

SKILLS POLICIES FOR RESILIENCE



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Introduction

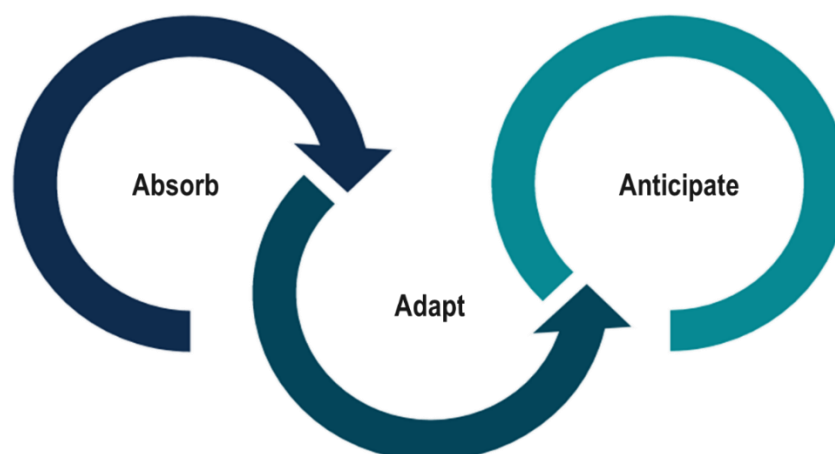
The COVID-19 pandemic has led to deep shocks and scars to the economy and societies throughout the world. To mitigate and address these shocks and scars, as well as the wider impacts of the pandemic, many countries put in place recovery plans that may now be threatened by Russia's war of aggression against Ukraine, the associated rises in energy prices and cost of living, and its consequences on the global economy. At the same time, countries are also mobilising to reduce greenhouse gas emissions and widespread environmental degradation, working to adjust to the diffusion of new digital technologies (including generative artificial intelligence systems), and putting in place strategies to reduce the economic and societal effects related to increased poverty and shares of marginalised population. Overall, countries look increasingly vulnerable, with risks of profound economic and societal upheavals.

Individuals and companies need to adapt to this heightened economic and societal instability and ensure that labour markets are responsive to changing conditions. All individuals may need support to ensure that they are employable in new labour market conditions. For vulnerable segments of the population in particular, it is a matter of remaining in, or re-entering, the labour market after a shock that may affect them disproportionately. For companies, the challenge is to revise their value proposition and develop new business models that can ensure their survival in a different economic setting. Policy makers are tasked to design incentives and instruments to enable and accelerate these transformations.

In this context, skills development and lifelong learning play a fundamental role, now more than ever before. Skills are essential to ensure that individuals and societies are able to navigate and integrate into a rapidly changing world of work. Learning from the past three years is critical to strengthen the resilience of lifelong learning systems to future and ongoing shocks. Stronger institutional capacity is needed to scale up key measures rapidly, when needed, while ensuring support to vulnerable economic actors. A resilient system invests in the resilience of individuals, of firms and of institutions, while developing mechanisms that enable their collective and coordinated reaction to economic shocks.

Resilience refers here to the capacity to absorb an economic shock in its making, and re-build better, more robust skills and labour markets. In other words, resilience is understood in this brief as the ability to bounce back stronger and to grow from adversity. **Figure 1** describes resilience in its three phases. When faced with sudden external shocks, resilient systems are well equipped to absorb the initial impact, minimising vulnerabilities and risks of experiencing long-term negative outcomes. Over time, resilient systems move from the absorption emergency phase to the adaptation phase, in which different agents and stakeholders take stock of the new normal and change practices to operate more efficiently given the new conditions. Finally, resilient systems reflect on what occurred, evaluating strength and weaknesses, emphasising how best they can anticipate future shocks as a way to develop new strategies to thrive given future alternative scenarios.

Figure 1. Resilient Skill Systems



Source: IAG-TVET

This brief focuses on the resilience of skill systems, which is key to promote resilient labour markets and societies. It reviews what policy responses can promote labour market integration and skills development, with a view to build resilient systems. It draws lessons from recent episodes of economic downturn, for example the COVID-19 pandemic – an economic crisis for which both shock and recovery are currently observable – as well as the cost-of-living crisis, that many countries have recently experienced as a consequence of rising prices, in particular for energy.

The brief first summarises evidence on the effect of COVID-19 and the cost-of-living crisis on labour markets and skills over 2020-2023, flagging their most important lessons. It then proceeds to describe a set of policies that have recently been implemented around the world to foster skill resilient systems in the face of external shocks – such as the pandemic crisis or the energy crisis, by classifying them in policies to enhance absorption, adaptation, and anticipation.

The brief finds that these crises made clear that building resilient labour markets and skills systems relies on making sure that individuals build solid foundation skills (literacy, numeracy, basic digital skills). Without these, access to labour markets and skills development opportunities is difficult if not impossible. For example, during the pandemic individuals who did not have basic digital skills found it hard to operate and build new skills because learning opportunities had to take place remotely. At the same time, it is clear that other soft skills such as adaptability, flexibility, and learning to learn have been essential to help individuals navigate through difficult and rapidly changing contexts, and for firms to ensure their survival. This group includes entrepreneurial skills, as in the case of those workers who launched new digital activities building on the new opportunities in different economic sectors during the pandemic.

Recent crises also showcased that for systems to be resilient they should enable workers to stay on their current job despite the economic turmoil, where appropriate, or to swiftly transition towards alternative job opportunities. Job retention schemes, rapid reskilling and the swift reconfiguration of workplaces enabled that, especially during the pandemic. Adaptation ensured the survival of many companies, who had to find new markets, marketing strategies, or working methods. In the same vein, resilient systems during recent crises were those that were able to adapt the skills of workers as well as the training programmes offered at firms to reflect the new reality.

Finally, resilient systems are those that evaluate strengths and weaknesses of actions implemented during ongoing crises, and anticipate future shocks to the labour market by keeping abreast of innovations and implementing subsequent reskilling and upskilling programs – for example by providing the workforce with the skills for the green transition and digital transition.

Lastly, the brief acknowledges that resilience should not come at the expense of other policy objectives, such as decency of jobs or fairness in the green and digital transitions. Its focus, however, is kept narrowly on the issue of resilience, to keep the discussion concise.

In Brief

- Recent crises have accentuated or even deepened existing socioeconomic disadvantages. Skills policies can contribute to lessen the costs of economic crises for individuals, firms and governments, by fostering labour market resilience, i.e. the capacity to absorb an economic shock in its making, and re-build better, more robust skills and labour markets.
- Countries, companies, and individuals that have done better in recent crises years are those capable of and willing to 'act fast' by adopting new working methods, technologies or policies.
- Foundation skills, adaptability and the ability to learn are and will always be essential elements to weather crises, for all economic actors. However, skills policies for resilience imply a larger, more diverse set of possible actions by governments.
- Policies to foster the resilience of skills systems can enhance the absorption, adaptation, and anticipation of the shock.
 - Absorption: rapid reskilling, remote work arrangements and retraining in job retention schemes enable workers to stay on their current job or swiftly transition to others, and firms to keep operating at capacity during the crisis.
 - Adaptation: infrastructure investment to enable distance working, support to online learning and didactics, and enhanced career guidance foster the adaptation of economic actors once the shock has hit.
 - Anticipation: Investments in skills intelligence and anticipation, active labour market policies, and learning of certain key skills strengthen the ability to anticipate future shocks and adequately adjust to them.

Evidence on the effects of recent crises on labour markets and skills

Uneven employment losses across sectors and socio-economic groups

Estimates made early in the COVID-19 crisis suggested that in 2020, 8.8 per cent of total working hours were lost globally – the equivalent of the hours worked in one year by 255 million full-time workers (ILO, 2021^[1]). Half of these hours could be attributed to those who remained employed with reduced working hours, the remaining half to outright employment losses. Losses were (mostly) reabsorbed, however, despite recurrent waves of the pandemic. Across Europe, for example, unemployment decreased across the European Union (EU) from a pandemic height of 7.8% in late 2020 to 6.2% in 2022 - lower than the unemployment rate before the pandemic.

Nevertheless, the ***pandemic deepened various forms of inequality***. Estimations of labour market losses were heterogeneous across socio-economic groups: globally and across all regions and countries, women, youth, lower-skilled and those in the informal economy were disproportionately affected by employment losses due to the pandemic (ILO, 2022^[2]; UNESCO, 2021^[3]; Euro-Mediterranean Economists Association, 2021^[4]).

Youth were particularly hard hit by the COVID-19 pandemic (OECD, 2021^[5]) because they have short employment histories, they have had less of a chance to accrue firm-specific skills and experience, and they were more likely to work in sectors that were impacted by the lockdowns and social distancing measures. As a result, youth had to deal with skill mismatches, underemployment, job losses, salary cuts, and vulnerable employment (Pastore and Choudhry, 2022^[6]).

The gap in hours worked in employment by women and by men was already large before the pandemic globally, with women aged 15–64 working an average of 19.8 hours per week, compared to 34.7 hours per week for men. In 2022 Q1, the global gender gap in hours worked was still 0.7 percentage points larger than the pre-crisis situation. During the pandemic, women were over-represented in hard-hit sectors, and increased care demands often required them to drop out of employment. Developed and emerging economies diverged during the recovery: women and men in high-income countries both experienced a strong recovery in hours worked, while the gender gap in low- and middle-income countries remains larger than the pre-pandemic (ILO, 2022^[7]).

During the pandemic, informal employees were three times more likely than their formal counterparts and 1.6 times more likely than the self-employed to lose their jobs as a result of the crisis. Moreover, informal workers were less likely to benefit from social protection (ILO, 2021^[8]). However, by the last quarter of 2021, the recovery in informal employment had overtaken that of formal employment. This overall development, however, masks considerable differences by gender. Women working informally have been, and continue to be, disproportionately affected by the crisis (ILO, 2022^[7]).

Evidence further suggests that workers with higher skill levels worked in occupations that were less affected by employment losses during the pandemic and benefited from more remote work options (OECD, 2021^[5]). Accommodation, food services, arts and culture, retail, and construction were the hardest hit during the COVID-19 crisis, as

these sectors had the highest share of jobs directly affected by social distancing requirements and the least ability to work remotely. Furthermore, individuals with higher skill levels worked in areas with readier access to the internet. Such differences in internet access accentuated inequalities between the global North and the global South, between households with different socioeconomic status, and between rural and urban areas. Lastly, the pandemic also highlighted and exacerbated skills shortages. For example, demand for healthcare staff and other essential services grew during the pandemic and is projected to continue to grow in the future (OECD, 2021^[9]; Basso et al., 2020^[10]).

Similarly, ***the ongoing cost-of-living crisis is having uneven effects, too, across sectors and socio-economic groups.*** In most countries inflation has reached levels not seen in the last four decades, hitting disproportionately the most vulnerable, low-income households (OECD, 2022^[11]; ILO, 2023^[12]). Global monthly real wages fell by –0.9 percent in the first half of 2022 – the first negative global wage growth on record –, even though the growth rate remained positive in emerging economies. This is consistent with the fact that inflation in the first half of 2022 was rising proportionately faster in high-income countries than in low- and middle income countries (ILO, 2023^[12]). As with the pandemic, individuals working in food services, hospitality, and retail have been hardest hit by the cost-of-living crisis (OECD, 2023^[13]). Indeed, these sectors tend to pay minimum wages which are struggling to keep up with inflation, while workers with higher skill levels tend to work in jobs that pay on average higher wages and allow for remote work, limiting their commuting cost and expanding the set of potential alternative jobs they can access if made redundant. Low-income households across the globe are also more vulnerable to the cost-of-living crisis because a higher proportion of low-income households' spending goes towards energy and food – the two areas that drove most of the initial increase in inflation (OECD, 2023^[13]; ILO, 2023^[12]).

The asymmetric impact of crises on skills demands

As a consequence of differences in labour demand across occupations and sectors, the pandemic and the cost-of-living crisis – albeit different in nature – had an asymmetric impact among individuals with different levels of skills and educational qualifications. Existing data suggest that those that work in sectors requiring few formal qualifications and that are more likely to rely on motor skills rather than information-processing skills have been disproportionately affected by both. Individuals with low levels of educational qualifications were the worst affected by the pandemic (ILO, 2021^[11]). Nearly half of workers in elementary occupations and those with a low qualification were confronted with job loss, work interruption, reduced working hours, or a combination of these, as opposed to around 30% of skilled and higher-educated workers (Cedefop, 2022^[14]). Similarly, low-paying jobs at the lower end of the skills spectrum are most affected (OECD, 2023^[13]).

Survey evidence from the EU shows that changes in skills needs were pronounced, affecting three in four companies (Cedefop, 2021^[15]). For example, the pandemic stressed the ***critical role played by soft skills*** (such as communication, flexibility, problem-solving, creativity, communication, etc.). Wherever social, intellectual and information and communication technology (ICT) skills are important for a larger proportion of jobs, employment loss can be expected to be relatively less intense (Cedefop, 2021^[16]; Cedefop, 2022^[14]; ETF, 2021^[17]; OECD, 2021^[9]) (OECD, 2023^[18]).

Labour market trends and new ways of organising work, education and training also suggest that **digital skills – whether advanced, above basic or basic – dominate skills demand** and are set to become even more important in the future (Cedefop, 2021_[19]). The pandemic boosted demand for digital skills at all levels: they are quickly becoming a transversal requirement in virtually all occupations and sectors, helping workers and businesses cope with ongoing change (ETF, 2021_[17]; OECD, 2021_[9]). Compared to before the COVID-19 pandemic, 39% of EU workers were found to use digital technologies more often to perform some of their job tasks, and 36% more often do online learning for job-related purposes (Cedefop, 2022_[14]). That said, a lot of digital skills training during the pandemic may not have been very substantial. Of those who had to digitally upskill for work, half (49%) required less than a week to learn how to proficiently work with the most frequently used technology, meaning with no or few errors and at the expected speed (Cedefop, 2022_[14]). Moving forwards, **digital resilience skills** will also become more important, which enhance the ability to adopt online or digital solutions to overcome the problems imposed through system administration, system management, and during the deployment of new ICT (ILO, 2022_[20]).

Of note as well is that workers struggling financially - be it because of employment losses during the pandemic or because they are cash-strapped during the cost-of-living crisis - are less likely to access training and thus are less likely to develop new digital skills (PwC, 2023_[21]). In fact, compared to workers who can pay their bills comfortably, those who struggle or cannot pay their bills are 12 percentage points less likely to say they are actively seeking out opportunities to develop new skills.

Companies decreased investment in lifelong learning

Notwithstanding efforts undertaken by the stakeholders involved, substantial constraints prevented the continuation of good quality technical and vocational education and training (TVET) provision during the pandemic (OECD, 2021_[9]; OECD, 2020_[22]). In a context of practical constraints linked to social distancing, less investment in equipment, and many businesses prioritising to keep business afloat, **the share of workers participating in training provided or funded by employers declined substantially** (OECD, 2021_[9]; OECD, 2020_[22]; Pouliakas and Wruuck, 2022_[23]), even if temporarily. Surveyed firms reported that the vast majority of employees saw their training interrupted (ILO, 2021_[24]). Micro, small, and medium firms (MSMEs) were impacted the most in this respect.

Many companies also adapted their training strategy (Cedefop, 2021_[15]). Estimates from an online survey of training providers on the effects of the COVID-19 pandemic on the provision of TVET and skills development, conducted between 5 April and 15 May 2020 revealed a **multitude of promising practices in the development of flexible learning and assessment options** (ILO and World Bank, 2021_[25]). Difficulties were identified with respect to the engagement of students in TVET programmes, the development of adequate quality assurance mechanisms that can work in remote learning settings, and access, affordability and lack of motivation among teachers, trainers and students.

Work-based learning, including apprenticeships, was especially affected by lockdowns, as learning was interrupted both at the workplace and in the classroom. Despite the immediate challenges for VET teachers, trainers and learners alike, the pandemic provided an opportunity to strengthen VET systems via the development

and adoption of technological innovations that facilitate distance learning and distance or alternative assessments, including Augmented Reality (AR), Virtual Reality (VR) and other AI applications in education (ETF, 2021^[26]).

Recent crises and accelerating structural changes

As a result of the latest economic shocks, some megatrends appear to have accelerated: the pace of automation and digitisation, the pervasiveness of remote work, and decarbonisation efforts.

Rising Hybrid: New forms of work

In some regions of the world, the pandemic has resulted in structurally higher levels of remote work. In the EU, for instance, telework arrangements, which were a relatively marginal phenomenon in 2019, became a reality in 70% of companies and most companies expect the increase in telework to be structural, at least in a medium-term perspective (Eurofound and Cedefop, 2020^[27]).¹ Sostero et al. (2020^[28]) estimate that 37% of dependent employment in the EU could be done remotely – very close to the estimates of teleworking indicated in real-time surveys during the COVID-19 crisis.

This potential is not always realised, however. In OECD countries, 30% of workers could telework, but the actual likelihood during the pandemic was considerably lower among workers without tertiary education and with lower levels of numeracy and literacy skills (Espinoza and Reznikova, 2020^[29]). Indeed, while the shift towards more remote working arrangements is mostly attributed to the nature of work and its organisation in companies, the availability of certain skills matters, and in particular of digital skills (Fana, Torrejón Pérez and Fernández-Macías, 2020^[30]). However, the evidence does not support a widespread need to develop massive retraining for digital skills but rather the need to provide targeted training to some workers and for some specific skills sets (Cedefop, 2022^[31]). This was confirmed also for some middle income and lower income countries, such as those in the Western Balkans, despite comparatively lower levels of telework arrangements (ETF, 2022^[32]; ETF, 2023^[33]).

In a similar vein to remote work, the pandemic increased labour flexibility overall. In particular, despite variations across different regions of the world, the pandemic generally fostered a higher demand for on-location services and strongly encouraged remote platform work and freelancing. These online opportunities can become an alternative to migration as they open up new markets and new ways of work (ETF, 2021^[34]; ETF, 2023^[33]). However, accessibility can be a source of inequality, as they require infrastructure (e.g., telecom, energy or banking), and an appropriate set of qualifications and skills. Furthermore, recent evidence on the decline in the demand for freelance work following the introduction of ChatGPT and in how much such work is being compensated (Hui, Reshef and Zhou, 2023^[35]) suggests that such work opportunities may be especially prone to new waves of technological developments.

¹ Most employers view the possibility for their employees to engage in remote work positively, although a small minority of firms has negative attitudes driven by concerns over lack of efficiency and effectiveness (Van Loo, Eiffe and Van Houten, 2021^[87])

Automation and Digitalisation

The last years saw an ***acceleration of digitalisation***, with companies and individuals increasingly adopting wider use of digital technologies and ICT software as part of their regular work and business operations (OECD, 2023^[13]; ETF, 2023^[33]). Although the evidence is mixed about the medium-term effects of such investments, it is reasonable to expect that in the long-run the economy will be affected by both job destroying (e.g. advanced robotics) and job creating automation (e.g. AI) (Cedefop, 2020^[36]).

Once again this may have differential effects on individuals, depending on their skills level. A key finding from forecast scenarios is that accelerating automation may substantially reduce the demand for work in the near future, in particular for workers with low- or medium-level qualifications. As people employed in highly skilled occupations (e.g. professionals) are less likely to be replaced by technology, difficulties in finding professionals with essential talent could rise (Cedefop, 2021^[37]). In Europe, for instance, 39% of EU workers increased their use of digital technologies to perform their work tasks because of COVID-19, but shares are much higher (51%) for workers in high skilled occupations than in semi-skilled (33%), manual (24%), and elementary (20%) occupations (Cedefop, 2022^[14]).

In Morocco, Türkiye, Albania, Tunisia, Ukraine, Armenia, and Israel automation and digitalisation had a transformative impact across countries and sectors at all skills level, resulting in the creation of new jobs or the transformation of existing ones, with only few jobs disappearing (ETF, 2021^[17]). Similarly, recent research on the implications of machine translation technologies for language professionals found that language professionals were not substituted by machine translation tools and, that machine translation tools complemented the work of language professionals instead (Borgonovi, Hervé and Seitz, 2023^[38]).

The green transition

In the aftermath of COVID-19, many countries around the world prioritised efforts to promote the green and the digital transition in the allocation of recovery funds to sustain long-term economic growth. Similarly, the energy and cost-of-living crises have provided an opportunity to accelerate the transition towards a net-zero economy in many countries. Such transition may not affect all equally across society and across countries, with potentially larger effects on lower-income groups, certain segments of the population, on developing countries, and on countries and regions with strong dependence on the most affected sectors.

The latest assessment of the ILO and the Partnership for Action on Green Economy (PAGE) demonstrated that a green recovery scenario with investments into renewable energies, building efficiency and green transport would add some 20.5 million jobs globally by 2030 (Partnership for Action on Green Economy, 2021^[39]). Under the “energy sustainability” scenario and the “circular economy” scenario, job creation could outpace job destruction, adding a net total of more than 25 million jobs by 2030 (ILO, 2019^[40]).² For the EU, it is estimated that the green transition could lead to between 1 and 2.5 million additional jobs by 2030 (European Commission, 2023^[41]).

² Although the projections were produced prior to 2020, they can be useful to shape forward looking approaches to rapidly changing labour market demands.

Jobs will be particularly created in sectors such as water supply, sewerage, waste management and remediation activities, construction, and electricity.

Realising the full job potential in greener economies will require important investments, including in education and upskilling and reskilling. Youth should be provided with environmental sustainability competences (Borgonovi et al., 2022^[42]), while workers will need retraining opportunities to adjust to a carbon-free way of working, or to transit from one job to another (Keese and Marcolin, 2023^[43]). Although there is a set of core technical skills that are potentially transferable from declining to growing industries, retraining will be essential to enable the transition across jobs. These include, for example computational thinking, strong scientific literacy and digital skills. Alongside core skills will be soft skills – including adaptive problem solving, communication, creativity, collaboration – which can confer a comparative advantage as they can be transferred across occupations (ILO, 2019^[40]).

Promoting resilience during the absorption phase

The need for individuals to re-evaluate their career prospects and engage in continuous vocational education and training is more pronounced in times of economic and social volatility, especially in the face of redundancy. In the absorption phase, resilient systems adopt schemes that enable workers to stay on their current job despite the economic turmoil, or to swiftly transition towards alternative job opportunities. This section of the brief describes the policy levers that can be activated to absorb the shocks and to learn lessons from the crisis that can be translated to the labour and skills markets.

Job retention schemes

The use of job retention schemes was extensive in OECD countries during the COVID-19 crisis, and mostly limited to the phase of marked demand slowdown. In the EU, the temporary Support to mitigate Unemployment Risks in an Emergency (SURE) was a crucial element of the EU's comprehensive strategy to protect citizens and mitigate the severely negative socio-economic consequences of the coronavirus pandemic, and mobilised significant financial resources.

Job retention schemes could be accompanied by the provision of education and skill development opportunities to maximise the probability that retained workers can quickly adjust to the changed reality of their job after the economic shock. However, the integration of skills development elements in job retention schemes remains rare so far (OECD, 2020^[44]). Moreover, when these schemes exist, take-up remains low, as companies have difficulties in planning investment in staff in a very uncertain economic climate, may lack resources – where needed – due to reductions in business volumes, and may prefer reviewing their longer-term strategic directions.

Job retention schemes have also been widely used in developing and transition countries. The evidence suggests that local level efforts are most effective: local people should be supported in their efforts to raise awareness, build morale, preserve community spirit and promote general health. Starting at the grassroots level with community-led solutions yields more sustainable policy action, which is therefore less susceptible to possible shortfalls in budgets and financial capacities, as governments would be asked to foot only part of the bill (UNESCO, 2021^[3]).

Rapid reskilling

COVID-19 disruptions forced stakeholders to rethink existing training programmes and materials, and systems for the assessment of skills needs for skills recognition, while supporting the urgent needs within healthcare and other essential sectors. For example, temporarily easing licensing and registration requirements can be useful to tackle critical short-term shortages that arose in regulated sectors. Time-bounded fast track licencing during the COVID-19 crisis allowed recognition of skills acquisition without full skills certification to boost health profession numbers. British Columbia in Canada amended its Health Professions Act so that international medical graduates, with at least two years of post-graduate training and the first part of the qualifying exams completed, could apply for a supervised associate physician licence to fight COVID-19 (OECD, 2020^[45]).

Moving forward, Rapid Assessments of reskilling and upskilling needs could be leveraged to help countries and workers transition from an initial shock to the recovery phase. Box 1 summarises a set of key actions to develop and deploy rapid reskilling during a crisis.

Box 1. Menu of Policy Actions for Rapid Reskilling

- **Refocusing** existing resources, repurposing existing curricula, making good use of the learning technologies and innovative approaches to learning delivery, and scaling up provision of training within existing Active Labour Market Policies.
- **Producing** the Rapid Assessment in a credible and timely manner, i.e., a report that makes a clear analysis, identifies priority areas for action, and proposes options for addressing them, be this at the individual or aggregate (sectoral, regional ,country) level.
- **Following-up action.** It may involve organisations such as qualifications bodies and funding bodies, which fast-track approval for initiatives by education and training providers or employers aimed to adapt curricula or learning delivery methods. It may also involve ministries and agencies that increase funding or making new funding streams available, to support the identified skills development needs.
- **Designing** new and innovative training programmes and expanding existing courses, including: developing new training materials and resources, both online and offline, and converting existing learning materials into an online format; recruiting and training of additional teachers and trainers; subsidising training and other forms of direct support for affected sectors; reorientation of training centres towards areas that are in need; deploying workers, jobseekers, migrant workers and refugees for sectors in need, including via fast-track licences and formal and informal recognition of skills.

Source: Based on ILO, (2020^[46]), and ILO and World Bank, (2021^[47]).

Reconfiguring workplaces

During the COVID-19 crisis, remote working arrangements were implemented as a way to keep businesses operational in many countries. Similarly, during the cost-of-living crisis, they reduced commuting costs. However, the growth of teleworking is associated with deeply unequal effects, favouring high-skilled/high-paid jobs (Espinoza and Reznikova, 2020^[29]; OECD, 2021^[48]). As a consequence, labour policies should enable workers employed in teleworkable occupations to effectively do so, but also should prevent the narrow proliferation of teleworking in the high-skilled spectrum of the labour market, by reducing the digital divide. This cannot be done only by investing in more digital upskilling of workers, as some jobs are currently intrinsically not teleworkable. Policies that focus on more digital investment in smaller firms as well as raising their awareness about possible reconfiguration of work towards the greater use of online solutions, combined with greater support to females/families, could facilitate the wider adoption of remote work (Cedefop, 2022^[14]).

Promoting resilience during the adaptation phase

The adaptation phase involves adapting the skills of workers as well as the training programmes offered at firms. Specifically, during the adaptation phases skills systems can be adjusted to reflect the new reality, drawing on lessons learned from the crisis.

Investing in infrastructures with a focus on SMEs

Investments in connectivity and digitalisation are crucial preconditions to enable the diffusion of new online business models that can enhance the resilience of skills systems, and of the labour market more broadly. Quality and affordable access should be considered, and account for existing vulnerabilities (ETF, 2021^[34]). Several Member States of the European Union have committed to invest in digital infrastructures through the European Commission's Recovery and Resilience Facility (Council of the European Union, 2022^[49]).

Investments in physical infrastructures, however, can only yield results when they are accompanied by effective organisational and human-resource practices. Survey results found that most EU companies that successfully weathered the COVID-19 pandemic changed their core business activities – for instance by creating work environments that were more conducive to autonomy – and made significant investments in adapting and upgrading physical infrastructures and work organisation (Cedefop, 2021^[15]; Eurofound and Cedefop, 2020^[27]).

A 2020 global survey of enterprises found that almost 83 per cent of MSMEs suspended operations during the pandemic, compared to 65 per cent of large enterprises. Conversely, almost 95 per cent of large enterprises introduced work from home measures compared to only 75 per cent of MSMEs (ILO, 2021^[50]). MSMEs were the most impacted by COVID-19 because of a lack of infrastructure, but also because of a lack of an effective internal organization and adequate human resources. Such enterprises were less likely to have the financial means to withstand prolonged disruptions to their business operations – those that did not close became saddled with high levels of debt that compromise their scope for future investments and productivity growth (ILO, 2021^[51]).

Leveraging the power of technology to promote skill development

Despite the operational difficulties that also impacted company's training programmes, during the pandemic many firms invested in mobilising **new digital tools and infrastructures to promote online learning**. Video conferencing tools and online learning programmes were made widely available, together with ad hoc training in how to use such tools (ILO, 2021^[50]). Some firms also supported staff by providing better internet connection, laptops or access to additional IT tools and programmes. Interestingly, governments provided greater flexibility than private enterprises in terms of funding rules, training

period, as well as scheduling of off-the-job and on-the-job training during periods of lock-down (ILO, 2021^[50]).

While access to learning and skills development was maintained in some contexts through a rapid shift to distance learning in TVET, the **pre-existing social and digital divides deepened**, and deprived the most marginalised groups of continued learning (ILO and World Bank, 2021^[25]). Among the different programmes, work-based learning especially suffered, as learners struggled to acquire practical skills without being at the office. This seems not to be the case for the cost-of-living crisis (DARES, 2023^[52]).

Online learning and hybrid lifelong learning can create barriers to access because of gaps in affordability, access to digital devices, bandwidth and pre-requisite digital skills. Furthermore, trainers should be equipped with the digital skills that are necessary to support hybrid teaching practice. Finally, online and hybrid programmes relying on digital tools that have not been carefully designed can display biases. Overall, to make the most of the digital investments it is important to **increase investment in digital platforms**, tools and resources, including equipment and software for online training, virtual reality (VR) and augmented reality (AR); **introduce or intensify** blended training and education methodologies; and **build** the capacity of staff to design and deliver online courses (Broadband Commission for Sustainable Development, 2021^[53]; OECD, 2020^[22]).

Box 2 suggests a number of key measures ensuring that the shift to distance and online learning both meets immediate learning needs and prepares for more effective systems in the future. In this perspective, the EU Digital Education Action Plan aims to create a shared vision of how school education can support the use of blended digital and non-digital learning tools that is effective, inclusive and engaging (European Commission, 2020^[54]).

Box 2. Measures to maximise the return from distance learning

The following measures can be implemented to ensure that distance and online learning benefit learners and do not translate into growing digital divides:

- Improving internet infrastructure and affordable access to the internet, especially in countries where there are wide regional disparities (including developing and transition countries);
- Expanding access for learners to online digital applications, platforms and learning spaces;
- Using inclusive digital and analogue technologies for distance learning and support;
- Supporting teachers and trainers to operate in the new environment;
- Providing support, career guidance and digital skills development for learners;
- Increasing distance and short course learning options for core, entrepreneurial and employability skills to vulnerable groups and individuals;
- Strengthening systems for the recognition and validation of digital learning;
- Increasing investment in digital solutions for practical skills development;
- Improving social dialogue and coordination amongst education and training institutions, employment services and local authorities.

Source: From ETF (2021^[26])

Indeed, training courses offered by conventional learning providers as well as massive open online courses (MOOCs) tend to be too long and broad and cover too many introductory-level skills. This can result in low self-motivation and could help explain why MOOCs

completion rates are as low as 10% (Narayanasamy and Elçi, 2020^[55]). To meet more diverse learning needs, lifelong learning providers could develop short, focused, 'just-in-time' online learning resources to support workers' professional development. This is found to be especially important for *crowdworkers* (Cedefop, 2020^[56]). Finally, more effort should be placed in developing effective testing methods and certificates, to ensure that online courses provide value for money to participants.

The quality of online courses can also be strengthened by training teachers to teaching in a hybrid setting. During the pandemic, teachers and trainers face multiple challenges to keep up with the latest digital transformations and to upgrade their skills to apply modern technology-aided instruction (ETF, 2020^[57]; UNESCO, 2022^[58]). Likewise, managers of training and education institutions were hindered by the lack of support in creating enabling digital environments and building innovative institutions. Moving forward learning systems need to ensure that teachers and trainers are properly supported and encouraged to engage with new pedagogies and digital learning tools, including networks or platforms that enable teachers and trainers to share experiences (UNESCO, 2022^[58]) (European Commission, 2020^[59]).

Simultaneously, digital skills training programmes for TVET teaching staff should be designed to overcome barriers to teachers'/trainers' participation, and countries should develop well-resourced national policies and strategies for digitalization in TVET.

Developing new methods of guidance, validation and quality assurance

As mentioned, the recent crises have hit certain tranches of the working population especially hard. In addition, in some developed countries the COVID pandemic propelled the Great Resignation – a temporary period of elevated voluntary departures from different jobs (Horowitz and Parker, 2022^[60]). In this context of increased unemployment, skill mismatches, underemployment, and movements across jobs, recent crises showcased the importance of improving the transitions from school to work, non-employment to work, as well as the transitions from job to job. Such transitions can only be done through better intermediation services, including but not limited to career guidance, as well as with better frameworks for the validation of nonformal and informal learning.

The individualisation of learning opportunities requires equal individualisation in the support provided through guidance and validation services that consider the heterogeneous backgrounds, prior experiences and needs of individuals in order to maximise the effectiveness of the services. An integrated approach of guidance and validation services would contribute to better informed individual career decisions, by gathering and using clearer and more tailored information to the specific individual's needs. Moreover, the coordinated provision of the services would improve efficiency, by increasing synergies, connections and sharing common processes and resources between guidance and validation. At a systemic level, more efficiency would also mean more impact, providing efficiency gains and further possibilities for quality improvement.

Within the skills agenda, the Recommendation 'A bridge to jobs – Reinforcing the Youth Guarantee' gives large space to the active support to employment, including guidance and validation, with tailored, individualised, and holistic approaches (Council of the European Union, 2020^[61]).

Promoting resilience during the anticipation phase

Resilient systems reflect on what occurred, evaluate strengths and weaknesses of implemented actions, and emphasise how they can best prepare for future shocks under alternative scenarios. Recent crises have indeed highlighted the need for skills systems to keep abreast of innovations and anticipate, rather than simply react to emerging trends. Only then policymakers can renew their investment in the development of the most suitable skills. As such, the anticipation phase is about creating systems that can anticipate future shocks and adequately prepare for them.

Skills intelligence

Skills anticipation is a strategic and systematic process through which labour market actors identify and prepare to meet future skills needs, thus helping to avoid potential gaps between skills demand and supply (ILO, 2015^[62]).

Skills intelligence monitoring and anticipation systems can play a crucial role in this respect. For instance, skills intelligence is one of 12 key actions of the EU New Skills Agenda. Tools to anticipate skills needs should be maintained and, if needed, developed further to focus on skills needs in the digital age (Eurofound, 2021^[63]). A number of tools and instruments are implemented at global level, to track developments in the labour market and in skills needs. Both traditional methods of research and innovative tools are used to understand fast changing skills demand. The key challenges and solutions to effective skills anticipation have been discussed in depth by several policy institutions (ILO et al., 2017^[64]).

The use of Big Data is spreading widely, both through the analysis of online job vacancies and the use of other data coming from the web (social media, but also international registers such as patents and international publications with text mining techniques). In order for policymakers to better anticipate the future of skills with stronger and more reliable data, the granularity of big data sources should be combined with conventional labour market information sources. Doing so would provide a fuller picture of what may be going on in terms of skill mismatches in an economy as well as emerging skills in occupations. Cedefop et al. (2021^[65]) expands on the benefits and risks of using big data for labour market and skills intelligence.

Transitions to work

Providing career guidance and investing in active labour market policies

Recent crises have exacerbated the need for up to date, flexible career guidance services, which can be adapted to new modes of service delivery and consider emerging labour market trends. In this context, career guidance services need to change to a new reality in which ICT becomes an embedded component of the service, not just a different form of service delivery, while keeping on assisting jobseekers to access jobs in sectors with growing labour demand (OECD, 2021^[48]).

The EU developed guidance for member states in the form of a Commission Recommendation on effective active support to employment following the COVID-19 crisis, via hiring incentives and entrepreneurial support, upskilling and reskilling opportunities, and enhanced support by employment services, with a special focus on young people and workers of all ages in the sectors worst affected by the pandemic (European Commission, 2021^[70])

How to measure the effectiveness of Active Labour Market Policies (ALMPs) remains an open and often unsolved question, but some features are likely to enhance success. Initiatives should focus on targeted groups, which could include people in precarious employment whose jobs are likely to be at risk, young people entering the labour force who have difficulty finding employment, newly unemployed low skilled workers of all ages in affected industries, etc. In the realm of training policies for activation, it is important to identify and anticipate the types of real labour market opportunities available to prioritized groups, to identify what the main gaps are between the skills they have and those needed by employers, to identify practical actions that can be taken to reskill and upskill existing workers to meet these needs, and to bridge skills gaps so as to facilitate transition into work for new labour market entrants. Including employers in designing ALMPs remains crucial to reduce mismatch

and to promote innovation in delivery and content. Public Private Partnerships can be used to achieve these goals.

In low- and middle-income country contexts, training policies have one of the greatest long-term impacts and are most effective at increasing employment when combined with counselling.³ During recent crises, some low- and middle-income countries have developed successful practices in terms of implementation of ALMP delivery to combat the crisis (ETF, 2022^[71]). But inequalities in access to digital services, especially in LMICs, have impacted the access to services for most vulnerable groups, as these services still rely heavily on interpersonal interactions.

In ETF partner countries the most pressing policy challenges after the recent crises include strengthening institutional capacity of PESs for effective ALMP delivery, in terms of comprehensiveness of services, supporting and developing implementation structures, and increasing resource capacity where possible. Further lessons from recent crises include the need to engage in more intensive partnerships with specialist service providers, in order to develop labour market integration trajectories, and to develop personalised services with a focus on growing sectors, incorporating steps towards increasing employability, with systematic interventions necessary to address particular barriers to integration (ETF, 2021^[72]).

Investing in individual learning accounts

Setting up Individual Learning Accounts (ILAs) can support individual workers participate in learning, quickly develop skills, or adapt to new working methods. The support goes directly to individuals, but an effective individual learning plan is designed together with their companies, guidance services, and training providers (European Commission, 2022^[73]).

While not a solution for all constraints to individual retraining efforts (OECD, 2019^[74]), ILAs can help to increase resilience by allowing adults to select trainings based on their broader labour market and societal relevance, as opposed to narrower current job requirements. Moreover, via ILAs, adults can seek training whenever a need or opportunity for it arises - for instance, during periods of short-time work. The principle that ILA owners can choose among the eligible training opportunities ensure that they can also train for a professional transition where needed, e.g. towards an in-shortage occupation or sector. This can be further supported with career guidance, or targeted provision of training entitlements for specific courses.

On 16 June 2022, following a proposal from the Commission, the Council of the European Union (EU) adopted a Recommendation on Individual Learning Accounts. Many European Members States are investing in piloting or building ILAs systems, and 17 Member States have included a reference to ILAs in their programming of the

³ Training policies, however, are also costly and returns are higher in times of economic downturn, when other work-based labour market reintegration options are

scarce. They also produce deadweight losses when not carefully combined with skills audits, validation of learning, and when the received training is untargeted.

European Structural and Investment Funds, or of the Recovery and Resilience Facility (Council of the European Union, 2022^[75]).

In some countries, such as France, the level of use of Individual Learning Accounts (*Compte Personnel de Formation - CPF*) is impressive. Since 2015, 20 million personal training accounts have been activated, and the number of training courses paid for through the CPF quadrupled since 2019. Sectors that were particularly affected by the COVID-19-related lockdowns (i.e. the accommodation and catering sector) have shown the highest CPF use rates. The most-selected courses are in transport, modern languages, social integration, ICT and security (European Commission, 2022^[73]).

Skills development

Investing in digital skills

The post pandemic working patterns will require enhanced digital skills. However, according to data from the Digital Economy and Society Index 2022 report (European Commission, 2022^[76]), in 2021, 46% of the adult population in the EU still did not have basic digital skills. Recent results from the implementation of the EU Skills and Jobs Survey in the EU and in some EU neighbouring countries (Western Balkans and Israel) confirm that acknowledgement of digital learning needs is lower among low skilled and adults (Cedefop, 2022^[14]). As a result, there is a concrete danger that a new digital divide will emerge, with individuals lacking digital skills not being able to find employment, to remain relevant in the labour market through upskilling and reskilling, or to engage in remote work (Sostero et al., 2020^[28]).

Examples of concrete actions to promote digital skills among adults and reduce the likelihood that a new digital divide are reported in Box 3. Always in the European context, the Pact for Skills offers an effective approach to upskilling by pooling resources and expertise of all actors in a given industrial ecosystem, with an initial focus on those most affected by the pandemic (European Commission, 2020^[77]). Having a large partnership with actors from the whole value chain in a sector, as opposed to single companies or trade unions, can facilitate finding solutions to the skills challenges. Since 2020, 20 large-scale skills partnerships have been launched in the 14 ecosystems industrial ecosystems of the EU Industry Strategy, with close to 1,500 individual organisations being involved. Together, they have committed to offer up- and reskilling opportunities for at least 10 million people of working age across the EU in the coming years.

Box 3. Instruments and actions of the European Union to promote digital skills among adults

- The Digital Education Action Plan, which sets the two priorities of (1) fostering the development of a high-performing digital education ecosystem, and (2) enhancing digital skills and competences for the digital transition. The Plan contributes to the European Skills Agenda, which calls for collective action to support the development of digital skills in the adult population at all levels.
- The Digital Decade, which is the European Commission's forward-looking strategic vision for the development of the digital economy and the transformation of European businesses by 2030. The Digital Compass is a framework to monitor the progress towards the 2030 targets and milestones.
- The EU budget will directly contribute to investment in skills, including digital skills, in the programming period until 2025. Resources supporting digital skills are made available under the Recovery and Resilience Facility (RRF). EUR 127 billion are dedicated to digital related reforms and investments in the national Recovery and Resilience Plans, of which 25,7 billion are on digital skills and education.
- Furthermore, the European Social Fund Plus, which is the EU's main training investment instrument, supports the EU's recovery by driving investment in jobs, skills and services. As of 2023, EUR 2 billion have been programmed exclusively for the support to the development of digital skills, above and beyond what is available for the same purpose through more general measures aimed, for example, to the modernisation of education and training systems, or to the delivery of active labour market policies.
- The *Digital Europe* programme provides funds to develop and cover tuitions of Master programmes and short-term specialised courses and job placements in companies or research centres where advanced digital technologies are developed or used. This is one of several financial instruments that support the creation of advanced digital skills programmes and promote work placements for individuals engaging in such programmes.
- With the support of the Digital Europe Programme, the Commission is developing and promoting *Digital Crash Courses* for SME employees to become proficient in areas such as AI, cybersecurity or blockchain.
- The 2023 April Package Council Recommendation on the improvement of the provision of digital skills in the European Union recommends Member States to encourage the development of advanced and specialist digital skills in VET, including AI and to support VET students in acquiring the digital skills that are needed to use immersive technologies, such as virtual reality, augmented reality, simulation and gaming (Council of the European Union, 2023^[78]).

Investing in skills for the green transition

The transition to a climate-neutral continent will lead to both new emerging green occupations and a transformation of existing jobs across the whole economy. This shift will require what we broadly refer to as “skills for the green transition”, although their exact definition is difficult to pin down.

Investments in the promotion of skills for the green transition will include not only occupation- or sector-specific professional skills (for instance expertise in renewable energy), but also science, technology, engineering, mathematics skills, as well as soft and other transferable skills that can help design, develop, and implement new processes, products and services to support a sustainable economy.

For instance, Cedefop’s Green Observatory found that the green transition crucially depends on occupations that manage it (managers, transport specialists), occupations that engage citizens to be part of the green transition, and digital professionals (e.g. big data, sensor-based technology) (Cedefop, 2022^[79]). Furthermore, an analysis of the EU’s Fit for 55 policy targets aimed at reducing greenhouse gas emissions found that the skills categories that are projected to grow the most in demand between 2019 and 2030 include: interacting with computers; thinking creatively; analysing data and information; and communicating with persons outside an organisation. These are skills for which demand will grow as a result of technological adoption, while skills related to operating and maintaining equipment and tools are projected to decline the most in the demand (Borgonovi et al., 2023^[80]). The report also shows that participation in training is especially low among the occupations that are projected to decline the most, such as blue-collar workers in the ‘mining of coal and lignite’ sector (Borgonovi et al., 2023^[80]). These findings further stress the need to focus on upskilling and reskilling those that will be most impacted by the green transition.

Lastly, individuals will need high levels of environmental sustainability competences to evaluate the environmental consequences of their actions, and to contribute to the green transition through their work, civic participation, and everyday actions (Borgonovi et al., 2022^[42]). Environmental sustainability competence encompasses four main competence areas (Borgonovi et al., 2022^[42]; Bianchi, 2020^[81]):

- **embodying sustainability values** encourages learners to reflect on personal values and worldviews and compare them with unsustainability and sustainability values and worldviews;
- **embracing complexity in sustainability** promotes learners’ systemic and critical thinking to better assess information and frame current or future challenges as sustainability problems;
- **envisioning sustainable futures** is about imagining alternative future scenarios and identifying steps to achieve a sustainable future by using creativity and adapting to changes;
- **acting for sustainability** promotes acting both individually and collectively to shape sustainable futures, as well as demanding effective policy action for sustainability.

Jobs that will emerge as a result of the green transition generally require proficiency in both technical skills as well as a set of core soft skills.

In order to promote skills for the green transition in the EU, Member States are encouraged to activate especially those measures that support quality employment and facilitate job-to-job transitions. These include, for instance, tailored job search assistance, policies for job creation, and access to finance and markets for MSME businesses, in particular those contributing to climate and environmental objectives (Council of the European Union, 2022^[82]). Other suggested measures support equal access to quality education and training, such as developing up-to-date intelligence on skills needs in the labour market, providing high-quality and inclusive education and training on skills and competences relevant for the green transition, and increasing adult participation in lifelong learning (Council of the European Union, 2022^[49]).

The EU is also supporting Member States' investments in skills for the green transition through unprecedented EU funding. Recovery and Resilience Plans include reforms related to green skills and green jobs amounting to EUR 1.5 billion. Examples are investments in reskilling and upskilling initiatives, and developing and implementing new targeted active employment policy measures for the needs of the green transition. Out of the European Social Fund Plus total budget for the 2021-2027 programming, EUR 9.6 billion have been programmed to contribute to green skills and jobs, and the green economy.

Promoting the use of microcredentials

With growing consensus on the need for more responsive education, training and learning systems that allow individuals to upskill and retrain in quicker and more flexible ways, alternative credentials have come under the spotlight. Although qualifications and degrees from initial education and training still play a key role, alternative credentials (including digital badges, microcredentials, nanocredentials, minor awards, etc.) are seen as necessary to make existing qualifications and credentials systems better fit for purpose and provide incentives for adults to engage in lifelong learning opportunities.

Microcredentials are perceived to be a (frequently digital) way to give visibility and value to relatively short learning courses and/or experiences. While their role in higher, academic education has received much attention and their link to the proliferation of relatively low-cost and short duration MOOCs seems to be clear, the influence of microcredentials on continuing training in the labour market is less understood. They are, however, especially important in presence of recurring economic crises, as instruments to foster the employability of displaced workers and the reallocation of workers across jobs. Survey evidence confirms that microcredentials are seen by stakeholders as essential to promoting lifelong learning opportunities, and providing flexibility and opportunities for progression (Pouliou, 2022^[66]). The use of microcredentials can bridge the gap between traditional qualifications and flexible learning pathways, and contribute to the adaptation of education and training to labour market changes. They can be used to address emerging needs for new skills and competences in the labour market and help to accelerate their integration into existing or new qualifications and training programmes (ETF, 2022^[67]). An effective system of validation of learning outcomes can enhance the diffusion of microcredentials (Council of the European Union, 2020^[68]).

The Recommendation on a European approach to micro-credentials for lifelong learning and employability seeks to support the development, implementation and

recognition of micro-credentials across institutions, businesses, sectors and borders in the European Union (Council of the European Union, 2022^[69]).

Recently, Cedefop collected information from crowdworkers and key stakeholders (including platform companies) on whether skills assessments and awarded microcertificates offered by platforms are used and of value for individuals in finding work. The study reveals that in the specific context of remote online work governed by relatively impersonal relationships between client and worker, microcredentials positively influenced job prospects for about 1 in 3 crowdworkers (Cedefop, 2020^[56]).

Conclusions and Policy Recommendations

The COVID-19 pandemic transformed economies and societies in large part by accelerating digitalisation and automation. Other shocks such as Russia's war of aggression against Ukraine and the ensuing energy crisis have fostered economic volatility, which ultimately affect individuals, companies, and overall countries. In addition, countries are also dealing with efforts to green economies and promote digital adoption. In this context, labour markets and the skills demanded are changing substantially and thus upskilling and reskilling are crucial to ensure that individuals are able to navigate and integrate into a rapidly changing world of work.

Reskilling programmes have a variety of aims, not solely improving technical skills. They aim to equip participants with socio-emotional skills, time management skills, digital skills, strengthen their mental health and well-being. Improving the capacity of reskilling programmes to support the resilience of vulnerable groups will require: promoting social dialogue and the engagement of trade unions; aligning training provision with crisis response and recovery plans at the national or sectoral level; leveraging digital technologies to ensure continuity in the training provided for employees, apprentices and interns/trainees while overcoming gender digital divide; investing in the capacity development of trainers and supervisors in enterprises, as well as of employees, apprentices and interns/trainees, to become more adaptable and resilient; facilitating close communication between trainers and learners in order to monitor progress and provide adequate pedagogical and psychological support where necessary; ensuring adequate preparation for resuming hands-on and practical training, including compliance with safety and health regulations.

This brief reviewed a range of policy responses countries enacted in response to COVID-19 and other shocks to promote labour market integration and skills development with the aim of identifying lessons that can extend to how to build resilience to future crises. Fostering resilient skills systems require ensuring that such systems have the capacity to absorb an economic shock in its making, while building more robust and inclusive labour markets for the future. In the language of this brief, policies for a resilient system need to enhance its **absorption, adaptation, and anticipation** capabilities, as summarised in Box 4.

Box 4. Policies for resilient skills systems: absorption, adaptation, and anticipation

During the **absorption** phase, resilient systems adopt schemes that enable workers to stay on their current job despite the economic turmoil, or to swiftly transition towards alternative job opportunities. In this sense, policies foster the absorption of the shock. Examples of instruments that can be mobilised during the absorption phase are:

- Job retention schemes.
- Rapid reskilling: Fast track licensing, recalling of workers with relevant skills, rapid retraining.
- Remote work arrangements, and other tools to reconfigure workplaces.

During the **adaptation** phase, resilient skills systems are adjusted to reflect the new reality, drawing on lessons learned from the crisis. Policies can achieve this, for instance:

- Investing in infrastructures, with a special focus on SMEs (e.g., improving internet infrastructure and affordable access to the internet).
- Skilling workers for the post-crisis labour markets by adjusting the learning environment. For instance: expanding access for learners to online digital applications, platforms and learning spaces; supporting teachers and trainers to operate in the new environment; increasing distance and short course learning options; strengthening systems for the recognition and validation of digital learning.
- Developing new methods of guidance and validation and providing certification, quality assurance mechanisms.

During the **anticipation** phase, skills intelligence and skills anticipation are needed to grasp opportunities offered by the changing labour markets. Resilient systems can anticipate future shocks and adequately adjust to them. This can be done through:

- Skills intelligence: Improving skills anticipation systems and skills intelligence capacity.
- Transitions to work: Providing career guidance and investing in active labour market policies; investing in individual learning accounts.
- Skills development: Investing in digital skills and skills for the green transition, and promoting the use of microcredentials.

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