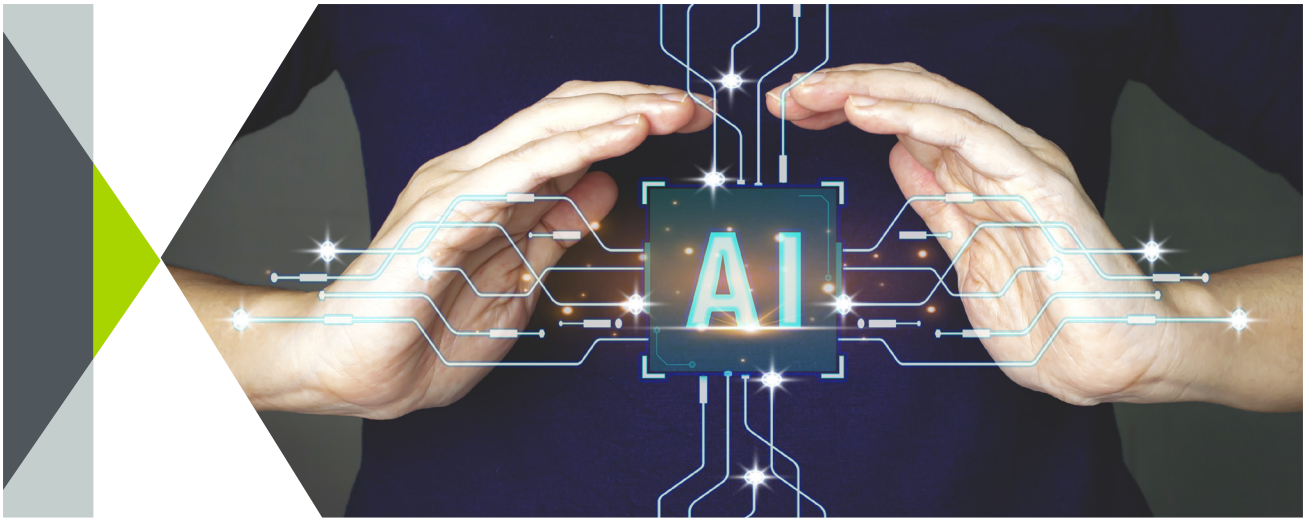


EXECUTIVE INSIGHTS

Generative AI And Human Expertise in Synch: Shaping the Future of Technology Services

Generative artificial intelligence (AI) systems — with ChatGPT a recent high-profile example — will be to 21st-century services businesses what Henry Ford's production line was to 20th-century manufacturers: significantly transformative.

But how can business leaders work with this new technology? What are the variables to consider when reviewing how and where to implement generative AI? Will generative AI be an 'assistant' or a replacement for the human element?

In this article, L.E.K. Consulting explores the potential impact of generative AI on various roles in the technology sector, as an example, and we outline a strategic process for adopting generative AI technology.

Generative AI has been front and centre in the news lately, driven by publicity around the ChatGPT, Bard and similar large language models. Public perception is that this technology will become a powerful tool for personal and commercial use; however, much of the current hype has focused on the "ask me anything and I will write anything" aspects of these systems.

But generative AI, a subset of the broader AI family, offers different and far greater transformational possibilities than do earlier iterations of AI products. Generative AI systems deliver a specific focus on creativity and synthesis, generating new content or data such as text, images or music based on data inputs or patterns it has learned as part of its 'training'.

As generative AI systems advance further, they can be applied to automate or support many tasks currently performed by employees, including the creation of original content based on data-driven patterns.

But the human element is critical here: for generative AI to succeed, it needs human skills like critical thinking, creativity and empathy to complement its own abilities to analyse large volumes of data, identify patterns and generate novel outputs.

Generative AI could very well significantly disrupt the global labour market. Some analysts[1] predict that up to 300 million full-time jobs could be fully or partly automated by using machine learning systems to replace or augment employees.

It's more likely, though, that generative AI will rework the way technology supports human endeavours, with the human element in these roles elevated as a result.

Generative AI — making the difference

Generative AI will impact many sectors, but its models will be most important to the technology sector. Many roles in cyber, cloud, IT services, data analytics, software and digital businesses will be enhanced by generative AI, as can be seen in the sample use cases outlined below (see Figure 1):

Generative AI can act as a double-edged sword in these instances: technology businesses can either use generative AI models to replace the human element altogether or to empower people to deliver even greater value for the organisation. The second alternative presents a more challenging — but ultimately more rewarding — option for businesses looking to harness the best of both AI and human creativity.

The implications for a business that makes the best use of generative AI are clear: improved productivity and more-efficient processes, producing reliable, high-quality results with minimal human error. Any upfront capital costs incurred by installing these systems and reconfiguring the business around them can quickly be offset by the resulting business improvements in the months and years after implementation.

The right strategic approach for introducing generative AI to your organisation

Businesses considering generative AI applications need to review the variables behind their use case and adopt a process to roll out these applications across the organisation. Our experience has shown that the following steps are necessary for evaluating and introducing generative AI into an organisation.

1. **Identify key skill-based use cases and prioritise their importance.** To effectively implement generative AI, first identify the most relevant use cases based on the areas where generative AI creates the most value. Engaging stakeholders and cross-functional

Figure 1
Use cases for generative AI role impacts

Generative AI application	Role	Role implication/evolution
Generative AI streamlines routine aspects of data analysis and automates pattern detection within data sets.	**Business analysts**	With generative AI streamlining the requirements gathering process, business analysts can focus on building stronger relationships with stakeholders, ensuring better communication and collaboration.
Generative AI helps automate routine tasks such as infrastructure design and provisioning, optimises configurations, and predicts system performance.	**Cloud engineers**	Cloud engineers can focus on designing and implementing more sophisticated cloud solutions, optimising performance, and addressing complex integration challenges.
Generative AI enhances project planning, risk assessment and resource allocation by analysing historical data.	**Project managers**	Project managers can collaborate with generative AI systems, fostering team synergy, stakeholder engagement and AI-driven decision-making.
Generative AI generates optimal system designs and architecture blueprints by considering multiple constraints and requirements.	**Solution architects**	Solution architects can validate AI-generated designs, refining solutions using human expertise and industry knowledge.
Generative AI automates code generation, offers recommendations for code quality and performance improvement.	**Software developers**	Software developers can refine AI-generated code, integrate complex systems, expand skill sets in emerging technologies alongside AI.
Generative AI assists in diagnosing and resolving technical issues, offering real-time problem-solving recommendations.	**IT support specialists**	IT support specialists can address complex issues, enhance customer experience, collaborate with AI to improve support services continuously.
Generative AI personalises marketing campaigns and identifies sales opportunities.	**Sales and marketing professionals**	Sales and marketing staff can refine their skills in client relationship management, understanding client needs and effectively communicating the value of AI-generated insights and recommendations.
Generative AI streamlines the talent recruitment process and helps identify suitable candidates.	**HR and talent acquisition specialists**	HR specialists can refine talent strategies, nurture company culture and ensure ethical use of AI in talent management processes, enhancing human-AI partnership.
Generative AI supplements many of the human-performed routine tasks required for legal and business compliance and other business support operations.	**Other professionals (e.g. legal and finance teams)**	These professionals can now focus on advising management on the strategic implications of their functions within the business.

Source: L.E.K. research and analysis

teams will help determine which use cases align with strategic objectives. These use cases must be prioritised to ensure a focused approach to adoption, which will result in better resource allocation and a higher likelihood of success.

Our 'attractiveness framework' (see Figure 2), outlined further in this article, offers a practical tool for this process. By mapping use cases and scoring them against the framework's evaluation elements, business leaders can clearly identify the best use cases to pursue.

2. **Evaluate the potential impact of generative AI on existing roles and processes.** It is crucial to understand the implications of generative AI adoption for existing roles and processes. This assessment should consider potential changes in employee responsibilities and workflows, and the need for upskilling or reskilling. Evaluating

these factors will help organisations prepare for a smooth transition, address potential challenges and maximise the benefits of generative AI integration.

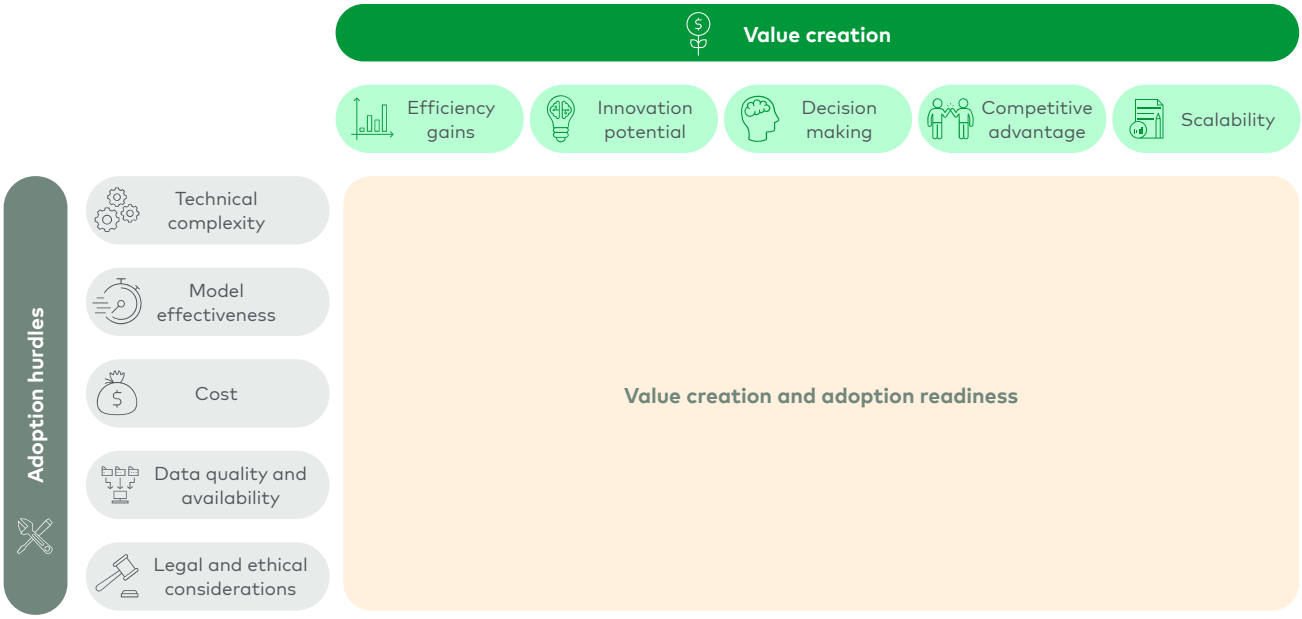
3. **Select, train and refine the right generative AI model using a minimum viable product (MVP) approach.** Once selected, the best generative AI model must be trained and refined using an MVP approach, which should be used to test trade-off decisions on sources of training data (public vs private), model accuracy, speed and conciseness of content generated.
4. **Develop a comprehensive change management plan to facilitate AI adoption.** Successfully adopting generative AI requires a well-structured change management plan that addresses potential resistance and prepares employees for new ways of working. This plan should include clear communication and adequate training to help employees adapt to the new technology. Employees should be trained on how best to interact with the model (including feeding data inputs and correcting model outputs) to improve its performance and effectively act as the 'human in the loop' — which is a critical element in model accuracy.
5. **Integrate generative AI models into the organisation and scale up successful projects.** After refining the generative AI model(s), organisations integrate them into existing workflows and systems. By gathering feedback across the project portfolio, organisations quickly kill non-performing projects and double down on successful projects.
6. **Continuously monitor and assess the performance and impact of the generative AI solutions implemented.** Once the generative AI model(s) are integrated, their performance and impact must be continuously evaluated. This ongoing assessment helps an organisation make necessary adjustments and ensure that generative AI continues to deliver value over time.
7. **Foster a culture of collaboration and ongoing learning between AI and human expertise.** The success of generative AI integration depends on the synergy between AI and human expertise. Organisations should encourage collaboration, learning and knowledge sharing to build trust in AI solutions and to leverage the unique strengths of both human and artificial intelligence.
8. **Develop a long-term AI strategy to support business objectives and adapt to the evolving AI landscape.** Finally, a long-term AI strategy should be established that supports business objectives and allows an organisation to adapt to the ever-changing AI landscape. This strategy should include investment in AI research and development, talent acquisition, and continuous improvement of AI solutions. Committing to a long-term vision allows organisations to remain at the forefront of technological advancements and maintain a competitive edge in their industry.

Using the attractiveness framework to make the right choices

Step 1 in the above process is critical for identifying the right use cases for generative AI solutions. Business leaders need to carefully model the impact of these use cases before adopting these systems to augment or replace various functions across their businesses.

To aid in this analysis, our 'attractiveness framework' (see Figure 2) helps business leaders assess the use cases for employing generative AI against a range of factors across two broad aspects: value creation and adoption hurdles.

Figure 2
L.E.K. attractiveness framework for generative AI use cases



Source: L.E.K. research and analysis

Considering the important questions

Value creation asks management to consider the business advantages of a generative AI use case. The value creation elements need to be set against the broader commercial and societal goals. How will the use of generative AI enhance the organisation's competitive advantage? Improve its top- and bottom-line performance? Improve its brand footprint and penetration within its markets? Reflect on the organisation's environmental, social and governance goals?

Adoption hurdles asks management to consider the likely challenges of adopting such a system. What are the elements that might work against the selection and adoption of a generative AI system or use case? Some of these (e.g. technical complexities, data quality and availability) can be overcome through development and testing. Others, such as issues around change management and legal and ethical considerations, are considerably more

challenging and have broader implications for an organisation's brand and reputation with its stakeholders.

As an example of this process, let's look at how business leaders can use the attractiveness framework to consider a generative AI use case for a cloud architect. The business may weigh the efficiency gains, innovation potential and decision-making improvements of implementing AI against potential adoption hurdles like technical complexity, data quality and legal considerations. The framework then lets the business evaluate whether generative AI can improve its ability to design cloud infrastructure more efficiently, innovate cloud solutions and make better decisions in managing cloud resources.

Creating the human-AI hybrid workforce

Generative AI adoption will require business leaders to carefully consider their people and talent strategies along the way. They will need to be clear on the training required in AI-related skills for existing employees to ensure that they remain relevant and competitive in the evolving IT services landscape. And businesses will need to identify the new roles that emerge from a transition to a generative AI environment — for example, AI trainers, AI ethicists or data scientists — to determine how their organisation can leverage these new opportunities.

The evolution and adoption of generative AI will continue at an exponential pace, placing organisations under immense pressure to stay abreast of these developments. Those business leaders who make the right choices — and manage their implementation well — will be the Henry Fords in a transformed world. Those who fail to keep up with the available generative AI options, or choose poorly, could conceivably end up as the blacksmiths and cartwrights of the 21st century.

For more information, please contact strategy@lek.com.

Endnotes

[1]The Potentially Large Effects of Artificial Intelligence on Economic Growth, Joseph Briggs and Devesh Kodnani, Goldman Sachs, March 2023

About the Authors

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