IoD | LONDON BUSINESS SCHOOL
POLICY PAPER

Assessing the expected impact of generative AI on the UK competitive landscape

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Foreword

This report offers really valuable guidelines for businesses and policymakers in what is essentially a new competitive environment. The identification of potential market consolidation and the widening of corporate inequalities due to generative AI adoption is particularly relevant.

The report rightly emphasizes the role of proprietary data in leveraging generative AI for competitive advantage. This is key to understanding how businesses can effectively use generative AI to enhance their operations and offerings. By identifying sectors and business models that might experience significant transformations, the report serves as a strategic tool for organisations planning to integrate generative AI into their operations. The recommendations for both sector-specific regulatory frameworks and broader policy measures to prevent monopolies and respond effectively to the challenges posed by generative AI are very timely-indeed overdue.

The report does an excellent job of engaging with industry leaders. As generative AI transforms job roles and industry needs, there is a pressing need for educational reforms to equip the future workforce with relevant skills. This includes not only the technical skills needed to work with generative AI but also the critical thinking and management skills to make strategic decisions in a generative AI-driven environment.

The insights provided by the report offer a foundation for both strategic decision-making by businesses and policy formulation by legislators and regulators, highlighting the need for international standards and a more active government policy on AI regulation.

Lord Clement-Jones
LibDem House of Lords spokesperson for Science, Innovation & Technology
and Co-Chair of the All-Party Parliamentary Group on AI

I am delighted to welcome this timely report from the IoD and London Business School. The report assesses the likely impact of generative AI on the UK competitive landscape concluding that adoption could widen corporate inequalities, with sectors prone to market consolidation seeing the most significant change. It frames the challenges and opportunities in the social and the political context making several excellent policy recommendations. If we are to make a success of GenAI – moving from hype to transformational impact – then we must act.

The report recommendations offer clear, pragmatic measures that address specific issues, many of which I have tried to address through my AI (Regulation) Bill. The current approach to regulation risks excessive fragmentation where much “slips through the cracks”. I have proposed an AI authority to address these gaps and ensure greater coordination and accountability across sectoral regulators.

I also welcome recommendations on the democratisation of proprietary data. In sectors, where data is disproportionately held by a few players we must look at how best to promote the sharing of that data, particularly where this can lead to broader societal benefits. In line with my AI Bill’s Clause 5, the report underscores the need to enhance legal frameworks for intellectual property and data privacy.

Finally, the recommendations extend to a radical overhaul of education and skills and greater public engagement on the benefits and opportunities of GenAI, an important agenda as we consider our responsibility to shape the future, not just for our generations but for those to come.

Lord Holmes
Author of Artificial Intelligence (Regulation) Bill

Executive summary

This report provides a systematic review of the expectations for change as a result of generative AI ('GenAI') as seen from the perspective of senior executives. It explores the differential expected impacts of GenAI across various sectors, employing a methodology based on the triangulation of survey data, workshops and in-depth interviews.

Our findings indicate that the adoption of GenAI could widen corporate inequalities, with sectors prone to market consolidation seeing the most significant shifts. While some industries are expected to benefit from early adoption and effective implementation strategies, others might experience little to no disruption. Managerial expectations underscore the critical role of proprietary data in leveraging GenAI for competitive advantage and highlight the varying importance of pattern recognition across sectors. Our study also reveals that while some firms are expected to significantly benefit from these technologies, the overall impact on market structures and competitive dynamics is expected to be uneven.

We provide managerial recommendations for action, such as to move from cost-based used cases to revenue-generating transformation, and consider organisational and strategic change. We also review the current policy response to GenAI and find that much may slip through the cracks.

We suggest that beyond the focus on exclusion and market power in the GenAI market, we should consider sector-specific regulatory frameworks and action plans. We also find that we need to review educational and skill development strategies, and help resolve bottlenecks and alleviate the impact of GenAI's redistributive impact.

Michael G. Jacobides and Mingyu Dalbert Ma
With the support of Chinmay Bajpai, Yuri Romanenkov,
Justinas Sukys, Netra Hirani, Yiru Susan Wang, George Alevras and Tom Albrighton

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Introduction
From GenAI hype to transformative impact

Since the launch of OpenAI's ChatGPT 3 in November 2022, the pace at which generative AI ('GenAI') has been improved and adopted has been truly exceptional. GenAI technologies, which are still developing at remarkable speed, may be able to tackle cognitive and creative tasks that were regarded, until recently, as the preserve of human decision-makers alone. Yet, perhaps paradoxically, the use of GenAI in business is still being debated. This is because, unlike almost any other innovation, GenAI was not developed at scale with any specific business opportunities in mind. Rather, it emerged due to lavish funding and the excitement over what new technology can ultimately lead to. These circumstances allowed a few firms – and a few investors – to create a technology that could have transformative implications for firms, business models, sectors and societies, but whose implications are yet to be understood.

Following this surge in technological opportunity, GenAI has been promoted as a driver of unprecedented productivity gains and substantial profit increases by many different actors: firms seeking aggressive technology use, consultancies seeking new growth areas, vendors seeking solid, good-margin business and industry experts alike.

Their projections often suggest that AI integration directly correlates with enhanced business performance, implying an overall expansion of the corporate 'pie'. While these arguments are predicated on questionable assumptions, they have still proved sufficiently impressive to persuade the boards of directors of otherwise hesitant firms. As the Gartner Hype Cycle suggests, we have now seemingly reached the peak of the AI hype, with some disillusionment now bound to set in. At the same time, however, we have many indications that this technology can be genuinely transformative. So where does the truth lie?

To get a clearer picture of the potential strategic impact of GenAI, it is helpful to look at analogous instances in the past. When it comes to transformative technologies, economic history cautions us against unbridled optimism. We discussed the 'IT productivity paradox' for decades after computing technology had become widely used, until we realised that IT would have little impact unless accompanied by business process redesign. Excitement with new technologies, such as we saw with the metaverse, can easily engender excessive expectations. Perhaps more important yet, such new technologies affect firms and sectors in very distinct ways. If we look at AI through a strategic lens, we can see that its impacts, as documented to date, are neither universally beneficial nor evenly distributed across industries. AI tends to increase inequalities in terms of profit distribution; it has been linked to greater competitive disparities; and it opens up wider and deeper fault lines between those firms that succeed and those that fail.

As such, the challenge we saw, and which motivated this study and report, was that the hype around GenAI and the rush to find use cases was obscuring GenAI's potential impact, which will not be purely positive but also vastly disruptive. More to the point, there was little work explaining where and why we should expect disruption and GenAI adoption to take place. While there was a sense that GenAI adoption and impact might vary by sector or business model, there was no systematic understanding of what patterns might emerge. Thus, the opportunity for London Business School faculty to leverage resources from the UK's Regional Innovation Fund came at an opportune time, as we had developed a set of hypotheses on a pressing set of questions. This was the background behind the genesis of this project[1].

1 Our research project formally started in December 2023 and went on till the end of March 2024, with an extension (funded by Evolution Ltd) until May, 2024, and was done in collaboration with the Institute of Directors Chair of the Expert Advisory Group on Science, Innovation and Technology and Chair of Region South, Faisal Khan, supported by LBS's Dalbert Ma, and LBS/Evolution Ltd's Yuri Romanenkov, Justinas Sukys, Chinmay Bajpai, Yiru Susan Wang, and IoD's Sasha Trapani, with input from other advisors. The product was directed by Prof Michael G. Jacobides from LBS (and Evolution Ltd) with the support of Faisal Khan from the IoD.

Our approach and methodology

Our ambition was to bridge industry and academe and apply rigour to the analysis in place of hype. The team comprised a group of researchers from London Business School working with the Institute of Directors (IoD) with the support of Evolution Ltd. Starting from some observations recently published in Forbes on why we should be excited about GenAI and where we should be wary of the hype, and an initial view of how companies should address GenAI published as an Evolution Ltd White Paper, we set out to explore what really mattered, working with senior executives and drawing on and extending recent work in business academe and experience in advisory.

We combined qualitative and quantitative methods. First, the LBS team and Evolution Ltd's advisors worked with the IoD to engage its members in a qualitative study through several workshops aimed at eliciting and refining hypotheses.

We then developed, refined and pre-tested a detailed questionnaire, which was sent to the IoD membership but also a small control sample of senior executives who were LBS alumni or executive education participants in its Next Generation Digital Strategies senior executive programme. We also worked with a leading Private Equity firm that granted us access to its portfolio firms, in order to compare and contrast their results. Having analysed the questionnaire responses and identified key patterns and correlations, we returned to the participating executives to explore what drove the correlations we found, along with additional features, and to ensure that our findings were well calibrated and that we understood the underlying mechanisms.

12 workshops were conducted with the IoD and three workshops were conducted with PE partner
Participants were designated to workshops based on sectors and their survey responses

March workshops:

Workshop 1: Non-Regulated Professional Services	Workshop 2: Education, Technology, Software	Workshop 3: Regulated Professional Services	Workshop 4: Media, Communications, and PR
Workshop was conducted open-ended for hypothesis exploration. Key discussion themes were distinctiveness and industry profits.	Workshop was conducted open-ended for hypothesis exploration. Key discussion themes were distinctiveness competition, and modularity.	Workshop was conducted open-ended for hypothesis exploration. Key discussion themes were proprietary data, and differentiation.	Workshop was conducted open-ended for hypothesis exploration. Key discussion themes were profits pools and proprietary data.

Survey pre-testing: 10 Interviews
Interviewees were selected to balance composition of sector and GenAI ambition/expectation/understanding.

April workshops:

Workshop 5 and 6: Pattern Recognition	Workshop 7 and 8: Strategic Uncertainty	Workshop 9 and 10: Proprietary Data	Workshop 11: Modularity
Two workshops were organised, one with participants rating high on pattern recognition (>=3), the other with low on pattern recognition (<=2).	Two workshops were organised, one with participants rating high on strategic uncertainty (>=4), the other with low on strategic uncertainty(<=2).	Two workshops were organised, one with participants rating high on proprietary data (>=4), the other with low on proprietary data (<=2).	One workshop was organised, with participants rating low on modularity of their business functions being represented (<=2).

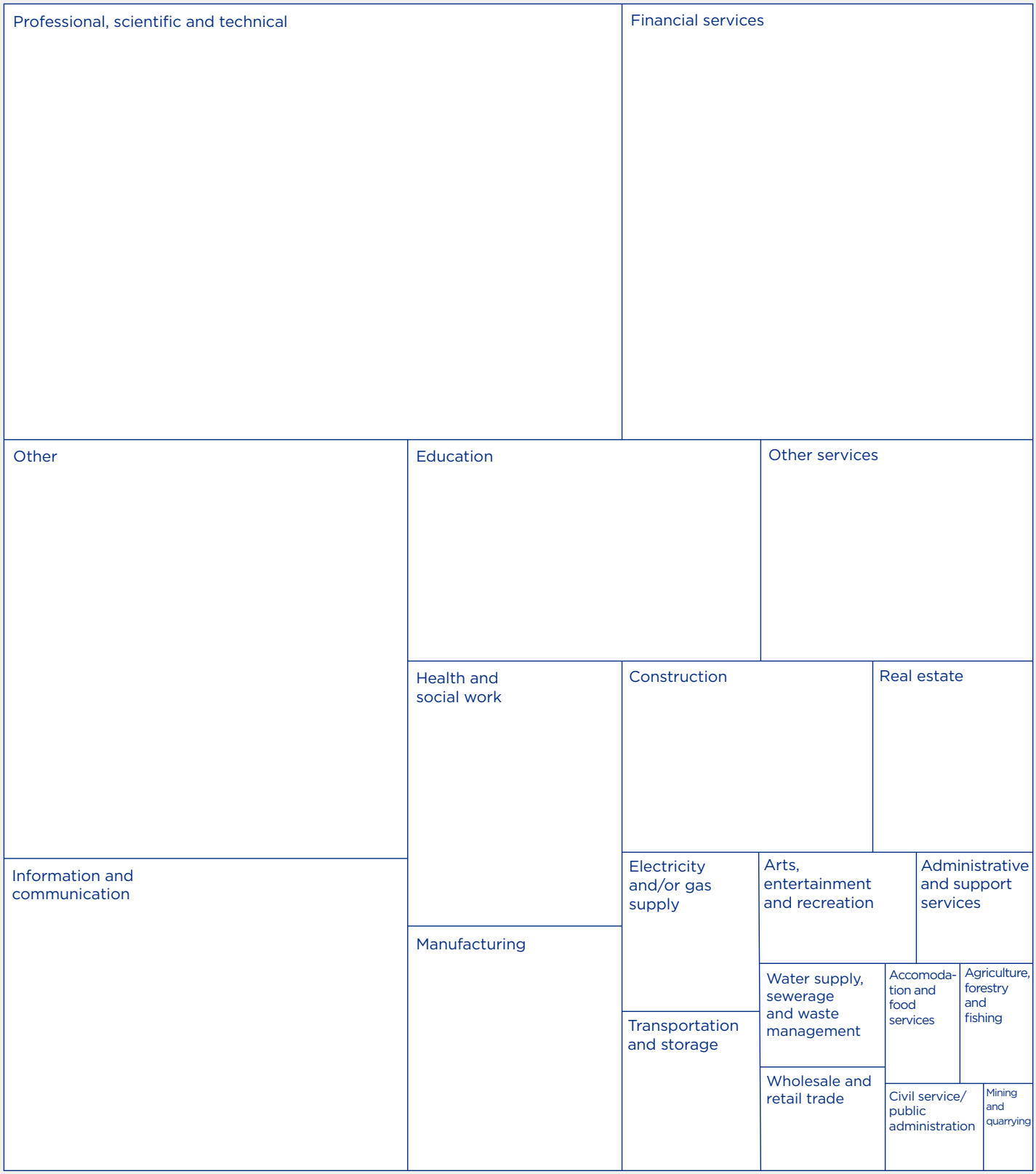
Workshop 12: Presentation of results, mechanisms, and cross-checking recommendations
Final workshop was conducted based on select participants from prior workshops to present our results, discuss our uncovered mechanisms, and cross-check and validate our recommendations for both regulatory policy and business strategy.

PE Working Session #1	PE Working Session #2	PE Working Session #3
Initial deep dive with PE partner to uncover initial hypotheses.	Presentation of preliminary empirical patterns and discussing mechanisms.	Further discussion of capabilities and practical implications for GPs.

In all, we received 277 questionnaire responses, welcomed 101 people in 15 workshops and engaged in numerous in-depth additional interviews. As far as we are aware, this is the first systematic analysis of expectations of change due to GenAI. The remainder of this report outlines some key patterns and mechanisms through which GenAI is reshaping firms, business models and industries and offers pragmatic recommendations for company strategy and policy alike.

Sectoral distribution of the IoD sample data

Professional services constitute the most represented at around 22.4% of the full sample



Note: n = 277
Source: Institute of Directors survey, team analysis

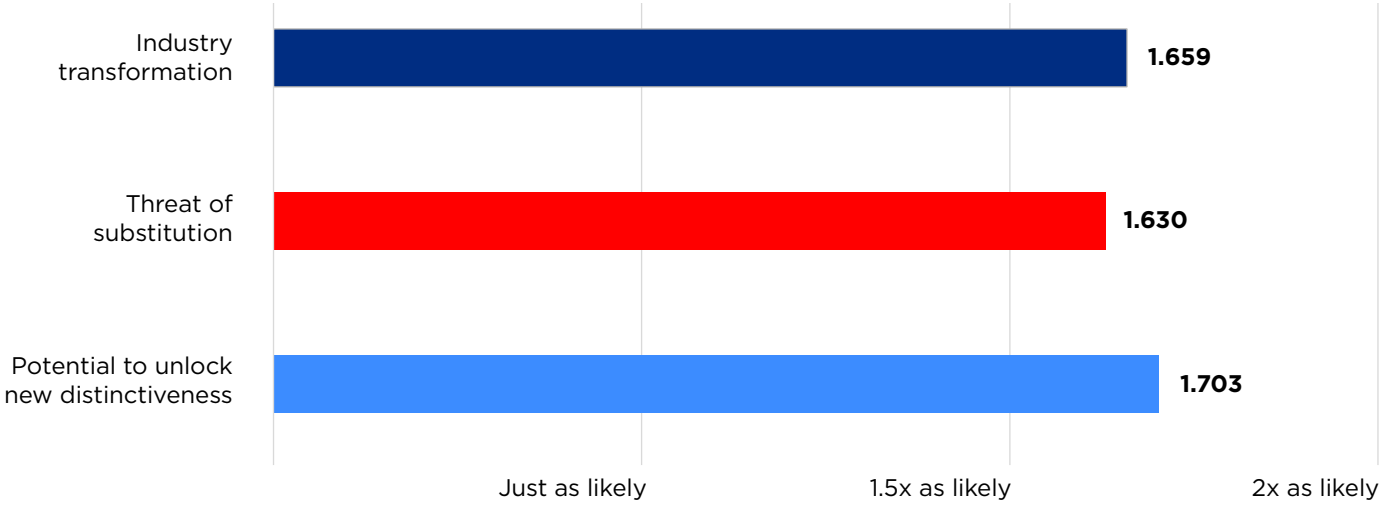
Sectoral characteristics predicting value changes post-GenAI: key measures and relationships to consider

In the absence of hard data on GenAI's impact, we focused on the extent to which executives expect their industry to be transformed. We considered some key variables, including not only the expectation of industry disruption on the basis of GenAI but also the extent to which an entire industry might be disintermediated or bypassed – as in the case of the advertising sector, where a significant proportion of the activity may be performed directly by clients of advertising agencies who could simply use GenAI tools as opposed to relying on an external provider. Conversely, we also considered whether our respondents expected that GenAI would provide the opportunity to unlock new forms of distinctiveness and as such gain a competitive edge.

One of the robust findings in our survey is that these measures tend to covary, suggesting that firms in our sample recognised the threat to the entire sector but believed that they could be successful within it, through better positioning. In other words, sectors that respondents expected to change the most significantly following GenAI were simultaneously expecting growth in their overall value (a larger 'pie'), but also a shift in how this value is distributed among participants. We also saw that these variables were predicted by certain key attributes – notably, the importance of pattern recognition as a driver of competitive success, suggesting that the sectors most affected could be those where pattern recognition is critical, from healthcare and law to advertising and education.

Sectors where pattern recognition is important face both the highest threat of substitution but also the highest potential for unlocking new distinctiveness

What is driving the increased likelihood of industry transformation? Is it to threat of substitution by suppliers and customers, or potential for new distinctiveness?



Note: n = 277
Source: Institute of Directors survey, ordinal logistic regression

Statistical analysis using univariate ordinal logistic regressions showed that high importance of pattern recognition increases the likelihood of industry transformation (OR=1.659), unlocking new distinctiveness (OR=1.703), supplier substitution (OR=1.63). Industry transformation was ordinally coded by 'How important do you perceive the usage of generative AI to be within your industry within the next 5 years?'; threat of substitution was ordinally coded by 'Rate the likelihood to which you expect generative AI to challenge the following aspects within your organisation over the next 5 years', and potential distinctiveness was ordinally coded by 'Assess the potential for generative AI to unlock new opportunities for distinctiveness within your market'.

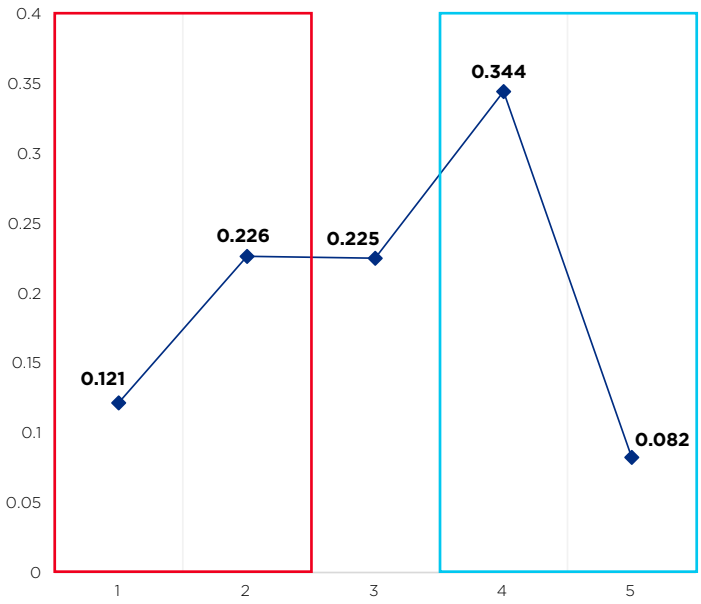
We find that in sectors where there is an expectation of change overall, even when the sector is being challenged, respondents are optimistic that new ways of adding value will also be found. This may mean that our respondents are part of firms that, despite the future challenges they see, will find new ways to survive and thrive. This may be a case of excessive optimism, or it may be a case of sample selection bias: we may only be seeing the responses of firms at the forefront of this technology, evidenced by the fact that they chose to engage in this time-consuming study.

Whatever the case may be, our preliminary findings suggest that GenAI, much like AI in general, will lead to a new set of winners and losers, and while sectors overall might face challenges, some firms may yet have an advantage.

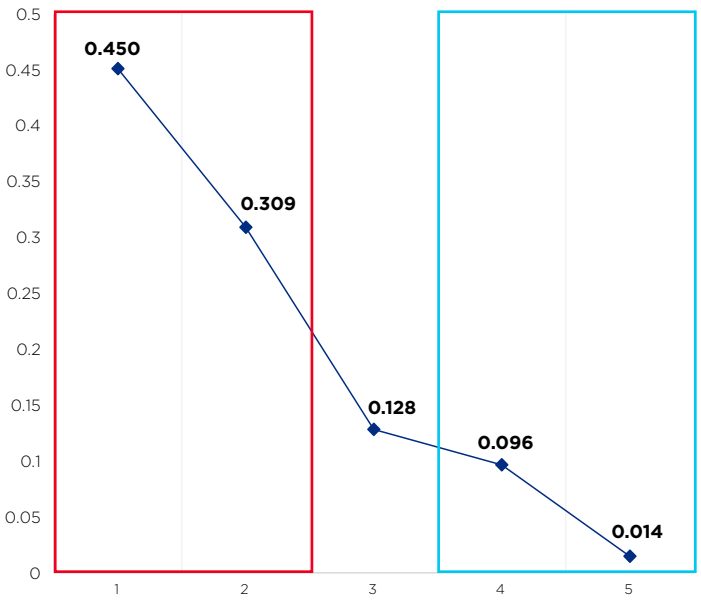
To dive more deeply into how and why this might be so, we move to exploring patterns of correlation, looking at how the expectation of industry transformation correlates with a host of other variables and how this is supported by our qualitative assessment, interviews or deep-dives. While these results come with the usual provisos and will be refined, we hope they advance the debate on how both strategy and policy should respond to GenAI.

Importance of proprietary data is associated with threat of disintermediation
Controlling for a variety of alternative variables and averaging them out for margins calculations

How does the likelihood of supplier disintermediation change as proprietary knowledge becomes more important to a sector?



Likelihood of disintermedation for **high proprietary data**



Likelihood of disintermedation for **low proprietary data**

N = 277
Source: Institute of Directors GenAI survey, team analysis

Margins analysis on the disintermediation variable, which spans from “extremely unlikely” (1), indicating that threat of disintermediation is highly unlikely, to “extremely likely” (5), suggesting that threat is highly likely, with a neutral midpoint at (3) signifying that a threat is neither likely nor unlikely. Predicted probabilities conditional on high (5) or low (1) proprietary data importance are presented above. Supplier disintermediation was ordinally coded by the question: “Rate the likelihood to which you expect generative AI to challenge the following aspects within your organisation over the next 5 years” and the option was “disintermediation by suppliers: the risk of suppliers bypassing our organisation directly to reach our clients”. Proprietary data importance was ordinally coded by the question “How important is proprietary data to your company’s business success?”.

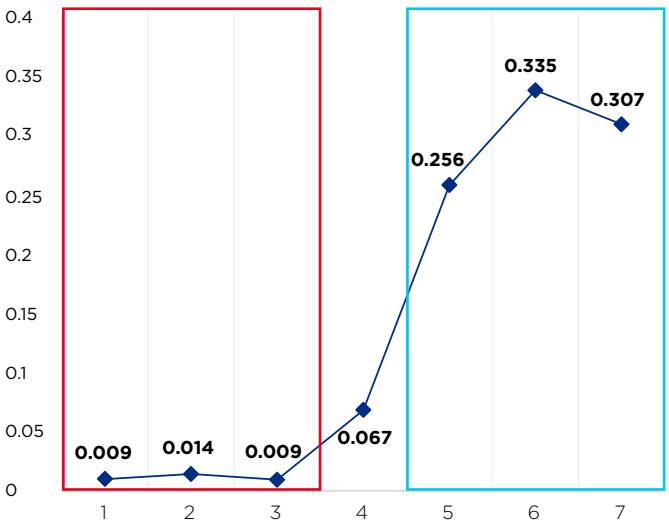
Proprietary data as a key enabler and differentiating factor

In the evolving landscape of GenAI, our research indicates a paradigm shift in the types of knowledge that confer competitive advantage. Historically, technical and tacit knowledge served as significant barriers to entry in various sectors. However, findings from our survey and workshops suggest that proprietary data is a powerful complement to GenAI. It also serves as a strong predictor of the extent to which an industry is expected to be transformed, and, even more so, the extent to which firms expect GenAI to unlock new ways to compete and make themselves stand out from the crowd[2].

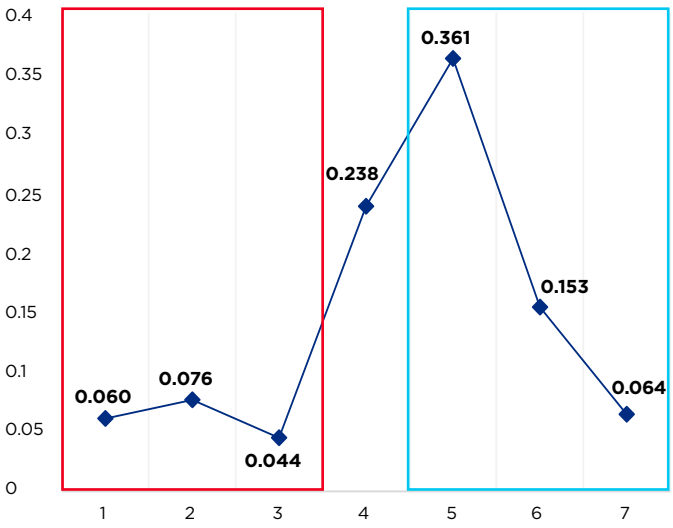
Our analysis reveals substantial differences in perceptions of the degree of distinctiveness conferred by GenAI, based on the importance that firms place on proprietary data. Respondents who regarded proprietary data as important were 63% more likely to believe that GenAI could unlock significant levels of distinctiveness.

Importance of proprietary data is associated with higher distinctiveness potential
Controlling for a variety of alternative variables and averaging them out for margins calculations

How does the likelihood of industry transformation change (decrease, neutral, increase) as proprietary knowledge becomes more important to a sector?



Likelihood of perceived potential distinctiveness for **high proprietary data**



Likelihood of perceived potential distinctiveness for **low proprietary data**

Note: n = 258
Source: Institute of Directors survey, team analysis

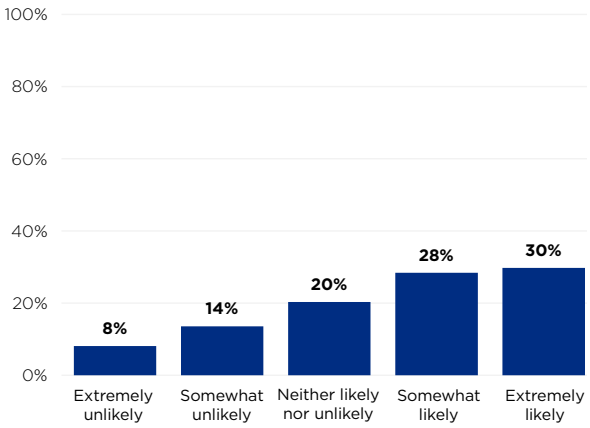
Margins analysis on the distinctiveness variable, which spans from "extremely negative potential" (1), indicating that impact is highly unlikely, to "extremely positive potential" (7), suggesting that impact is highly likely, with a neutral midpoint at (4) signifying neither positive nor negative. Predicted probabilities conditional on high (5) or low (1) proprietary data importance are presented above. Potential distinctiveness was ordinally coded by the question: "Assess the potential for generative AI to unlock new opportunities for distinctiveness within your market". Proprietary data importance was ordinally coded by the question "How important is proprietary data to your company's business success?".

2 That said, the interpretation of what "proprietary knowledge" is left to the survey respondents, who simply rated how important it is for their success. Given the importance of this variable, future work will look at the different components of such proprietary data – is it data around customers and their interactions, for instance, or other data that is not publicly available?

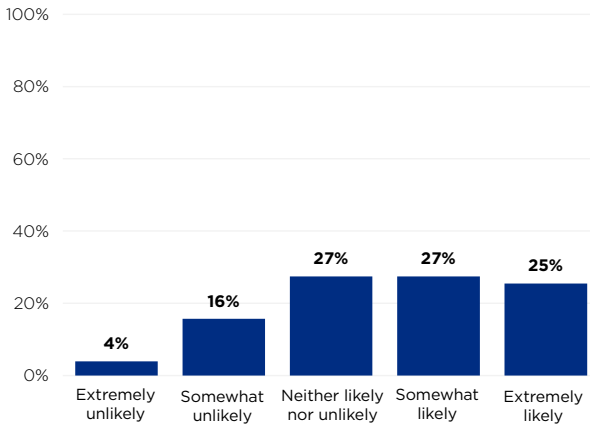
However, proprietary knowledge advantage is not distributed equally across firms

Distributional analysis showcases firm turnover positively associated with proprietary data

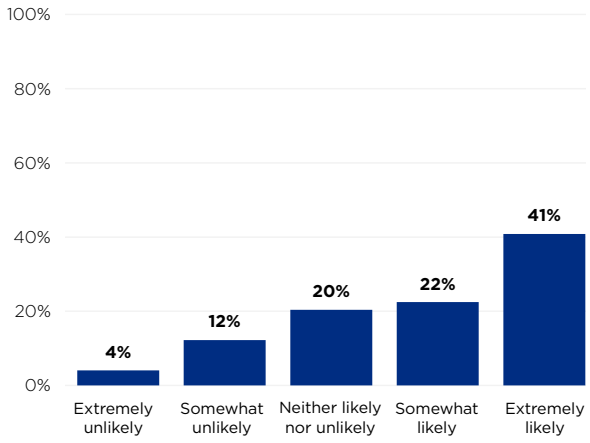
Under £250,000



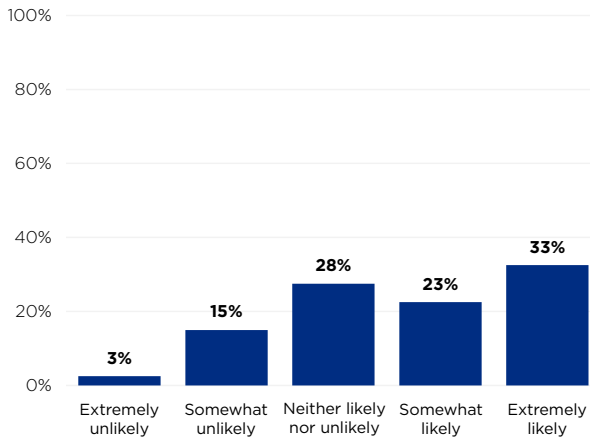
£250,000-£2 million



£2 million-£10 million

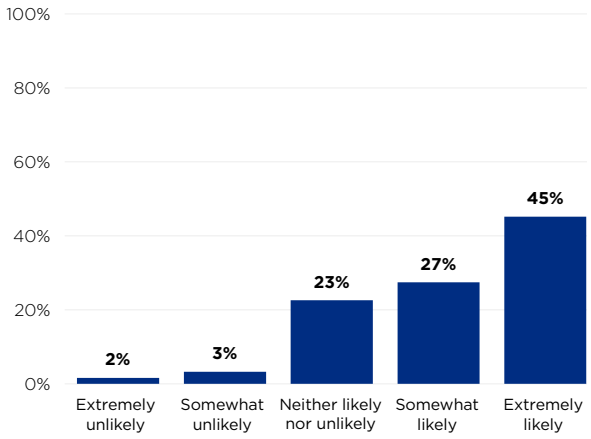


£10 million-£50 million



Our analysis looked at two more types of knowledge: technical and tacit[3]. We found that, if we consider all three types of knowledge together, proprietary knowledge retains its statistical significance, while tacit and technical knowledge are not important. Proprietary knowledge stands out as a significant predictor of distinctiveness, showing a 40% higher likelihood of achieving distinctiveness when factored into our models, while the importance of tacit knowledge and even more so technical knowledge will not serve to protect firms or preserve their advantage when GenAI is expected to have a disruptive impact.

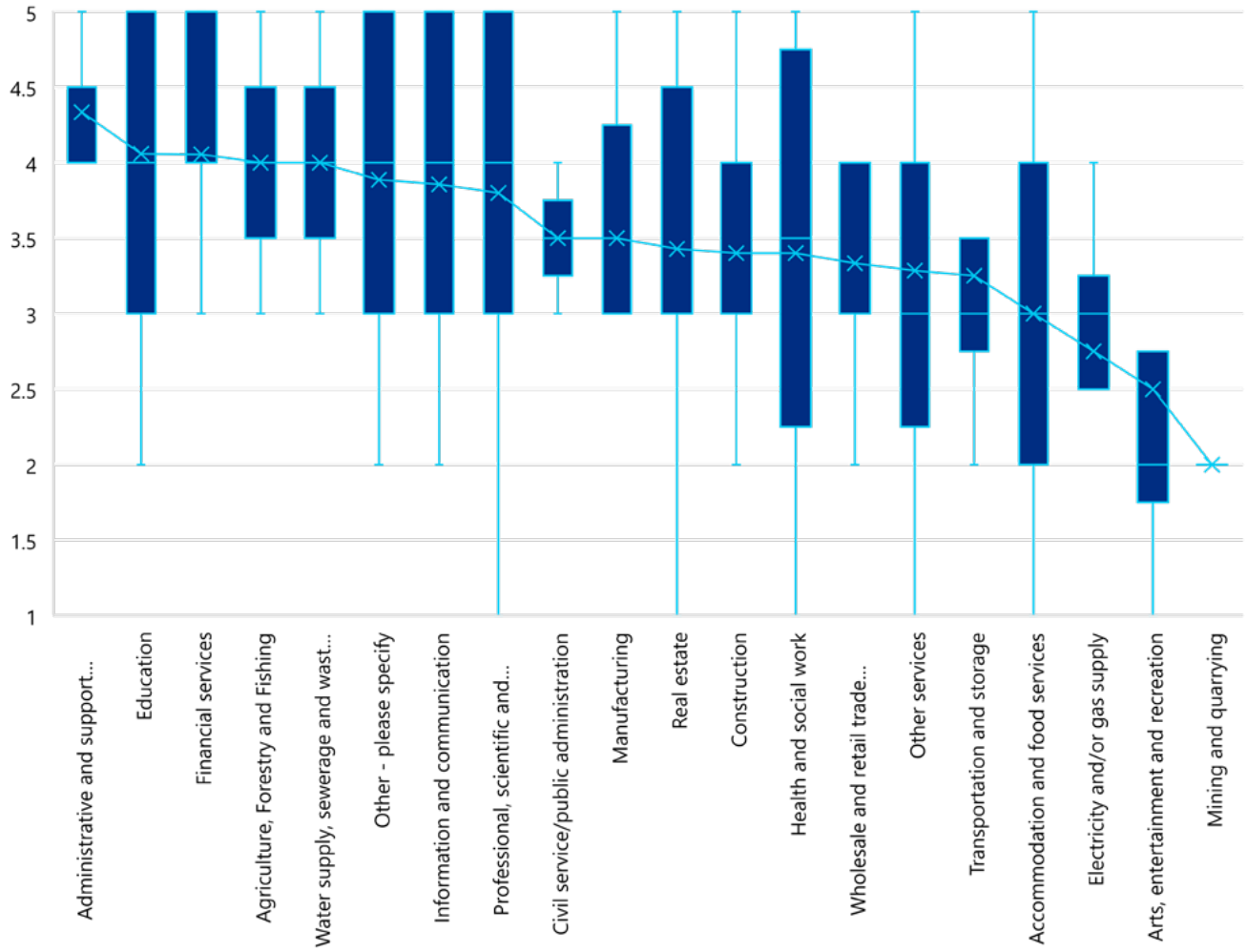
Over £50 million



Histogram distributions of importance given to proprietary data by firm sizes categorised into a – Under £250,000; b – £250,000 to £2 million; c – £2 million to £10 million; d – £10 million to £50 million; e – Over £50 million

3 Within our survey, we defined technical knowledge as 'the role of specialised expertise in your industry or field in driving innovation and maintaining a competitive edge' and tacit knowledge as 'know-how/the importance of unspoken, experience-based skills and insights in your firm's success'. There was low pair-wise correlation between proprietary data and tacit knowledge (0.04), moderate correlation between proprietary data and technical knowledge (0.22) and higher correlation between technical and tacit knowledge importance (0.45).

Proprietary data



Box plot to showcase sectoral distribution of importance given to proprietary data along with the mean values of respondents' response for importance level (denoted by an 'x' inside the box plot) and the median values (denoted by the horizontal line inside the box plot)

What makes this finding consequential is that the distribution of proprietary knowledge is not statistically uniform across firm sizes – unlike technical and tacit knowledge, which are statistically uniform across firm sizes. Proprietary knowledge, as our interviews confirm, is based on proprietary data. Larger firms, which can benefit from superior data access and more robust data management capabilities, tend to hold a disproportionate share of proprietary knowledge. This suggests that size plays an important role in the ability to capitalise on GenAI technologies.

The importance of proprietary knowledge, perhaps unsurprisingly, is associated with concerns about accuracy. Firms that possess more proprietary data are associated with a 30% higher likelihood of facing issues related to output accuracy – a statistically significant barrier to adoption.

This challenge persists across various firm sizes, regulatory environments and operational strategies, suggesting a widespread concern that must be addressed if firms are to harness the full potential of GenAI.

Our sectoral analysis highlights certain industries where proprietary data is especially critical, such as information and communication services, professional and scientific sectors and administrative services. An executive from the educational technology sector illustrates this point, noting, 'Fifty percent of all courses are created with our tools, and so we can build models based off of what is really effective training with the most effective techniques. That data moat means that companies can rely on us to bring the best, most effective learning capabilities through our AI techniques.'

Similarly, representatives from the automation and data-analytics sectors shared insights on the transformative potential of proprietary data in developing new products and revenue streams. 'There's other cases where you can monetise and sell something that you could not sell earlier, or sell it better,' one leader explained, highlighting the use of proprietary data in drug discovery. Another added, 'For you to develop a product, especially when the product relies on data, if you have a huge customer base that is using your product and you get data from that, it makes the cycle work faster and you learn more to read more and improve.' This suggests that there will be forces, much as we have seen in digital sectors, where size and the infrastructure to leverage data and proprietary knowledge beget competitive advantage and greater scale.

Surprisingly, sectors such as agriculture and water/sewerage also emphasise the importance of proprietary data, highlighting potential public health implications and the need for policy alignment to prevent service disruptions. Conversely, sectors such as education, health, professional services, real estate and food services show a more equitable distribution of proprietary knowledge. This balance suggests a need for targeted strategies – resource allocation for firms that lack proprietary knowledge, and support in managing adoption barriers for those that have it. This nuanced approach is crucial for leveraging proprietary data as a key enabler in the GenAI era, ensuring that the benefits of this transformative technology are maximised while its risks are effectively managed.

Additional sectoral and business-model differences that drive GenAI impact: pattern recognition

Pattern recognition in business and AI transcends mere technological capability, reflecting how organisations strategically implement AI: through structured routines to consistently identify patterns or on a more ad hoc basis. Pattern-recognition capability allows companies to extract actionable insights from data, anticipate market trends and personalise their customer interactions. For instance, two firms in the same industry might both analyse data on customer behaviour, but the firm with a systematic approach to pattern recognition can adapt to trends and optimise operations more quickly than the one that reacts only sporadically and haphazardly. In the context of GenAI, where pattern-recognition capabilities can be exploited at scale, the downsides of random or isolated analyses or flailing around without clear aims become even more salient, heightening the risk of significant strategic missteps and operational inefficiencies.

Our research reveals that the importance placed on pattern recognition significantly influences perceptions of GenAI's transformative potential. Companies that saw pattern recognition as crucial to their business success were more likely to view their industry as significantly transforming, to see greater potential for distinctiveness and to perceive a greater threat of substitution.

When we delved more deeply into this question, our analysis revealed that pattern recognition was also a robust predictor of distinctiveness in operations, corroborated by statistical models including firm size, sector, regulatory environment and proprietary data. Firms emphasising pattern recognition were 1.4x more likely to unlock distinctiveness, highlighting the interplay between unique data access and the extraction of strategic insights.

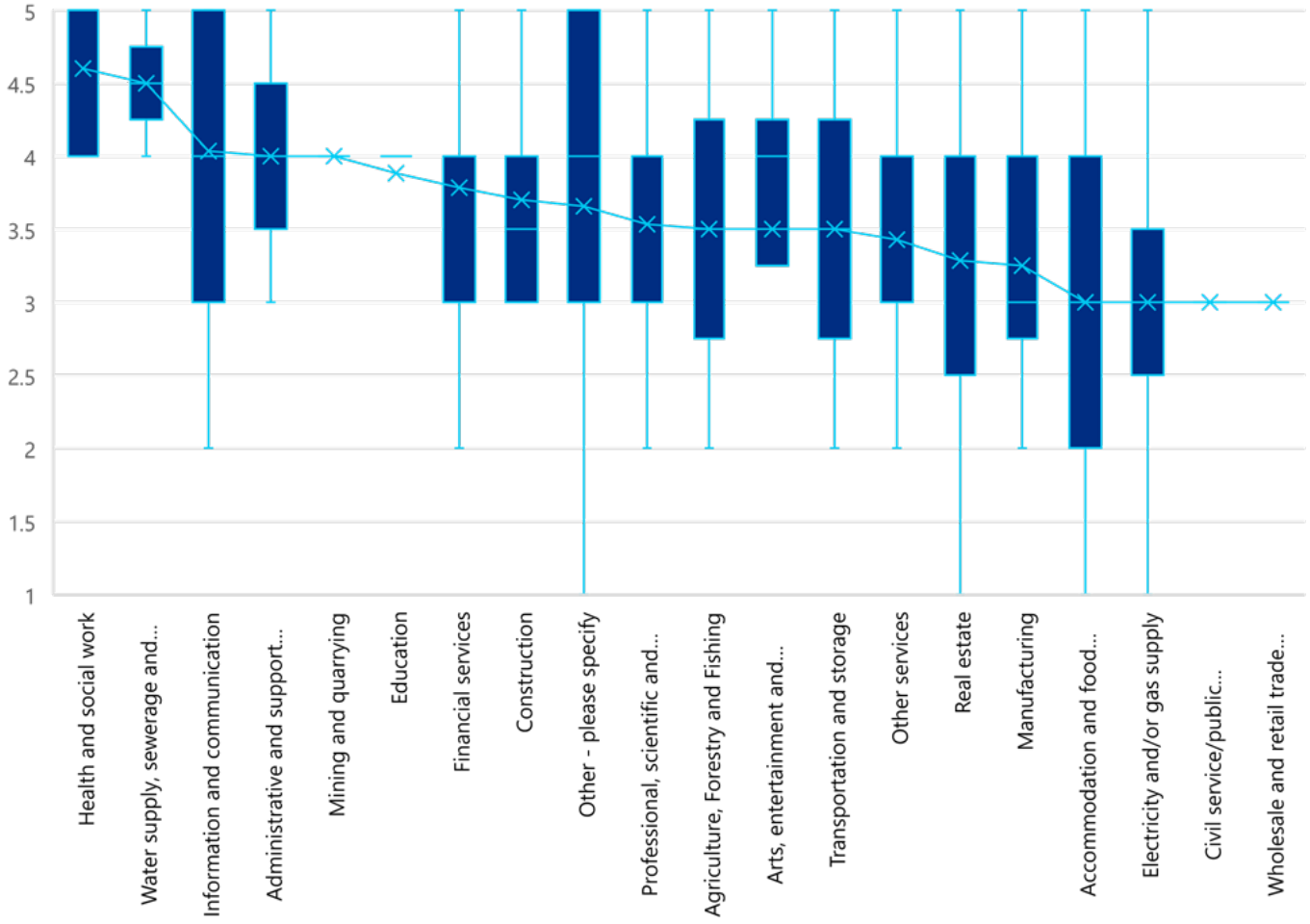
Our data highlighted that the role of pattern recognition varies widely not only across but also within sectors. Industries such as information and communication services, transportation and storage and accommodation and food services, in particular, exhibit wide variations in how much they value pattern recognition, with the importance ascribed to it ranging from low to high.

This disparity indicates that there are distinct business models, and since only some of them will benefit from GenAI, this may lead to value migration.

Firms that can grasp the importance of pattern recognition, and leverage GenAI in doing so, should be able to outperform their peers – and quite possibly change the underlying economics of their sectors, as was made clear by our qualitative discussion.

That said, while this disparity may be important and grow larger in some sectors, in others the variance may be smaller. Sectors such as water supply and sewerage and healthcare consistently assign great importance to pattern recognition, driven by the critical need for accurate data analysis in decisions affecting public health and safety. Meanwhile, manufacturing, construction and agriculture show moderate levels of importance placed on pattern recognition.

Pattern recognition



Box plot to showcase sectoral distribution of importance given to pattern recognition along with the mean values of respondents' response for importance level (denoted by an 'x' inside the box plot) and the median values (denoted by the horizontal line inside the box plot)

Recommendations part 1
Proprietary data, pattern recognition and GenAI

Given our analysis, we outline some initial strategy and policy recommendations. These proposals aim to leverage the opportunities presented by GenAI while addressing potential challenges and ensuring equitable benefits across sectors.

For businesses:

1. **Build up your proprietary data or compensate for its lack:** Businesses should evaluate their position in terms of proprietary data relative to their competitors. Understanding where you stand can help in identifying strategic opportunities or vulnerabilities. Consider whether you have feasible means to acquire additional proprietary knowledge to strengthen your competitive edge.

2. **Enhance data-management practices:** The quality of data plays a critical role in maximising the benefits of GenAI. Businesses should assess the cleanliness and structure of their data. Implementing robust data collection and cleaning procedures is essential to ensure that AI technologies are working with accurate and relevant inputs, thus enhancing the reliability and effectiveness of their outputs.

3. **Assess and invest in pattern-recognition capabilities:** Organisations should evaluate the degree to which they currently rely on pattern recognition and consider further investments to enhance these capabilities. This includes not only technological investments in AI systems that can process and analyse large datasets but also training programmes to improve human understanding and oversight of pattern-recognition processes. Furthermore, fostering a culture that values data-driven decision-making and continuous learning is crucial.

4. **Invest in hyper-customisation inasmuch as you can add value to the customer and build a more defensible moat:** Leverage proprietary data to innovate and differentiate your product and service offerings. This could involve developing new business models based on the insights derived from your data. Inasmuch as there is little proprietary data, focus on the other benefits of GenAI that allow you to hyper-personalise at scale, with the goal of building a moat around the value of meeting customers' needs effectively.

For policymakers:

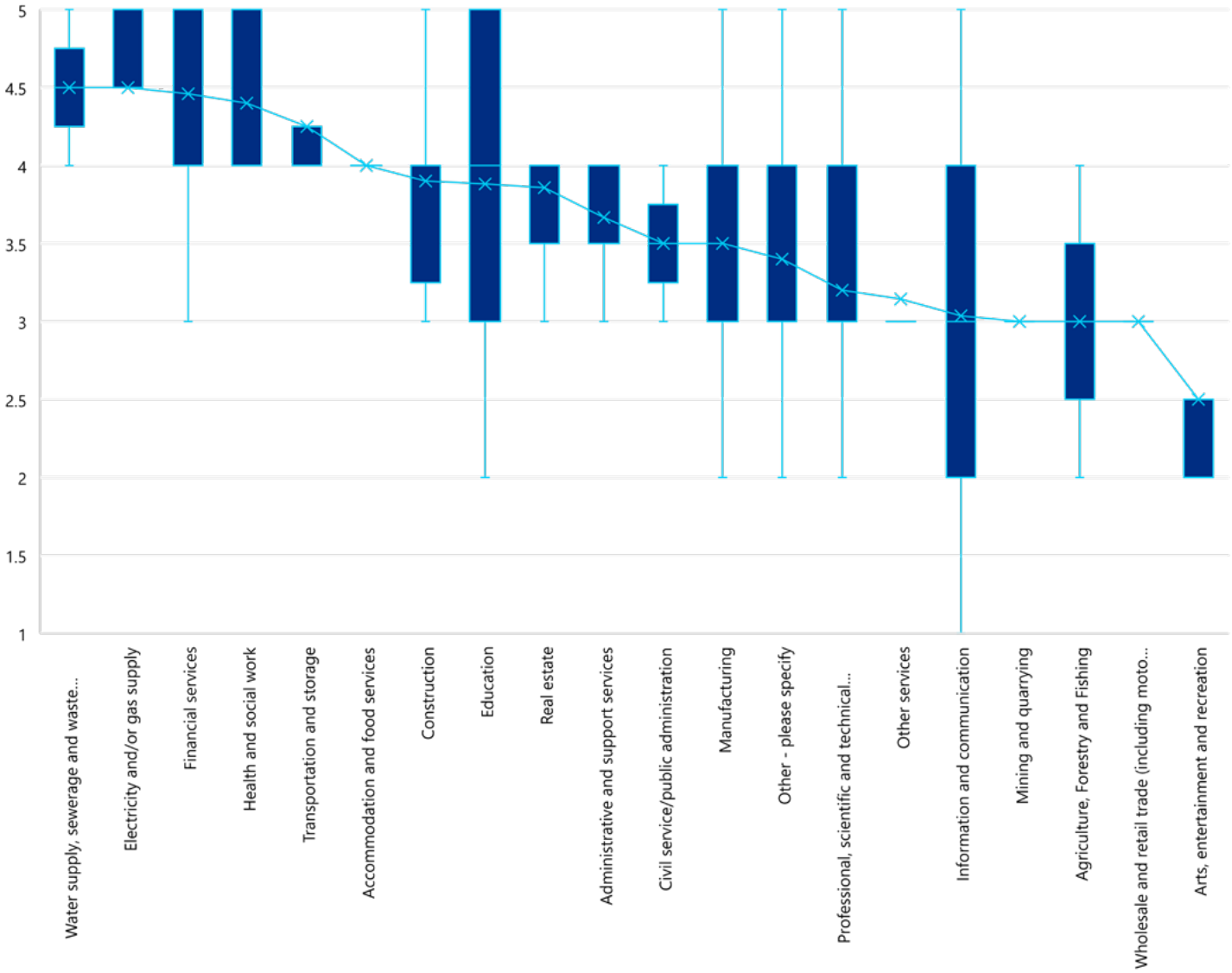
1. **Consider the democratisation of proprietary data:** In sectors where proprietary data is disproportionately held by a few players, consider policies that promote the sharing or democratisation of such data, especially where this can lead to broader societal benefits. This could include creating frameworks for data sharing that protect individual privacy while still allowing for collective advancements in research and development. The focus of policy may need to shift from the technology of AI to underlying data ownership and use.

2. **Alleviate adoption bottlenecks in at-risk sectors:** Policymakers should identify and address the specific bottlenecks that hinder the adoption of GenAI in sectors that are most at risk of widening corporate inequalities and greater GenAI impact to counterbalance growing inequality. This may involve providing targeted support for AI adoption, such as subsidies for AI integration or tax incentives for research and development in AI technologies.

Factors influencing the speed of sectoral change: regulation and modularity

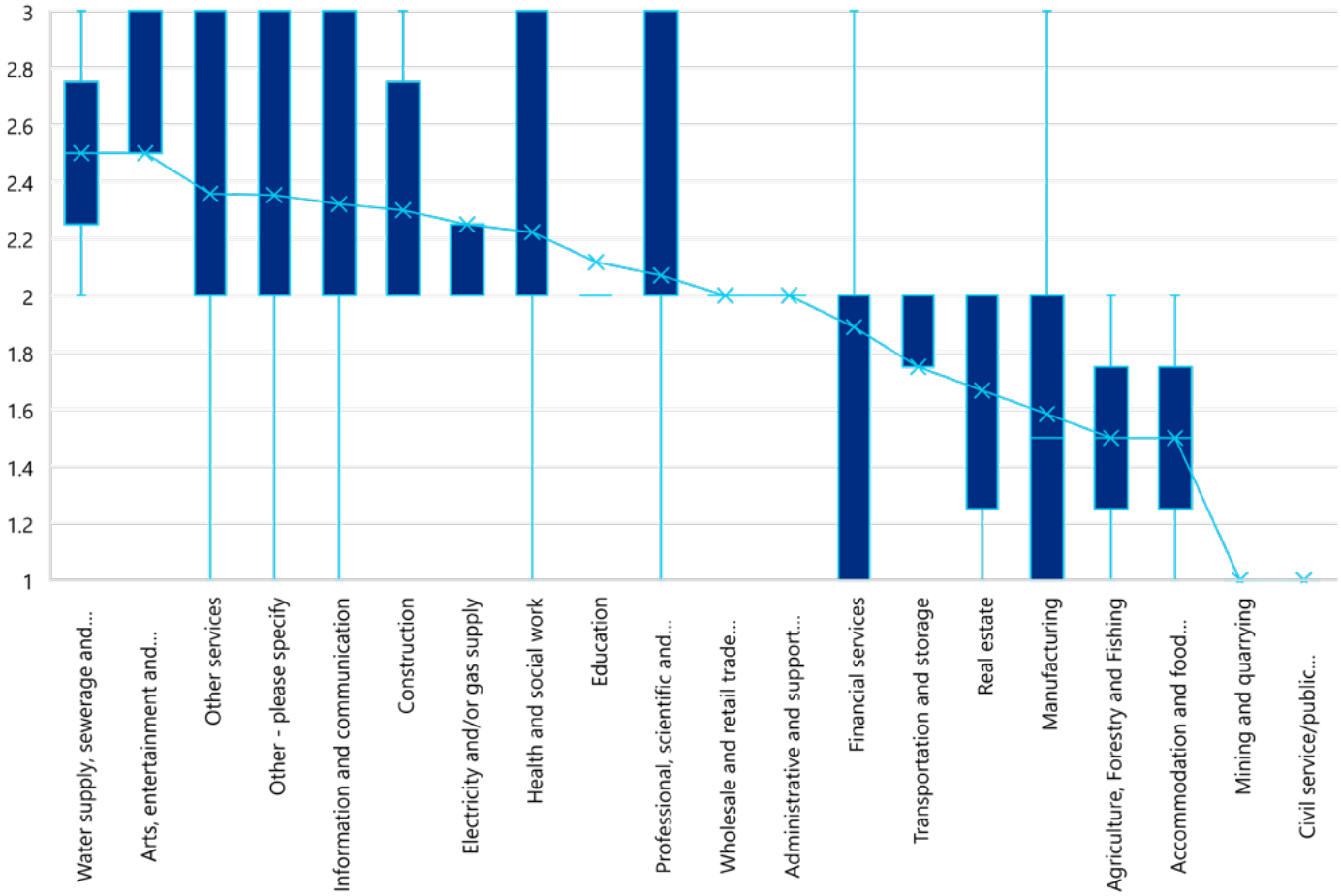
Our research also confirmed that two additional dimensions, regulation and modularity, are important predictors in terms of the speed at which sectors might be affected by GenAI.

Regulation



Box plot to showcase sectoral distribution of regulatory environment along with the mean values of respondents' response for regulation levels (denoted by an 'x' inside the box plot) and the median values (denoted by the horizontal line inside the box plot)

Modularity



Box plot to showcase sectoral distribution of reported modularity in business operations along with the mean values of respondents' response for modularity levels (denoted by an 'x' inside the box plot) and the median values (denoted by the horizontal line inside the box plot)

Modularity refers to the degree to which a firm's processes can be separated and recombined. Modularity often enables quicker adaptation to technological change, but it can also make processes easier to replicate. Our results first highlighted that firms that operate with high modularity in their processes tend to perform better in terms of their ambition and expectations for GenAI. This positive association indicates that modular firms are better positioned to integrate GenAI into their operations, reflecting greater excitement about the technology's potential.

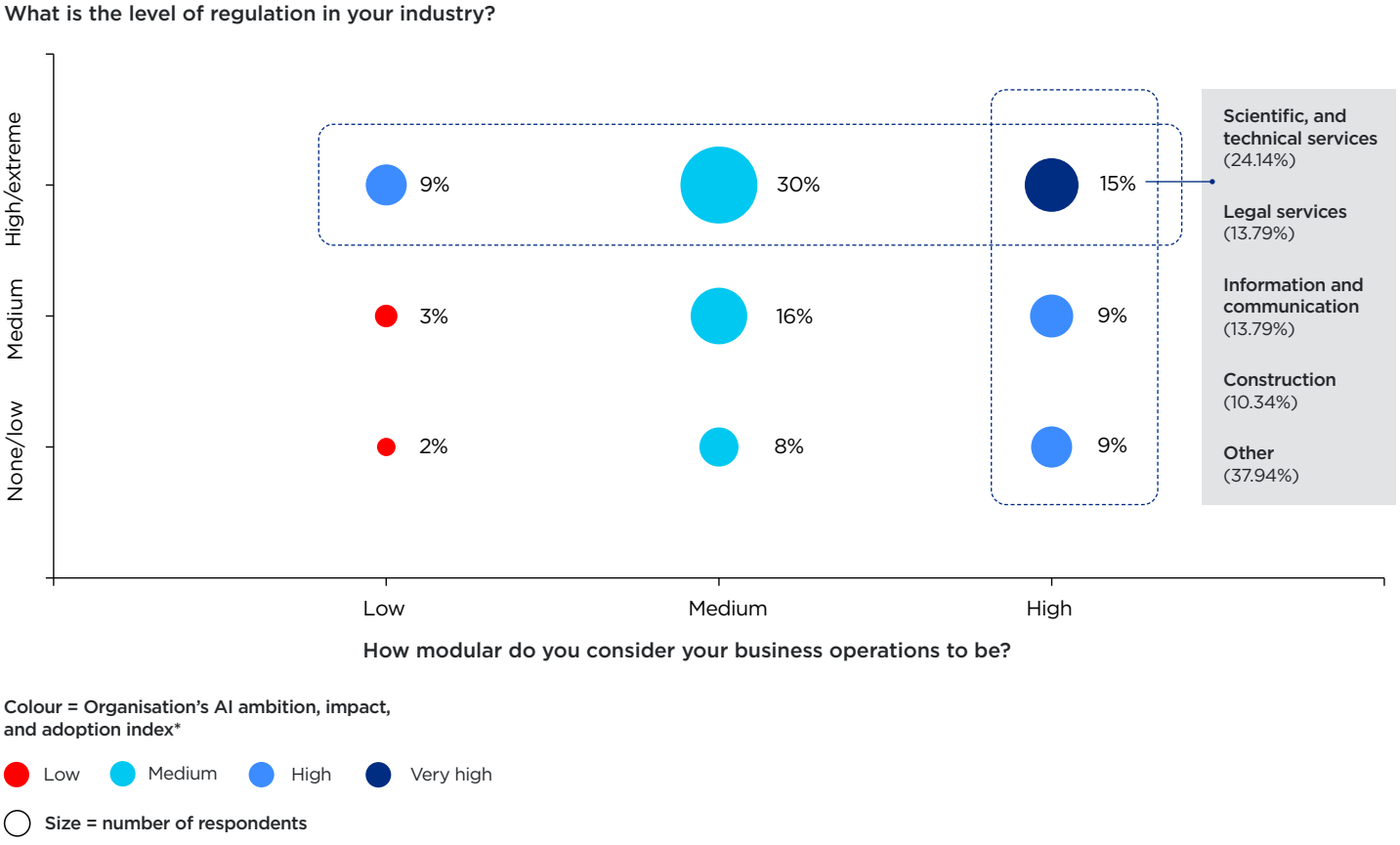
On the other hand, the streamlined and replicable nature of modular operations has typically been associated with greater threats of imitation, as greater modularity has been shown to make an organisation's operations more transparent. Our findings suggest that modularity is associated with expected impact of GenAI and correlated with the importance of pattern recognition.

Another factor that we find, which complements modularity, is the importance of regulation at the level of a sector. First, we find a strong positive association between regulated sectors and excitement over GenAI – perhaps because these sectors are involved in the most delicate issues where GenAI can play a role, and perhaps because they require reporting as well as pattern recognition aided by GenAI. Furthermore, in sectors with stringent regulations, firms benefit from safeguards that prevent competitors from easily replicating successful models. In comparing qualitative data between workshops with regulated and non-regulated professional services, we noted a significant difference in participant responses. Participants from the regulated professional services, during open-ended discussions, expressed markedly fewer concerns about the entry of new firms.

This suggests that regulated environments may stabilise the competitive landscape and protect incumbent firms from being unbundled or obliterated by GenAI. This might be the case in the legal sector, where disruptors cannot easily challenge incumbents even if it were technologically feasible to do so. As the graph below shows, we find that these two dimensions interact and help explain firms' enthusiasm for GenAI in their own context.

As the graph of our survey data below suggests, the highest average levels of ambition and expectation for GenAI are found in sectors that score high on both modularity and regulation. This group of respondents comprised 25% from scientific and technical services, followed by 14% each from legal services and information and communication services and 11% from construction. The remaining 38% was spread across other sectors.

Regulation and modularity are associated with GenAI ambition, adoption, and impact
There appears to be greater GenAI excitement amongst those of higher modularity and regulation

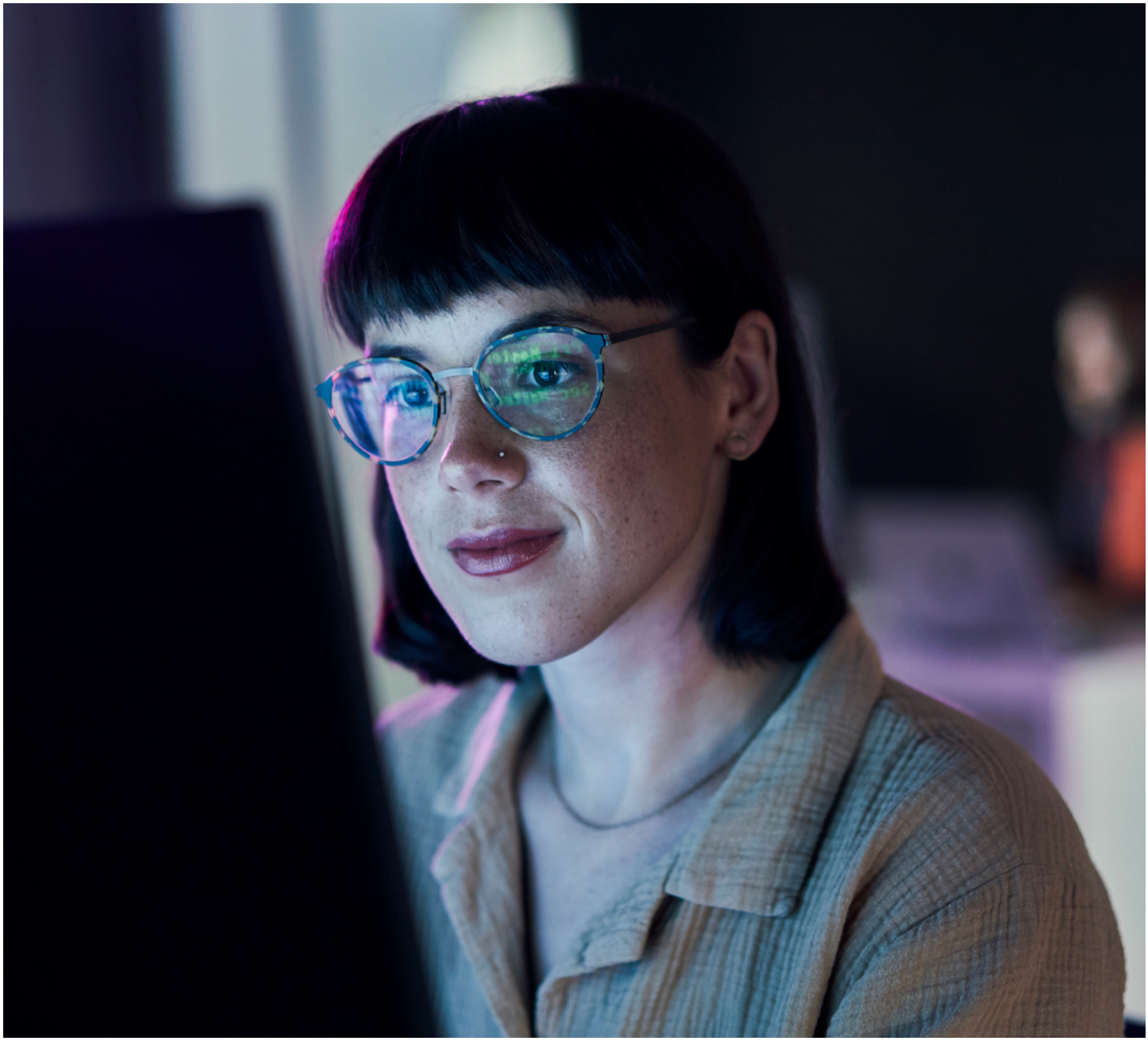


Note: n = 132

*Organisation's AI ambition, impact, and adoption index is a normalised average of questions: 1) Which of the following best describes the level of overall generative AI expectation within your organisation?; 2) average of answers: to what extent do you use or intend to use generative AI for each of the following use cases?; 3) Which of the following best describes generative AI impact within your organisation so far? Source: Institute of Directors survey (initial sample), team analysis

Interestingly, our analysis finds no statistical association between this excitement over GenAI and the expectation of increased profit pools. This suggests that the enthusiasm is driven more by the potential for firms to capture greater shares of existing profits within their sectors rather than by the creation of new profit opportunities (a 'bigger slice' rather than a 'larger pie'). This dynamic underscores a competitive shift where firms anticipate leveraging GenAI to outperform less capable competitors and consolidate market share rather than expanding the overall market.

Qualitative insights from our workshops underscore these points. In regulated sectors such as legal and financial services, participants noted that regulatory frameworks play a crucial role in client trust and competitive positioning, shielding incumbents from the risks posed by new entrants and rapid technological change. Conversely, in our discussions with non-regulated professional services such as strategy consultancies, there was greater concern about the potential for new firm entry and a lack of product differentiation following the widespread adoption of GenAI.



Recommendations part 2
Tackling sector-based dynamics

Based on our analysis of the sectoral and business-model dynamics relating to pattern recognition, modularity and sector-level regulation, we propose some recommendations for firms and policymakers on how to navigate this context.

For businesses:

1. **Modularise your business to enhance AI benefits with an eye on competition:** Businesses should consider whether they can modularise to facilitate GenAI use. While modularity does increase the risk of imitation, it allows firms to adapt quickly to technological changes and gain a temporary competitive edge.

2. **Leverage regulatory protections:** Firms operating in highly regulated sectors must fully understand and leverage the protections that these regulations offer against competitive threats. This might involve aligning AI strategies with regulatory standards to maximise legal and competitive advantages, ensuring that new AI implementations enhance their market position rather than endangering it.

For policymakers:

1. **Enhance legal frameworks for intellectual property and data privacy:** As pattern-recognition capabilities expand with the advent of GenAI, it is imperative to update and enhance legal frameworks concerning intellectual property rights, copyright and data privacy. The ability to deploy pattern-recognition technologies across sectors can raise significant legal and ethical challenges, particularly in how data is used and how intellectual outputs are protected. Policymakers should focus on crafting regulations that balance innovation with individual rights, ensuring that businesses use these powerful tools responsibly while protecting consumers and creators from potential abuses. This includes clearer guidelines on data ownership, the use of AI-generated content and the implications for copyright in the age of generative outputs.

2. **Consider sector-specific AI guidance:** Provide sector-specific guidance and resources for businesses to navigate the integration of AI, but also consider how existing sector-based regulations may provide entrenched incumbents with opportunities for rent-seeking. Balance the need to innovate with the need to protect competition intensity and fend off the risk of firms involved in GenAI production, such as Big Tech, expanding their remit and posing threats to an increasing number of verticals. Competition authorities such as the CMA may need to broaden their purview to consider GenAI's impact on other sectors and on business models, beyond the implications of GenAI being supplied by such a small number of leading firms.

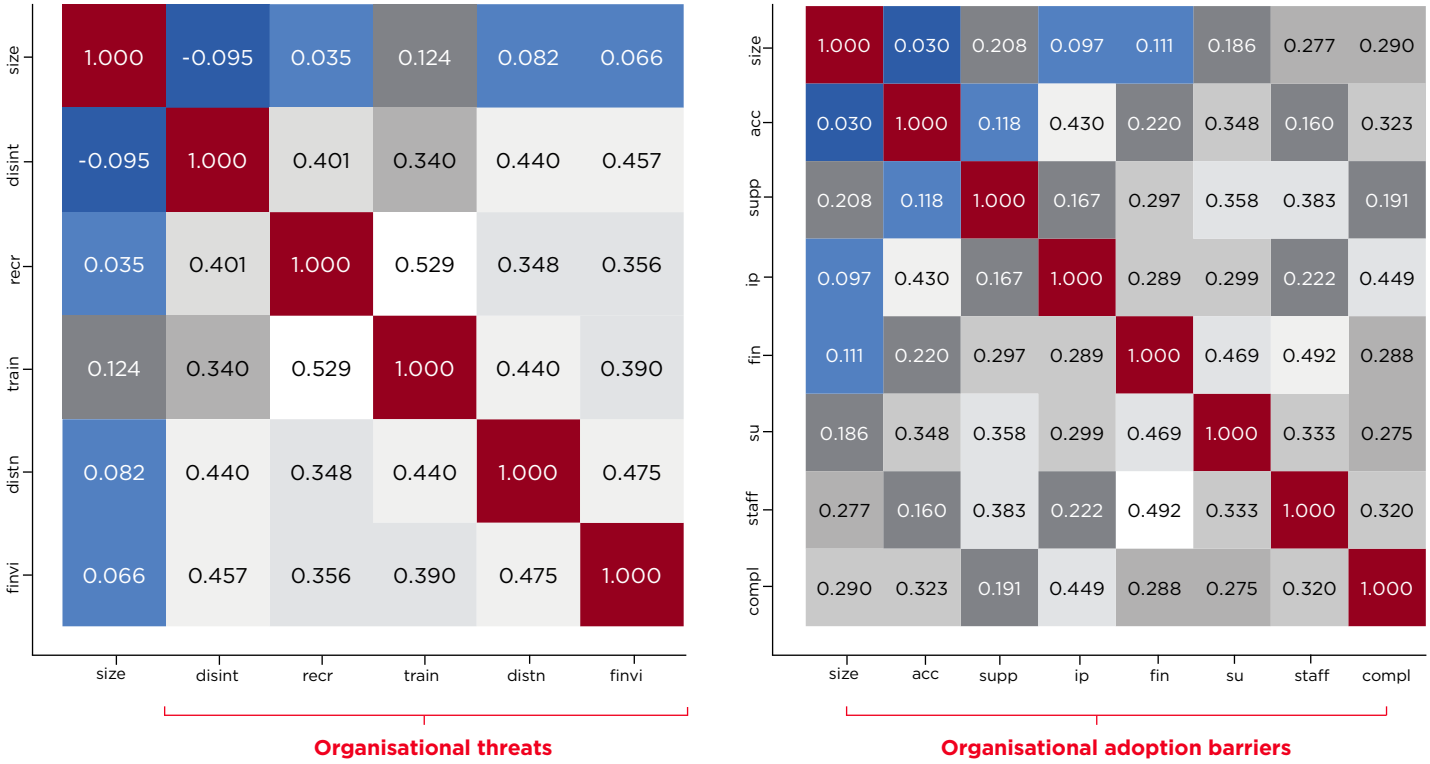
Leaders' approach to adopting GenAI: pathologies and differences in sectors and firm sizes (or styles)

In exploring the barriers to adopting GenAI, we found consistent evidence that leadership engagement has a profound influence on how firms integrate and capitalise on this new technology.

Our survey data revealed that firms where leadership demonstrated active interest in and support for GenAI were 31% more likely to recognise the potential for substantial industry change than those whose leaders took little or no interest in the technology. Such lack of interest among leaders was a significant barrier to adoption. These results are consistent with research on managerial cognition, which suggests that organisational barriers shape cognitive frames, thus biasing and influencing choices in technological investment.

Workshop discussions further reinforced this finding. Unsurprisingly, participants noted that senior leaders often prioritise short-term performance metrics, which can undermine long-term technological adoption. Our analysis across firms of different sizes indicated that while leadership indifference does not represent an extreme barrier in any one size category, it does tend to loom larger for bigger firms. Among small firms with turnovers of less than £2 million, about three-quarters reported that lack of leadership interest was not a significant barrier. This perception shifted as firms grew larger, with those with turnover of £2 million–£50 million and £50 million+ increasingly identifying it as a moderate barrier.

Large firms face less organisational threats but higher GenAI adoption barriers
Pairwise correlations suggest proprietary data may be a double-edged sword



Note: n = 258
Source: Institute of Directors survey, team analysis

Pairwise correlation matrices between firm size, organisational threats and GenAI adoption barriers. Organisational threats include likelihood of disintermediation, recruitment challenges, training challenges, potential for new distinctiveness and financial viability (from left to right). Organisational adoption barriers include output accuracy, interest and support, IP concerns, financial viability, strategic uncertainty, staffing and compliance (from left to right).

As our sample, drawing on IoD members, was more heavily weighted towards smaller organisations, we can observe variances within that group. Our findings suggest that fairly small organisations, i.e. those just above the £2 million turnover threshold, start seeing leadership indifference as an impediment to GenAI adoption. Moving to larger organisations, such as those that feature in the portfolio of the Private Equity (PE) firm we considered, the absence of leadership engagement was also noted as a crucial barrier. This may mean that firms that (aspire to) grow quickly, such as those owned by PE, must deal with multiple competing claims on their time and energy, and lack of leadership initiative can block an organisation's AI adoption.

Further analysis of the drivers behind leadership indifference to GenAI indicated that the variance in adoption rates is more closely linked to firm-specific attitudes towards risk and experimentation rather than broad sectoral characteristics. Notably, financial services firms reported a lower adoption rate of approximately 48% – significantly trailing the 70–80% rate of adoption observed in most other industries. This discrepancy highlights a sector in which conservative leadership attitudes particularly impact technological uptake. Moreover, our workshops reinforced this finding, with a prevailing view that the ability and willingness of corporate leaders to experiment will be pivotal in determining future market leaders.

Output accuracy, bias, staffing and expertise are consistently the most important barriers for non-GenAI users

To what extent do you view the following topics a barrier to your usage/implementation of generative AI at your company?
Index, 1-5

Industry	Avg barriers, Index	Top 3 barriers		
Construction*	2.6	Output accuracy and bias	Staffing and expertise	Strategic uncertainty
Education	2.5	Output accuracy and bias	Compliance and security	Staffing and expertise
Other services	2.3	Output accuracy and bias	Staffing and expertise	Strategic uncertainty
Financial services	2.2	Compliance and security	Staffing and expertise	Output accuracy and bias
Health and social work	2.2	Compliance and security	IP concerns	Output accuracy and bias
Other industries	2.1	Compliance and security	Staffing and expertise	IP concerns
Professional services	2.1	Output accuracy and bias	Strategic uncertainty	IP concerns
Manufacturing	2.0	Financial cost	Staffing and expertise	IP concerns
Information and communication	1.9	IP concerns	Compliance and security	Strategic uncertainty

XXX – Not among the top-3 overall barriers

Barriers in these sectors appear to be less important for GenAI adoption

Note: n = 277
Source: Institute of Directors survey, team analysis

This brings us to another vital element: the tolerance of error. GenAI is particularly well suited for creative tasks, where the objective is to generate a pattern that is neither 'right' nor 'wrong' in and of itself. However, there are several contexts where firms need a definitive answer that must be trusted – where the output generated by AI technology must be accurate no matter what. In such contexts, while GenAI could theoretically have a drastic impact and disrupt the underlying business model, it may not be fully deployed, for fear of inaccuracy and liability that organisations must bear.

This sentiment aligns with empirical results from our survey data showing that firms that are less engaged in GenAI perceive issues such as output accuracy and compliance with security measures as significant barriers. Together, these insights suggest that the key determinant of successful AI integration lies not in the dynamics of particular sectors but rather in the risk attitudes and experimental openness of leaders of individual firms, as well as context-specific concerns over the accuracy and usability of outputs.

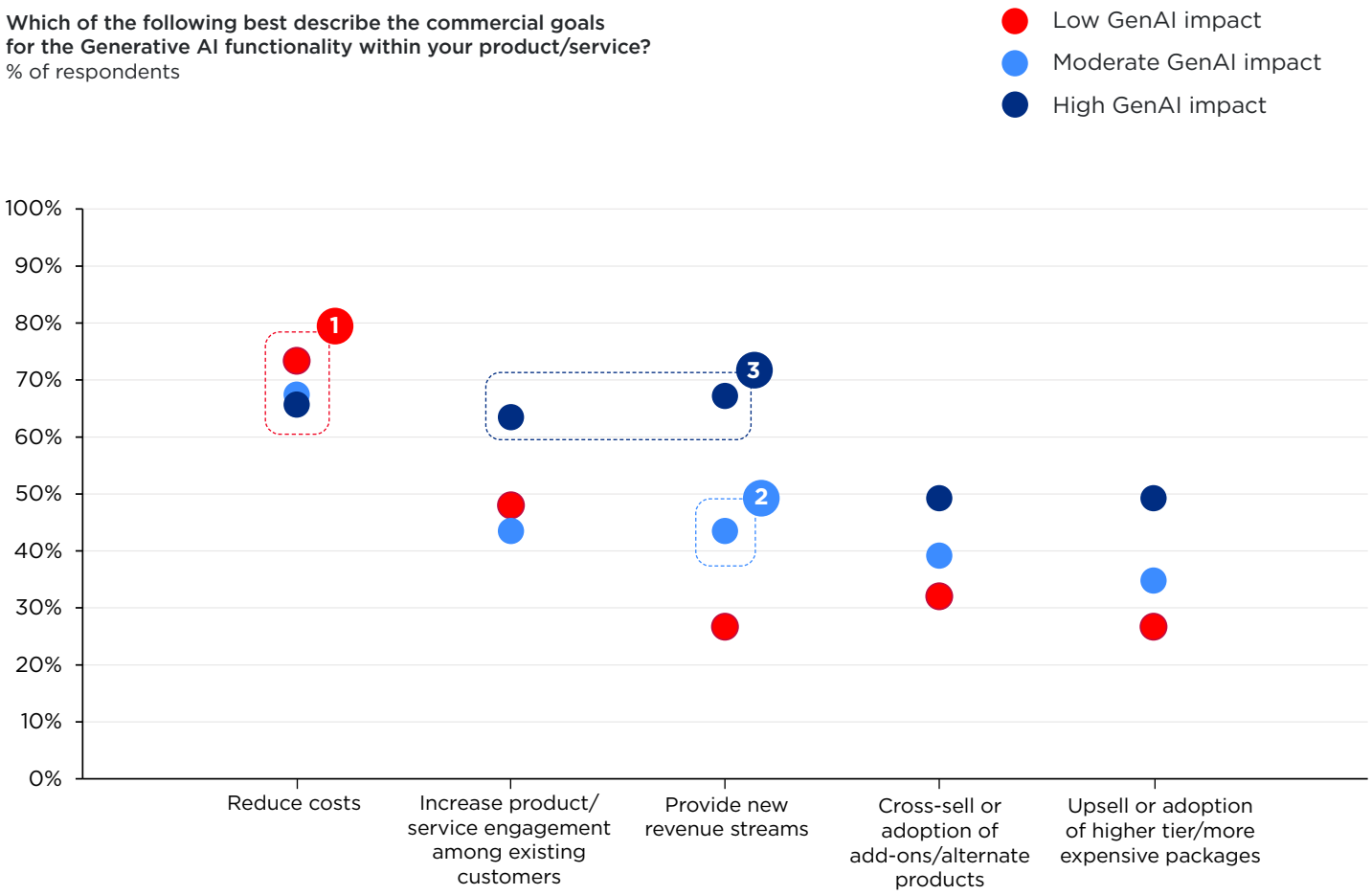
Focus on GenAI use: cost, revenue generation and customisation/customer engagement, used broadly or deeply

Moving from the adoption of GenAI to its use, our study considered use cases such as cost reduction (widespread, and usually focused on labour cost), new revenue expansion and better connection with customers leading to customisation. We distinguished between firms that self-reported having experienced low, moderate or high impact from the use of GenAI.

While all firms focus on cost-cutting, which becomes more of a strategic necessity, the firms that achieve high GenAI impact are clearly distinguished by focusing on new product development and the creation of new revenue streams. They also focus more on engaging more with existing customers, and cross-sell, upsell and improve margins as a result. Therefore, to benefit from GenAI, firms may need to shift away from a focus on cost-based use cases and take a broader, more ambitious perspective.

All businesses prioritise cost reduction, but higher-impact organisations tend to utilise GenAI to generate new revenue streams and enhance customer engagement

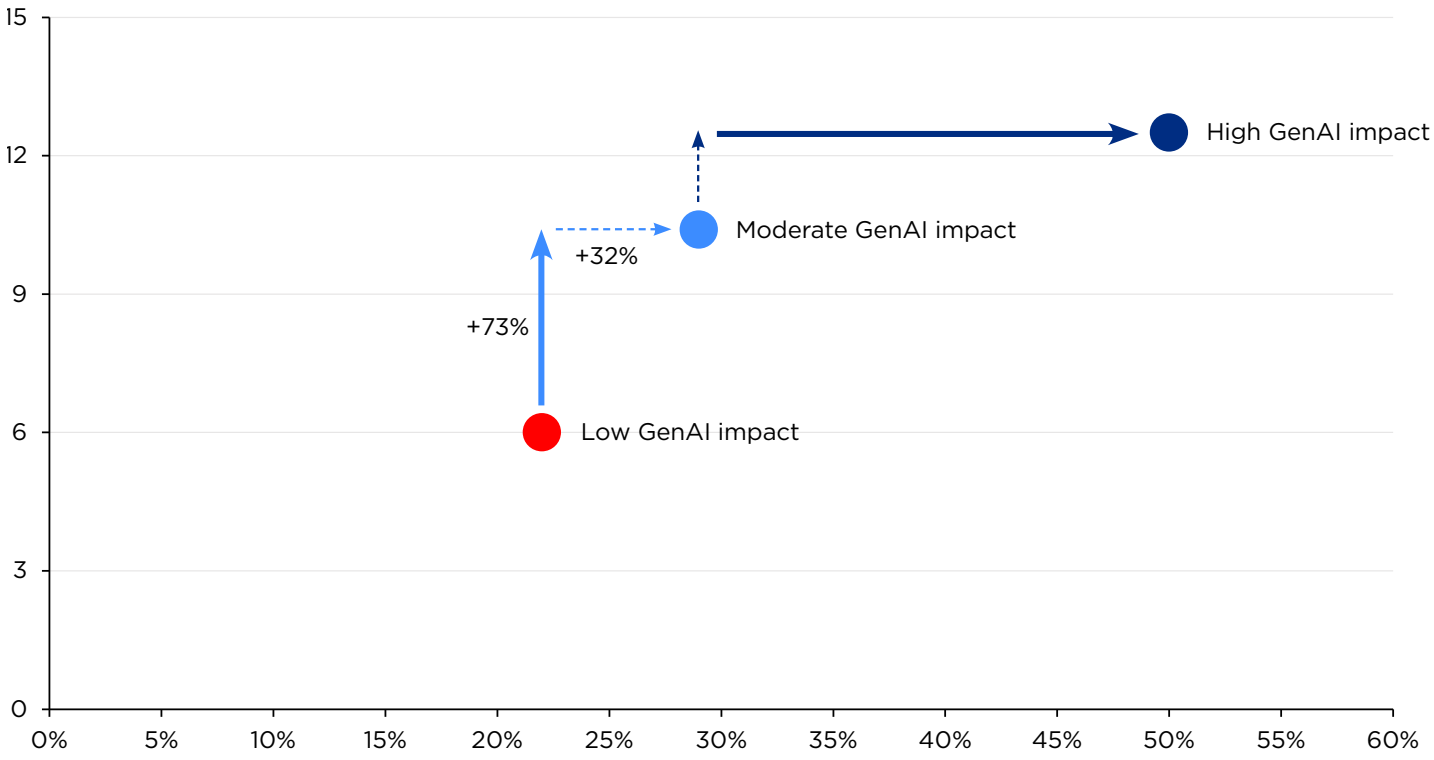
Which of the following best describe the commercial goals for the Generative AI functionality within your product/service?
% of respondents



N = 188
Source: Institute of Directors GenAI survey, PE Partner GenAI survey, team analysis

Both GenAI usage 'depth' and 'breadth' improve GenAI impact, with firms first prioritising breadth to achieve moderate impact before focusing on depth for maximum impact

GenAI usage 'breadth',
Average # of use cases where GenAI is used 'Ad-hoc' or 'Regularly



GenAI usage 'depth',
Average of use cases where GenAI is used 'Regularly' as a percentage of use cases used 'Ad hoc' or 'Regularly', %

N = 188
Source: Institute of Directors GenAI survey, PE Partner GenAI survey, team analysis

We also distinguished between breadth and depth in the use of GenAI. Breadth reflected the number of use cases in which GenAI was employed, while depth considered whether, for those use cases mentioned, GenAI was used 'regularly' (as opposed to 'occasionally/ad hoc') as a proportion of the total.

As we can see, high-GenAI-impact firms use GenAI not only more broadly, but also more deeply, i.e. more consistently, embedding it in their operations (especially in comparison to moderate-GenAI-impact firms). This suggests that the effective use of GenAI requires its proper integration into a firm's organisation – a topic that was also reconfirmed in our qualitative discussions.

Recommendations part 3
Becoming more effective GenAI user

Drawing on our analysis, we propose some recommendations for businesses and policymakers on how to take advantage of GenAI and realise its benefits.

For businesses:

1. **Fend off the potentially debilitating combination of hype convincing the board and operational managers resisting change:** While the senior leaders of some organisations may desire to unlock funding to exploit GenAI, they may often trip over a lack of excitement or managerial ability at the operating level, leading to resource wastage and little impact. Leaders must be clear about choices and trade-offs. For instance, the enthusiasm to unlock distinctiveness through proprietary data must acknowledge that the organisation may value output accuracy, as well as requirements in terms of data and decision infrastructure.

2. **Focus on revenue generation and customisation, not just cost reduction:** Our findings clearly show that to fully benefit from GenAI, firms need to look beyond cost-based use cases and use GenAI to unlock competitive advantage and increase revenues. Likewise, they should look at how to use it to better connect with customers and offer hyper-personalisation at scale.

3. **Favour depth over breadth:** While the breadth of use cases is important, we find that depth – i.e. consistent use of GenAI – is what really makes the difference in the impact that businesses see. Focus on changing the organisation so it can fully benefit from GenAI.

For policymakers:

1. **Help firms overcome the true bottlenecks to adoption by targeting what keeps them from implementing GenAI – including raising awareness:** It is important to take a pragmatic stance on the barriers to GenAI adoption and offer as targeted a remedy as possible, with an eye on having companies engage more with the technology. Acknowledge that different sectors, with different tolerances for output error, will need to be handled differently.

2. **Encourage comprehensive GenAI adoption beyond cost-cutting and support new business models:** Emphasise the importance of GenAI in generating new revenue and integrate this perspective into any incentive mechanisms for adoption. Policies should encourage firms to look beyond cost-cutting, focusing instead on the new monetisation and revenue opportunities that GenAI can unlock. Furthermore, policies and incentives should prioritise the consistent and integrated use of GenAI throughout organisations, promoting depth and organisational adaptation rather than just a broad range of use cases. This approach will help shape firms' perceptions and ensure a more impactful and sustainable integration of GenAI.

Drawing a clearer map of opportunities and bottlenecks

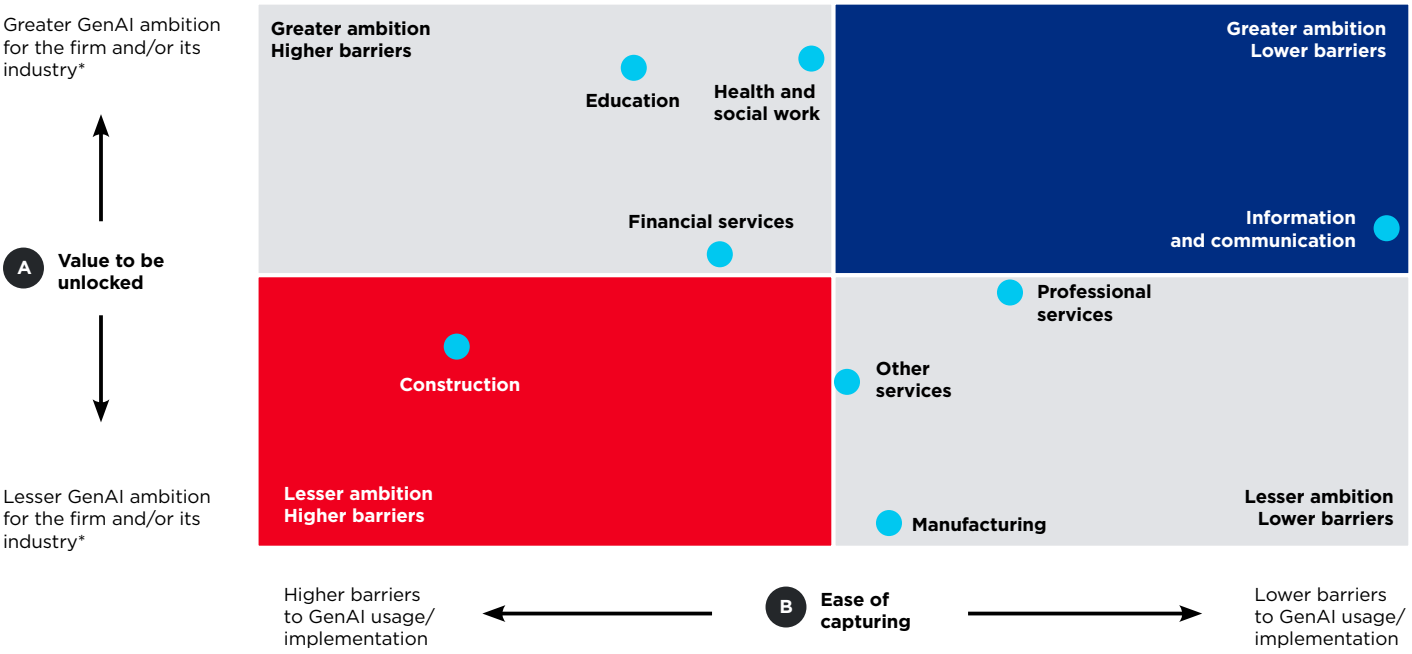
We began by suggesting that we did not expect either GenAI's benefits or its risks to be equi-distributed. Our analysis reconfirms this. Our recommendation is to move away from a monolithic conception of 'GenAI' as a technology and towards a more nuanced and evidence-based analysis of opportunities and bottlenecks for businesses and policymakers alike. While we anticipate significant variance even within sectors, and that business models and monetisation will play a significant role and should be better understood, such detailed analyses go beyond the scope of this report.

Turning to a sectoral analysis, to illustrate how we could move forward, we propose below a simple classification of industries, looking at respondents' survey responses on the expected potential value of GenAI and the perceived ease of capturing that value.

This reveals that there are some sectors, such as those in information and communication, where there is significant value to be unlocked and relatively few obstacles to doing so. In others, such as health and social work or education, there is very high perceived value-add to be unlocked, but this is held back by significant barriers to change.

While simple, this mapping helps us understand the challenges ahead and suggests that the respective approaches of strategists and policymakers should be quite distinct. For instance, when potential value is high, but barriers are significant, the focus should be on resolving bottlenecks. In contrast, when value is high and barriers are low, the focus should be on execution and positioning, since many a firm may have similar ideas and abilities to unlock GenAI value, raising questions about competitive moats.

Survey data enables us to construct an industry map, classifying them based on the expected potential value of GenAI and the ease of capturing that potential



N = 307
Merged sample with IoD and PE Partner

*Calculated as average of (1) 'Which of the following best describes the level of overall generative AI expectation within your organisation?' and (2) 'How important do you perceive the usage of generative AI to be within your industry within the next 5 years?' Source: Institute of Directors GenAI survey, PE Partner GenAI survey, team analysis

Recommendations part 4
Leveraging sectoral and business-model maps

On the basis of the analysis above, we come to our penultimate set of recommendations for action.

For businesses:

1. **Focus on overcoming barriers in high-barrier, high-potential sectors:** For sectors identified as having high potential value but also high barriers to implementation, such as construction and financial services, it is crucial to focus efforts on overcoming these barriers. This could involve investing in specialised AI training for staff, enhancing data infrastructure or collaborating with technology providers to develop customised AI solutions that meet regulatory and operational challenges specific to these sectors.

2. **Leverage GenAI for competitive advantage in lower-barrier sectors:** Industries such as information and communication, which are characterised by lower barriers and high ambition, should pursue GenAI integration aggressively and focus on effective positioning and on using hyper-personalisation as their competitive moat. These sectors offer a conducive environment for rapid GenAI adoption, but they will soon become competitive.

For policymakers:

1. **Use a sectoral map to identify and monitor at-risk sectors:** Policymakers should use the sectoral map as a diagnostic tool to identify those industries most at risk of experiencing shifts in market concentration and potential increases in profit inequalities due to GenAI adoption. By closely monitoring these sectors, government agencies can proactively address emerging issues, such as monopolistic tendencies or significant disruptions in labour markets. This oversight will be crucial for implementing regulatory adjustments, providing targeted support and ensuring that the benefits of GenAI are distributed equitably across the economy.

2. **Develop targeted support and regulatory adjustments for vulnerable sectors:** Based on insights derived from the sectoral map, targeted interventions should be designed to support sectors that are highly ambitious about GenAI yet face substantial barriers. This could include financial incentives for GenAI research and development, subsidies for small and medium-sized enterprises to adopt GenAI technologies and regulatory adjustments that encourage innovation while preventing market dominance by a few players.

The final frontier: how GenAI changes the dynamics in organisations and the skills that will be needed

Moving from the sectors and business models to organisations themselves, one final aspect that surfaced during our qualitative work was the fact that GenAI could undermine long-established mechanisms for organisations to operate and alter the skills required for success.

Consider, for instance, the traditional mechanisms of selection in both staffing and differentiating service quality. On the demand side, GenAI leads to difficulties in identifying the quality of services offered. Conversely, from the supply side, it complicates recruitment, making it hard to distinguish quality human capital.

On the supply side, the recruitment landscape has been notably altered by the advent of GenAI. Traditional indicators of candidate quality, such as the polish of a cv or the articulacy of a cover letter, are no longer reliable. As one workshop participant reflected, '...in the past, there used to be a fairly straightforward way in which you could say, I knew if someone was capable, because when I spoke to them, or when they sent me something, it was polished [by the person themselves]. And when you saw polished work, you could infer something: either knowledge or efforts.' Now, tools powered by GenAI can produce highly polished application materials with minimal human input, making it increasingly difficult to assess a candidate's true capabilities based on these documents alone.

Similarly, on the demand side, GenAI presents challenges in assessing the quality of professional services. The technology's ability to produce high-quality presentations and reports means that traditional indicators of a firm's expertise, such as the professionalism of their slide decks, are no longer as telling. A participant noted, '... right now, there's nothing that you can read because you can have a presentation that looks professional, even if it is not that prestigious. Think 10 years ago, I would say, "Whoo, okay, look at their slide decks. They look professional and well thought out and logical, I can trust them." The problem is that we can now get this with the push of a button – so what is it worth?' This erosion of quality indicators poses a significant challenge for professional service firms, where the ability to demonstrate expertise directly impacts client trust and business acquisition.

A related challenge is that since GenAI can easily generate advice and well-structured output, the skills now needed are the ability to tell good advice from bad and to work effectively with GenAI. Does this mean that more technical knowledge is required, or would a thorough grounding in a more rigorous if abstract discipline such as logic be more useful? What educational skills should schools, universities and business schools promote, and how do they differ from what has been put forth until now? What should businesses expect and require, and what should they encourage, promote and measure as they operate in a world with GenAI?

Furthermore, the influence of GenAI extends into training and organisational structure. In sectors such as construction, where tacit knowledge is crucial, the challenge becomes how to train employees when the tasks traditionally used to impart this knowledge are being automated. 'How do you train the employees within the organisation to gain tacit knowledge when the very tasks that they are required to do in order to gain tacit knowledge are those which are being replaced by GenAI?' wondered a workshop participant. This shift may even lead to a breakdown in organisational structure as traditional pathways for promotion and career advancement disappear, challenging the very fabric of workplace dynamics and growth opportunities within firms.

These issues pose particularly significant risks for bigger firms. Nearly 50% of respondents from firms with a turnover below £2 million viewed these challenges as non-existent or minor barriers to GenAI adoption. Interestingly, the distribution of survey participation was centred around the £2 million turnover mark, suggesting a robustness in the outcomes concerning staffing and adoption. It appears that beyond this turnover figure, staffing and promotion issues begin to pose significant risks for organisations.

From a sectoral viewpoint, staffing consistently appears among the top three barriers across industries for firms aiming to increase GenAI adoption. Sectors such as construction, services, financial services and manufacturing are particularly at risk of encountering staffing barriers, which could hinder their ability to effectively integrate and leverage GenAI technologies.

Recommendations part 5
Skill development and organisational responses

For businesses:

1. **Identify and develop skills needed to complement GenAI while sustaining HR capabilities:** Firms must be aware of the societal and legal/regulatory requirements to operate ethically with GenAI and develop sophisticated skills to critically review GenAI recommendations in practice. Additionally, organisations should create robust plans to sustain their HR capabilities in the short term, ensuring they do not become 'hollowed out' or lose expertise. By focusing on skill development and maintaining a strong talent pipeline, firms can ensure they continue to grow the next generation of employees and leaders while effectively leveraging GenAI.

2. **Build capabilities in combining GenAI with organisational change, both to empower the organisation and to mitigate risk:** For example, GenAI can provide significant information throughout the organisation. This should be seen as an opportunity to empower employees and make them more entrepreneurial, and perhaps even open up the pores of the organisation to make it more collaborative. One of the key attributes of successful GenAI implementation is to get the 'I' before the 'AI', per our qualitative evidence. At the same time, a firm must ensure that it can manage the risks GenAI poses to the organisation.

For policymakers:

1. **Redesign the educational system for a post-GenAI world:** As GenAI reshapes various industries, the educational system must evolve to prepare the workforce for new demands. Beyond the truism that we need to redesign educational programmes to include AI literacy and practical, technology-driven problem-solving skills, policymakers can help ensure that the workforce is adaptable, capable and ready to meet the challenges posed by a rapidly evolving job market. This poses a deeper challenge: what skills are needed to complement GenAI, and how do we impart them? How can we change 'what' we should teach and impart, in addition to rethinking 'how' we teach?

2. **Review priorities for vocational and professional training and continuing education:** The changes that GenAI will induce suggest that we need to play close attention to the skills needed to complement it. We thus need to review current plans in terms of career development and also how we should support current workers and empower those of the future. Those providing such qualifications – not least business schools – should recalibrate their offerings.

3. **Hands-on learning from companies and cutting-edge institutions:** As this topic is still evolving, we would recommend policymakers to engage with firms that are at the cutting edge of using GenAI to identify how their needs are being met and what can be done to support them. As with most of our recommendations, we expect that a sector-by-sector approach will work best.

As we conclude this comprehensive exploration of the implications of GenAI, it is evident that the integration of this transformative technology will have profound impacts across multiple sectors. Our analysis, underpinned by extensive survey data, targeted workshops and semi-structured interviews, has revealed critical insights into how GenAI is reshaping industry landscapes, shifting competitive dynamics and influencing strategic decisions at both corporate and policy levels.

The sectoral map we have developed serves as a strategic tool for businesses to gauge the potential value and barriers to GenAI implementation across industries. It highlights the sectors where GenAI could drive significant changes in market concentration and points to areas where businesses and policymakers need to focus their efforts to harness the potential of GenAI technologies effectively.

Businesses are encouraged to reassess their operational models and competitive strategies in the light of GenAI capabilities. Understanding the interplay between proprietary data, pattern recognition and modularity within their operational contexts will be crucial in leveraging GenAI for competitive advantage while mitigating the risks associated with market dynamics and technological vulnerabilities.

For policymakers, the findings underscore the importance of adapting regulatory frameworks to the realities of an AI-driven economy. Ensuring that the benefits of GenAI advancements are broadly distributed requires updating educational systems, fostering fair competitive environments and providing targeted support to sectors that are at risk of increased profit inequalities.

Our policy recommendations in the context of the UK's regulatory framework

Governments around the world are scrambling to ensure they won't miss out on GenAI activity or be left behind in the geopolitical race for GenAI. On the other hand, they are also anxious to provide guardrails and protections to their citizens and businesses. So far, there is no template to follow, since the technology evolves at breakneck speed and its impacts are poorly understood. In the UK, despite a strongly stated commitment to both support GenAI and mitigate the risks that it entails, the regulatory response has so far been cautious. There has been no overarching framework such as that promulgated by the EU's AI Act or put forth by the US and Chinese governments. Other than centrally organised activities that have focused more on communication than on policy content and impact, such as the Bletchley summit last winter, responsibility has been devolved to existing parts of the regulatory apparatus, where each agency has interpreted GenAI on the basis of its existing lens. Whilst understandable, this approach risks losing the forest for the trees.

All relevant agencies sent their response by April 30. The Bank of England, Competition and Markets Authority (CMA), Equality and Human Rights Commission (EHRC), Financial Conduct Authority (FCA), Health and Safety Executive (HSE), Information Commissioner's Office (ICO), Legal Services Board (LSB), Medicines and Healthcare products Regulatory Agency (MHRA), Office for Nuclear Regulation (ONR), Office for Standards in Education, Children's Services and Skills (Ofsted), Office of Communications (Ofcom), Office of Gas and Electricity Markets (Ofgem) and Office of Qualifications and Examinations Regulation (Ofqual) all sent out their responses covering their remit of responsibility.

Focusing on those closest to our own work, Ofcom, the UK's communications regulator, recently published its strategic approach to GenAI for 2024/25, outlining its engagement with the challenges posed by the latest AI advancements. Central to Ofcom's concerns are the potential for GenAI technologies to facilitate the creation of illegal or harmful content, spread misinformation and enhance the capabilities of fraud and scams, as well as issues of algorithmic bias. The Information Commissioners' Office (ICO) emphasises data protection, though it is hard to see how protecting data will bring adequate protection for businesses using GenAI and people exposed to it. Cutting across other agencies, the Digital Regulation Cooperation Forum (DRCF) focuses on preventing discrimination and ensuring equitable treatment across all applications of AI in the UK. However, this does not encompass equality in terms of business dynamics – something that the Equality and Human Rights Commission, despite its emphasis on fairness, does not focus on either.

Perhaps more relevant to our own purposes, the Competition and Markets Authority (CMA), in its comprehensive review on AI Foundation Models ('FMs'), considers the multifaceted impact of the core pillars of GenAI, looking at how the current and emerging levels of concentration may create significant dependencies and lead to a dominant oligopoly at the core of the GenAI-driven world. While the CMA considers the impact of FM concentration on some adjoining sectors such as cloud and considers how firms are using FMs in search and productivity software services, its analysis does not explicitly look at how the rise of GenAI might affect the dynamics of competition in other sectors, whose patterns of competition and concentration might change as a result of GenAI. It remains to be seen how the long-awaited Digital Markets Unit of the CMA, which will hopefully soon be operational, may engage in this territory.

Our analysis complements and extends this work, as it looks at the emerging implications of GenAI for firms, business models and sectors. It also suggests that there is no 'ownership', in a regulatory or policy sense, of these issues. We know of no plan that tackles the issues we bring forth, or that provides a systemic and systematic approach to the recommendations we make. In this sense, we feel that the recent proposals of the Private Bill under consideration in the House of Lords on an AI Authority represent a move in the right direction, though the devil will clearly be in the detail of implementation.

From our research, we conclude that GenAI will require coordinated action with clear ownership not only on the regulatory front but also at the level of policies, recommending, where appropriate, a recalibration of priorities in pertinent parts of the government. The objective should be to create a clearer ownership structure and accountability in terms of the progress towards managing the disruption that GenAI will inevitably create, and for a coordinated effort to align the goals that need to be put forth.

We are aware that our analysis does not provide answers, but rather raises questions and identifies important areas where policy could play a role. However, we think that the priorities raised will need to have clear ownership, even when the resulting policy actions relate to other, broader areas of responsibility that cut across the regulatory and policy apparatus – going in the direction of what the AI Authority Bill proposes, but also further extending the remit. Such areas will include education and up-skilling, as well as employment and competition dynamics, but also sector-specific areas where careful policymaking may be able to remove the bottlenecks that reduce the potential impact of GenAI and/or attenuate potentially detrimental impacts. It will also be important for such an authority to have the funding to attract talented people with a deep understanding of these vital topics, which are also generating significant excitement in the private sector.

This report aims to serve as a foundation to inspire further research, guide strategic implementations of AI technologies and stimulate dialogue on how best to navigate the challenges and opportunities presented by GenAI. As we continue to explore this evolving landscape, the focus should remain on creating a balanced approach that maximises benefits, minimises risks, and supports those who are at risk to be left behind, ensuring that GenAI contributes positively to our collective future.

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