

SKILLS FIRST FOR INCLUSIVE AND EFFICIENT LABOUR MARKETS



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Abstract

Skills-based approaches are growing in popularity as a way to alleviate skills shortages, unlock hidden talent and increase the diversity of the workforce. This paper describes the challenges of skills-based approaches and includes a set of actions for employers, training providers, social partners and governments looking to implement the approach. The evidence gathered suggests that skills-based approaches require time and investment but, when adopted and implemented successfully, can yield positive results. When embarking on their skills-first journey, organisations can make small and gradual adjustments to their recruitment and hiring practices, training, performance management and leadership style, while governments can strengthen underlying frameworks and systems to support a more inclusive skills-first labour market.

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Introduction

A ‘skills-based’ – or ‘skills-first’ – approach focuses on skills themselves rather than on how they have been acquired. Organisations that employ this approach prioritise skills, competencies and abilities over education, qualifications and work experience. The concept emerged first in recruitment processes to help alleviate labour shortages by allowing firms improved access to underutilised talent, helping to match workers to roles based on their abilities. Gradually, the approach spread to other firm practices, and wider organisational policies have shifted their focus to employees’ skills to support a culture of skills-based career progression and lifelong learning. A skills-based approach is also used nowadays in the development of new training programmes to design and deliver targeted, more future-ready learning programmes, and in career guidance to facilitate better matches between jobseekers and employers.

In recent years, skills-based approaches have been growing in popularity. Take-up of the approach has particularly accelerated post-pandemic, with acute labour shortages challenging many organisations, prompting them to consider more innovative approaches to hiring talent. In 2022, one in four job postings on LinkedIn in the United States did not require a degree, an increase from 15% in 2020 (LinkedIn, 2023^[1]). A similar finding applies to jobs ads more broadly, with a sizeable portion of occupations seeing a reduction in degree requirements in recent years (Emsi Burning Glass, 2022^[2]). In parallel, more employers are recognising the value of alternative credentials. Many large technology companies have also announced their commitment to prioritise skills over degrees in IT occupations (Emsi Burning Glass, 2022^[2]).

In general, support for the approach is strong – about 80% of employers believe in prioritising skills over qualifications in the United States (American Student Assistance and Jobs for the Future, 2022^[3]). There is even support for the approach at top levels of government – in early 2021, the United States government released a memorandum to limit the use of educational requirements in federal contracts of IT service workers (United States Executive Office of the President, 2021^[4]). A number of American states – including New Jersey, Maryland, Colorado and Pennsylvania – have recently removed degree requirements for most government jobs. Nonetheless, existing challenges limit a more widespread adoption of the approach.

This paper describes the benefits and challenges of a skills-based approach, and highlights best-practices in organisations across the OECD that are successfully implementing the approach. The evidence gathered points to the fact that organisations pivoting towards a skills-based model should consider hybrid approaches and make small adjustments as they begin their skills-first journey, while governments, training providers, social partners and public employment services should reflect on how they can better support a skills-first labour market. Overall, this paper presents evidence that skills-based approaches require time and investment but when adopted and implemented successfully, can yield positive results.

Key policy messages

- Employers looking to implement a skills-based approach should engage with skills intelligence tools, inclusive hiring software and skills-based matching platforms when writing job descriptions, advertising positions and finding talent.
- Employers can consider developing talent acquisition programmes or partnering with non-profit organisations and training institutions to develop alternative entry pathways.
- Employers should engage with skills-based assessments and a range of inclusive hiring techniques to expand talent pools and accurately screen for and assess candidate skills.
- Employers should adopt a lifelong learning mindset and seek-out appropriate training opportunities for employees, including through the use of project-based work and facilitating internal worker mobility to expand on-the-job skills development.
- Employers who wish to expand their adoption of skills-based approaches can consider tying employee progression and promotion decisions to skills, and where needed, training managers to ensure they are well-equipped to lead skills-based appraisal conversations.
- Training providers should expand programme delivery options to include shorter, more targeted, modular, asynchronous and online learning options to improve flexibility in adult learning provision and boost participation in training, especially amongst under-represented groups.
- Training providers should engage employers and social partners in the design of training courses to ensure curricula remain relevant to industry needs. They can also collaborate with employers to place learners into firms to facilitate better skills-matches and improve practical training.
- Training providers should establish internal quality assurance mechanisms to ensure skills-based training is of high standard.
- Governments should conduct quality assurance of training providers and develop training regulations to maintain minimum training standards.
- Governments should establish an efficient system for the validation of non-formal and informal learning system to facilitate employers' recognition of employees' skills.
- Public employment services should match jobseekers to employers based on skills and can engage with advanced technologies like artificial intelligence to better conduct this matching.
- Public employment services should train their career guidance counsellors on how to write skills-based resumes and conduct skills-based assessments to better service jobseekers and employers.
- Trade unions, social partners and public employment services can all contribute to the generation and dissemination of skills intelligence by identifying skill needs and labour market trends.
- Trade unions and social partners should play a greater role in addressing skills-based approaches in collective bargaining agreements and voicing the concerns of workers especially regarding skills-based progression and pay.
- All stakeholders should expand data collection efforts to better track performance and evaluate the success of skills-based approaches.

Fostering talent through skills-based approaches

Unlocking hidden talent by prioritising skills

Adopting a skills-based hiring approach can help firms access previously underutilised talent. The removal of formal degree requirements for certain roles, recognising non-standard learning pathways and relying on skills-based assessments during recruitment increases opportunities for candidates from non-traditional backgrounds to apply for vacancies. This allows candidates with alternative credentials – who are more often than not from non-traditional backgrounds – to be considered equally to candidates with formal qualifications.

LinkedIn estimates that in roles where women are underrepresented, the proportion of women in the talent pool could increase by 24% more than it would for men with a skills-first approach, suggesting that underrepresentation is not merely due to skills shortages amongst women (LinkedIn, 2023^[11]). In the technology, information and media industry, this figure is 14%. More generally, many employers report difficulties in hiring entry-level talent, but one survey finds that simply removing strict qualification or work experience requirements can immediately boost the pool of applicants, helping to build a true entry-level talent pipeline (Generation, 2023^[5]).

Skills-based hiring may be particularly beneficial for younger workers who have less formal work experience. Some evidence suggests that skills-based hiring can increase the talent pool of Gen Z workers (born between 1997 and 2012) even more than for Gen X (born between 1965 and 1980) or Millennials (born between 1981 and 1996), facilitating a quicker transition into the labour market from education (LinkedIn, 2023^[11]). A recent survey of employers in the tech sector found that about one-quarter had recently removed education or work experience requirements for entry-level tech roles – a move which will likely benefit younger workers (Generation, 2023^[5]). Moreover, other groups like foreign-born individuals may stand to benefit from this approach – newly arrived migrants with international qualifications that have not yet been formally recognised may be able to enter the labour market more quickly upon arrival.

With a skills-based approach, the increase in the global talent pool could be significant. Using a sample of 18 countries, recent estimates suggest as much as 100 million workers could be added to the global workforce through a skills-first approach (World Economic Forum, 2023^[6]). Regional estimates suggest that some countries stand to benefit relatively more if skills-based approaches were scaled-up on a larger scale – for example, the talent pool in the United States could increase by almost 20% (LinkedIn, 2023^[11]). This is likely because many candidates have the right skills but do not possess a college degree or have not accrued traditional work experience.

Current skills shortages can act as a strong incentive for more firms to adopt a skills-based approach. The technology sector in particular not only has one of the biggest skills shortages right now, but is also expected to have significant shortages in the future with the demand for ICT specialists expected to outstrip supply in the coming years (International Labour Organization, 2020^[7]). Across the OECD, cognitive, digital and scientific knowledge skills – skills highly related to technology and STEM careers – are in shortage (OECD, 2023^[8]). Firms looking for workers with these skills could benefit greatly from a skills-based hiring approach.

Fostering financial benefits and lifelong learning through a focus on skills

Rather than emphasising formal qualifications and previous job titles, skills-first hiring focuses on assessing whether a candidate has the right skills for the job. By highlighting skills themselves, rather than how they were acquired, firms can acquire better quality matches. Evidence suggests that organisations with skills-first practices are over 60% more likely to achieve positive workplace results – they are more likely to innovate, improve processes to maximise efficiency, and anticipate and respond to change effectively – than firms who have not adopted such practices (Deloitte, 2022^[9]).

In addition, workers are also more likely to state that they would be attracted to and remain in an organisation that makes key personnel decisions based on skills and capabilities, rather than job titles and degrees (Deloitte, 2022^[9]). Organisations adopting skills-first approaches are more likely to retain high performing employees and deliver a positive and inclusive workplace environment. Survey data indicates that over 90% of employees state that they would stay at a company longer if it invested more in their careers (LinkedIn, 2018^[10]). Workers employed under skills-based approaches can be top performers at work with skills being a better predictor of job performance than education or work experience. Furthermore, some employer surveys state that experienced workers without college degrees were often considered just as productive as their college-educated counterparts, and have lower turnover rates, reducing costs for firms (Harvard Business School, 2017^[11]).

More generally, skills are strongly linked to firm productivity. Greater gender and cultural diversity in the workplace – particularly at the managerial level – is associated with higher productivity within firms (Criscuolo et al., 2021^[12]). Because firms that employ skills-first hiring are more likely to employ staff from diverse backgrounds, they in-turn are likely to reap the financial benefits. Sectors that struggle with diversity issues (such as the STEM industries) can stand to benefit financially from adopting a skills-first approach.

For many firms, a greater focus on skills goes beyond recruitment. Building a skills-based culture also affects workers' career development, performance and progression. Skills-based policies democratise opportunity when progression and promotion decisions are tied to skills rather than tenure or experience, improving employee satisfaction. Firms that prioritise skills and competencies (over other factors like tenure) during promotion decisions may have better quality managers. Better quality leadership, in-turn, affects firm financials, with management quality and level of training linked to firm productivity (Criscuolo et al., 2021^[12]). Overall, greater employee satisfaction with progression opportunities builds better, more positive workplace environments.

With a greater focus on skills, firms are also more likely to invest in their employees' learning and development by providing meaningful on-the-job training or expanding opportunities to engage in external training. Building a skills-first culture requires firms to assess and anticipate their skill needs, and appropriately train their workers when they identify skills gaps. This is particularly important in the context of both the green and digital transitions, with firms needing to invest more in training to ensure their workers skills are in-line with changes in future skill requirements. For instance, given the high speed of technological development, ICT specialists will need to participate more frequently in ongoing training than specialists in other fields (International Labour Organization, 2020^[7]). Training providers who use a skills-based approach in the development of their learning programmes are also able to design and deliver more relevant, future-focused learning, helping to close skills gaps in the workforce. Moreover, a skills-first culture can alter the way work is conducted within organisations. When encouraged to undertake new tasks and projects to develop their skills, workers continuously learn and strengthen their abilities while they are at work.

Adopting a skills-based strategy

To operationalise a successful skills-based culture and support a lifelong learning mindset, organisations will need to make several changes. Governments can support the work of firms by providing the frameworks and systems necessary for a skills-focused labour market. Case studies and practical examples included in this paper draw on the results of the 2023 OECD Survey of Skills-Based Approaches (see Box 1 for more details), additional OECD research and bilateral discussions with organisations.

Box 1. OECD Survey of Skills-Based Approaches

In July 2023, the OECD launched an online survey on skills-based approaches. Open to organisations in the private and non-profit sector, training providers and trade unions, the purpose of the survey was to understand how institutions use the approach, what changes they made to their practices in order to employ the approach, and any challenges and success factors they identify. For organisations that do not use the approach, a question regarding barriers to adoption was asked. Additionally, training providers were asked whether they believed the adult learning landscape is ready for a skills-based approach. In total, 50 organisations submitted a complete response, of which 42% are in the private sector, 18% are non-profit organisations, 16% are training providers, and 24% are other or not identified. The main findings of the research are the following:

- Around three-quarters (74%) of all surveyed organisations have heard of the approach and over half (62%) use the approach. Many organisations use the approach in training and development (33%), while some also use it for hiring and recruitment (17%), and promotion and progression (17%). Some organisations report utilising the approach across almost all areas of their operations (13%).
- When developing the approach, many organisations consulted their existing staff, though a few also reached out to other stakeholders (including other organisations using the approach, training providers, guidance services, and government or employment services).
- For those that employ the approach, organisations report reforming their recruitment processes (for example, through the introduction of assessment centres and online technical or other practical tests) and developing skills-based training programmes for their employees. A few leading organisations report making changes to their employee progression processes including the use of personalised skills development plans.
- Many organisations report a need for staff and leaders to adopt a change of mindset in order to foster greater support for the approach. Organisations recognise that there needs to be greater recognition of skills gained in non-traditional ways, and managers need to better embrace a mindset of continuous learning to successfully adopt the approach.
- Furthermore, training providers believe more can be done to ensure adult learning provision is well-equipped for a skills-first world, including aligning programmes to evolving skill needs and a move towards practical, project-based learning.

Deconstructing job roles based on skills

In order to properly understand the skill needs of their workforce, firms first need to take stock of the current roles offered by their organisation. Firms looking to kick-start their skills-first journey should begin by undertaking a review of the current roles in their organisation to identify which ones may be better suited for a skills-first approach (see Box 2). An extensive skills audit will help employers identify which positions may no longer strictly require a qualification. Some roles, particularly entry level positions, may be better suited for the approach than others, and many roles, especially for occupations that have specific licensing or regulatory requirements, will still require qualifications. Thus, firms may need to adopt a hybrid approach, recognising that a skills-based hiring policy complements but does not replace existing recruitment methods.

Box 2. A successful skills-first strategy begins with an extensive skill audit

IBM first adopted a skills-based approach in the United States over a decade ago, in response to a shortage of skilled workers in the technology sector. They started with an extensive review of all job descriptions at the company. Human resource leaders at IBM engaged with business units across the company to understand the knowledge and skills required for specific roles, before re-writing job descriptions that emphasised abilities over credentials. They then conducted some proof-of-concept hiring before expanding the approach across the organisation. While at the time almost all roles at IBM required a college degree, now more than half of IBM's job postings in the United States do not include a college requirement and 20% of their American hires do not have a college degree. As a result of this change, IBM now receive 63% more applications from underrepresented groups (IBM, 2022^[13]; IBM, 2023^[14]).

During this process, employers may engage with skills analysis tools to better understand the current and future skill requirements of their workforce. Indeed, across the OECD, many private and public institutions have joined forces in the past few years to forecast skill needs. For instance, in Finland, numerous employers' representatives, trade unions, and training and education providers are part of skills councils, whose role is to forecast how sectoral evolutions will impact skills needs. Firms can build their own internal skills intelligence systems, or collaborate with other firms to do so (see Box 3). They can also rely on external sources for skills intelligence, such as LinkedIn's Talent Insights, which uses real-time data to provide labour market and skills insights including information on skills trends. It also allows firms to assess the skills of their talent marketplace, and helps firms source skilled talent by connecting jobseekers with job posts based on skills information. Publicly provided tools are mentioned in the last section of this paper.

After job titles are mapped to skill needs, job descriptions for skills-first roles should be re-written to highlight the skills necessary to perform well in a role. When writing skills-based role descriptions, employers may consider utilising a skills framework or taxonomy – internationally recognised ones include the European Skills, Competences and Occupations (ESCO) classification, the Occupational Information Network (O*NET) database, and the World Economic Forum's Global Skills Taxonomy, which builds on both ESCO and O*NET to integrate additional emerging skills (World Economic Forum, 2021^[15]). Relevant to the technology sector, the Skills Framework for the Information Age (SFIA) Foundation provides a global skills and competency framework for the digital world.¹ Adopting a common skills taxonomy within a firm allows employers to identify the skills of their workers in a more standardised way, and allows them to assess how easily workers can move across different roles within the company. Small and medium-sized

¹ More information on the SFIA Foundation can be found here: <https://sfia-online.org/>.

firms can particularly benefit from existing frameworks to avoid using limited resources to develop and maintain their own.

Some firms may still require external guidance to better understand how to write a skills-based job description. To fulfil this gap in the market, private consulting firms such as Grads of Life in the United States provide companies with advice on and tools to successfully implement a skills-first strategy. Businesses can consider outsourcing their skills intelligence by utilising existing data-backed taxonomies, such as the one developed by SkyHive. Smaller firms who do not have the resources to do so can consult industry associations who may have existing labour market information to share free of cost. Some non-profit organisations such as Jobs for the Future also provide support for employers looking to scale-up their skills-based policies, including assessment tools for companies to identify their skills-first readiness.

Box 3. Industry collaboration accelerates understanding of skill needs

Unilever and Walmart ran a three-month joint skills pilot programme from December 2020 to February 2021 to understand how the companies can unlock hidden skills, better prepare their workers for the future, and facilitate worker mobility based on skills. With the help of Accenture and SkyHive, part of this work was to identify the skillsets of declining and emerging jobs, how much they overlap, and which skills would need to be acquired for workers to move between roles. Job roles at Unilever and Walmart were broken down into their component parts – roles are viewed as a collection of skills – and after doing so, skills gaps between different roles were found to be less wide than expected; it would only take six months for staff to be reskilled for new roles in different functions (Accenture, 2021^[16]). This type of data-backed work helps to eliminate biases regarding job mobility and allows for the expansion of career pathways. Unilever continues to use artificial intelligence to identify the skills their employees have and will need in the future.

When writing job ads, firms should consider the use of anti-bias and inclusivity screening tools. These tools screen for non-inclusive language and can make text recommendations to reduce bias in job postings. The use of such tools encourages inclusive hiring, improving the diversity of the candidate pool. For instance, Gender Decoder is a linguistic decoder that screens text for masculine-coded language. Some tools go beyond job ads, like Textio, which scans text written for performance management purposes to ensure managers provide bias-free and effective feedback to their employees. Moreover, Applied is an ethical recruitment software which provides an inclusive job description tool, alongside their core product offerings which assess candidates' skills and help firms predict their best hire.

Identifying new channels for a better candidate-to-job match

Whilst skills-based approaches help facilitate better employee-employer matches, employers may need to find new ways to find the right talent. Both workers and firms can exploit matching platforms and sites that recommend roles based on skills in order to find their optimal skills match. Some private sector solutions, described in Box 4, can facilitate this matching process, though users should be aware that, given such platforms are typically subscription-based (for both employers and workers), only a select pool of roles will be available through such platforms. Jobseekers and employers can also engage with the services of their national or sub-national public employment service – some agencies match people to roles based on skills.

Box 4. Linking people to jobs: Subscription-based skills matching platforms

The Workday Skills Cloud is an example of a private sector solution which facilitates skills-based matching of workers to jobs. This cloud-based system leverages a rich database to infer workers' skills and provides skills suggestions. Jobseekers are able to view their skills dashboard, which provides insight into skills they have acquired or lost, and how their skills compare to the skills needed for a particular role. Human resource managers can use the platform to gain insight into skills trends, gaps, and supply and demand.

Abodoo's Skills Passport is a platform that allows individuals to capture and collate information on their technical (hard) skills and transversal (soft) skills, plus other details about their work experience. The Skills Passport comes with an integrated personalised learning engine, where more than 10 000 learning and development programmes across the European Union can be connected and recommended to users based on the career pathways they wish to pursue. Individuals can update their profile with any newly acquired skills each time they undertake a new course. The Skills Passport is portable, accessible through a unique QR code and remains with the candidate for the duration of their training and employment journey. Users will see job and career matches that are only above a 50% fit for their skills, and other important attributes they seek in a role (such as location, benefits and working model). This feature helps workers identify the most suitable career path based on their current skills and interests. Likewise, employers can see their best skills-match (in an anonymised way) and can invite candidates to interview using the platform.

Employers may consider developing specific talent acquisition programmes to find the most suitable employees. These programmes or recruitment campaigns – such as the one described in Box 5 – focus on hiring talent with the right skills, even if they have acquired these skills in non-traditional ways. To ensure the success of these programmes however, more employers need to recognise the value of learning acquired through alternative methods. The vast majority of employers in the United States (80%) believe that organisations need more information on how alternative pathways differ from traditional pathways (American Student Assistance and Jobs for the Future, 2022^[3]). These firms may thus need to actively engage in seeking out more information to understand how non-degree learning paths build skills. Managers may require personalised coaching and guidance services to tackle pre-conceived perceptions and biases and build their understanding of non-traditional pathways.

Box 5. Skills-based recruitment drives help hire diverse talent

Increasingly, more companies are creating alternative recruitment pathways to hire and train diverse workers. Talent acquisition programmes such as Workday's Opportunity Onramps use a skills-based approach to source talent, and provide training, internships and job opportunities to jobseekers from non-traditional backgrounds. The programme expands pathways for individuals who have not undertaken traditional college education but have acquired skills through alternative routes, such as through bootcamp courses. Workday states that 16% of all their 2022 hires for entry to mid-career roles in the United States came through the Opportunity Onramps programme, which sets them on track to achieve their goal of 20% by the end of 2023 (Workday, 2023^[17]). Alongside Opportunity Onramps, Workday also has other talent acquisition programmes for untapped talent, including an early career internship for technical roles where they partner with technical training courses to access skilled talent pools. The entire cohort of 2022 early talent interns has since been converted to a full-time position (Workday, 2023^[17]).

Adapting recruitment and assessment techniques for skills-first hiring

As firms begin to prioritise candidates' skills over their qualifications, their recruitment practices need to evolve. Traditional screening methods tend to rely heavily on screening for candidates' qualifications or experience and are thus not well suited for skills-based hiring. Instead, firms can broaden the range of their recruitment techniques by exploring the use of practical assessments, group assessment centres, and skills or competency-based interviews. Other inclusive hiring techniques include reviewing portfolios of past work, providing anti-bias training to recruitment panels, using blind CV software, and asking applicants to not reveal personal or demographic information on their application (Generation, 2023^[5]).

These techniques screen candidates for their capabilities and help employers test for the specific skills that are needed in a role. They are also less likely to invite discrimination and bias – Generation's survey of employers in the technology sector found that when reviewing blind resumes, employers were equally likely to offer an interview to candidates with a degree than to those with a (non-degree) certification (Generation, 2023^[5]). This finding challenges the long-held assumption that candidates with formal qualifications have more skills or are better suited for jobs.

Nonetheless, assessing and validating candidates' skills was reported as the biggest hiring challenge faced by employers trying to implement a skills-based approach in a 2021 private sector survey (McKinsey, 2022^[18]). Some employers are thus lacking the confidence to and knowledge of how to design effective assessment methods to validate a candidate's proficiency in certain skills. Some paid, private sector solutions exist – a few examples are noted in Box 6 – to help employers embark on their skills-first journey. Some of these solutions are supported by artificial intelligence and may help to assess candidates' skills in an accurate and unbiased manner.

Box 6. Subscription-based solutions for talent acquisition and skills assessment

Employers may consider engaging with the services of online platforms to find, hire and assess potential employees. For instance, Vervoe helps firms to develop unique skills assessments and work simulations to predict candidates' job performance, based on their library of over 300 skills assessments. Backed by artificial intelligence, the site grades and ranks candidates based on their performance in the skills tests. CodeSignal provides technical interview and assessment guidance for employers in the technology sector, including the use of coding tests. Their assessment process exposes candidates to a rotating and large set of questions, and together with other anti-cheating mechanisms, aims to ensure rapid and effective technical skill screening. Pymetrics provides employers with a skills-based applicant screening process to identify good skills matches, and a quantitative reasoning assessment for employers looking to fill analytical and finance roles. For workers, it is also a matching platform which links jobseekers with roles based on soft and hard skills matches and provides users with personalised course recommendations to close skills gaps. Furthermore, to support jobseekers in preparing for technical assessments, sites like Interviewing.io facilitate anonymous mock interviews with engineers from top technology companies (e.g., Amazon, Google and Facebook).

Alooba is a start-up founded in 2019 which offers clients a CV screening service and assessments made to test and validate candidates' data and analytics skills. Particularly relevant for employers in technical and quantitative fields, the assessments test and validate candidates' proficiency across 50+ technical skills, including for roles in data science, data analytics and data engineering. The service helps remove unconscious bias from the screening process by objectively pre-screening candidates – candidate cloaking hides applicants' personal information, reducing the likelihood of discrimination and bias during recruitment. Employers can customise their desired candidate skills assessment by integrating their own questions with Alooba's database.

On the worker side, jobseekers will need to prepare for a skills-based hiring process by developing a skills-based CV, and should identify other ways to market their skills, for example through the use of a digital skills product. They may reach out to career guidance services for resume, interview and career advice. Over the past decade or so, several public employment services have started matching jobseekers to vacancies based on skills – for example, this is the case in Belgium and France (see Box 7), as well as in Germany, Denmark and the Czech Republic (European Commission, 2014^[19]). Skills-based matching has the potential to improve the accuracy of candidate-to-job matches and broadens career pathways for jobseekers who are encouraged to explore the transferability of their skills to new occupations. Public employment services across Europe generally have well-established skills-based profiling and assessment tools which help jobseekers understand their skill sets and skills gaps (European Commission, 2023^[20]). Despite these advances, guidance counsellors across OECD countries can be better trained to deliver targeted, skills-based guidance, including advice on how to perform skills-based assessments and interviews, and potentially how to use advanced technology to conduct better skills matches. Agencies can consider the use of artificial intelligence algorithms – very few across Europe have done so thus far – to better match jobseekers to employers using skills intelligence (European Commission, 2022^[21]).

Box 7. Public employment services delivering skills-based advice

Over the past few years, Pôle Emploi, the French public employment service, has reduced its reliance on CVs. Whilst jobseekers can still choose to provide their CV to an employer, Pôle Emploi has developed a ‘business card’ for each jobseeker which showcases their skills, including any detailed technical or soft skills. Skills are at the core of a French jobseeker’s profile – career counsellors are guided by a system which matches jobseekers’ skill profiles to new job openings. Additionally, in March 2023, Pôle Emploi launched a significant reform of its catalogue of job profiles (called ROME 4.0). Now, job profiles are constructed using a skills-based approach, thereby emphasising the key role that skills, knowledge and abilities play in each occupation. This new format aims to facilitate the transferability of skills across sectors and occupations, stressing how jobseekers can build their careers by focusing on their skills regardless of what their previous field of work was.

Le Forem, the public employment service of Wallonia in Belgium, matches job vacancies with jobseekers using a skills-based approach. Jobseekers engaged with Le Forem’s services are asked to provide information about their skills in a particular occupation. Employers are also asked to include details of the skills required for a position in their job advertisements. The agency has transitioned from a system based on job title, experience and expected education, to a more complex, skills-based system, where skill demand and supply is at the centre of the matching process. Based on artificial intelligence technology, Le Forem collects personal characteristics and skills information for each jobseeker, and use them, combined with skills-based testing, to build the jobseeker’s professional profile and skills portfolio. This is used to provide training and career guidance support. The data is available to jobseekers via a secure ‘personal space’, where jobseekers can also find a tool for an online skills assessment (European Commission, 2023^[20]).

Public employment agencies across Europe have been using a range of skills-based assessments and profiling tools for some time. The skills-based assessments procedure conducted by the public employment service in Denmark, for instance, is quite extensive. It involves: 1) a counselling and placement interview (to record vocational, language and soft skills in a placement software); 2) a work placement (which measures vocational skills with the help of an employer or a training institute); and 3) a psychological assessment (used to assess aptitude, motivation, interdisciplinary skills and digital skills). Some agencies utilise assessments for specific skills. For example, Pôle Emploi in France exploits a tool called Pix Emploi to evaluate basic digital skills. Pix Emploi is a short online test with 20 questions based on the EU Digital Competence Framework, focusing on skills like sending and

receiving emails, using a text editor, or browsing safely on the internet. Three levels of digital autonomy are defined: very limited, moderate, and autonomous. Based on the outcome of the test, counsellors can propose workshops to help jobseekers use online Pôle Emploi services and can offer basic digital skills training leading to a certification, which they can add to their resume (European Commission, 2023^[20]).

Engaging in continuous training to address skills gaps

Adopting a skills-first mindset also calls for a lifelong learning mindset. With the rapid speed of technological change and the transition to a greener economy, skill demands are evolving continuously. Thus, workers should be engaged throughout their lives in re- and up-skilling programmes to ensure their knowledge, skills and capabilities remain up to date. Workers will be especially encouraged to engage in training when employers signal that they value it through a skills-first approach. Skills-first approaches provide a unique opportunity to make training more focused on skills gaps – when training and education providers re-design courses in a more modular, targeted way, learners can train more quickly and flexibly, thus increasing accessibility. More information on how governments can support an inclusive and flexible adult learning system is provided in the final section of this paper.

Firms may consider re-formulating internal training to be more skills focused. Larger companies, for instance, can consider creating an internal learning platform for workers, akin to the ones described in Box 8. Alternatively, firms can provide greater financial assistance for workers looking to undertake external training. Workers and firms may both require external guidance to navigate the variety of training offerings. Some cohorts will require extra assistance in updating their skill profiles to remain competitive – older workers, for instance, who may have years of work experience alongside formal qualifications, may require greater re- and up-skilling to prepare for a more skills-focused labour market. Alongside the provision of greater training opportunities, employers may need to rethink onboarding processes and the role of mentorship to ensure skills-first hires are well-integrated into the work environment.

Box 8. Personalised learning recommendations encourage continual skills development

To support a culture of continuous learning, IBM's internal learning platform provides personalised training recommendations for employees and tracks their progress. Supported by artificial intelligence, recommendations are made based on employees' skills profiles, though the decision to engage in a particular training is ultimately up to the employee. The system offers industry-recognised digital credentials which are portable and can be taken by the worker to their next employer. Each employee at IBM is expected to complete a minimum of 40 hours of professional learning and development in a given year. IBM's learning platform combined with the lifelong learning expectations set by senior management mean that employees generally exceed their annual learning targets – in 2022, staff at IBM completed an average of over 80 hours of training (IBM, 2023^[14]).

Agencies in the public sector have also established internal platforms that provide personalised career and training information. For instance, the United States Navy's MilGears platform enables service members and veterans to capture skills acquired through training, education, and on-the-job experience. The platform aggregates users' entire record of training and education accomplishments into a single, secure, and centralised place. It provides recommended professional growth opportunities and future career pathways tailored to each service member based on their military education, training, credentials, and experience. Individuals can log their validated credentials, determine their skill gaps,

and use their profiles to help plan for their post-military careers. The platform ties skills to the O*NET taxonomy, providing a skills framework that links to jobs across the American economy.

A skills-first labour market extends beyond firms and workers; training providers also have an important role to play to ensure training programmes are adapted to the skill needs of the current and future workforce. Some training providers – such as Generation, as described in Box 9 – engage in industry collaboration to ensure programmes and curricula remain updated. Responses provided by training providers to the OECD’s Skills-Based Approaches Survey revealed that many providers believe the adult learning landscape is not yet well-equipped for a skills-first world. Whilst progress has been made towards a skills-focused training environment, there remains a disconnect between what training programmes offer and what employers seek. Industry collaboration when designing programmes is important, as well as a greater emphasis on hands-on, practical training. Training should also be broken-down in a more modular, flexible way to encourage greater participation, with each module addressing specific learning outcomes to ensure programmes are targeted to the right skills (OECD, 2023^[22]). Finally, training institutions should conduct regular internal audits of their programmes and establish mechanisms to ensure the delivery of high-quality training.

Box 9. Collaborating with industry to deliver relevant skills training

Operating across 18 countries, Generation is a non-profit organisation providing training to prepare jobseekers for employment. Each of its bootcamp-style, 1- to 3.5-month long training programmes is designed to deliver skills training to prepare learners for a specific role or occupation. To ensure its training programmes align with the skills most sought after by employers, Generation engages with employers, industry associations and other experts to identify emerging skills gaps. Based on this feedback from and collaboration with stakeholders, programme offerings are continually refined to ensure they meet industry needs. When designing their programmes, Generation conducts job shadowing to understand the exact needs of a role. Industry experts are consulted again after programmes are designed to ensure key areas for skill development are not missed. Additionally, Generation programmes prioritise hands-on, experiential learning which simulates real-world work environments to provide learners with practical skills that can be quickly applied in the workplace.

Adapting performance management processes to better support career progression based on skills

If skills development is the norm, then promotion and progression decisions can be more easily made based on skill levels and work performance, rather than tenure, experience or job history. Support for this approach is strong – around three-quarters of both workers and business leaders express overall support for evaluating workers based on their skills (Deloitte, 2022^[9]). Importantly, career progression based on skills can promote greater equity in workplaces – 80% of workers in a recent survey stated that hiring, pay, promotion, succession and deployment decisions based on skills would reduce bias and improve fairness, while 75% of business executives believed it would help democratise opportunity (Deloitte, 2022^[9]).

Under a skills-based approach, the performance appraisal process would include a skills development conversation. Manager feedback should reflect a person’s skills, with performance discussions centred largely around how to improve skills gaps. One way to fill skills gaps is to facilitate greater employee mobility across teams and projects, as noted in Box 10. Skills-based appraisals provide personalised development advice. Feedback is generally more meaningful and actionable than standard performance

or output based feedback, providing workers with a clearer sense of direction and growth. If companies have re-written job descriptions using a skills language, managers will be able to benchmark workers' performance against the expected skills of each role more easily, providing more open and clearer feedback. This also makes promotion decisions within an organisation more transparent. Moreover, employees can conduct a self-appraisal in this system. Involving workers directly into the performance management system personalises the process and allows managers to respond directly to workers' concerns. Nonetheless, progression decisions tied to skills may not be suitable for all roles and firms will need to understand when it is suitable to make these decisions. Managers themselves may also require additional training, guidance and information on how to conduct skills-based appraisals, and more generally to instil a top-down acceptance of a skills-based culture.

Box 10. Developing skills through project-based work

Some organisations have developed their own internal systems to facilitate employee mobility. Unilever's "U-Work" internal talent marketplace enables employees to flexibly move between projects and tasks across the organisation, either as a permanent employee or as a "U-Worker" – a worker who is contracted to work on short-term projects but retains a core set of benefits like a permanent employee. The company is increasingly structuring its operations such that work is being divided into projects, tasks and deliverables, allowing the right talent with the right skills to be allocated to projects. Underpinning this system is the belief that each role in the organisation is a collection of skills, rather than a simple job title. To further support skills development, each Unilever employee has an individual plan called "My Future Fit Plan", a skills development framework that connects workers to the company's priority skill needs for current and future roles. Each employee identifies one or more future pathways for themselves and uses their plan to guide their career path and training decisions. Employees also receive personalised learning materials that fit their plan.

The WorkDay Career Hub is a platform where individuals can sign-up for gig work. Individuals can work on specific projects based on the particular skills they would like to develop. Managers can leverage the platform to find suitably skilled workers for temporary or short periods of time. In a recent survey, Workday finds that 95% of gig participants are able to build on existing skills or develop new skills while using their platform. The vast majority of project managers also report that gig hires produce just as good results and are just as efficient as other team members (Workday, 2021^[23]), though broader concerns remain about the job security of gig work.

Opportunity Marketplace, offered by SAP, is a talent marketplace which matches people to opportunities and roles based on their skills, interests and preferences. It recommends personalised development opportunities to users and connects them with experiential, on-the-job learning, allowing them to learn new skills or practice their current ones. Beyond work, employees can also be connected to mentorship programmes and training courses. Companies who use this type of software can fill their skills gaps internally whilst simultaneously encouraging a lifelong learning and growth mindset.

Within a skills-based appraisal system managers may consider rewarding employees when they take actions (such as training) to improve their skills. In this way, part of workers' remuneration would be tied to their skills. Decisions surrounding pay rises and promotions can be assessed through a combination of performance at work, outcomes achieved, and skills displayed or used. Employers may offer workers both a base salary based on their job or role, and a "skills" salary based on the market value of and organisational need for their skills (Deloitte, 2022^[9]). Some leading organisations are utilising advanced technology to make more transparent decisions around pay and performance (see Box 11). In addition, employers may consider providing non-monetary recognition for skills development, such as through the use of digital credentials to incentivise workers to pursue and complete training and certification.

Box 11. Using artificial intelligence to make skills-based pay decisions

To make better pay decisions, IBM uses an artificial intelligence backed system called CogniPay. Through this system, managers make compensation decisions by evaluating data on employee performance. The system assesses what other employers pay for similar jobs and what the market demand is for similar skills, to ensure workers are receiving competitive salaries. The system also takes into account voluntary attrition of employees with the same skills. IBM estimates that attrition halved after managers began to act on CogniPay recommendations (SHRM, 2019^[24]). Beyond pay, IBM has replaced its traditional annual performance review process with a more frequent, coaching-based system which assesses employees' skills growth on a quarterly basis.

Despite the benefits of using AI to may progression and pay decisions, workers' representatives express concern about their potential discriminatory or non-inclusive nature. Workers should consent to their use and unions should be included in the design, development and implementation of such algorithms.

Despite the benefits of skills-based pay, challenges may arise when the skills-based system interacts or conflicts with a qualification- or experience-based remuneration systems. Workers' representatives and trade unions voiced some concern on this issue in the OECD Skills-Based Approaches Survey. Many collective agreements across Europe use workers' qualifications to set wage and benefit scales. The European Trade Union Confederation has expressed concern that only those with formal qualifications will retain traditional protections as set out under collective agreements (Euractiv, 2023^[25]). Firms will need to make sure that workers are not penalised for not having a formal qualification, but that, likewise, highly qualified workers with formal qualifications do not receive lower pay than their equally skilled, non-qualified counterparts. Social partners should think carefully about how pay scales and pay rises are determined, and whether a hybrid approach based on a combination of pay, experience, qualifications and performance should be adopted. In general, trade unions have a role to play in addressing skills-based approaches in collective bargaining. Social partners and employers should discuss and negotiate together the ways in which skill-based approaches can advance worker progression and job opportunity.

Adopting a lifelong learning mindset and establishing strong evaluation processes requires leadership support

A lifelong learning mindset begins at the top. Successful implementation of a skills-based approach requires the support of senior management. Employers commonly cite a traditional legacy mindset as the biggest obstacle preventing adoption of a skills-based approach (Deloitte, 2022^[9]). Leaders looking to build a skills culture should make active and open commitments to their workforce, and express their support for lifelong learning, which in-turn will encourage more workers to undertake continuous skills development. Even so, implementing the approach will take time and leaders may not see the true value of or benefit from the approach for a while. Employers should remain open to receiving criticism and hold a space for consultation and feedback with their staff to ensure they collect a broad range of opinions as they progress through their skills-first journey.

To track progress, organisations should consider establishing strong frameworks and processes to evaluate their adoption of the approach. If they are not doing so already, employers can begin collecting data on key diversity and evaluation metrics, such as application, interview and hiring rates of diverse candidates, performance of candidates on skills-based assessments, the percent of staff undertaking new

training each year, and retention and attrition rates. Continuous improvement on these metrics will reinforce wider support for the approach. Some organisations with strong evaluation frameworks are described in Box 12.

Box 12. Evaluating skills-based approaches

IBM has been collecting extensive data since first implementing a skills-based approach over a decade ago. It finds that their skills-based hires are just as skilled and effective as workers hired under traditional models, and that there is no meaningful difference in the cognitive ability assessment scores of graduates with bachelor's degrees and skills-first hires (IBM, 2023^[14]). In many ways, skills-first hires often exceed expectations and score quite highly in annual performance reviews (IBM, 2023^[14]). IBM is part of the Measurement Working Group of the Multiple Pathways Initiative, which helps organisations align on best practices and develop frameworks and metrics to measure company progress towards adopting skills-based practices (Business Roundtable Multiple Pathways Initiative, 2022^[26]).

Generation also has an established data collection system and evaluation process. Through their annual alumni survey – which follows graduates two to six years post-graduation – Generation assesses outcomes across a broad range of measures. They assess for instance the progress of their graduates in the labour market by collecting data on job placement rates at 90 days and 180 days post-graduation, job retention rates at one-year post-placement, and earnings before training and after job placement. Generation finds that after completing one of its bootcamp-style training programmes, almost 90% of graduates find a job within six months, 70% continue to meet their daily financial needs two to six years later, and 40% can save for the future (Generation, 2023^[27]). By collecting detailed data on its impact, Generation can more accurately assess the effectiveness of its skills-based methodology and the longer-term impact of its training programmes.

Supporting private sector efforts through broad government actions

Governments can support the efforts of the private sector by establishing the frameworks and systems necessary for a skills-first future. First, governments can work to provide an efficient Validation of non-formal and informal learning (VNFIL) system (this is also referred to as a Recognition of Prior Learning system). A strong VNFIL framework is essential as skills-first approaches scale-up across the labour market, as it allows employers to recognise and validate candidates' skills more easily. Many workers already possess a range of valuable skills acquired informally or non-formally. By engaging with VNFIL processes, they can have these skills validated by a trusted, third-party body. Employers may be more willing to hire workers without formal qualifications if they, instead, have their skills validated by VNFIL bodies. Moreover, through VNFIL procedures, workers can earn credentials or study credits which can then fast-track further training, helping workers to train more flexibly (OECD, 2023^[22]; OECD, 2023^[28]). In this way, credentials and qualifications can continue to play an important role in a skills-focused labour market.

Alongside an efficient VNFIL system, which validates and recognises learning acquired in non-formal ways, expanding and diversifying the way learners can learn can boost adults' participation in training. Governments and training providers should provide more flexible and modular learning options, and expand delivery methods to include online and asynchronous learning options. Making training more modular requires breaking down programmes into discrete modules, with each module defined by a set of learning outcomes designed to teach specific skills. In this way, programmes are designed with skills in mind, allowing learners to address specific skills gaps when needed. More generally, modular, shorter,

and asynchronous learning provides learners with greater flexibility over when, where and how they learn, and can be an excellent way to boost participation amongst underrepresented cohorts (OECD, 2023^[22]).

To support firms in conducting skills assessments, the public sector can develop publicly available, free skills analysis tools. Most OECD countries, at the national, regional or sectoral level, conduct these exercises, usually at the public employment service. Box 13 provides an example of a social partner being involved in generating skills intelligence for the technology sector. Trade unions should also actively be involved in identifying skill needs and labour market trends. Governments can also contribute to skills knowledge by developing skills-based occupational profiles. For example, the Australian Skills Classification identifies skills for every occupation in the Australian economy, helping employers and workers identify occupations which share common and transferable skills. This type of mapping also supports employers implementing a skills-based hiring strategy to identify skill needs for each of their jobs roles and write skills-based job ads.

Box 13. Social partners generating skills intelligence for the tech sector

Social partners and industry associations can be heavily involved in the generation of sectoral-specific skills intelligence. TechNation Canada – Canada’s leading national technology industry association – provides information on jobs in the technology sector. Their free Career Finder tool contains information on: 1) Job Availability (the demand for technology-related jobs by region and seniority); 2) Job Title Heatmap (a tool which provides skills trends including emerging and decreasing skills by region); 3) Job Descriptions (provides detailed job descriptions for technology roles to support employers in writing job ads); and 4) Career Pathways (helps workers discover technology career pathways and suggests skills needed to train). Additionally, TechNation has published cybersecurity national occupational standards which can help employers incorporate a language of skills and competencies when re-writing cybersecurity related job descriptions.

Governments have also a role to play to ensure skills are taught, assessed, recognised and valued in a standardised, high-quality way. Skills-based approaches are relatively novel – with more organisations beginning to experiment with and implement the approach, quality assurance is essential. The public sector can ensure a higher standard of training by for example continuing to conduct independent audits of training providers. This will ensure skills-based programmes are designed and delivered effectively and consistently, and will simultaneously help build trust amongst employers and workers who seek alternative learning pathways. Furthermore, developing training regulations and minimum standards establishes baseline requirements that training providers must follow. Governments can also work to establish standardised skills assessment and validation procedures through VNFIL processes.

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