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Introduction

Skills and talent shortages are critical challenges facing societies and economies today. The absence of relevant skills impedes business growth, hinders economic prosperity and inhibits individuals from realizing their full potential. Employers need to rethink their limited focus on using educational achievement and previous experience as proxies for the skills they require. Such an approach perpetuates the scarcity of talent and excludes many people who would otherwise be hugely valuable in the workplace.

A “skills-first” approach focuses on whether someone has the right skills and competencies for a particular role, rather than how the skills have been acquired. In our previous report, Putting Skills First: Framework for Action, published in 2023, we identified the enablers and actions for implementing a skills-first approach. The report found that more than 100 million people in the 18 global economies covered in our analysis would stand to directly benefit from a skills-first approach – due to being underemployed in their current job or wanting to work but having given up looking for a job due to lack of hope of success.

In this follow-up report, we identify five specific opportunities for intervention where the gains from skills-first solutions are most likely for employers and workers alike. We also highlight a diverse set of Skills First “Lighthouses”, selected by an independent expert panel. The report concludes by offering key takeaways regarding success factors in implementing skills-first approaches.

The report draws on recent data from the World Economic Forum’s Future of Jobs Survey and PwC’s Global Workforce Hopes and Fears Survey to provide insights from businesses and workers around the world about talent trends and areas for which taking a skills-first approach can help the most.

As we navigate the complexities of the future job market, where the demand for certain skills fluctuates, embracing a dynamic approach to talent acquisition becomes indispensable. Solutions such as a skills-based hiring strategy allow businesses to stay agile and responsive to emerging needs, positioning them at the forefront of innovation. Moreover, a skills-first approach goes beyond individual and business success and can contribute to broader societal cohesion. By widening access to opportunities, this approach also becomes a powerful instrument in fostering inclusivity and diversity within the workforce.

Resolving labour shortages, bridging skills gaps and equipping workers with skills for the jobs of tomorrow are key to creating resilient and productive labour markets. It is our hope that this report sparks a call to action, inspiring organizations worldwide to proactively embrace a skills-first ethos and to generate greater productivity, inclusivity and prosperity.
Executive Summary

The need and the opportunity to put skills first have aligned. For bold leaders, the result is business transformation.

As labour markets become increasingly tight across advanced economies, demographics, combined with the green and digital transitions, will create additional talent shortages. There is a vast untapped opportunity in recruiting and developing talent where people’s skills are more efficiently matched to their roles. Most of that opportunity is yet to be seized.

Sixty percent of businesses say that skills gaps in the local labour market hold back the transformation of their business – the top barrier globally. Only 39% of businesses report a positive outlook for talent availability in the next five years, well behind optimistic expectations regarding talent retention and talent development. While many businesses have already made strides to reorient the development of their workforce around skills needs, few have boldly embraced more flexible hiring. Skills-first recruitment is not just a human-resources project, but the key to transforming business.

Forty-six percent of workers say their formal qualifications are not relevant to their job, yet only 6% of global businesses believe that removing degree requirements would improve talent availability in their organization. The sectors which most strongly believe that flexibility of degree requirements will improve access to talent are Agriculture and Natural Resources, Accommodation, Food, and Leisure, Automotive and Aerospace, and Health and Healthcare.

Businesses must assess and recruit from wider pools of skilled applicants from atypical industries and demographics. Innovative skills-based assessments are an effective alternative to professional history and experience. Fifty-eight percent of workers believe that they have skills that are not clear from their qualifications or job history, and 46% believe that employers focus too much on their job history and too little on their skills.

Personal networks still play too strong a role in hiring decisions, with 51% of workers believing that they have missed out on jobs or career opportunities because they don’t know the right people. The sectors most strongly implicated are Financial Services, Information Technology and Digital Communications, and Retail and Wholesale of Consumer Goods. By prioritizing skills over traditional markers of privilege, Skills First approaches promote more equitable pathways to workforce participation based on “what you know” rather than “who you know”.

A skill-first culture can help employers and workers adapt to the digital transition. Fifty-eight percent of employees surveyed believe that the skills their job requires will change significantly in the next five years and 66% feel they have a clear sense of how the skills their job requires will change in that time. Artificial intelligence (AI) and big data accounts for much of the disruption, followed by creative and analytical thinking – domains where workers may underestimate the scale of the coming demands on them.

Getting ahead of the green transition requires companies to apply skills-first approaches. Although only 16% of companies identify green skills as being important to their workers today, 42% say they will grow in importance in the next five years and 21% will place a strategic focus on developing them in their workforce. Thirty-nine percent of workers say green skills will be important to their career development in the next five years and 47% are confident that their employer will provide them with the tools, resources and opportunities they will need to build their green skills.

A cultural shift to skills-first approaches needs both sponsorship from executives and governance from human-resources professionals. The Skills First Lighthouses described in this paper are case studies which, taken together, identify the key ingredients for success. There is a need for skills to be part of the business strategy, and for leaders to tell that story internally and to pursue culture change alongside process change. Persistence and iterative feedback are required over several years as the programme expands to give opportunity to all sectors of the business. Change should be inclusive and data driven, with accountability on key performance indicators.
Economic growth depends on resilient and productive labour markets which efficiently match human capital and technology to opportunity. Yet labour markets are becoming increasingly tight across advanced economies. In the United States, 6.4 million unemployed workers are outnumbered by 9.6 million job openings. In Europe, 2.9% of positions are currently unfilled – the highest rate ever recorded. Structural drivers of these labour shortages include diminishing working-age populations, compounded by changes in jobs and skills due to geoeconomic developments, the green transition, and technological developments. Failure to address labour shortages may hinder economic growth and slow progress on environmental and social challenges.

Worldwide, only 39% of businesses report a positive outlook for talent availability in the next five years, well behind optimistic expectations regarding talent retention (53% of organizations) and talent development (77% of organizations). Across industries, the outlook is particularly challenging for the Supply Chain and Transportation, Health and Healthcare, Manufacturing, and retail industries (Figure 1). Almost every industry sees accessing talent as a greater challenge than retaining it or developing it.

**FIGURE 1**

Talent outlook 2023-2027
Outlook for talent availability, retention and development, by industry

---

**Source**
While the outlook is worse in advanced economies – fewer than 20% of organizations operating in the Netherlands, Sweden, Belgium and the Czech Republic are optimistic about talent availability in the next five years – the problem is global. Among organizations responding to the Forum’s annual Future of Jobs Survey, which reports business operations exclusively outside of G20 countries, 37% had a negative outlook for talent availability in the next five years. Businesses worldwide are being challenged to develop fresh and creative approaches to getting the talent they need to grow and transform.

Skills-first approaches emphasize a person’s skills and competencies rather than degrees, job histories or job titles when attracting, hiring, developing or redeploying talent (Figure 2). They can be effective in closing labour shortages, bridging skills gaps and equipping workers with skills for the jobs of tomorrow. This report 1) identifies five specific areas of opportunity where applying skills-first approaches can generate the highest returns for workers and employers alike, and 2) showcases successful examples of skills-first policies, initiatives and programmes led by employers, governments and educational institutions.

**FIGURE 2**

A framework for action

**Skills-first framework**

1. **Enabler 1:** Embracing a skills-first culture, policies and mindset

2. **Enabler 2:** Adopting a common skills language

3. **Action Area 1:** Identify current and future skills needs and gaps and map skills to work tasks

4. **Action Area 2:** Articulate skills needs in job descriptions and leverage and recognize innovative skills assessment methods

5. **Action Area 3:** Co-develop and co-deliver skills-based training programmes with industry, learning providers, and government

6. **Action Area 4:** Boost lifelong learning and access to skills-based learning opportunities

7. **Action Area 5:** Create skills-based pathways for development and redeployment

**Source**

Skills-first opportunities

Over 60% of surveyed businesses report facing skills gaps—the top global barrier to business transformation. While many businesses have become more skills-based organizations, there are five areas of action and opportunity where skills-first strategies may be most effective for workers and employers when adapted to the needs of specific sectors.

1.1 Rethinking academic requirements to broaden talent pools

Workers change careers more often today compared to previous generations. In the United States, older millennials have changed jobs once every 1.9 years of their working lives, compared to once every three years for baby boomers, and the rate at which workers voluntarily leave jobs has increased by almost 50% over the past decade. As technology adoption, the green transition and geo-economic pressures continue to accelerate the reconfiguration of labour markets, it is increasingly important to ease workers’ access into careers different from those for which they originally trained.

FIGURE 3

Jobs which typically require post-secondary education

Ordered by the anticipated number of annual openings in the United States in the coming decade.

<table>
<thead>
<tr>
<th>Job Title</th>
<th>Annual job openings (000s)</th>
<th>Median wage ($, 000s)</th>
<th>Educational Backgrounds (% of the current workforce)</th>
</tr>
</thead>
<tbody>
<tr>
<td>General and Operations Managers</td>
<td>296</td>
<td>98</td>
<td>No degree 50%</td>
</tr>
<tr>
<td>Registered Nurses</td>
<td>193</td>
<td>91</td>
<td>No degree 45%</td>
</tr>
<tr>
<td>Software Developers</td>
<td>136</td>
<td>127</td>
<td>No degree 50%</td>
</tr>
<tr>
<td>Accountants and Auditors</td>
<td>126</td>
<td>78</td>
<td>No degree 40%</td>
</tr>
<tr>
<td>Business Operations Specialists, all other</td>
<td>107</td>
<td>76</td>
<td>No degree 40%</td>
</tr>
<tr>
<td>Elementary School Teachers, except Special Education</td>
<td>96</td>
<td>62</td>
<td>No degree 50%</td>
</tr>
<tr>
<td>Market Research Analysts and Marketing Specialists</td>
<td>95</td>
<td>68</td>
<td>No degree 40%</td>
</tr>
<tr>
<td>Managers, all other</td>
<td>94</td>
<td>129</td>
<td>No degree 50%</td>
</tr>
<tr>
<td>Management Analysts</td>
<td>93</td>
<td>95</td>
<td>No degree 40%</td>
</tr>
<tr>
<td>Human Resources Specialists</td>
<td>79</td>
<td>64</td>
<td>No degree 50%</td>
</tr>
<tr>
<td>Financial Managers</td>
<td>70</td>
<td>140</td>
<td>No degree 50%</td>
</tr>
<tr>
<td>Project Management Specialists</td>
<td>68</td>
<td>95</td>
<td>No degree 40%</td>
</tr>
<tr>
<td>Secondary School Teachers, except Special and Career/Technical Education</td>
<td>67</td>
<td>62</td>
<td>No degree 50%</td>
</tr>
<tr>
<td>Preschool Teachers, except Special Education</td>
<td>56</td>
<td>35</td>
<td>No degree 50%</td>
</tr>
<tr>
<td>Medical and Health Services Managers</td>
<td>55</td>
<td>105</td>
<td>No degree 50%</td>
</tr>
<tr>
<td>Substitute Teachers, Short-term</td>
<td>53</td>
<td>35</td>
<td>No degree 50%</td>
</tr>
<tr>
<td>Computer and Information Systems Managers</td>
<td>47</td>
<td>164</td>
<td>No degree 50%</td>
</tr>
<tr>
<td>Sales Managers</td>
<td>43</td>
<td>131</td>
<td>No degree 50%</td>
</tr>
<tr>
<td>Middle School Teachers, except Special and Career/Technical Education</td>
<td>42</td>
<td>62</td>
<td>No degree 50%</td>
</tr>
<tr>
<td>Substance Abuse, Behavioural Disorder, and Mental Health Counselors</td>
<td>42</td>
<td>50</td>
<td>No degree 50%</td>
</tr>
</tbody>
</table>

Source
Figure 3 shows projections by the US Bureau of Labor Statistics for the jobs expected to have the most openings in the next 10 years and for which most workers currently have a degree. For some professions formal qualifications remain critical. In these cases, public-sector leaders, businesses and civil society must work together to broaden access to the required qualifications and address fundamental aspects of job attractiveness, quality and wages.

For other jobs, loosening academic requirements and focusing on skills assessment can stave off labour shortages by opening new talent pipelines and support workers in transitioning from declining jobs to growing jobs. With structural churn expected to hit 23% of jobs over the next five years, a focus on skills can reduce turbulence in labour markets. In practice, this means that employers offer flexibility on educational requirements wherever skills can be assessed in other ways and workers can affordably and flexibly access professional certificates that are geared to professional opportunities, accepted by employers and quality-assured by academia.

For other jobs, loosening academic requirements and focusing on skills assessment can stave off labour shortages by opening new talent pipelines and support workers in transitioning from declining jobs to growing jobs. With structural churn expected to hit 23% of jobs over the next five years, a focus on skills can reduce turbulence in labour markets. In practice, this means that employers offer flexibility on educational requirements wherever skills can be assessed in other ways and workers can affordably and flexibly access professional certificates that are geared to professional opportunities, accepted by employers and quality-assured by academia.

**FIGURE 4**

Removing degree requirements, business strategy and employee opinion

<table>
<thead>
<tr>
<th>Business strategy on degree requirements, 2023-2027 (Share of organizations surveyed)</th>
<th>Employee opinion (Share of employees)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do your mass-employment jobs have degree requirements?</td>
<td>Are your formal qualifications relevant to your job?</td>
</tr>
<tr>
<td>Would eliminating degree requirements improve talent availability?</td>
<td>Would eliminating degree requirements improve workforce diversity?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Business sector</th>
<th>Do your mass-employment jobs have degree requirements?</th>
<th>Would eliminating degree requirements improve talent availability?</th>
<th>Would eliminating degree requirements improve workforce diversity?</th>
<th>Are your formal qualifications relevant to your job?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Real Estate</td>
<td>72%</td>
<td>4%</td>
<td>3%</td>
<td>55%</td>
</tr>
<tr>
<td>Education and Training</td>
<td>70%</td>
<td>4%</td>
<td>6%</td>
<td>62%</td>
</tr>
<tr>
<td>Health and Healthcare</td>
<td>70%</td>
<td>4%</td>
<td>3%</td>
<td>63%</td>
</tr>
<tr>
<td>Media, Entertainment and Sports</td>
<td>55%</td>
<td>5%</td>
<td>5%</td>
<td>62%</td>
</tr>
<tr>
<td>Energy and Materials</td>
<td>55%</td>
<td>5%</td>
<td>5%</td>
<td>63%</td>
</tr>
<tr>
<td>Automotive and Aerospace</td>
<td>53%</td>
<td>5%</td>
<td>5%</td>
<td>62%</td>
</tr>
<tr>
<td>Care, Personal Services and Wellbeing</td>
<td>50%</td>
<td>5%</td>
<td>9%</td>
<td>62%</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>50%</td>
<td>5%</td>
<td>9%</td>
<td>62%</td>
</tr>
<tr>
<td>Financial Services</td>
<td>50%</td>
<td>4%</td>
<td>9%</td>
<td>62%</td>
</tr>
<tr>
<td>Government and Public Sector</td>
<td>48%</td>
<td>4%</td>
<td>9%</td>
<td>62%</td>
</tr>
<tr>
<td>Information Technology and Digital Communications</td>
<td>40%</td>
<td>4%</td>
<td>9%</td>
<td>62%</td>
</tr>
<tr>
<td>Agriculture and Natural Resources</td>
<td>40%</td>
<td>4%</td>
<td>9%</td>
<td>62%</td>
</tr>
<tr>
<td>Infrastructure</td>
<td>40%</td>
<td>4%</td>
<td>9%</td>
<td>62%</td>
</tr>
<tr>
<td>Professional Services</td>
<td>35%</td>
<td>4%</td>
<td>9%</td>
<td>62%</td>
</tr>
<tr>
<td>Non-governmental and Membership Organisations</td>
<td>32%</td>
<td>4%</td>
<td>9%</td>
<td>62%</td>
</tr>
<tr>
<td>Supply Chain and Transportation</td>
<td>29%</td>
<td>6%</td>
<td>12%</td>
<td>54%</td>
</tr>
<tr>
<td>Retail and Wholesale of Consumer Goods</td>
<td>27%</td>
<td>6%</td>
<td>12%</td>
<td>54%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Business sector</th>
<th>Would eliminating degree requirements improve workforce diversity?</th>
<th>Are your formal qualifications relevant to your job?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accommodation, Food, and Leisure</td>
<td>26%</td>
<td>6%</td>
</tr>
<tr>
<td>Agriculture and Natural Resources</td>
<td>26%</td>
<td>6%</td>
</tr>
<tr>
<td>Automotive and Aerospace</td>
<td>26%</td>
<td>6%</td>
</tr>
<tr>
<td>Food and Beverages</td>
<td>25%</td>
<td>6%</td>
</tr>
<tr>
<td>Media, Entertainment and Sports</td>
<td>24%</td>
<td>6%</td>
</tr>
<tr>
<td>Technology</td>
<td>23%</td>
<td>6%</td>
</tr>
<tr>
<td>Health and Healthcare</td>
<td>22%</td>
<td>6%</td>
</tr>
<tr>
<td>Information Technology and Digital Communications</td>
<td>22%</td>
<td>6%</td>
</tr>
<tr>
<td>Professional Services</td>
<td>22%</td>
<td>6%</td>
</tr>
<tr>
<td>Retail and Wholesale of Consumer Goods</td>
<td>21%</td>
<td>6%</td>
</tr>
<tr>
<td>Financial Services</td>
<td>20%</td>
<td>6%</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>20%</td>
<td>6%</td>
</tr>
<tr>
<td>Supply Chain and Transportation</td>
<td>20%</td>
<td>6%</td>
</tr>
<tr>
<td>Government and Public Sector</td>
<td>20%</td>
<td>6%</td>
</tr>
</tbody>
</table>


Currently, only 6% of global businesses believe that eliminating degree requirements would increase the availability of talent to their organization over the next five years. In addition, only 22% believe that eliminating degree requirements will increase the diversity, equity and inclusion (DEI) in their workforces. Figure 4 shows data from employers and workers in key sectors – organized by the share of companies surveyed in each sector that use degree requirements as a key hiring criterion and supplemented by worker opinion from PwC’s Hopes and Fears survey – on whether their qualifications are relevant to their job.

Across all industries, only 54% of workers surveyed say that their formal qualifications are relevant to their job. Even highly formalized sectors, such as Education and Training as well as Health and Healthcare, contain a contingent of nearly 40% of workers who have responded negatively to the question around the relevance of their formal qualifications to their job.

Figure 4 also shows the sectors which most strongly believe that flexibility of degree requirements will improve access to a diversity of talent: Agriculture and Natural Resources (36% of organizations surveyed); Accommodation, Food, and Leisure (33%); Automotive and Aerospace (30%); and Health and Healthcare (29%).
Using innovative skills-based assessments can be an effective complement to basing hiring decisions on professional history and experience. Skills-based recruitment can expand talent pools and skills-first workforce planning can help link training to hiring and opportunities for internal mobility.

Figure 5: Hidden skills and new talent pipelines

According to research by PwC, 58% of workers believe that they have skills that are not clear from their qualifications or job history. Figure 5 indicates that picture is consistent across industries – according to many workers, their qualifications and professional history are not an adequate proxy for their full skill set. As a result, nearly half of workers (46%) believe that employers focus too much on their job history and too little on their skills.

The landscape of business strategies portrayed by the Future of Jobs Report 2023 shows that most employers rely on traditional skill proxies such as degrees and job history and less so on skill assessments. However, many employers are beginning to apply these complementary approaches. For example, 86% of government and public-sector organizations surveyed plan to use the evaluation of work experience as a key hiring method in the next five years – the highest for any sector. However, they are also most likely (57% of organizations) to deploy proprietary skill assessments. Similarly, the sectors most likely to use psychometric profiling to evaluate candidates (Care, Personal Services and Wellbeing, and Financial Services) are also still among the most likely to place a premium on work experience. Skills-first approaches need not replace traditional methods such as assessing previous experience but can complement them by increasing their accuracy and effectiveness.
Over the coming decade, the demand for jobs typically requiring advanced qualifications is unlikely to grow significantly in some advanced economies. For example, in the United States, the U.S. Bureau of Labor Statistics (USBL) estimates that, currently, only 31% of jobs require a degree and that this number will rise to only 32% by 2032, despite the anticipated growth of the labour force as a whole. Figure 6 lists those jobs which the USBL projects will be in greatest demand in the next decade as well as their typical educational requirements. Forward-thinking employers are using proprietary and off-the-shelf skills assessments and are updating job descriptions to recognize both formal education and practical skills. This approach particularly attracts workers with significant but non-typical work experiences.
### Looking beyond personal networks to widen access to opportunity

Skills-first approaches can help employers expand talent pools by hiring based on “what you know” rather than “who you know.”

Evidence from PwC’s Hopes and Fears Survey suggests that network strength remains a key factor in career opportunity. Across industries, 51% of workers say that they feel that they have missed out on jobs or career opportunities because they don’t know the right people. Figure 7 shows the sectoral breakdown: sectors most strongly implicated are Financial Services (55% of workers), Information Technology and Digital Communications (54%) and Retail and Wholesale of Consumer Goods (54%).

For individuals from underrepresented communities, access to opportunities based on personal networks can perpetuate systemic inequalities, limiting career paths for those without access to influential connections. This “network gap” often reinforces existing disparities, hindering the potential for merit-based advancement and reinforcing social and economic barriers.

This network gap also limits options for employers. By prioritizing individual capabilities and competencies over factors like social connections, skills-first approaches can help level the playing field and expand the talent pool available to companies. LinkedIn data indicates that adopting a skills-based hiring approach results in, for example, a 24% increase in the proportion of women in the talent pool compared to men, particularly in fields where women are underrepresented.

In addition to complementing the power of network strength in economic opportunity via skills-first hiring and talent development, companies can also seek to increase the network strength of underrepresented communities through internships and engagement with local communities. By complementing education requirements, experience records and personal networks with accurate skill matching and skills recognition, skills-first approaches open new talent pipelines for the benefit of workers and businesses alike.

#### Figure 7

**Worker opinion on the link between network strength and career opportunity**

“I feel I have missed out on jobs/career opportunities because I don’t know the right people”

<table>
<thead>
<tr>
<th>Industry</th>
<th>Agree</th>
<th>Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information Technology and Digital Communications</td>
<td>55%</td>
<td>28%</td>
</tr>
<tr>
<td>Retail and Wholesale of Consumer Goods</td>
<td>54%</td>
<td>27%</td>
</tr>
<tr>
<td>Financial Services</td>
<td>54%</td>
<td>29%</td>
</tr>
<tr>
<td>Supply Chain and Transportation</td>
<td>52%</td>
<td>29%</td>
</tr>
<tr>
<td>Professional Services</td>
<td>52%</td>
<td>30%</td>
</tr>
<tr>
<td>Media, Entertainment and Sports</td>
<td>51%</td>
<td>30%</td>
</tr>
<tr>
<td>Infrastructure</td>
<td>51%</td>
<td>32%</td>
</tr>
<tr>
<td>Energy and Materials</td>
<td>50%</td>
<td>32%</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>50%</td>
<td>29%</td>
</tr>
<tr>
<td>Agriculture and Natural Resources</td>
<td>49%</td>
<td>32%</td>
</tr>
<tr>
<td>Automotive and Aerospace</td>
<td>49%</td>
<td>31%</td>
</tr>
<tr>
<td>Accommodation, Food and Leisure</td>
<td>48%</td>
<td>31%</td>
</tr>
<tr>
<td>Education and Training</td>
<td>48%</td>
<td>36%</td>
</tr>
<tr>
<td>Real Estate</td>
<td>48%</td>
<td>34%</td>
</tr>
<tr>
<td>Government and Public Sector</td>
<td>47%</td>
<td>34%</td>
</tr>
<tr>
<td>Health and Healthcare</td>
<td>45%</td>
<td>37%</td>
</tr>
</tbody>
</table>

Source

PwC, Hopes and Fears Survey 2023.
Preparing for the demands of the digital transition

The *Future of Jobs Report 2023* estimates that 44% of worker’s core skills will change in the next five years. Businesses responding to the Future of Jobs Survey identified analytical thinking, creative thinking and skills related to AI and big data as, on average, their top strategic priorities for the skills development of their workforce, with each identified in the training strategies of more than 40% of organizations surveyed. Analytical and creative thinking have been identified as strategically important since the beginning of the Future of Jobs series in 2016; however, AI and big data have been growing in importance. Employers do not identify it as a very important skill for workers today (where it is ranked 15th out of 26 skills assessed), but it jumps 12 places higher in strategic importance in the 2023-2027 ranking, underlining the emphasis businesses place on the digital transition across multiple sectors.

**FIGURE 8**
Skill instability in the next five years, according to worker and executive opinion

<table>
<thead>
<tr>
<th>Sector</th>
<th>Top upskilling priority</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture and Natural Resources</td>
<td>AI and big data</td>
</tr>
<tr>
<td>Automotive and Aerospace</td>
<td>Analytical thinking</td>
</tr>
<tr>
<td>Energy and Materials</td>
<td>Creative thinking</td>
</tr>
<tr>
<td>Government and Public Sector</td>
<td>Environmental stewardship</td>
</tr>
<tr>
<td>Infrastructure</td>
<td>Leadership and social influence</td>
</tr>
<tr>
<td>Information Technology and Digital Communications</td>
<td></td>
</tr>
<tr>
<td>Information Technology and Digital Communications</td>
<td></td>
</tr>
<tr>
<td>Manufacturing</td>
<td></td>
</tr>
<tr>
<td>Media, Entertainment and Sports</td>
<td></td>
</tr>
<tr>
<td>Real Estate</td>
<td></td>
</tr>
<tr>
<td>Retail and Wholesale of Consumer Goods</td>
<td></td>
</tr>
<tr>
<td>Professional Services</td>
<td></td>
</tr>
</tbody>
</table>

Source

Figure 8 shows the sectoral breakdown of worker and management opinion on skill instability in the next five years, overlaid with companies’ top upskilling priorities for their workforce for 2023-2027.

A more detailed breakdown of digital skills prioritized in executive strategies and identified in worker opinion can be found in Figure 9. The Information Technology and Digital Communications as well as the Financial Services industries clearly emerge as sectors where a strong majority of workers recognize the coming disruption of the digital transition to their work. Business leaders agree, emphasising technology skills such as AI and big data, design and user experience, computer programming and networks, and cybersecurity more strongly in their workforce development strategies than other sectors.
There is a growing demand for technology roles in the Financial Services and other sectors, such as Data Analysts and Scientists, Big Data Specialists, Business Intelligence Analysts, Database and Network Professionals, Cybersecurity Professionals, and Data Engineers, driven by advances and growth in adoption of frontier technologies which rely on big data. Across sectors, there is a global shortage of almost 4 million Cybersecurity Professionals, creating serious implications for the economy and national security.

These talent needs are challenging if not impossible to meet through traditional approaches to hiring. Preparing for the digital transition calls for concerted skills-first approaches to reskilling and upskilling for all talent across an organization to adapt to technology and to build out specialized talent for the most pressing gaps.
## Getting ahead of the green transition

Among the macrotrends analysed in the *Future of Jobs Report 2023*, businesses expect the green transition to be the greatest source of job creation. Figure 10 shows a sectoral breakdown of the proportion of organizations that plan to redeploy workers from declining to growing roles as a workforce strategy in the next five years. Across industries, 46% of organizations surveyed plan to redeploy workers to achieve their business goals – the third-most popular strategy, behind investing in learning and training on the job (81%) and accelerating the automation of processes (80%). Though redeployment does not exceed upskilling or automation as a workforce strategy in any industry, the likelihood of industries pursuing redeployment varies considerably, from 29% of Health and Healthcare organizations to 61% of Financial Services organizations. Key sectors for the green transition, such as Energy and Materials (49%), Agriculture and Natural Resources (48%), and Supply Chain and Transportation (34%), all rank near or below the global average. Though the green transition affects most industries, fewer than half of organizations in each of these three key sectors currently plans to embrace widespread redeployment of workers into the green jobs of tomorrow.

### FIGURE 10
Redeployment as a workforce strategy 2023-2027, by share of organizations surveyed

<table>
<thead>
<tr>
<th>Sector</th>
<th>Share of Organizations Surveyed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial Services</td>
<td>61%</td>
</tr>
<tr>
<td>Non-governmental and Membership Organisations</td>
<td>59%</td>
</tr>
<tr>
<td>Professional Services</td>
<td>51%</td>
</tr>
<tr>
<td>Information Technology and Digital Communications</td>
<td>51%</td>
</tr>
<tr>
<td>Media, Entertainment and Sports</td>
<td>50%</td>
</tr>
<tr>
<td>Energy and Materials</td>
<td>49%</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>49%</td>
</tr>
<tr>
<td>Agriculture and Natural Resources</td>
<td>48%</td>
</tr>
<tr>
<td>Government and Public Sector</td>
<td>45%</td>
</tr>
<tr>
<td>Real Estate</td>
<td>44%</td>
</tr>
<tr>
<td>Education and Training</td>
<td>44%</td>
</tr>
<tr>
<td>Infrastructure</td>
<td>44%</td>
</tr>
<tr>
<td>Care, Personal Services and Wellbeing</td>
<td>40%</td>
</tr>
<tr>
<td>Retail and Wholesale of Consumer Goods</td>
<td>40%</td>
</tr>
<tr>
<td>Accommodation, Food, and Leisure</td>
<td>38%</td>
</tr>
<tr>
<td>Automotive and Aerospace</td>
<td>35%</td>
</tr>
<tr>
<td>Supply Chain and Transportation</td>
<td>34%</td>
</tr>
<tr>
<td>Health and Healthcare</td>
<td>29%</td>
</tr>
</tbody>
</table>

Source
According to business leaders: According to workers:

<table>
<thead>
<tr>
<th>Green skills</th>
<th>Important for our workers today</th>
<th>Growing in importance</th>
<th>A strategic priority for employee training</th>
<th>Important for my career development</th>
<th>Something I can develop at my current employer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture and Natural Resources</td>
<td>54%</td>
<td>71%</td>
<td>55%</td>
<td>44%</td>
<td>47%</td>
</tr>
<tr>
<td>Energy and Materials</td>
<td>26%</td>
<td>67%</td>
<td>92%</td>
<td>48%</td>
<td>49%</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>23%</td>
<td>63%</td>
<td>92%</td>
<td>48%</td>
<td>49%</td>
</tr>
<tr>
<td>Media, Entertainment and Sports</td>
<td>20%</td>
<td>44%</td>
<td>26%</td>
<td>44%</td>
<td>43%</td>
</tr>
<tr>
<td>Retail and Wholesale of Consumer Goods</td>
<td>19%</td>
<td>60%</td>
<td>26%</td>
<td>32%</td>
<td>46%</td>
</tr>
<tr>
<td>Government and Public Sector</td>
<td>18%</td>
<td>40%</td>
<td>27%</td>
<td>40%</td>
<td>43%</td>
</tr>
<tr>
<td>Infrastructure</td>
<td>18%</td>
<td>63%</td>
<td>14%</td>
<td>28%</td>
<td>43%</td>
</tr>
<tr>
<td>Supply Chain and Transportation</td>
<td>18%</td>
<td>51%</td>
<td>21%</td>
<td>47%</td>
<td>50%</td>
</tr>
<tr>
<td>Non-governmental and Membership Organisations</td>
<td>18%</td>
<td>47%</td>
<td>22%</td>
<td>38%</td>
<td>45%</td>
</tr>
<tr>
<td>Financial Services</td>
<td>14%</td>
<td>43%</td>
<td>18%</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>Health and Healthcare</td>
<td>12%</td>
<td>49%</td>
<td>18%</td>
<td>44%</td>
<td>52%</td>
</tr>
<tr>
<td>Information Technology and Digital Communications</td>
<td>12%</td>
<td>46%</td>
<td>13%</td>
<td>44%</td>
<td>24%</td>
</tr>
<tr>
<td>Accommodation, Food, and Leisure</td>
<td>11%</td>
<td>41%</td>
<td>15%</td>
<td>28%</td>
<td>45%</td>
</tr>
<tr>
<td>Care, Personal Services and Wellbeing</td>
<td>10%</td>
<td>58%</td>
<td>16%</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>Automotive and Aerospace</td>
<td>10%</td>
<td>52%</td>
<td>24%</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>Real Estate</td>
<td>9%</td>
<td>44%</td>
<td>17%</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>Professional Services</td>
<td>9%</td>
<td>52%</td>
<td>19%</td>
<td>35%</td>
<td>46%</td>
</tr>
<tr>
<td>Education and Training</td>
<td>4%</td>
<td>37%</td>
<td>14%</td>
<td>35%</td>
<td>43%</td>
</tr>
</tbody>
</table>

Source

Figure 11 shows that across industries, only 16% of companies identify green skills as being important to their workers today, but 42% say they will grow in importance in the next five years and 21% will place a strategic focus on developing them in their workers. By comparison, 39% of workers say green skills will be important to their career development in the next five years and 47% are confident that their employer will provide them with the tools, resources and opportunities they will need to build their green skills.

Agriculture and Natural Resources as well as Energy and Materials lead the way regarding plans to develop their workforce’s green skills in the next five years. LinkedIn’s research has found that the increase in demand for green skills is already surpassing the increase in supply, suggesting the possibility of an imminent green skills shortage. Between 2022 and 2023 alone, the share of green talent in the workforce rose by a median of 12.3% across 48 countries, while the share of job postings requiring at least one green skill grew nearly twice as quickly, by a median of 22.4%. As governments focus on the green transition as a core element of their industrial strategies, they will need to think through the talent and skills needs for this transition to take place. Young people will be a priority, not least as a disproportionate number are located in lower-income countries and regions that are particularly vulnerable to climate change. Skills-first approaches by both governments and employers will help expand the talent pool available.
Innovative, scalable and impactful examples can inspire leaders aiming to make skills the key currency of the labour market. The 13 Skills-First Lighthouses presented in this section are case studies designed to equip leaders with real-world examples of successful skills-first approaches.

Following a call for submissions by the World Economic Forum’s Centre for the New Economy and Society, an independent panel of skills experts (see the Contributors section for a list of experts that formed this year’s panel) selected the case studies to highlight based on the following criteria:

- **Significance**: magnitude of impact on hiring, retention, and worker upskilling and reskilling
- **Quantifiability**: demonstration of metrics to measure and drive further impact
- **Scalability**: impact potential within or beyond the organization
- **Sustainability**: sustainability of the initiative and potential for long-term impact

Lighthouses qualified for inclusion in this report only if a majority of the panel judged them to meet all four criteria. All submissions were synthesized and anonymized prior to panel review, and judging followed a predesigned rubric. Panelists represented a diverse range of expertise and perspectives in the public and private sectors as well as civil society, and were not affiliated with any organization that submitted a lighthouse.

Table 1 provides an overview of each of the 13 lighthouses, organized by employer-based case studies (8 lighthouses) and case studies from the government and education sectors (5 lighthouses). Each lighthouse demonstrates a unique skills-based approaches, and all vary by goals and objectives, target population and sector.

### Table 1: Skills First Lighthouses

<table>
<thead>
<tr>
<th>Organization and programme</th>
<th>Description</th>
<th>Impact highlights</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Employer Lighthouses</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IBM SkillsBuild</td>
<td>Offering free education with 1000+ courses and specialized support and guidance to bridge the digital skills gap and promote diversity in the technology sector.</td>
<td>– Since 2021, over 7 million learners have enrolled in free IBM courses through the company’s combined education initiatives, and in 2022 IBM contributed over $435 million in combined cash, technology and services toward education. – In 2023, unveiled 45 new partnerships with national employment agencies, veterans’ affairs associations and organizations focusing on specific communities and demographics.</td>
</tr>
<tr>
<td>London Stock Exchange Group My Career</td>
<td>Driving internal mobility through a skills-based Career Navigator talent marketplace to reduce attrition and align talent strategies to achieve cohesive organizational growth.</td>
<td>– Eight months post-launch of the Career Navigator talent-marketplace software, and with 38% of the organization now actively engaged, the targets of an increase in internal mobility of 15% and costs for hiring externally dipping by 20% look realistic. The clarity behind the framework has empowered employees to drive their own skills development with career aims in mind.</td>
</tr>
<tr>
<td>Organization and programme</td>
<td>Description</td>
<td>Impact highlights</td>
</tr>
<tr>
<td>---------------------------</td>
<td>-------------</td>
<td>------------------</td>
</tr>
<tr>
<td><strong>Natixis</strong>&lt;br&gt;Jobs in Motion</td>
<td>Revamping internal mobility policies to align jobs with future skills demands, promoting internal mobility, career progression and inclusive talent management based on competencies and skills.</td>
<td>– Jimmy, an AI-powered professional development tool launched in May 2022, has been deployed to 10,000 employees across 38 countries. Approximately 65% of the employees with access to Jimmy have completed their skills profile (68% in France where 50% of staff is based).&lt;br&gt;– Since the deployment of the programme, the average number of training hours (including mandatory training) per employee based in France has increased by 35%. Over the same period, the organization saw an increase of 9.25% in its worldwide internal mobility rate.&lt;br&gt;– More than 520 staff have been reskilled or upskilled by the Step-Up Academy; among them, 42% have moved into a completely new job.</td>
</tr>
<tr>
<td><strong>PwC</strong>&lt;br&gt;Skills Programme</td>
<td>Prioritizing skills-centric approaches over job-centric models to transform internal global workforce strategy and processes by integrating technology and ethical AI.</td>
<td>– PwC UK’s external recruitment team piloted the application of skills-first practices on a specific business area and significantly reduced the mean hiring time by 45% compared to business-as-usual hiring methods.&lt;br&gt;– PwC’s skills-first approach to hiring has helped democratize access to jobs and economic opportunities. It has transformed the talent pipeline for the Deals practices of Europe, Middle East and Africa, and Asia Pacific with greater gender and neurodiversity by increasing hiring of women by 20% and increasing hires with STEM or other non-finance degrees by 17%.</td>
</tr>
<tr>
<td><strong>Sanofi</strong>&lt;br&gt;Democratizing Digital and Data</td>
<td>Improving access to digital and data skills to create enterprise-wide impact, enhancing digital literacy, elevating customer-centricity and fostering a growth mindset.</td>
<td>– DeliverDigital, piloted with over 900 participants in 2023, led to increased teamwork, innovative solutions and fresh ideas.&lt;br&gt;– DriveDigital, initially piloted with 33 candidates, is expanding to include the top 150 executives in key business areas, with 87% recommending it and 93% anticipating a sustainable impact.</td>
</tr>
<tr>
<td><strong>SAP</strong>&lt;br&gt;Skills Transformation Programme</td>
<td>Leveraging a unified skills taxonomy and simplified access to skills-based learning profiles to promote transparency in recruitment and data-driven workforce planning across the organization's ecosystem.</td>
<td>– Year 1 Customer Success programme graduates experienced a 55.5% surge in productivity, accompanied by a notable 24% increase in deals won.</td>
</tr>
<tr>
<td><strong>Siemens</strong>&lt;br&gt;My Skills</td>
<td>Integrating a decentralized navigator into the learning platform and leveraging data insights on in-demand roles and skills to empower the workforce in identifying and closing skills gaps.</td>
<td>– Since its inception in 2021, over 58,000 people are now using the My Skills platform.&lt;br&gt;– 200 “skills managers” were engaged to go beyond their day-to-day roles to be skills champions on behalf of their organizational unit.</td>
</tr>
<tr>
<td><strong>Standard Chartered</strong>&lt;br&gt;Future Skills Academies</td>
<td>Creating an end-to-end skills-based experience across the employee life cycle to build a future-ready workforce and democratize access to skills development through AI-driven platforms.</td>
<td>– Deploying skills through “gigs” on the Marketplace has unlocked productivity worth $6.1 million, showcasing tangible benefits derived from these interventions.&lt;br&gt;– Average learning days per employee increased from 2.8 in 2019 to 4.7 in 2022, indicating the building of a learning habit among its workforce.</td>
</tr>
</tbody>
</table>

<p>| Government and Education sector Lighthouses | |
| <strong>Academy of Career and Technology Cambodia</strong>&lt;br&gt;Digital Pathways for Youth | Utilizing digital media design, app- and web-development curriculum frameworks to shape career pathways and accelerate talent development for Cambodia’s youth. | – Students achieved skills akin to second-year university students, with 70% of graduates pursuing higher education and earning wages 10-15% above the national average.&lt;br&gt;– All curriculum graduates demonstrated accelerated progress in tech-based careers, with 25% employed and 5% in managerial roles or starting businesses. |</p>
<table>
<thead>
<tr>
<th>Organization and programme</th>
<th>Description</th>
<th>Impact highlights</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Coursera</strong>&lt;br&gt;Credit Recommendation of Professional Certificates</td>
<td>Issuing quality-assured skills first professional certificates with credit recommendations to enable continuous educational advancement and empower learners globally.</td>
<td>– 76% increase in learner enrolment for job-aligned degrees with stacked professional certificates.</td>
</tr>
<tr>
<td><strong>Edge Tech</strong>&lt;br&gt;The Musa Initiative</td>
<td>Collaborating with partners to upskill and reskill using WhatsApp and a chatbot to provide a guided, bite-sized learning experience to the Latin American workforce.</td>
<td>– A UNDP partnership aimed at financial inclusion for Venezuelan migrants resulted in 40% opening their first savings account. &lt;br&gt;– Impacted 350,000 individuals in two years, achieving a 90% completion rate and average of 4.8/5 participant satisfaction score.</td>
</tr>
<tr>
<td><strong>Metropolia University of Applied Sciences</strong>&lt;br&gt;MINNO</td>
<td>Engaging undergraduate students annually in real-world challenges to foster a bridge between education and the professional realm in Finland and enhance skills.</td>
<td>– Approximately 4,000 undergraduates participate each year and nearly 90% of them complete projects across 1,000 challenge providers and strategic partners who work closely with the learners. &lt;br&gt;– Projects are mandatory for all degree students and a career monitoring survey found that nearly 81% of 2018 graduates are employed.</td>
</tr>
<tr>
<td><strong>National University of Singapore</strong>&lt;br&gt;SkillsFuture Career Transition Programmes</td>
<td>Enabling mid-career professionals in Singapore to pivot into emerging sectors, with the primary objective to ensure the effective placement of participants upon programme completion.</td>
<td>– More than 60% of participants have so far been placed into relevant jobs. The same figure was achieved for SGUnited Skills Learning, the forerunner of SCTP—one of the highest success rates nationwide during the pandemic.</td>
</tr>
</tbody>
</table>
IBM SkillsBuild is a free education programme dedicated to bridging the digital skills gap among underrepresented communities. It offers over 1,000 courses in 20 languages, allowing learners to develop technical and workplace skills while earning industry-recognized credentials, creating opportunities for career advancement. By targeting high-school students and teachers, university students and faculty, and adult learners, IBM SkillsBuild aims to narrow the digital divide and improve socioeconomic equity.

IBM’s skills-first approach is inspired by leadership’s philosophy that “talent is everywhere; training opportunities are not.” To promote access to the digital economy, irrespective of applicants’ backgrounds, IBM internally prioritizes skills-first hiring, the acceptance of alternative and industry-recognized skills credentials, global apprenticeship schemes, and social impact initiatives with core principles of skills-based learning programmes, free access and lifelong learning.

In October 2021, IBM committed to skilling 30 million people by 2030, aiming to democratize economic opportunity in the digital economy and address digital skills gaps. Most recently IBM has announced a commitment to train 2 million people in AI in three years, with a focus on underrepresented communities. Central to all this work is IBM SkillsBuild, which aims to bridge the technology skills gap for jobs in AI, cybersecurity, data analysis, cloud computing and several other technical disciplines.

Impact highlights

- Since 2021, over 7 million learners have enrolled in free IBM courses through the company’s combined education initiatives, and in 2022 IBM contributed over $435 million in combined cash, technology and services toward education.

- IBM SkillsBuild has reached learners all over the world through partnerships, including 45 new collaborations in 2023 alone with national employment agencies, veterans’ affairs associations, and organizations that focus on youth, refugees, neurodiversity and women.
## Approach and actions

- **Expanding access to training courses through a digital learning platform:** IBM SkillsBuild is designed for scale to reach tens of thousands of high-school students, university students and adult learners simultaneously, with a particular focus on promoting access to STEM jobs. Over 1,000 free courses, from beginner to advanced proficiency, emphasize practical training for in-demand jobs, and personalized learning pathways match the evolving needs of learners throughout their educational and professional lives.

- **Connecting participants to STEM-related career opportunities:** IBM SkillsBuild offers personalized STEM pathways, credentials and volunteer programmes to match learner needs. Collaborations with partners and local employers offer tailored career paths to learners. Guided by mentors from IBM’s volunteer network, learners can connect with job opportunities via job fairs, seminars, interviews, micro-internships and apprenticeships. Career Conversations within IBM SkillsBuild provide learners access to industry professionals, offering career insights and mentorship.

- **Forming global collaborations to create relevant and in-demand learning content:** IBM SkillsBuild’s success relies on global partnerships with national employment agencies, veterans’ affairs associations, governments, nonprofits, schools and businesses, as well as content partnerships on emerging technologies to ensure that learners are always at the forefront of innovation. Partners include: Red Hat, CompTIA, Udemy, Coursera, Adobe and Mindspark.

## Drivers of success

- **Accessible to underrepresented communities:** Content is offered in 20 local languages ensuring that learners, including immigrants and refugees, gain a deeper comprehension of the material. Technology skills gained go beyond those related to IBM products and yield digital skill credentials which can be verified by employers.

- **A holistic, transparent and data-first approach:** Collaborating to deliver social impact at scale requires complex systems to be as clear and transparent as possible. IBM SkillsBuild populates a real-time analytics dashboard using a transparent and auditable process. Governance from IBM’s CSR Leader and chief impact officer ensures strict oversight of business processes, data capture and data privacy. Results are shared transparently in annual ESG reports. Progress is fostered using agile methodologies, which can adapt to market demands and lessons learnt.
Employer Lighthouses

Lighthouse 2

London Stock Exchange Group

My Career

The London Stock Exchange Group (LSEG) boasts 24,000 employees in 65 countries and a £7.4 billion income, and its My Career programme is founded on a skills-based career framework accessible through LSEG’s Career Navigator talent-marketplace software, which connects individual personal ambitions with development plans. The tool promotes transparency among colleagues and visibility into various organizational areas, uncovering diverse roles and facilitating an understanding of requisite skills and gaps within the organization.

In a 2021 internal employee survey, the organization identified a lack of career opportunities as the second-most prevalent reason for employee departures. Approximately 50% of the workforce believed they did not have relevant career prospects within the company. In response to this feedback, LSEG recognized the need for a paradigm shift in how talent and skills were perceived and addressed. Consequently, the organization undertook the creation of a unified skills-based career framework applicable to all roles, emphasizing skills as a crucial factor for career progression. The primary focus was on enhancing internal mobility, curbing attrition rates and optimizing expenditures related to reskilling and external hiring.

My Career was established with the explicit goal of fostering career navigation transparency. It provides all employees with unrestricted access to available roles and their required skill sets. This approach not only aims to empower individuals in navigating their career paths within the organization; it also serves to create a more cohesive and unified strategy by aligning the career framework with other people-related activities, including reward and internal talent-acquisition processes.

Impact highlights

- Eight months post-launch of the Career Navigator talent-marketplace software, and with 38% of the organization now actively engaged, the targets of an increase in internal mobility of 15% and costs for hiring externally dipping by 20% look realistic. The clarity behind the framework has empowered employees to drive their own skills development with career aims in mind.

- Organizationally-aggregated level skill data is informing the talent strategy for 2024, identifying gaps in key areas such as product development and management skills these have been set as a priority for the year ahead. This change is anticipated to have a direct impact on organization competitiveness.
Approach and actions

- **Streamlining job profiles through an integrated talent marketplace:**
  Over the course of a year, a dedicated team streamlined 25,000 jobs into 1,100 distinct job profiles that included the requisite skills and proficiency levels. As a catalyst for scalability and sustainability, Career Navigator was introduced in a phased rollout and integrated into performance and talent processes. Work is ongoing to integrate third-party learning content for continual professional development.

- **Implementing a transparent and widely-accessible career trajectory tool:** Role requisitions, job postings, promotions, reward parameters and curated learning have been standardized. The tool has empowered colleagues by providing clarity on roles, opportunities and areas for improvement and helping individuals take control of their career trajectory. The platform facilitates potential role transitions, enables skill self-assessment, encourages peer and leader evaluations, and connects individuals with mentors. It serves as a catalyst for expanding skill sets, facing new challenges and unlocking untapped potential.

- **Creating alignment between role expectations and skills proficiency levels:** Access to skills data has significantly supported workforce planning and regional investment decisions. The platform aids in pinpointing skills and assessing their locations and proficiency through self and peer evaluations. Aligned with the updated values, the platform fosters an understanding of personal and organizational values, contributing to the development of high-performing teams.

Drivers of success

- **Clearly defined metrics promote DEI**
  Group Strategic Objectives increase clarity on internal talent and opportunities, supporting diversity and inclusion targets, and reducing the attrition of underrepresented talent.

- **Targeted scaling strategy**
  In the next two years, targets include reaching 80% of employees and strengthening links to talent identification, succession planning, progression and promotion, ultimately taking a skills-first approach to talent management.

- **Good governance**
  Proposed changes to the career framework are categorized based on their impact. Minor changes, like updates to existing job profiles, occur quarterly through collaboration with HR partners and business members, while medium-impact changes related to job family groups involve project-like collaboration with various teams. Strategic changes or annual reviews align the framework with business and industry needs, and weekly meetings are held with account managers so that the Career Navigator tool addresses adoption processes and feedback.
Natixis

Jobs in Motion

Jobs in Motion was launched as part of Natixis’ 2021-2024 Strategic Plan. Natixis is the Global Financial Services division of Groupe BPCE, the second-largest banking group in France, and employs 13,000 workers in more than 40 countries. To help the workforce transition to the future of work, Natixis have overhauled its internal mobility policies as part of a company-wide change management initiative to promote skills first.20

Jobs in Motion aligns jobs and people with the skills demands of the future by facilitating internal mobility, career progression, upskilling and reskilling. Through this initiative, Natixis works towards inclusive, transparent and unbiased talent management by providing visibility on every vacancy to every employee and shifting the focus from traditional metrics like diplomas and previous experiences to competencies and skills as selection criteria.

Impact highlights

- Jimmy, an AI-powered professional development tool launched in May 2022, has been deployed to over 10,000 employees across 38 countries. Approximately 65% of the employees with access to Jimmy have completed their skills profile (68% in France where 50% of staff is based).

- Since the deployment of the programme, the average number of training hours (including mandatory training) per employee based in France has increased by 35%. Over the same period, the organization saw an increase of 9.25% in its worldwide internal mobility rate.

- More than 520 staff have been reskilled or upskilled by the Step-Up Academy; among them, 42% have moved into a completely new job.
Approach and actions

Utilizing AI-powered solutions to address skills gaps: Jimmy, an AI-powered professional development tool, offers features such as LinkedIn synchronization and targeted training recommendations, and functions as a job board and talent marketplace, streamlining internal sourcing processes. The platform’s main objective is to empower employees to enrich their profiles and explore job opportunities within the organization. It allows users to explore the organization’s job model, identify the specific skills needed for different roles, and evaluate their fit with job expectations. As a job board and talent marketplace, Jimmy is a valuable tool for recruiters to source and sort profiles, in particular based on skills. It enables employees to discover open positions and apply directly, while providing recruiters with comprehensive access to employee profiles. It also proactively addresses skills gaps and presents relevant available training modules to bridge skill deficiencies.

Implementing a strategic workforce planning methodology: In certain key areas of the company, an analysis was conducted on the resources and skills required to meet strategic objectives. The outcome of this analysis identifies skills gaps which could hinder such objectives and provides a framework to prioritize staffing and talent development actions such as reskilling and upskilling, targeted training, internal mobility, and permanent or temporary external recruitment. In addition, a new tool is currently under development internally (CaPla) to provide management with a comprehensive global overview of all skills within the company at any given time, irrespective of contract type or location. This is made possible because Natixis details the skills required for each job category within the organization.

Combining academic and on-the-job training to serve business needs: Natixis’ Step-Up Academy designs reskilling and upskilling programmes which combine academic and on-the-job training for the evolving demands of the company’s future job roles. Complementary career-boosting workshops cover topics such as how employees can self-market their skills. To ensure alignment between organizational needs and employee skills, Natixis also organizes “speed-job meetings” which involve hiring managers explaining job and skills requirements for emerging roles, such as Global Process Owners, Hospitality Managers or Data Domain Owners.

Drivers of success

Future-proofed career development via metrics
Natixis is driving workforce agility and performance through forward-looking learning and career development initiatives. Future-of-work-proof programmes incorporate assessment metrics such as the percentage of job positions filled by internal staff, the percentage of staff in the same position for more than five years, the number of staff who attended mobility workshops, and a detailed profile of trained staff.

Robust governance
A steering committee oversaw budget validation, while a programme director and project management officers employed the agile methodology to align all stakeholders, including HR, business lines, Finance, Strategy and IT.

Key performance indicators (KPIs) and change management
Since 2020, KPIs have been monitored to track progress, including using company-wide surveys to track staff perception on skills development. Internal communications campaigns foster a culture that embraces change and adapts to evolving work paradigms. KPIs include inputs such as the number of people enrolled in development workshops and outputs such as the share of open positions filled by internal mobility (47% in 2023 in France).
PwC Skills Programme

The PwC Skills Programme is designed to transform the network’s talent approach from being primarily job-based to skills-based. PwC is a network of professional services firms with more than 360,000 employees, revenues of $53.1 billion for the fiscal year ending June 30, 2023, and locations in 151 countries. The skills journey began in 2019 when it announced a global programme – New World. New Skills. – aimed at bridging the digital divide and making the world of work a more resilient, capable and inclusive place. PwC intentionally evolved its approach beyond digital skills by targeting specific areas of the business such as sustainability, cybersecurity and critical human skills in response to changes in the marketplace and emerging trends. Since then, the journey has progressed into other areas beyond upskilling, focusing on both scalability and sustainability, including making purposeful investments in technology, artificial intelligence (AI) and other enablers to activate broader scale change.

Impact highlights

– Digital upskilling efforts resulted in the creation of a new homegrown talent pool of Digital Accelerators in many member firms. These Digital Accelerators created impactful innovations both for internal use and to the benefit of clients. They range from bots and automations that saved many hours of manual work to delivering substantially faster and higher quality results for clients.

– Over 118,000 people across 138 countries have begun or completed upskilling to earn the PwC Inclusive Mindset Badge. The impact of this learning journey is already being felt: 92% of PwC’s learners state it has impacted their ability to practice more inclusive behaviours in their day-to-day interactions. This is further evidenced by significant increases of six percentage points for both Diversity & Inclusion indicators focused on inclusive workplace and belonging since the launch of this upskilling intervention, according to PwC’s most recent annual global people survey.

– PwC has reached more than 10 million beneficiaries through community projects to address the mismatch between the skills people have today and those needed to navigate the digital world.

– PwC UK’s external recruitment team piloted the application of skills-first practices on a specific business area and significantly reduced the mean hiring time by 45% compared to business-as-usual hiring methods. Initial success led the team to embark on a longer-term journey towards a more comprehensive skills-led sourcing approach, underpinned by new technology and changes in behaviour.

– PwC’s skills-first approach to hiring has helped democratize access to jobs and economic opportunities. It has transformed the talent pipeline for the Deals practices of Europe, Middle East and Africa, and Asia Pacific with greater gender and neurodiversity by increasing hiring of women by 20% and increasing hires with STEM or other non-finance degrees by 17%.
Approach and actions

- **Powering skills strategy through upskilling initiatives**: PwC leverages a host of initiatives to drive its skills-first strategy. Digital Upskilling is a network-wide upskilling initiative focused on automation, AI and design-thinking, while Global Cyber and Sustainability Academies build capabilities in cybersecurity and sustainability areas. The network’s Global Alliance Certification Programme provides developmental pathways for certifications in tools of Global Alliance partners. The network-wide Badge Programme and Internal Certificates validate learning and increase the visibility of learned skills. The Jump Start Your Career initiative, currently launched in PwC Portugal and PwC Egypt’s Technology and Innovation Centre, is a global programme involving a consortium of universities and technology alliance partners to train, certify and recruit students for a potential career at PwC. Another example is the While You Work Certified Public Accountant Acceleration programme in PwC US that combines a master’s degree with part-time work at PwC. These programmes demonstrate PwC’s commitment to development and have improved its ability to deploy qualified practitioners faster to meet client demand.

- **Leveraging skills over experience**: PwC’s skills strategy is to emphasize skills over experience by developing a consistent language for skills and their definitions, and establishing long-term skills goals. This will better enable strategic workforce-planning efforts and inform how to best address skills gaps. Finally, PwC is restructuring a global job architecture grounded in skills to support the use of technology automation and the personalization of employee development.

- **Scaling up through technology**: PwC is committed to technology that enhances skill development, scalability and adaptability. The growing skills data pool means greater visibility into a broader talent pool for client engagements, new role opportunities and projects based on the extent to which people’s skills fit the project requirements. An AI-driven recruitment tool used by multiple member firms prioritizes skills over educational or job-title credentials. Initial pilots of this tool were conducted using technology talent pools such as cloud engineering, data and cybersecurity, with sustainability soon to be added. The plan is to proactively build talent pools that can be used across the business when demand arises. Other tools link external market data with internal skills data to improve workforce-planning decisions and to better offer a personalized, future-ready learning experience.

Drivers of success

- **Linking skills to business needs and strategic priorities**
  The key to the success of PwC’s skills programme is its foundation in business needs and market priorities such as digital, sustainability, cyber and AI. When there is a clear connection to the short- and long-term success of the business, buy-in and commitment are more easily secured.

- **Locally customizable for global scalability**
  Solutions are globally developed but locally customizable. Joint development between the global teams and representatives from member firms means that PwC can create solutions that will be fit-for-purpose regardless of the size of and resources available to a local member firm.
Sanofi

Democratizing Digital and Data

Sanofi, operating in the Health and Healthcare industry and headquartered in France, boasts 91,000 employees and an annual revenue of $43 billion. By 2030, Sanofi aims to boost digital capabilities to significantly decrease the time between discovery and therapy and become the first biopharma company powered by AI at scale. 3D: Democratizing Digital and Data, an enterprise programme created in 2020, has reached nearly 35,000 employees as of 2023 and aims to engage every employee by 2030. Its objectives are threefold: 1) increase digital literacy and establish a common digital skills language, 2) improve consumers’ digital experience by placing them at the heart of digital strategy, and 3), cultivate a growth mindset where data and insights drive decision-making.

The programme was initially created following a 2019 digital and analytics quotient survey which measured Sanofi’s digital and analytics maturity across four main dimensions: strategy, capabilities, organization and culture. One of the recommendations that came out of the survey was to focus on talent development and capability-building to enhance literacy, build expertise and deliver impact. At the same time, the Sanofi team assessed wider skills trends in the market, including the rapidly changing skills requirements due to technology advancements. Reinforced by Sanofi’s 2030 corporate ambition to deliver best-in-class and first-in-class science to patients faster, notably via digital capabilities, the company has taken a three-fold enterprise-wide approach to engage and upskill its employees, experts and leaders.

Impact highlights

- DiscoverDigital has engaged 34,000 active learners through 288,000 completed lessons over three years, boasting an 80% completion rate and reaching well over 37% of the entire organization to date. Sanofi estimates an average 65% “knowledge uplift” as a result. Measuring behavioural shifts are also critical: over 76% of learners state they now place the customer at the heart of strategy “frequently or always” vs. 50% pre-training. Finally, 83% of learners “frequently or always” consider data and insights before making a decision, vs. 59% prior to training.

- In the pilot cohort, over 900 participants signed up for the DeliverDigital programme in 2023, yielding an overall net promoter score (NPS) of +50, which is extremely positive for a fully virtual experience. Their colleagues report an increased willingness on the part of participants to assist other teams, propose innovative digital solutions, and offer fresh, out-of-the-box ideas.

- After the initial pilot with 33 candidates, the DriveDigital programme has been rolled out for the top 150 executives, with a strategic focus on the skills and knowledge executives will need to lead Sanofi’s digital and data driven transformation. 87% of participants said they would recommend the programme to their peers and 93% anticipate a sustainable impact on how they saw Sanofi’s data-driven transformation.
Approach and actions

- **Enabling digital literacy for customer-facing and customer-experience roles**: DiscoverDigital engages customer-facing and customer-experience employees in digital literacy skills. An iterative rollout over three years began with a proof-of-concept programme for 700 self-nominated employees that tested whether learning objectives were achieved.

- **De-risking experts’ digital future through curated learning journeys**: DeliverDigital was built to address the identified risks of emerging, evolving and expiring digital skills within Sanofi. In late 2022, the team surveyed leadership and identified agile mindsets and practices, consumer experience, data analysis and AI as the greatest skills gaps and top priorities. To build the required training resources, Sanofi has leveraged internal technical subject matter and pedagogical expertise to curate curricula from a combination of Coursera, Udemy Business and internal content. The programme guides participants through a structured learning journey comprising self-paced reading, webinar-style learning with experts, experiential demos of how to apply the skill in a role, and practice activities with peers to foster hands-on learning and skill application.

- **Upskilling senior leadership to drive the digital transformation**: DriveDigital prepares senior leadership and executive teams to accelerate digital transformation strategy to deliver best-in-class and first-in-class science faster to patients. A global executive development-skill needs analysis found evidence for a significant gap in executives’ digital, data and strategic transformation skills needed for the future, similarly to the expert cohort identifying agile mindset and practices, consumer experience, data analysis and AI as the highest needs. To deliver the resulting DriveDigital initiative, Sanofi partnered with HEC Business School and, following a pilot with 33 senior executives, the company deployed DriveDigital to the top 150 executives from across the company.

Drivers of success

- **Digital Champion Network**: Sanofi assembled a network over 90 digital champions spanning regions, business units and global functions. Over three years, they implemented a stepwise iterative global change management and engagement plan that included onboarding webinars, expert speaker forums and digital immersion days. A recent strategic focus to engage the top 12 country leaders has already boosted learning completion rates to exceed 80% of teams.

- **Experiential learning**: Sanofi identified the 70-20-10 experience, exposure and education model for learning and development as it empowers learners to take action and apply their learnings directly in their jobs, thus strengthening organizational capacity. Flexible learning across a mix of opportunities and channels shapes the learning experience to maximize impact for employees as well as the organization as a whole.

- **Executive engagement**: The programme has been successful due to the highly collaborative partnership between Sanofi’s executive development team and HEC programme directors and project teams. Engagement from Sanofi’s CEO and executive committee sponsors created accountability for executive participants throughout the three-month DriveDigital journey, ensuring that key learnings were implemented in the organization. A cross-business advisory board of senior executives provided strategic direction.
SAP’s skills journey is rooted in the digital transition and workplace transformations during the COVID-19 pandemic. Based in Germany, SAP is an information technology and digital communications company with 112 thousand employees and $30 billion in revenue. Its skills-first interventions build a unified language for skills and role descriptions to foster transparency and accurate recruitment, data-driven workforce planning, intentional upskilling and enhanced workforce development from hire to retire.

In many areas of the company, skills have been annually rated by individuals and managers for nearly a decade, leading to strategic investments to secure long-term success. SAP is now building on this foundation with the Skills Transformation Programme, which is scaling efforts throughout the company via a unified skills taxonomy and interface tool for providing skills-based learning recommendations.

In addition to this internal effort, SAP is also helping people across the globe to reskill and find employment. Available globally and delivered by local partners, People to Work uses publicly-funded training to help people become SAP software consultants, developers or end users.

Impact highlights

- The Skills Transformation Programme has already been shown to deliver performance improvements. For example, account executives who completed the Year 1 Customer Success programme outperformed the productivity of non-participants by 55.5%, including 24% additional deals won.

- SAP aims to reach 26 million people by 2030 via a staggered rollout so that implementation is agile. This total includes all employees plus their ecosystem of customers and partners. So far, the pilots have reached up to 50,000 people. The developer community in particular has received targeted recommendations based on their skill gaps, so far yielding a five-fold registration increase in attendance at learning events, 92% satisfaction rate, and 95% of participants saying the content was relevant to their day-to-day work.
Approach and actions

Enhancing talent planning and recruitment through a unified skills taxonomy: SAP’s skills taxonomy is the foundation of its transformation programme, providing a skills language that is aligned with the market in order to revolutionize how to recruit employees by focusing on the specific skills required for a role, rather than university degrees or how candidates acquired those skills and build a more diverse workforce, giving opportunities to those from underrepresented backgrounds. As a result, partners and customers can now identify skills gaps before they become apparent with project failures. As a result of unifying their skills taxonomy, strategic workforce planning, recruiting and career development have all improved. SAP started by defining their vision for skills in collaboration with senior leadership and across business units – in alignment with market and subject-matter experts to whittle down a library of more than 6,000 skills to 1,500 skills, including general skills from the Lightcast taxonomy, SAP-specific skills, and skills which will eventually sunset as a result of projects.

Integrating skills into the hire-to-retire talent management: Cross-company collaboration in SAP is driven by skills-based market momentum, with stakeholders responsible for hire-to-retire processes integrating skills into core people processes. SAP is currently modernizing its global job architecture by migrating to a single tool, SAP Success Factors, and implementing a governance process for roles and skills with a biannual update cycle. The platform will be rolled out in a staggered approach to stay agile and iterate the approach based on what is learned from each rollout.

Drivers of success

Targeted learning and upskilling
Targeted learning recommendations offering personalized agendas based on skills have been instrumental in enabling learners at every stage of their career to acquire the necessary skills for future success. For example, this year SAP enabled 18,250 colleagues to develop cloud skills, and intends to more than double this amount in 2024. The initiative aligns with broader organizational objectives, such as unlocking the potential of AI and the cloud for SAP customers. In a rapidly changing technology market, focusing on upskilling and reskilling the workforce contributes to both employee development and customer satisfaction, which are both key to the organization’s overall success.

Skills-based mindset
A change-management campaign is underway to ensure that a skills-first mindset is adopted by employees and integrated into existing processes. To accomplish this, the SAP learning team is partnering with existing units to adjust messaging and gather feedback to improve the skills offering. Technical feedback is communicated to the Success Factors engineering team.
Siemens My Skills

My Skills is a decentralized skills-based learning navigator integrated into Siemens’ learning experience platform. Siemens leverages its data to gain insights on in-demand roles and skills, skill levels and skills development to ensure the sustainable employability of its workforce.

As a Germany-based global technology company focused on industry, infrastructure, mobility and healthcare, with 320,000 people and 77 billion euros revenue, Siemens invests continuously in its people by updating their skills and knowledge to meet the challenge of rapid technological disruptions. My Skills focuses specifically on skills-based learning for the Siemens workforce. In line with business goals, business units and functions use My Skills to define the skills needed for each role. They then match this information with workforce skills, detect skills gaps and, together with the skill manager using AI, recommend a learning plan to close the skills gaps. Additionally, the people at Siemens can use My Skills to assess their skills, identify skill gaps, and receive a personalized learning plan.

Impact highlights

- Since its inception in 2021, over 58,000 people are now using the My Skills platform.
- 200 skills managers were engaged to go beyond their day-to-day roles to be skills champions on behalf of their organizational unit.
Approach and actions

- **Encouraging skills profiles to prepare employees for future roles**: All employees have access to the My Skills platform, which allows employees to add role-based and individual skills to their profiles. People can self-assess their skills or seek ratings from colleagues or managers. The platform provides full transparency, allowing people to explore future roles they aspire to, and offers learning recommendations to bridge skill gaps.

- **Improving workforce planning through skills evaluation**: A complementary top-down approach invites a targeted group of employees to evaluate themselves in alignment with their managers on a set of skills. Here, skill managers step in to make learning a smooth, meaningful and inspirational experience. Often My Skills is an integral part of workforce transformation (for which Siemens utilizes its #NextWork approach) to align the process of skills development with strategic workforce planning.

- **Identifying learning interventions based on skills gaps**: For those organizational units using My Skills there is transparency on the skills of their workforce, the proficiency levels and the skills gaps compared to the “targeted” proficiency levels. This generates meaningful insights on how “future-fit” the respective target group is, what for them the skills are with the biggest development need. This leads to focussed learning interventions which are measured over time. Furthermore, the skills managers monitor to what extent the skills gaps close and eventually lead to an increase of the proficiency level of the respective skill. My Skills data provides useful insights on the time and learning hours needed to progress from one to the next proficiency level. This allows for predicting how long the target group needs to develop towards the required proficiency levels.

Drivers of success

- **Decentralized and centred on business needs**
  My Skills is delivered as a decentralized navigator across different business units and functions, outside the remit of the People and Organization team, helping to democratize skills management. Two examples of large My Skills projects include: In Next Generation Sales at the Digital Industries organization, the skills manager links My Skills to the annual strategy cycle of the business, outcomes are translated into changes in existing skill roles and/or defining new ones. Based on workforce transformation (named #NextWork) the Global Business Services organization determines, at a regular basis, relevant job roles and skills. These are accessible for all GBS people in My Skills and give meaningful orientation for individual learning as one important lever for the organization to stay future-fit.

- **Skill manager community**
  The most important long-term success factor is the interaction with the skill-managers community. Currently, there are over 1,100 roles and over 2,000 skills defined, with proficiency levels ranging from beginner to expert. These roles and skills are managed by more than 200 skill managers from the respective business function or region. These experts play a crucial role in the decentralized skill management approach as they understand the business context and requirements of specific roles. They can leverage AI to gain insights into skill gaps and match relevant learning opportunities to employee needs. Skill managers are actively involved in the development of My Skills and regularly meet to share, exchange and align on how to best curate a smooth, meaningful and inspirational experience for users.
A financial services company headquartered in the United Kingdom with 83,000 employees and $16.3 billion in income, Standard Chartered is embedding skills throughout the employee life cycle, focusing on cultivating a learning habit, delivering hyper-personalized skill development, and creating an end-to-end skills-based experience for future-ready employees, with a special focus on making the experience both inclusive and democratized.

The initiative is centred on building a skills-based organization and originated from a strategic analysis which forecasted the decline of “sunset roles” and the increase of “sunrise roles” due to evolving client needs and technological advancements. The analysis also highlighted a shift from a traditional “pyramid” workforce to a “diamond”, with fewer entry-level positions and a larger middle layer emphasizing the changing demand for skills and leading to a compelling business case for skills-first talent management.

The programme’s top objectives have been to identify and define the skills crucial for the future of banking and encourage employees to develop a learning habit. The benefits sought from this include harnessing technology trends, reducing recruitment costs through improved internal deployment and competing for top talent by enhancing the Employee Value Proposition. The initiative democratizes access to skills development through an AI-driven learning platform (diSCover), Future Skills Academies and an AI-enabled internal Talent Marketplace.

**Impact highlights**

- By deploying skills through “gigs” on the Marketplace, the Bank has unlocked productivity worth $6.1 million, showcasing tangible benefits derived from these interventions.

- Over 77,000 employees engaged with the diSCover platform in 2022, highlighting substantial growth of 54% from approximately 50,000 users in 2020.

- The Bank has seen an increase in average learning days per employee from 2.8 in 2019 to 4.7 in 2022, indicating the building of a learning habit among its workforce.

- Since 2021, more than 2,000 employees have undergone reskilling/upskilling via proof-of-concept journeys designed for priority sunrise roles, including Universal Bankers, Data Translators and Cyber Security Analysts. Ninety-three percent of colleagues who started the proof-of-concept journeys have been successfully certified as fit for their role, and 86% are now employed in the targeted sunrise roles.
Empowering talent through a skills-first business strategy: Skills-based profiles were developed for critical job families within the Corporate, Commercial, and Institutional Banking (CCIB) business. Talent is identified based on potential and skills, and managed through skills-focused career conversations. The initiative aims to empower employees to take charge of their careers by offering skills-based pathways for development, mentorship sessions and an integrated approach to learning and development.

Redefining internal mobility through an AI-based internal talent marketplace: Skills are integrated into recruitment, identification of potential, talent management, skills development, and internal mobility, aiming to create a dynamic, future-ready workforce. The internal Talent Marketplace has proven instrumental in enabling employees to swiftly connect, form diverse teams and tackle priorities, irrespective of organizational silos or geographical boundaries.

Refreshing hiring strategy to include skills: Since 2021, skills and competencies have begun to be included in the global job description template. People leaders are expected to choose from a range of human (behavioural) skills when they define roles. Depending on the scope of the position, they also choose a range of technical skills (competencies) that are relevant to the role and which are chosen from a library of over 400 competencies designed in partnership with business leaders. The skills and competencies outlined in the job description form the basis of the “business needs discussion” that recruiting teams have with hiring managers. In these discussions, the hiring manager discusses the requirements of the role with the recruiter to help inform the skills- (and experience-) based shortlisting process for applications. These skills and competencies are in turn assessed at the hiring stage, with a targeted set of interview questions that have a strong emphasis on the human (behavioural) skills. Standard Chartered also uses a global Valued Behaviours psychometric assessment tool for external hiring that is based on a range of skills that underpin the Valued Behaviours. Over time, candidates who perform better on this assessment are found to be more likely to be converted into a hire and have a lower likelihood of leaving voluntarily within the first year and a lower likelihood of receiving a poor performance outcome.

Drivers of success

- Embedded learning habits
The diSCover platform tracks users’ completion of learning content and scores, monitoring adoption and completion of critical skill-building pathways, programmes, and certifications, including overall average learning hours per employee across the Bank and benchmarked against external trends. Other key metrics tracked include the reduction in cost and time of hiring and cost savings from re-skilling and upskilling compared to external hiring.

- Linking of skills to organizational goals
Linking metrics to broader organizational goals such as productivity helps increase capacity across the Bank, break down functional silos and drive agile ways of working. Similarly, completion of sustainability-focused learning programmes aligns with the Bank’s commitment to driving Net-Zero carbon emissions.

- Scalable strategies
Ongoing efforts involve establishing success-based skills profiles for priority roles and reviewing technology and data architecture for long-term scalability. Business sponsors drive the narrative, embedding the learning platform into ongoing activities and building a network of change champions in each market/business/function.

- Business-led Learning Councils
Mechanisms for continuous improvement include Learning Councils with senior business leaders to co-create learning priorities and continuous improvement through employee feedback, drop-in clinics, NPS scores and success stories.
Academy of Careers and Technology
Cambodia

Digital Pathways for Youth

The Academy of Careers and Technology was created in recognition that secondary education in Cambodia has lacked technology-related skills for the past 10 years. In 2018, the academy piloted the development of a curriculum framework for high-school aged young people through project-based learning for digital media design, app- and web-development skills that specifically maps competencies required by the private sector for students in grades 10-12.

The ultimate objective of the initiative is to speed up the process of talent development in digital and design skills, especially for youth, and to enable students to recognize their talents and plan better for their careers. Delivering an app- and web-development and digital media design curriculum framework for Cambodian youth ages 14-23, the initiative operates with 46 employees and $300,000 in revenue.

The most significant impact to date has been the establishment of clear, defined and accessible pathways for junior-high and high-school students in Cambodia to acquire digital media design, app- and web-development skills. Previously, students had to complete grade 12 and attend university to acquire these skills. Frameworks were created to more efficiently bridge the gap with this competency-based curriculum at the high-school level.

Impact highlights

- The results of the pilot indicated that students achieved skills comparable to second-year university students and could qualify for Junior Graphic Designer/Web Developer roles after high school. Seventy percent of total graduates are currently working and studying at the university, with a higher-than-national wage salary by at least 10-15%; 54% of graduates from the programme are female, with 97% percent continuing in technology-related fields.

- 100% of students who have graduated through this curriculum have demonstrated accelerated progress in their tech-based careers. Approximately 25% of total graduates are currently working and 5% are in managerial positions or have started their own businesses.

- After the success of an early pilot, the Cambodian Ministry of Education recognized the importance of this curriculum and translated it into Khmer so that all Cambodian public schools have free access.
Approach and actions

- **Public-private partnerships mapping curriculum to industry needs**: The Academy partnered with over 15 private-sector companies such as Aperia Company and Idea Consultants and 11 universities in Cambodia such as Institute of Technology of Cambodia and LimKokWing University Cambodia to determine the digital media design, app- and web-development competencies needed for students in grades 10-12.

- **Scaling curriculum nationally in collaboration with government**: Following the successful pilot, the Academy worked with the Ministry of Education, Youth and Sports Cambodia to ensure recognition of this curriculum as part of a national curriculum framework. Together, they formed a committee comprising experts, teachers, industry representatives and university affiliates to develop and provide this curriculum, lessons and resources for all Cambodian public schools in Khmer. The rollout in Cambodian public schools is planned for 2024.

Drivers of success

- **Aligned to market and private-sector needs**
  Students obtain a national high-school diploma after three years in a full-time programme. The framework seeks to guarantee true competency by allowing the private sector to collaborate with students in grade 10, 11 and 12. In grades 11 to 12, work-based learning takes place in partnership with trusted, standard private sectors on set of competencies, either in person or online.

- **Lean and agile organization setup**
  The Academy has managed to stay lean as an organization in terms of operational costs and learning to adapt quickly. It began as a small self-funded social enterprise that has scaled to a national level. Fees paid by parents are supplemented by one in four students receiving a scholarship. Due to a variety of limitations, many students are unable to enrol in the physical school. As a result, the academy is looking to launch an online school.
The absence of a standardized, global credit system has historically made it difficult for learners to transfer their skills and knowledge across different educational and professional settings. Coursera, a US company with approximately 1,400 employees and an annual turnover of $609.06 million in the past four quarters, aims to provide a seamless, accessible and low-cost entry point for learners to combine skills-based, non-traditional learning environments with the credibility and employability conferred by formal educational settings.

The Credit Recommendation of Professional Certificates initiative offers quality-assured skills-first certificates, with credit recommendations, from widely accepted credit systems. This empowers learners to continually build upon their educational achievements, irrespective of their geographical location or stage in their educational or professional journey, enhancing their employability and facilitating job placement. Thus, the Credit Recommendation of Professional Certificates initiative aims to bridge the gap between non-traditional and traditional education, providing a quality-assured currency of recommended academic credit that enhances the value proposition for both university and industry partners, facilitating curriculum integration, and increasing degree enrolment.

Impact highlights

- Learners exhibit a strong preference for job-aligned degrees that incorporate stacked professional certificates, resulting in a 76% increase in their likelihood to enroll in such programmes.

- American Council on Education (ACE) credit recommendations have been instrumental in addressing a significant pain point for universities. These credit recommendations provide universities with a trusted mechanism to integrate Coursera-hosted content into their curricula, thereby facilitating partnership.
Approach and actions

– **Recognizing non-traditional learn to match labour-market needs**: On Coursera’s platform, professional certificates are created in collaboration with industry-leading organizations and are oriented towards the recommendations of business and industry representatives to prepare a workforce based on labour-market requirements. Coursera collaborates with industry partners to launch the professional certificates on their platform in five phases: research, course development, production, beta testing, and evaluation and improvement. A third-party academic credentialing body such as the American Council on Education (ACE) then provides a credit recommendation based on course data, the syllabus, the curriculum-design methodology, instructor biographies and learner resources. Selected from diverse academic institutions ranging from research universities to community colleges, the ACE faculty review team aims to provide a credit recommendation that is widely accepted by colleges and universities in the United States which is then listed in the ACE National Guide. Plans are now in place to scale this in Europe via European Credit Transfer and Accumulation System credit recommendations, thereby extending the reach of this initiative to 5,600 higher education institutions and 38.2 million learners in 49 countries.

– **Issuing certificates based on Open-Badge standards**: The Credit Recommendation of Professional Certificates initiative leverages the Credly platform to issue digital transcripts. ACE endorses digital Credly badges and transcripts with the given credit recommendation and seal of approval, facilitating an effortless exchange of verified credentials and eliminating the friction often associated with the recognition of non-traditional learning experiences. Credly is compliant with Open Badges standards, which are recognized internationally for capturing and communicating skills and achievements. Learners can easily email their digital transcripts to higher education institutions, employer HR departments or any other entity that requires verified proof of their achievements.

Drivers of success

– **Continuous feedback loops**
Feedback loops with partners and third parties ensure learning content is kept up to date for the job market and curriculum relevance, and that credit recommendations for professional certificates are maintained.

– **Inclusive stakeholder collaborations**
Stakeholder groups are essential to reconcile disparate operational rhythms between academia and business. The key is to collaborate with entities that have a significant standing in their respective sectors. This ensures that the initiative is both globally pertinent and regionally resonant, much like Coursera’s collaborations with ACE and other external quality-assurance agencies.

– **Learners’ value credits**
Coursera’s research shows that learners value highly the opportunity to pursue content with credit recommendations, and that this strongly influences their learning choices. Aspiring initiatives should therefore centre their strategies around tangible learner benefits – be they immediate employability or long-term educational prospects.

– **Narrative-building**
Coursera has collected and shared learner stories to build a compelling narrative around the transformative power of their initiative. This not only serves as a powerful testament to the initiative’s impact but also helps in garnering wider stakeholder support.
Operated in Peru by Edge Tech, the Musa initiative co-develops and co-delivers skills-based training programmes aimed at upskilling and reskilling the Latin American workforce. By forging strategic partnerships with industry partners, learning providers and government agencies, Musa creates customized learning opportunities that address the specific needs of various sectors such as Retail, Micro-finance or NGOs. The initiative seeks to professionalise and formalise SMEs by fostering financial inclusion and entrepreneurial skills.

Established during Peru’s COVID-19 lockdown, Musa’s primary objective is the upskilling and reskilling of traditional business owners in Latin America. These individuals operate predominantly within the informal economy and are characterized by limited access to formal education and basic smartphones as well as a preference for pre-paid data plans. Recognizing these unique challenges, Musa has developed a tailored solution to meet their needs precisely at their technological and digital readiness levels. Leveraging WhatsApp, a widely used platform in Latin America (81% daily usage), Musa offers a guided learning experience through a chatbot. This approach provides real-time data to programme partners, enhancing the learning journey. Musa’s proprietary methodology transforms diverse training materials into bite-sized, 15-minute conversational experiences, incorporating the principles of behavioural science and metacognition.

Impact highlights

- In two years, Musa has impacted the lives of 350,000 individuals, contributing to their personal and professional growth, achieving a 90% completion rate and a satisfaction rate of 4.8 out of 5 from programme participants.

- One Musa programme developed in partnership with the UNDP aimed to enhance the financial inclusion of Venezuelan migrants in Peru resulted in 40% of participants opening their first savings account.
Approach and key actions

- **Partnering with industry for accessible and relevant training**: Musa’s programme implementation follows a collaborative approach, involving partnerships with industry stakeholders, learning providers and government agencies to co-create and co-deliver skills-based training programmes. Leveraging the expertise and resources of partners is crucial, as they have direct access to the target population. This collaborative model not only enhances the accessibility and relevance of the training but also allows all organizations to strengthen their relationship with the community and learn from community needs as they grow.

- **Customizing training and assessment to address workforce gaps**: A comprehensive needs assessment identifies skills gaps within the workforce and customized training modules are tailored to address these needs. For instance, a programme developed in partnership with the UNDP aimed to enhance the financial inclusion of Venezuelan migrants in Peru. As a result, 40% of the participants opened their first savings account.

Drivers of success

- The initiative is designed to meet learners where they are in terms of technology, device accessibility and learning readiness. By providing an engaging and practical training experience through a familiar platform like WhatsApp, Musa has successfully removed several barriers to learning. Another important element of success are partnerships with direct access and trust from the target beneficiaries.
MINNO is a European Credit Transfer System (ECTS) innovation project within the curriculum of Metropolia University of Applied Sciences, a Finnish organization with more than 1,000 employees and a turnover of €111.1 million. The project serves as a bridge between the education and the professional spheres, reinforcing learners’ networks and self-leadership and project management skills. Introduced in 2008, the initiative focuses on real-world challenges, incorporating entrepreneurial skills, design thinking and multidisciplinary team learning. Post-training, 100 MINNO coaches guide projects while 35 MINNO coordinators work to establish a culture of sustainable skills development.

Impact highlights

- MINNO provides a multidisciplinary learning platform for undergraduate students, with roughly 4,000 participating each year and nearly 90% of them completing projects across 1,000 challenge providers and strategic partners who work closely with learners.

- MINNO projects are mandatory for all degree students and a career monitoring survey for 2018 graduates found that nearly 81% are employed.
Approach and actions

- **Preparing students for in-demand skills in innovative curriculum design:** In 2015, an operational group was mandated to compile a business briefing pack, organize business contacts, foster a culture of sharing best practices, develop in-house training for lecturers, cultivate partnerships and create the MINNOFest innovation showcase for students, strategic partners and challenge providers. In 2023, the group reinvigorated innovation projects using a four-stage implementation plan. In the preparatory phase, students engage in a micro-module to foster self-management and individual development goals mapping. In the developmental phase, the focus shifts to team dynamics, design thinking and practical project work guided by coaches. In the third phase, learners apply their skills in commercial research, development and innovation projects, with the goal of bridging the skills gap within the business world. The fourth phase offers the option to join the pre-incubator programme, which provides intensive support for entrepreneurial ideas. Objectives are two-fold: to encourage industry partners to recognize students’ skill sets and to introduce learners to the contemporary challenges of the professional landscape.

- **Fostering a pedagogical philosophy of learning, research, development and innovation:** Learning is integrated within research, development and innovation, with the challenge provider serving as the learning platform. Beyond learning conventional skills and competencies, the programme also provides networking benefits for students, serving as a gateway into Finnish working life for international students by providing networking opportunities. This network is instrumental to future jobs and partnerships as graduating students carry forward connections forged during joint projects.

Drivers of success

- **Collaborative networks**
  Strategic collaborations, both within the university and with external partners, have been critical for the MINNO project’s progress. These also include establishing robust networks such as SIMHE (Supporting Immigrants in Higher Education in Finland), in which Metropolia University of Applied Sciences plays a role in guiding highly educated immigrants to effectively discern and leverage their competences. Through Metropolia Match® service, Metropolia’s career coaches aim to help individuals recognize their competencies and find the best study and career path.

- **Feedback culture**
  Learner feedback is systematically collected through a standardized form distributed to learners following each course. The institution employs the EntreComp framework to assess learners’ skills development, aligning their progress with essential working life skills. External audits and internal evaluations contribute to the continuous improvement process, pinpointing specific areas for development.
National University of Singapore

SkillsFuture Career Transition Programme

National University of Singapore’s (NUS) SkillsFuture Career Transition Programme (SCTP), part of Singapore’s SkillsFuture initiative, empowers mid-career individuals with industry-relevant skills to improve their employability and pivot to new sectors or job roles. As a train-and-place programme, it includes training, immersive learning, career advice and employment facilitation. As feedback is gathered from employers on the type of candidates they need, the programmes teach participants industry-relevant skills while companies have access to a pipeline of motivated individuals.

The SCTP was launched in early 2022 in recognition that as industries and job functions emerge and reconfigure with technological advancement, individuals will have to evolve in tandem. The SCTP enables mid-career professionals to pivot into emerging sectors, with the primary objective to ensure the effective placement of participants upon programme completion.

Impact highlights

- More than 60% of participants have so far been placed into relevant jobs. The same figure was achieved for SGUnited Skills Programme, the forerunner of SCTP -- one of the highest success rates nationwide during the pandemic.
National University of Singapore: SkillsFuture Career Transition Programme

**Approach and actions**

- **Mapping skills sought with skills taught:** A thorough market scan identifies in-demand job roles and secures employer partnerships with corresponding vacancies. Next, Continuing Education and Training Units evaluate and scope required skills and align them with NUS capacity and capability.

- **Validating courses with employers:** Courses are validated with employers to ensure they meet the necessary skill requirements, followed by the establishment of quality assurance measures and detailed administrative processes for effective upskilling and reskilling programmes.

- **Rigorously selecting candidate:** Finally, there is a stringent selection process for trainees focusing on aptitude, attitude and genuine commitment to seeking employment in the targeted job role.

- **Providing wraparound support services:** In addition to the core curriculum, NUS provides comprehensive career advisory and career counselling services concurrently with the course delivery, enhancing the holistic support offered to trainees. This meticulous approach underscores NUS’s commitment to not only equipping individuals with relevant skills but also facilitating their successful integration into the workforce.

**Drivers of success**

- **Quality jobs**
  Scaling hinges on successful job placements. A structured process identifies quality jobs first, then skills, courses and participants who are primed for success in these roles.

- **Key performance indicators (KPIs)**
  Skills-first programmes are resource-intensive, requiring strategic and incremental growth. KPIs reported to the university’s board allow rigorous tracking and monitoring of enrolments, attrition and placement rates refine the selection process of trainees, fostering confidence among future employees and employers participating in the programmes.

- **Dialogue with employers**
  Feedback from employers during the job interview stage informs continuous improvement, leading to enhancements in career coaching support, including assistance in CV preparation and interview skills. This iterative process ensures the continued effectiveness and relevance of the programmes.
Labour-market data points to a sizable opportunity that can be seized by taking skills-first approaches to recruitment and talent management. The lighthouses included in this report show successful skills-first approaches in action. Learning from and scaling these policies and initiatives offers economic and social returns. Success factors from employers in the public and private sectors include:

1. **Sponsorship from leadership**: Skills-first approaches must be endorsed and modelled by leadership, with skills content co-owned by business functions. By monitoring data on skills and skills gaps, leadership can track the business impact of learning and development, remain accountable, and make informed decisions about deploying skills-first approaches.

2. **Alignment with business needs**: Businesses increasingly report skills gaps to be a significant barrier to productivity and business transformation. Taking skills-first approaches should be viewed not as a human-resources project, but the key to transforming business. Skills-first strategies must be grounded in practical business needs and market priorities, linking skills metrics to broader organizational goals such as improvement in productivity and unlocking efficiencies in hiring techniques.

3. **Leading with effective communication**: Skills-first strategies are a multi-year journey. An effective change-management campaign requires regular communication on the transformative power of engaging in skills, both from the top down (management mandated) and from the bottom up (employee impetus). Successful organizations create a network of change champions and advocates that represent different parts of the business to build an enthusiastic group of supporters for the programme in the organization.

4. **Data and evaluation for iteration**: Skills First Lighthouses regularly track metrics such as skills gaps, active users, learning hours, course completion rates, and internal and external mobility. Data allows employees and employers to see which skills gaps are holding them back and identify practical ways of closing them. Feedback is collected either through standardized forms or regular check-ins with relevant stakeholders to continuously improve. External audits and internal evaluations contribute to these iterations, pinpointing specific areas for development.

5. **Leveraging technology for scale**: Although most initiatives start through targeted pilots, making fit-for-purpose technology platforms and tools accessible to all employees helps maximize skills transparency and visibility. Most lighthouses use some sort of bespoke or vendor-integrated technology to track skills and skills gaps, build skills profiles and link them to upskilling or reskilling initiatives at scale. This process is co-owned by business functions and human resources departments to ensure they are practical and up to date. As organizations grow, the task of keeping track of the skills gaps of thousands of workers can be supported by ethical, safe and secure AI.

6. **Leadership from governments and the Education sector**: Many of the Skills First Lighthouses detailed in this section are led by education institutions, government departments and skilling agencies. In addition to employers, the wider education and public-sector systems must support a shift towards skills-first approaches to complement traditional systems, meet talent needs across economies and invest in the workforce of the future.
The World Economic Forum is deeply grateful to the independent panel of experts which selected Skills First Lighthouses: Simon Brown, Chief Learning Officer, Novartis; Lady Mariéme Jamme, Founder, IAmTheCode; Chris McCahan, Chief of Education and Chief Investment Officer, International Finance Corporation; Luciana Vaccaro, Rector, University of Applied Sciences and Arts Western Switzerland.

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Endnotes

9. Ibid.
10. Ibid.
The World Economic Forum, committed to improving the state of the world, is the International Organization for Public-Private Cooperation.

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