In collaboration with
PwC

Leveraging Generative AI for Job Augmentation and Workforce Productivity:
Scenarios, Case Studies and a Framework for Action

WORLD
ECONOMIC
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Foreword

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Generative artificial intelligence (GenAI) is transforming the world of work. According to the World Economic Forum's latest Future of Jobs survey, within the next five years, employers expect GenAI advancements to reshape a substantial number of jobs, potentially affecting up to 40% of total global working hours.

As the capabilities of this transformative technology continue to evolve, organizations are wondering how they can use GenAI to drive job augmentation and workforce productivity, and the actions they can take to harness its full potential.

To find out, the World Economic Forum and PwC embarked on a new piece of research focusing on how early adopters of GenAI are leveraging it across the workforce, the impact it is having and the lessons they have learned along the way.

Based on interviews with more than 20 organizations across a wide range of industries and geographies, we found that successful deployment of GenAI depends as much, or more, on people than the technology itself. Workers need to understand, trust, and adopt GenAI. This requires not only training and support but also a cultural shift within the organization to embrace new ways of working.

This report covers insights from the early adopters we interviewed, as well as four different scenarios for how the deployment of GenAI in organizations could play out. It also offers an actionable framework which organizations can use to shape their GenAI workforce approach.

We would like to thank all the organizations and experts who generously shared their time and experience with us. We hope this report will be a useful resource for organizations across the world as they navigate the opportunities and challenges that GenAI brings for job augmentation and workforce productivity.

Executive summary

Generative artificial intelligence (GenAI) has the potential to drive significant improvements in workforce productivity at the level of tasks, organizations and economies. Delivering those gains depends, among other things, on the deployment of GenAI to **augment** jobs, i.e. to partially perform tasks in such a way that technology effectively supports or enhances human capabilities through human-machine collaboration. Drawing on a review of existing research, scenario analysis and case studies of early adopters, this report proposes a framework for action that fosters job augmentation.

Global context

What sets GenAI apart from previous developments in artificial intelligence is its ability to widen access to the use of AI and eliminate the barrier of specialized knowledge. GenAI has the potential to contribute to economic and productivity growth by creating efficiencies through freeing up working time spent on lower-value tasks to engage in higher value-added activities. Moreover, GenAI has the potential to augment human workers by enhancing their skills and capabilities, thereby increasing their productivity and enabling new and diverse forms of value creation.

However, GenAI's potential to enhance productivity may vary across countries, industries, and organizations. To effectively deploy GenAI in the workforce, organizations must also address a range of factors including trust, skills, culture and the demonstration of business value from GenAI investments.

Scenario analysis

With such a fast-moving technology, it is hard to predict how even the relatively near-term future will play out. To help think through the possibilities, it is useful to think in terms of scenarios based on two key uncertainties that will shape the near future of GenAI-enabled job augmentation, productivity and innovation. The first core uncertainty relates to the **level of trust in GenAI**, which refers to the confidence that employees and organizations have in GenAI-driven tools and their outputs as well as employee trust in their employers, technology providers, and governments. The second core uncertainty relates to whether the **applicability and quality of GenAI** will continue to improve in the short-term or remain the same.

Any combination of these two dimensions is possible, leading to very different outcomes. A world where trust is low—either because GenAI does not progress significantly from today; or,

conversely, because of concern over its fast progress and potential for job disruption—is one which misses out on the opportunities of productivity gains and job augmentation. A world of high trust but limited improvements in GenAI contains significant risks; while one where both trust and quality and applicability improve in tandem is likely to see the biggest gains in workforce productivity and job augmentation.

Insights from early adopters

The four near future scenarios outlined provide a useful background to insights derived from **interviews with more than 20 early adopters** from a wide range of industries and regions across the world. These organizations are pursuing GenAI partly out of confidence in productivity gains. They also believe that GenAI will improve the quality of work, and the experience of their employees. A different motivation is a desire to pre-empt the potential disruption of their business.

The organizations quickest to adopt GenAI in their workforce are those that could be described as 'data-driven'. They emphasize the need to develop and test GenAI solutions in small groups before rolling them out to the rest of the organization, allowing for issues to be identified and addressed before wider implementation. They also put significant emphasis on risk management, including designing processes that have 'humans in the loop', forming internal committees or councils that establish internal rules, standards, and frameworks and assess use cases and consider sustainability implications of using GenAI at scale.

To identify the potential for workforce productivity gains and job augmentation, early adopters combine both bottom-up and top-down approaches, with strong support from leadership and reliance on the innovative capabilities of their workforce. It is in day-to-day practice where most use cases are identified and developed. According to this perspective, the most promising use cases are those embraced and championed by employees themselves.

Framework for action

Combining insights from the scenarios and lessons learned from early adopters, the report proposes an actionable framework for promoting job augmentation and workforce productivity growth with GenAI. Focusing on factors within an organization's control, it is designed to be useful both to organizations just starting out on their GenAI workforce deployment journey as well as those seeking to scale existing efforts.

The framework highlights a number of key elements around two core themes: **Enable** and **Engage**. The Enable elements focus on establishing foundations and guiding principles and include: GenAI vision and strategy; Data and technology infrastructure; and Regulatory compliance and governance. The Engage elements focus on facilitating that GenAI workforce applications are effectively adopted and integrated into workflows to generate the desired benefits. These elements include: Culture and change management; Skills development and redeployment; and Use case management.
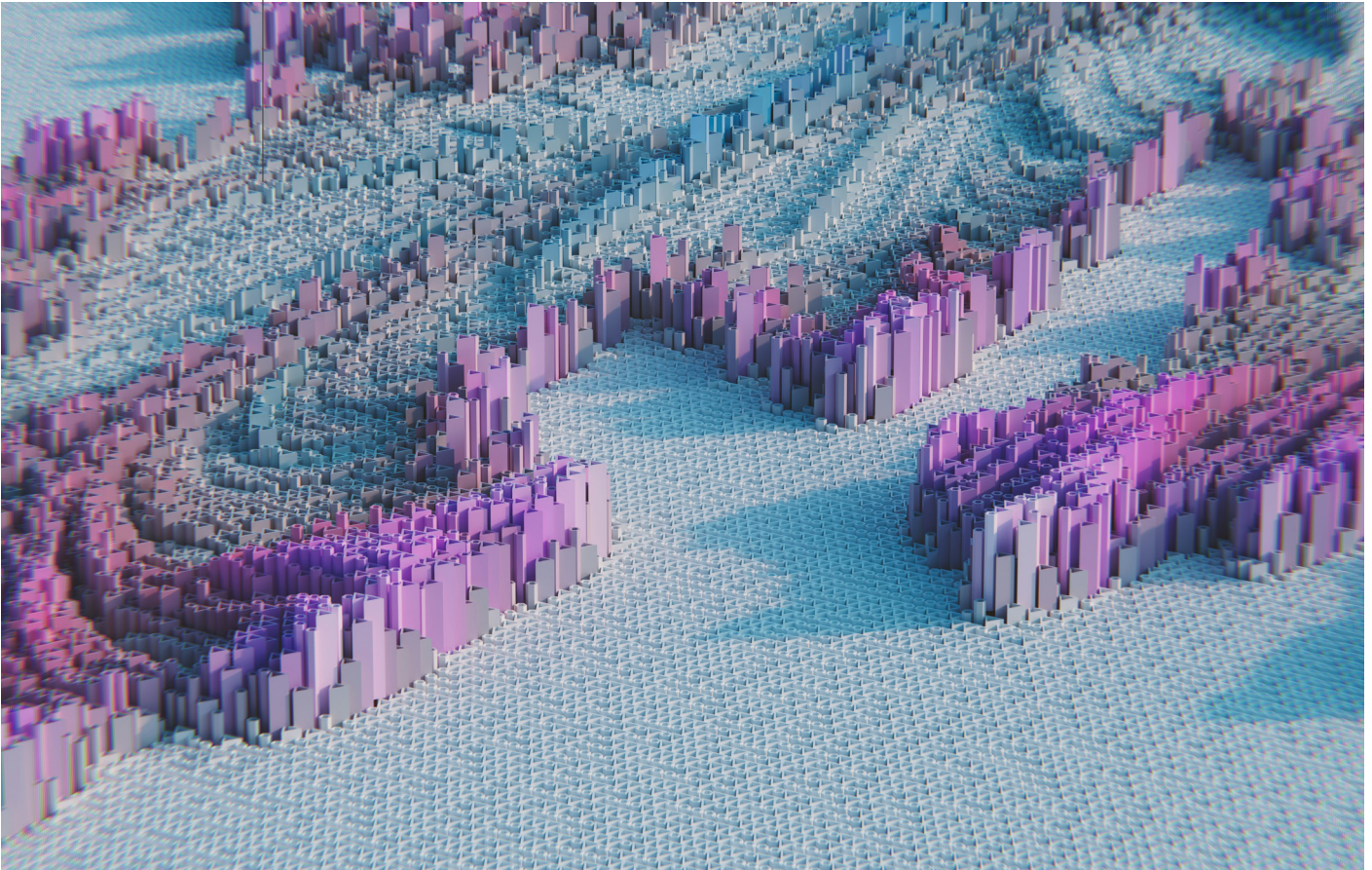
Introduction

This report aims to unearth the experience of early adopters of generative artificial intelligence (GenAI) deployment in the workforce to derive lessons learned and provide an actionable framework for promoting job augmentation and enhancing workforce productivity. It examines the key elements that organizations must have in place to facilitate these outcomes. Research interviews conducted for this report are global in scope, encompassing a wide range of geographies, industries and organizations including commercial, public-sector and social entities.

The emergence of GenAI in the workplace has created significant interest, from the boardroom to the breakroom. **Section 1** examines these expectations, hopes and concerns, and outlines current barriers for individuals and organizations to effectively leverage the technology to achieve better people and business outcomes.

At present, the future of GenAI in the workforce remains uncertain and undefined. Despite rapid developments, the technology is still in its infancy, making it impossible to extrapolate the extent to which productivity gains and job augmentation may be achieved in the near future. Acknowledging the unpredictable nature of the future, **Section 2** considers four scenarios to enable various stakeholders to think through the multiple ways in which GenAI in the workforce could evolve.

Section 3 presents findings from interviews with more than 20 early adopting organizations that have generously shared their experiences, lessons learned and expectations regarding the emerging impact of GenAI on productivity gains and job augmentation to provide valuable insights into the practical implications and potential returns of GenAI workforce deployment.

Section 4 builds on the previous sections to offer an actionable framework that organizations may adapt for their own use to augment jobs and enhance productivity through GenAI adoption. The framework aims to enable organizations to harness the potential of GenAI while adhering to ethical standards, emerging legal requirements, and considering the development and well-being of employees using the technology.

The findings suggest that, with the right enabling conditions, GenAI has the potential to augment jobs and enhance productivity. However, this requires organizations to go through a phase of understanding the technology's value for their specific needs, identifying appropriate use cases, and thoroughly testing the solutions. Moreover, safeguarding that workers understand, trust and adopt GenAI is essential before use cases can be scaled; thus, in addition to training and support, a cultural shift within the organization is also critical to embrace new ways of working. Based on the insights from the interviews, the successful deployment of GenAI depends as much or more on people than on the technology itself.

This report has been developed as part of The Jobs Initiative, coordinated by the World Economic Forum, which aims to build the jobs of tomorrow and ensure good jobs for all in the context of ongoing labour market disruptions. One key focus area for the initiative is promoting strategies for leveraging GenAI for job augmentation and workforce productivity growth. It is one of a series of current World Economic Forum reports that explore the transformative role of artificial intelligence across industries and a variety of key themes.

① GenAI's potential for promoting job augmentation and workforce productivity

This section provides an overview of the debate about generative artificial intelligence (GenAI) in the workforce and its potential for promoting job augmentation and productivity growth. It also highlights current expectations and assessments surrounding GenAI as well as barriers to its more widespread workforce adoption, two years after the public launch of one of the most prominent large language models (LLMs).

By leveraging natural language processing technology, GenAI enables users to interact with it as though they were conversing with a human, reducing barriers to usage and the need for specialized technical knowledge. Since the public launch of ChatGPT 3.5 in November 2022, and

several other prominent LLMs shortly thereafter, public interest in GenAI has surged, raising expectations about its potential to transform the global labour market. According to the World Economic Forum's latest Future of Jobs survey, within the next five years, employers expect a substantial number of jobs to be reshaped due to GenAI advancements[1], potentially affecting up to 40% of total global working hours.[2]

This first section of the report will review the current state of the debate on GenAI's potential, with a particular focus on job augmentation, workforce productivity growth and barriers to the technology's more widespread workforce adoption.

1.1 | GenAI and job augmentation

Like other recent advances in automation and AI technologies, the rise of GenAI has led to concerns about possible job displacement. This apprehension is partly rooted in the technical potential of the technology itself and partly in skepticism about employers' and governments' ability to support individuals through AI-induced job disruptions.[3] One recent survey indicated that 47% of employees who had used GenAI expressed concerns that it may affect the nature of their work in a negative way.[4]

Research examining the potential impact of GenAI on jobs commonly operates on the premise that job roles and occupations are composed of various tasks, some of which may be susceptible to varying degrees of automation by GenAI. For instance, tasks that are repetitive or routine are more exposed to automation than those requiring significant human interaction. While a wide range of tasks may be fully automated by GenAI, research to date has found very few examples of jobs that could be displaced in this way in their entirety.[5]

More frequently, GenAI may partially automate some tasks of a job role but simultaneously improve human workers' ability to perform other tasks. In line with recent research, this paper refers to this process as *job augmentation* (see Box 1 and Fig. 1).[6]

As GenAI technologies and labour markets continue to evolve, it is likely that some job roles may become more fully automated while others may be further augmented in the future. In similar ways to earlier industrial transformations, both job automation and job augmentation may be expected to lead to additional job creation – both directly, creating wholly new jobs in various fields,[7] and indirectly through macroeconomic spillover effects from increased productivity and additional economic value creation. The focus of this report is on the immediate term and in putting into place enabling conditions for job augmentation now and in the next years.

| **Automation and augmentation**

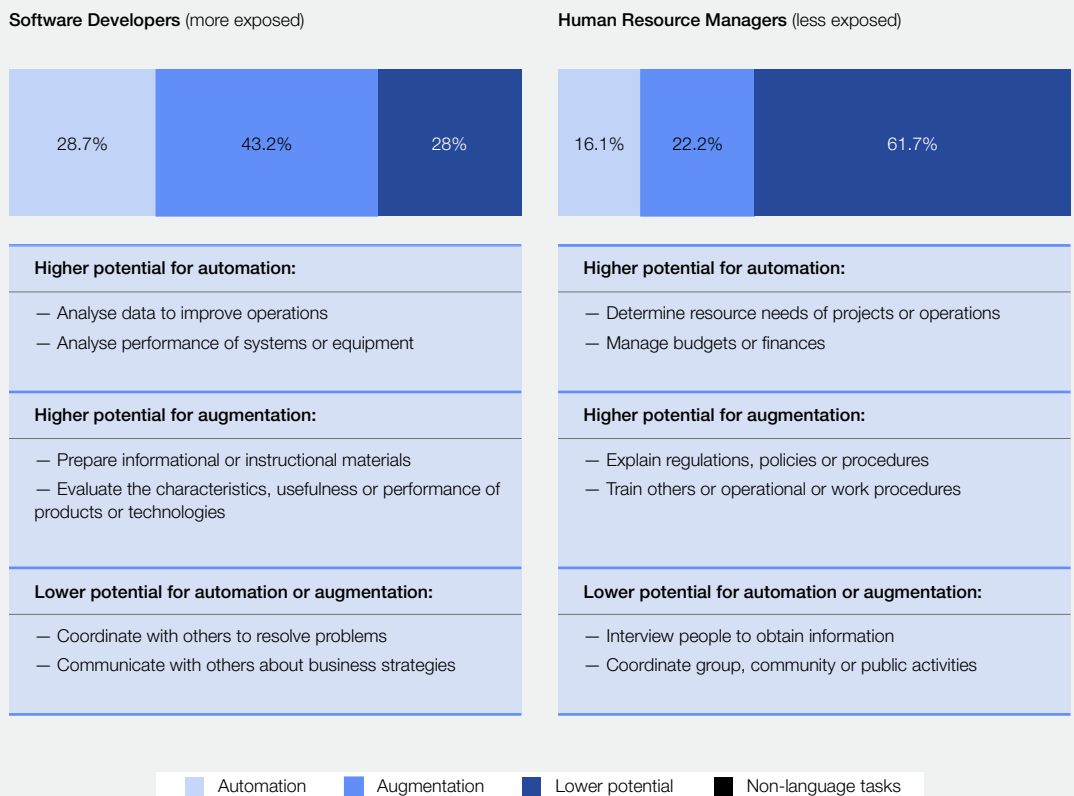This report distinguishes between the following definitions:

Job automation refers to the use of GenAI to fully perform tasks that were previously performed by humans in a given occupation.[1]

Job augmentation refers to the use of GenAI to partially perform tasks in such a way that technology effectively supports or enhances human capabilities through human-machine collaboration. Job augmentation may go beyond technical productivity increase to also enhance job quality and worker well-being.[2]

1. Raisch, S. and S. Krakowski, "Artificial Intelligence and Management: The Automation–Augmentation Paradox", *Academy of Management Review*, vol. 46, no. 1, 2021.

2. World Economic Forum, *Augmented Workforce: Empowering People, Transforming Manufacturing*, 2022.

FIGURE 01 | **GenAI: Example of a more exposed and less exposed job**

Software Developers (more exposed)

28.7% | 43.2% | 28%

Higher potential for automation:
— Analyse data to improve operations
— Analyse performance of systems or equipment

Higher potential for augmentation:
— Prepare informational or instructional materials
— Evaluate the characteristics, usefulness or performance of products or technologies

Lower potential for automation or augmentation:
— Coordinate with others to resolve problems
— Communicate with others about business strategies

Human Resource Managers (less exposed)

16.1% | 22.2% | 61.7%

Higher potential for automation:
— Determine resource needs of projects or operations
— Manage budgets or finances

Higher potential for augmentation:
— Explain regulations, policies or procedures
— Train others or operational or work procedures

Lower potential for automation or augmentation:
— Interview people to obtain information
— Coordinate group, community or public activities

Legend: ▢ Automation ▢ Augmentation ▢ Lower potential ▪ Non-language tasks

Source

World Economic Forum, *Jobs of Tomorrow: Large Language Models and Jobs*, 2023.

1.2 | # GenAI and workforce productivity growth

GenAI's potential impact on productivity is one of its most anticipated benefits, particularly because of the slowdown in productivity growth in many economies.[8] Although current forecasts vary widely, it has been suggested that GenAI's impact on productivity could add trillions to the global economy over the next decade.[9]

What sets GenAI apart from previous developments in AI is its ability to widen access to the use of AI and eliminate the barrier of specialized knowledge. GenAI has the potential to contribute to economic and productivity growth by creating efficiencies through freeing up working time spent on lower-value tasks to engage in higher value-added activities. For instance, automating help desk queries may allow customer service workers to focus on more complex issues that increase customer satisfaction. One recent study, surveying more than 100,000 workers from 11 GenAI-exposed occupations, found that workers estimated ChatGPT could reduce working times

by 50% for one-third of their job tasks.[10] As respondents interviewed as part of the research for this report highlighted, to realize these potential productivity gains it is important to capture time saved as value at an organizational level.

Moreover, GenAI has the potential to augment human workers by enhancing their skills and capabilities, thereby increasing their productivity and enabling new and diverse forms of value creation.[11] For instance, GenAI may augment human capabilities in creative tasks, though it does not currently surpass human creativity on its own.[12] Research also suggests that GenAI may help narrow productivity gaps between lower- and higher-skilled workers.[13]

GenAI's potential to enhance productivity may vary across countries, industries and organizations. At a country level, more developed economies may face higher disruption risk due to prevalence of knowledge work, but they are also better equipped to adopt GenAI more quickly and at scale.[14] Many of these countries also face a decrease in labour supply, which may boost the demand for new technologies such as GenAI to seek efficiency improvements.[15] Emerging economies may similarly benefit from productivity growth by addressing infrastructure constraints and shortages in basic digital skills. Early research indicates that GenAI may disproportionally boost productivity for workers with less experience or skill, thereby reducing entry barriers to the digital economy.[16]

At an industry level, exposure to GenAI-driven task automation and augmentation varies widely across sectors, with not all industries being equally impacted or standing to benefit from GenAI. As described above, previous research has identified which tasks are most exposed to LLMs, highlighting their higher or lower potential for automation or augmentation. For example, one recent study found that software developers from three large technology firms increased the number of tasks completed by over 26% using GenAI.[17] When these exposure levels are aggregated at the industry level, it becomes evident that the impact of GenAI may vary significantly across industries. For instance, the technology and financial sectors could face substantial task automation, while the healthcare and education sectors may benefit more from task augmentation.[18]

Importantly, as discussed in Section 3 of this report, productivity growth is not the only driver for organizations to deploy GenAI. Many also expect improved quality of work and better work experiences for their employees, increasing employee engagement and talent retention.

1.3 | Current barriers to scaling GenAI adoption in the workforce

Historically, slow and inconsistent adoption of AI technologies has restricted their impact and effectiveness.[19] As of mid-2024, only 12% of workers report that they use GenAI at work on a daily basis.[20] Current barriers to GenAI uptake encompass concerns related to trust, skills acquisition, change in culture and unclear business value.

Trust

Trust is a crucial factor that must be considered when embracing new technologies. GenAI models are sometimes referred to as "black box" systems due to the complexity of their algorithms, raising concerns about the outcomes they generate and transparency.[21] In line with this, CEOs see cybersecurity, spread of misinformation, legal or reputational damage, and increased levels of bias as primary concerns related to the adoption of GenAI.[22] In addition to bias and discrimination, workers are specifically worried about the lack of oversight, transparency, explainability and accountability.[23]

To build trust and facilitate the ethical use of GenAI, there is strong demand for transparency and responsible deployment. Increasingly, organizations are implementing responsible GenAI principles to build trust in decision-making processes by improving explainability and mitigating risks. At both national and supranational levels, some territories are tightening regulations on AI to promote trust and ethical use by setting clear boundaries and enforcing accountability. For example, the European AI Act includes the "human-in-the-loop" principle, emphasizing human accountability in decision making. This principle may help to increase trust in GenAI by establishing accountability and respecting human values.[24]

At an industry level, concerns have been raised about a comparatively small number of industry players holding significant influence over the development of GenAI as well as its regulatory environment.[25] Government regulation is partly aimed at creating a level playing field where all parties follow the same regulations and criteria. Nevertheless, inconsistent AI laws worldwide could also have the reverse effect, disadvantaging organizations that are operating in the most strictly regulated jurisdictions.

Skills

At a workforce level, two out of five employers report that a lack of adequate AI-related skills is an obstacle to the integration of GenAI at work.[26] Increased demand for GenAI skills outside of tech roles is evident when examining the share of job postings in non-tech roles that now request these skills.[27] Yet, there is a prevailing concern among 78% of senior executives that their companies may fail to train their employees rapidly enough to keep pace with technological advancements in the coming years.[28] This concern is reinforced as 37% of more than 56,000 workers from 50 countries and regions surveyed by PwC have not used GenAI applications for work in the past year, and an additional 25% have only done so once or twice. Even in the highly exposed financial sector almost one-quarter of workers reported not to have used GenAI for work. In the telecommunication sector, which showed the highest overall use of GenAI, 19% of workers have never used GenAI in their work.[29]

Culture

The culture of an organization is a crucial factor in the adoption of new technologies such as GenAI. Organizations interviewed for this report stress the importance of change management: successful introduction of GenAI depends on experiments and finding use cases. This requires a stimulating and supportive culture. For example, it is important to cultivate mindsets such as a future-positive attitude, growth mindset and agility, which are crucial for employees to embrace GenAI in the workplace. Young (technology) companies and data-driven organizations tend to adopt new technology easier and faster because they are less hampered by existing, established ways of working and embody a data culture and digital literacy.

Business value

Certain enterprises are readily committing substantial resources to GenAI technologies, with investments in GenAI projected to grow by 60% over the next three years, reaching 7.6% of IT budgets by 2027.[30] Others exhibit greater reluctance, questioning the assuredness of the returns these investments may bring. Companies often cite costs as a significant barrier to GenAI adoption, with a number of them unsure of the technology's potential benefits.[31] The uncertainty is amplified by the limited evidence available on the impact of GenAI on firm performance.[32] Preliminary outcomes show promise, but the conclusive benefits remain unclear. For instance, the edge from adopting GenAI could diminish with increasing competitive pressures in the market.[33]

Preliminary findings indicate that the most significant promise of GenAI in revolutionizing business models could reside at the intersection of specialized expertise and innovative problem-solving, propelling rapid advancements in proposition innovation that encompass new offerings, customers, markets, channels and customer relationships. Interviews conducted for this report with various early adopters of GenAI show that organizations remain cautious about the use of GenAI in externally facing products and services. While ultimately something they may strive for, so far, most organizations are experimenting and scaling up GenAI within the comparatively safer walls of their own internal organization.

To shift the focus from smaller-scale incremental improvements to new business models, the advancement of GenAI, in combination with other emerging technologies, will be one of the most important determinants. For instance, the emergence of multimodal LLMs enables the concurrent processing and generation of various data forms (including text, imagery and audio), integrating these elements to create a thorough understanding. It can bring new strategic business benefits such as improved decision-making, enhanced user experience and operational efficiency.[34] With more clarity on the speed and magnitude of such developments, the potential of GenAI to lead to business model reinvention will become more apparent.

② The unwritten future of GenAI in the workforce

There remains a high degree of uncertainty about the future trajectory of GenAI in the workforce and the extent to which its potential for job augmentation and productivity growth may be realized. This section presents four different near future scenarios for how the deployment of GenAI in organizations could play out. Organizations, leaders and workers alike will need to consider these alternative futures when forming their hopes, expectations and strategies regarding GenAI adoption.

"Amara's law" states that observers tend to overestimate the short run impacts of new technology and underestimate the longer-term ones. The long-term impact of GenAI on productivity, augmentation and innovation remains uncertain.[35] While some current task- and firm-level use cases for tools like ChatGPT have shown a 40% decrease in task time and an 18% increase in quality,[36] experience has shown that it can take a long time for technology to become sufficiently widespread to affect productivity at an economy-wide scale.[37] Applying GenAI in tasks, processes and structures requires experimentation and finding and applying use cases – and this simply takes time.[38] This is also confirmed by the case study interviews in Section 3.

Moreover, many tasks that humans currently perform, for example in the areas of transportation and manufacturing, are multifaceted and require real-world interaction, which GenAI is not currently able to improve upon.[39] The question is whether organizations will reach a point where massive scaling-up may take place, leading to productivity gains and job augmentation on a macroeconomic level in the longer term.

Scenario thinking: navigating an uncertain future

Studies of the future recognize its unpredictability and aim to anticipate and prepare for the impact of potential developments, in this case: the impact GenAI could have on job augmentation, productivity and innovation in the near future. The scenarios presented in this section are tools to navigate uncertainty and inform strategic decisions. They explore uncertainties and present possible outcomes of GenAI-induced job augmentation, productivity and innovation. These scenarios are not forecasts or idealized visions but illustrate what realistically could happen.

This section presents four scenarios for the near-term future of GenAI based on future studies methods (Figure 2; see the Appendix for a more detailed description of the report's scenario methodology). Scenarios were developed through workshops and trend analysis, focusing on two key uncertainties that will shape the near future of GenAI-induced job augmentation, productivity and innovation: 1) trust in GenAI, and 2) improvements in applicability and quality of the technology. These scenarios are applicable to organizations that are exposed to GenAI, with leadership aiming to deploy GenAI, regardless of current workforce adoption or external influences. The analysis excludes situations where governmental entities may force or restrict GenAI use.

GenAI-induced job augmentation and productivity growth: Two core uncertainties

The first core uncertainty relates to the **level of trust in GenAI**, which refers to the confidence that employees and organizations have in GenAI-driven tools and their outputs. It also refers to the trust of employees in the organization, the technology provider and the government to prevent issues such as privacy breaches, exploitation and information leaks. As outlined in Section 1, trust is crucial for GenAI adoption and is influenced by different factors.

The second core uncertainty relates to whether the **applicability and quality of GenAI** will continue to improve in the short term or remain the same. High applicability means GenAI tools are practical and useful across various use cases and industries. High quality means the outputs are accurate, reliable and have a low percentage of errors. When combined, these qualities make GenAI valuable and dependable. Improved applicability and quality would lead to new use cases, user models and functionalities, allowing GenAI to (further) augment and automate tasks, enhance jobs, create new industries and serve as a foundation for future technologies.

FIGURE 02 | Four scenarios for the near future of GenAI

High

Trust in outcomes

Scenario 1
High Hopes

High trust

Current applicability/quality

Scenario 4
Shifting Gears

High trust

Expanding applicability/quality

Scenario 2
Broken Promises

Low trust

Current applicability/quality

Scenario 3
Lost Opportunities

Low trust

Expanding applicability/quality

Low

Remains at current level

Improves

Applicability and quality of GenAI

Source
PwC and World Economic Forum.

2.1 Scenario 1: High Hopes

High trust, current applicability & quality

In this scenario, enthusiasm for GenAI workforce adoption is high. Leadership hopes GenAI will contribute to the solving of labour shortages and anticipates it will improve the quality of work. There is a fear of missing out on opportunities as well. Organizations, fearful of disruption, are afraid of jumping on a fast-moving train too late. The majority of the workforce is also enthusiastic, influenced by the buzz on social media. They are experimenting with ChatGPT and other LLMs at home and want to use it at work to handle tedious tasks, such as generating the first draft of a report. The most active and knowledgeable employees encourage their colleagues who are more hesitant to use it. There is room for experimentation and failure, with some organizations encouraging their employees to Bring Your Own AI (BYOAI). In this scenario, organizations invest hugely in GenAI technology, in its application and in training.

Over time, however, in this scenario it turns out that GenAI does not live up to the sky-high expectations. Because confidence is so high, employees also use tools that are not validated or without proper knowledge. Without a thorough understanding of how GenAI works, employees are not able to effectively interpret or validate the results it produces. This leads to inaccurate decision-making or reliance on flawed insights. So, high trust does not result in increasing productivity; on the contrary, it leads to work having to be redone (for example, one recent study showed that participants who used an LLM to solve a particular business problem exhibited a 23% lower correctness of the response compared to those who completed the task without GenAI, due to ineffective use of the tool).[40]

Examples of GenAI misfires go viral on social media. Data-breach incidents are widely reported in the media, which influences the public and political debate and provides impetus for further regulation. Due to mistakes and scandals, organizations tighten their risk management. Organizations that planned to integrate GenAI into all their products and processes are not doing so: they have become reluctant, while quality and usability are stagnating.

GenAI turns out to be excellent at handling administrative tasks, it is a tool that assists people but does not generate short-term breakthroughs. However, the hope that GenAI is a panacea is fading, and organizations are scaling back on their investments in GenAI because the return on investment is disappointing. They are also reserving larger budgets for training on the responsible use of GenAI and risk management.

Scenario 1 implications:

– Organizations continue to develop GenAI, but the majority do so only within their internal organization for now. The risks are considered too high to integrate it into externally facing products and services.

– Administrative jobs will begin to be augmented. Broader productivity gains will be minimal and mainly seen on an individual or team level.

– Organizations will not systematically scale up GenAI for job augmentation, at least in the short term.

2.2 | Scenario 2: Broken Promises

Low trust, current applicability & quality

The major difference between scenario 1 and 2 is the lack of enthusiasm and willingness among employees to deploy GenAI in scenario 2. Workers are inclined not to emphasize its potential and what it can do but rather the biases and the sometimes unreliable outcomes. This feeling is reinforced by stories about the unreliability of GenAI. Of course, there are employees in these organizations who do see the potential of GenAI and who do experiments, but they are too few to get their colleagues to go along on a large scale.

Workers in this scenario may have access to the tools but tend to trust the quality of human work and judgement over technology so they do not feel motivated to try them out. Without humans-in-the-loop as well as policy there will be lower trust. This means that they do not experience the benefits GenAI can offer. GenAI is thus primarily used for labour-intensive and low-risk tasks like drafting an email. Employees are unlikely to trust the outcomes and instead conduct additional reviews of the outputs, often resulting in redoing the work. To increase adoption, organizations invest heavily in change management and training, but even these efforts do not fully overcome the resistance to embracing GenAI.

In this scenario, the risks of "accidents" are not realized, but neither are the opportunities for innovation and job augmentation. Employees continue to manually handle most tasks that could have been automated or augmented by GenAI.

Slight efficiency gains are achieved by performing simple tasks with GenAI, but the time required to verify the accuracy of outputs negates any potential benefits. External competitive pressures may slightly increase adoption, resulting in a marginally higher but still limited impact on productivity.

In this scenario, adoption could be driven by external factors, such as competitive dynamics, despite its limitations in applicability and quality. Some companies might take the risk of adopting GenAI to gain an (uncertain) competitive edge. (Netflix, for instance, has expressed concerns regarding the potential impact of competitors leveraging GenAI technology on their ability to compete effectively).[41] Additionally, the desire to future-proof the organization, preparing for potential improvements in GenAI, might motivate organizations to start integrating the technology now.

Scenario 2 implications:

– Adoption of GenAI is very slow, thereby limiting the impact of GenAI on job augmentation and workforce productivity.

– Individuals will use GenAI, but not on a large scale. Light individual productivity gains could be achieved by performing simple tasks with GenAI, but the effects will be negated by the time required to verify the accuracy of outputs.

– External pressures may slightly increase adoption, resulting in a marginally higher but still limited impact on augmentation and productivity.

2.3 | Scenario 3: Lost Opportunities

Low trust, expanding applicability & quality

At first glance, this scenario resembles Scenario 2: organizations want to deploy GenAI, but a large part of the workforce is resisting or hesitant. However, in this scenario, low trust is due to concern about job displacement as opposed to fear of incorrect GenAI tool outcomes. In fact, in this scenario, the expanding applicability and quality of GenAI is so good that it can potentially take over many tasks and even fully replace a range of jobs.

In this scenario, pressure from shareholders or supervisory boards on leadership is very likely to increase the pace of deploying GenAI on a larger scale. Early adopters may achieve substantial competitive advantage by benefiting from the high applicability and quality of GenAI. These early adopters are likely to see benefits, which could lead to a gap between those who scaled early and those who did not.

There is pressure on leadership relating to the workforce, and jobs of people who "cannot keep up" with developments are seriously at stake. This may lead to tensions within the organization and will also require involvement of unions and worker representatives.

Some forward-thinking organizations may opt to invest heavily in culture change and upskilling, focusing on using GenAI responsibly and skills that are needed in the future – with initial pilots targeting specific low-risk, high-return areas – to test GenAI's productivity gains and mitigate concerns over job replacement. However, other organizations may take a less human-centric approach.

Scenario 3 implications:

– Slower implementation of GenAI in most organizations, due to lack of trust.

– In the market, there is a big difference between early adopters and those who follow, which only increases the pressure on the latter.

– Within organizations there will be pressure on workers who are reluctant or unable to adopt GenAI, potentially leading to conflict and unequal outcomes.

– Job augmentation and initial productivity improvements are evident in certain parts of the organization; however this has not led to widespread job augmentation and productivity enhancements, and benefits are concentrated among a few.

2.4 | Scenario 4: Shifting Gears

High trust, expanding applicability & quality

In Scenario 4 we again meet the enthusiastic and experimenting organizations and workforces encountered in Scenario 1, with trust being high and quality and applicability rapidly expanding, enabling organizations to scale up use cases faster.

GenAI becomes an integral part of daily processes, tasks, tools and systems. It seamlessly integrates into various roles, automating routine tasks and providing advanced decision-support capabilities, resulting in considerable productivity gains and the creation of new and augmented roles. In this high trust / high quality scenario, organizations not only use GenAI in their own operations, but also begin to incorporate it into their products and services faster, potentially driving substantial innovation and business model transformation.

Much more than in the other scenarios, organizations may maximize GenAI-associated productivity increases, job augmentation and potentially even job creation. However, with a rapid pace of change, demands on organizations' and workers' agility and adaptability are equally high. For some workers, this means transitioning to other functions faster. Workers who are unable to adapt to the accelerated pace of change may face job losses, potentially leading to conflict between workers and the organization. Counteracting this, access to a wide range of jobs may be democratized through leveraging access to GenAI tools, and talent pools expanded.

Accelerated upskilling programmes may be required to enable employees to acquire new skills fast, while demand for GenAI and data experts will rise, intensifying the war for talent. Gaps between those whose jobs are exposed to transformations by GenAI and those whose are not could emerge or deepen, leading to significant societal impacts. Accordingly, this scenario requires organizations

and workers to be even more resilient and agile.

Scenario 4 implications:

– Faster adoption of GenAI leads to large organizational efficiency gains. GenAI is deployed not only in the internal organization but also in products and services. This potentially leads to business model reinvention.

– Trust in GenAI is no longer something that only needs to be gained from employees, but also from customers and stakeholders.

– Maximum potential for productivity increases and job augmentation, but also higher rates of job displacement and, potentially, opportunities for democratizing access to job opportunities through GenAI tools.

– Some workers may benefit from these developments more than others, at both the workforce and organizational levels. This may have wider social ramifications.

(3) Insights from early adopters

Successfully leveraging GenAI across the workforce is less about the technology itself than it is about the people adopting it. That is one of the most important lessons learned from interviews with more than 20 early adopting organizations about their GenAI deployment journey conducted for this report. Additional insights presented in this section highlight the importance of investing time and effort in gaining the support and participation of the entire workforce.

BOX 2 | About the research interviews

In researching this report, interviews were conducted with over twenty organizations from a wide range of industries and regions across the world. What they all had in common was their exploration of opportunities to implement GenAI within their own organizations. This exploration typically began with the introduction of ChatGPT, with some organizations starting with the earliest models and the majority beginning with the launch of GPT 3.5 in November 2022. These organizations can be considered early adopters in the GenAI workforce journey, although their current progress may vary. The case study sample for this section deliberately excludes organizations that are hesitant to embark on this journey or are at the very beginning. The intention behind this selection was to specifically learn from early adopters.

C-suite level representatives from different functions within these organizations were engaged, including human resources, change management, technology, and strategy. By default, the interviews were conducted anonymously to encourage openness. Interviewees willingly shared both their successes and lessons learned from deploying GenAI to their workforce, which, ideally, will be valuable for other organizations.

3.1 | The GenAI workforce deployment journey: Lessons learned from initial pilots through to scaling up

The "ChatGPT moment"

According to several interviewees, there exists a discontinuity between the world before November 2022 and the world after. The public launch of ChatGPT 3.5, suitable for widespread use by people without technological knowledge or skills, has had a significant impact. Its user-friendliness, the ability for employees to experiment with the technology at home and the breakroom anecdotes led organizations to wonder, "what does this mean for me, my employees and my customers?" They were eager to explore the potential implications for their workforce, services and products. Early adopters anticipated potential transformative changes in the future, often referring to it as a "game changer".

Strong risk awareness

Most organizations interviewed were highly conscious of the risks of GenAI workforce deployment. Concerns include data breaches, privacy violations as well as bias in outcomes or other ethical aspects. They want to prevent reputational damage and avoid conflicts with regulators and authorities. Consequently, many organizations are taking a cautious approach by conducting experiments and implementing pilots within the comparatively safe walls of their own organization. One typical example that came out of the interviews is setting up a GenAI chatbot that answers questions about internal rules and procedures, preventing long searches on the organization's intranet. Even among the

more advanced adopters, the focus for more complex GenAI use cases was around the internal organization. Among the more than 20 organizations interviewed, only four were found to be currently using LLMs in their services or products for customers.

Combination of bottom-up and top-down

The introduction and further rollout of GenAI require strong support by the leadership of an organization. However, due to the versatility of this technology, which can easily be applied to various tasks and processes, senior leaders also rely on the innovative capabilities of their workforce. It is in day-to-day practice where most use cases are identified and developed. According to this perspective, the most promising use cases are those embraced and championed by employees themselves.

Careful scaling

Based on conversations with various early adopting organizations, it is evident that many have moved beyond the initial experimentation phase. One of the key lessons learned by interviewees is the importance of not rushing the implementation process, which some consider to be a potential pitfall. They emphasize the need to develop and test GenAI solutions in small groups before rolling them out to the rest of the organization. This approach allows for any issues or shortcomings

to be identified and addressed before wider implementation, preventing users from losing interest if things don't work as expected. Additionally, attempting to move too quickly may create resistance by employees, as further discussed below.

Advantages of data-driven organizations

The organizations quickest to adopt GenAI in their workforce are those that could be described as "data-driven". These organizations have been working on establishing robust data quality, data infrastructure, data governance and security measures for years. For example, they already implemented a data lake, a centralized place where vast amounts of business data are stored. This data lake serves as the foundation for processing and utilizing data for analytical purposes. While they may not necessarily be faster at identifying use cases for GenAI, they already have all the necessary components in place to develop and deploy quickly. With their existing data infrastructure and governance practices in place, these organizations could readily capitalize on the potential of GenAI for their workforce and business needs.

Some interviewees also worked closely with (technology) partners to foster the development of GenAI within their organizations. Companies could also leverage these partners' expertise and resources to further enhance and refine GenAI solutions for their workforce.

3.2 | Insights on drivers of GenAI adoption: More than productivity gains

Fear of disruption

The unknown future is a driver in and of itself for the use of GenAI. Organizations interviewed recognize that they cannot predict what the future will hold, but they anticipate that GenAI will drive significant workforce changes, nonetheless. They want to pre-empt the potential disruption of their business by their current competitors or newcomers, so they start working on GenAI implementation, sometimes even without having a clear understanding of what it will ultimately yield. These organizations assume that the learning curve they are currently experiencing will pay off later, as they aim to develop a competitive advantage over those who deploy GenAI to their workforce later.

Workforce productivity

As discussed in Sections 1 and 2, it is currently difficult to determine the extent to which the use of GenAI may lead to significant productivity gains at the macroeconomic level. However, at the organizational level, some organizations do report such gains. For instance, one organization stated that it was able to automate requests that typically took two weeks to less than a few minutes. These gains are particularly evident in routine and repetitive (administrative) work. This aligns with the findings of previous research, which concluded that the potential for productivity improvement lies primarily in professions with this type of work.[42]

It is notable that quite a few organizations among the interview sample do not have a clear plan for what their workers should do with freed-up time. Most of them do not currently measure the

productivity gains but are planning to do so in a next phase. Some of the interviewees emphasized the significance of capturing the value at an organizational level, so that time saved is not wasted or consumed by other burdensome tasks of individual employees. However, while most organizations are still in the phase of experimenting and slowly scaling up use cases, they do expect that work will change and that employees will have more time for value-added and creative tasks, and for problem-solving. What these organizations do have in common is their iterative approach and ability to learn quickly. They are also resilient and quick to embrace new technology versions, incorporating them into their strategy. This indicates that agility and resilience are considered more important at this stage than having a fully laid-out plan from the beginning. Many interviewees agreed on the importance of measurement but have chosen to postpone it to later phases or not yet found a way to integrate it into their operations.

Some organizations have doubts about whether the promise of future productivity growth will be fulfilled and that the full value of GenAI workforce deployment can be captured at an organizational level: "Didn't we all think that email would increase productivity, while now we all spend hours dealing with email? And isn't there a risk that the achieved efficiency will "leak" because the freed-up time is not necessarily spent in a useful way?"

Improving quality of work

According to interviewees, productivity is consistently cited as a key motivator for implementing technology, even if just to get budget for it. If tasks and processes can be performed faster and/or with fewer people, this is always beneficial for a company. But (expected) productivity improvement is not the only driver. Improving the quality of work is mentioned by interviewees as an equally important driver for the deployment of GenAI to the workforce. If implemented correctly, technology has the potential to be more accurate and consistent than humans, make fewer mistakes, and can therefore lead to higher quality and customer satisfaction.

"Empowering people" is also a frequently mentioned term by the interviewees. More than one-quarter of respondents explicitly mentioned that GenAI enables employees to do work that is more enjoyable, creative and more value adding, freeing them from tedious administrative tasks. Organizations facing a shortage of staff and labour-market scarcity in their industry anticipate GenAI to reduce work pressure and stress. Though sometimes they experience unintended side effects in this area: some organizations have experienced that automation of administrative tasks actually led to increasing work pressure, whereby employees had lost the opportunity to clear their minds and unwind, which they used to do during this routine work. In those cases, efficiency gains are filled by extra breaks.

As noted earlier, all interviewed organizations assume that work is changing and new roles are emerging, such as roles focused on validating GenAI outcomes. Empowering the workforce also means preparing the workforce for the future: when tasks are materially altered or truly disappear, the staff must be empowered to do other work.

3.3 | Insights on GenAI workforce deployment: Importance of building trust

Unease felt in departments with administrative work

All interviewees agreed on one thing: GenAI adoption by employees in the organization is much more important than the technology itself. However, while in some organizations and departments employees were eager to try out the new technology, in other organizations and departments, people were more hesitant. Moreover, people were not always comfortable with the outcomes of technology. Are the outcomes accurate? Is there bias? Is it ethically responsible to replace a photographer's images with GenAI -generated images?

Even within organizations, the differences can be significant, and rapid adoption often depends on where ownership lies: with frontline teams, with the organization's IT department, or jointly? Frequently, IT professionals within the organization were among the quickest to embrace GenAI and are playing an important role in the roll-out of pilots and use cases. Almost all interviewees indicated that the most significant impact of GenAI is felt in departments with a lot of administrative work. It is precisely in those departments that there often was uncertainty because people were afraid of losing their jobs or fear that they do not have the skills to keep up: "In a way, you have to adapt to the pace of that group, otherwise you won't get them on board," said one of the interviewees. "You shouldn't go faster than these people can. Don't immediately set all kinds of productivity goals for them. First, make sure that people start using it and derive value from it."

Building trust through training

"The only thing you can counter fear and uncertainty with, is 'trust'," said one of the interviewees. The technology itself is quite simple and user-friendly, though some of the interviewees mentioned that handholding was required to get people started and alleviate their anxiety. People don't need to have technical knowledge to use it. Therefore, training should focus on how it works, what impact it has, where the limitations are and what value it brings to daily work. Additionally, a part of the training should address the responsible use of GenAI, including the ethical aspects such as bias, data leakage and the organization's norms.

Providing reskilling and upskilling opportunities, including trainings that enable workers to grow into new roles, may give people confidence that they won't become obsolete, but that they can grow with the changes and that they can augment their roles. The question of whether such training was mandatory varied from organization to organization.

Aligning employee and organizational interest

Early adopter organizations interviewed for this report put a lot of effort into demonstrating that using GenAI is attractive, improves work and makes it more enjoyable. One interviewee stated: "We position GenAI as an intern. It's not the perfect colleague yet, but it can help you." Another interviewee emphasized that it was key to make employees aware that they also benefitted themselves from learning to deal with GenAI: "You need to align the interest of the individual who wants to develop with the interest of the company that wants to change."

Low-barrier, peer-to-peer learning appears to be effective. Many organizations organize informal gatherings ("town halls"), where employees may share their experiences, learn from each other and celebrate successes. These regular meetings are also crucial for fostering continuous learning. To prevent people from dropping out, these types of gatherings, along with interactions between colleagues and the support of champions/ ambassadors, whom employees can turn to when facing difficulties, help maintain engagement.

Importance of change management

The implementation of GenAI cannot be done without change management. This requires an innovative culture, which may not naturally exist in every organization. Some organizations mentioned they see the effect already on the culture of the organization and expect this to be bigger once GenAI is scaled across the organization. Delegating initiatives to the workforce for example, has an impact on the management of teams and the existing hierarchy. Ambitions in the field of GenAI also imply agility from both management and the workforce as the exact outcomes of GenAI remain uncertain. While iterating and starting new initiatives, it is important to also understand the effect on the culture of the organization and the mindset shift it requires of employees. Interviewees mentioned that effective leadership therefore is very important, and that this mindset shift must come from the top of the organization.

There is also a crucial role for middle management. They understand the workflows of the workforce where leadership can be too distant to understand which processes drive the highest impact. Within some of the interviewed organizations middle managers drive part of the innovation and adoption and as a result, they get a more strategic role. They need to implement GenAI in their teams while being caught between the dual pressure from higher-level management and the concerns from the employees. In that sense, the expectations of middle management regarding the pace of changes may be the most realistic, and it is expected by respondents that they will play a crucial role in the (further) adoption of AI.

3.4 | Insights on GenAI workforce deployment: Risk governance

Many organizations interviewed for this report do not know exactly what percentage of their workforce uses GenAI for work. Reported figures vary from 20% to 80%, while some stated that "almost everyone" was using GenAI, or that at least everyone could because they gave the entire organization access to a GPT-powered chatbot or Copilot type of solution. The accessibility of GenAI tools across the case study sample varies widely. While some respondents grant all employees access to all tools, others limit this to one or two departments, and in some cases, licenses can only be obtained on request. This decision is usually strongly related to the organization's risk appetite and past experiences.

A few organizations have had "accidents" such as data leaks while others saw that GenAI tools were used irresponsibly, such as composing sensitive letters or emails. This led to delays in further implementation, causing frustration among employees eager to proceed. Such risk appetite determines the pace of implementation and whether GenAI is only deployed internally or also in client-facing services. "Once you take the leap of faith, you can't go back," said one organization. "Meanwhile, those people have also started doing something else or something new in the organization. GenAI really does change jobs. If you want to go back, you have to put everyone back in their old position."

The importance of "humans-in-the-loop"

Past scandals involving discriminatory algorithms, the black box nature of GenAI, and the introduction of government regulations (such as the European AI act) have increased respondents' risk awareness when it comes to GenAI workforce deployment, with a notable example being the tendency of GenAI to generate illustrations of meetings that predominantly feature white, older men. This highlights the importance of validation, verification and human intervention in the process. One interviewee emphasized that "the biggest mistake you can make is to remove humans from your processes."

GenAI councils to safeguard quality and ethics

To monitor the risks, quality and responsible use of GenAI, most organizations interviewed work with internal committees or councils. These councils establish internal rules, standards and frameworks and assess use cases. These councils are often organization-wide, with representatives not only from Risk and Compliance and Legal functions but also from Strategy, Marketing, IT, and Business. The reason for such an approach is to safeguard that all perspectives, risks and opportunities are considered in decision-making. However, opinions differ among respondents on whether this leads to acceleration or delay in the workforce deployment of GenAI. Some complain about the slowness of this alignment process, while others argue that it helps achieve alignment sooner and safer. Nearly all organizations interviewed report that they have developed training in responsible use; however, not all organizations make this training mandatory.

Sustainability considerations

LLMs, central to GenAI systems, are energy-intensive compared to smaller, task-specific AI models. Each prompt from large models requires calculations that consume a significant amount of energy. The higher the adoption of GenAI, the more energy consumption this entails. This contradicts the mission of most organizations to reduce their environmental footprint. While this is a problem that most organizations acknowledge, few have developed a strategy for acting on it, yet. Some argued that it should be addressed in the supply chain, by the cloud providers of GenAI tools who have promised to strive for climate neutrality, while others expected policy and regulators to weigh in eventually. For the moment, based on the interviews conducted for this report, one conclusion is that environmental considerations do not seem to be central to GenAI workforce deployment decisions.

Framework for action

Combining insights from the scenarios and lessons learned from early adopters outlined previously, this section proposes an actionable framework for promoting job augmentation and workforce productivity growth with GenAI. Focusing on factors within an organization's control, it is designed to be useful both to organizations just starting out on their GenAI workforce deployment journey, as well as to those seeking to scale existing efforts.

To promote job augmentation and workforce productivity growth through GenAI adoption, organizations will need to employ a flexible strategy.

It is crucial for organizations to be able to swiftly respond to new developments and adapt their approach accordingly. Early adopters' experiences show that an iterative approach, characterized by continuous learning and improvement, holds the most promise.

Accordingly, as visualized in Figure 3, this section proposes a flexible framework that focuses on a number of key elements that may help organizations achieve widescale adoption of GenAI among their own workforce, and beyond (e.g. among contractors in their value chain).

FIGURE 03   **Framework: Promoting job augmentation and workforce productivity with GenAI**

Source

PwC and World Economic Forum.

The proposed framework is based on two iterative stages: **Starting** and **Scaling**. In the Starting phase, organizations pilot and test various GenAI workforce applications and tools to gather important insights on what works well and what does not, while minimizing initial investment. Based on these early results and lessons learned, organizations may then make informed decisions on broader measures, which leads to the Scaling phase.

The different elements that organizations should address during the Starting and Scaling phases revolve around two core themes: **Enable** and **Engage** (Figure 3). The Enable elements focus on

establishing foundations and guiding principles and include: GenAI vision and strategy; Data and technology infrastructure; and Regulatory compliance and governance. Addressing these elements is an essential prerequisite for the early adoption and development of GenAI use cases. Over time, some of these elements may be strengthened or expanded when the use cases become more advanced or complex. The Engage elements focus on facilitating that GenAI workforce applications are effectively adopted and integrated into workflows to generate the desired benefits. These elements include: Culture and change management; Skills development and

redeployment; and Use case management.

This framework mainly focuses on the Engage elements, since – as the insights from early adopters highlighted – successful workforce engagement should be considered one of the most important differentiators in driving successful job augmentation and workforce productivity growth. In addition, it is important to note that the specific elements under the Enable and Engage themes will often be highly context-specific to the organization embarking on the GenAI workforce journey, with different individual starting points and specific contexts in which they are operating. A customized approach to GenAI workforce deployment, tailored to specific organizational needs, may enable faster job augmentation and increased productivity outcomes.

4.1 | Enable

As Figure 3 illustrates, the key enabling elements of the framework include: GenAI vision and strategy; Data and technology infrastructure; and Regulatory compliance and governance.

GenAI vision and strategy

When articulating a GenAI vision and strategy, organizations should take into account various factors and priorities. One important aspect is to align with the organization's broader digital strategy. The GenAI strategy must also remain sufficiently agile to adapt to evolving business goals. Stakeholders such as the organization's leadership, employee representatives and individual workers with different mandates should be continuously involved in discussions around the impact on jobs to ensure multiple perspectives are considered: Though sometimes seen as slowing operationalization, this approach can help create organizational alignment and speed up adoption. Importantly, GenAI strategy should integrate with workforce planning strategies, so that employees are upskilled, reskilled and redeployed as needed to reflect changing roles and skill requirements to future-proof the organization.

Data and technology infrastructure

For successful GenAI workforce adoption, a robust data and technology infrastructure is essential. Without this, GenAI systems are at risk of delivering inaccurate performance, exhibiting bias and encountering legal issues, which could lead to low trust, usage and adoption. Additionally, scalable infrastructure is key to supporting GenAI rollout across various functions and applications. While some organizations may initially embark on the GenAI workforce deployment journey without having thorough data and infrastructure in place already, these elements will become increasingly more essential during scale-up in order to reach the full potential of job augmentation and productivity gains.

Regulatory compliance and governance

With the rise of GenAI, organizations face tangible risks related to data privacy, intellectual property, ethical use and potential misuse. As the adoption of GenAI accelerates, it is essential for companies to develop robust responsible AI programmes.[43] Compliance with existing and emerging regulations is vital to maintaining trust and mitigating legal or reputational risks. By combining regulatory adherence with ethical and responsible AI practices, organizations can create a foundation of trust and sustainability for GenAI deployment, both internally and externally. As with GenAI vision and strategy, it is important to include employee representatives in planning and decision-making processes to discuss and address potential ethical implications, risks and benefits associated with the implementation, and scaling-up of GenAI. Further, organizations should develop clear guidance that outlines how job augmentation will be implemented and managed to facilitate legal compliance and fair treatment of employees.

4.2 Engage

Derived from the action steps that early adopters interviewed for this report felt were the most effective in maximizing job augmentation and delivering productivity gains, key engagement elements include: Culture and change management; Skills development and redeployment; and Use case management (Fig. 4).

FIGURE 04   **Starting and scaling engagement for job augmentation with GenAI: Checklist**

Starting Actions	Scaling Actions
Culture & Change Management	**Culture & Change Management**
☑ Allocate the right resources	☑ Designate stakeholders at all organization levels
☑ Communicate the 'why'	☑ build trust through transparency
☑ Identify pilot group	☑ Learn from knowledge sharing
☑ Make employees aware and inspire them	
☑ Monitor adoption	
☑ Reward adoption	
Skills Development & Redeployment	**Skills Development & Redeployment**
☑ Identify the skills gaps and skills required	☑ Manage job redeployment
☑ Upskill to minimize the skills gap	☑ Redesign jobs
	☑ Conduct strategic workforce planning
Use Case Management	**Use Case Management**
☑ Identify and explore use cases	☑ Scale use cases
☑ Start with a pilot	☑ Standardize development practices and tools
☑ Set KPIs	☑ Review and adjust KPIs
☑ Measure return	☑ Measure continuously
☑ Create a business case	☑ Uncover hidden efforts

Source
PwC and World Economic Forum.

One key insight from the early adopter interviews conducted for this report is that deployment and successful scaling of GenAI in the workforce is less about the technology itself, than it is about the people. To fully leverage GenAI's potential for job augmentation and productivity growth, organizations must foster a new approach to work. A people-centred approach can drive positive and sustainable results by empowering the workforce to adapt. Promoting the right mindsets and behaviours within the organization is key to facilitating a working culture and environment that is open to change and experimentation. It is also important to measure how workers are moving along the adoption curve, from initial awareness to commitment and engagement, addressing any barriers and concerns.

Starting actions

– **Allocate the right resources**: Without allocating sufficient resources to support

change-management and adoption initiatives, use cases and tools may not be effectively utilized or adopted. It is important to set the right expectations to avoid employee disengagement when desired outcomes are not achieved at first attempt.

– **Communicate the "why"**: It is important to have leaders convey their vision on how GenAI can become a game changer for the organization – both in what it delivers and how it is being delivered – demonstrating how GenAI deployment aligns with the broader business strategy and highlighting benefits for employees.

– **Identify pilot groups**: A pilot group can help develop and test GenAI workforce applications before rolling out to the rest of the organization. This may involve identifying employees who are enthusiastic about GenAI to serve as influencers when scaling GenAI across the organization, leveraging their positive experiences to encourage others to adopt GenAI, and supporting GenAI use within their teams.

– **Promote employee awareness and engagement**: This may entail launching internal campaigns, including gamification, to promote GenAI and creating excitement and curiosity among employees. These campaigns should highlight the potential, benefits and impact of GenAI for both the organization, the individual and their teams.

– **Monitor adoption**: Organizations may measure how employees are moving along the adoption curve by analysing user interactions and survey data (e.g. low usage, low sentiment), and by actively listening to employee feedback and addressing any concerns or issues to increase trust.

– **Reward adoption**: Recognizing, incentivizing and rewarding employees who actively adopt and utilize GenAI may motivate others to follow suit.

Scaling actions

– **Designate stakeholders at all organization levels**: Organizations should consider promoting active support and endorsement of GenAI adoption across the organization. Executive sponsors can support GenAI implementation, provide strategic direction, align the necessary resources and model the right behaviours to employees. Middle managers may communicate the importance of GenAI to their teams, outline the expected effects and changes on the tasks of their teams, and secure the provision of necessary training and support.

– **Build trust through transparency**: It is important to build trust between employees and the organization by engaging employees in discussions about how GenAI will be used within the organization and how job changes and potential displacements will be managed, transparently addressing any concerns.

– **Learn from knowledge-sharing**: Organizations should encourage active collaboration among employees to share successful use cases and take advantage of the organizational network to increase adoption through peer-to-peer learning or town halls to share best practices and celebrate successes.

4.4 | Skills development and redeployment

As part of scaling up GenAI workforce deployment, organizations must equip workers with the necessary knowledge, skills and capabilities, while simultaneously managing workforce redeployment and redesigning job roles. Workers should also understand how GenAI can drive innovation and increase productivity at individual, team and organizational levels. New skills are essential for the practical application of GenAI. These skills are not only necessary to successfully execute new tasks that arise from job augmentation (e.g. reviewing and approving outputs generated by GenAI), but also for transitioning to different roles within the organization. Continuous GenAI skill development will keep the workforce agile and adaptable to future technological advancements.

Starting actions

– **Identify skills gaps and skills requirements**: Organizations should understand the current workforce skills landscape and compare against the determined skills required for efficient human-GenAI collaboration. Successful GenAI job augmentation does not only hinge on the ability to perform tasks using GenAI, but also on performing new, more complex or value-adding tasks.

– **Upskill to minimize skills gaps and increase GenAI adoption**: Organizations

should educate teams on how to use GenAI by covering essential topics on what GenAI is, how to access it and how to prompt effectively. Additionally, they should provide thorough training on practical applications and use cases to help teams understand what GenAI can be used for and how to unlock its potential. It is recommended to make training on the responsible use of GenAI mandatory to proactively mitigate risks. In addition to the direct benefits, early adopter interviewees emphasized that training also builds trust and alleviates uncertainty among employees, thereby giving people confidence to adapt to and embrace GenAI.

Scaling actions

– **Facilitate redeployment**: Organizations should proactively identify roles affected and jobs displaced due to GenAI adoption and consider transferring employees into different jobs or reshaping roles, while reskilling them to avoid further job displacement.

– This can be achieved by understanding job adjacencies to promote internal mobility and the development of parallel career pathways in a workforce disrupted by GenAI.

– **Redesign jobs**: Organizations can augment roles on a larger scale by embedding GenAI tools and use cases into existing organizational processes to streamline workflows and improve efficiency. This will allow employees to focus on tasks not impacted by GenAI, requiring strategic, interpersonal and creative skills and creating more meaningful jobs.

– **Conduct strategic workforce planning**: Strategic workforce planning can help enable alignment between the organization's workforce resources and capabilities and the organization's strategic goals and objectives. This should entail regularly assessing workforce capacity and skill gaps created by GenAI to determine areas that need further resourcing, reshaping and reskilling. Gaps may be identified with surveys, skills assessments or strategic workforce planning technologies.

4.5 | Use-case management

Strategically selecting and disseminating appropriate use cases for GenAI workforce adoption is crucial to demonstrating benefits, improving business outcomes, gaining stakeholder buy-in and informing decision-making about further workforce GenAI implementation. Use cases can be powerful tools in demonstrating how the implementation of GenAI aligns with overall business strategies and addresses challenges such as productivity growth and employee job satisfaction.

Starting actions

– **Identify and disseminate strategic use cases**: This should entail engaging the organization thoroughly to collectively identify where GenAI can add the most value. When identifying use cases, organizations should consider the potential impact of use cases on employees' roles and responsibilities to address potential job changes, employee sentiments and the need for reskilling. These use cases should be identified through both bottom-up and top-down approaches, engaging all stakeholders. An initial focus on out-of-the-box products and simple use cases for repetitive tasks may help realize easy adoption and efficiency gains.

– **Start with a pilot**: Organizations should consider pilot GenAI deployments to gain valuable insights from initial small-scale implementations, enabling informed decisions

and adjustments when scaling up. This approach will help identify any challenges early on, secure stakeholder buy-in before further investment and provide a platform for experimentation and learning from failures.

– **Set Key Performance Indicators (KPIs) and measure returns**: Organizations should determine KPIs that will be used to measure success, such as workforce adoption, employee well-being and productivity gains. The measurement framework should be supported by a combination of available hard data and self-reported data from interviews and employee surveys, and it should take a dual approach focusing on KPIs targeting both senior leadership and frontline workers. KPIs should be tracked to identify a baseline and conduct continuous evaluation of progress and goal achievement, such as possible reduction in costs and productivity gains. Collecting feedback from both leadership and employees can help to understand whether leaders accurately capture the overall value being created. Results should be used to adapt current and inform future strategies.

– **Create a business case**: Organizations may wish to create a robust business case by highlighting the benefits generated by GenAI implementation (such as perceived productivity gains, time savings and employee satisfaction). The validation of the business case may then influence decisions on further rollout and can support gaining buy-in from leadership to scale

GenAI, if successful.

Scaling actions

– **Scale use cases**: Organizations should consider taking an iterative approach, scaling GenAI workforce deployment gradually across the organization, and consistently monitoring impact to address any challenges that arise during each wave of implementation. This iterative approach allows for better management of change, facilitating that any issues can be addressed early on.

– **Standardize development practices and tools**: Standardizing GenAI development practices and tools across the organization by setting clear standards and controls can help promote consistency and quality and provide an effective way to handle increasing complexity.

– **Review, measure continuously, and adjust KPIs**: Organizations should consider reviewing KPIs regularly to be in line with the objectives determined. Establishing a framework for ongoing evaluation and continuous improvement can help assess whether the goals set for GenAI workforce adoption, scaling and contribution to strategic objectives of the organization are achieved, identifying opportunities for optimization, expansion or modification to contribute to business success.

– **Uncover hidden efforts**: Mechanisms can be created to uncover significant innovative efforts and experimentation occurring within the organization, to avoid them being accessible to only a limited part of the workforce. It is crucial to combine efforts to avoid redundant experimentation and allow other employees to benefit.
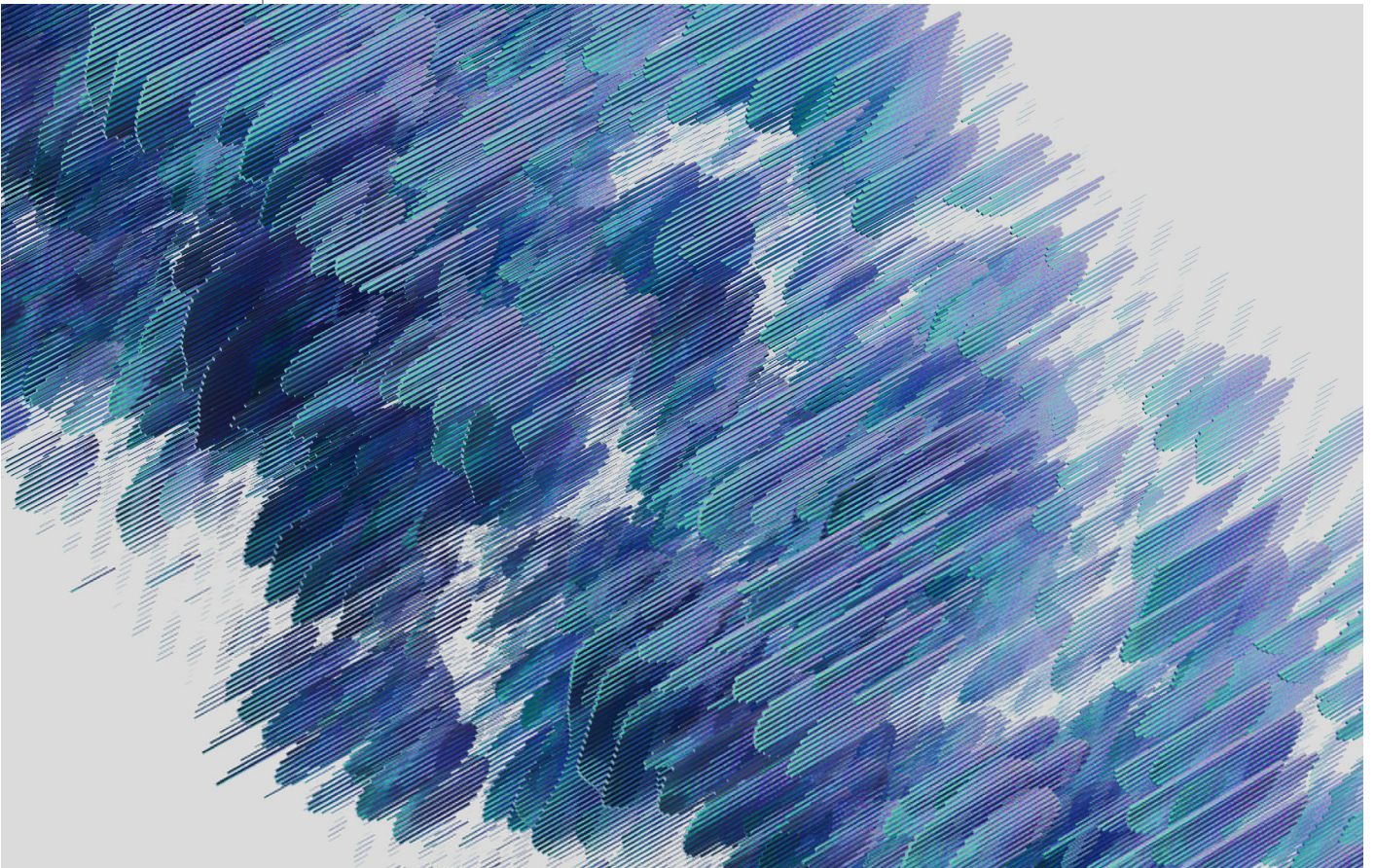
Conclusion

The emergence of GenAI in the workplace has created uncertainties, challenges and opportunities for workers, organizations and economies at large. The experience of early adopters interviewed for this report highlights that the path to harnessing GenAI's full potential for job augmentation and workforce productivity growth is iterative and multi-faceted, requiring continuous learning, adaptation, and alignment with broader business and workforce strategies and goals. This journey is not without its challenges and its success depends not only on the technological but even more so on the human element.

The framework for action proposed in this report allows organizations to start small, identify appropriate use cases, learn from initial implementations and scale progressively, enabling them to better navigate the current uncertainties surrounding GenAI in the workforce and the potential futures outlined in the report's scenarios. By piloting use cases and gathering insights, organizations can refine their approaches and expand GenAI workforce deployment thoughtfully and responsibly.

Crucially, as this report has shown, driving job augmentation and productivity growth increases through GenAI is at its core a human endeavor that requires buy-in from employees, robust change management and continuous upskilling. By aligning the interests of the organization with those of its workforce, companies can foster an environment where GenAI enhances job quality, supports innovation, drives productivity and, ultimately, enables job augmentation at scale.

The Jobs Initiative, coordinated by the World Economic Forum, works towards good jobs for all in the context of these ongoing labour market disruptions. One of the key focus areas for the initiative is promoting strategies to ensure that GenAI and other new technologies promote job augmentation, not displacement. We invite all interested stakeholders to join us in this important work.

Appendix: Scenario methodology

The methodology used to derive the scenarios in Section 2 of this report was a systematic process involving workshops and trend analysis. Below are detailed steps describing the methodology.

Step 1: Taking stock of trends

An extensive inventory of trends and developments influencing GenAI-induced job augmentation, productivity and innovation. Over 100 trends were identified in this phase.

Step 2: Identifying clusters of trends

Individuals with mixed backgrounds, experiences, seniority levels and demographics were put into teams to cluster related trends. The 100+ trends were consolidated into approximately 30 clusters. Each cluster represented a group of related trends that together had a significant impact on GenAI-induced job augmentation. Trends were then rated based on this impact and those with above-average impact were identified as "drivers of change".

Step 3: Ranking by impact and uncertainty

After clustering the trends and identifying 15 key drivers of change, each driver was assessed based on two dimensions: 1) the degree of uncertainty (i.e. likelihood of occurrence), and 2) its impact on GenAI-induced job augmentation, productivity and innovation (i.e. extent and strength of influence). Each participant individually plotted these, followed by a collective discussion and debate in efforts to map out the final matrix (impact against uncertainty).

Step 4: Choosing core uncertainties

From the high-impact and high-uncertainty quadrant, two core uncertainties were identified. The selection of these core uncertainties was crucial as they represent the most critical and unpredictable factors that could shape the future of GenAI-induced job augmentation. These core uncertainties form the basis for the scenario matrix, which are outlined in detail in this report.

Step 5: Developing scenarios

Using the core uncertainties as axes, eight distinct scenarios were developed, four for the near-term future and four for the distant future. The two uncertainties for the near-term future are 1) Improvement in applicability and quality of GenAI, and 2) Trust in outputs of AI. The two uncertainties for the distant future are 1) Large-scale adoption by organizations, and 2) Extent of GenAI deployment.

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