CCS Insight

making sense of the connected world

Putting Generative AI to Use in the Real World

A CCS Insight Podcast Companion Report

In conjunction with IBM

This is an accompanying report to CCS Insight's podcast, *Putting Generative AI to Use in the Real World.*

Since the launch of OpenAI's ChatGPT to the public in November 2022, generative artificial intelligence (AI) has caught the imagination of the world. ChatGPT attracted 1 million users in the first week and over 100 million users in the first two months, forming the digital zeitgeist of today and driving the strategic IT investment agenda in many organizations.

From CEOs to children, everyone has been experimenting with the power of generative AI. Some have let their imagination run wild with the possibilities of the technology, and others have focused on how it can be applied today.

But AI in general is not new: companies have been developing AI and machine learning technologies for many decades. One organization with a rich history in this area is IBM. Even before the ChatGPT frenzy, IBM was applying AI in real-world solutions that delivered meaningful outcomes in areas such as healthcare.

Bola Rotibi, Chief of Enterprise Research at CCS Insight, was joined by IBM's Andi Britt, Senior Partner and Talent Transformation Leader, and Jon Lester, Vice President for HR Technology, Data and AI, to discuss what the firm has been doing and its vision for the future.

This report gives an overview of the insightful discussion, exploring the applications and challenges of generative AI and providing a glimpse into the years ahead to inform AI strategies.

What Is Generative AI?

Generative AI at its core is the ability to create content from a prompt, typically entered using conversational language. The user then receives a response in their desired format — image, text, video or audio. This is made possible by large language models that are trained on vast data sets. This capability can be great fun to play with, and it also has meaningful applications that can drive value for individuals and organizations.

Crucially, the system can understand the human and the human can understand the system. The user does not require special training, skills or experience — they just need to know what they want, and the AI needs to have been trained on the appropriate data to deliver an applicable response. However, entering better prompts increases the chance of better output, so there is an emerging skill in prompt engineering and scripting. In some cases, AI platforms are being used to create prompts for other AI-based platforms to follow.

The possibilities of the technology are endless. Organizations like IBM have been applying AI in various areas across IBM and its clients, such as to support skills attainment, career mapping and progression, and human resources.

Where Can Generative AI Deliver Real Value Today?

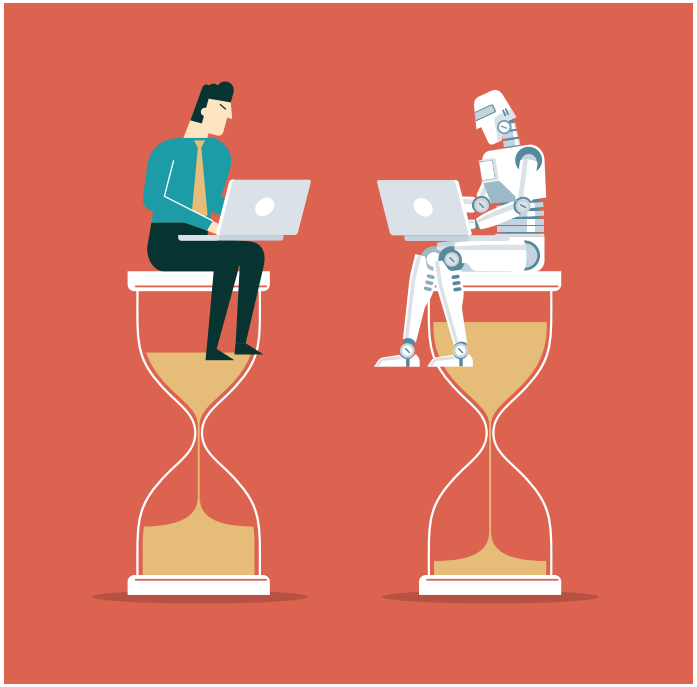
In human resources, IBM has identified three common ways in which AI has been applied. However, at a general level the principles guiding the use of AI for HR purposes are applicable to other areas and functions across an organization.

- **Ad hoc tasks** such as capturing information from employees and deriving insight. For example, new employees can provide feedback on the onboarding process, which AI can analyse and summarize to suggest improvements.

"Generative AI can significantly increase the speed at which we provide significantly better and quicker insights to augment human decision-making for managers."

- **Automation of processes**, such as the creation of FAQs. Previously, employees would have to field questions, collect the answers, pull together the most common questions and answers and create an FAQ system. AI can simply generate the answers on request.

- **Automation of programmes using digital twins**. A digital twin is a virtual AI-based persona that can remember past business interactions to make workflows more effective as it has a long-term memory. It works in partnership with a domain expert to move employees higher up the value chain by engaging with multiple personas in natural language or via events to compete a specific set of processes in an end-to-end programme.



The great hype for AI is not unique: we often see this with new technologies such as blockchain and the Internet of things. Often, the hype smothers the potential as reality seems disappointing. With AI, this situation may play out differently.

Firstly, there are already established examples of real-world applications of generative AI. For Andi and Jon, the challenge is keeping up with the speed of technology evolution rather than applying it. By focusing on solutions that AI can deliver today and that demonstrate value, organizations can build momentum based on proven outcomes, generate further buy-in and temper disappointment.

"That's the advantage of generative AI. It can scan all our systems where we track what assignments, activities and jobs we need to perform."

Secondly, it is important to note that, unlike many new technologies, generative AI is inherently accessible, which makes it very easy to adopt. This underpins IBM's long-term vision to make generative AI for everyone, not just technology companies. The aspiration is that AI could help everyone do everything better.

But what does this look like in practice? As part of IBM's investigation into the possibilities of generative AI, the company undertook a typical exercise whereby teams would look at different functions in the business and try to understand how the technology could be used to improve their efficiency and effectiveness. This would usually be done over days or weeks following a design thinking process. The team would create personas to understand how and where improvements could be made.

In this case, using generative AI as part of the process itself, the teams were able to generate the personas in seconds rather than days. Furthermore, the team could ask questions of the generated persona like how they would interrogate real people in those roles. Through this process, they discovered ways in which they could improve productivity by 10% to 20% by providing colleagues with generative AI-powered copilots.

The focus so far has been on more basic tasks, but as the technology evolves it will be able to tackle more-complex problems. Being aware of these limitations is crucial. For example, generative AI is not yet good enough to deal with complex business areas like compliance. The risks of "hallucinations", or inaccurate results where the AI model creates false data, could result in negative outcomes for the business.

The future vision is a hybrid workforce where people and AI work together to solve problems and deliver outcomes quickly and better. One way in which this can be achieved now is by AI taking care of the more basic but often time-consuming tasks, freeing up employees to focus on the areas where their skills and experience deliver the best value.

Examples of how AI can aid workers:

- Software developers can use AI to create basic applications that developer teams then build on and improve, reducing overall time.
- Graphic designers can dedicate their efforts to creative aspects, using AI to complete mundane tasks like removing the background from a photo.
- Knowledge workers can spend less time writing emails where the initial draft can be created by a copilot.
- Admin tasks such as recording the minutes of a meeting can be automatically generated by AI, allowing meeting participants to focus on the discussion.

"For us, the hype is definitely real. But the challenge with generative AI is that it moves so quickly, and its capabilities get so much better and better over time, that our thinking has to change."

What Challenges Do Early Adopters Face?

The main challenge for organizations with any new technology is knowing where to start. As usual, this will most likely begin with a business case for a particular application of the technology.

The process can be split into three steps. The first and most basic scenario is conversational. For example, businesses can encourage employees to get answers to common questions by asking AI rather than going through an extensive process dependent on people, who can be a limited resource.

The second step is transactional activities. For example, in human resources, an AI model can automate the ability for an employee to book time off. In this situation, the user is not just enquiring and receiving an answer but creating data in a system.

The third step is where the AI becomes more proactive. In the first two scenarios, it is the employee who starts the interaction. However, in this scenario, the AI can make suggestions to the individual. In human resources, this could be suggesting training to prompt the learning of new skills to help an employee in their career development.

New technologies are never without their challenges, and AI is no exception. The hype for generative AI has been good for fuelling interest and adoption, but it has also fuelled fear. Many have considered how AI could replace people in the workforce. However, AI will create new scenarios that will require people, offsetting job losses by the creation of new roles.

The goal of the hybrid workforce is not for AI to replace real people, but for people to benefit from working with AI. Where organizations can demonstrate this, they will be able to alleviate this fear.

A further challenge is the concern that AI will make decisions that affect our lives. In human resources, AI systems have been used for recruitment and the selection of employees to be part of project teams.

The concern is that AI is now making the decision as to whether an applicant gets the job or whether employees are chosen to work on a particular project. However, this is not the case in IBM.

Real people are still making these types of decision with the additional assistance of AI to help improve, accelerate and support the process. The question of decision-making is vital to how organizations use AI in the future, and the role of AI will be determined by legislation as well asor an organization's ethical beliefs.

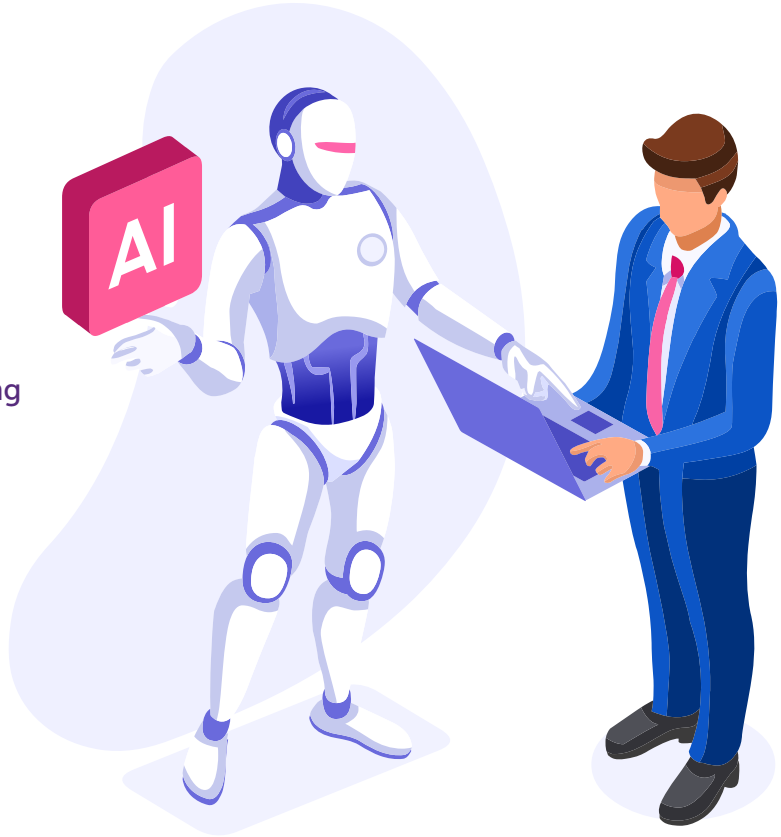
How to Ensure the Ethical Use of AI?

The question of ethics and AI will be an area of increasing development and interest for individuals, organizations and governments in the coming years. It is important that where AI is providing advice, it is transparent in explaining how it is coming to that advice. AI should not be a black box from which information emerges with no way of knowing how or why it reached that outcome.

The source of AI output is in the input — the training data sets. This intellectual property must be recognized in the output, both in terms of credit and financial reward where applicable. We have already seen AI service providers remunerating creators content used to train AI models. Some have even promised initiatives to mark content created by AI through metadata that credits sources and creators.

IBM has been working with AI for many decades, and the area of ethics is well-developed in the organization. For example, there is a dedicated AI ethics board that proactively investigates how the business is using AI to make sure it does not fall foul of what IBM believes to be good practice. This does not aim to be a blocker to AI development; rather, it provides guardrails in which new AI-enabled solutions can function without fear of problems such as bias.

"At IBM, we have a very clear principle that the purpose of AI is not to make the decision, it's to augment human decision-making. It's going to help me make the decision by analysing data and making recommendations, but it won't make the decision."



What Next?

In the coming years, there will be increasing regulation, legislation and standards for AI that will help organizations to apply the technology correctly. This will serve to alleviate many of the anxieties about what AI could mean for individuals in the workforce and society more generally.

The area of AI is rapidly evolving, making it difficult to predict its journey beyond the next 12 months. Looking at new products from technology providers such as IBM and the applications already being served by AI, the idea of a hybrid workforce is already here, and it will continue to grow at a rapid pace as more of us interact with AI daily.

Currently, the focus is on how organizations can apply AI to deliver point solutions, and this is driving value for enterprises and individuals. The great potential of AI will be unlocked when it starts to shape the operating model of the business itself.

If generative AI can quickly accomplish tasks that consume much of a business' time, taking mundane tasks away from employees, how does this enable the business to fundamentally change? How much faster can research and development bring new solutions or avoid wasting time and money on failed initiatives? Whatever the industry, the future will look very different.

"We genuinely believe that AI will accelerate the shift to a hybrid workforce: we will see humans working with digital workers to be more productive, add more value, make quicker and better decisions, but also change the whole way that they as individuals work."