AI and Machine Learning for Complex Business Decision Making

PART 6 – MOVING TO AN AI ADVANTAGE

In **Part 6** of this six-part series of 10-minute reads, we present highlights of the 2020 MMPA Conference,[1] **AI and Machine Learning for Complex Business Decision Making**, to illustrate the versatility and ubiquity of new digital technologies and to spotlight CPAs' changing competencies and emerging opportunities.

Part 1 – From Excel to AI: The Analytics Evolution looks at the **analytics evolution** and the way CPAs in finance and audit need to adapt their analytics skillset to keep up with this rapidly changing field.

Part 2 – Technology for Problem Solving warns against the **digital transformation trap**: losing sight of problem solving and, instead, following the lure of technology. How should CPAs assess AI technology and **value creation**?

Part 3 – Systems Thinking and a Framework for Applying AI looks at **systems thinking** – a critical-thinking competency for CPAs – and a **framework** for applying AI and machine learning to complex business decision making.

Part 4 – Data and Trust examines **data management value chains**, new roles for CPAs and initiatives to ensure that data and AI systems are used fairly, accountably and transparently.

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1   The 2020 MMPA Conference was hosted by the Master of Management & Professional Accounting (MMPA) Program and BIGDataAIHUB at the Institute for Management & Innovation (IMI), University of Toronto at Mississauga (UTM). The MMPA Program combines an MBA curriculum with the development of technical and leadership skills vital for the accounting profession.

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Part 5 – Humans, Machines and Humachines focuses on **human skills**. It introduces AI-augmented intelligence in emerging organizations called **humachines** and the way CPAs' human and technical skills can play a role in commercializing Canada's AI start-ups.

Here, Part 6 – Moving to an AI Advantage looks at the way companies move to an **AI advantage** and steps CPAs can take to be future ready.

PART 6 – Moving to an AI Advantage

Part 6, the final part of this series, looks at barriers to implementing AI and machine learning to complex business decision making and at ways to move forward. It concludes with what current and prospective CPAs can do to improve their understanding.

Barriers to Implementation

Speaker Nada Sanders identifies common barriers to implementing technology effectively to solve business problems (see Figure 6.1). Not surprisingly, some of these same barriers were also identified as part of CPA Canada's *Get Digital: Survey of the digital landscape for small and medium businesses and how to overcome common barriers to digital transformation*. Read more to learn about challenges faced by finance leaders across Canada and the way they overcame them.

FIGURE 6.1: BARRIERS TO IMPLEMENTING TECHNOLOGY
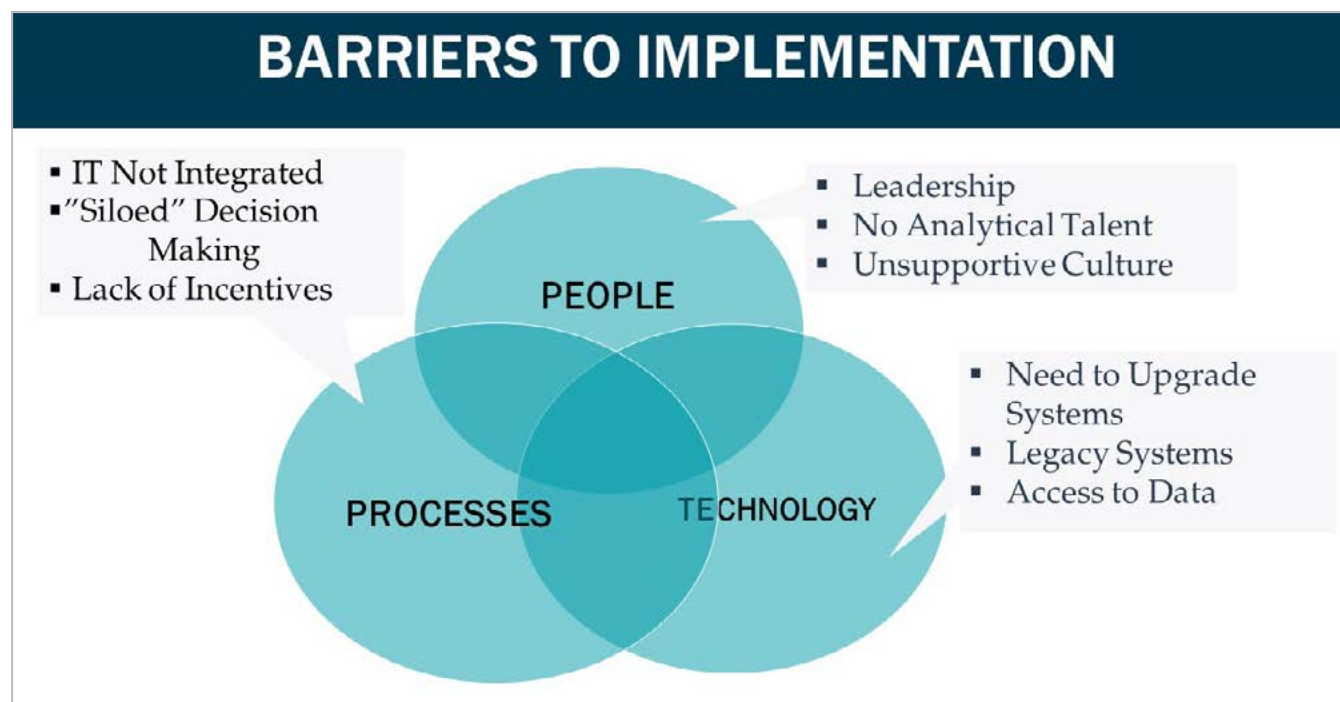
Source: Speaker Nada Sanders

People are an organization's greatest asset and greatest liability, which makes them one of the most important elements. When people feel threatened by changes, don't understand them and don't feel included, they can sabotage implementation, Sanders warns. Speaker Retsef Levi adds that technical challenges are not nearly as great as cultural ones.

While many organizations may favour *automation* over *augmentation* in adopting technology, says speaker Thomas Davenport (Ammanath, et al., 2020),[2] all speakers believe that the best way to take advantage of emerging AI technology – as counterintuitive as it may seem – is to invest more in human re-skilling and upskilling, which allows retention of organizational wisdom at the same time.

"Utilize talent and people for focused decision making, and leave technology for repetitive tasks," advises Sanders. "Through this process the organization will prevent the atrophy of key decision making."

"Not all companies will adopt AI, but all will need enhanced decision making," adds speaker Michael Lionais.

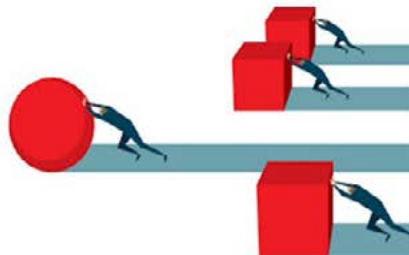## How to Gain an AI Advantage

Speaker Thomas Davenport summarizes how to use AI to gain competitive advantage (see Figure 6.2).

FIGURE 6.2: CREATING AN AI ADVANTAGE

Source: Speaker Thomas Davenport

2   Based on an international 2019 Deloitte survey of IT and line-of-business executives in Ammanath, B., Jarvis, D. & Hupfer, S. (2020, July 14). *Thriving in the Era of Pervasive AI: Deloitte's State of AI in the Enterprise, 3rd Edition, Deloitte Insights* [Online]. ["Across all functional areas, roughly two-thirds of [AI] implementations are used for automation or optimization versus enhancing the capabilities of individuals."]

In addition, speakers advised organizations to:

- Start with a vision, a problem to solve, a process to improve, *not* the technology
- Allocate sufficient resources: real challenges are at the beginning (e.g., in getting/understanding useable data) and at the end (e.g., in disseminating and integrating technology into workflow processes)
- Integrate people, processes and technology
- Invest in change management, motivation and retaining talent
- Take a systems approach
- Build trustworthy AI; use ethically and strategically aligned design

## Concluding Thoughts for Prospective and Current CPAs

Maybe the most important organizational capability is the business translator that can bridge the two worlds of business decisions and data analytics / AI / automation / technology.

RETSEF LEVI

For prospective and current CPAs to prepare for their future changing roles, speakers suggest:

- Lifelong learning is important. Skills are cumulative across the eras of data analytics for data scientists and other roles (see **Figure 6.3**), so what CPAs-as-business-data analytics-translators will need to know can be expected only to grow (Speaker Thomas Davenport).
- See the opportunity in translation work between business and technology (Speaker **Pavel Abdur-Rahman**).
- Cultivate skills that machines cannot learn, such as negotiation, communication, collaboration and strategic thinking (Speaker Nada Sanders).
- Build critical thinking and creative problem-solving skills to understand what questions to ask of data (Speaker Nada Sanders).
- Be curious (Speaker **Kamran Khan**).
- Understand data analytics, big data and the logic of programming (Speaker Michael Lionais).
- Be willing to work alongside smart machines (Speaker Thomas Davenport).

FIGURE 6.3: CUMULATIVE SKILLS ACROSS ANALYTICS ERAS
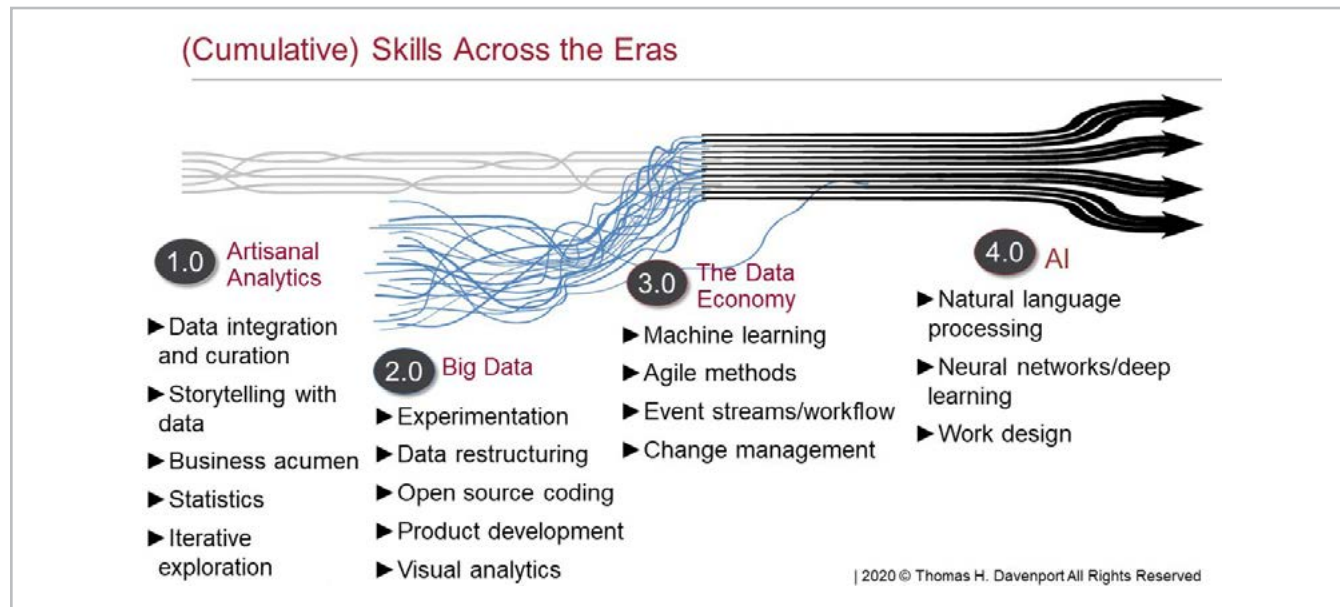
Source: Speaker Thomas Davenport

FOR CPAs: BE ETHICAL

We are part of a global community that is even more interconnected than we had previously thought. Technology is playing a big part in this. As global citizens we understand that lives depend on us all doing the right thing. It reminds us that as professional accountants – we have a duty – a higher calling – to do the right thing. Be ethical.

IRENE WIECEK, CHAIR, 2020 MMPA CONFERENCE

And, watch for more collaborative publications by CPA Canada that explore AI and its impact on the accounting profession.

References, Part 6

Ammanath, B., Jarvis, D. & Hupfer, S. (2020, July 14). *Thriving in the Era of Pervasive AI: Deloitte's State of AI in the Enterprise,* 3rd Edition. *Deloitte Insights* [Online]. [This survey report is based on an international 2019 Deloitte survey of IT and line-of-business executives. "Across all functional areas, roughly two-thirds of [AI] implementations are used for automation or optimization versus enhancing the capabilities of individuals."]

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