



CIKLUM

Generative AI: cracking the code to business growth



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An introduction to Generative AI

Generative AI (GenAI) is proving to be such a game-changer that even the biggest players on the global market are having to sit up and take notice.

It's easy to understand why. The ability to create or generate text, images, audio and video through artificial intelligence, algorithms and machine learning techniques has the potential to fundamentally change entire industries forever. And as a result, GenAI is thriving and attracting major investment despite the general IT trends of a market downturn and tech-sector layoffs. For example, [Stability AI](#) and [Jasper](#) have both recently raised more than **\$100 million apiece** in new investment, and they're just two of over 150 start-ups that are already exploring GenAI's possibilities.

The launch of [ChatGPT](#) in November 2022, and the record-breaking rate of adoption it initially generated, has changed the playing field in the tech sector entirely. Even Google had to call a 'Code Red' meeting involving its most senior leaders to discuss their response to ChatGPT, with AI features being made a top priority. [According to the New York Times](#), Google now intends to release more than 20 AI-related products by the end of 2023.

At the time of writing, it isn't clear exactly what the future holds for AI. While progress so far has been heralded by many as the first step on the road to machines becoming self-aware, there is uncertainty on how the technology will develop, as well as ethical concerns in some quarters. Nonetheless, we have already built models for clients that are having a transformative impact on their business, underlining why it's so important not to miss out on the opportunity.

This guide explores the potential benefits, risks and use cases of GenAI, and will help you determine where you can deploy it to best effect.

Driving competitive advantage and enterprise value

It's clear that there is significant business opportunity to be found within GenAI. But to understand where genuine value can be found, it's helpful to go back and understand why the first AI platform to go mainstream has been so successful.

ChatGPT is the fastest-growing consumer application the world has ever seen, attracting **100 million active users** in January 2023, just two months after it launched. There's no single 'smoking gun' that explains why ChatGPT has gained so much traction around the world so quickly. Instead, there are several different factors at play:



Reinforcement Learning from Human Feedback (RLHF) & Natural Language Processing (NLP):

OpenAI employs this technique to fine-tune its model to generate better answers/ results that pass the ultimate test, human acceptance. Through its Natural Language Processing (NLP) capabilities, ChatGPT leads the way in understanding the subtleties of human language, even in jargon-heavy topics like IT. The platform has been able to put highly complex subject matter into language that anyone can understand.



User experience

The chat-like interface has delivered a user experience that is similar to conversing with a human being. ChatGPT exudes a consistently positive tone, avoiding condescension, frustration or other offensive language. This creates a comfortable experience for users, fostering a strong connection with technology.

 Flexibility, integration and scalability

As ChatGPT can be used for complex AI tasks, rudimentary chatbots and everything in between, it has universal appeal for both business and personal use. It is a true general purpose technology and has an impact in all industries, much like mobile and the internet.

 Multilingual functionality

The ability for ChatGPT to generate quality results in several different languages, and not just English, has played a major part in its global growth.

All these stand-out factors have given ChatGPT such a broad range of use cases that it’s been too good a proposition for investors and businesses to turn down. As a result, [Microsoft has invested OpenAI \\$10billion](#) to use ChatGPT technology in many of its solutions, including search engines and customer service platforms.

It’s a perfect demonstration of how an AI platform has to have customer-centric appeal in order to succeed from a business point of view. Organisations and customers alike have to be able to understand clearly how they will benefit from AI, whether that be smoother customer journeys, new revenue opportunities, or faster and more efficient processes. It is on this foundation that the best AI solutions of today and tomorrow will be built, standing out from competitors and driving significant enterprise growth for its creators.



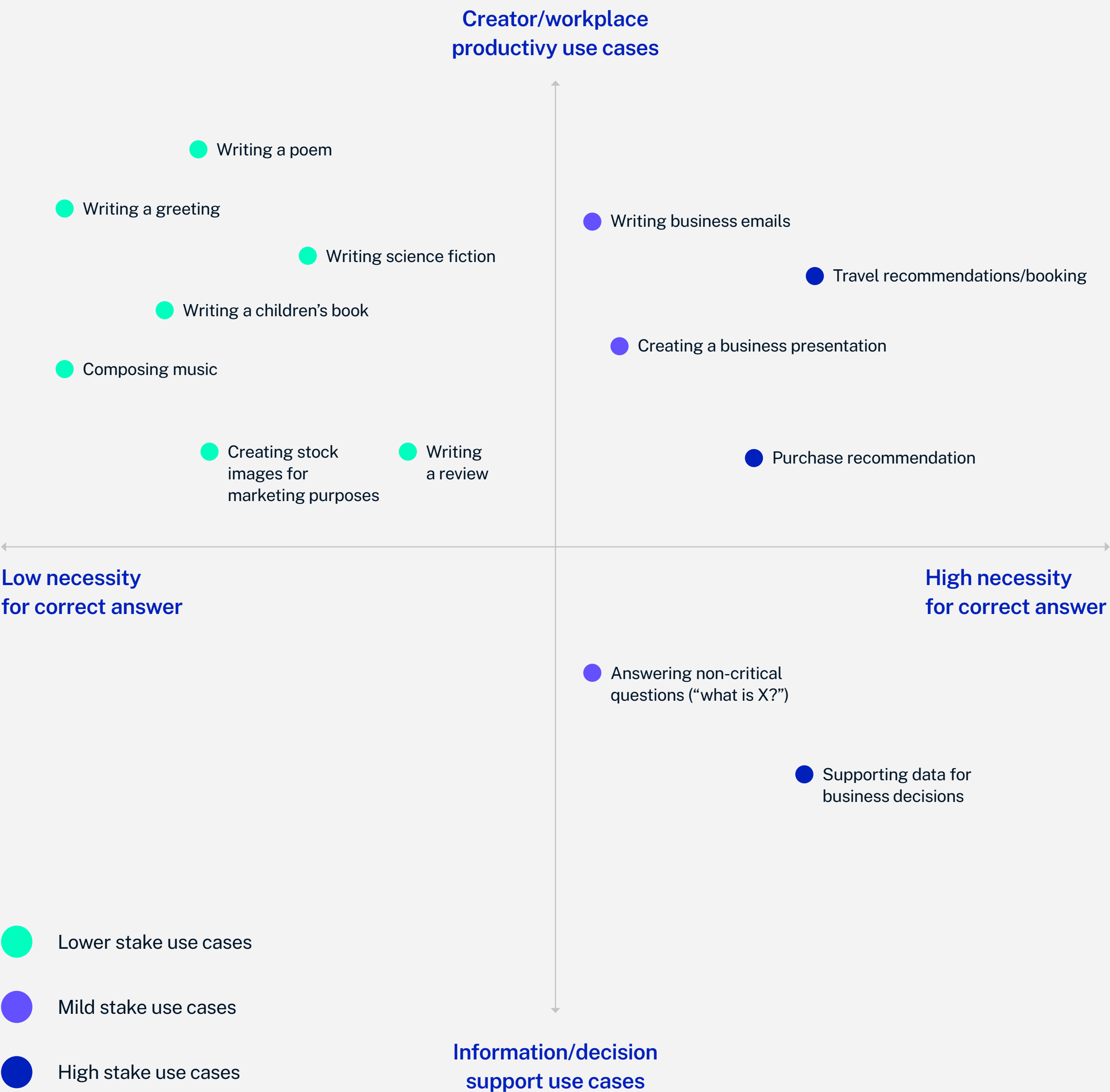
Identifying and addressing the risks

It’s still early days for GenAI, which is good news in a sense, because it means that no single business has been able to establish a dominant market position. Even Google, with all its financial and operational muscle, has found the going tough. Having fast-tracked its chatbot Bard into the marketplace in response to ChatGPT, the platform made a highly-publicised error that generated a **9%** fall in the stock market value of parent company Alphabet.

			
Initial Approach	“Ship rapidly at all costs”	“Ignore and continue status quo”	“Experiment early and leverage own strengths”
Business	Innovative multimedia instant messaging app and service	Digital subscription platform for homework and online tutoring	Innovative language learning app
Outcome	• 1.67/5 average US app store rating • 75% of reviews are 1/5	• 0 GenAI product/feature shipped • Core user journey (Q&A) easily substitutable by GenAI • Proprietary data either unused or subpar vs. public internet sources	• 4 months until 1st paid GenAI featured release • Leveraged & augmented existing user journeys • Leveraged user data for personalised experience
Market Valuation	>28% drop in share price post release	>67% drop in share price since ChatGPT release	>100% increase in share price since ChatGPT release

This demonstrates how deploying GenAI in the right places and in the right ways is easier said than done, needing to be built based on real user needs rather than theory. This isn’t only from a technical standpoint, but also from the perspective of any regulations and compliance demands involved. Strong governance processes and frameworks are therefore vital to ensure that AI use is fair, transparent and proper.

Then there are the ramifications of any inaccurate information or advice that GenAI solutions may give users and customers, commonly referred to as “hallucinations”. For example, if medical professionals are given the wrong recommendations for treatment, or manufacturing businesses repair their machinery incorrectly, there is a serious risk of harm to users and the people around them. The axis below can help identify which business use cases are suitable for GenAI deployment, and those which may not be.



These are major concerns that need to be addressed, and yet many CxOs are overlooking or underestimating them in the rush to get AI solutions to market as quickly as possible. The result of this is that they risk their organisations being exposed to multiple headwinds in the long-term, including:

01

Technical readiness

If you don’t have the right infrastructure and skill sets in place, then it becomes difficult to manage systems to good effect, and to build GenAI on a strong and sustainable foundation. Any infrastructure that doesn’t have large-scale storage, very low latency, strong networking and excellent analytics capabilities will struggle to cope.

02

Data quality

If the underlying data used by the GenAI solution is poor, inaccurate or there isn’t enough of it, then it won’t generate results of sufficient quality and reliability. Ensuring that data is in place, structured and processed is vital before any GenAI deployment is considered. This should include filling out or removing missing values, fixing errors, and slimming data down for easier handling, amongst other activities generally referred to as data pre-processing.

03

Hidden costs

Many AI solutions are built on a price-per-prompt basis, where the computing power and energy needed to run them is priced depending on how much use the solution gets. If not built appropriately this cost can be up to \$3 per question-and-answer pair, meaning overall costs can quickly mount up for solutions with widespread adoption. Using appropriate architecture and GenAI models can reduce this down to a couple of cents or less.

04

Security

Cleverly crafted questions can trigger prompt injection, potentially exposing sensitive training data which contains personal or confidential information. [Prompt injection attacks](#) have already had some success on ChatGPT and Microsoft Bing Chat, amongst other platforms.

How to make the most of Generative AI

Most GenAI projects will live or die on the quality and quantity of the data that will support them. If businesses don't have high quality proprietary data to train or tune a GenAI model, then the best product they can release will simply be a ChatGPT experience. This will not offer any competitive advantage and lead to a bad user experience. Don't believe us, ask Snapchat.

Unless you are mature in data practices, a data transformation programme before any AI implementation is absolutely essential -and not only in the short-term. With a strong foundation of data and the ability for AI to refine its processes independently, the amount of real data needed for machine learning will reduce over time; [Gartner suggests](#) by as much as **70% by 2025**.

Achieving this will require pulling data in from across your organisation, and from other sources and systems, too. Ensuring that this data can be properly integrated requires careful cleansing and governance, close alignment on the definitions of certain data features, and keeping data properly stored and protected.

Businesses who can put a robust infrastructure and data foundation in place -as OpenAI did for ChatGPT -are therefore able to scale up their use of large language models very quickly and confidently. This puts them in pole position to innovate before their competitors, and enable more specialist business uses for AI like contract management and code generation.

All this is making the potential for GenAI to transform entire businesses and industries simply vast. For example, the [biotech company Absci](#) has already been able to design new antibodies much faster with the help of AI, to the point that it could cut the drug development process by more than two years. In use cases like this, the difference is not only the ability to create new business opportunities -it could potentially save lives, too.

Strong candidates for Generative AI

McKinsey estimates that AI can add trillions of dollars to the value of the global economy, including up to **\$340 billion** a year in the banking industry and up to **\$660 billion** in retail. Whether businesses are small or large, operate in B2C or B2B, transformative use cases for GenAI are emerging across many industries.

With a mature data capability in place, you’ll be able to unleash the potential of GenAI by turning large quantities of structured, labelled data into useful knowledge for end-users. This potential can be realised internally, by driving operational efficiency, and externally by delivering enhanced customer value.

Internally, GenAI can be used to:

- 01

Boost productivity

Employees (as well as students, customers and all other types of end-user) are using GenAI to make their day-to-day work simpler and faster -so much so that ChatGPT often hits its operational capacity during normal office hours.
- 02

Shorten time to market

AI can write code and test it for accuracy, saving vital time for software developers in cutting out the most repetitive and time-consuming work. This can not only accelerate code quality testing, it can reduce development time frames substantially.
- 03

Enable predictive capabilities

Using AI to analyse data and trends for insights can help with forecasting, demand prediction, supply chain optimisation and generally informing better business decisions.

From an external perspective, AI is also making its presence felt with end-users and customers, thanks to user experiences similar to human interactions online, and the speed and quality of its work. The extent of the difference AI can make is so large that AI will soon become a basic expectation among most customers, in areas such as:

01

Enhance customer services

GenAI can be used to augment user experiences and make more advanced capabilities accessible for all. An excellent example of this is the text prompt-based photo editing functionality that Meta is currently developing for Instagram.

02

Improve communications

AI has taken over much of the simple and more repetitive work in customer communications, like answering the most commonly asked questions. In the UK, energy provider [Octopus is now using AI to answer 44% of all the customer service emails](#) it receives.

03

Refine search results

Using AI to generate better and more relevant results when searching is improving user experiences across a wide range of businesses, and especially retail. [Google's Search Generative Experience](#) is being developed with smarter responses in mind.



Developing the right business use cases

In order to take full advantage of GenAI it's best to follow the core implementation principles of product discovery, problem-solving, testing, iteration and optimisation. Get this balance right and you're perfectly placed to drive innovation, optimise operations, achieve business objectives, and deliver what your customers need.

In order to work out what you need to do, ask yourself the following questions:

- What is the maturity, quality and quantity of your data at present?
- How much data do you have that is proprietary and unique to you within your industry?
- To what extent are you capable of incorporating human feedback to train an AI model?
- Have any of your competitors already deployed AI, and are they realising benefits from it, either internally or externally?
- What is the user need that an AI platform can fulfil?
- Have you conducted an AI opportunity assessment, incorporating the potential of other opportunities such as Robotic Process Automation?
- Are there peaks in user demand at certain times of day, week or year that an AI platform can assist you with?

The answers to these questions can give you a solid starting point from which to approach your AI project, and help you do all the right things in preparation. If you feel you need help with this discovery process, then an expert GenAI partner will be able to support you.

How Generative AI works best

Ciklum is here to help

There's lots about GenAI that's exciting. But as much as the sudden growth of the technology might make it seem so, the success of platforms like ChatGPT isn't down to luck. It takes a lot of planning, care and clear definition of objectives to develop AI tools that will fulfil user needs and drive new efficiencies - and that's where we at Ciklum can help you.

Our end-to-end approach to AI doesn't just give you access to technology: we also give you support with discovery, strategy, proof of concept, integration, implementation and maturity. Our global workforce of AI experts ensure that development is always aligned to your business goals, and that your energy and enthusiasm for GenAI are channelled in the right direction.

Ciklum is a global Experience Engineering firm that stands at the forefront of innovation, blending next-generation product engineering, exceptional customer experiences, and cutting-edge AI. We revolutionize the way people live by developing groundbreaking technologies that reimagine, reshape, and redefine the future.

For more than two decades, we've been a trusted partner to both global enterprises and digital disruptors, spearheading the creation of digital solutions that not only tackle complex corporate challenges but also propel businesses toward accelerated growth and success.

We believe in the power of end-to-end partnership. Our expert engineers and state-of-the-art Labs seamlessly integrate with your business to deliver remarkable results.

With a vast global team comprising of over 4,000 highly skilled engineers, experience design specialists, product owners and consultants, we combine our expertise with your vision, joining forces to engineer technology that paves the way for the future of your business.

Find out more about how Ciklum can support your Generative AI implementation.

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