A conversation about Artificial Intelligence

KPMG Board Leadership Centre

The use of Artificial Intelligence (AI) is one of the buzz topics in business today. Most boards are thinking about it to some extent. But how can organisations get full impact from AI? And what are the risks they need to manage? Theos Evgeniou, Theos Evgeniou, Professor at INSEAD and Chief Innovation Officer at Tremau, the reg-tech company for digital regulations, joined our FTSE350 Board Leadership Centre meeting to share his insights.

The world of AI may seem mysterious and futuristic – but it is very much with us already. Numerous businesses are already using AI applications to differing degrees, to automate processes, speed up decision making and create efficiencies.

Indeed, as Theos Evgeniou observed, at its most basic level AI is actually just an extension of practices that have been used in business for decades already. He gave the example of credit decisions and approvals in a financial services context. "Banks have hundreds or even thousands of rules that have been written down by humans, which are followed to check, support or approve lending decisions. These rules are put into a piece of software – maybe just an Excel spreadsheet – and applications are run through them to generate a score or yes/no decision. That is already AI in a sense. It's not very complicated really."

The huge potential of AI

If this is 'traditional' AI, things are moving on to greater levels of sophistication. Now, AI algorithms can create rules themselves instead of just following rules already created by human staff. The algorithms can learn from the data they're processing and previous decisions made. They can also apply these rules to other areas where we don't already have human-derived rules. This ability to teach itself – machine learning – brings in new possibilities. At its most advanced, AI can create rules that are not even 'human friendly'. They can codify processes for evaluating tasks for which humans can't express 'rules', such as "how do you recognise a human face?' or even 'how do you ride a bicycle?'

Theos explained that the difference between AI and mere automation is that AI enables businesses to automate *decisions*, not just processes. These decisions could be about almost anything, and applied to areas that can help an organisation become more profitable, more efficient, more customer-centric or more innovative. That's why the potential is so big.

"AI can enable businesses to support, standardise and automate decisions and then scale it across the organisation, making millions of decisions, recommendations and predictions in parallel," he said.

Barriers and constraints

But if that's the prize organisations are aiming for, how far have things come? Theos underlined that we are still in "early days". For a start – understandably enough - most board members don't have a detailed understanding of AI. The number of people within an organisation that do is necessarily going to be limited. Theos referred to research by INSEAD conducted amongst board members of around 120 companies that found that 75% of executives feel the board lacks the skills needed to make AI decisions. And yet, in 70% of cases, AI decisions (usually as part of wider digital transformation plans) are approved by the board. That is as it should be – but clearly, raising AI understanding is important.

Theos outlined that in his view there are four main barriers or constraints to the adoption and successful leveraging of AI. Firstly, there is the lack of understanding. Secondly, there are issues around data quality and availability – data being key to powering AI. Then there is what Theos described as an "old timer" – resistance to change, that has applied to technology adoption for many years already. Finally, there are ethical questions and concerns.

Ethics and regulation

Certainly, ethical issues are a live topic within the field of AI. In many ways, they link to regulatory rules and standards too. Theos commented that regulators around the world are actively looking at AI – but have not yet put forward any rules. These can be expected to come within the next few years however.

In a sense, these rules are likely to be an extension of the regulations around data privacy that have become such a focus in recent years. For example, if AI is used in an online context to interact with a customer then it's likely that regulation will require a business to make this clear. There will need to be transparency. Theos gave another example, of retail businesses looking to use AI within shopping malls – perhaps to track and analyse which customers are going into which shops, which parts of the shop window they look at first from outside, building a picture based on age, gender and other factors. Is that acceptable if the customers don't know they are being observed? Does it matter if they are not being individually identified but only observed anonymously? Multiple questions open up.

But ethical questions are also very much about fairness. AI could be used, for example, to maximise the profitability of certain products or services, or to target promotions and offers most effectively. But if the AI, in doing this, homes in on more affluent geographical areas or demographics and bypasses lower income groups or other customer profiles – is that discriminatory? It could be deemed to be unethical. It could pose a reputational risk to a business.

Governance and risk management

AI needs to be carefully thought about and managed. "You need strong AI governance," Theos said. "Some companies have set up AI ethics boards for example. It's about leveraging the opportunities of AI while mitigating any risks."

Encouragingly, Theos stressed that the governance approach to AI can to a great extent be drawn from well-established existing risk management approaches. In an financial services context, for example, managing AI risk is similar to managing model risk. More broadly, the 3 Lines of Defence assurance model can be used for AI too. The first line of defence is the AI developers in the business, who need to ensure they are following good development practices. The second line is the risk management team. And the third is audit, internal and/or external.

"It's a huge 'space under development'," Theos observed. "But there are lots of new tools emerging to help businesses monitor and manage AI, as well as to document it and create a register of all AI applications being used."

'Locked' or open AI?

There is a further dimension too, at the more advanced end of AI – and that is whether applications should be 'locked' or whether they should be allowed to continuously learn and evolve. If an application is locked, then it will stay the same and keep applying the same rules and processes. This is 'safer' – but runs the risk that the AI may get outdated if the external market or customer behaviours change.

If an application is allowed to continuously evolve, then you have the risk of not knowing what it will do. Google allows applications such as auto-correct to continuously evolve. The US health regulator, the FDA, has so far only granted approvals to AI-based medical diagnosis technologies that are locked. "It's a big decision to take," Theos said. "If your applications are not locked, then clearly this means close monitoring is even more important."

There were multiple questions from participants around everything from data to automation, and ethics to regulation. One question posed was whether businesses should have a separate AI strategy or roll it up within the wider technology strategy?

Theos' answer was that it could be part of the wider technology programme, "but with an asterisk!" However you treat it, you have to appreciate that AI involves new risks and new specific issues to think about.

Grounds for encouragement

However, if that sounds daunting, overall Theos offered much encouragement. "You can do a lot around AI within your existing structures and practices. Much of the risk management you will already know from other contexts. That's the good news."

He concluded: "As board members, think about whether you have the right skills at a leadership level and further down in the organisation to leverage these technologies. Do you have the right structures and committees in place to manage the risks? Also, perhaps take some time to rethink your business using AI: if you had a blank piece of paper and were starting from scratch, how would you design AI into your business and what would you want it to do?"

Key questions for boards

1. Does your board fully understand the positive impact AI can have on the business and if not, is there a plan to improve knowledge and information sharing?

2. Has the board identified a potential starting point for AI use within the organisation by investigating existing use cases and potential impact on costs and profitability?

3. Has the board set up a task force to investigate how automation will impact the workforce in terms of required skills, recruitment and re-training?

4. Has the board considered how AI could require a change in the business model and looked at what this will mean in terms of processes and procedures?

5. Is the board sufficiently skilled to investigate possible risks and governance issues that may arise from AI adoption?

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