In collaboration with PwC



Putting Skills First: A Framework for Action

MAY 2023

Contents

Preface	3
1 Skills-First: Boosting the Talent Pool for the Jobs of Tomorrow	4
2 Skills-First: By the Numbers	6
2.1 Benefits of skills-first approaches for business, government and individuals	6
2.2 The global skills-first talent pool	7
3 Skills-First: A Framework for Action	10
3.1 Key enablers	11
3.2 Actions areas	13
Conclusion	22
Endnotes	23
References	25
Contributors	27
Acknowledgments	28

Disclaimer

This document is published by the World Economic Forum as a contribution to a project, insight area or interaction. The findings, interpretations and conclusions expressed herein are a result of a collaborative process facilitated and endorsed by the World Economic Forum but whose results do not necessarily represent the views of the World Economic Forum, nor the entirety of its Members, Partners or other stakeholders.

© 2023 World Economic Forum. All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means, including photocopying and recording, or by any information storage and retrieval system. A Framework for Action

Preface



Robert E. Moritz Global Chairman, PwC



Saadia Zahidi Managing Director, World Economic Forum

Skills and labour shortages are two of the most pressing concerns facing societies and economies today. The impact on businesses, for example, is immense. PwC's latest Annual Global CEO Survey found that 52% of CEOs believe labour and skills shortages will significantly impact profitability in their industry over the next 10 years. These talent shortages come at a particularly critical time for businesses, with many of them challenged with reinventing their business models in response to a range of external and internal drivers ranging from economic and geopolitical uncertainty to stakeholder and competitive pressures.

The World Economic Forum's latest Future of Jobs Report 2023 finds that organizations across all industries identify skills gaps and an inability to attract talent as the key barriers preventing industry transformation. And the situation seems likely to get more acute, as businesses race to fill what the World Economic Forum has described as the jobs of tomorrow.

This report highlights one key element of a potential solution. A "skills-first" approach to hiring and developing people has the potential to transform the way that labour markets operate, delivering significant benefits not just to business, but to our wider society and economy.

A skills-first approach focuses on whether a person has the right skills and competencies for a particular role, rather than having the right degree, job history or previous job titles. It means that businesses get the skills they actually need for a particular job, but more than that, it democratizes access to good jobs for those people who have the competencies but not the right formal qualifications for a role.

For many individuals, this removes a key barrier to their ability to apply their skills and contribute. A skills-first approach provides access to employment opportunities as well as good jobs offering career progression and higher earning potential from which they would otherwise have been excluded. At present more than 100 million people are underutilizing their existing skills in this way across the economies studied by this report.

For businesses, a skills-first approach vastly increases the potential pool of talent from which they can draw. Relaxing degree entry requirements, for example, as several businesses – including PwC UK – have already done for some roles, opens up the process to talented people who would have otherwise been excluded from the hiring process. More than that, it can help provide businesses with the specific talent they need to deliver on today's priority business outcomes, whether that be fuelling innovation, enhancing customer experience, managing costs, or entering new markets.

Delivering such a fundamental change requires more than simply the involvement of HR teams. To make it work will require the involvement and collaboration of CEOs and policy-makers at the highest level. What is needed is a multi-stakeholder approach: CEOs need to make it a priority within their organizations, governments have to build an enabling environment and HR teams need to implement robust processes and practices.

That is why the World Economic Forum and PwC have collaborated to create this framework for action which businesses and governments can use to shape their skills-first approach. This report is the first in a two-part series, with the second report to be launched at the World Economic Forum's 2024 Annual Meeting.

Adopting a skills-first approach has the potential to deliver a significant win – for individuals, for businesses, for our society and the economy. We hope to inspire organizations to take action.

Skills-First: Boosting the Talent Pool for the Jobs of Tomorrow

The term "skills-first" is increasingly used by a wide range of organizations across the private and public sector to describe a new approach to talent management that emphasizes a person's skills and competencies – rather than degrees, job histories or job titles - with regard to attracting, hiring, developing and redeploying talent. By focusing directly on skills themselves, rather than on how they have been acquired, a skills-first approach has the potential to democratize access to economic opportunities and pathways to good jobs for many more people than traditional approaches have done.

For employers, a skills-first approach can create more robust talent pipelines - and may help to address skills shortages. For policy-makers, a skillsfirst approach can promote economic prosperity and serve as a boon for local communities. However, the full potential and range of use cases of the skills-first approach is not yet fully understood by many leaders and decision-makers in both the private and public sectors.

A number of recent developments have contributed to the emergence of skills-based talent management practices. These include labour shortages in various economies and sectors; the increase in remote work and changes in talent management practices during the COVID-19 pandemic; the growth of online learning and micro-credentials; and increasingly sophisticated use of artificial intelligence (AI) and big data for jobs and skills mapping. Having the right skills within an organisation also remains a critical concern for companies as they look to reinvent their business model, reduce costs and manage external economic pressures. Based on the analysis presented in this report, we expect the popularity, potential and need for the skills-first approach to grow exponentially in the coming years. This is particularly true with regard to what the World Economic Forum has called the "jobs of tomorrow" - roles across a wide variety of sectors and job families that are critical to the future shape of our economies and societies, but that currently face severe talent shortages. According to the Future of Jobs Report 2023, in the next five years, skills gaps and an inability to attract talent will constitute the most important barriers preventing industry

transformation. For example:

- Demand for workers with green skills is expected to significantly surpass supply in the next five years,¹ it is estimated that as much as a 66% increase in green roles will be needed to progress the green and energy transitions by 2030.²
- Technology literacy remains one of the fastestgrowing in-demand skills, with millions of unfilled job vacancies related to digital and technology roles globally,³ including nearly 3.5 million unfilled roles in cybersecurity.⁴ Technological disruption also continues to create demand for wholly new roles, such as generative AI prompt engineering.5
- By 2030, according to the United Nations Educational, Scientific and Cultural Organization (UNESCO), the world will need more than 69 million additional teachers to meet sustainable development goals related to education;⁶ while the World Health Organization (WHO) projects a shortfall of 15 million health workers, mostly in low- and lower-middle-income countries.7
- The International Labour Organization (ILO) estimates that, as part of changing demographics and the professionalization of the sector, 300 million new roles related to childcare and eldercare might be needed in the global care economy by 2035.8
- According to the International Road Transportation Union (IRU), as the supply chain and logistics industry is transforming, there remains a global shortage of 2.6 million commercial truck drivers.9

The skills-first approach offers an opportunity to build more robust talent pipelines for many of these jobs of tomorrow. It simultaneously has the potential to benefit millions of individuals who have struggled to access more traditional labour markets.

As an initial estimate, this report finds that more than 100 million people covered by our analysis of 18 global economies - whether by 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 – would stand to directly benefit from a skills-first approach (see Chapter 2).

In terms of organizations' talent management cycle, the skills-first approach has several innovative and unique features. With regard to hiring, organizations are adapting their assessment systems to be more skills-oriented, considering candidates with skills acquired through alternative methods such as micro-credentials. When it comes to development, organizations are shifting the way they promote their employees, from a job-centric approach to a skillscentric approach – compensating people to help build and retain critical skills within the organization. To achieve a consistent experience across the talent lifecycle, such an approach will need to be executed in alignment with broader organisational strategic goals and human resources policies. With redeployment, whenever possible, a skills-first approach aims to avoid redundancies and layoffs. Instead, organizations develop and implement policies that allow workers to leverage transferable skills from roles that are disappearing towards new tasks and responsibilities, while supporting them with reskilling, hands-on-training and redeployment into new and emerging jobs. Increasingly, technologies such as machine learning and Al are being leveraged by organizations to develop the foundations for skills-first adoption. These technologies can help a company understand what skills their employees have and what they will need in the near future to achieve their business objectives.10

While the potential of the skills-first approach is increasingly recognized in general terms, no comprehensive, global, quantified estimate of the potential exists that could build the case for prioritizing the approach as a key business and policy imperative for leaders and decision-makers. Moreover, beyond simply documenting its various dimensions and benefits to the economy, there is also a need for additional guidance on emerging good practices as well as for more specific recommendations on developing action plans to realize the benefits of the approach.

Accordingly, this report – the first in a two-part series – is written specifically with top decisionmakers from business and government in mind. It has three aims: 1) provide a high-level estimate of the number of individuals globally who might stand to directly benefit from a skills-first approach, boosting the talent pool for the jobs of tomorrow, 2) provide a straightforward and accessible framework for action on realizing the full potential of the skillsfirst approach through supportive action at an organizational and policy level,¹¹ and 3) highlight innovative case studies of how organizations and governments are benefiting from and leveraging the skills-first approach.

A subsequent report – the second in our twopart series, to be released in early 2024 – will further examine the macroeconomic benefits of implementing a skills-first approach at scale and provide a full quantitative analysis of the potential global GDP benefit resulting from integrating hitherto untapped talent into the labour market via a skills-first approach.

This report has been developed in collaboration with PwC and in consultation with leading experts and practitioners from across the World Economic Forum's Reskilling Revolution Consortium and Chief Learning Officers Community, who have our gratitude for their ongoing feedback and guidance. Our immediate aspiration for this report is that it will generate a common understanding of what is genuinely new about a skills-first system; articulate the potential benefit of this approach in terms of economic growth, industry transformation and addressing inequities in the global labour market; and prove immediately useful to a wide range of organizations and industries seeking to adopt a skills-first approach.

Ultimately, we envision this report serving as a building block toward a vision for how, in years to come, a comprehensive skills-first system could put human capital at the core of business and government strategy in an age of global digital, energy, supply chain and geopolitical transitions – issues which we will expand on in our followup report. Our hope is that a growing coalition of stakeholders will join us on this journey.

2 Skills-First: By the **Numbers**

Benefits of skills-first approaches for business, 2.1 government and individuals

Research documents that there are several notable benefits of skills-first approaches for business, government and individuals. These include:

Unlocking hidden talent pools

By one recent estimate, by 2030, approximately 85 million jobs could go unfilled globally because of a lack of applicants with the skills to take them, which could result in \$8.5 trillion in unrealized annual revenues.¹² This adds to the aforementioned finding by the Forum's Future of Jobs Report 2023 that inability to find skilled talent will constitute the most important barrier to business and industry transformation across a wide variety of sectors and geographies over the coming years (see Figure 1). In this context, a skills-first approach can support organizations in finding and attracting a wide range of hidden talent who might otherwise not even participate in the labour market.^{13, 14} According to recent research by LinkedIn, globally, the pool of potential candidates can increase, on average, by nearly 10 times when using a skills-first approach, indicating its potential in bridging talent shortages, reducing time to hire and generating associated cost savings.15

Increasing productivity

Recent research by Deloitte finds that organizations building a skills-first culture are 63% more likely to achieve results across 11 key business and workforce outcomes, including meeting or exceeding financial targets, than those who have not adopted skills-first practices.¹⁶ Similarly, at a national level, Organisation for Economic Cooperation and Development (OECD) research on adult skills identifies a strong link between the effective application of skills and productivity,17 enabling countries that support the scaling of skills-first approaches as part of national policies and development strategies to move toward higher value-added activities, raised productivity, and economic growth.¹⁸ For workers, a skills-first

approach may also result in higher productivity through increased motivation and engagement. Using skills proficiencies as the basis for career development conversations can help both employees and employers be accountable and responsible for employees' growth and success - leading to greater equity and transparency with clearly defined skills for each role so individuals can understand their skills gaps and strengths and be motivated to upskill themselves accordingly.

Supporting talent mobility and redeployment

Skills-based redeployment of workers is predicted to play an increasingly important role in supporting industry transformation. Targeting internal talent pools that share a similar or adjacent set of skills and need limited upskilling and reskilling can be an effective strategy for organizations to address key skills gaps quickly and economically. Industry-wide mapping of skills adjacencies and recognition of skills-based credentials for specific roles and in-demand professions can be an effective way of supporting disrupted workers who may be redeployed in adjacent roles to minimize negative near-term effects from dislocations.¹⁹ For example, in order to achieve the International Energy Agency's (IEA) net-zero by 2050 scenario for the global energy industry, approximately 14 million new jobs are expected to be generated in sustainable energy supply by 2030. Over the same period, fossil fuel production could lose 5 million positions, resulting in a net gain of 9 million jobs in the sector.²⁰ Capitalizing on Oil and Gas professionals' existing skills will be vital in meeting the talent needs of the renewable energy industry due to skills similarities and transferability, especially in areas such as project management, engineering, construction, finance and operations. In terms of meeting additional talent demand in the renewable energy sector, Wind Turbine Technicians are predicted to be one of the fastest growing, in-demand jobs that will need a large volume of diverse talents. Utilizing a skills-first approach can help to fill these roles by leveraging unified skills

language to create skills-first job descriptions to help solve the green workforce transition challenge and build an agile talent pipeline for the sector.

Promoting diversity, equity and inclusion

Reducing barriers to entry by adopting skills-first practices such as hiring for skills, removal of formal degree attainment requirements for certain roles, recognizing alternative credentials, or relying on skills-based assessment methods can open up opportunities for more individuals to participate in the labour market and encourage candidates from non-traditional backgrounds to consider applying for roles. For example, individuals with disabilities are less likely to have completed a bachelor's degree, so are often discouraged to apply for jobs with a degree requirement.²¹ Further, only 24% of

countries have achieved gender parity in upper secondary education, and in countries affected by conflict girls are more than twice as likely to be out of school,22 resulting directly in women's reduced access to formal qualifications and limiting their employment options. The intersection of factors such as low income, race, gender, conflict and disability can further exacerbate these gaps. By focusing on individuals' diverse skills, potential and motivation, a skills-first approach can help remove unintended bias from the recruitment process.23 Beyond the hiring stage, skills-based workforce management can also help to address issues related to equal pay for equal work, increasing retention and productivity. Research also shows a positive link between workforce diversity and innovation.²⁴ Finally, a skills-first approach can help ensure that teams are composed of individuals with a wide range of experience and expertise, allowing for sharing of ideas and perspectives that can lead to breakthroughs and product innovation.

2.2 | The global skills-first talent pool

The skills-first approach offers an opportunity to build more robust talent pipelines for millions of jobs of tomorrow. It simultaneously has the potential to benefit millions of individuals to transition into roles that are a better match for their existing skills or that recognize and make use of these skills for the first time. This pertains to a wide variety of cohorts of people - ranging from workers seeking career transitions to more rewarding, futureproof or higher productivity fields to those who have struggled to access more traditional labour markets. The first category includes those currently in declining roles subject to technological disruptions, while the latter category includes individuals from many different backgrounds, including individuals without formal qualifications but skills acquired through work and lived experience and alternative education pathways; migrants and refugees, whose existing skills and qualifications may not be recognized in their host countries; parents and caretakers who took time out of their job histories to support family members; and people with disabilities facing bias in articulating their skill sets and job-fit potential, among many others.

To date, no consistent data sources exist that do justice to the full global picture of individuals who might benefit from a skills-first approach. However, this report combines data from the International Labour Organization (ILO) and the World Economic Forum's Future of Jobs Report 2023 to arrive at an initial estimate of this global skills-first talent pool in a geographically diverse range of economies. To provide a global picture, our analysis covers 18 economies—Austria, Brazil, Chile, Colombia, Czechia, France, Greece, Indonesia, Iraq, Israel, Republic of Korea, Pakistan, Serbia, South Africa, Thailand, Türkiye, United States and Vietnam representing a sizable segment of the global labour market of 687 million workers (see Figure 1).

According to our data, with regard to pre-specified education requirements, on average, only half of these countries' working populations (51%, or 352 million people) are employed in roles that are wellmatched to their formal education level, while 29% (197 million people) work in roles for which they may be considered formally 'under-educated' and 20% (138 million people) in roles for which they may be considered formally 'over-educated'. The share of the formally well-matched workforce ranges from a low of 34% in Pakistan to a high of 69% in Czechia, highlighting the imperfect nature of formal education requirements and the potential of a skillsfirst approach for generating significant productivity increases through a more granular, direct focus on job-relevant skills.

Moreover, workforce underutilization—the combined share of individuals who consider themselves under-employed in their current job, who are currently in unemployment, and who would like to work but have currently given up looking for a job due to lack of hope of success—ranges from around 4-6% of the working population in Thailand, Czechia and Vietnam to 27% in Brazil, 30% in Iraq and 43% in South Africa. It stands at 7.2% of the working population in the United States, and 13% in France and the Republic of Korea, respectively. In total, more than 100 million out of the 687 million people covered by our analysis are under-utilizing their existing skills. $^{\rm 25}$

While the rate of workforce underutilization tends to slightly decrease with higher formal education attainment, it remains at similar overall levels even among those with intermediate formal education attainment and above, and - at any given education level - is generally significantly higher among women, young people and persons with disabilities, highlighting the significant pool of talent that could be activated through a skills-first approach. For example, of a total of 11.3 million discouraged job seekers - those who would be available to work but have given up hope – in South Africa, the United States, Republic of Korea, Türkiye, Brazil, Iraq, France, Indonesia, Thailand and Chile, 6.4 million have previously attained at least intermediate formal gualifications or above. A skills-first approach can support those with some formal qualifications as well as those with job-relevant skills gained through

previous work and life experiences or adjacencies of these skills to those sought after in available jobs.

As these figures highlight, the potential global skills-first talent pool is considerable. However, this potential is currently not yet fully recognized by many employers and other stakeholders. For example, the Forum's Future of Jobs Report 2023 finds that, whereas more than 6 in 10 employers have identified shortage of skilled talent as the top barrier to business transformation over the next five years, only 3 in 10 have considered introducing flexibility into formal education requirements to widen their talent pool. This discrepancy points to a need for additional guidance and more specific recommendations to realize the benefits of the skills-first approach. Accordingly, the following chapter sets out a holistic framework designed to provide actionable quidance as well as case studies of organizations already successfully implementing the approach.

		Workforce, matc formal educat	Workforce, match beween job and formal education attainment		Workforce underutilization	orce ization		Discouraged job-seekers, by level of formal education attainment	seekers, by level tion attainment		Employer	Employer perspective
	Total (thousands)	"Matched" " (%)	"Matched" "Under-educated" "Over-educated" (%) (%)	"Over-educated"	Total (thousands)	Total (%)	Total (thousands)	Basic or less than basic (%)	Intermediate (%)	Advanced (%)	Finding skilled talent seen as top barrier (%)	Flexible on formal education to diversify talent pool
Austria	4,306	59	20	21	530	12	28	32	49	19	65	28
Brazil	91,188	58	24	18	24,621	27	1,368	48	40	10	59	32
Chile	8,315	60	17	23	1,322	16	109	ŝ	49	12	71	17
Colombia	20,741	46	36	18	4,397	21	n/a	n/a	n/a	n/a	81	27
Czechia	5,219	69	17	14	209	4	n/a	n/a	n/a	n/a	68	38
France	27,728	60	18	22	3,577	13	448	8	42	19	20	32
Greece	3,928	64	14	22	915	23	80	19	55	26	67	39
Indonesia	130,518	49	35	16	23,885	18	392	ß	32	Q	68	31
Iraq	8,675	25	67	80	2,611	30	598	64	7	29	20	13
Israel	3,952	63	23	14	292	7	30	19	60	22	63	39
Republic of Korea	27,401	47	13	40	3,507	13	1,640	15	ગ્ર	54	63	21
Pakistan	61,652	34	29	7	5,117	8	n/a	n/a	n/a	n/a	44	45
Serbia	3,018	61	24	15	525	17	60	27	56	17	68	33
South Africa	17,218	49	19	32	7,335	43	3,305	61	SS	Ð	74	39
Thailand	37,752	47	41	12	1,321	4	147	49	59	22	57	30
Türkiye	28,797	49	30	20	6,594	23	1,629	57	ន	19	64	26
United States	152,581	55	16	29	10,986	7	1,673	ß	65	31	67	27
Viet Nam	53,405	58	25	17	3,097	9	62	64	ឌ	13	65	18
Total	686,393	51	29	20	100,842	15	11,568				66	30

Source

World Economic Forum, The Future of Jobs Report 2023 ILOSTAT data serie: & International Labour Organization, ILOSTAT. 'educational misma underutilization by (

Note

ILOSTAT data series: Employment by sex, status in employment and 'educational mismatch', normative approach; Composite rate of labour underutilization by sex, age and education; Discouraged job-seekers by sex, age and education.

3 Skills-First: A **Framework for Action**

Despite growing interest in skills-based approaches and active experimentation by a growing number of employers only a minority of companies have begun to systematically extend skills-first practices across their organization.26

Based on a synthesis of recent research, review of current practice and expert consultation, this section proposes an initial framework for action, complemented by illustrative examples and case studies, for businesses and governments interested in leveraging a skills-first approach in support of the objectives outlined in the previous section.

For ease of accessibility and to facilitate further discussion and adaptation, the framework is

organized into two areas: key enablers and key actions (Figure 2). The key enablers cover tools and innovations that may help businesses and governments with faster adoption of skillsfirst practices. Having these enablers in place will generally make it easier and more effective and sustainable for organizations to implement skills-first approaches. The action areas outline practical, evidence-informed steps on how to begin implementing skills-first practices. The sections that follow elaborate on these areas and include illustrative case study company and country examples.

FIGURE 2 Skills-First: A Framework for Action

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

Skills-first framework

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

Action Area 2:

Articulate skills needs in job descriptions and leverage and recognize innovative skills assessment methods

Action Area 3:

Co-develop and co-deliver skills-based training programmes with industry, learning providers, and government

Action Area 4:

Boost lifelong learning and access to skills-based learning opportunities

Action Area 5:

Create skills-based pathways for development and redeployment

Although industrial sectors, businesses and governments operate in different contexts, the identified actions and enablers apply across a range of industries and geographies and are designed so that companies and countries can adapt them to match specific needs.

Furthermore, while the action areas are interlinked and based on mutually supporting themes that are likely to be deployed in combination as part of any

3.1 | Key enablers

Throughout our consultations with experts, policymakers and business leaders, embracing the philosophy of having a skills-first culture, on the one hand, and having a common language to talk about skills, on the other hand, were consistently seen as the two most important enabling factors in adopting skills-first practices and approaches, at both a company and national level. Persistence matters: Our consultations indicate that, on average, it may take 24 to 36 months to obtain the necessary stakeholder buy-in, investments and technology partners for a skills-first culture to take root.

In this section, we explore why these enabling factors matter and how to activate them, and highlight several case studies on how organizations and policy-makers have gone about setting them up.

Key Enabler 1: Embracing skillsfirst culture, policies and mindset

Embracing a skills-first culture involves building organizations that commit to growing their talent, recognize return on investment in their workforce, reward lifelong learning and curiosity, and value workforce diversity. To activate this vision, these organizations reinforce the importance of getting the right granularity of data on skills; communicating the benefits of looking at each role as a collection of skills and proficiencies, experiences, values, attitudes and mind-set; and training hiring managers and talent acquisition teams on how to attract and assess candidates for skills.

At a country level, a high-level national body that provides expert advice and leadership on labour-market trends and current, emerging and future workforce skills needs can help enable a skills-first culture across the country. This includes establishment of expert bodies such as SkillsFuture in Singapore or the National Skills Commission in Australia, to name a few examples. Recent research by PwC, UNICEF and Generation Unlimited concludes that governments should be mapping national skills, aligning on a common company or country's successful move towards a skills-first roadmap, they are not designed to be followed in a specific chronological order: Some organizations may begin their journey by adopting skills-first hiring practices to alleviate existing talent gaps, while others may seek to optimize talent management for their existing workforce. Building a holistic and adaptive approach to skills-first will ultimately be of greater importance for success than the original point of entry.

skills language, investing in skills development and training, regulating skills recognition systems and developing skills forums to improve information sharing.²⁷ The first step in implementing these activities is for a high-level national body to embody a skills-first ethos.

To create buy-in for a skills-first culture, whether at an organizational or national level, it is important to link back to overall business and talent goals and establish aligned criteria to measure and document the benefits, return on investment and impact of pursuing a skills-first approach. While this is likely to be a multi-year continuous journey, organizations could set metrics to compare and track their progress against measures such as financial metrics (e.g. increased revenue), innovation metrics (e.g. new products or services created), and people metrics (e.g. employee engagement levels and satisfaction levels).

Key Enabler 2: Adopting a common skills language

Aligning on a common language when talking about skills – within organizations and across stakeholders – through a skills taxonomy can enable more effective collaboration and coordination on skills between learners, learning providers, policy-makers and employers.

For employers, a well-balanced skills taxonomy helps people managers broaden their focus from specialist and technical skills to promote the full spectrum of skills that make an effective employee. Such an approach highlights commonalities between skills needs across business functions and opportunities for organization-wide skills training initiatives, and encourages internal mobility and talent redeployment. Having a common terminology for skills allows learning providers to articulate and deliver learning content and training programmes in terms of work-relevant skills, preparing an industry-ready workforce for today and tomorrow. For policy-makers, a national skills taxonomy may offer support both on the supply side of the labour market – enabling learners and other job seekers

looking for work to easily access information about in-demand skills and design personalized learning pathways to good work – and on the demand side, supporting employers to articulate job descriptions in terms of skills to find suitable candidates.

Many countries have adopted public-private collaboration approaches to building sectoral skills maps and taxonomies to capture skill demand in each sector, including the development of corresponding professional standards.²⁸ For example, Georgia recently established a new skills agency in the form of an innovative public-private partnership to coordinate skills harmonization and reform of its vocational training sector. Globally, there are a variety of skills taxonomies in wide use, by both the public (e.g. O*NET, ESCO), and private (e.g. LinkedIn, Workday) sectors.²⁹ The World Economic Forum's Global Skills Taxonomy is an effort to provide a translation tool between such different taxonomies.³⁰ Regardless of which skills taxonomy an organization chooses to adopt or adapt, there are three properties to consider: (1) Dynamic, to reflect the fast-changing labour market and flexibility to be updated regularly; (2) Customizable, able to speak to the needs of specific industries; and (3) Granular, able to explore specific skills and skills adjacencies at the required level of detail.

CASE STUDY 1 Creating the foundations for setting up a successful skills-first culture (Unilever)

Unilever, a leading multinational consumer goods company, is actively working on building a future-fit workforce by increasingly focusing on skills instead of job titles. Unilever acknowledges that to be able to use skills as a currency, there needs to be a consistent understanding of skill and proficiency levels. They have started with 600 Unilever-endorsed skills based on Degreed's skills taxonomy and utilized Degreed as the central learning hub for all office-based workers.

Unilever estimates that a skills-first approach can unleash an estimated 50% trapped capacity in its current workforce model. Consequently, Unilever is now including skills in its criteria for internal mobility, in addition to experience and performance data. Employees self-assess their skills and rate proficiency levels; then line managers or subject matter experts endorse the ratings. Hiring managers then compare and match the skills in a job vacancy with the potential candidates' skills to select the right candidate. A key challenge in embedding this change is establishing an organizational culture where skills are trusted and recognized. Unilever is ensuring this by:

- Engaging senior leadership early to have their buy-in, understanding their concerns and explaining the long-term vision – for example, showing that by measuring skills, leadership can track the business impact of the learning and development budget
- Focusing on answering the "what's-in-it-for-me" for key stakeholders; for example, showing employees that skills can make the internal mobility process more equitable and transparent in terms of feedback for missed opportunities
- Communicating consistently with HR and the business around the benefits; for example, showing hiring managers how a heat map can be created using the data of the available skills within a team

As a recommendation for other organizations on a skills-first journey, Unilever reiterates the importance of skills data, but also reminds them to proactively engage stakeholders and bring them along.

CASE STUDY 2 Boosting skills recognition through the European Year of Skills (European Commission)

The European Commission (EC) is leading a significant effort to promote a skills-based culture across the European Union (EU), adopting a proposal to make 2023 the European Year of Skills.³¹ The aim of this initiative is to raise awareness about the importance of skills development for individuals and businesses and facilitate access to upskilling and reskilling opportunities for all.

By emphasizing the importance of skills, the European Year of Skills aims to promote a culture that values and prioritizes ongoing learning and development. The initiative will pursue four main objectives and offer a fresh perspective on lifelong learning by:

- Encouraging and supporting investment in training and development across Europe to fully utilize the potential of the workforce
- Ensuring skills match labour-market requirements through collaboration with EU member states, social partners, education and training providers and businesses
- Matching individuals' skills and aspirations with available job opportunities, particularly in the digital and green sectors,

to support economic recovery; further efforts will be made to engage those who are not in education, employment or training, particularly women and young people

 Enhancing learning opportunities and mobility, as well as facilitating the recognition of qualifications, to attract skilled individuals from outside the EU

The campaign will also be leveraging the EU's existing tools to enable a common language around skills, such as the ESCO skills taxonomy³² and Europass resume.³³

The year will create new momentum to reach the EU 2030 social and employment targets of at least 60% of adults in training every year, and at least 78% in employment. The EC also plans to bring life to this initiative by launching new initiatives; implementing existing ones, such as its Pact for Skills;³⁴ funding implementation and development of reskilling and upskilling programmes; as well as events and awareness campaigns across the EU to support mutual learning of partners.

3.2 | Actions areas

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

To operationalize a skills-first approach, companies and industries must develop a holistic view of the skills they have available to them across functions, job families and levels, and compare this against the skills they would need to achieve their long-term business objectives. Similarly, policy-makers need to take stock of skills across different occupations, industries and levels and account for broader labour-market drivers of change to estimate future need of skills in different industries. By overlaying skills supply and demand data across the entire organization, industry or country, businesses and governments can understand if their strategy is achievable, where skills gaps are prevalent or emerging, and what investments will be needed.

To fully operationalize a skills-first approach, two levels of skills data are likely to be needed:

- Labour-market data, including data on growing and declining skills, industry demands, and drivers of labour-market change in the economy
- HR and learning data, such as working history, job architecture, learning and development data, credentials, feedback, goals, and project documentation, which can provide an additional layer of detail

As organizations grow, keeping track of dozens of continuously evolving skills across thousands of workers is not a manual nor trivial task. Increasingly, deploying AI tools is critical to achieving the full potential of becoming a skills-first organization – but adoption of AI must be done carefully and responsibly.

CASE STUDY 3 Mapping skills to work tasks leveraging a new Skills Insights Hub (HSBC)

In 2021, HSBC, a global financial services organization, embarked on a Future Skills campaign of skills-building activities. Leveraging the World Economic Forum's skills taxonomy and other tools, the company implemented an innovative in-house Skills Insights Hub. The hub helps identify existing skills and references them against skills descriptions, showing what skills are needed now and in the future. The Hub supports with gap analysis between current and target skills states and helps measures the progress of ongoing skills interventions. The impact of the solution has been helping them to:

Identify the most prevalent skills in parts of the organization and the ability to map them to a skills taxonomy

- Understand the exposure to skills shifts for a given role and how skills requirements are changing in different job clusters. Further, these trends can be subdivided by gender, region, ethnicity and age
- Compare their skills data with other organizations in the same industry to understand the external supply and demand of skills

HSBC is further exploring how both its human resources department as well as other business units can use the Skills Insights Hub to drive strategic delivery of targeted learning interventions, data-driven workforce and succession planning, responsible redeployment, targeted reward and recognition, and proactive ways of retention.

Action Area 2: Articulate skills needs in job descriptions and leverage and recognize innovative skills-based assessment methods

Skills-first hiring consists of specifying skills needs in job postings on a consistent basis. Recent research by LinkedIn finds that, currently, 45% of employers on the platform explicitly used skills data to fill their roles, a 12% year-on-year increase.³⁵ Skills-first hiring often entails, where appropriate, removing traditional formal degree requirements as a pre-condition for hiring and replacing them with skills-based (micro-)credentials as well as new methods for directly assessing candidates' current skills, capabilities and potential. For example, IBM uses various skills-based assessments to evaluate applicants. These include coding challenges, cognitive ability tests and problem-solving exercises.³⁶

It should be noted that hiring regardless of formal qualifications is not always feasible or appropriate for every role or in every industry. Roles involving public safety, or in Aviation or Healthcare, or those specialist roles with regulations and occupational licensing requirements are examples. On the other hand, relevant stakeholders should collectively assess if skills-based assessments might provide a valuable additional perspective in situations in which formal qualifications are not recognized. For example, there are currently more than 30 million refugees forcibly displaced outside of their home country,³⁷ whose existing qualifications may often not be formally recognized in their current host

country, yet who seek to apply their skills and work in the host country. $^{\mbox{\tiny 38}}$

The public and private sectors can work together to scale recognition and adoption of skills-based hiring practices by:

- Featuring skills and competencies in job descriptions: To harness the full potential of skills-first hiring, skills-first job descriptions should aim to incorporate the following three characteristics: (1) Distinguish required skills and preferred skills: required skills are skills that are necessary to perform essential job duties while preferred skills can be learned during on-boarding and training or are used to perform non-essential job duties; (2) Remove traditional formal degree requirements, where appropriate: consider what skills the requirement is equated to, and if those skills may be acquired without earning a traditional degree through alternative pathways; (3) Eliminate biased language and avoid unclear terms: use clear, plain language that avoids industry jargon and include an inclusivity or equal-access-to-work statement. For example, a range of AI tools can now recognize gender bias by identifying gendered words such as "decisive" or "salesman" and find alternatives.39
- Adopting minimum standards for designing skills-first assessments: Many organizations are seeking to shift from traditional methods of assessing candidates to skills-first assessments. There are three key characteristics for designing and deploying such assessments: (1) Role specific: assessment questions should be tied to day-to-day tasks, projects and skills that will be used by workers on the job; (2) Equityoriented: assessment design should be inclusive

to cater to the needs of all test-takers (e.g. by providing additional support for candidates with dyslexia); (3) Cognitively demanding: questions should be rigorous; this is important when the assessment is intended to serve as representation of mastery of skills at certain proficiency levels. Moreover, assessments on their own are rarely enough to gauge whether a candidate will be successful in the role. Candidates' attitude, mind-set and willingness to learn, grow and adapt may play an equally important role. Aligning on common standards for recording and verifying skills earned: Invariably, there is inconsistency in data when it comes to proof of skills, credentials and work experiences gained from different environments. Emerging technologies like blockchain may help, by making it possible for individuals to record their credentials in one place accessible at anytime, anywhere in the world, and for employers to verify authenticity of the credential and make them interoperable across HR and learning management systems.

CASE STUDY 4 Identifying adjacent skills and opportunities (ManpowerGroup and SkyHive)

ManpowerGroup is a workforce solutions company that helps organizations transform in the fast-changing world of work. In 2022, ManpowerGroup launched a customized job postings platform, the Jobs Exchange⁴⁰ via Welcome.US,⁴¹ to support refugees and forcibly displaced populations in accessing job opportunities. In collaboration with partners (e.g. Accenture and Pfizer) of Welcome.US, the Jobs Exchange aggregates employers in locations where they know refugees are settling and then invites local companies to identify vacancies to promote for refugee hires. Companies are asked to consider roles across seniority levels and to post targeted vacancies from a skills-first perspective: emphasising the essential skills required to do the job over formal qualifications.

The Jobs Exchange is one component of end-to-end support for refugee employment, with its success largely attributable to the human touchpoints that inform the journey. For many refugees, initial exposure to the platform comes via communitybased hiring fares. Here, refugees are invited to complete a skills assessment created by SkyHive.⁴² The assessment allows self-reporting of skills and, through its AI, is capable of identifying additional skills the candidate may not have recognized in themselves. In so doing, it has proven effective in expanding the range of potentially suitable jobs and job matches. Crucially, the skills-assessment carries validity in the eyes of employers to support the job-matching process. The skills-to-jobs journey is additionally complemented by the strength of a committed employment coalition. Refugees in particular encounter language barriers that preclude successful hiring. Yet, Welcome.US has been able to leverage the power of numbers to facilitate job-entry. For example, employers have hired refugees in groups, relying on the fluency of one to support the employment of a broader cohort. In addition to accelerating language acquisition, these approaches have successfully shifted the emphasis from language fluency to skills and demonstrated the ways in which the talent management cycle can be adapted to acknowledge local needs in a mutually beneficial manner.

As Manpower Group looks to scale its efforts, its focus is two-fold: expanding its network of employers who adapt jobs to focus on skills and hire accordingly, and honing in on the role of skills-based technologies in the process. Through integrating assessments into the Jobs Exchange digital journey and identifying additional touchpoints where skills-based technologies can be leveraged to support job matching (e.g. resettlement agencies), the group hopes to fulfil its commitments to refugee hiring while extending its impact to other non-traditional cohorts. In just one year, more than 100,000 jobs have been advertised by over 500 employers on the Jobs Exchange and thousands of refugees successfully matched. The Ingka Group, operating 392 IKEA stores across 31 markets, has a longstanding commitment to inclusive growth, championed by senior leaders. The Group's values-driven approach is articulated in its People and Plant Positive Strategy and corresponding Neighbourhoods Framework – policy tools that orient the company's business and workforce strategy within broader social impact ambitions. In 2019, Ingka Group committed to support 2,500 refugees with language and job training by the end of 2023. This values-driven approach has created space for individual IKEA retail operations to adapt hiring and talent management strategies to local contexts and needs.

In the wake of the war in Ukraine in 2022, the company extended its commitment to refugees and forcibly displaced populations with its Hiring Displaced Talent Framework.⁴³ The framework is built upon the idea that candidates have existing skills and are ready to work, and facilitates a pathway to IKEA recruitment accordingly. In countries of operation, recruiters proactively look for candidates via talent pools and with the support of local non-profits. Hiring teams are trained to tailor conversations to potentially complex and emotionally charged contexts and are equipped to tailor the onboarding journey thereafter. A learning offer is typically crafted to reflect a candidate's new working environment and responsibilities. With millions of refugees from Ukraine fleeing to Poland, IKEA Poland was one of the first Ingka Group countries to adopt the approach. The team "look for talent, not CVs" and consequently do not require formal documentation to prove work experience, relying more on an illustration of skills and a desire to work. To this end, while language remains a barrier in most of the locations where IKEA operates, IKEA Poland conducts interviews in the language of the refugee to give them a better chance of expressing their skills and competencies. Similarly, in IKEA Switzerland, job suitability is assessed over a five-day trial period, a hiring strategy that reduces the reliance on language fluency and focuses on the job-relevant skills of refugees.

The trial period has allowed the company to hire into roles on the shop floor and within corporate functions, including specialist roles. For those who may not have the relevant skills, IKEA Switzerland offers internships and pre-apprenticeship opportunities across all its departments. Across these programmes, the workload is adapted to integrate learning and development opportunities, demonstrating an approach that provides workplace exposure to reinforce existing skills while proactively building on competency gaps. To date, 41 people have been hired at IKEA Poland and 217 supported via the different employment pathways at IKEA Switzerland. The retention rate for refugees across the Ingka group is often at par with or higher than regular hires.

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

Skills-based training entails developing programmes that support individuals in acquiring specific skills aligned with the needs of the industry and jobs of tomorrow, increasing workers' employability and access to high-growth, high-productivity jobs while addressing skills gaps and promoting local economic growth. This approach is best implemented through a collaborative ecosystem involving industry experts, learning providers and policy-makers, ensuring that the programmes are developed and delivered in a holistic and collaborative manner, drawing on the expertise of multiple organizations. For example, the Partnership on Al⁴⁴ – a community that was formed in 2016 by Amazon, Google, Facebook, IBM and Microsoft, and now includes over 100 organizations from academia, civil society and industry - is an example

of a collaborative skills-based approach. By collaborating, community members can leverage their collective expertise and resources to create effective learning programmes that address critical skills needs in the field.

Embracing skills-based training requires shifting existing talent development approaches from preparing individuals for a specific career or role to skills, proficiencies and experience that can help them transition flexibly between projects and roles based on individual skills, interests and business needs. This can be done by:

- Developing learning objectives across industries that meet skills needs. This entails identifying knowledge and skills that learners need to acquire to succeed in a particular field or industry by conducting an industry analysis examining current and future workforce needs and identifying the associated skills and competencies required.
- Creating partnerships with learning providers to align with industry needs by developing new programmes or updating existing curriculums. Partnerships formed with learning

providers can involve developing new courses or programmes that incorporate the latest industry practices or technologies. In addition, existing curriculums may be updated to address emerging skills and ensure that content remains relevant.

Ensuring access to learning and resources.
Government, industry and learning providers

may collaborate to identify underrepresented groups and develop partnerships to provide access to learning resources and material, allocating funding to scale up infrastructure and technology and create policies that support lifelong learning.

CASE STUDY 6 Future-proofing the industrial workforce (Saudi Aramco)

Saudi Aramco, one of the world's largest integrated energy and chemicals companies, has historically focused on building its workforce from the ground up. As an energy provider, industrial workers represent nearly 70% of the company's employees, and the vast majority have been trained from the beginning of their careers through Aramco's in-house industrial training centres. Their learning journey often starts with the apprenticeship programme, a two-year programme designed to train Saudi high-school graduates and prepare them with entry-level academic and job-skills training. These roles could include Operators, Maintenance Technicians, Firefighters, Security and many other jobs. Once the apprentices complete this initial certification, they continue as full-time employees to attend advanced training in academic, safety and job skills post-phase courses. In addition, they also receive professional development for relevant certifications and workplace requirements. Each of these steps is delivered, tested and monitored in-house through departments committed to their development. This holistic and rigorous approach underscores Saudi Aramco's commitment to developing its workforce for long-term success.

While a multitude of self-directed e-learning courses are available for industrial employees, recent initiatives have

focused on deploying immersive virtual reality (VR) platforms to broaden scope and scale, while also applying safe and sustainable protocols. Wearing VR headsets, workers safely train on complex and advanced equipment. At the same time, using augmented reality (AR) and VR tools as well as fully digitizing course books and materials on iPads and similar devices allows for training in ways that were not previously possible, creating opportunities to provide skills for young people in numbers and locations that were previously limited by equipment or classroom availability. Over time, Aramco envisions that this VR platform will be able to fully certify industrial employees, as well as act as a knowledge repository for skills-based practices.

As industrial workers move past the apprenticeship and early-career stages, they usually find that there are many career advancement and progression opportunities for them to grow within the company. Saudi Aramco has well-defined career paths that allow workers to advance from entrylevel positions to leadership roles, with clear guidance and mentoring, career counselling and regular assessments of progress and potential. Scaling up internal reskilling and upskilling efforts to build talent will help other organizations in the long run while keeping in mind the time, effort, resources and financial investment required to implement properly.

Action Area 4: Boost lifelong learning and access to skillsbased learning opportunities

Providing access to skills-based learning, upskilling and reskilling opportunities is essential for individuals and organizations to remain competitive and adapt to changes in the labour market. According to a recent study, 77% of business executives agree that their organizations should help workers learn new skills, but only 5% strongly agree that their organization is investing enough to enable people to keep up with the changing world of work.⁴⁵ Making it convenient, feasible and practical for workers to access learning can help inspire them to engage in learning on an ongoing basis, cultivating a skills-first mind-set to unlearn, relearn and upskill based on business needs and personal ambitions.

For example, since 2004, Google has maintained a commitment to its "20% time" rule, encouraging employees to spend 20% of their time working on learning a new skill or working on a project or idea that will benefit Google, which will enable them to be more creative and innovative.⁴⁶ Since 2015, McDonald's has been investing in Archways to Opportunity, a US-based initiative enabling its restaurant workers to access programmes to learn English-language skills, earn a high school diploma at no cost, receive tuition assistance to pursue a college degree, and access free education and career advisory services. By 2021, the initiative had supported over 55,000 employees and McDonald's has awarded more than \$165 million in tuition assistance.⁴⁷

The public and private sectors could collaborate to scale lifelong learning, inspire people with a skills-first mind-set and expand access to skills-based learning opportunities by:

- Providing individuals with practical experience to develop their skills. This can be done, for example, by offering apprenticeship and internship programmes, which will provide learners with practical experience to develop their skills where they will be able to work with industry professionals and gain hands-on experience.
- Offering funding for training, upskilling and reskilling opportunities to help individuals develop new skills. Government and industry can provide direct financial assistance, incentives and sponsorship for individuals to access skills-based learning programmes. This will ensure that learners have sustainable access to training that aligns with industry needs.
- Encouraging the development of mentorships programmes. These programmes will allow individuals to have access to subject matter experts in their desired field who can help them develop relevant skills and knowledge. Assigned mentors can offer guidance, support and advice for individuals to achieve their goals.

CASE STUDY 7 Linking organizational skills mapping to personalized learning opportunities (Siemens)

Siemens, a global technology company focused on industry, infrastructure, mobility and healthcare, with over 300,000 employees across the world, recognizes that technological disruptions require employees to consistently update their skills and knowledge. Therefore, Siemens is placing strong emphasis on continuous, lifelong learning and development; upskilling; and reskilling to meet business needs.

To this end, Siemens leverages My Skills, a de-centralized, skills-based navigator tool for personalized skills development. My Skills is integrated into My Learning World, Siemens' company-wide learning experience platform which offers more than 130,000 learning opportunities in various formats and on a wide range of topics.

Employees have the opportunity to complete a selfassessment of their skills, identify skills needs and receive personalized learning recommendations based on skill gaps, enabling them to create a personalized learning plan and to steer their own learning and development. So far, Siemens has reached more than 41,000 employees with My Skills. Additionally, businesses and functions can utilize My Skills to define required roles and respective skills of the role to democratize reskilling and upskilling and enable employees to continuously develop the right skills for a current role or the next one to come. Over 800 My Skills roles and over 1,800 skills (categorized as beginner, basic, advanced and expert) have been defined and the repository is continuously growing.

Roles and skills are defined by more than 300 skill managers of the respective business or function. These experts are key to the overall de-centralized skill management approach as they know the business context and requirements of a specific role and can match relevant learning opportunities with the help of Al.

Siemens leverages My Skills and data from My Learning World to gain insights on in-demand roles and skills, skill levels and skills development of the workforce to ensure organizational capabilities and sustainable employability.

CASE STUDY 8 Encouraging individuals to take ownership of their skills development (SkillsFuture Singapore)

Singapore is taking a skills-first approach for preparing its workforce of the future by anticipating the skills needs of the market and encouraging citizens to gain those skills to increase employment and productivity. And, at the same time, engaging employers to adopt skill-based hiring and career development for their employees. This effort is being led by the SkillsFuture Singapore Agency (SSG) that coordinates the national movement focusing on providing Singaporeans with lifelong learning through reskilling and upskilling opportunities for a competitive economy. SSG provides resources such as SkillsFuture Credit, Jobs-Skills Insights, Skills Advisory services, and the MySkillsFuture online portal to empower Singaporeans to chart their own career and lifelong learning pathways.

SkillsFuture Credit, funded by the Singapore government, provides financial support for training to Singaporeans. SkillsFuture Credits are distributed to eligible individuals through their dedicated SkillsFuture Credit account via the MySkillsFuture online portal which they can access using their SingPass (a citizen's unique digital identity used for all secure transactions). The credits are currently distributed as per the following criteria:

- Opening SkillsFuture Credit of S\$500 for citizens aged 25 and above
- One-off SkillsFuture Credit top-up of S\$500 for every

citizen aged 25 years and above as of 31 December 2020 (set to expire on 31 December 2025).

 One-off SkillsFuture Credit of S\$500 to every citizen aged 40 to 60 as of 31 December 2020 to improve individuals' access to career transition programmes.

Since the introduction of the SkillsFuture Credit in 2015, the participation rate for training has increased from 35% in 2015 to 50% in 2022. While research is ongoing regarding the long-term impact of SkillsFuture Credit, initial responses indicate positive outcomes. In 2021, 94% of the surveyed trainees indicated that they could perform better at work after undergoing SSG-funded training. Over a five-year period (from 2016 to 2021), the number of Singaporeans who have used their SkillsFuture Credits nearly doubled, from 126,000 in 2016 to 247,000 in 2021. SSG is continuing to expand access as they believe that everyone in the workforce should continue to pursue reskilling at the workplace and via institutional-based learning.

The experience of Singapore shows that governments and policy-makers can be the "convenor": supporting the partners in the skills ecosystem and managing the skills demand and supply to develop and sustain a competitive and inclusive economy.

Action Area 5: Create skillsbased pathways for development and redeployment

Recent research found that three of the top five factors for workers considering a new job reflect individuals' desire to grow and develop new skills,⁴⁸ while, currently, more than 80% of role moves involve a change of employer.49 Skills-first approaches can empower individuals to take charge of their own career pathways, exploring both upward progression and finding alternative routes within the same organization, moving away from traditional linear careers focused on specific occupational fields and hierarchies. Increasingly, creating skills-based pathways to work across a breadth of projects and teams is not just a "nice-to-have" but a "must" for companies to stay competitive and retain employees. This is particularly critical for a rapidly evolving world of work, where organizations may have to quickly reprioritize and restructure teams. Redeploying

talent within an organization by matching skills saves time and effort required for training and onboarding on the company's background, processes and systems, resulting in reduced training and hiring cost and increasing business efficiency and productivity. It also strategically leads to talent retention in case of organizational restructuring where roles or projects might be becoming redundant. Yet individuals can be redeployed into a new role, sustaining their employment as well as helping preserve the company's external reputation.

A skills-first approach can identify adjacent career pathways by focusing on overlapping skills and actionable skills gaps. For example, a Bank Clerk working in the physical branch can upskill themselves on digital tools for the bank's call centre role as they already have the skills for customer service and customer relationship management. Development pathways enabled through skillsfirst approaches may also leverage flexible and personalized learning opportunities for individuals. For example, an individual could enrol in a microcredentials programme that allows them to earn a series of shorter, targeted credentials that can be combined into a larger qualification over time. As a result, learners can save time and money and guarantee that they are not duplicating learning that they have already attained.

Skills-based development and redeployment pathways can be enabled by:

- Assessing and tracking skills in performance management. A first step for operationalizing skills-based pathways is to identify overlapping skills between roles to match people to internal mobility opportunities with limited to no reskilling. Additionally, where skills gaps exist managers can transparently communicate skills and proficiency requirements for roles and work with concerned individuals to find support and training for closing the gaps. This provides employees with an actionable trajectory to keep them motivated and working toward a clear goal over time.
- Building adaptability and resilience in the organization's culture. For a workforce to embrace skills-based career pathways, it is important to have an organizational culture and mind-set that supports agility in the face of change. This can be reinforced through crossfunctional training, project-based work and open communications about career transitions.

Additionally, using skills to match talent to roles can help alleviate worries and uncertainty around the future of their jobs as employees can view how their skills are independently valued by their employer. This encourages the workforce to be increasingly resilient and be ready to be redeployed into new areas and face the challenges in the job market.

Recognizing the financial value of skills through skills-based pay and compensation. Approximately 75% of executives and workers state that skills-based pay and transparency on what skills are worth in practice would be a positive development.⁵⁰ One method to address this can be to explicitly consider skills as a criterion for hiring and promotion decisions. Another, more experimental, method might be to base compensation entirely on an individual's skills portfolio, aligned to market value and the organization's requirements.⁵¹ In future, this approach might help to redefine jobs in the language of skills, with greater transparency and opportunity for individuals to reduce pay gaps by investing in their skills portfolio through reskilling and upskilling initiatives. However, the idea of pay-for-skills is still in its very initial stages, with a current lack of best practice examples on how to do so accurately and fairly.

CASE STUDY 9 Developing new career pathways to keep up with disruption (PwC)

PwC, a professional services network with offices in 152 countries and nearly 328,000 people, is on a journey toward becoming a skills-based organization, with skills flowing throughout the business and employee life cycles. This journey began with the organization's New World, New Skills initiative, PwC's commitment to digitally upskill individuals both inside and outside of their organization, and has continued through to their strategy, and The New Equation, to help clients build trust with their stakeholders and deliver sustained outcomes. The skills needed to solve clients' complex problems requires PwC to identify emerging and forward-looking skills, requiring constant upskilling and reskilling of their people.

As digital disruption continues to impact the market,

traditional hiring methods, skill sets and career paths have been disrupted as well, requiring not only new career paths, but new sources of talent. Development of these career paths is underway, with a technologist career path taking priority. The in-depth skills technologists require are critical to keeping pace with the level of change.

There are several territories within the PwC network that have begun rolling out new technologist career paths. These provide an opportunity for specialists to grow their careers with a different set of responsibilities and role names, marking the beginning of a broader career path evolution across the organization.

CASE STUDY 10 Understanding the skills base within the organization for better redeployment decisions (TechWolf)

TechWolf, an AI-based skills intelligence solution, helps organizations understand their skills landscape to make better business decisions. Many chief human resources officers (CHROs) lack a comprehensive view of their people's skills and, therefore, struggle to redeploy people with changing business needs. Recently, TechWolf worked with a Financial Services organization with inconsistent and poor-quality skills data that limited the leadership's capability to make decisions regarding workforce planning, internal mobility and training. The organization assessed that it had around 3,000 people in surplus but had insufficient information about possible redeployment options to minimize redundancies, They collaborated with TechWolf on a twostep solution:

 Connect the organization's skills supply to skill data: by utilizing TechWolf's vocabulary of 70,000 skills and the HR and learning data from the organization, TechWolf was able to analyse the current skills of the financial institution's employees.

 Connect the organization's skills demand to skill data: by linking the bank's job architecture to the skill data, TechWolf was able to model the future demands for jobs. This was a key input for redeployment of people as the language of skills could be used to connect vacant roles with potential candidates.

The introduction of this Al-based solution made it 80% faster for HR teams to identify redeployment opportunities. Within the first 3 months of implementation, 200 people had been redeployed within the bank. Additionally, TechWolf highlighted actionable skills gaps for individuals so the bank could provide targeted reskilling initiatives such as digital tools training.

Conclusion

A skills-first approach can bring economic growth, more equity and greater inclusion by recognizing and providing individuals with the necessary skills to succeed in a rapidly changing job market. Investing in a skills-first approach can help businesses and governments develop a highly skilled workforce that has access to better job opportunities and earning potential leading to a more innovative and prosperous economy and society overall.

For this to become a reality, collaboration and commitment is needed from both the public and private sectors so that policies and programmes are aligned in creating outcomes that support lifelong learning and skill development.

This report is part of the broader effort of the World Economic Forum's <u>Reskilling Revolution</u> initiative and is intended to provide a framework for action and collaboration for such change.

A subsequent report, to be released in early 2024, will further examine the potential macroeconomic and GDP benefits of implementing a comprehensive skills-first approach at scale, as well as expand on strategies for measuring its success.

Endnotes

- 1. Linkedin Economic Graph, 2023a.
- 2. World Economic Forum, 2023.
- 3. Buchanan and Kronk, 2022.
- 4. Esentire, 2023.
- 5. Hoff, 2023.
- 6. UNESCO Institute for Statistics, 2016.
- 7. World Health Organization (WHO), Health workforce, <u>https://www.who.int/health-topics/health-workforce#tab=tab_1.</u> <u>Accessed April 2023.</u>
- 8. ILO, 2022.
- 9. IRU, 2022.
- 10. Schlamp, 2023.
- 11. This report does not provide detailed implementation guidance from a human resources and corporate talent management perspective. Recent report and toolkits covering these issues include, e.g. Deloitte, 2022, and Markle, *Employer Toolkit: Empowering employers to adopt more equitable hiring practices*, <u>https://markle.org/employer-toolkit</u>.
- 12. KornFerry, 2018.
- 13. Fuller, et al., 2022
- 14. McKinsey &Company, 2022b.
- 15. Linkedin Economic Graph, 2023b.
- 16. Cantrell, et al, 2022.
- 17. OECD, 2023.
- 18. International Labour Office, 2008
- 19. Accenture, 2021.
- 20. IEA, 2021.
- 21. US Bureau of Labor Statistics, 2015.
- 22. UNICEF, Girls' education, <u>https://www.unicef.org/education/girls-education.</u> Accessed April 2023.
- 23. Goss, 2022.
- 24. World Economic Forum, 2020.
- 25. The International Labour Organization's ILOSTAT platform provides a comprehensive technical discussion of "labour underutilization" and its measurement: <u>https://test-ilostat.pantheonsite.io/resources/concepts-and-definitions/description-labour-force-statistics/.</u>
- 26. Pontefract, 2022; Cantrell, et al, 2022; DeNeve, 2023.
- 27. PwC, Reaching YES: Addressing the youth employment and skilling challenge, https://www.pwc.com/gx/en/issues/ upskilling/a-global-strategic-collaboration-with-unicef-and-genu/addressing-the-youth-employment-and-skillingchallenge.html.
- 28. Ibid.
- 29. Santa Maria, 2022.
- 30. See more about the Global Skills Taxonomy here: https://www1.reskillingrevolution2030.org/skills-taxonomy/index.html.
- 31. European Union, European Year of Skills, https://year-of-skills.europa.eu/index_en.
- 32. See more about ESCO here: https://esco.ec.europa.eu/en.
- 33. See more about Europass here: <u>https://europa.eu/europass/en.</u>
- 34. See more about Pact for Skills here: <u>https://pact-for-skills.ec.europa.eu/index_en.</u>
- 35. LinkedIn Economic Graph, 2023b.
- 36. Graduates First, *IBM Assessments Tests and Interviews: 2023 Full Guide,* <u>https://www.graduatesfirst.com/ibm-assessment-tests.</u>
- 37. UN High Commissioner for Refugees (UNHCR), *Figures at a Glance*, <u>https://www.unhcr.org/us/about-unhcr/who-we-are/</u><u>figures-glance</u>. Accessed April 2023.
- 38. One effort to address this issue using a skills-first approach is the World Economic Forum's Refugee Employment Alliance: https://www.weforum.org/projects/the-refugee-employment-and-employability-initiative.
- 39. Gaucher and Friesen, 2018.

- 40. | See more about ManpowerGroup here: https://manpowergroup.avature.net/welcomeus.
- 41. See more about Welcom.US here: <u>https://welcome.us/about.</u>
- 42. See more about SkyHive here: https://www.skyhive.ai.
- 43. Ingka, 2022.
- 44. See more about Partnership on Al here: <u>https://partnershiponai.org.</u>
- 45. Deloitte, 2022.
- 46. Clark, 2021.
- 47. See more about Archways to Opportunity here: https://www.archwaystoopportunity.com/about_archways.html
- 48. Linkedin Learning, 2023.
- 49. McKinsey & Company, 2022a.
- 50. Deloitte, 2022.
- 51. Bravery, Kate and Jean Martin, "Future-proof your organization: Spotlight on pay for skills", Mercer, 2022. <u>https://www.mercer.com/our-thinking/want-to-pay-for-skills-five-things-to-keep-in-mind.html.</u>

References

Accenture, Future Skills Pilot Report, 2021, https://www.accenture.com/_acnmedia/ PDF-149/Accenture-Future-Skills-Case-Study.pdf#zoom=50.

Bravery, Kate and Jean Martin, "Future-proof your organization: Spotlight on pay for skills", Mercer, 2022. <u>https://www.mercer.com/ our-thinking/want-to-pay-for-skills-fivethings-to-keep-in-mind.html</u>.

Buchanan, Joy and Henry Kronk, *The Slow Adjustment in Tech Labor: Why Do High-Paying Tech Jobs Go Unfilled?*, The Center for Growth and Opportunity at Utah State University, 2022, <u>https://www.thecgo.org/</u> <u>research/the-slow-adjustment-in-tech-labor-</u> <u>why-do-high-paying-tech-jobs-go-unfilled/</u>.

Cantrell, Sue, Robin Jones, Michael Griffiths and Julie Hilipakka, *The skills-based organization: A new operating model for work and the workforce*, Deloitte, 8 September 2022, <u>https://www2.</u> <u>deloitte.com/us/en/insights/topics/talent/</u> <u>organizational-skill-based-hiring.html</u>.

Clark, Dorie, "Google's '20% rule' shows exactly how much time you should spend learning new skills—and why it works", CNBC, 16 December 2021, <u>https://www.cnbc.</u> <u>com/2021/12/16/google-20-percent-</u> <u>rule-shows-exactly-how-much-time-you-</u> <u>should-spend-learning-new-skills.html</u>.

De Neve, Andreas, *Debunking the skill-based* organisation for business leaders, Techwolf, 2023, <u>https://techwolf.</u> <u>com/blog/debunking-the-skill-basedorganisation-for-business-leaders.</u>

Esentire, 2023 Official Cybersecurity Jobs Report, 2023, <u>https://www.esentire.</u> <u>com/resources/library/2023-official-</u> <u>cybersecurity-jobs-report.</u>

European Union, *European Year of Skills*, <u>https://</u> <u>year-of-skills.europa.eu/index_en</u>.

Fuller, Joseph, Christina Langer, Julia Nitschke, Layla O'Kane, Matt Sigelman and Bledi Taska, 2022, The Emerging Degree Reset, The Burning Glass Institute, <u>https://www.hbs.edu/managing-the-future-of-work/Documents/research/ emerging_degree_reset_020922.pdf</u>

Gaucher, Danielle and Justin Friesen, "Evidence That Gendered Wording in Job Advertisements Exists and Sustains Gender Inequality", *Journal of Personality and Social* Psychology, vol. 101, no. 1, 2018, pp. 109-128, <u>http://gender-decoder.katmatfield.com/</u> <u>static/documents/Gaucher-Friesen-Kay-</u> JPSP-Gendered-Wording-in-Job-ads.pdf.

Goss, Louis, "Consulting and finance firms hire more black candidates when using anonymous 'skills-based' tests in the hiring process", *City AM Daily*, 26 June 2022, https://www.cityam.com/black-candidatesmore-likely-to-get-hired-if-anonymous-skillsbased-tests-are-used-in-the-hiring-process/

Graduates First, *IBM Assessments Tests and Interviews: 2023 Full Guide*, <u>https://www.</u> <u>graduatesfirst.com/ibm-assessment-tests</u>.

Hoff, Madison, "Here's why now is the perfect time to find a new job", *Forum Agenda*, 7 February 2023, via LinkedIn, <u>https://www. linkedin.com/posts/world-economic-forum</u> from-a-wind-turbine-technician-to-a-remoteactivity-7033844938530283520-VBdj/.

Hunter, J. E. and R. F. Hunter, "Validity and Utility of Alternative Predictors of Job Performance", *Psychological Bulletin*, vol. 96, no. 1, 1984, pp. 72–98.

Ingka, "We knew we had to do something – we didn't want to wait" – IKEA Poland's work finding jobs for their displaced Ukrainian neighbours, 18 May 2022, <u>https://www. ingka.com/news/we-knew-we-had-todo-something-we-didnt-want-to-waitikea-polands-work-finding-jobs-for-theirdisplaced-ukrainian-neighbours/.</u>

International Energy Agency (IEA), Net Zero by 2050: A Roadmap for the Global Energy Sector, 2021, <u>https://iea.blob.</u> <u>core.windows.net/assets/deebef5d-</u> <u>0c34-4539-9d0c-10b13d840027/</u> <u>NetZeroby2050-ARoadmapfortheGlobalEnergySector</u> <u>CORR.pdf.</u>

International Labour Office, "Report V: Skills for improved productivity, employment growth and development", *International Labour Conference, 97th Session*, Geneva, 2008, <u>http://ilo.org/wcmsp5/groups/</u> <u>public/@ed_norm/@relconf/documents/</u> <u>meetingdocument/wcms_092054.pdf</u>.

International Labour Organization (ILO), Greater investment in care could create almost 300 million jobs [Press release], 7 March 2022, <u>https://www.ilo.org/</u> global/about-the-ilo/newsroom/news/ WCMS_838469/lang--en/index.htm.

- International Road Transportation Union (IRU), *Global driver shortages: 2022 year in review*, 22 December 2022, <u>https://</u> <u>www.iru.org/news-resources/newsroom/</u> <u>global-driver-shortages-2022-year-</u> <u>review#:~:text=In%20June%20</u> <u>2022%2C%20after%20surveying.over%20</u> 2.6%20million%20professional%20drivers.
- KornFerry, Futue of Work: The Global Talent Crunch, 2018, <u>https://www.kornferry.</u> <u>com/insights/this-week-in-leadership/</u> <u>talent-crunch-future-of-work</u>.
- Linkedin Economic Graph, *Global Green Skills* Report 2022, 2023a, <u>https://</u> <u>economicgraph.linkedin.com/research/</u> <u>global-green-skills-report</u>.
- Linkedin Economic Graph, *Skills-First: Reimagining the Labor Market and Breaking Down Barriers*, 2023b, <u>https://economicgraph.</u> <u>linkedin.com/research/skills-first-report</u>.
- Linkedin Learning, 2023 *Workplace Learning Report: Building the Agile Future*, 2023, <u>https://learning.linkedin.com/</u> <u>content/dam/me/learning/en-us/</u> <u>pdfs/workplace-learning-report/</u> <u>LinkedIn-Learning Workplace-Learning-</u> <u>Report-2023-EN.pdf</u>.
- Markle, Employer Toolkit: Empowering employers to adopt more equitable hiring practices, https://markle.org/employer-toolkit.
- McKinsey & Company, Human capital at work: The value of experience, 2022a, <u>https://</u> www.mckinsey.com/capabilities/ people-and-organizational-performance/ our-insights/human-capital-atwork-the-value-of-experience.
- McKinsey & Company, *Taking a skills*based approach to building the future workforce, 2022b, <u>https://www.</u> mckinsey.com/capabilities/people-andorganizational-performance/our-insights/ taking-a-skills-based-approach-tobuilding-the-future-workforce.
- Organisation for Economic Co-operation and Development (OECD), "Using people's skills more effectively to raise productivity in Tlaxcala, Mexico", in OECD Skills Strategy Tlaxcala (Mexico): Assessment and Recommendations, OECD Press, 2023, <u>https://www.oecd-ilibrary.org/</u> sites/5ac9bb58-en/index.html?itemId=/ content/component/5ac9bb58-en.
- Pontefract, Dan, "It's About To Happen: The Shift From Jobs To Skills-Based Organizations", *Forbes*, 7 October 2022, <u>https://www.forbes.com/sites/</u> <u>danpontefract/2022/10/07/its-about-to-</u>

happen-the-shift-from-jobs-to-skills-basedorganizations/?sh=22ab6a5b6b7a.

- PwC, Reaching YES: Addressing the youth employment and skilling challenge, https://www.pwc.com/gx/en/ issues/upskilling/a-global-strategiccollaboration-with-unicef-and-genu/ addressing-the-youth-employmentand-skilling-challenge.html.
- Santa Maria, Anthony, "Go Skills-First with a Skills Taxonomy", *Linkedin Talent Blog*, 22 February 2022, <u>https://www.linkedin.</u> <u>com/business/talent/blog/learning-and-</u> <u>development/build-or-buy-skills-taxonomy.</u>
- Schlamp, Peter, "A.I. is a must for skillsbased organizations that want to move at the speed of future business", *Fortune*, 18 February 2023, <u>https://fortune.com/2023/02/17/</u> <u>workday-future-business-skills/</u>.
- UNESCO Institute for Statistics, *The World* needs almost 69 million new teachers to reach the 2030 Education goals, 2016, https://unesdoc.unesco.org/ark:/48223/ pf0000246124#:~:text=ln%20the%20 next%2014%20years,44.4%20million%20 secondary%20school%20teachers.
- UN High Commissioner for Refugees (UNHCR), *Figures at a Glance*, <u>https://www.</u> <u>unhcr.org/us/about-unhcr/who-we-are/</u> <u>figures-glance</u>. Accessed April 2023.
- UNICEF, *Girls' education*, <u>https://www.</u> <u>unicef.org/education/girls-education</u>. Accessed April 2023.
- US Bureau of Labor Statistics, "People with a disability less likely to have completed a bachelor's degree", TED: *The Economics Daily*, 20 July 2015, <u>https://www.bls.gov/opub/ted/2015/</u> people-with-a-disability-less-likely-to-havecompleted-a-bachelors-degree.htm.
- World Economic Forum, Diversity, *Equity* and Inclusion 4.0, 2020, <u>https://</u> www3.weforum.org/docs/WEF NES DEI4.0 Toolkit 2020.pdf.
- World Economic Forum, Jobs of Tomorrow: Social and Green Jobs for Building Inclusive and Sustainable Economies, 2023, <u>https://www.</u> weforum.org/whitepapers/jobs-of-tomorrowsocial-and-green-jobs-for-buildinginclusive-and-sustainable-economies.
- World Health Organization (WHO), *Health workforce*, <u>https://www.who.int/health-topics/health-</u> <u>workforce#tab=tab_1</u>. Accessed April 2023.

A Framework for Action

Contributors

Putting Skills First: A Framework for Action is an Insight Report published by the World Economic Forum's Centre for the New Economy and Society, in collaboration with PwC.

Project Team

World Economic Forum

Deema Alhadrami HR Analyst, Saudi Aramco; seconded to the World Economic Forum

Till Leopold Head of Mission, Education, Skills & Learning, World Economic Forum

Aarushi Singhania Mission Specialist, Education, Skills & Learning, World Economic Forum

PwC

Miral Mir Senior Associate, PwC UK; seconded to the World Economic Forum

Bhushan Sethi

Partner, PwC Strategy&; Adjunct Professor NYU Stern School of Business

Yalin Zhao

Senior Manager, PwC UK; seconded to the World Economic Forum

We are grateful to our colleagues in the Centre for the New Economy and Society, especially to: Attilio Di Battista, Eoin Ó Cathasaigh, Genesis Elhussein, Tarini Fernando, Sam Grayling, Elselot Hasselaar, Dorsey Lockhart, Ostap Lutsyshyn, Gulipairi Maimaiti, Mark Rayner, Tanya Milberg, Pearl Samandari Massoudi, Andrew Silva and Saadia Zahidi.

We are also extremely grateful to colleagues at PwC for insights and support: Rachel Bridge, Peter Brown, Bethan Grillo, Christie Maliyackel, James Morris and Andrea Plasschaert.

Thank you to our report governance colleagues at the World Economic Forum as well as to Mike Fisher and the team at Accurat for their superb editing and layout of this report.

Acknowledgements

The World Economic Forum would like to thank the members of the Chief Learning Officers community as well as representatives of its Reskilling Revolution Champions community, Future Skills Alliance, Skills Accelerators, and Global Future Council for Education and Skills, without whose insights, expertise and commitments this report would not have been possible. In addition, we would like to extend our warm thank you to Andreas De Neve, Co-Founder & CEO, Techwolf; Sean Hinton, Founder & CEO, SkyHive Technologies; Tamar Kitiashvili, Director-General, Skills Agency Georgia; Jan Owen, Co-Convenor, Learning Creates Australia; and Ravin Jesuthasan, Global Leader Transformation Services, Mercer for their valuable insights. Thank you also to the many additional experts and colleagues who provided input and helped shape this publication along the way.

Community of Chief Learning Officers

Amanda Vaughan Group Head, Talent & Learning, AXA SA

Amy Regan Morehouse Senior Vice-President, Trailhead

Anna Moulton Group Human Resources Director, Dentsu Inc.

Bronwyn Tinker-Kelly Global Head Learning, Kearney Inc.

Catherine Cape Global Head of Learning, Deutsche Bank AG

Catherine Thibonnet Chief Learning Officer, Natixis SA

Christophe Lanne Chief Transformation Officer, Natixis Investment Managers

Daniela Proust Senior Vice-President; Head, Global Learning and Growth, Siemens AG

David Armstrong Vice President/Learning Officer, WorldQuant LLC

David Morris Global Head, People Capability, HSBC Holdings Plc

Gosia Prior VP Organizational and Talent Transformation, Rockwell Automation Inc.

James Fulton Global Head of Talent and Chief Learning Officer, The Goldman Sachs Group Inc.

Kathy Kavanagh Global Learning & Development Leader, PwC

Kelly Palmer Chief Learning & Talent Officer, Degreed Inc

Lieven De Groodt

Lisa Melo Vice-President, Learning and Performance, RBC Financial Group

Liz MacGillivray Chief Learning Officer, Marsh McLennan

Maurice Collis Vice-President, Leadership and Organization Development, Agility

Melissa Giles Vice President, Learning & Organizational Development, Culture Amp

Oskari Asunta Vice President, Learning & Development, Bain & Company

Patrick Hull Vice-President Global Learning and Future of Work, Unilever

Ramona Arora Vice President, Global Learning & Development; Chief Learning Officer, Dell Technologies

Sally Henderson Global Head of Talent and Learning, Zurich Insurance Group

Sami Al Murshed Vice President, Training and Development, Saudi Aramco

Shannon Custard Manager, Global Competence Development, Ingka Group (IKEA)

Simon Bastian Director, Talent Development, Infrastructure Functions, Deutsche Bank AG

Simon Brown Chief Learning Officer, Novartis AG

Syneathia LaGrant Vice President, Learning & Leadership Development, ManpowerGroup Inc.

Tobias Möckel Head of Organizational Learning & Leadership, Merck KGaA

Zahed Kamathia Vice-President, Global Head of Talent, The LEGO Group A/S

Putting Skills First: A Framework for Action 29



COMMITTED TO IMPROVING THE STATE OF THE WORLD

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

The Forum engages the foremost political, business and other leaders of society to shape global, regional and industry agendas.

World Economic Forum

91–93 route de la Capite CH-1223 Cologny/Geneva Switzerland

Tel.: +41 (0) 22 869 1212 Fax: +41 (0) 22 786 2744 contact@weforum.org www.weforum.org