The State of AI

2022

Peak.ai

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Foreword

AI is a powerhouse, it's set to change the way we work – providing we get it right.

The uncertainty of 2020 has spilled into 2022. And in today's fickle commercial landscape, the predictive potential of Artificial Intelligence (AI) has never been more needed.

As with all new technologies, transformation and successful adoption is gradual, and does not happen seamlessly. AI is a data technology and is facilitated by an overarching data strategy, yet the majority of respondents in this survey are thinking about the two separately. While most of the decision makers surveyed already have or plan to implement a data strategy, only a third are doing so with an eye on AI adoption.

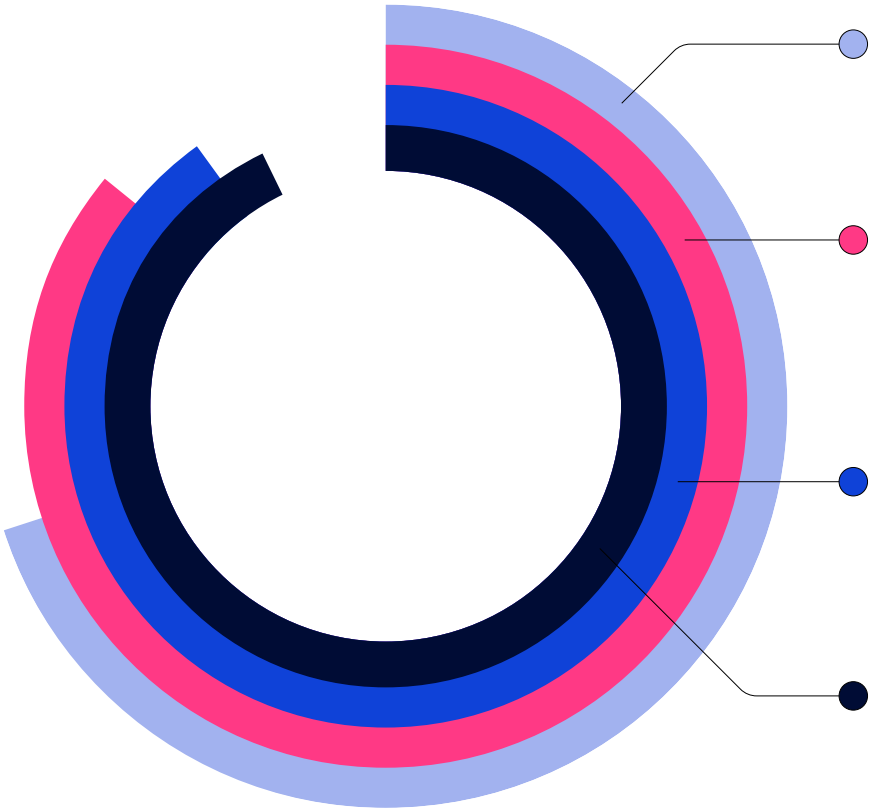
The hints of gaps in strategy, understanding and vision between CEOs and their boards unearthed in this report demonstrate the need for open discussion, there's still work to be done addressing gaps in understanding – at every level.

The data unequivocally shows that AI is already becoming a powerhouse, and changing the way we work. Four in five of those questioned for this report said their business was either currently using a form of AI or was working towards doing so. And 86% of those who were using it across a limited number of departments had plans to extend it to the entire business.

The way we work is changing, and how we run our businesses will follow suit. Dealing with unprecedented volatility – across a multitude of factors – means commercial success is about more than simply growing. Today, winning means making decisions that have a positive impact, on our people, on our planet, our communities and our balance sheet. And AI is at the heart of that change.

This is just the beginning.

The headlines



70%

think their organization is data-driven.

86%

of those doing AI across a small number of departments intend to extend it to the entire business

90%

are already using AI, or working towards doing so.

93%

Are using AI to assist with decisions and 95% to automate decisions

52% have a Chief Data Officer

52% have at least one data engineer

42% have at least one data scientist

Read on for the full report

Introduction

Digital transformation is the process of using digital technologies to create or modify business processes, that might mean the adoption of technologies such as cloud computing, or those that enable and ease remote working.

> As we transition into the Intelligence Era – a fourth Industrial Revolution characterized by Artificial Intelligence (AI) – digital transformation will increasingly focus on embracing AI and the software that enables its build and adoption.

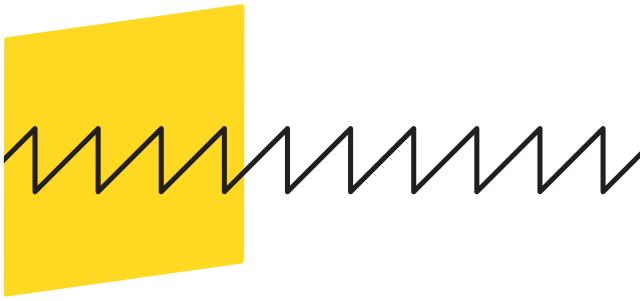
This report provides a snapshot of the attitudes to and progress being made on digital transformation, automation and AI by businesses across the UK, US and India in 2022. It is based on a survey of 775 decision makers (senior managers or above) from businesses with at least 100 employees, surveyed in late April 2022 by Opinium.

83%

of decision makers universally agree there has been some level of digital transformation within their industry

Transitioning to the Intelligence Era

The mass move to online working has increased businesses' reliance on digital solutions. This was initially sparked by the pandemic.



Almost every industry has been affected, 83% of decision makers universally agree there has been some level of digital transformation within their industry. Less than one in three of those state that transformation is limited only to remote working, suggesting that while it might have been initiated or sped up by the events of 2020, for many businesses the scope and benefits of digital transformation have moved well beyond the immediacy of changing working habits.

In fact, around 41% of decision makers recognize high levels of digital transformation within their industry, with processes routinely automated and new technology frequently introduced. This increases markedly in Professional Services (70%), Transport (54%) and Healthcare (53%), all of which are well above the global average.

With increasing innovation comes the generation of more data – globally we're projected to create, capture, copy and consume 97 zettabytes of data (each one equal to a trillion gigabytes) this year alone. A third more than 2020, and double that of 2019[1].

It is little surprise then that 70% of decision makers view their organization as data-driven. While having a wealth of information initially sounds positive, in its current volumes the data available is simply too much to process.

Artificial Intelligence can analyze huge volumes of data far quicker than humans, identifying trends and providing a predictive view of potential future outcomes. In a high inflationary environment, with volatility in everything from supply chains to geopolitical conditions, more businesses are starting to recognize the potential of the technology to ensure operational efficiency and a competitive advantage against a backdrop of uncertainty.

The potential of AI to help make sense of this data has not escaped most businesses, with 90% of decision makers already using AI or working towards doing so.

[1] Statista, 2022. Volume of data/information created, captured, copied, and consumed worldwide from 2010 to 2025(in zettabytes). Statista.

Investing in data

Machine learning and AI are powered by data, that means robust data collection and management is the starting point for any journey to adoption.

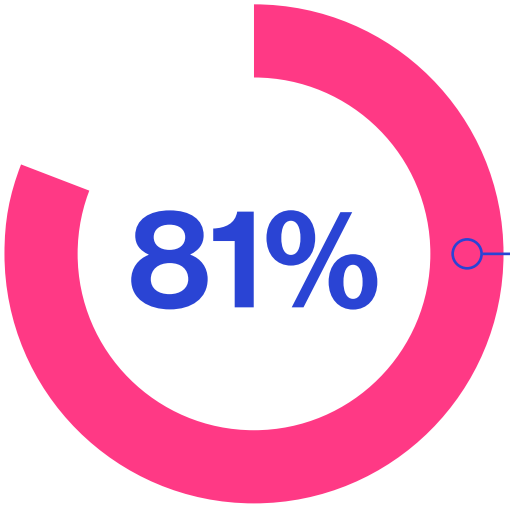
For many businesses, it's a deceptively complex task. Typically, organizations collect data at a department or functional level, in different formats, with two teams frequently miscounting or double counting the same metric. Bringing years of disparate data from across an organization into one place and agreeing accurate measures for duplicate data points is an important step towards adoption.

Just as vital is a data strategy; a roadmap that determines how a business will collect, store, analyze, and use data to support organizational goals and objectives. It should include a framework (a data architecture) for how that data strategy will be supported by technology and services.

"As a field, data architecture has traditionally focused on making sure systems are optimized, that information flows and is appropriately stored. For operational systems, and later Business Intelligence, which both leverage historical data, this approach was tried and tested. As AI becomes an organizational goal and we start modeling future scenarios, technical teams now need to rethink how they approach data architecture.

We're seeing a new type of data architecture emerge, with models that support AI applications as a critical part of the business rather than a support function or downstream."

Atul Sharma
co-founder and chief technology officer, Peak



of decision makers state that their business has a data strategy with a further **17%** intending to introduce one.

Of the 81% that do have a data strategy, it is most likely to be focused on

55%
centralizing data within the business

54%
establishing measurable goals for the use of data

53%
managing security risks and compliance

"It's a mistake to embark on a data project without AI ambitions and puts a business in serious jeopardy of having to retrofit infrastructure further down the line. AI is far more focused on business outcomes than traditional data technologies, it's regressive to consider a data strategy only in the context of data cleaning or Business Intelligence reporting."

Atul Sharma
co-founder and chief technology officer, Peak

Just over a third of respondents (35%) with a data strategy say it includes a plan to facilitate AI.

With most businesses either implementing or intending to implement AI, the fact that only a third of those have a data strategy to facilitate the technology is a concern.

Even uncoupled from AI ambitions, organizations are still able to justify significant commercial investment in data. Half of those surveyed stated that their organization had a Chief Data Officer, and most businesses now have (86%) or intend to implement (7%) a data lake or warehouse; repositories for storing data in either its raw (lake) or structured (warehouse) form.

Only 3% of decision makers globally stated they saw no need for either a data lake or data warehouse.

Prioritizing data practitioners

Over the last five years there has been a significant push to upskill in-house data capabilities.

When asked what data practitioners they currently have within the organization, 42% of respondents stated at least one data scientist and 52% at least one data engineer.

That Chief Data Officers are apparently being hired with more frequency than data scientists, and the same frequency as data engineers, suggests a focus on building from the top down. Businesses appear to be investing in a senior leader, who in turn prioritizes engineering talent to clean data and implement robust collection and management.

Perhaps most crucially, 76% of those with Business Intelligence (BI), analytics and data science teams frequently observed them collaborating with other departments. This suggests that a strategic focus on centralizing data within businesses is typically well supported by technical teams; a vital element to its long-term success.

"Data and AI strategy are not a tech problem. Technical teams should be thinking about them as a business problem – what does the business need? – rather than simply undertaking a task because it is mandated. Technology should make life easier for end users, which means they need to work hand-in-hand with commercial teams to deliver it.

Frequent collaborations within teams should be encouraged, but could also be indicative of a need for data science capabilities across all business functions, with data scientists frequently being dropped into scenarios as problem solvers."

Atul Sharma
co-founder and chief technology officer, Peak

Creating a culture that supports innovation

Attitudes within a business towards digital transformation and AI in particular can ultimately determine a project's effectiveness.

Implementation requires support from across the organization, both to facilitate adoption and provide feedback to iterate and improve applications.

Of the respondents currently using AI, 81% noted that functional leaders supported implementation and adoption, a similar number (80%) suggested support from senior management, but confidence in the backing of junior staff was less, with only 75% citing support at this level.

When asked...

81%

of decision makers think senior management supports AI, this drops to...

75%

when assessing support from junior staff.

"A reduction in support for AI further down the org is understandable, if problematic. Commercial applications of AI are relatively nascent, and there is apprehension around its potential to automate complex tasks – particularly amongst those whose roles typically include those tasks.

In reality, widespread adoption of AI is more likely to increase the impact of 'human' activities and remove a lot of repetition from those in more junior positions.

For AI projects to be successful, direction on this and the business's wider vision for digital transformation needs to be communicated successfully throughout the organization. And that starts from the top."

Zoe Hillenmeyer

chief commercial officer, Peak

There is evidence businesses are struggling with the cultural component of innovation. While 89% of decision makers felt their organization had a forward-looking vision when it came to digital transformation, 22% of those doubted its importance.

Visibility of overall AI strategy within management is also a problem. Of the respondents in businesses that have or are working towards AI, 55% of CEOs stated that it is being implemented throughout the business, this decreased to 42% among the rest of the c-suite and fell to just 38% when asked of broad management (i.e., senior management below board level).

Similarly, 98% of CEOs from organizations currently undertaking AI over a small number of departments said they intend to extend their AI strategy across the entire business, while only 56% of c-suite and 84% of broad management said the same.

Perhaps one of the reasons for this disconnect is that CEOs are more likely to perceive high levels of support for AI initiatives than decision makers in general, and so underestimate the importance of articulating their vision and strategy. Most CEOs (82%) in businesses implementing AI thought junior employees were supportive of the technology, whereas only 69% of the c-suite said the same. Similarly, 88% of CEOs stated that senior management supported AI, while only 75% of c-suite thought that to be true.

98%

of CEOs currently using AI are planning to extend their use of it

"Differences between CEOs and those with functional specialities are likely indicative of the differing priorities within most orgs and – to a larger degree – siloed thinking. CEOs might be comfortable with an overarching strategy, but if it is light on detail for areas that are high priority to the rest of the management team, they won't be so supportive.

Likewise, a high level data strategy with solid long-term goals might satisfy a CEO, but if its near-term focus is on data cleansing and management, functional leaders won't yet be seeing value."

Zoe Hillenmeyer
chief commercial officer, Peak

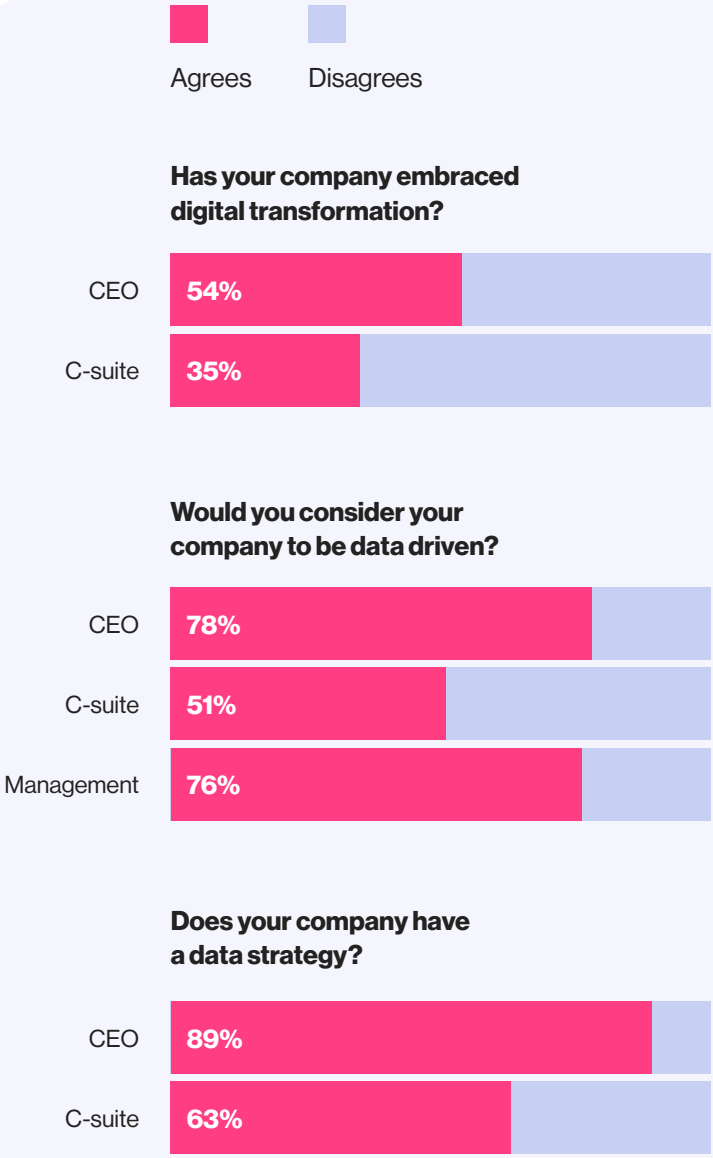
Introducing the C-Factor

There is a clear disparity in how CEO and c-suite perceive digital transformation and AI, both within their own industry and organization.

This suggests that a lack of clarity within the wider organization may originate from a lack of consensus in the boardroom. When asked if their industry has embraced digital transformation, 54% of CEOs stated that it had compared to only 35% of the c-suite.

Assessments of data maturity are also markedly different, with 78% of CEOs confirming their organization to be data driven, vs. 51% among c-suite. The opinions of broad management aligned more closely with CEOs on this, with 76% agreeing that their organization is data driven.

The majority (89%) of CEOs also stated that their organization had a data strategy, whereas just under two thirds (63%) of c-suite said the same. Interestingly, of those businesses that don't currently have a data strategy, 32% of c-suite say they intend to introduce one, while only 10% of CEOs say the same.



Understanding regional differences

There were stark differences in the data maturity levels of respondents from US, UK and India, with the latter clearly far more developed when it comes to digital transformation, data strategy and AI adoption.

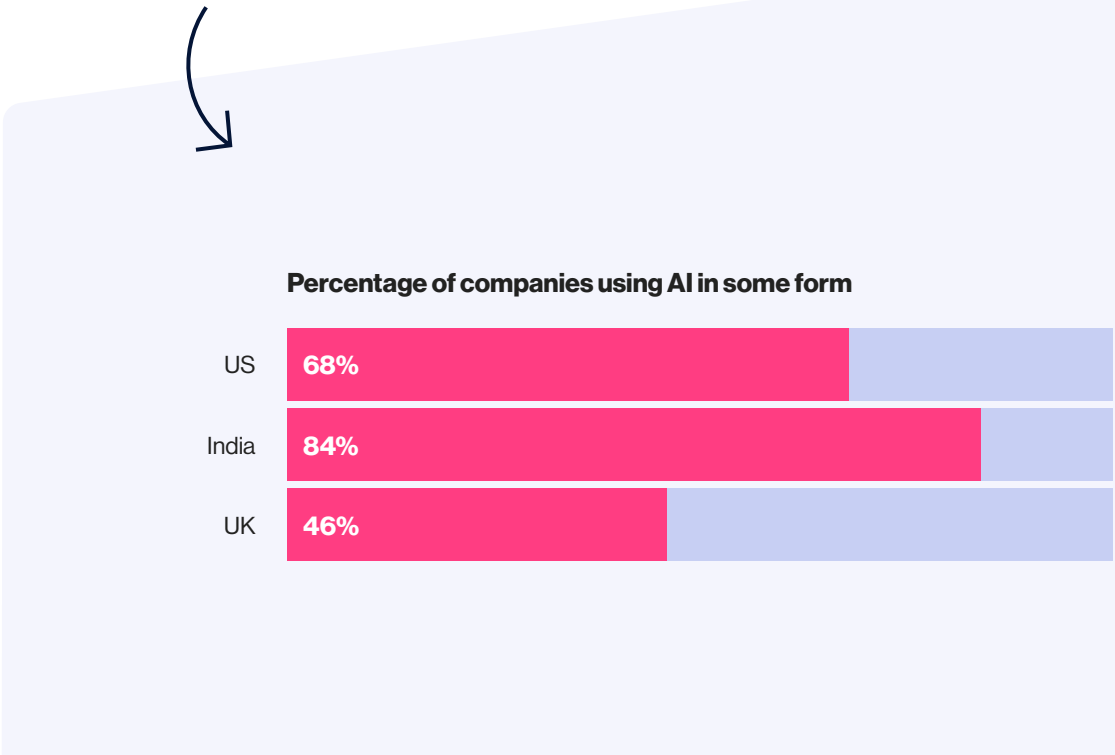
US

The US is notably behind India when it comes to perceptions of digital transformation and adoption of AI, but it is significantly advanced on the UK. Most (68%) of US businesses are currently using AI in one form or another, this compares to 84% in India and just 46% in the UK.

Respondents suggested appetite for digital transformation was high within their own business – with an average of eight projects attempted by organizations within the last five years, with a success rate of 75%. Yet, US decision markers were more likely to perceive no digital transformation in their industry over the same time frame. Nearly a quarter (24%) suggested digital transformation was not part of their industry, compared to 12% in India and 10% in the UK.

Automation is the creation and application of technologies to complete processes with minimal human intervention. Augmentation is the use of technology to support and improve processes performed by humans.

When asked whether their businesses were using automation or augmentation to aid with decision making, there was a general trend in all markets towards automation rather than augmentation. However, the US was the only market in which more businesses had been augmenting decision making for longer than a year (53%) than those leveraging automation (49%). This is likely a reflection of the US as a service economy, and indicative of the businesses with the funds to invest in the technology.



UK

The UK is at risk of being left behind by comparison to the other countries surveyed. Two thirds of UK decision makers say their business has a standardized process for collecting data, compared to 81% in the US and 82% in India.

Similarly, far fewer businesses in the UK are currently using AI, although 36% of decision makers are planning to implement it in the future, higher than late adopters in both the US (21%) and India (12%).

This suggests that UK businesses have been delayed in their adoption of AI by comparison to both India and the US. Indeed, the UK also has the highest incidence of both businesses planning to implement an AI strategy and those with one currently isolated to smaller departments. While 60% of Indian businesses and 45% of US have an AI strategy that is developed enough to be executed across the business, only one third of UK decision makers could say the same.

India

Respondents in India regularly score their businesses and industries higher than those in other markets.

India is the most digitally ready country, with 52% of decision makers recognising high levels of digital transformation within their industries, compared to 36% in both the US and UK.

Most (90%) decision makers in India stated their businesses have a data strategy in place, higher than both the UK (68%) and US (84%). And 96% of those with AI isolated to a small number of departments are ready to implement AI across the entire business, an aspiration held by 90% of decision makers in the US and 72% in the UK.

The importance of Decision Intelligence

One of the biggest challenges for businesses adopting any new technology is how to quantify the value of their investment.

One of the biggest challenges for businesses adopting any new technology is how to quantify the value of their investment. Capital requirements are typically high with digital transformation projects and time to impact can be prolonged, particularly in early stages.

While 90% of decision makers were using AI in their businesses, there was no stand out measure by which to assess the value of AI projects undertaken. This suggests that most are implementing AI without a clear business case.

Focusing on the data available and seeing what can be developed is a common mistake for businesses implementing AI. The result is often expensive and prolonged 'data science projects' that yield little value for the end users.

To be successful, AI projects need to start with an end goal in mind. Models must be built to deliver on a specific business need, and it should be clear what result an application will drive at the outset of the project.

Starting with an objective that needs to be achieved and then working backwards to determine how is an approach that is currently being popularized by Decision Intelligence – the commercial application of AI to the decision making process. It is outcome focused, and is characterized by short time to value and decreased cost of ownership.

This approach makes quantifying value easier. If an application is built to deliver against a specific need, then value is measured by whether it met that need and the resulting commercial impact for the business.

Looking ahead

The majority (93%) of businesses either store their data in a data lake or warehouse or intend to.

"With businesses generating huge data volumes, a central repository is a growing necessity. Now the majority of organizations have data lakes and warehouses, popularity for data marts is also likely to increase. Marts are function specific and enable the same data to be surfaced in a format that's consumable for each team, presenting a different view for finance, sales, marketing and so on."

Atul Sharma
co-founder and chief technology officer, Peak

In businesses currently employing AI, 93% stated they were using it to assist with decisions and 95% to automate decisions.

"Decision making wasn't in the lexicon for AI for so long simply because it wasn't possible, now it is, the technology is moving into a phase where it can meet commercial needs.

Augmenting decision making is the primary utility for businesses using AI. If you can optimize decisions at scale, you have less waste; you have employees, customers and partners whose needs are met and maintained. That leaves more space for people to be creative and interesting. Your team spends less time on repetitive tasks, less time working out how to accomplish monotonous problems and more time on the things you can't build models for.

It's a mindshift change that's going to have a profound impact on the way we work, how businesses compete and, ultimately, win."

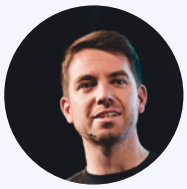
Zoe Hillenmeyer
chief commercial officer, Peak

Most (86%) respondents doing AI over a small number of departments intend to extend it to the entire business.

"The future of commercial AI is an intelligence unique to every business. An AI that works holistically across each department so that one function is never optimized at the expense of another.

Most businesses recognize that one centralized intelligence is the end goal, and they're working towards adopting a connected application that delivers value for everyone within the organization.

But AI isn't easy. While we're still formulating strategies, developing applications and educating our teams, an iterative approach is the best method for ensuring support for – and the success of – commercial AI adoption."



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About Peak

Peak is a platform for building Decision Intelligence applications, enabling businesses to apply AI to the commercial decision making process.
Companies already powered by Peak include:

Statistics cited in this report are taken from a survey of 775 decision makers (senior managers and above) based in the US, UK or India. Respondents were all from companies with 100 or more staff. Research was conducted for Peak by Opinium, in partnership with the Center for Economic and Business Research (CEBR). The survey ran from 19-25 April, 2022.