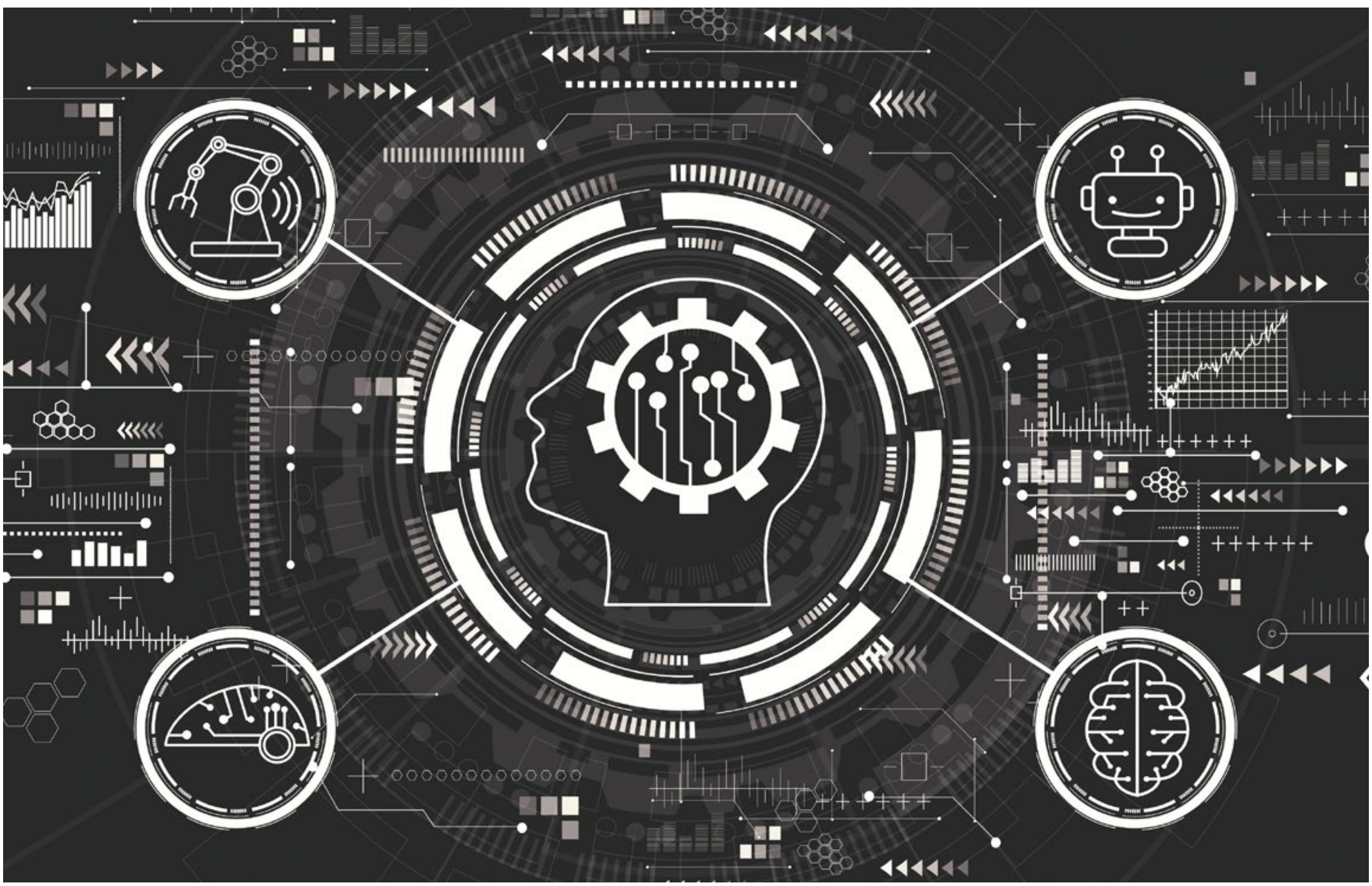
CHARTERED PROFESSIONAL ACCOUNTANTS CANADA

A Delta Perspective to an Innovation Mindset



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Contact us

This publication is part of a broader conversation CPA Canada is initiating on the Innovation Delta model. Please contact us with any feedback or insights that could help us in the development of future publications on this topic.

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A Delta Perspective to an Innovation Mindset

Think back to the year 2000. The Internet was still new and the dot-com bubble had just burst. Now, imagine you were part of video-rental giant Blockbuster's team charged with deciding if you should pay US$50 million to buy struggling Netflix? The start-up wasn't targeting your core market, your offering was far better quality, and there was no immediate competitive threat. Would you have seen its potential as a market disruptor and jumped at the chance? Or, would you have taken the narrow view, as the team at the now defunct Blockbuster did, and walked away?

The challenge Blockbuster's team faced back then is the same challenge CPAs face today. How do you assess and value something brand new, when there is no precedent and no clear view to growth potential? A narrow mindset and the limitations of traditional financial analysis tools make it difficult for CPAs to measure the value of disruptive innovation. **Applying earnings per share, discounted cash flow and net present value methodologies to assess investment opportunities risks undervaluing innovative ideas**, which can take time to develop and realize value.

More problematic however, is an often too-narrow, business-as-usual approach. In today's digital landscape, where change and innovation are the defining characteristics, there is no business as usual, and no ceiling on what's possible. Just look at Netflix. It has forever changed the way people around the world consume entertainment and has grown into the future of entertainment, boasting 200 million subscribers and US$25 billion in revenues. Of course, Netflix is not alone as a disruptor. Amazon, Uber, Airbnb, Apple – the list of brands that have changed how we live continues to grow.

A new, more expansive approach is necessary. CPAs cannot afford to be that Blockbuster advisor, having a narrow mindset and focusing only on cranking out a quantitative analysis. They have to adopt an innovation mindset and take appropriate risks. The question is how?

As Mervyn King, Chair Emeritus of the International Integrated Reporting Council, stated in an article for The CPA Journal, “The CFO has to become a chief value officer (CVO). He is the true change maker inside a company.”

CPA Canada is working to prepare CPAs to assume the role of CVO. This will require CPAs to look beyond the numbers and view innovation not simply as a new technology, but through a business lens and to understand its value-creation potential. They also need to be more willing to encourage their organizations to take appropriate risks when it comes to trying new innovative ideas and products. More than this, CPAs have to be able to explain an innovation's purpose, impact and value to stakeholders.

CPAs don't have to be innovators or engineers to identify value. Rather, CPAs need to take a broader view and recognize how a new technology or innovation can impact a process, a business, an industry and the greater society by assessing what's net new about the innovation relative to what it aims to replace or create.

Despite the many success stories driven by technological innovation, innovation can very often fail. But rather than avoiding it altogether, CPAs should leverage their training and experience to assess the merits of a technological innovation methodically – by understanding the technology and the business impact it can have. To do so will require expanding their thinking to adopt an innovation mindset and adding to their current toolkit by understanding innovation concepts and incorporating the Innovation Delta model.

Get started by understanding common innovation concepts

One critical way to broaden your mindset is to explore innovation concepts that are paving the way for disruptors.

Creative destruction The concept was coined by the Austrian economist Joseph Schumpeter in *Capitalism, Socialism and Democracy* and posits that the creation of new processes, businesses and industries leads to the destruction of others. Schumpeter stated: "This process of Creative Destruction is the essential fact about capitalism." Sometimes it is necessary for a company to leave its core products in favour of new, untested alternatives. For example, Netflix, Spotify and Apple Music's transition to streaming and subscription-based revenue models killed DVD rentals and music CD sales. It can be argued that the risk-averse nature of Blockbuster's finance and leadership teams blinded them to the reality of creative destruction and the potential of Netflix.

Exponential change Human beings are conditioned by experience to expect things to happen in a linear way. However, the rate of change in the world of technology is exponential. That's why traditional financial models such as the discounted cash flow method, which requires calculating a terminal value for an organization past a set forecast period may not work as well in valuing long-term exponential growth.

Many CPAs may use a constant growth rate assumption over the lifetime of the analysis or an exit multiple based on similar businesses today, both of which may undervalue certain innovations. In his essay "The Law of Accelerating Returns", Ray Kurzweil, Director of Engineering at Google, describes the concept of exponential change in this way: "In exponential growth, we find that a key measurement such as computational power is multiplied by a constant factor for each unit of time (e.g., doubling every year) rather than just being added to incrementally."

The long tail Author Chris Anderson introduced the concept of the long tail (i.e., digital content aggregators can monetize niche content through the economics of infinite shelf space) in an article for *Wired* magazine. The article grew into the 2006 book, *The Long Tail: Why the Future of Business is Selling Less of More*. He identified three rules to successfully implement the concept:

1. Provide the largest amount of content: "Netflix has made a good business out of what's unprofitable fare in movie theaters and video rental shops because it can aggregate dispersed audiences." The implication is that any piece of content will have value to a content aggregator who will be able to garner millions of views in total, even if each item is only viewed a few times.
2. Pass the savings of digitization on to the consumer: "Price according to digital costs, not physical ones." Anderson also states content providers can make money from misses by offering them at lower cost, thereby pulling "consumers down the tail with lower prices."
3. Use algorithmic recommendations to help consumers find niche content: Through algorithmic recommendations, content aggregators can suggest what else to consume, thereby "offering mass customization as an alternative to mass-market fare." He notes that 60% of Netflix's views come from recommendations.

The wisdom of crowds The idea that the crowd is wiser than the individual was first introduced more than a century ago. In 1906, while visiting a country fair, the scientist and statistician Francis Galton took note of a contest to guess the weight of an ox. He calculated the average of the nearly 800 guesses at 1,197 pounds. The actual weight was 1,198 pounds, a number no one individual guessed.

In 2006, writer and editor Jeff Howe coined the term "crowdsourcing" in his article "Rise of Crowdsourcing" for *Wired* magazine. He defined it as: "the act of taking a job traditionally performed by a designated agent (usually an employee) and outsourcing it to an undefined, generally large group of people in the form of an open call."

That same year, Netflix launched a crowdsourcing competition. It offered a $1 million prize to "encourage a range of algorithmic solutions to improve the company's existing recommendation program, Cinematch, by 10%."

Freemium (i.e., a pricing strategy where the basic version of a product or service is offered for free). In his follow-up to the long tail, Chris Anderson articulated the idea of "freeconomics" to describe how companies can leverage the idea that the marginal cost in a digital service offering is close to zero. Netflix harnessed the power of this concept by initially offering the first month of its streaming service free.

Network effects (i.e., "when the usefulness of a product increases for consumers in proportion to the number of people using it."). Culturally, as Netflix shows occupy conversations within the office, campus or social circles, people may subscribe to the streaming service to participate in such discussions. It has evolved into "the place to be for viewers because that's where the content can be found, and it's the place to be for content creators because it's where the viewers can be found.".

The Innovation Delta model: Six steps to adopting an innovation mindset

The Innovation Delta model helps CPAs evaluate innovation based on its impact on assets, people, platform and data and then to translate its value in business terms. It draws on ideas from existing frameworks to aid CPAs in rethinking how the profession looks at innovation by putting it in the context of delivering value to stakeholders.

1. Follow the enthusiasts

Understanding an innovation does not require an undergraduate degree in computer science. Rather, CPAs should learn to identify an innovation's early adopters and champions and why they are excited about this new idea, how it works and its potential impact. For example, when cloud computing was still new, thought leaders such as David Linthicum, Chris Hoff, John Willis and others regularly posted, lectured and spoke about it. Many agreed on its core elements as defined by the NIST framework:

- On-demand self-service: users can unilaterally provision the resources they need.
- Broad network access: application is accessible through a browser or "thin client".
- Rapid elasticity: application can scale up and down on demand.
- Measured service: metering capability allows for pay-per-use of resources.
- Resource pooling: multiple customers with a single set of pooled computing resources.

2. Focus on business use-cases, not the technology

How are early adopters using the innovation? Summarize the business use cases. Which business processes are being impacted?

For example, Flightcaster is a tech start-up that leverages cloud-based Infrastructure-as-a-Service (IaaS) to develop and deliver its mobile application. The app predicts flight delays based on data from airlines, the FAA and weather services by using scalable analytics. Two people maintain the program. Without the ability to procure IT resources from the cloud, it would have cost millions of dollars' worth of infrastructure and a much larger staff.

Larger, established companies are also leveraging the cloud. The Washington Post company used cloud computing to convert 17,481 non-searchable PDF pages into machine readable text. The job took 26 hours and cost: $144.62.

3. Figure out the delta to see the value more clearly

Understanding what's really valuable about an innovation comes down to understanding what is net new about it as compared to the incumbent model. What are the existing model's core elements? How is it being used? Compare the two models to determine how the innovation provides business value not achievable with the current model of doing business.

In the Flightcaster and Washington Post use cases outlined above, cloud and IaaS transformed how IT could be procured (i.e., no contracts, no waiting for servers to be provisioned, no figuring out how to dedicate lines between the company and the environment). The delta between the innovation and legacy systems can be described in this way: cloud brought pay-as-you-go resource acquisition to IT procurement. It is important to note that determining business value extends beyond financial considerations and should reflect how the innovation will impact multiple stakeholders.

4. Determine the impact

This requires understanding how multiple stakeholders (customers, suppliers, gatekeepers) will be impacted in terms of assets, people, platform and data.

FIGURE 1: DETERMINING IMPACT

Stakeholder and Community Dimensions	Customer	Supplier	Gatekeeper
Assets (incl. societal and natural assets)	Does the innovation provide access to assets that were previously inaccessible?	How does the innovation alter the flow of assets from the incumbent suppliers to customers?	Gatekeepers are private or public entities that can influence the outcome of the innovation. These can include governments, regulators and venture capitalists, for example. How will the gatekeepers react to the disruption caused by the innovation?[1]
People	How does the innovation impact how the customer deals with employees?	Does the innovation allow access to non-traditional partners, employees, contractors, etc.?	
Platform	Does it bring about a platform relationship that allows the business to be a meeting ground for external suppliers / producers and customers?[2]		
Data	Does the customer get access to: • more data? • better analytics capability? • additional KPIs / transparency?	Does the supplier get access to: • more data? • better analytics capability? • additional KPIs / transparency?	

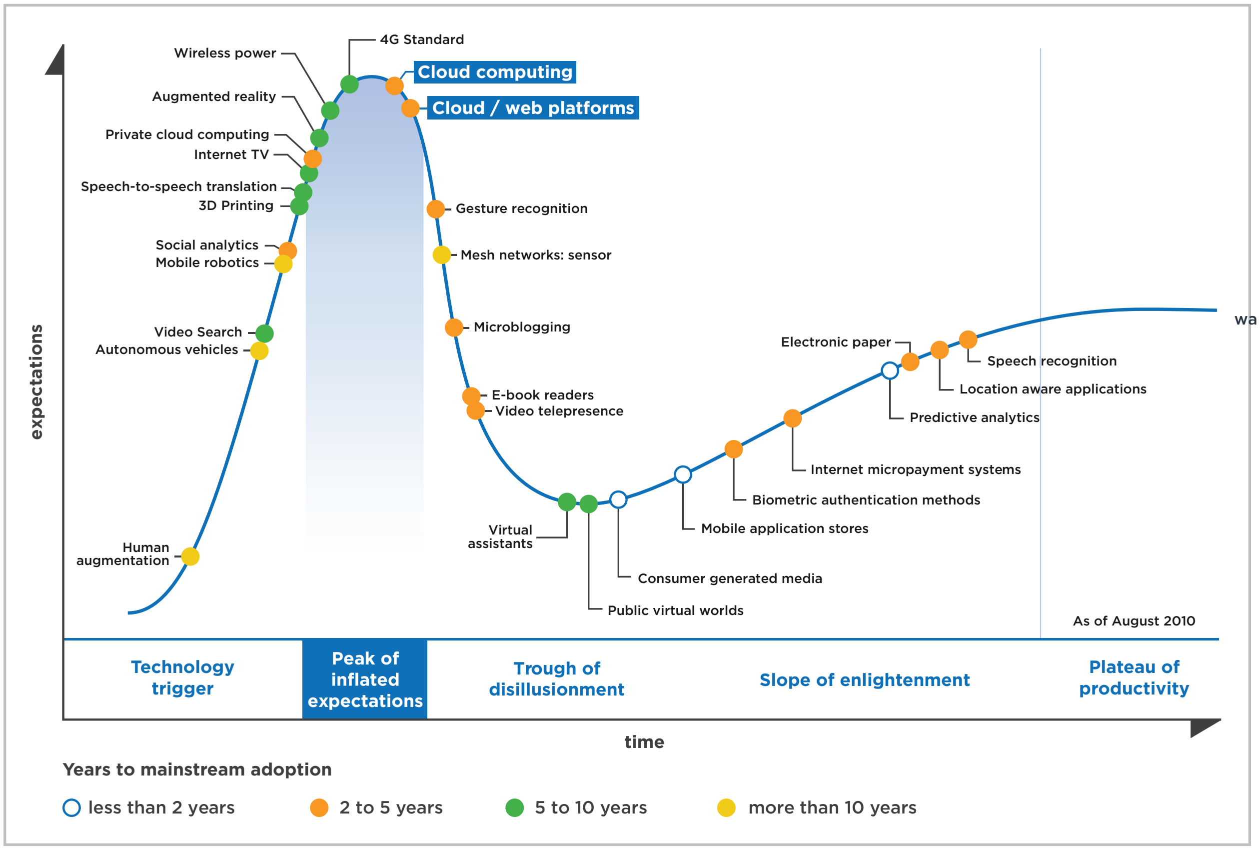
1 For example, Uber was able to scale quickly in the early days because at the time many governments / regulators chose not to require the company to adhere to the taxi cab licensing system.

2 "A platform is a business based on enabling value-creating interactions between external producers and consumers. The platform provides an open, participative infrastructure for these interactions and sets governance conditions for them. The platform's overarching purpose: to consummate matches among users and facilitate the exchange of goods, services, or social currency, thereby enabling value creation for all participants." – Geoffrey G. Parker, *Platform Revolution: How Networked Markets Are Transforming the Economy--and How to Make Them Work for You*

5. Identify how soon the innovation will arrive

Due to the exponential rate of change concept, innovation can come faster than anticipated. Gartner's Hype Cycle is one framework to help assess the maturity, adoption and social application of a specific technology and how it is potentially relevant to solving real business problems and exploiting new opportunities.

FIGURE 2: THE 2010 HYPE CYCLE FOR CLOUD COMPUTING



As highlighted, cloud computing was at the "Peak of Inflated Expectations"[3] in 2010, but was expected to mature in a two- to five-year time frame.

6. Assess the innovation's disruptive potential

The late academic, business consultant, author and one of the world's top experts on innovation, Clay Christensen, developed the theory of disruptive innovation and a model to assess disruption. Specifically, he identified the greatest potential for disruption is to serve

3 During this phase of the Hype Cycle, the technology is running on hype – the media is filled with positive press about the ability of the technology to be the silver bullet to "solve all one's problems". But in reality, the bad news is yet to be printed. This occurs during the next phase, i.e., during the Trough of Disillusionment.

over-served customers with inferior / cheaper products. He termed this low-end disruption.[4] As an example, he highlighted how minimills, which offer lower quality steel at a lower price, eventually kept moving up market until they were competing head-to-head with the billion-dollar integrated steel companies.

According to Christensen, disruptive businesses share a number of characteristics, including: lower gross margins, smaller target markets and simpler products that may not perform as well as existing solutions based on traditional performance metrics. “Because these lower tiers of the market offer lower gross margins, they are unattractive to other firms moving upward in the market, creating space at the bottom of the market for new disruptive competitors to emerge”. This is why CPAs need to ensure the financial tools they use to assess value are not biasing the organization against disruptive innovation.

Tools such as earnings per share, discounted cash flow, net present value and payback are not inherently bad, but they are biased against innovation. Rather than being the only barometer of potential success, existing financial tools for valuing financial benefits over time should be complemented by new approaches, such as the Innovation Delta model, to help determine the future potential value of an innovation, technology, product or service line.

4 He also identified a second model of disruption, new-market disruption, where the disrupter focuses on non-consumption and can offer “good enough” quality / set of features for a lower price.

Conclusion

CPAs are uniquely positioned to help organizations rethink, assess and, when appropriate, embrace innovation – but only if they adopt an innovation mindset. Thinking differently about innovation will require understanding the concepts that are fuelling disruption and exponential growth, and evaluating value based on potential long-term impact to an organization and broader society. The Innovation Delta model provides actionable steps to help CPAs adopt an innovation mindset in order to more accurately evaluate and value innovation.

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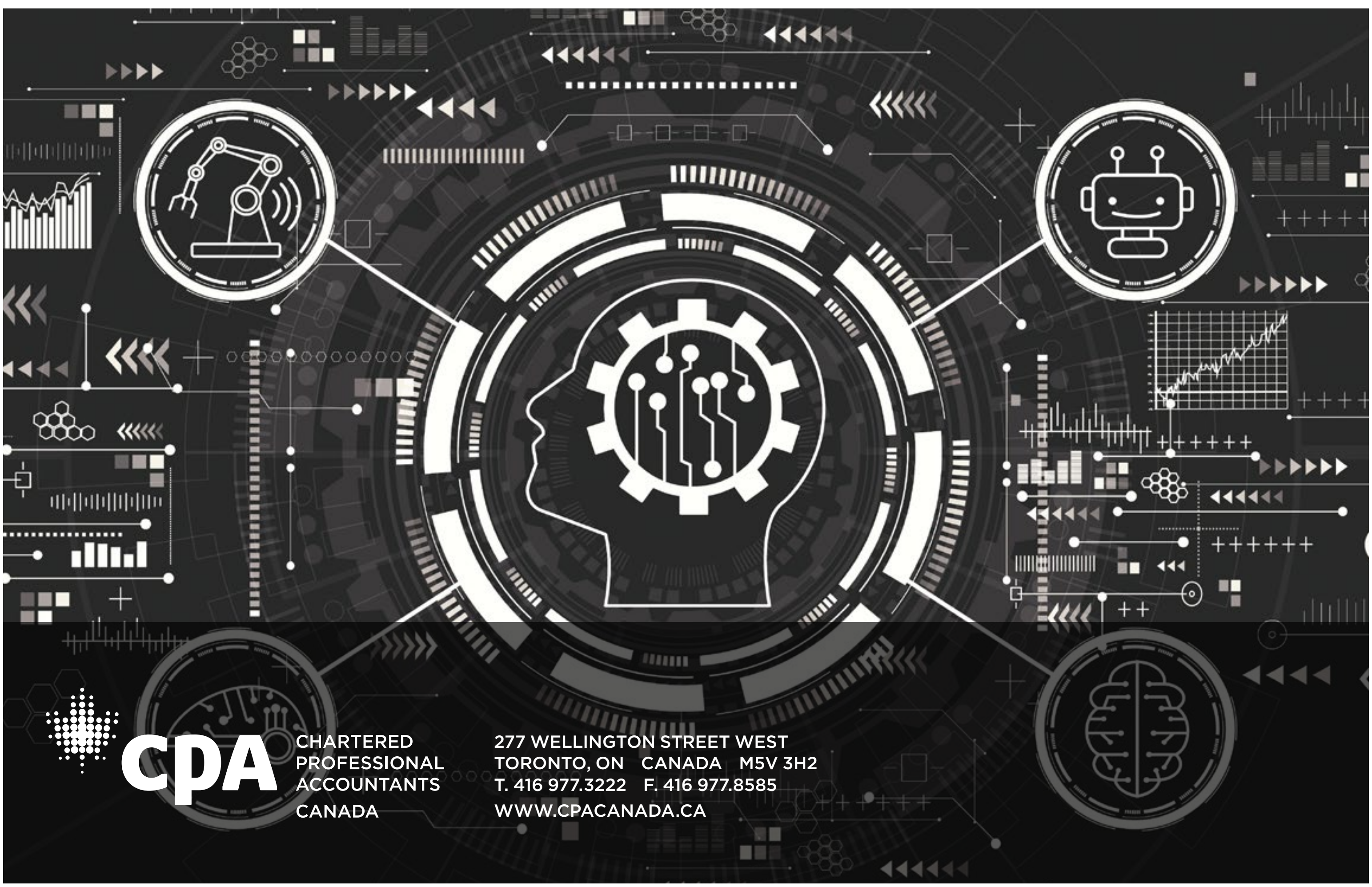

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