



Artificial Intelligence

A breakthrough in the Public sector auditing sphere

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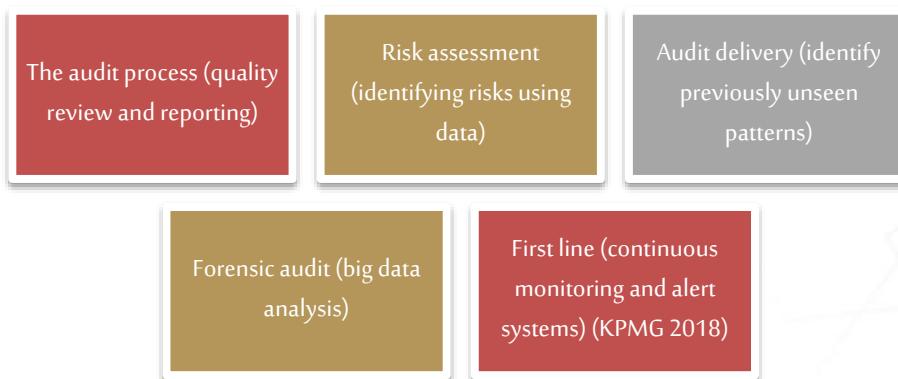
Artificial intelligence: a breakthrough in the Public sector auditing sphere

Artificial intelligence (AI) heralds a new era, a digital disruptor, with the potential to impact all sectors: Public sector audit will also need to embrace the possibilities to thrive in this period of 'Digital Darwinism' ¹ (ACCA 2013).

Artificial intelligence is defined as that activity devoted to making machines intelligent, and intelligence is that quality that enables an entity to function appropriately and with foresight in its environment ² (Nilsson 2010)

One may be forgiven for thinking AI is a relatively new phenomenon. However, it has been around for over 20 years: When Deep Blue, IBM's supercomputer, beat chess champion Garry Kasparov, it marked a seminal moment: a computer can learn and out-perform a human (KPMG 2017). Today AI is helping in various fields such as healthcare, education, public safety and security, employment and the workplace and even entertainment (Stanford 2016) ³

The increasing applications for AI has the potential to impact audit:



For example, the EY Global Artificial Intelligence Lab applied AI and deep learning technologies to the lease accounting process: AI has streamlined data capture from contracts. This has enabled the team to work more quickly and efficiently, simultaneously providing better support to clients in their transition to new accounting standards such as IFRS 16 (Persico and Boillet EY 2018).

¹ Digital Darwinism: thriving in the face of technology change IMA ACCA 2013

² Nils J. Nilsson, The Quest for Artificial Intelligence: A History of Ideas and Achievements (Cambridge, UK: Cambridge University Press, 2010) & ARTIFICIAL INTELLIGENCE AND LIFE IN 2030 ONE HUNDRED YEAR STUDY ON ARTIFICIAL INTELLIGENCE | REPORT OF THE 2015 STUDY PANEL | SEPTEMBER 2016

³ "One Hundred Year Study on Artificial Intelligence (AI100)," Stanford University, accessed August 1, 2016, <https://ai100.stanford.edu>.



This is a long way from the traditional theatrical depiction of robots taking over the world. It is our human qualities: judgment, professional skepticism or personal experience that cannot be replicated. The traditional repetitive laborious tasks can be automated freeing up valuable expertise to focus on value added activities such as reasoned analysis, interpretation and strategic insight and more complex problem solving.

It is predicted that this will allow many audit professionals to move toward the role of a trusted business advisor. This role will require exceptional interpersonal skills and qualities, as well as the creativity to deliver strategic insights utilizing the tools at their disposal. This information will give them the capacity to become more forward-looking and predictive, helping clients to identify future risks and opportunities. (KPMG 2018).

However, there are risks that will need to be carefully managed: The AI methodology will only be as good as the original algorithms used in the coding. Human frailties such as error and biases (both unintentional and intentional (IIA 2018 4) have the potential to influence the outcomes of the data analysis (McKinsey 2017) 5. This human factor as identified by IIA will need to be reviewed and tested. But humans have their value too and are essential to 'meaning making' as AI is able to process huge volumes of data but it will still require the human to turn it into meaningful insight.

The final challenge is the ethics – auditors will need to assess the ethics of the AI algorithms developed and how these have been applied (IIA 2018)

The launch of the UAE strategy for AI in October 2017, the first of this scale globally, sets an ambitious agenda to, amongst other things, drive efficient responsive services and boost government performance at all levels 6. The impact of this will be significant for government: by 2031 the aim is for AI to help reduce government costs by 50% and raise the barriers for any financial crime risk amongst other striving targets. The public sector auditor has a crucial role to provide proper scrutiny and assurance that public funds are being used to drive best value and deliver public services. Auditors will need to move from the analogue age to the digital age to remain one step ahead.

The evolution of cognitive technologies: either product, process, or insight are here now and will need proper governance and oversight to ensure the opportunities are realized and the risks are managed. The only thing that remains constant is change. It is time for the public sector auditor to lead the way.

⁴ <https://na.theiia.org/periodicals/Public%20Documents/GPI-Artificial-Intelligence-Part-III.pdf>

⁵ <https://www.mckinsey.com/business-functions/risk/our-insights/controlling-machine-learning-algorithms-and-their-biases>

⁶ <https://government.ae/en/about-the-uae/strategies-initiatives-and-awards/federal-governments-strategies-and-plans/uae-strategy-for-artificial-intelligence>