Intelligent Investment

# What are the implications of AI for real estate?

REPORT

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# Introduction

Artificial Intelligence is not new, with many forms of AI and machine learning already used widely. But the term 'AI' has become commonplace more recently, driven by the development of generative AI, which broadens the capabilities of traditional AI.

Instead of performing straightforward tasks based on its original programming, generative AI is able to create new data and learn patterns based on its original input. Therefore it's widening the potential for enhanced and more creative applications.

Technology is becoming progressively more embedded in everyday life, with innovations being adopted ever faster. Generative AI tools are no exception to this trend, with ChatGPT being the fastest growing app in history. Now that generative AI is tangible for the consumer, demand for AI in all forms is likely to accelerate further and compound with the opportunity that it presents for businesses.

100m

Active users on ChatGPT in two months after its launch

Source: Reuters

In this report, we provide a high-level overview of the use of AI in business and real estate. Specifically, we consider:

01 **How will AI impact the economy and business?**

02 **What are the implications for the real estate industry?**

03 **What are the risks?**

This report is the first in a series of articles in which we dig deeper into the world of AI. We explore a range of topics including the use of AI in the home buying process, its application in healthcare and in real estate solutions.

All images in this report have been AI-generated

01

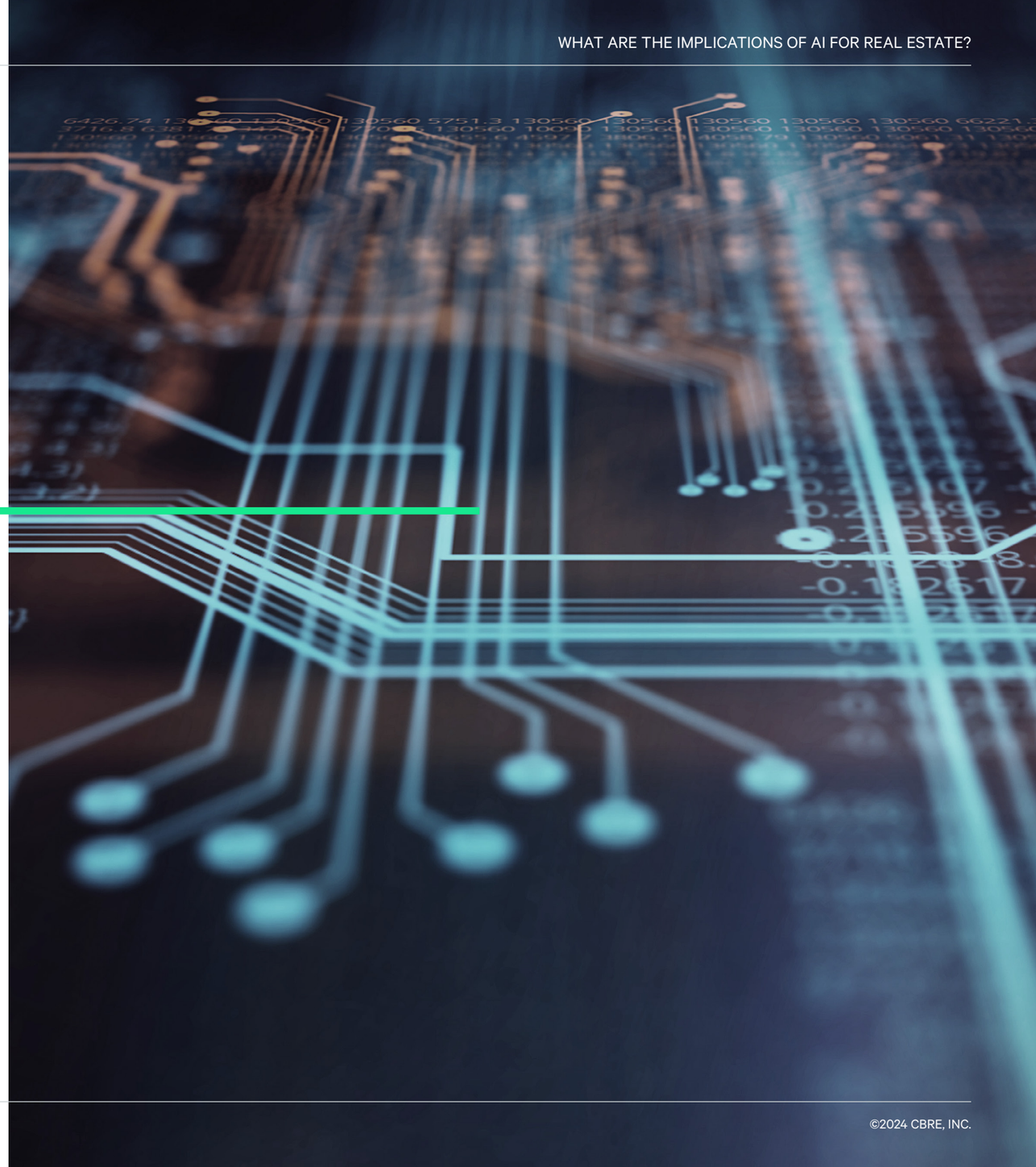
# How will AI impact the economy and businesses?

# The potential for AI to revolutionise the way we work

As with past technological innovation, AI can profoundly impact where and how people work. This could be through the direct automation of roles, using technology to improve efficiency, or indeed through more fundamental changes either to the type of jobs or the places of employment. This will have implications for the wider economy.

Using AI to speed up a range of business processes and administration, whether by full automation or augmenting a role, could improve productivity and boost economic growth. Potential applications include, but are not limited to: many clerical roles such as the production of contracts, minute taking, and invoicing.

There could be further gains through facilitating product improvements and new innovations. Findings from the May 2023 CfM-CEPR Survey suggest that most respondents expect AI to increase the global growth rate to 4–6% per annum over the next decade (from 4% per annum). Other estimates indicate global GDP growth of 7% (c.$7 trillion) and an uplift in productivity growth driven by the use of natural language processing.



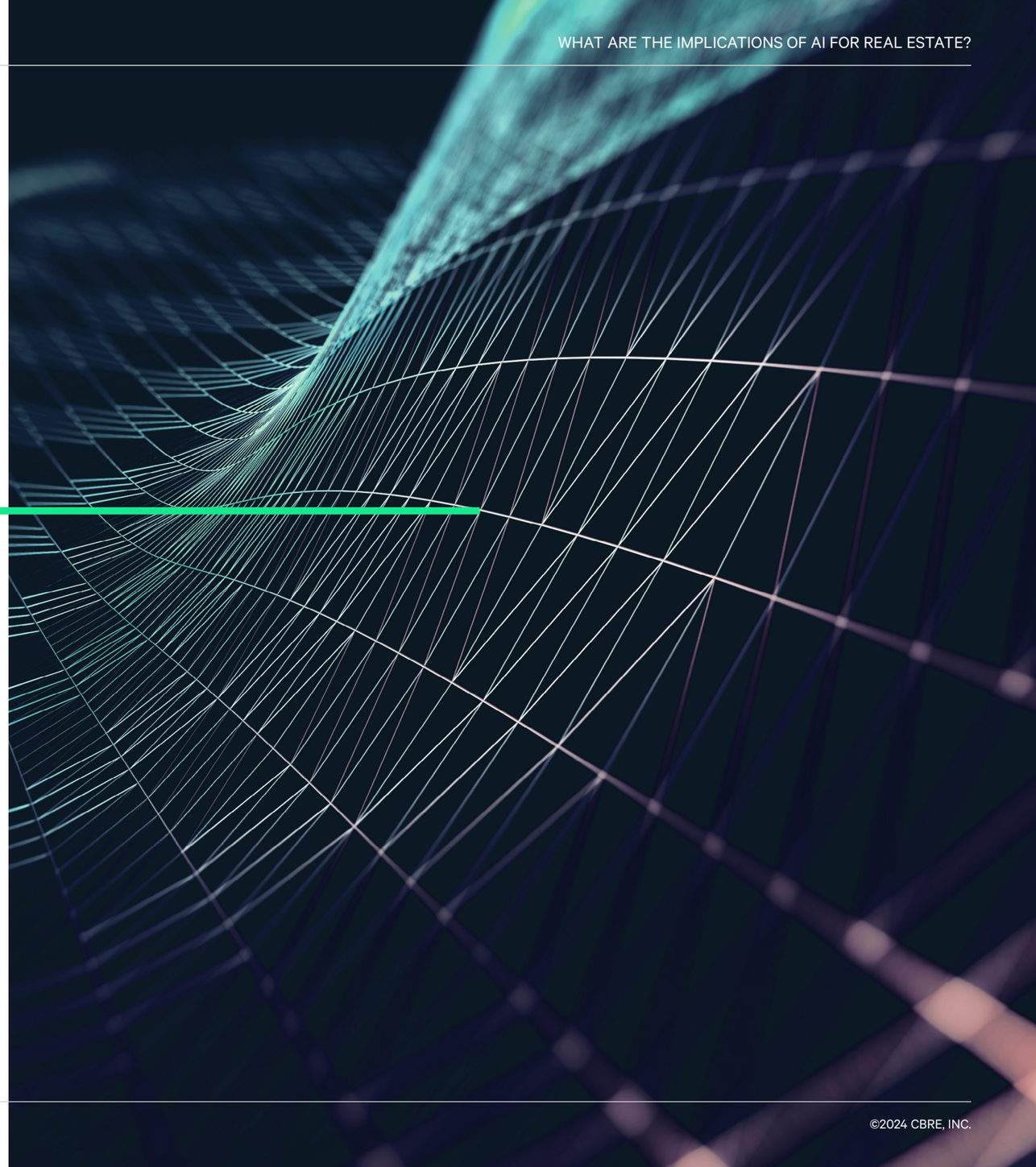
# There are concerns that increased automation will lead to job losses

Estimates suggest that 30% of UK jobs have a high probability of AI automation, which leads to questions about the possible impact on employment levels. Fears around the effect of automation aren't new. There have already been multiple technological developments which have seen repetitive low skilled work replaced by automation. However, evidence suggests that technological developments have created far more jobs than have been lost. For example, from 2001 to 2015, automation and technological developments contributed to the loss of 800,000 jobs, but created nearly 3.5 million elsewhere. This is a net increase of c.2.7 million jobs and added £140 billion to the UK economy. PwC's report for BEIS suggests a continuation of similar trends.

As expected, employment in tech roles is likely to see particularly notable growth, with US forecasts projecting growth within software development to be significantly higher than the average for all occupations.

The nuance of generative AI in contrast with earlier technologies is its ability to perform more advanced, cognitive work. This could result in higher skilled jobs being more exposed than in the past, according to Oxford Economics.

However, multiple sources of research indicate that many roles will only be susceptible to partial disruption. Using AI is likely to broaden capabilities rather than displace jobs. It could save time for employees, allowing them to focus on scaling up and strengthening their offering.



# Businesses have been slow to react

Business application and usage is in its infancy and unsurprisingly, the tech sector has led adoption so far.

A 2023 survey by McKinsey & Company found that only 35% of businesses were using machine learning and 20% using generative AI at the time. This indicated the need for significant growth to achieve their desired uptake.

However, the number of organisations adopting AI in at least one business function has increased rapidly during the last year from 55% to 72%. Generative AI use nearly doubled to 65%. Organisations using the technology are reporting cost cuts and increasing revenues within teams using AI.

A key challenge will be competition as rival companies decide the pace at which they invest in and capitalise on the opportunity. Industries that could benefit substantially from AI (for example, the healthcare sector) might be motivated to take early opportunities. Companies paying higher wages could be more incentivised to automate work or have increased capacity to finance automation. But on a larger scale, the impact of AI is likely to be seen most quickly in high productivity cities, according to Oxford Economics.

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# What are the implications for the real estate industry?

# Real estate is a data-driven industry that is well-positioned to benefit

The real estate sector has historically been slow in adapting to new technologies, and this pattern is mirrored now. Global VC funding in AI has been lower in real estate than other sectors, according to data from Preqin, accessed via OECD.AI (2024).

Still there is progress, and with a $110 billion to $180 billion value potential for the real estate industry, it's not surprising that AI applications are being widely considered.

- 72% of real estate owners or investors that responded to Deloitte's 2024 Commercial Real Estate Outlook indicated that their organisations were piloting or implementing AI; more so than any other technology.
- Real estate firms have already significantly increased hiring for generative AI talent, which was up 64% in 2022 and up another 58% to August 2023.
- Results of our European Office Occupier Sentiment Survey 2024 indicate that one third of occupiers are using AI for their corporate real estate processes, and 20% of those regard it as transformational.

# There are many potential applications of AI

By introducing AI at all stages of the real estate life cycle, stakeholders including investors, developers, and operators can build more efficient, sustainable operations. This will enhance asset values, enable smarter investment decisions, and improve tenant experience. There are a number of ways that AI could now, or in the future, help real estate stakeholders to optimise their internal business processes:

**Potential applications of AI within real estate organisations**

## Investing

Informing property selection by filtering and testing location options

Modelling cash flows, forecasts, or climate change scenarios

Efficiency gains in legal procedures e.g. conveyancing or due diligence

## Building

Scrutinising and creating visuals from written design parameters and urban plans

Precision in project planning and forecasting

Handling and quickly analysing data on design, dimensions, or specifications

## Leasing

Autogenerating outputs e.g. lease contracts and inspection reports

Enabling interactive and editable imagery to showcase a unit to let

Assisting tenant onboarding e.g. screening and credit checks

## Operating

Automating rent collections

Reporting of real-time building data, e.g. occupancy rates or costs

Customer service via an external communications ‘co-pilot’

# AI could also dictate real estate requirements

These changes will not only affect the procedures of industry players, but also the physical layout and operation of the buildings themselves. For example, AI-enabled monitoring of hardware can detect problems and maximise the lifespan of a data centre. Despite being energy-intensive itself, AI can be used within data centres to ensure that the energy spent is used as efficiently as possible.

These same approaches could enhance sustainability and optimise energy usage across many real estate asset types. Using generative AI to make buildings more 'smart' could also help to enhance user experience within individual assets, adhering to occupier preferences. In fact, the use of AI by the occupiers themselves will also be an important catalyst for further change in physical real estate. Their bespoke use of AI technologies could feed through not only to the size of their real estate requirements, but also the type.

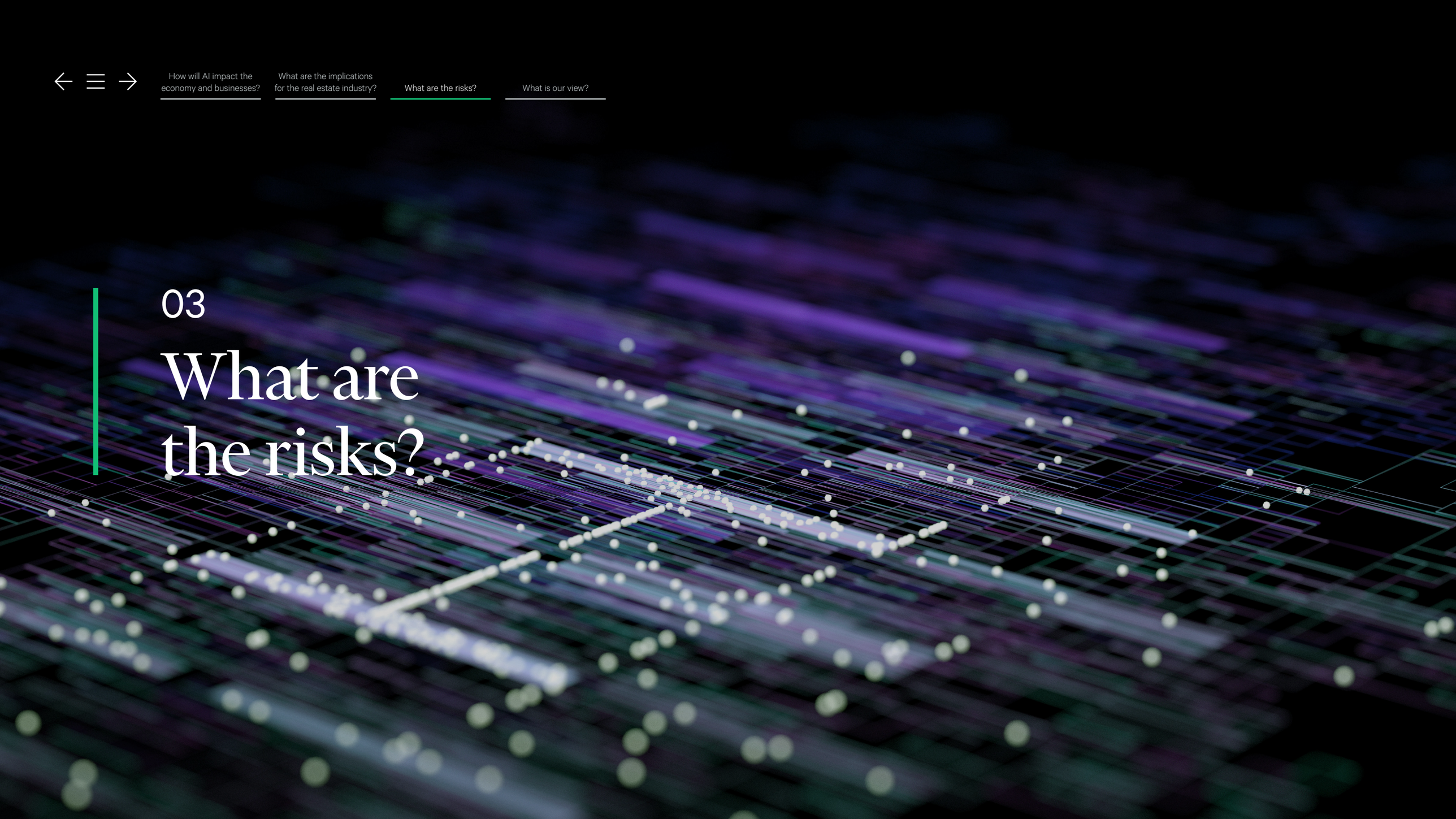
Generative AI could drive efficiencies in healthcare by supporting professionals with accurate diagnoses, assisting in drug discovery, and reducing time spent on routine tasks. Virtual diagnosis could reduce the need for on-site medical space. In contrast there may, for example, be a need for more digital lab space.

Automation of manufacturing processes and developments in transport infrastructure could improve productivity and efficiency for logistics occupiers. The use of driverless vehicles may change the requirement and locations of logistics hubs.

Consumer-focused businesses like retail and hotels could benefit from AI-enhanced customer service or the personalisation of services and products. Using the technology within physical stores or leisure units could increase the demand for brick and mortar property.

Any net change in the employment rate could be reflected in office footprint requirements, given that the 20 occupations most exposed to AI are, according to Oxford Economics, majority office-based.

There will be implications for data centres, which will need to adapt to the specific demands of AI. For example, the high-performance processors need more power than traditional data centre processors. In addition, they generate more heat, so need bespoke cooling technology.



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# What are the risks?

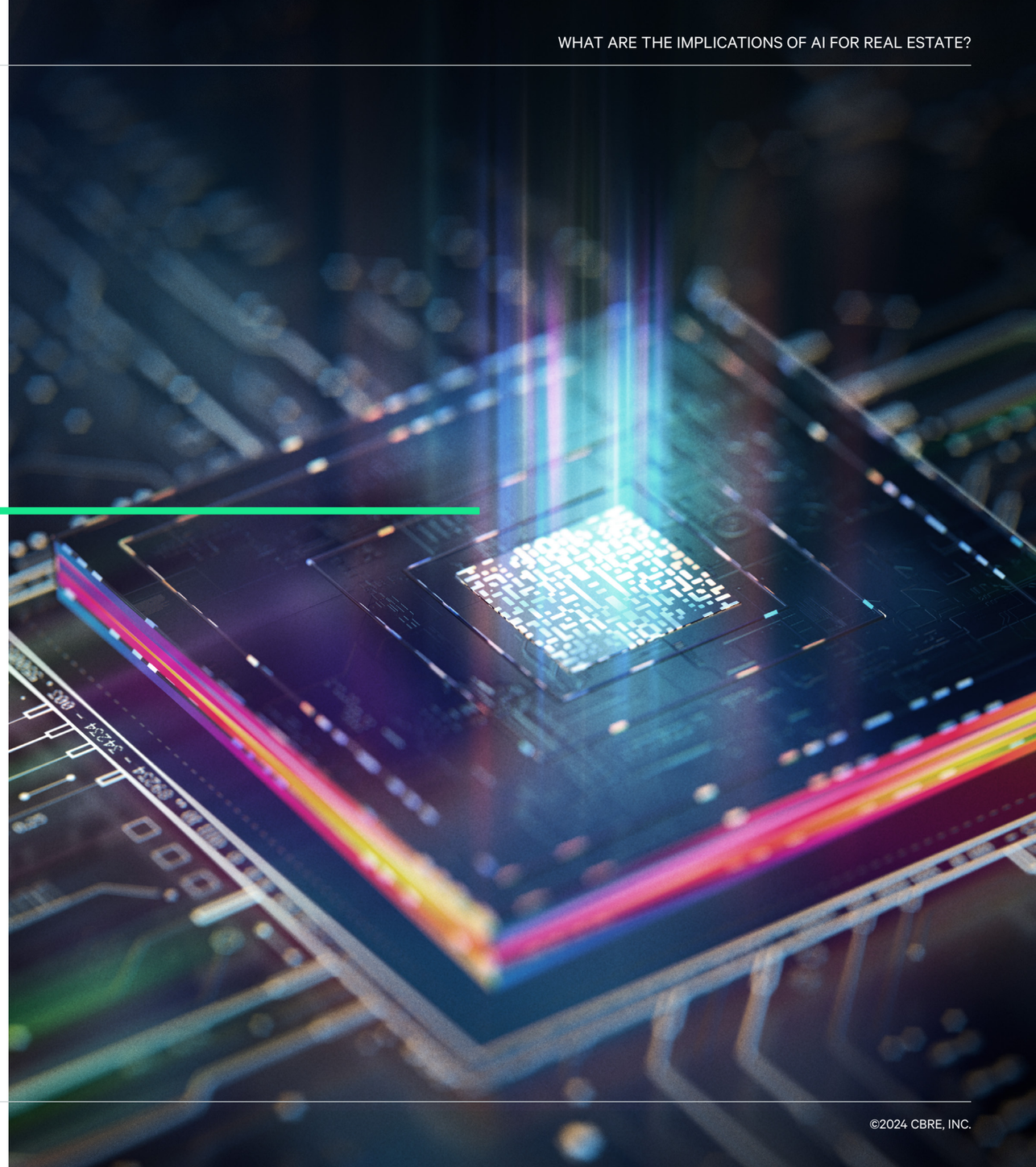
# The evolution and adoption of AI faces resource challenges

Growth in AI in its entirety is reliant on the microchips that underpin its development. Despite maximum production of graphics processing units (GPUs), availability of the chips is currently limited. While supply of essential components is restricted and relatively few companies compete for market share, progress is constrained.

Initiatives such as the European Chips Act aim to incentivise investment and increase chip production.

At the current growth trajectory, annual electricity consumption from AI servers by 2027 would be more than the annual usage of many small countries. The substantial power and intensive processing required will bring consequences for the electricity grid and for data centres enabling the technology.

New AI functionality could require data centre units to have specific locational characteristics or upgrades to perform at higher levels of performance. Growth in the UK could be confined by grid capacity, which is already stretched.



# There are also risks for users

Risks include inaccuracy, cyber security, risk to a user's intellectual property, and ethical concerns.

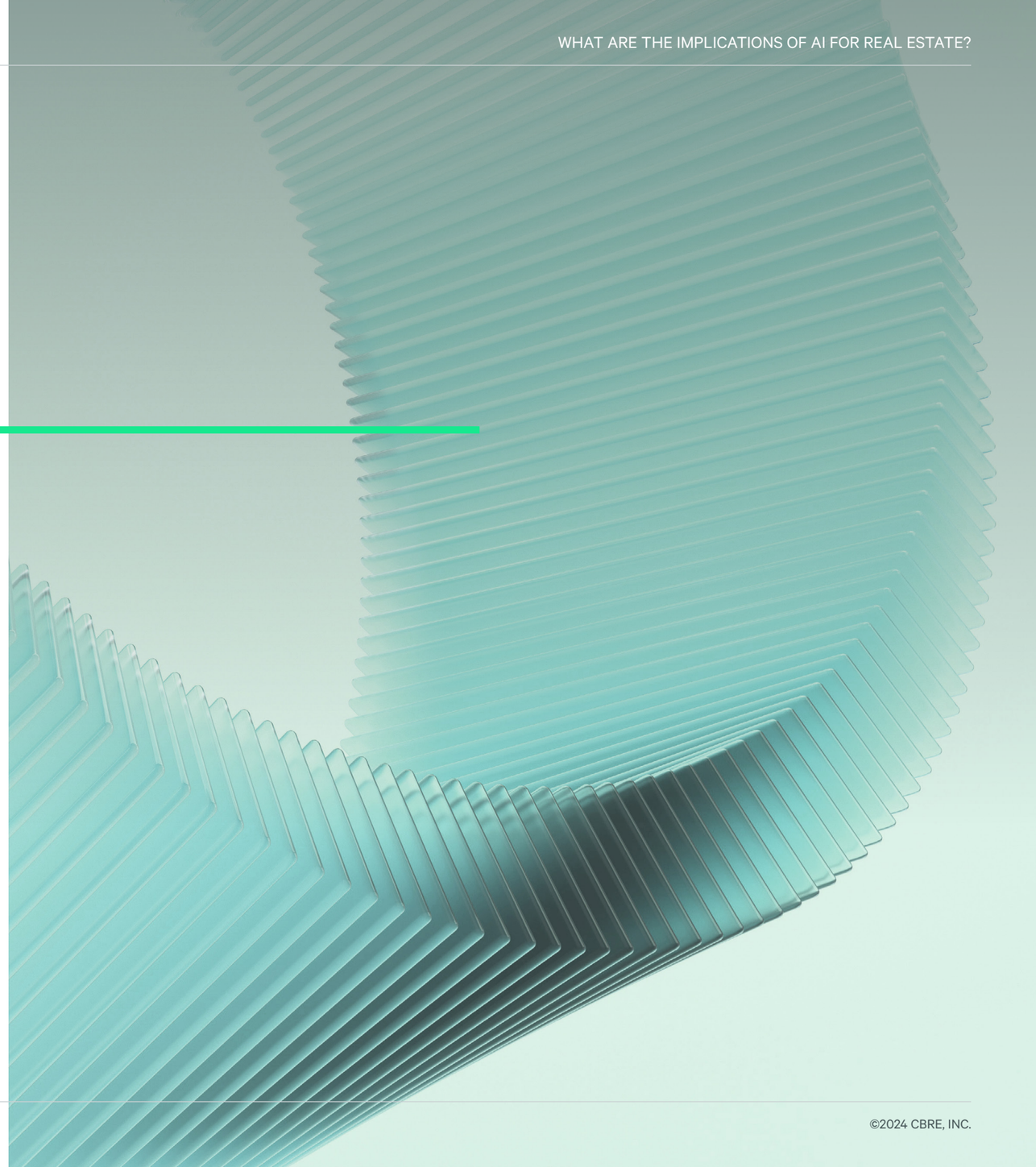
The latest World Economic Forum Global Risks Perception Survey identified misinformation as the most severe short-term risk globally, with 'AI-generated misinformation and disinformation' voted a key technological driver.

Even with the best intention, AI can be poorly used. To prevent this, AI models should have a clear purpose and predefined output, should be trained using high-quality, diverse and balanced data, and should be rigorously tested to best prevent errors or bias.

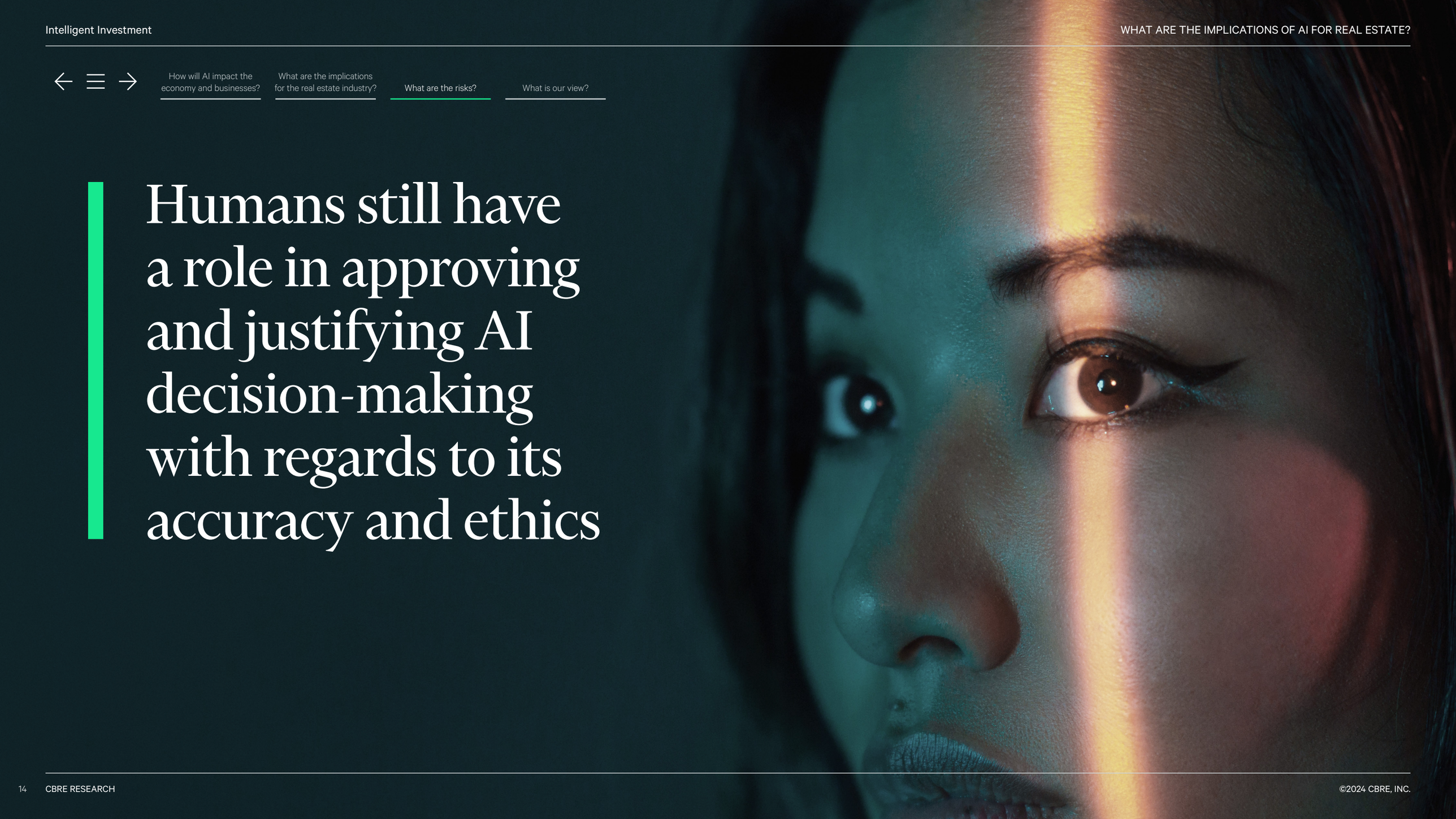
Even with this in place, AI can 'hallucinate', providing an incorrect or biased response to a query. As a result, blind reliance on AI could lead to damaging business decisions and wider consequences if issues are not detected.

Legislation will go some way to reducing the macro risk around AI, but it still needs to be established globally. The first law to guideline structures and protective measures for generative AI development is the EU Artificial Intelligence Act.

Focusing in on regulatory concerns for the UK, the Conservative-backed AI Safety Institute had begun leading conversations to promote the evaluation of AI risks and clear information sharing internationally. We can expect further regulation to be implemented at the UK level under the new Labour Government.



# Humans still have a role in approving and justifying AI decision-making with regards to its accuracy and ethics



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# What is our view?

# In summary

There are already proven applications for AI in use, particularly in machine learning, but as a newer strand of the technology, there is still uncertainty around the potential of generative AI. Despite this, the opportunity is clear. Generative AI could further revolutionise technology, and has already increased public awareness of AI in all forms.

The launch of generative AI has sparked conversation globally, suggesting that initial absorption rates could be high. However few businesses, including those in the real estate sector, are yet to fully embed AI use. Organisations are typically further ahead in adopting machine learning due to its relative maturity, nonetheless many are slow to adapt.

We expect that the widespread integration of AI will be driven by the capital invested, growth of talent, and the management of the risks discussed in this report, through regulation or other means. The timeframe this requires will influence the pace for both business and public adoption in the next five years.

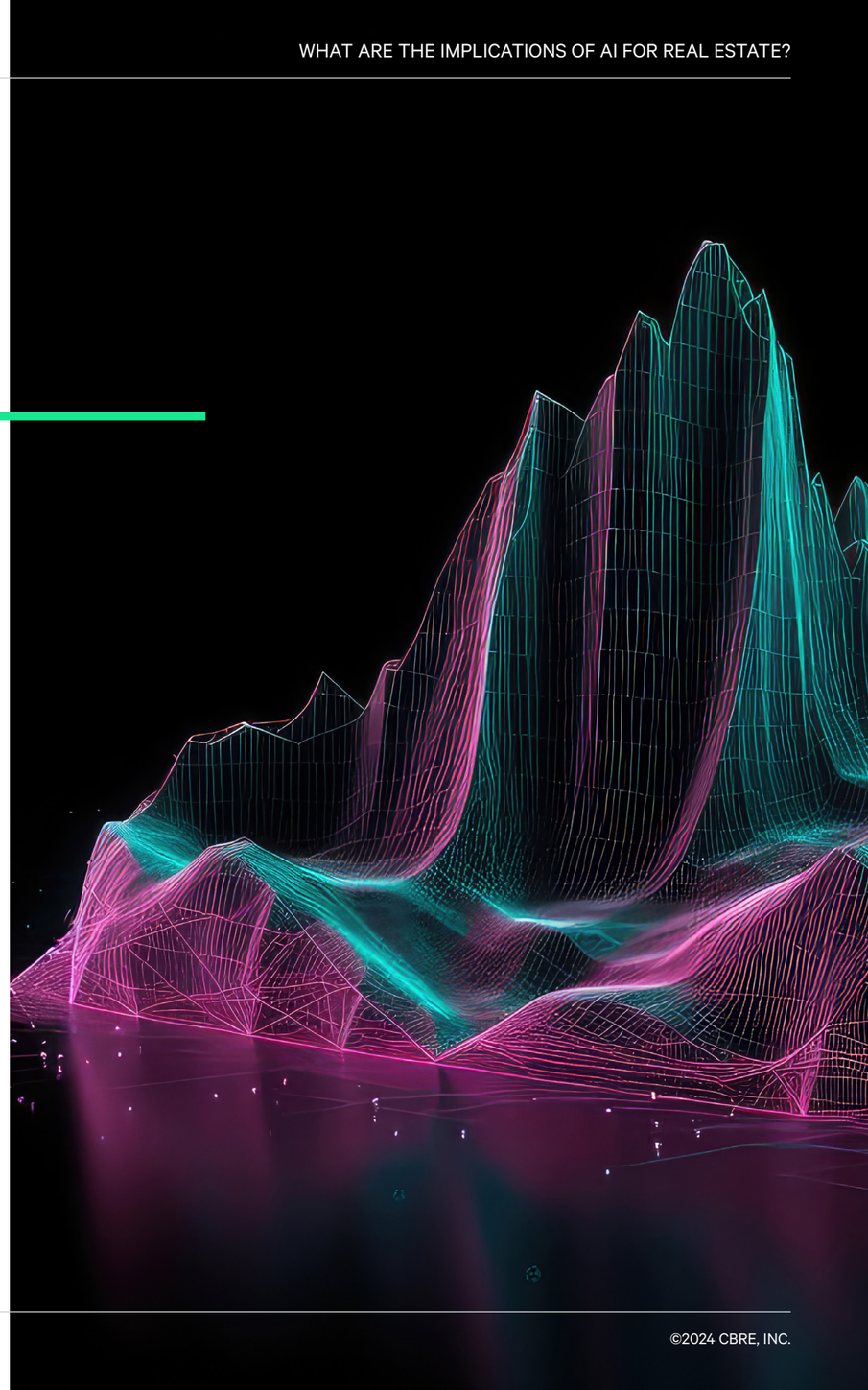
Once all aspects of generative AI are understood and trusted, we could see it truly embedded in the everyday. In the meantime, those who choose to take chance on its early forms could be successful but are taking more risk.

We have already seen automation through technological development, but the extent to which generative AI will disrupt the jobs market is still unclear and the expected impacts are nuanced dependent on the type of work.

Generative AI is likely to extend our capacity to automate more cognitive tasks, but ultimately, automation is not new and it intends to achieve easier, streamlined processes. Instead of replacing labour, it could free time for higher-value work.

Evidently there is a need for a collaborative approach as we embrace AI capabilities, but layering this with human judgement will produce safe, accurate, and meaningful outputs.

As development in AI evolves further it could support economic growth, but ultimately, the outlook for jobs will be closely linked to the wider economy, of which advancement through AI will be just one influencing factor.



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