

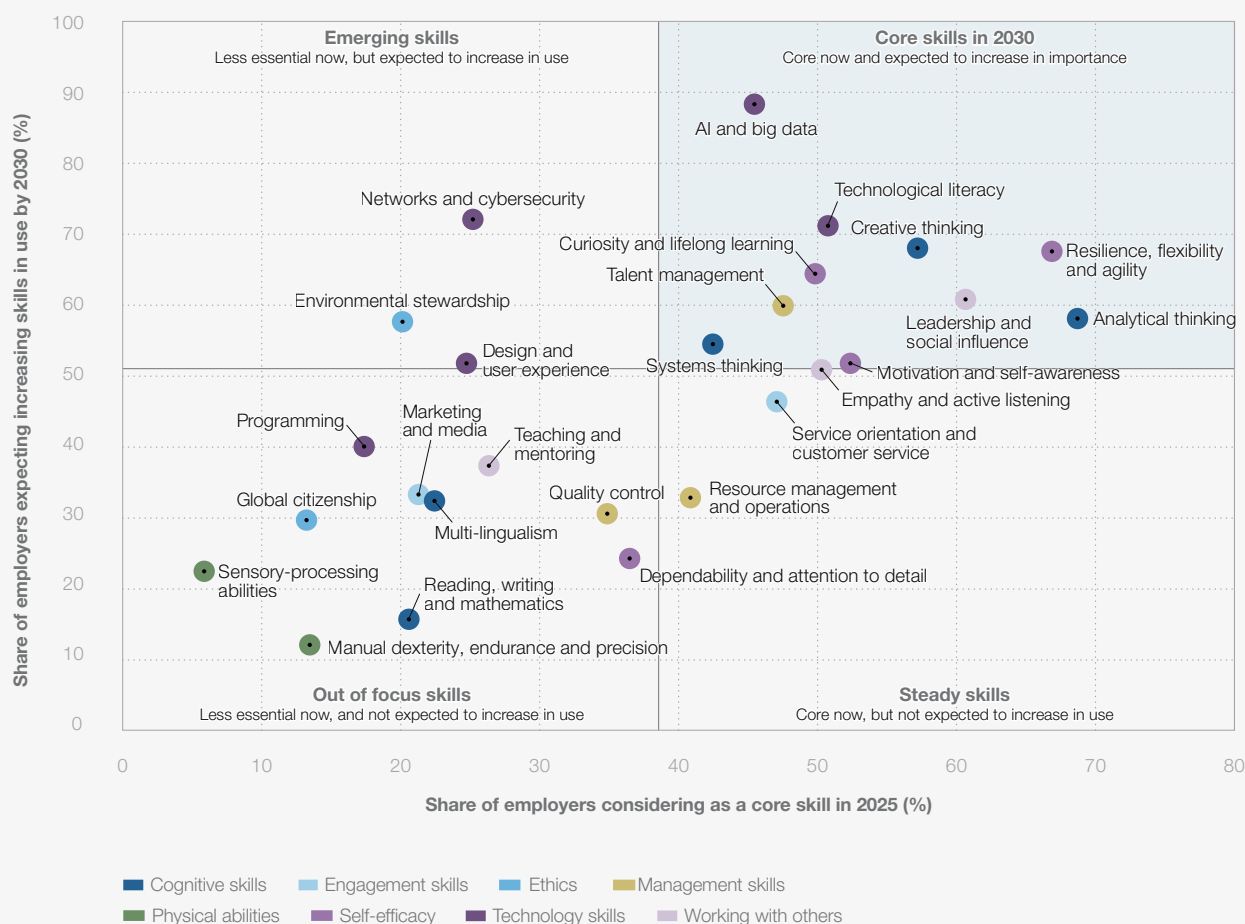
On the other hand, skills that are core today, but expected to remain stable over the next five years without significant increase in use, displayed in the lower right quadrant, include empathy and active listening, service orientation and customer service and resource management and operations. Finally, the bottom left quadrant of Figure 3.6 highlights

skills that are neither critical now nor expected to increase significantly in use over the next five years. While most of these skills remain important, they may represent areas where less investment is required, allowing employers to prioritize resources toward more rapidly evolving skill sets.

FIGURE 3.6

Core skills in 2030

Share of employers considering skills to be a core skill in 2025 and share of employers expecting skills to increase in importance by 2030.



Source

World Economic Forum, Future of Jobs Survey 2024.

Note

The Future of Jobs Survey uses the World Economic Forum's Global Skills Taxonomy. Bold lines represent the median values across all skills.

Skill differences between growing and declining jobs

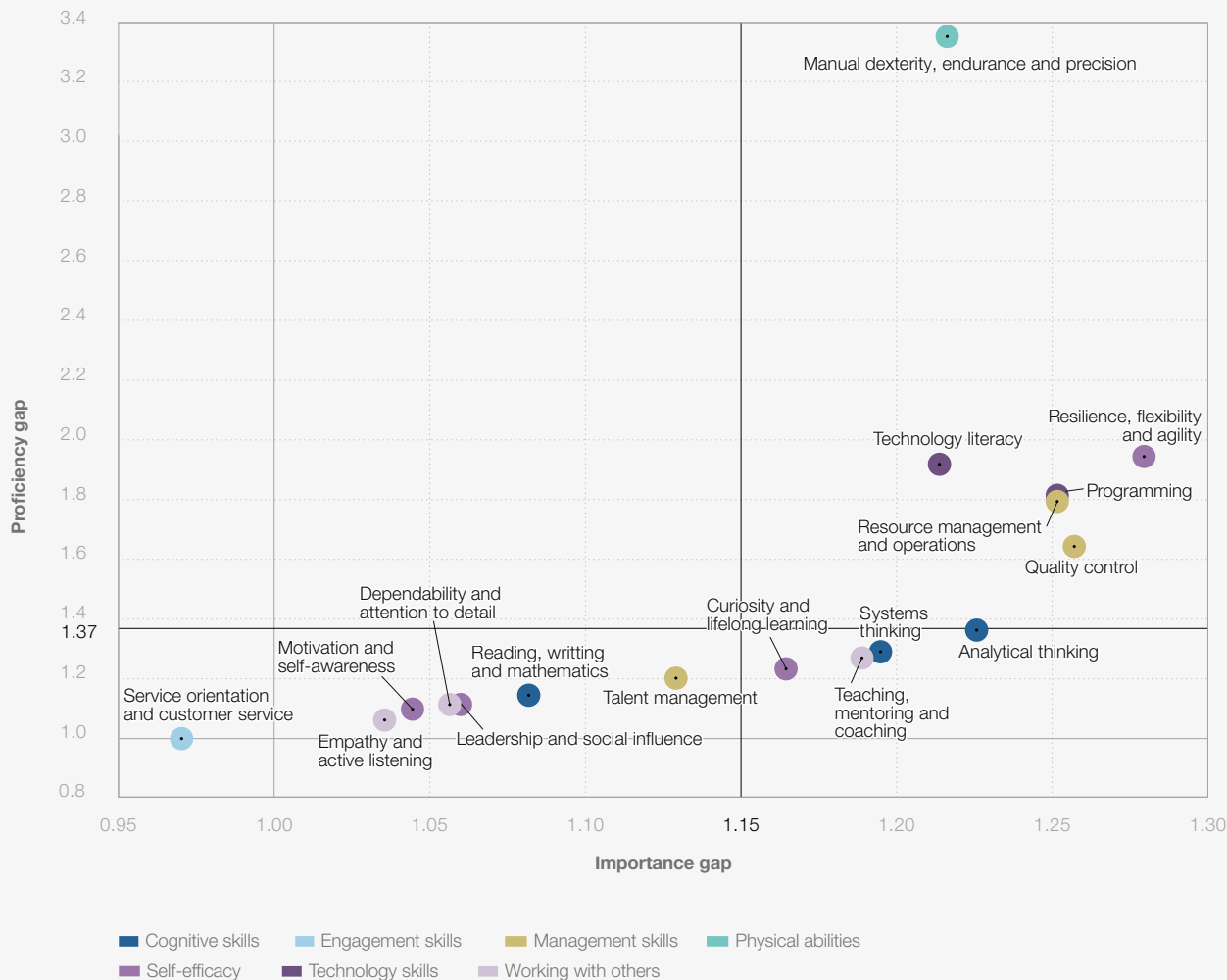
While a diverse set of skills is essential for navigating the evolving workforce landscape, contrasting the skills requirements particularly associated with growing jobs, and those associated with declining ones, reveals windows of opportunity that exist for enabling dynamic job transitions.^{37,38} Figure 3.7 illustrates these differences based on two metrics derived from the O*NET skills inventory:³⁹ the “importance gap”, which measures how much more essential a skill is for growing jobs, and the “proficiency gap”, which indicates the level of

expertise required for each skill in growing jobs compared to declining jobs. For example, a score of 2 in either metric means a skill is twice as critical or requires double the proficiency in growing roles.

FIGURE 3.7

Skill importance gap and skill proficiency gap between growing and declining jobs

When growing and declining job roles attach the same level of importance and proficiency to a skill, the index equals one. The bigger the value, the bigger the gap between growing and declining jobs.



Source

World Economy Forum analysis, based on Future of Jobs Survey 2024, the World Economic Forum's Global Skills Taxonomy and O*NET skill importance and level for each occupation.

Note

Bold lines represent the average across all skills.

At an aggregate level across all growing and declining roles, resilience, flexibility and agility skills are the most significant differentiator between growing and declining job roles, ranking higher in both importance and proficiency for growing roles. Programming and technological literacy also differentiates growing and declining roles, reflecting the increasing integration of technology across occupational fields. While programming scores higher in importance, it requires less proficiency compared to technological literacy.

Resource management and operations, and quality control skills also show marked gaps in both proficiency and importance. Analytical thinking completes the list of top five skills for the importance gap, while ranking 6th for the skill proficiency gap.

Manual dexterity, endurance, and precision display a notable difference in proficiency requirements

rather than importance. This suggests that in roles in which manual skills remain critical, businesses are seeking a higher degree of specialization that combines manual abilities with technological literacy, and problem-solving skills. Growing roles demanding high manual skill proficiency include Drafters, Engineering and Mapping Technicians, Electrotechnology Engineers, Mechanics, Machinery Repairers, and Solar Energy Installation Engineers. By contrast, declining roles, such as printing trades workers and transportation attendants, generally require lower levels of manual skill proficiency. Notably, the only skill with an equal or lesser requirement in importance or proficiency for growing jobs is service orientation and customer service.

These findings underscore the importance of targeted skills development efforts to support workers in transitioning to growing roles as well as to ensure employers can access a talent pool with the skills required for the future of work.

3.2 Drivers of skill disruption

This section discusses how each of the five identified macrotrends driving labour-market transformation – technological change, geoeconomic fragmentation, green transition, demographic shifts and economic uncertainty – are expected to influence skill evolution by 2030.

Technological change

Technological advances are expected to drive skills change more than any other trend over the next five years. The increasing importance of AI and big data, networks and cybersecurity, and technological literacy is driven by the expansion of digital access and the integration of AI and information processing technologies. These trends are not only seen as responsible for the growth of these three fastest-growing skills but also for the rising importance of analytical thinking and systems thinking. These shifts highlight the increasing complexity of decision-making and the need for critical problem solving in a data-driven world.

Beyond the top 10 fastest-growing skills, design and user experience, along with marketing and media skills, are also expected to see growth driven by technological advancements. These skills are closely linked to digital transformation, reflecting the rising importance of delivering seamless digital experiences and understanding the impact of consumer behaviour.

Robots and autonomous systems are also seen as a key driver of skills change, contributing to the increased demand for not only the three top-growing skills, but also programming and systems thinking – skills essential for managing and optimizing interactions with autonomous technology. As noted in Chapter 2, robots and autonomous systems are also among the primary drivers behind the fastest-growing jobs. Coupled with the rising demand for the three top growing

skills, and programming, this trend underscores the importance of technological expertise and systems thinking as core skills in technical fields. These capabilities are crucial for enabling employees to adapt to, and collaborate effectively with, automated systems across a range of industries.

While technology fuels demand for certain skills, it also accelerates the decline of others. Skills such as manual dexterity, endurance, precision, and reading, writing, and mathematics are expected to diminish in relevance as digital access, AI and information processing, and robotics increasingly automate these tasks. Interestingly, whereas programming remains stable as an in-demand skill, both respondents expecting growth in its use and those expecting decline consistently point to technological change as the primary driver behind this change. As discussed in more depth in Chapter 2, this highlights the dual effect of technology, underscoring how the same technological forces that drive job creation may also contribute to job displacement. Additionally, as also discussed in Chapter 2, the primary impact of technologies such as GenAI on skills may lie in their potential for “augmenting” human skills through human-machine collaboration, rather than in outright replacement, particularly given the continued importance of human-centred skills (Box 3.1).

These findings underscore an urgent need for appropriate reskilling and upskilling strategies to bridge emerging divides. Such strategies will be essential in helping workers transition to roles that blend technical expertise with human-centred capabilities, supporting a more adaptable workforce in an increasingly technology-driven landscape.

BOX 3.1

Generative AI and human-centred skills

In collaboration with Indeed

The release of ChatGPT 3.5 in November 2022 marked an inflection point in public awareness of GenAI technologies, which sparked both excitement and apprehension regarding their potential impact on the workforce.⁴⁰ In this context, research conducted by Indeed for this report highlights the continued importance of human-centred skills in an age of GenAI. Figure B3.1 illustrates the capacity of GenAI to substitute a human in executing specific skills, based on an assessment by GPT-4o of its own ability to utilize skills across three areas: its ability to provide theoretical knowledge about a given skill, its

problem-solving abilities related to that skill, and the need for physical presence or manual actions in performing that skill.⁴¹ The chart categorizes more than 2,800 granular skills into the World Economic Forum’s Global Skills Taxonomy and evaluates their capacity of substitution by GenAI according to five categories: very low capacity, low capacity, moderate capacity, high capacity, and very high capacity.

Zero of the more than 2,800 skills assessed were determined to exhibit “very high capacity” to be replaced by the current generation of GenAI

tools, with the majority of examined skills (69%) determined to have either “very low capacity” or “low capacity” to be substituted, indicating that GenAI currently remains limited in performing tasks that require physical execution, nuanced judgment or hands-on application. Skills rooted in human interaction – including empathy and active listening, and sensory processing abilities – and manual dexterity, endurance and precision, currently show no substitution potential due to their physical and deeply human components. These findings underscore the practical limitations of current GenAI models, which lack the physicality to perform tasks that require hands-on interaction – although advances in robotics and the integration of GenAI into robotic systems could impact this in the future.

Where GenAI demonstrates higher substitution potential is in skills that can be effectively performed by leveraging theoretical knowledge alongside digital manipulation. These include granular skills within AI and big data, such as data mining and machine learning applications.

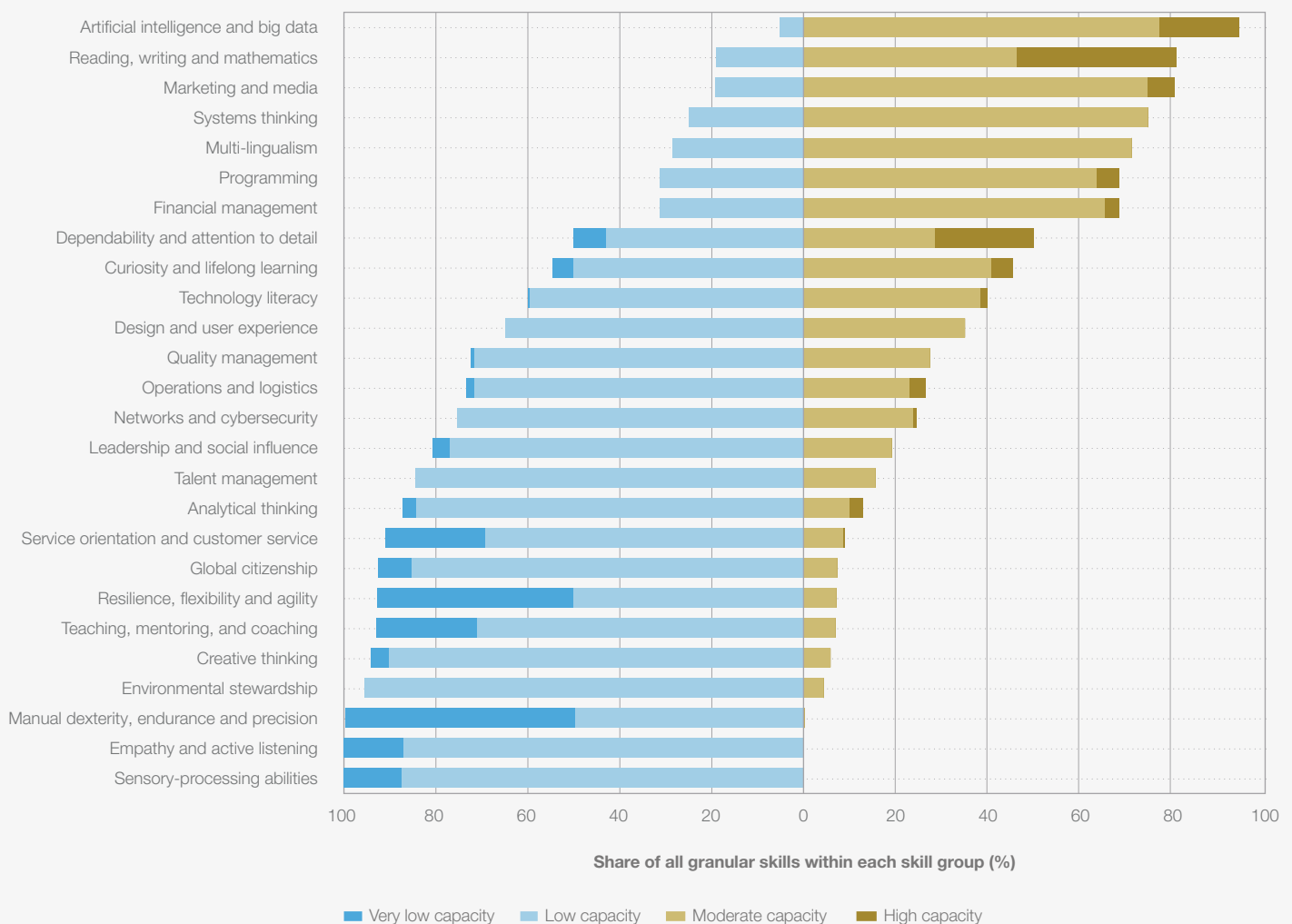
Furthermore, GenAI shows strengths in reading, writing, and mathematics, and multi-lingualism, where it can assist in summarizing complex information, drafting text, performing calculations, and translation. Notably, more than one-quarter (28.5%) of the more than 2,800 granular skills examined currently exhibit a moderate capacity of substitution, highlighting areas where, as the technology continues to evolve, its capacity of substitution could increase in the near future.

These findings highlight the potential of GenAI for augmenting human work through human-machine collaboration, rather than fully replacing it in most areas. Skills requiring nuanced understanding, complex problem-solving or sensory processing show limited current risk of replacement by GenAI, affirming that human oversight remains crucial even in areas where GenAI can provide assistance. For employers, these insights emphasize the need for training and upskilling initiatives that focus on both advanced prompt-writing skills and broader GenAI literacy.

FIGURE B3.1

Current capacity for substitution by Generative AI, by skill group

Capacity of GenAI substituting a human in performing a given skill as a percentage share of all granular skills within each skill group. Analysis based on GPT-4o, with over 2,800 granular skills from the Indeed database as of August 2024.



Geoeconomic fragmentation and economic uncertainty

The Future of Jobs Survey also examined the impact of geoeconomic trends on skill evolution. Increasing geoeconomic fragmentation, coupled with the rapid adoption of new technologies and expansion of digital access, has significantly increased cybersecurity concerns.⁴² These geoeconomic trends have led to a surge in demand for network and cybersecurity skills as organizations seek to protect digital infrastructure from emerging threats.

Geoeconomic fragmentation is also driving a need for human-centred skills such as resilience, flexibility, agility, leadership and social influence, and global citizenship. In a world where crises are becoming more frequent, employers need leaders and teams capable of adapting to uncertainty and managing complex social dynamics.

Slower economic growth and increased restrictions to global trade are contributing to the increased importance of creative thinking and resilience, flexibility, and agility. These skills are crucial for navigating uncertain economic landscapes, as businesses seek to innovate and remain competitive despite market constraints.

Green transition

A growing focus on environmental stewardship as a critical skill reflects an evolving alignment between business strategies and sustainability objectives. This rise, driven by climate adaptation efforts, carbon reduction initiatives, and energy generation, storage and distribution technologies, points to a profound shift whereby environmental skills are becoming increasingly integral across diverse sectors. As previously shown in Chapter 2 and Box 2.1, an increasing prioritization of climate adaptation and energy solutions by employers responding

to the Future of Jobs Survey is not only evident in skill requirements but also appears as a significant factor in net job growth by 2030.

While demand for global citizenship skills is expected by most respondents to remain stable over the next five years, employers that anticipate a rise in its importance cite the convergence of climate-change adaptation, geoeconomic fragmentation and broadening digital access as key factors. This highlights the growing interconnectedness of sustainability and global collaboration, particularly as businesses operate in increasingly fragmented and climate-sensitive environments.

Demographic shifts

Ongoing demographic shifts, particularly aging and declining workforces in developed economies, are expected to emerge as a significant driver of skill demand. Aging and declining working-age populations are pressing organizations to prioritize talent management, teaching and mentoring and motivation and self-awareness. Alongside these priorities, there is a rising focus on empathy and active listening, resource management, and customer service, highlighting a growing need for interpersonal and operational skills that can address the specific needs of an aging workforce and foster more inclusive work environments.

Increasing demand for talent management and motivation and self-awareness skills is also driven by growing working-age populations. Findings reported in Chapter 2 underscore similar patterns, where aging and growing working-age populations are major drivers of growth in jobs across Education, Sales, and Hospitality. These trends reveal the dual role demographic changes play in shaping both job availability and the types of skills needed, emphasizing the interconnectedness of workforce demographics with skills development and talent strategies across sectors.

3.3 Reskilling and upskilling strategies

Having anticipated significant skill disruptions, employers have increasingly invested in reskilling and upskilling initiatives to align workforce skills with evolving demands (see Section 3.1).

This section explores training trends, how employers expect to finance their training initiatives, and their expectations regarding the outcomes of these investments.

Training needs

Future of Jobs Survey respondents indicate that

50% of their workforce has completed training as part of their learning and development initiatives. This reflects a positive global trend compared to 2023, when only 41% of the workforce had received training. The rise in training completion is evident across nearly all industries (Figure 3.8), suggesting a growing recognition of the importance of continuous skill development.

However, a few industries stand out from this trend. Agriculture, Forestry and Fishing, and Real Estate are the only sectors that have seen a decline in training completion between the two last editions of this report. On the other hand, industries like Insurance and Pensions Management, Supply

FIGURE 3.8 Training completion as part of learning and development strategies, 2023 vs. 2025, by industry

Evolution in the share of the workforce that has completed training as part of employers' learning and development strategies. Only industries with data points for both years are included in the analysis.



Source

World Economic Forum, Future of Jobs Survey 2024 and Future of Jobs Survey 2022.

Note

Only industries with data points for both years are included in this analysis. Professional Services has data available only for 2025.

Chain and Transportation and Telecommunications have seen the most significant rise in the share of workers completing training.

Looking ahead, Figure 3.9 provides an overview of expectations around workforce training needs by 2030. According to surveyed employers, for a representative sample of 100 workers 41 will not require significant training by 2030; 11 will require training, but it will not be accessible to them in the foreseeable future; and 29 will require training and be upskilled within their current roles. Additionally, employers anticipate that 19 out of 100 workers will require training and will be reskilled and redeployed within their organization by 2030.

The anticipated need for training varies significantly across industries and geographies. While companies headquartered in North America estimate that 67% of their workforce will require training by 2030, those in Central Asia and the

Middle East and North Africa project that under 50% of their workforce will need training by 2030.

Industries, such as Telecommunications, and Information and Technology Services, which saw some of the largest uptake in reskilling and upskilling (Figure 3.8), still anticipate significant training needs, with 63% and 62% of their workforce, respectively, expected to need further training by 2030. By contrast, sectors with declining trendlines in training completion are among the sectors with the lowest projected additional training needs.

The share of employees estimated as unlikely to receive upskilling opportunities is somewhat uniform across industries and geographies, suggesting that while the demand for skills may vary, access to reskilling and upskilling opportunities remains similarly constrained globally.

FIGURE 3.9 Upskilling and reskilling outlook, 2025-2030

Breakdown of the typical training outlook for a representative group of 100 workers, calculated based on averages of the training requirements reported by employers surveyed.



Source
World Economic Forum, Future of Jobs Survey 2024.

Funding for training programmes

When it comes to funding of reskilling and upskilling initiatives, employers predominantly expect to fund their own training programmes, as shown in Figure 3.10. The second-most common funding mechanism is free of cost training, followed by government and public-private funding.

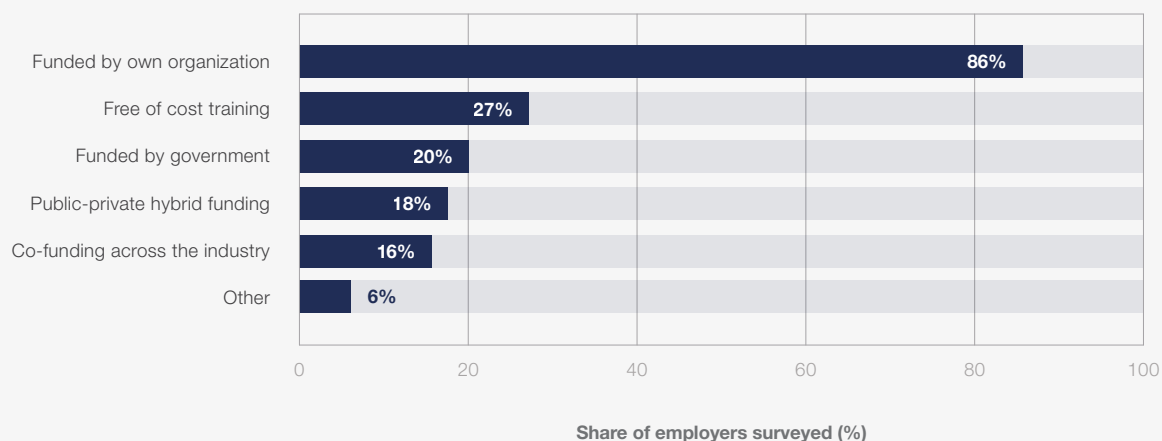
With funding for reskilling and upskilling being the most-welcomed public-policy support by Future of Jobs Survey respondents, government funding plays a more significant role in industries such as Accommodation, Food, and Leisure; Government

and Public Sector; and Education and Training, where over 30% of companies expect to rely on public financing for training initiatives. On the other hand, only 3% of companies in the Insurance and Pensions Management industry expect to rely on government funding for training.

While co-funding across industries is the least utilized funding model overall, it is expected to have the largest use in industries such as Care, Personal Services and Wellbeing; Agriculture, Forestry, and Fishing; and Automotive and Aerospace. This highlights the importance of cross industry collaboration in these industries.

FIGURE 3.10 | Funding for training, 2025-2030

Share of employers anticipating use of stated funding source for worker training programmes from 2025 to 2030.



Source

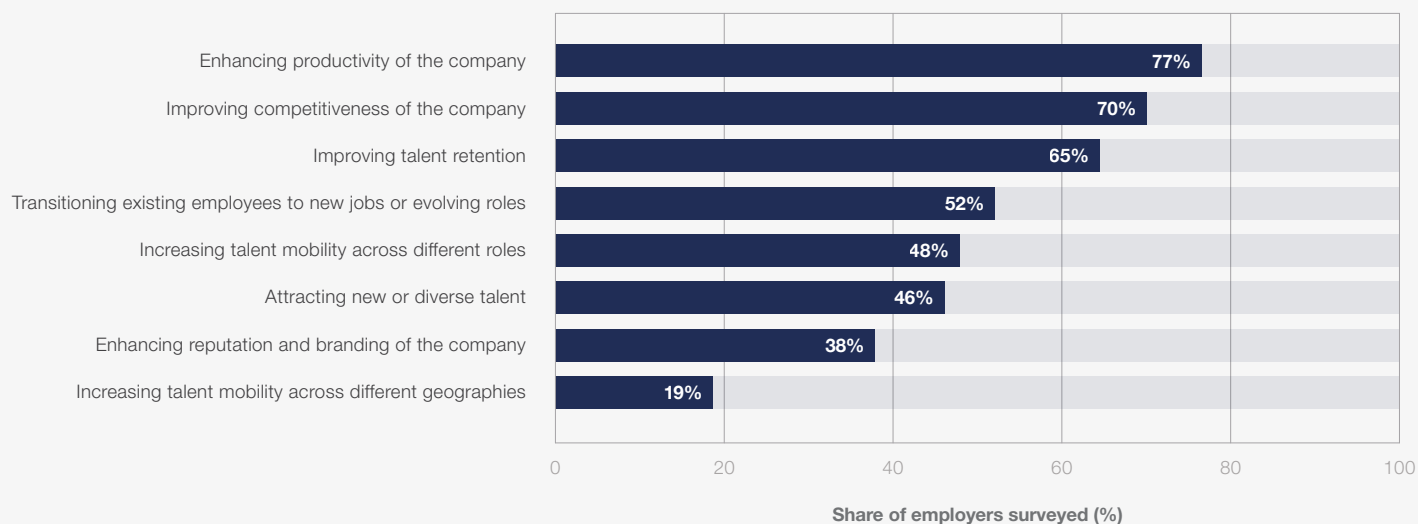
World Economic Forum, Future of Jobs Survey 2024.

The most common outcomes employers expect from their investment in training are enhanced productivity (cited by 77% of respondents) and improved competitiveness (70%). Talent retention ranks as the third-most important expected outcome of training programmes, though it plays

a more central role in sectors such as Automotive and Aerospace, Electronics, and Production of Consumer Goods, where over 72% of employers highlight this as a key priority (Figure 3.11).

FIGURE 3.11 | Expected outcomes from investing in training, 2025-2030

Share of employers expecting the stated outcome from investing in worker training programmes from 2025 to 2030.



Source

World Economic Forum, Future of Jobs Surveys 2024.

4

Workforce strategies

This chapter discusses workforce strategies that employers anticipate adopting in response to the macrorends shaping the future of work and key barriers to organizational transformation. It also analyses employers' outlook on talent availability

from now to 2030, and explores planned workplace practices and policies to achieve their organization's business goals, with a particular focus on the shifting relationship between humans and technologies.

4.1 Barriers to transformation

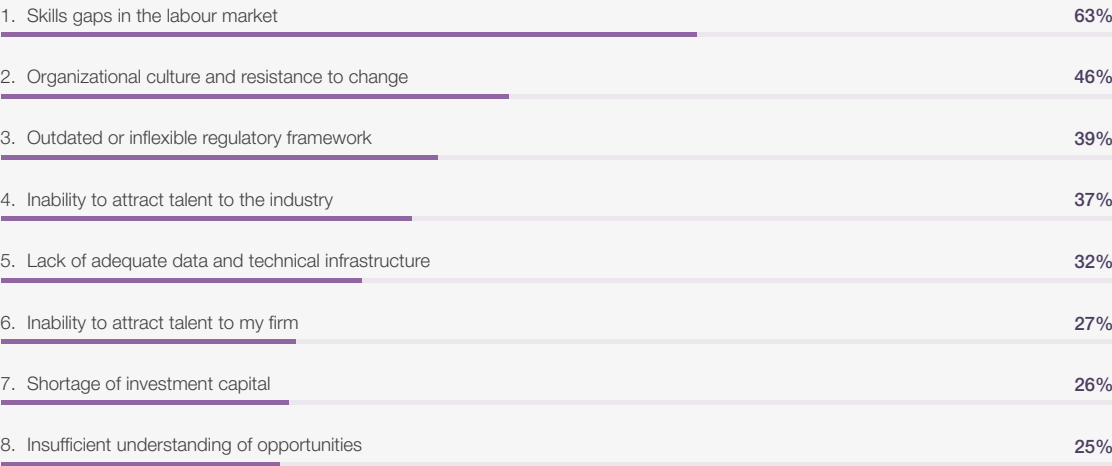
Skill gaps in the labour market are the primary barrier to business transformation perceived by Future of Jobs Survey respondents for the 2025-2030 period, cited by 63% of surveyed employers (Figure 4.1). This is even more pronounced than the results described in the 2023 edition of the

report, where skills gaps in the local labour market also topped the transformation barriers, backed by 60% of executives. This skill challenge persists across almost all industries and geographies, ranking first in 52 out of 55 economies and 19 out of 22 sectors.

FIGURE 4.1

Barriers to organizational transformation, 2025-2030

Share of employers surveyed expecting the stated barrier will hinder their organisational transformation.



Source
World Economic Forum, Future of Jobs Survey 2024.

The second most significant perceived barrier is organizational culture and resistance to change, identified by 46% of respondents as a key obstacle, which highlights the anticipated challenge of aligning internal processes, organizational structures, hierarchies and mindsets in responding to the trends and disruptions companies expect to face. Regulatory concerns

are considered the third most relevant barrier, identified by 39% of employers. Moreover, 32% of respondents highlight a lack of adequate data and technical infrastructure as an additional obstacle. Other barriers, such as shortage of investment capital (26%) and insufficient understanding of opportunities (25%), are cited less frequently.

In the report's 2023 edition, more than half of respondents identified difficulties in attracting talent as a primary barrier. This year's survey distinguishes between industry attractiveness and firm-level attractiveness, and results show that 37% of companies view lack of industry attractiveness as a notable barrier, while 27% cite firm-specific issues.

Talent availability outlook

Employers' outlook on talent availability has decreased compared to the results highlighted in the report's 2023 edition. This year, only 29% of businesses expect talent availability to improve over the 2025-2030 period, a drop from 39% in 2023. By contrast, 42% of employers expect talent availability to decline over this period, resulting in a net negative talent availability outlook (-13%

net expectation of improvement) and highlighting increasing concern among businesses regarding their ability to find the right future talent (Figure 4.2).

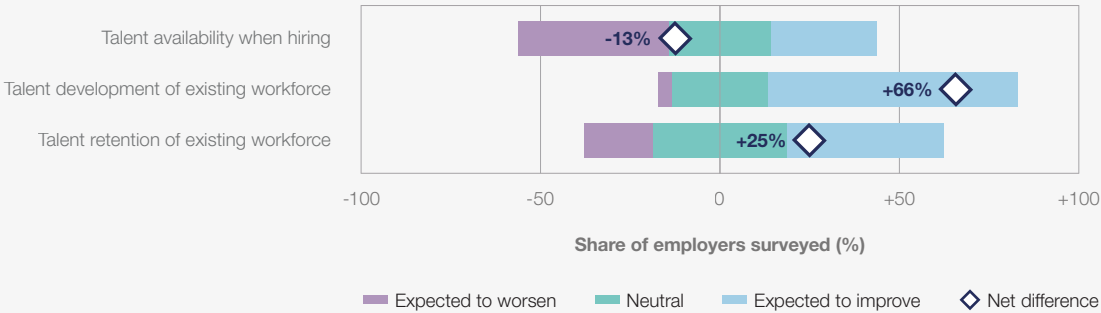
However, employers remain more broadly optimistic about the outlook for talent development. Seven in 10 respondents expect improvements in talent development within their organization by 2030. However, as noted in the report's 2023 edition, 77% of businesses expressed a positive view on the outlook for talent development, suggesting that some companies are re-evaluating their expectations.

With regard to talent retention, employers are similarly less positive than in the report's previous edition: Only 44% of surveyed organizations expect improvements in their ability to retain talent, a decline from 53% two years ago.

FIGURE 4.2

Talent outlook, 2025-2030

Share of employers surveyed expecting a positive, neutral and negative outlook for talent availability, talent development and talent retention over the next five years.



Source
World Economic Forum, Future of Jobs Survey 2024.

Country-specific variations in talent availability outlook, as shown for hiring in Figure 4.3, reflect broader demographic dynamics. For example, in the Middle East and North Africa, employers in countries such as Egypt (+39% net expectation of improvement), Morocco (+38%), and Bahrain (+31%) display high levels of optimism about talent availability, with the majority of respondents expecting hiring conditions to improve by 2030. By contrast, employers in European economies anticipate increasing challenges in hiring availability.

Expectations around talent development shows significant regional variation. For example, companies headquartered in Eastern Asia, Sub-Saharan Africa, and Central Asia generally report high levels of optimism for the next five years. By contrast, businesses headquartered in Europe, the Middle East and Northern Africa, and Northern America are more cautious than global averages with regard to their expectations.

As for talent retention, employers in high-income and upper-middle-income economies express greater concern compared to their counterparts in lower-middle-income economies.