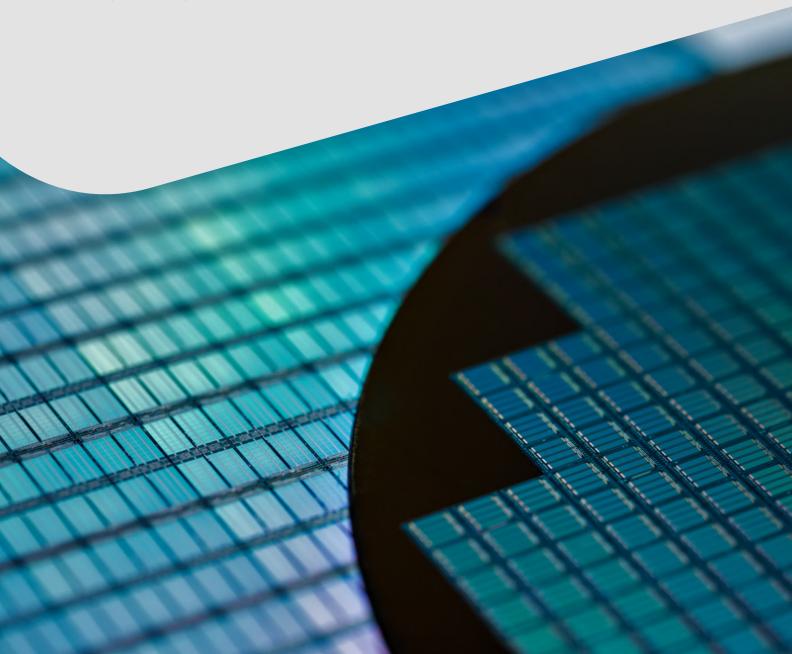


SPECIAL REPORT: ASSESSING THE GENERATIVE AI OPPORTUNITY

How businesses are preparing for and investing in the generative AI revolution





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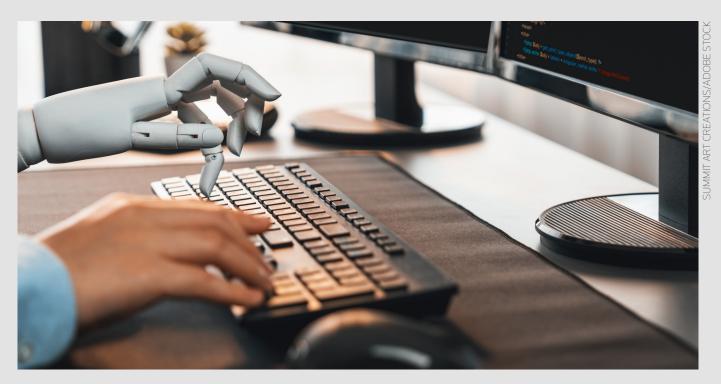
Charting Generative Al Investment Trends

Inside the Generative Al Vendor Landscape 16
Sector-specific
Generative Al Trends

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FOREWORD



Liam StokerContent Lead **Reuters Events**

Welcome to this Reuters Events special report, Assessing the Generative Al Opportunity. This study has been produced following a qualitative research process and a survey of professionals with knowledge and/or experience of their organization's approach to generative Al.

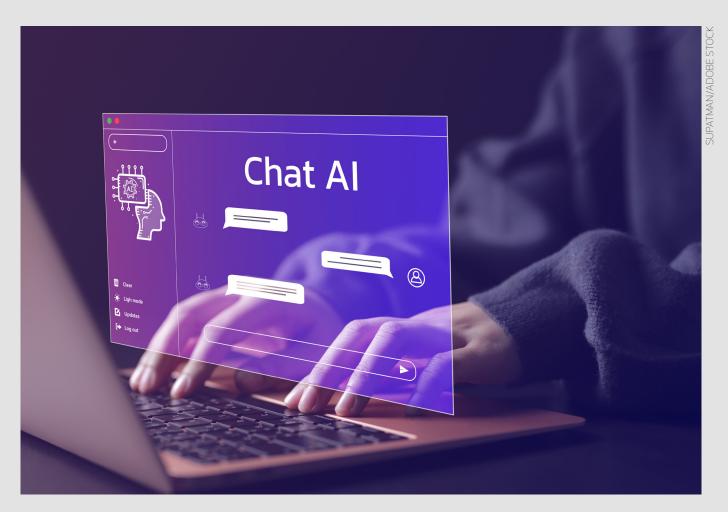
This survey was conducted in October 2023, and more details of the survey and our respondents can be found in the Methodology section of this report.

This report explores the key investment and strategy trends that both professionals and organizations as a whole are encountering as generative AI emerges as a potentially key technology. It charts the current investment profile for generative AI across the economy, exploring the divergence between economic sectors and delves into the emerging strategies underpinning such investments: where is generative AI being implemented internally, how do organizations expect investments in generative AI to grow, and who are organizations turning to for generative AI-powered tools and applications.

Our research comes following a year in which generative AI emerged as a truly transformative tool for businesses. While still relatively nascent, our research concludes that a significant majority of businesses are either planning to or have plans to implement generative AI in business-as-usual activities, but some concerns remain.

We would like to take this opportunity to thank the thousands of professionals who completed our survey, alongside those who took time out of their schedules to help with our qualitative research phase. This report would not have been possible without their valuable contributions, and we look forward to continuing the discussion at Reuters Events' MOMENTUM AI events this year, held in both San Jose in July, and in London in October.





EXECUTIVE SUMMARY

The public launch of ChatGPT in November 2021 was a landmark moment for generative Al. It demonstrated the potential for businesses to realise significant operational efficiencies, but also raised serious concerns pertaining to the ethics, security and privacy of large language models. Nevertheless, billions of dollars' worth of investment has flowed into providers of generative Al models, cementing its status as one of the must-watch stories of 2024.

Our research has found that a significant majority of respondents, and their respective organizations, are alert to the potential of generative Al. More than three-quarters of respondents (76%) indicated that their organization are either currently using or plan to use generative Al in the next 12 months, while the share of our respondents within our 'Big Business' cohort – organizations whose annual revenues exceed \$1 billion – is in even greater.

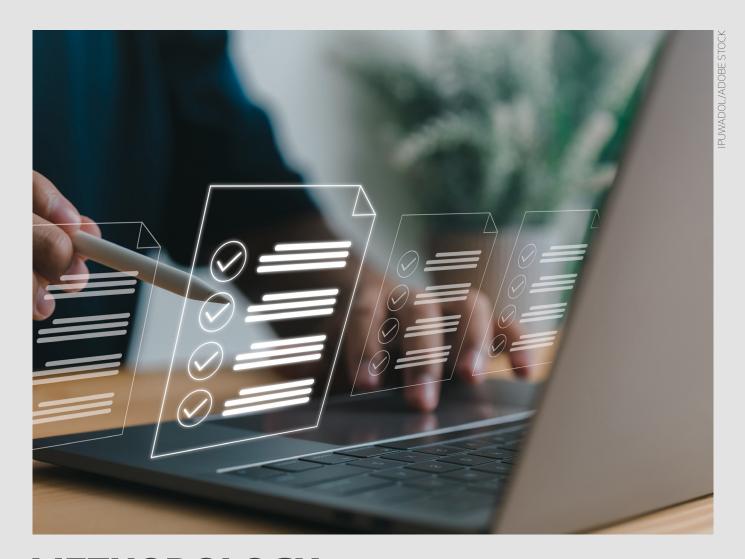
Furthermore, our research indicates that larger businesses are moving quickly to experiment with and implement

generative AI, outpacing SMEs. Respondents from our 'Big Business' cohort indicated they are more likely to fall within our highest investment categories, expect greater growth in investments in the future and are more likely to be implementing generative AI among more sizeable teams.

What our research has indicated, however, is that some industries are responding quicker to generative AI than others. Greater shares of respondents from sectors like insurance, pharmaceuticals and healthcare suggested current and future investments fell into our higher categories, for example.

The vendor landscape for generative AI, perhaps predictably, is already dominated by a handful of suppliers with serious technological expertise and investment. While these are the most popular vendors across all business sizes and industries, outside of the established vendors we see a preference for more bespoke offerings, tailored for industry-specific needs.





METHODOLOGY

The Reuters Events Generative AI Opportunity Review Survey 2023 was conducted in October 2023, engaging professionals with an understanding of their organization's planning for and investment in generative AI.

The survey was conducted via an online form and all questioning was designed and implemented following strict market research guidelines and principles.

A total of 4,139 respondents participated in the survey, with 2,416 of them completing the survey, answering all questions. A high share (72%) of respondents are in board, senior organizational leadership or senior management positions, with a further 16% of respondents in midmanagement roles.

Respondents were sought from across the global economy and, as a result, our survey sample is made

up of professionals from numerous sectors. Of our total respondents, 13% are from professional/business services organizations, 11% are from technology/software businesses, 7% are from public sector/government/NGO entities, 7% are from renewables companies and 6% are each from the oil and gas and automotive sectors. Respondents from healthcare, insurance, pharmaceuticals and logistics/supply chain sectors were also recorded.

While respondents from organizations of all sizes were sought, for the purpose of this report we have segmented a specific subset of respondents we are terming our 'Big Business' group. This group comprises respondents from organizations with annual revenues in excess of \$1 billion, and we are comparing these responses to our overall responses to highlight when strategic decisions with regards generative AI may be different for large organizations.



1 BUSINESS PLANNING FOR GENERATIVE AI

ACTIONABLE INSIGHTS

- Large businesses would appear slightly more likely to be using, or have plans to use generative Al within the next 12 months. However a majority across our entire sample – some 76% - have plans to do so, indicating those without plans to implement generative Al would be considered laggards.
- Larger businesses also appear more likely to be assembling larger teams for work on generative AI, indicating the potential benefits of operating at scale.
- While central IT functions was the most commonly cited business unit to be implementing generative AI, combining sales, marketing and customer service functions – commonly grouped together – would see their share rise to almost one-third (32%) of respondents.



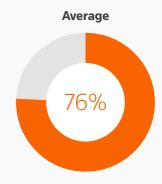
If 2023 was the year of generative AI, then 2024 stands to be the year in which hype translates into action. According to our survey, a majority of total respondents (76%) said their business either currently use generative AI or plan to begin using it in the next 12 months. That share is slightly larger (84%) within our cohort of businesses with annual revenues of at least \$1 billion, indicating that the interest in generative AI subverts any notion that only 'big business' will adopt it. (Figure 1)

Figure 1

A greater share of respondents from larger organizations indicated they are using or plan to use generative AI

Share of respondents indicating their organization is using generative AI or plans to use it in the next 12 months, showing survey average vs 'big business' cohort





*Note: The average indicates the average share of respondents from all revenue bands, including \$0-\$1m, \$2m-\$5m, \$6m-\$10m, \$11m-\$50m, \$51m-\$250m, \$251m-\$1bn, \$1.5bn-\$5bn, \$5.1bn-\$25bn, \$26bn+





Whilst we can conclude that organizations not currently using generative AI and without short-term plans to use it are in the minority, there may be good reason for this such as the industry or company type.

Our research can also point to specific industries where adoption of generative AI is more likely, allowing us to conclude which industries we might describe as common adopters. Compared to an adoption average across our entire respondents base of 76%, three industries stand out as having particularly high adoption of generative AI. Around 89% of respondents from software/technology organizations said they are either currently using or plan to use generative AI within the next 12 months, an unsurprising result given the nature of that industry. Similar levels of adoption are also recorded by pharmaceutical (88%) and media (86%) organizations, completing our set of common adopters.

Conversely, industries including renewables (70%), oil and gas (67%) and manufacturing (62%) recorded adoption rates materially below our average. While other sectors such as

"INDUSTRIES INCLUDING RENEWABLES, OIL AND GAS AND MANUFACTURING RECORDED GENERATIVE AI ADOPTION RATES BELOW OUR SURVEY AVERAGE"

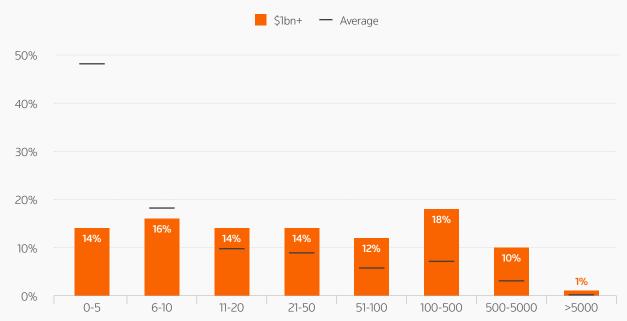
construction and real estate recorded even lower adoption rates (~50%), sample sizes for these respective sectors are insufficient for us to conclude with certainty.

We also explored how the adoption of generative AI is being driven internally in terms of the number of employees, or the size of teams, engaged in generative AI. Within our established 'big business' group, just over half (58%) of respondents said that they had up to 50 employees currently using the technology, with 14% of respondents within the cohort stating that 0-5 employees were engaged with generative AI (*Figure 2*).

Figure 2

Larger businesses are more likely to have bigger teams engaging with generative Al

Share of respondents stating the number of employees engaged in generative AI per bracket, showing survey vs 'big business' cohort



*Note: The average indicates the average share of respondents from all revenue bands, including \$0-\$1m, \$2m-\$5m, \$6m-\$10m, \$11m-\$50m, \$51m-\$250m, \$251m-\$1bn, \$1.5bn-\$5bn, \$5.1bn-\$25bn, \$26bn+





However, 42% of respondents within the 'big business' group said they had more than 50 employees engaged with generative AI, with 29% in particular stating they had more than 100 employees exploring the technology.

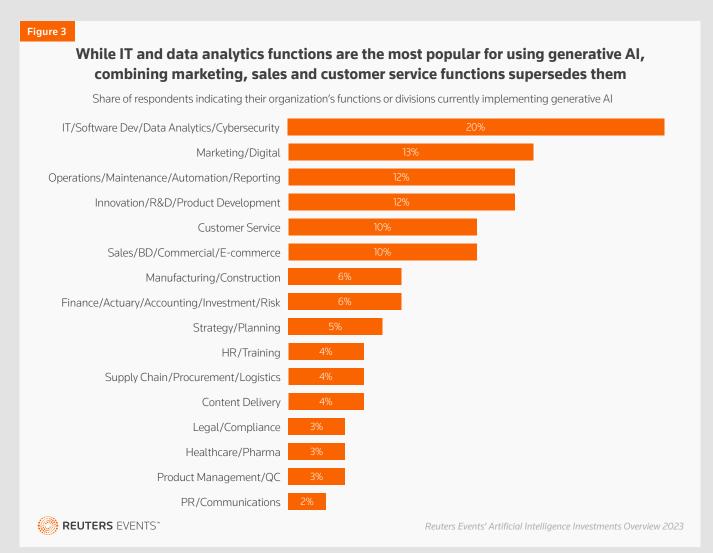
This would indicate that large businesses are already assembling sizeable teams to explore the adoption and use of generative AI, further supporting the notion of it being transformative technology that is expected to affect material change internally and support growth moving forward.

In terms of use cases currently being favored for generative AI, our research indicates a lean towards marketing, sales and customer service functions, with around one-third (30%) of respondents within our 'big business' group indicating that these functions or divisions are currently implementing generative AI. This largely corresponds with the figure recorded across our entire respondents base (32%), indicating this to be a trend across the economy.

When seen in isolation, however, marketing (13%), customer service (10%) and sales or commercial (10%) functions were the second, fifth and sixth most commonly selected role functions by our respondents respectively. IT, software development, data analytics and cybersecurity was the most commonly selected division to be tasked with implementing generative AI, identified by 20% of respondents.

In comparing results from our 'big business' group against our total set, our research indicates businesses are responding in distinctly similar ways, regardless of business size. Comparing both sets of data shows only marginal differences, limited to one or two percentage points. Where we see more distinction, however, is in the industry type, with more specific divisions or functions implementing generative AI.

These results are discussed in length in our dedicated industry profiles chapter.







2 CHARTING GENERATIVE AI INVESTMENT TRENDS

Interest in generative AI has translated into significant investment, with billions of dollars worth of private investment heading to organizations at the forefront of developing large language models such as OpenAI.

For the purpose of this report, we have explored how individual businesses are both investing in AI today, and how they expect those investments to change over the course of the next three years. We have analyzed this data both comparing our 'big business' group of respondents versus our respondent average while also profiling differences per sector or industry, allowing us to determine industries with expectations of high growth for generative AI investments.

When reviewed across our entire respondents base, current annual investments in generative AI are, largely, relatively

ACTIONABLE INSIGHTS

While responses from across our full sample would appear to suggest that investments in generative AI remain relatively modest, our research also indicates respondents within our 'Big Business' cohort are more likely to be spending more significant sums in this early stage. This, alongside previous findings around the size of teams implementing generative AI, could indicate how larger businesses will be able to capture the benefits of such tools much more quickly than SMEs.

LUCKY AI/ADOBE STOC

- The pharmaceutical and healthcare industries would appear to be the early leaders, across the industries represented in our sample. These two sectors have greater shares of respondents falling in our 'medium' and 'high' investment categories, while the transport/logistics/supply chain sector recorded the lowest share of respondents falling within these two categories.
- While very much a 'middle of the road' sector in terms of current investment in generative AI, the insurance industry tops our poll for expected growth. 40% of respondents from insurance organizations said their expected growth in investments in generative AI fell within our 'high' or 'very high' brackets. This could be seen as an indication of the perceived benefits of generative AI for insurance organizations in the near future.



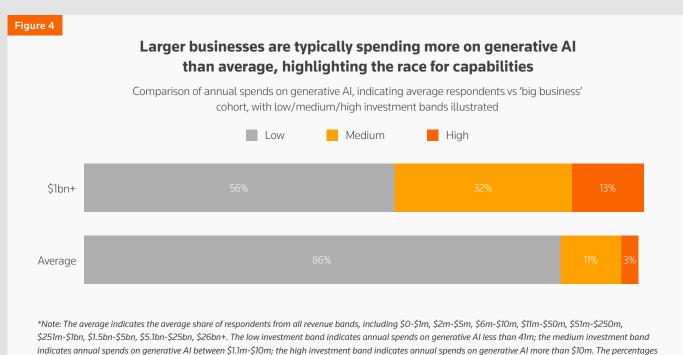
modest. A majority of total respondents (86%) said their organization's annual spend on generative AI are in the \$0 – 1 million bracket, which we have termed 'low investment' for the purposes of this report. This perhaps indicates how nascent the technology is, with returns or efficiency gains posed by the technology still largely unknown.

"A MAJORITY OF TOTAL
RESPONDENTS (86%) SAID THEIR
ORGANIZATION'S ANNUAL SPEND
ON GENERATIVE AI ARE IN THE
\$0 - 1 MILLION BRACKET"

Our research does indicate that our 'big business' group does expect to invest more in generative AI than our average respondent. While around half (56%) of respondents from this group placed current investments in generative AI within the low bracket, around one-third (32%) of respondents placed current investments within the \$1 – 10 million bracket, which constitutes our 'medium investment' bracket. By means of comparison, our respondent average for annual investments in this range was 11%. (Figure 4)



Reuters Events' Artificial Intelligence Investments Overview 2023





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might not add up to 100 per cent due to rounding error

Our 'high investment' bracket, which specifies annual investments in generative AI to exceed \$10 million, was selected by 13% of respondents from our 'big business' group, compared to just 3% of respondents from our overall respondents.

When segmenting our responses on current investments per industry, we can also identify specific sectors which are more likely to form part of our 'high investment' bracket. As figure five illustrates, greater shares of respondents from industries including Healthcare, Pharmaceuticals, Automotive and Oil and Gas indicated spending that would fall within our "medium" bracket. Oil and Gas is a potentially interesting sector in this regard, given that rates

of generative AI implementation within the industry were below average. In this sense, we may conclude that the Oil and Gas sector is expecting to catch up with other industries. (Figure 5)

Industries where respondents recorded higher instances of 'high' investment, meanwhile include Healthcare (7%), Professional and Business Services (5%), Pharmaceuticals (4%) and TMT (4%), all of which have an above average inference of spending in excess of \$10 million per year on generative AI.

While current investments could be described as modest, a significant majority of total respondents (81%) said that they

Figure 5 The Healthcare and Pharmaceuticals industries top our current generative Al investment rankings Share of respondents, segmented by sector, to have placed annual investment in generative Al into our 'low', 'medium' and 'high' spending brackets Low Medium High Healthcare Pharmaceuticals Automotive Oil and Gas TMT Manufacturing/Construction Insurance Banking/Other finance Renewables Professional/Business Services Public Sector/Government/Education/NGO Transport/Logistics/Supply Chain *Note: The low investment band indicates annual spends on generative AI less than 41m; the medium investment band indicates annual spends on generative Al between \$1.1m-\$10m; the high investment band indicates annual spends on generative Al more than \$10m.





expect investments to grow in the next three years. Our 'big business' group recorded an even higher inference of growth, with 88% of respondents from this group indicating that investments are expected to grow.

We also asked respondents to estimate the extent at which their organization's investments in generative Al will grow, and used the results to determine 'medium', 'high' and 'very high' growth factors across our base of respondents.

A majority of overall respondents (68%) stated that investments would grow between 0 – 20% in the next three years, which we have termed as 'medium growth' within this report. Nearly one-third of respondents fell within the 'high' or 'very high' growth categories, reflecting growth in excess of 20%, however this was largely recorded within the 'high' growth category, with 26% of respondents indicating that they expect annual investments in generative AI to grow by 21 – 40%. (Figure 6)

"68% OF RESPONDENTS STATED THAT THEIR INVESTMENTS WOULD GROW BETWEEN 0 - 20% IN THE NEXT THREE YEARS"

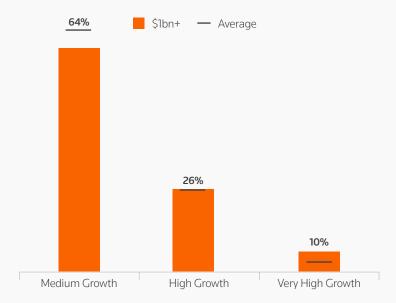
Comparing expected growth in investments within our 'big business' group and overall respondents indicates that growth factors would appear similar, with only a few percentage points of difference between them.

It does, however, stand to reason that businesses with high revenue would maintain higher investment budgets to begin with, meaning that in terms of pure fiscal measures, our 'big business' group are likely to continue outspending smaller organizations on generative AI. Of our 'big business' group, around 71% of respondents said at least 11% of their entire technology investment budget would be dedicated to generative AI this year.

Figure 6

While a majority of respondents indicated more modest growth in generative Al investments, larger businesses were more likely to forecast 'very high growth'

Share of respondents indicating the growth in annual investments in generative AI, indicating medium, high and very high growth, showing survey average vs 'big business' cohort



*Note: The average indicates the average share of respondents from all revenue bands, including \$0-\$1m, \$2m-\$5m, \$6m-\$10m, \$11m-\$50m, \$51m-\$250m, \$251m-\$1bn, \$1.5bn-\$5bn, \$5.1bn-\$25bn, \$26bn+. The very high growth band represents more and equal than 41 per cent of increase in annual investments in generative Al; corespondingly, high growth band represents 21-41 percent of increase, and medium growth represents less and equal than 20 percent of increase.





When segmenting our respondents to take respective industries into consideration, we can conclude that similarly to how Pharmaceutical and Healthcare industries fall within our 'high investment' bracket, respondents from these industries are more likely to fall within our 'high growth' or 'very high growth' categories, indicating growth of 21 – 40% and greater than 40% growth respectively.

Pharma and Healthcare are joined in the 'high growth' category by the Insurance sector, whereas the Legal, Insurance and Oil and Gas industries make up our list of sectors identified as within our 'high growth' bracket. (Figure 7)

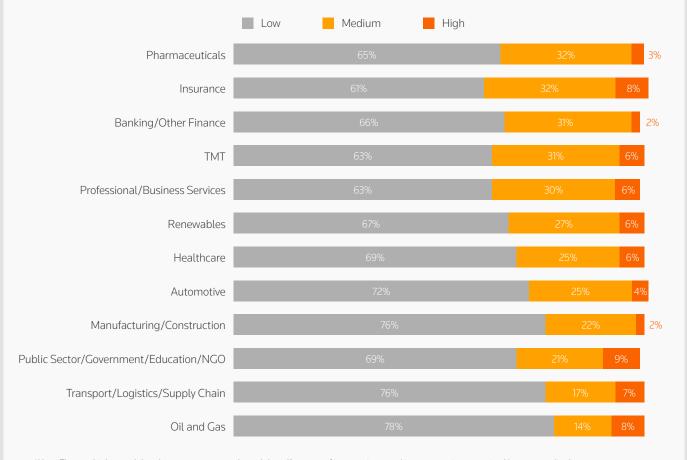
Our research can therefore conclude that the Pharmaceutical, Healthcare, Insurance and Legal industries

are not just out-investing other industries today, but are also indicating that they expect investments to grow at greater rates than other industries over the next three years. We may expect, as a result, that these industries will maintain their lead at the forefront of generative AI adoption and investment in the short to medium term.

Meanwhile, the Oil and Gas sector – currently standing as a below-average adopter of generative AI – is expected to grow investment in generative AI at an above-average rate. From a mix of below average or average adopters, the Oil and Gas industry could be regarded as a challenger or one-to-watch.

While the Oil and Gas sector is most likely to expect medium growth in generative AI investments, the Insurance sector is most likely to expect high or very high growth

Share of respondents per sector to have placed annual investment in generative Al into our 'medium', 'high' and 'very high' growth brackets



*Note: The very high growth band represents more and equal than 41 percent of increase in annual investments in generative AI; correspondingly, high growth band represents 21-41 percent increase, and medium growth represents less and equal than 20 percent of increase.





3 INSIDE THE GENERATIVE AI VENDOR LANDSCAPE

With organizations across the economy looking to both integrate and invest in generative Al capabilities, it is important to have an overview of the vendor landscape. To this end, we asked survey respondents to name vendors they have either worked with or are considering working with and analyzed these details according to company size and industry.

Across both metrics, the generative AI landscape is largely dominated by three or four key players: Microsoft, Google, OpenAI and AWS. These four are the most commonly-cited vendors across our respondents and hold a more

ACTIONABLE INSIGHTS

- The vendor landscape is already being dominated by reputable providers – Microsoft and Open AI, Google and Anthrophic, AWS – who were among the most cited vendors by respondents across all organization sizes and industry types. There is already an established, dominant position in the market by these entities, perhaps unsurprising given the early capabilities of large language models released by these players.
- But outside of the established leadership group, the vendor landscape becomes more differentiated based on sector-specific capabilities tailored to meet current demand. Organizations in certain sectors could therefore seek out tools that meet certain requirements, as well as testing tools with a more dominant position in the market.

Figure 8

Microsoft, OpenAI, Google and AWS have a strong hold over generative AI vendor landscape today

Wordcloud created using number of mentions of technology partners and vendors used by respondents







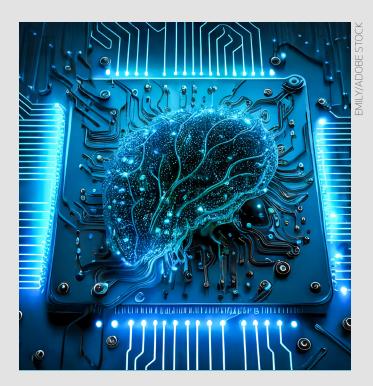
pronounced position of dominance specifically with our 'big business' group. With Microsoft owning a 49% stake in the for-profit entity of OpenAI following investments totaling \$13 billion, the vendor landscape is even more concentrated, and a runaway industry leader is present.

Below that bracket, the most commonly cited vendors include IBM, Nvidia and Anthropic, the latter being the subject of multi-billion-dollar investments from both Google and Amazon.

The majority of vendors mentioned by respondents provide either software solutions or access to generative AI tools or capabilities – large language models in the main. A minority, including the likes of Nvidia and some lines of Oracle's generative AI service, provide hardware – GPUs – or access to hardware.

When analyzing the top vendors mentioned per industry, the dominance of the leading players is maintained, however the lists are unsurprisingly made up of more industry-specific tools and technologies. Legal teams are turning to generative AI-powered products including Thomson Reuters' Westlaw Edge, while C3.ai is identified by respondents from the Oil and Gas, Manufacturing and Logistics & Supply Chain sectors – the company tailoring generative AI tools to provide field technicians in these specific areas with assistance. (Figure 9)

What this would indicate is that while, across the economy, popular and well-known tools such as ChatGPT, Bard and other large language models are commonly used, vendors



are emerging with more tailored and focused capabilities, built with specific industries in mind.

This may, however, continue to evolve as more popular and mass-funded tools become more advanced and leading organizations in the field launch new, differentiated tools. A potential case study here would be the launch of Open Al's Sora tool in February 2024, which creates video from text prompts – a potentially significant capability for the creative industries.

Figure 9

INDUSTRY	COMMONLY CITED VENDORS OUTSIDE OF THE 'BIG FIVE'				
Oil and Gas	C3.ai	Aviva	Baker Hughes	Cisco	Geminus Al
Insurance	Shift Technology	Guidewire	Cortical.io	RiXtrema	Eleviant Tech
Legal	Midjourney	Thomson Reuters / Westlaw	Aria Technologies	Bing	
Pharmaceuticals	CGI	DisruptRE	Doxa	Glemser	Esko
Healthcare	IQVIA	Elekta	Ambient Technologies	Helium Plus	Odoo





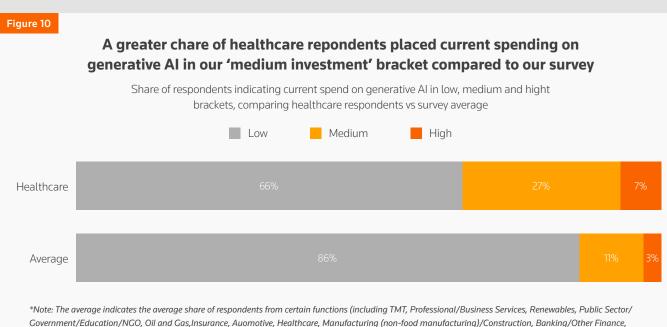


4 SECTOR-SPECIFIC TRENDS

While previous chapters of this report discussed the findings of our survey as a whole, for this chapter we have analyzed the results on a per-sector basis. This has allowed us to identify which sectors are adopting generative Al more quickly or aggressively than others, which are dedicating more resource internally to generative AI and any differences in the application or use-case for generative AI. (Figure 10)

ACTIONABLE INSIGHTS

- Individual sectors are responding to the premise of generative AI in different ways, perhaps bounced by different perceptions of the benefits and advantages of the technology, but also the threats and risks associated with it.
- This is being felt not just in the investment profile for generative AI, but also the teams tasked with implementing it and the expected growth in investments. Organizations may therefore want to consider a more tailored approach to generative AI, rather than following the crowd.



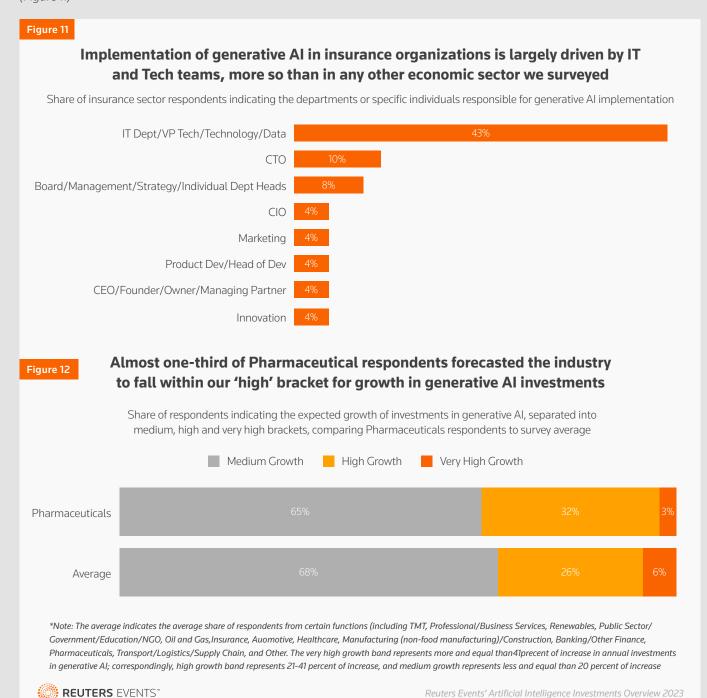
Government/Education/NGO, Oil and Gas,Insurance, Auomotive, Healthcare, Manufacturing (non-food manufacturing)/Construction, Banking/Other Finance, Pharmaceuticals, Transport/Logistics/Supply Chain, and Other. The low investment band indicates annual spends on generative Al less than \$1m; the medium investment band indicates annual spends on generative AI between \$1.1m-\$10m; the high investment band indicates annual spends on generative AI more than \$10m.





Our research indicates that the healthcare sector may be investing more heavily in generative AI than others. Figure nine indicates how respondents from the healthcare sector were more likely than our average to be investing in the greater investment bands, specifically those dictating investments in excess of \$500,000 per year. This tallies with conclusions reached elsewhere in this report highlighting healthcare as a high growth industry for generative AI. (Figure 11)

One key conclusion to pull out from our cohort of respondents from the insurance industry is the high share of respondents that identified that responsibility or technology selection and implementation sat with the IT Department/VP Technology/Technology/Data team. Forty-three per-cent of insurance respondents stated as such – the highest share of any sector we have analyzed as part of this report. (Figure 12)





Respondents from the pharmaceutical sector indicated that they were more likely to forecast higher growth in generative Al investments over the next three years than our respondent average. More than one quarter (27%) of respondents aid they expected generative Al investments to grow by 11 – 20% over the next three years, while a further 23% said they expected such investments to grow by as much as 40%. (Figure 13)

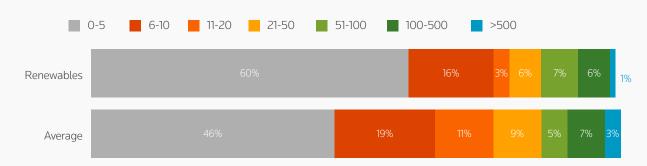
One possible conclusion to take from our cohort of

respondents from the renewables sector is that they remain less committed to generative AI than others. More than half (55%) of respondents from the renewables sector said they currently have between 0-5 employees engaged with generative AI technologies, far above the survey average of around 40%. Renewables respondents were also more likely to suggest that spend on AI training and skill development in 2023 was between \$0-10,000\$ (our lowest bracket for spending) than our respondent average.

Figure 13

The renewables sector would appear to have smaller teams engaging with generative AI rather than our survey average

Share of respondents indicating the size of teams engaging with generative AI, comparing renewables respondents to survey average.

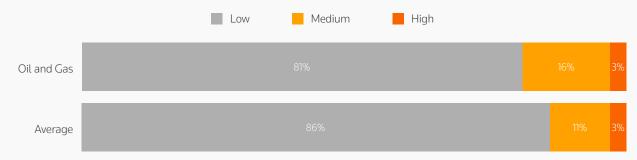


*Note: The average indicates the average share of respondents from certain functions (including TMT, Professional/Business Services, Renewables, Public Sector/ Government/Education/NGO, Oil and Gas, Insurance, Auomotive, Healthcare, Manufacturing (non-food manufacturing)/Construction, Banking/Other Finance, Pharmaceuticals, Transport/Logistics/Supply Chain, and Other. The percentages might not add up to 100 per cent due to rounding error.

Figure 14

Current spends on generative AI within the Oil ad Gas sector are comparable to our survey average, but could grow in the coming years

Share of respondents indicating current spend on generative AI in low, medium and high brackets, comparing oils and gas respondents vs survey average.



*Note: The average indicates the average share of respondents from certain functions (including TMT, Professional/Business Services, Renewables, Public Sector/Government/Education/NGO, Oil and Gas,Insurance, Auomotive, Healthcare, Manufacturing (non-food manufacturing)/Construction, Banking/Other Finance, Pharmaceuticals, Transport/Logistics/Supply Chain, and Other. The low investment band indicates annual spends on generative Al less than \$1m; the medium investment band indicates annual spends on generative Al between \$1.1m-\$10m; the high investment band indicates annual spends on generative Al more than \$10m.



