Grant Thornton

Is your internal audit function artificially intelligent?

In recent years, the world has seen exponential growth in the amount of data being captured, processed and stored by organisations, mirrored by a relative reduction in the cost of data storage itself. As a result, the timely, accurate analysis and appropriate management of these vast amounts of data ('big data') is where organisations can recognise real business value. Global technology companies are facilitating organisations in this endeavour by collaborating with them in the development of Artificial Intelligence (AI).

What is AI?

The consensus is that AI is hardware and software capable of behaving like the human brain including, learning, reasoning, adapting, analysing, making decisions and performing complex and judgment driven tasks. There are many other interchangeable terms for AI such as machine learning, image recognition and cognitive computing.

AI is not about being absolutely correct and complete, it uses probability to process data and estimate the likelihood of particular events occurring. The higher the quantity of good quality data processed, then the greater accuracy of the AI's decision making, thereby allowing management to place greater reliance on the AI's output.

What does AI mean for internal audit?

Internal audit functions will need to recognise the global shift towards AI and consider the advisory/assurance role they will have in this movement. It will be critical that they keep pace with the practical application of AI in business and develop competencies that will enable them to provide AI related advisory and assurance services to their organisation.

As AI is founded upon data analysis and the processing of big data, some of the key risks associated with AI will derive from risks relating to data management, quality and security, as well as AI specific risks.

Internal audit will be expected to provide assurance on the risks underlying the design, performance, oversight and monitoring of AI based processes. Additionally internal audit will be tasked with identifying, assessing and communicating to the board and senior management, the risks associated with AI and the efforts of the business to address those risks, each being key in assuring AI augmented processes.

Internal audit can fulfil its AI assurance role by engaging in certain distinct activities related to AI such as:

- including AI in its risk assessment and considering whether to include AI in its risk-based audit plan;
- being actively involved in AI projects from the beginning, providing advice and insight contributing to successful implementation;
- where AI has been implemented within business operations or incorporated into a product or service, internal audit should provide assurance on the management of risks related to the reliability of the underlying algorithms and the data on which the algorithms are based;
- ensuring the moral and ethical issues that may surround the organisation's use of AI are being addressed; and
- providing assurance in relation to AI established governance structures.

Our services

Grant Thornton has internal audit professionals and subject matter experts to guide and assist internal audit functions in enhancing their internal audit methodology and capabilities, ensuring the key pillars and risk areas for auditing AI are appropriately considered.

Our AI auditing framework sits at the centre of our AI assurance and advisory service. We can support our clients in integrating this framework into their internal audit functions so as to best support them in delivering their AI assurance role.

Our AI auditing framework

Each element of the AI auditing framework is set within the context of an organisation's AI strategy and are outlined below.

Strategy

Each organisation's AI strategy will be unique based on its approach to capitalising on AI opportunities. Internal audit must consider the organisation's AI strategy at the outset and internal audit should help management and the board realise the importance of formulating a deliberate AI strategy consistent with the organisation's objectives.

Governance

AI governance refers to the structures, processes and procedures implemented to direct, manage and monitor AI activities in pursuit of achieving the organisation's goals. Regardless of the specific approach, AI governance establishes accountability and oversight, helps to ensure that those responsible have the necessary skills and expertise to effectively monitor AI and helps to ensure the organisation's values are reflected in its AI activities. AI activities must result in decisions and actions that are in line with the ethical, social and legal responsibilities of the organisation.

Data architecture and infrastructure

All data architecture and infrastructure will likely reflect the organisation's architecture and infrastructure for handling big data. It includes considerations of:

- the way that data is accessible (meta-data, taxonomy, unique identifiers and naming conventions);
- information privacy and security throughout the data life-cycle (data collection, use, storage and destruction); and
- roles and responsibilities for data ownership and use throughout the data life-cycle.

Data quality

The completeness, accuracy and reliability of the data on which AI algorithms are built are critical. It is not unusual for an organisation to have a poorly defined, incoherent structure to its data. Often, systems are not integrated and do not communicate with each other and only do so through complicated add-ons or customisations. How this data is brought together, synthesised and validated is crucial.

Performance measurement

As an organisation integrates AI into its activities, performance metrics should be defined to tie AI activities to business objectives and clearly illustrate whether AI is effectively contributing to the achievement of those objectives. Management must actively monitor the performance of its AI activities.

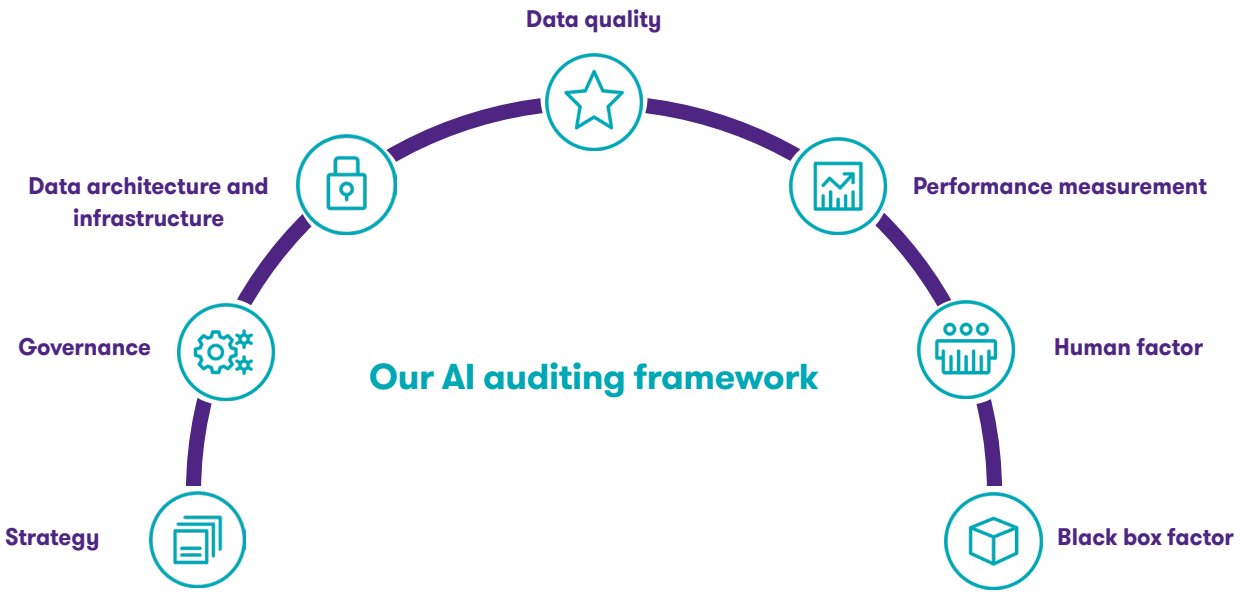
The human factor

Algorithms are developed by humans. Human error and biases will impact the performance of algorithms. The human factor component considers whether:

- the risk of unintended human biases in AI design are identified and managed;
- AI has been effectively tested to ensure that results reflect the original objective;
- AI technologies can be transparent given the complexity involved; and
- AI output is being used legally, ethically and responsibly.

The black box factor

As organisations advance to implementing Type III and Type IV AI technologies, utilising machines or platforms that can learn on their own or communicate with each other, how the algorithms are operating becomes less transparent or understandable. The black box factor will become more and more of a challenge as an organisation's AI activities become more sophisticated.



Conclusion

The internal auditing profession cannot sit on its laurels for fear of being left behind in what may be the next digital revolution – AI. To prepare, internal auditors must understand the fundamentals of AI, the role that internal audit should play in it, as well as its underlying benefits and risks.

We can assist internal audit functions in navigating the challenges of AI by recalibrating their plans, expertise and methodologies to cater for same. This will ensure they are best placed to critically assess the effectiveness of AI risk management, control and governance processes.

Contacts

Please contact a member of our team below for further information and discussion.

Brendan Foster
Partner, Advisory
T +353 (0)1 680 5945
E brendan.foster@ie.gt.com

Sara McAllister
Director, Advisory
T +353 (0)1 680 5716
E sara.mcallister@ie.gt.com

Offices in Dublin, Belfast, Cork, Galway, Kildare, Limerick and Longford.

grantthornton.ie

@GrantThorntonIE

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