

B20 INDIA 2023

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TASK FORCE ON

Future of Work, Skilling and Mobility

Policy Paper

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**Future of Work,
Skilling and Mobility**

Policy Paper

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Contents

Foreword: Chair of the Task Force	6
Messages from Co-Chairs	8
Recommendations: Executive summary	11
Executive summary	13
Introduction	18
Recommendation 1	20
Recommendation 2	42
Recommendation 3	66

Foreword: Chair of the Task Force



SHOBANA KAMINENI

Chair, B20 India Task Force on Future of Work, Skilling and Mobility, Executive Vice Chairperson, Apollo Hospitals Enterprise, India

It has been my honour to chair the B20 Task Force on “The Future of Work, Skilling and Mobility” this year with India, the world’s largest democracy, assuming the G20 presidency. The Task Force was focused on an agenda that cultivates inclusive growth, equity, and sustainability in the face of transformative work, and approached the matter from a holistic perspective, incorporating insights and proposing policy recommendations pertaining to longstanding areas of global concern. The outcomes in the form of recommendations represent the culmination of extensive research, collaboration, and deliberation among global leaders, policymakers, and industry experts, all committed to shaping a better future for the workforce.

In a rapidly evolving landscape, the concept of work is undergoing a deep and fundamental metamorphosis. The future of work presents a wide array of possibilities, promising a dynamic shift in the way we perceive, approach, and engage with our work. We stand at the precipice of a great transformation, as the current global trends hold the potential to disrupt our existing work arrangements while holding a promise to unlock new opportunities that would drive us toward a remarkable future.

As the world grapples with the impact of post-pandemic economic conditions, we are constantly adapting to the new realities it left in its wake and leveraging the lessons learned to foster greater agility, adaptability, and flexibility.

The onslaught of technological advancement has pushed us into a new world of uncharted territories. New emerging technologies, such as artificial intelligence, pose a risk of obsolescence to many jobs and skills. However, it has opened new opportunities for the integration of the human mind and technology, which may lead us to enhanced productivity and innovation.



In the face of such a paradigm shift, the boundaries of work are ever evolving. Other key trends, such as demographic changes, migration, and the growing urgency for climate action have challenged our existing structure and stability. The skills in demand are rapidly changing, with a growing emphasis on adaptability, digital literacy, and cognitive abilities. Lifelong learning is becoming increasingly imperative, as we navigate a world where upskilling and reskilling are crucial for remaining relevant.

Amidst these challenges, there is a collective resilience and willingness to tackle them as we stride towards a brighter future. We hold the potential to empower ourselves through continuous learning and experimentation. By embracing these changes, we hold the key to shaping a better tomorrow.

I am inspired by the optimism that pervades discussions among global leaders and businesses. There is a shared understanding that now is the time for bold and decisive action. As we enter this

new era of work and learning, it is imperative that we match our collective understanding with concerted and coordinated efforts. I would like to express my gratitude to the members of the B20 Task Force, whose dedication and expertise have been invaluable in shaping this document. I also extend my appreciation to all the stakeholders who have contributed their insights, ideas, and recommendations.

This policy document aims to put forth these multidimensional dynamics and inspire collective effort towards a future where we thrive amidst the ever-changing landscape of work, and serves as a call to action for leaders, businesses, and policymakers around the world to embrace the challenges and opportunities before us. Together, we can forge a path towards a future of work that is inclusive, resilient, and empowers individuals to thrive in the face of change.

Let us seize this moment to shape a better future for all.



Messages from Co-Chairs



Transformations of the labour market have accentuated the need to invest in skills, leverage technological advancements, and facilitate workers' mobility. In this complex environment, the HR services industry is a solution provider for skilling and upskilling, and adaptation to change in order to build an inclusive, resilient and diverse workforce.

BETTINA SCHALLER BOSSERT
President, World Employment Confederation



The model in which the company was the centre, where workers, in general, projected long careers, although it still exists, must have a more restricted role in terms of the perspective of work in society, because the tendency is the increase of more transitory relations of production and work, with less sense of hierarchy and more work in networks. Work will no longer be a place where the worker goes, but will become a task to be accomplished.

MARCO ANTONIO BRANQUINHO JUNIOR
Diretor Presidente, Cedro Textil



A well known proverb says: 'Action speaks louder than words'. Our action as leaders in the business community has a strong impact on economic growth, which is the basis for employment creation, skills development and social progress. To achieve better economic growth, we need to work together with G20 policymakers to promote sustainable enterprises, entrepreneurship, skills development, talent mobility, flexible labour markets, productivity. This will also facilitate a smooth transition from the informal to the formal economy. Such cooperation will help turn words in this B20 report into action that makes a difference in the real lives of people.

RENATE HORNUNG-DRAUS
Managing Director - Economic & International Affairs,
Confederation of German Employers' Associations



The world of work is undergoing profound changes. Organized by the Confederation of Indian Industry, the Co-Chairs and members of the B20 Task Force of the World of Work, Skilling and Mobility have come up to very important recommendations to G20 after rounds of discussions, exchanges and revisions. It is our firm belief that effective implementation of these recommendations will play an active role in boosting inclusive global economic growth, just transition and matching labor market supply and demand.

ZHU HONGREN
Standing Vice-Chairman and Secretary-General, China Enterprise Confederation





There remain many barriers in future-proofing our economies and workforce with a human-centric and sustainable focus. Moreover, multilateral efforts remain critical in solving our joint challenges. With these policy recommendations, we provide recommendations for policymakers and other related stakeholders with an overarching perspective that require unprecedented global collaboration.

ZEYNEP BODUR OKYAY

President and Chief Executive Officer, Kale Group



The B20 Task Force on Future of Work, Skilling and Mobility identified some of the major urgent challenges facing the world of work today.

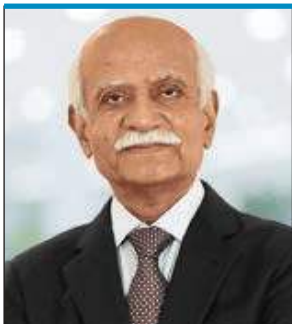
Skills shortages, informality, low productivity, sustainability challenges especially for micro, small and medium sized enterprises, and lack of access to finance, support and incentives are just some of these challenges.

To help tackle those challenges, G20 must work in close cooperation and partnership with the private sector to boost employment and contribute to economic growth.

IOE calls on the G20 to consider these recommendations to collectively move towards our common goals: robust and thriving economy, high employment, better standard of living for all and a resilient skilled workforce.

MICHELE PARMELEE

President, International Organization of Employers (IOE)



Building a future-ready workforce requires prioritizing skills development and embracing mobility. By equipping individuals with the right skills and facilitating labor mobility, we can foster innovation and drive economic growth. A flexible and inclusive approach to work will empower individuals to thrive in the changing world of work, ensuring shared prosperity for all.

BVR MOHAN REDDY

Founder Chairman & Board Member, Cyient



For sustainable economic and social growth, it is essential to promote the adequate environment for private initiative - specially SMEs- and job creation, aligning learning systems with labor-market needs, technology transfer and social dialogue to make understand the new economic realities, changes, and challenges. Is it urgent to address the disparity in technology adoption, along with re-skilling and upskilling strategies to increase competitiveness and productivity and to make real the main objective of having economic development with social inclusion.

DANIEL CARLOS FUNES DE RIOJA

President, Unión Industrial, Argentina & Former Chair, B20





Future of Work, Skilling and Mobility are interrelated crucial things to cope with global transformation challenges.

Having the outcome of core recommendations on fostering inclusive and sustainable growth, accelerating workforce skilling and matching skill demand with supply, this Task Force has comprehensively highlighted the aspects driven by technology transformation, post pandemic economic conditions and demographic trends.

Alignment of business communities and governments in G20 countries is mandatorily needed to bring those recommendations into actionable ones.

YUSAK SULAEMAN

President Director, PT Isuzu Astra Motor Indonesia



I think it is clear to many of us that we are living in a pivotal time in the world of work history. Yes, there are many challenges, but equally it is a time of tremendous opportunity and possibility. As decision makers from both public and private sectors we undoubtedly carry a tremendous responsibility on our shoulders; to see the positive amidst the negative, and to see the numerous possibilities that on the surface look like problems waiting for solutions. One thing that our B20 meeting here today underlines is our collective conviction in the need for continuous dialogue and partnership in order to continue to promote development and positive change in the world around us.

LAMA AL SULAIMAN

Vice Chairman, Kingdom Holding Company and Executive Committee Member, International Chamber of Commerce (ICC)



As the 21st century continues to unravel, our shared vision of the future of work, skilling and mobility must consistently adapt and evolve. As we progress, it is important to remember that talent has no boundaries. Our collective task is to unleash potential, not restrict it. That means we need to rethink our approaches to talent management, skilling, and labor mobility.

This policy paper is a critical step in this direction and signifies our collective commitment to shaping a future of work that's inclusive, equitable and diverse. I am excited to co-chair this initiative and help lead the charge in creating a better world of work for us all.

JOHNNY C TAYLOR JR.

President & CEO, Society for Human Resource Management (SHRM)

Recommendations: Executive Summary

Recommendation 1 – Fostering inclusive and sustainable growth in transforming the world of work

Policy action 1.1: Promote responsible and ethical use of technologies to drive equitable economic opportunities

Policy action 1.2: Support growth in emerging sectors by bringing together the right combination of jobs and skills

Policy action 1.3: Promote inclusivity and flexibility at the workplace to foster equality

Policy action 1.4: Ensure mental well-being of the workforce

Policy action 1.5: Empower SMEs, start-ups and women-led enterprises to drive economic growth

Policy action 1.6: Bridge the formal-informal workforce divide for a more inclusive economy

Policy action 1.7: Foster an enabling environment for businesses to grow, thrive, and innovate

Policy action 1.8: Dialing up the role of public and private partnerships

Recommendation 2 – Accelerate workforce skilling to adapt to changing industry demands

Policy action 2.1: Predicting the skills needed for future of work using technology driven framework

Policy action 2.2: Leverage technology to the gap between skilling and jobs of tomorrow

Policy action 2.3: Expand scope of digital skills libraries

Policy action 2.4: Develop employable skills through education

Policy action 2.5: Partner with private entities to enhance workforce skills

Policy action 2.6: Promote continuous learning and upskilling through lifelong learning

Policy action 2.7: Develop green skills for sustainability and adapting climate change along with skilling for silver and care economy

Recommendation 3 – Boost global workforce mobility to match skill demand with supply

Policy action 3.1: Remove policy barriers to enable cross-border mobility

Policy action 3.2: Leverage technology to enable cross-border mobility

Policy action 3.3: Build a universal labour information management system (ULIMS)

Policy action 3.4: Domestic actions to enhance cross-sector mobility



Select KPIs & SDGs

Recommendation 1 – Fostering inclusive and sustainable growth in transforming the world of work

KPIs

- Proportion of informal employment in total employment
- Average hourly earnings
- Unemployment rate, by sex, age and persons with disabilities
- Fatal and non-fatal occupational injuries per 100,000 workers

SDGs Covered



- **SDG 8.3:** Decent job creation, entrepreneurship, encourage the formalisation and growth of MSMEs
- **SDG 8.5:** Full and productive employment and decent work for all, and equal pay for work
- **SDG 8.8:** Protect labour rights and promote safe and secure working environments

Recommendation 2 – Accelerate workforce skilling to adapt to changing industry demands

KPIs

- YTD Participation rate of youth and adults in formal and non-formal education and training
- Proportion of youth and adults with information & communications technology (ICT) skills

SDGs Covered



- **SDG 4.3:** Ensure equal access for all to affordable and quality technical, vocational and tertiary education
- **SDG 4.4:** Increase the number of people who have relevant skills, for employment, decent jobs and entrepreneurship
- **SDG 4.5:** Eliminate disparities at all levels of education
- **SDG 4.7:** Ensure that all learners acquire the knowledge and skills needed to promote sustainable development

Recommendation 3 – Boost global workforce mobility to match skill demand with supply

KPIs

- Existence of a developed and operationalised national strategy for youth employment
- Number of countries with migration policies that facilitate orderly, safe, regular and responsible migration and mobility of people

SDGs Covered



- **SDG 8.b:** Develop and operationalise a global strategy for youth employment
- **SDG 10.7:** Facilitate orderly, safe, regular and responsible migration and mobility of people, including through the implementation of planned and well-managed migration policies



Executive Summary

The world of work is undergoing a profound transformation. Driven by a few key global trends – technological advancement, post-pandemic economic conditions, demographic changes, migration, and climate action – the future of work will deeply disrupt existing work arrangements and at the same time, it will also create new avenues for growth and prosperity.

The G20 should take concerted action and shape policies that can maximise the benefits of these trends while minimising the disruption they will cause. While the previous B20 summit in Bali encouraged the workforce advancement through its recommendations to upgrade education systems to fit the labour market needs, drive productivity and inclusion, and encourage SME support, more steps need to be taken to advance and solidify the progress made so far.

This report builds upon the work of previous B20 Task Forces and proposes policy actions for G20 leaders that would drive growth, equity, and sustainability for present and future generations through a human-centered agenda that is inclusive, resilient, and sustainable at its core¹. The recommendations in this report consist of three pillars of action:

1. Foster inclusive and sustainable growth in the transforming world of work
2. Accelerate workforce skilling to adapt to changing industry demands
3. Boost global workforce mobility to match skill demand with supply

Foster inclusive and sustainable growth in the transforming world of work

As people and businesses confront new realities and challenges in the aftermath of the pandemic and the rise of frontier technologies, G20 nations bear a critical responsibility to promote inclusive growth.

The primary goal should be to reduce existing inequalities and ensure that the forthcoming technological-driven growth enhances greater inclusivity over the next decade.

“Work” as we know it is undergoing a major transformation in three spheres: a) the tasks being performed, b) the location from where work is delivered (including remote working), and c) the composition of the workforce. As highlighted by a recent OECD report, the future of work presents exciting opportunities with the potential for automation to transform 14% of current jobs and create new ones. Additionally, with 32% of jobs having the potential for partial automation, it is a chance for workers to develop new skills and take on new roles, driving substantial progress and growth.¹

An important segment driving the growth of economies are the SMEs which continue to play a significant role across many nations. It is crucial to focus on SMEs and their supply chains in the context of continuous education and upskilling including entrepreneurial education within schools.

Providing access to finance and development for these businesses will help them grow and stay competitive and sustainable in the market while creating jobs and aiding them to formalise and stimulate innovation ecosystems. Investing in reskilling and upskilling, small and medium-sized enterprises (SMEs) will not only enhance their productivity but also improve their long-term viability. This will also help young entrepreneurs, start-ups, and SMEs to stay abreast of the latest technologies that are changing the business landscape. With the advancement of Industry 4.0, it is important to ensure that no SME is left out, and therefore young entrepreneurs and SMEs should be recipients of specific courses on technology and core work skills that would impact their day-to-day operations and enable new business models.

¹ OECD. 2023. Future of Work. Referenced from: <https://www.oecd.org/future-of-work/#a-world-reshaped-by-digitalisation>



The importance of mental health cannot be underestimated as these are linked to productivity levels. Adverse impacts such as burnout, stress, and decreased job satisfaction can result from poor mental health, affecting cognitive behavior, productivity and driving overall success in the workplace. A WHO study has shown that governments spend less than 2% of their health budgets on mental well-being.² While G20 nations should focus on promoting quality public health services and awareness campaigns, some employers are already prioritising it. This is highly encouraged, especially in a post-pandemic world.

Although the link between mental health and economic productivity has been recognised for some time, a lot of work remains to be done to improve mental health access to treatment for mental health problems.

A couple of other areas where the Task Force believes additional thrust is required are driving higher participation in and the growth of women-led enterprises and skill development for workers in diverse forms of work, including those working via platforms. These areas remain important pillars in ensuring all-round growth, and therefore, making concerted efforts to develop this segment of the economy will be crucial.

The G20 nations have a critical responsibility in addressing inactivity and advocating for and supporting the underserved communities, including women, people with disabilities, and marginalised communities. The best social integrator is work, and thus, governments should ensure their representation in various areas of work, by providing them with necessary support systems, enabling their social, financial, and infrastructural inclusion, and implementing effective communication systems and accessible work designs and workplaces. Additionally, remote, and flexible work arrangements are of paramount importance for these groups, as they offer a means of balancing work and personal life and promote inclusivity and diversity in the workplace. With the growing availability of remote work infrastructure, the workforce will have the flexibility to perform their duties from beyond major cities while still complying with legal requirements.

It is critical to align labour-market regulations with the realities of today's labour markets. We encourage the G20 to implement national and international regulatory frameworks that recognise and enable diverse forms of work, including open-ended, fixed-term, agency, part-time and self-employed work, as well as means to organise them, such as platform work. Flexible labour markets are crucial to enable businesses to respond to changing market demands and future disruptions.

The promotion of diverse forms of work will stimulate job creation and growth and contribute to reduce informality. Diverse forms of work, such as part-time work, fixed-term contracts and working through private employment agencies, can offer a stepping-stone to employment, especially for workers who face higher barriers on the labour market such as young, low-skilled, and migrant workers. This also brings people from informality to the formality. Agency work is a huge avenue to bring people into the formal economy. In 2021, Private Employment Agencies, placed more than 80 million in the labour markets.³

Within the private sector, there is a fantastic opportunity to improve both effectiveness and efficiency of ALMPs through improved collaboration between Public and Private Employment Service organisations. For example, public-private partnerships could allow for the pooling of private and public employment professionals and organisations to share expertise, create synergies, and deliver more efficient and targeted designs of public activation policies.

The employment challenges facing G20 countries demand a pooling of capabilities from across the public and private sectors to deliver career management and support services effectively and efficiently at the speed and scale required. Public and Private Employment Service organisations represent attractive complementary partners in addressing this challenge: for private agencies, cooperation with Public Employment Services offers better access to labour market information and other data at the disposal of public authorities, and for public agencies, cooperation brings opportunities to optimise the use of public funds through cost savings and greater efficiency in service delivery.

2 Open Access Government. 2022. Government spend on Mental Health. Retrieved from: <https://www.openaccessgovernment.org/who-budget-on-mental-health/130792/>

3 World Employment Confederation. 2023. Economic Report 2023. Referenced from: <https://wecglobal.org/publication-post/economic-report-2023/#:>



Focusing on the needs and perspectives of young people is crucial in shaping the future of work, skilling, and mobility. This includes involving them in the decision making process and designing solutions that are inclusive and meet their unique needs, which could be driven by designing fellowship, training, and apprenticeship programmes in collaboration with government, non-government, and industrial bodies. By doing so, we can ensure that the future of work is equitable and accessible for all, regardless of age, gender, or background.

Finally, the gig economy is growing rapidly with the digitisation of economies, providing access to flexible work options and attractive compensation. However, it is crucial to safeguard the interests of all stakeholders to ensure sustainability and viability of such new ways to organise work as they are gaining traction across the developed and developing world. To achieve this, policymakers must engage in consultations with business, labour, and other key stakeholders to understand the implications of gig work, freelance work, and crowd work and thereby maximising the benefits by framing policies accordingly.

Accelerate workforce skilling to adapt to changing industry demand

Two major trends are shaping today's workplace: the digital and green transitions. As a result of these transformations, many jobs will disappear, many will not resemble what they used to, and many new occupations will emerge. Advances in AI, robotics, and automation will reduce the need for manual, repetitive, and basic cognitive skills, while increasing the demand for technological, social, emotional, and higher cognitive abilities. Similarly, the green transition will push for new products to be developed. This will require new skills, but changing product cycles will also create unexpected new skills demands, as manufacturers may focus more on prolonging the product life cycle by investing in repair networks, or efficient use of resources by smarter planning.

To keep pace with this changing nature of work, G20 nations will have to help their citizens develop new skill sets and competencies.

They must:

- Devise updated curricula focused on skills and flexible learning strategies that can continually adapt to advances in technology in an agile and personalised way
- Implement policy measures to improve the links between educational and training institutions and industry through social dialogue with employers. Competence benchmarks can also facilitate the transition from the school to the labour market
- Provide adequate support for teachers

But before countries can overcome the skills gap, they must identify the skills that would result in higher employment, better incomes and more job satisfaction in the future using a skill ontology approach. To build a detailed view of the key skills that would be required, they will need to build a standardised skill framework where:

- Talent demand data and supply data are collected
- ML algorithms are mapped to create skill profiles of current and future roles
- Skill ontology graphs are used to map these skills and roles with future ones and define pathways

This approach can help benchmark the current skill sets of the workforce with those required in the future. They can also anticipate future skill needs with surveys, industry analyses, and assessment of labour market data and trends.

Along with focusing on skill development, countries must respond to the challenge of skill mismatch. They can employ a skill matching framework that links job seekers with appropriate job opportunities based on their skills, knowledge, and experience to reduce the impact of the current skills gap.

Plugging the skill gap would also require many countries to reform their education systems not just to increase mobility from education to employment, but also to support continued career development and sustainable employability through specific policy actions that support lifelong learning. Lifelong learning can help working individuals adapt to the changing job market and keep pace with rapid technological advancements.



The G20 should prioritise promoting lifelong learning to adapt to the global economy's changing demands for new skills and knowledge. Governments, employers, educational institutions, workers, and industry associations all have a role to play in promoting and supporting lifelong learning initiatives.

New advancements in learning delivery, such as blended or hybrid education, must also be monitored to ensure they meet quality standards and promote equitable access to technology and resources. Apart from using learning to improve job outcomes, policymakers must tailor education and skill development programmes, so they are key drivers of success in developing entrepreneurial activity. This approach can teach crucial business skills, focus on providing business networking opportunities, mentor youth to grow successful businesses and, hence create more jobs.

Employers are key partners in improving the skilling and mobility of workforce, and governments can leverage their industry expertise through initiatives such as sectoral skill councils, community-based vocational training programmes, and social dialogues. These initiatives can help enhance the skills of jobseekers in particular sectors or industries and provide job-related training to individuals who cannot access traditional education or training programmes.

Decision makers will also have to plan for skill development to support growing sectors and implement policies to support employees transitioning from contracting industries. The move to a more sustainable economy and demographic change in the form of aging populations in much of the developed world are steering this shift and, as a result, the green and care economies have some of the highest potentials for creating future jobs.

Large corporations will be crucial to implementing vocational education and training schemes at scale, and private employment services organisations can be invaluable partners to deliver efficient and effective work transition programmes. The sheer range and complexity of challenges we address in this paper demands collaboration as a pre-requisite; both to planning and to implementation.

In an era where individuals are expected to change jobs with greater frequency, across a greater variety of sectors and at older ages, the need for effective systems for learning, work transition, career management, and financing for learning, is acute and growing. A challenge of this scale demands significant public-private partnership.

Skilling initiatives in the green sector must focus on identifying and providing the right skills using a green skills framework and include reskilling of the workforce in other sectors to ensure that new opportunities benefit a broader share of society. Capacity-building initiatives for the care economies would require both culture change to eradicate stereotypes and policy reform to expand the formal recognition of skills and the adoption of more flexible approaches to working. In addition, cybersecurity skills should be an area of focus for G20 nations, given the need for strengthening privacy with technological advancement and increase in digital adoption.

Boost global workforce mobility to match skill demand with supply

In a world where digital transformation is driving the workforce, cross-border mobility can be a powerful tool for development. The ongoing technological change and market transformation mandate that G20 nations adopt a comprehensive approach to workers' mobility to address the shortage of highly skilled individuals in several member countries.

To enhance workforce mobility, G20 countries can take early steps by adopting the initiatives proposed in the Global Compact on Migration, notably objectives 5 and 6. Valuable work on the issue of migration, including on Labour Mobility, is being done in the context of the GFMD as well.

The intent is to increase workforce mobility, and it is important to drive home the difference between mobility and immigration. While immigration is the intention of settling, mobility is a temporary work-related movement across borders and plugs the short-term skill gaps that countries are dealing with in various crucial industries.



Although various skilling initiatives, such as the standardisation and skills matching framework, can address the skills mismatch to some extent, countries must adopt a multi-prong approach focused on increasing mobility. Some means are:

- Eliminating policy barriers via pathfinder projects
- Using technology to manage the movement of people
- Fostering a more seamless global labour market by creating a Uniform Labour Information Management System (ULIMS)

To address legal and regulatory obstacles and recognition challenges connected to workforce mobility, member countries require a shared mobility strategy. Pathfinder policies, such as bilateral and multilateral agreements, skill standards, easy visa processes, and mutual skill recognition frameworks, can be adopted and used to simplify the complexities of international mobility. In addition, technology can be leveraged to facilitate and manage cross-border movement, connect jobseekers with employers in different countries, validate worker identities and credentials, and streamline the handling of worker grievances. However, deploying these advanced technologies would require governments to implement strict cybersecurity regulations and measures to protect the privacy of stakeholders.

The G20 can utilise its substantial resources to construct a Universal Labour Information Management System (ULIMS) that builds on existing national-level Labour Market Information Systems. A ULIMS would give participating countries centralised information on labour market trends in various regions worldwide, empowering policymakers to take proactive action on numerous labour and employment issues such as workforce mobility and skills mismatch. The deployment of modern technologies should be done while protecting the privacy and data-related concerns of employees or jobseekers, and meeting the challenges associated with information exchange.

The implementation of a global-level labour management system would be ambitious and may pose major challenges, but the potential benefits and impact could make it a useful and timely intervention that the G20, with its unique place in the global order, could implement. B20 nations are focusing on enhancing cross-sector mobility, which involves moving individuals across different industries in their career paths. To achieve this, they can take several actions such as providing training programmes, encouraging collaboration, supporting diversity and inclusion, developing transferable skills, and creating incentives for employers. Additionally, activation policies, inclusion of marginalised groups, and agile labour markets can help enhance cross-sector mobility.



Introduction

Global leaders today are facing unparalleled challenges of a highly interconnected and intricate nature. The aftermath of the COVID-19 pandemic continues to bring about significant societal changes and disruptions in the ways we live, learn, and work. Technological transformations, such as generative AI, induced and accelerated by the pandemic, pose a huge execution risk as many jobs and skills are on the verge of becoming obsolete and being replaced by new ones. Leaders must act decisively to tackle global issues, including but not limited to climate change, the energy crisis, and economic uncertainties. Moreover, leaders must provide support to their people as they confront uncertainties, anxiety, depression, and burnout. These challenges have impacted every country, industry, and sector, and their implications for the future of work are significant.

These pressures can seem daunting, but there also exists a collective optimism among people, businesses, and governments that the resilience we cultivated and the lessons we learned in the last three years will help us build a better future. Both global leaders and businesses recognise the need to take bold recovery steps as we enter a new era of work and learning. Now is the time to match that common understanding with common action.

The road to recovery

The pandemic came as a shock, but it also stimulated quick action as countries mobilised to respond to the immediate needs of businesses and workers and implemented urgent measures to secure a swift recovery. At the forefront of government strategies to avoid social and economic turmoil were actions to readjust their policies in line with the changing dynamics of work and education.

The B20 has helped the G20 navigate these tumultuous times by consistently advocating for reforms to labour markets and education and training systems. Looking back at last year's Task Force, the Indonesia B20 focused its three key recommendations on aligning post-pandemic recovery and growth, education upgrades and lifelong learning systems, and workforce inclusion to the future of work.

Several governments have made progress in implementing these recommendations. For example, the UK government launched two programmes - Help to Grow: Management and Help to Grow: Digital - to facilitate the development of SMEs. These programmes are expected to support 100,000 SMEs in upskilling employees^[1].

In the education sphere, the Australian government incentivised employee training through a 20% tax deductible, while the Brazilian government helped young social and economic entrepreneurs build leadership and entrepreneurship skills through its Young Leaders of the Americas Initiative. The country also launched the Academy for Women Entrepreneurship to support women entrepreneurs through skill training, resources and networking opportunities^[2].

Countries have also focused their initiatives on young people, especially vulnerable youth, for whom the pandemic posed considerable risks in the fields of education, employment, and mental health. The Canadian government invested USD 150 million through their I-WIL Initiative to provide technology-assisted work experience opportunities for post-secondary students in Canada^[3]. The EU, through its Youth Action Plan announced financial support of 50 million Euros towards formal and informal learning opportunities through its Africa-Europe Youth Academy^[4]. This will support youth to work on leadership skills.

[1] UK. Help to Grow Campaign. Retrieved from: <https://helptogrow.campaign.gov.uk/>

[2] Australian Taxation Office - Small Business Technology Investment Boost and Small Business Skills and Training Boost. Retrieved from: <https://www.ato.gov.au/General/New-legislation/In-detail/Direct-taxes/Income-tax-for-businesses/Small-Business-Technology-Investment-Boost-and-Small-Business-Skills-and-Training-Boost>

[3] Government of Canada - Employment and Social Development Canada. Retrieved from: <https://www.canada.ca/en/employment-social-development/news/2022/07/government-of-canada-marks-world-youth-skills-day-with-major-investments-in-skills-and-innovation-projects.html>

[4] European Commission. Youth Action Plan. 2022. Retrieved from: https://ec.europa.eu/commission/presscorner/detail/en/qanda_22_5882



Despite these interventions, persistent challenges remain and the G20 members will have to rethink the scope of their policy actions to address the challenges that the future of work poses for all of us.

Looking ahead

This Task Force takes the baton at a time when the residual effects of the pandemic continue to drive economic uncertainty. High inflation and a recession on the horizon have made the outlook gloomy, forcing many companies to pause investment and cut jobs. The mobility of workers has also fallen in many countries due to policies employed to safeguard local populations. Reports indicate a 10-40% decline in mobility rates^[5]. And amid these challenging circumstances, generative AI, and Industry 4.0 technologies have emerged as a new frontier, one that has the potential to reshape job landscapes with profound implications for the workforce.

These unique challenges also present us with unique opportunities to carry out reforms that will

align labour markets workforce, and education policies with the forces that are shaping the future of work. For example, investment in upskilling and reskilling the workforce will have to be boosted and initiatives to increase the quality and availability of lifelong learning will have to be scaled up.

An unseen benefit here will be the increasing pace of technology adoption, which has led to a wider diffusion of digital skills at a time when the digitalisation of economic activity is increasing. The latest advances in technologies, such as artificial intelligence and the Internet of Things, will continue to accelerate this trend, and have the potential to turn this new era in digital innovation into a driver of stronger and more inclusive growth.

It is in this context that the G20 will have to shape a Future of Work, Skilling, and Mobility, where the workforce enjoys better productivity, growth and welfare as new and better jobs replace their old ones. This Task Force and policy paper intends to support the journey by giving actionable recommendations that provide fresh solutions to longstanding challenges.

[1] ILO-OECD. Impact of Covid 19 pandemic on jobs and incomes in G20 economies. 2020. Retrieved from: https://www.ilo.org/wcmsp5/groups/public/--dgreports/--cabinet/documents/publication/wcms_756331.pdf



Recommendation 1

Fostering inclusive and sustainable growth in transforming the world of work

Policy actions

- 1.1 Promote responsible and ethical use of technologies to drive equitable economic opportunities
- 1.2 Support growth in emerging sectors by bringing together the right combination of jobs and skills
- 1.3 Promote inclusivity and flexibility at the workplace to foster equality
- 1.4 Ensure mental well-being of the workforce
- 1.5 Empower SMEs, start-ups and women-led enterprises to drive economic growth
- 1.6 Bridge the formal-informal workforce divide for a more inclusive economy
- 1.7 Foster an enabling environment for businesses to grow, thrive, and innovate
- 1.8 Dialing up the role of public and private partnerships

The COVID-19 pandemic has brought to light the existing disparities in the global workforce and had a lasting impact on the world of work. It has disproportionately affected vulnerable sections of society, such as women and informal workers, and further intensified the barriers that hinder equal opportunities, leading to a hindrance in competitiveness and growth. The combination of post-pandemic realities and rapidly advancing digital technologies is shaping the future of work, and the G20 has an essential role to play in addressing this challenge comprehensively through collaborative mechanisms. The top priority of the G20 should be to foster equality in the workforce, which will lead to inclusive economic growth, ensuring that everyone has equal opportunities to participate in the changing economy, driven and enabled by recent technologies.

- G20 nations must align their policies to ILO Centenary Declaration for the Future of Work and strengthen their capacity to⁴ promote an enabling environment for entrepreneurship and sustainable enterprises, particularly micro, small, and medium-sized enterprises, recognising the

private sector's potential impact to bolster economic growth and job creation

- Ensure diverse forms of work arrangements, production, and business models, including those with domestic and global supply chains are considered to promote diversity in the workforce, enabling equal opportunities for all and fostering inclusive economic growth
- Strengthen work institutions to protect all workers and reaffirm the importance of the employment relationship in providing legal safeguards and certainty. Address the issue of informal work and take effective measures to facilitate the transition to formal employment
- Promote the acquisition of skills, competencies, and qualifications for all workers throughout their working lives as a joint responsibility of governments, private sector, and social partners
- Play an essential role in enabling the multilateral system to achieve its objectives, by reinforcing cooperation and enhancing institutional arrangements for policy coherence

⁴ ILO Centenary Declaration for the Future of Work, ILO. Retrieved from: https://www.ilo.org/wcmsp5/groups/public/@ed_norm/@relconf/documents/meetingdocument/wcms_711674.pdf

The policy actions within this recommendation will contribute to the achievement of SDG 8.3 (Promote development-oriented policies that support productive activities, decent job creation, entrepreneurship, creativity and innovation, and encourage the formalisation and growth of MSMEs), SDG 8.5 (Achieve full and productive employment and decent work for all women and men and equal pay for work of equal value) and SDG 8.8 (Protect labour rights and promote safe and secure working environments for all workers).



1.1 Promote responsible and ethical use of technologies to drive equitable economic opportunities

The unprecedented growth of digital technology has revolutionised the workplace in the last two decades, with cutting-edge technologies such as AI (artificial intelligence), IoT (internet of things), blockchain, virtual and augmented reality, and 5G networks of Industry 4.0 transforming society. The emerging Industry 5.0, which involves humans and advanced technologies working together, promises further workplace efficiency and productivity. For example, AI-powered language models, such as ChatGPT, are already going mainstream and people have been using them to write code, draft blogs, and compile work reports, among other things. These technologies can provide a range of benefits to education, training, and customer support by acting as a virtual tutor, trainer, or customer service representative. But while these technologies can increase efficiency, accuracy, and productivity, they also have the potential to perpetuate certain bias and discrimination, making it crucial for governments to produce policy interventions to promote responsible usage in commercial spaces.

Opportunities outweigh risks

As these technologies continue to advance at an exponential rate, their integration into the workplace has become inevitable. AI, for instance, is already driving advances in automation, data analysis and decision-making in business operations, and IoT devices monitor and optimise various business aspects, from inventory management to energy usage.

Blockchain has several uses in the workplace as it increases safety in data storage and management, verification of employee identity, credentials, and qualifications to prevent fraud and confirm job suitability and tracking of compliance with ethical standards and regulations. VR and AR have uses in employee training, product demos, and immersive experiences for customers. The high speeds and low latency that 5G networks offer can lead to new applications and services that can enable real-time collaboration or support the use of autonomous vehicles and drones.

Many of these above technologies can be combined to improve processes in various sectors. An interesting use case can be observed in the agricultural field where farmers can leverage IOT to improve their agricultural yield by leveraging sensors to monitor crop and soil health. For example, firms in the US have developed an IOT to develop precision farming to collect data on soil moisture, temperature, etc., to optimise crop yield. Other stakeholders, such as banks, can provide financing using technologies such as machine learning to analyse crop patterns, perform soil analysis and monitor weather conditions to provide credit for any specific crop.⁵ Technology also plays a significant role in formalising the economy by providing platforms for payments, skilling and even for working. These are just some of the use cases. These frontier technologies are becoming integral to every type of business as they mature and reach a level of capability that is critical for success.

⁵ Coherent Market Insights. 2023. Retrieved from: Key Companies – Internet-of-Things (IoT) in Precision Agriculture Industry



Understand the jobs transformation challenge

The biggest challenge the adoption of these technologies poses is whether technology can create more jobs than it displaces. The answer for now is yes.

Generative AI will disrupt work as we know it today, introducing a new dimension of human and AI collaboration in which most workers will have a “co-pilot,” radically changing how work is done and what work is done. As a result, every job will be impacted – some will be eliminated, most will be transformed, and many new jobs will be created.

A recent Goldman Sachs research predicts that generative AI could automate up to 300 million full-time jobs globally, equating to 18% of total global work. Advanced economies may be more heavily impacted than emerging markets. Although this shift in automation could significantly increase global labour productivity, some jobs, even highly skilled ones, are more at risk than others.⁶ Within sectors, jobs in agriculture, mining and manufacturing are the least exposed to generative AI, while those in information processing industries, such as IT, face an increased level of automation risk as they rely on programming and writing skills, which are closely related to GPT's capabilities.⁷ OECD research predicts that nearly 14% of all jobs are likely to be automated, while another 32% are at considerable risk of being partially automated⁸.

Recent Accenture research suggests 44% of working hours across industries can be impacted by artificial intelligence i.e., Large Language Models (LLMs). Language tasks account for 66% of total worked time in the US. Of the overall share of language tasks, 67% have high potential to be automated or augmented by LLMs (see Figure 1). The research across 22 job categories also found that LLMs will impact every category, ranging from

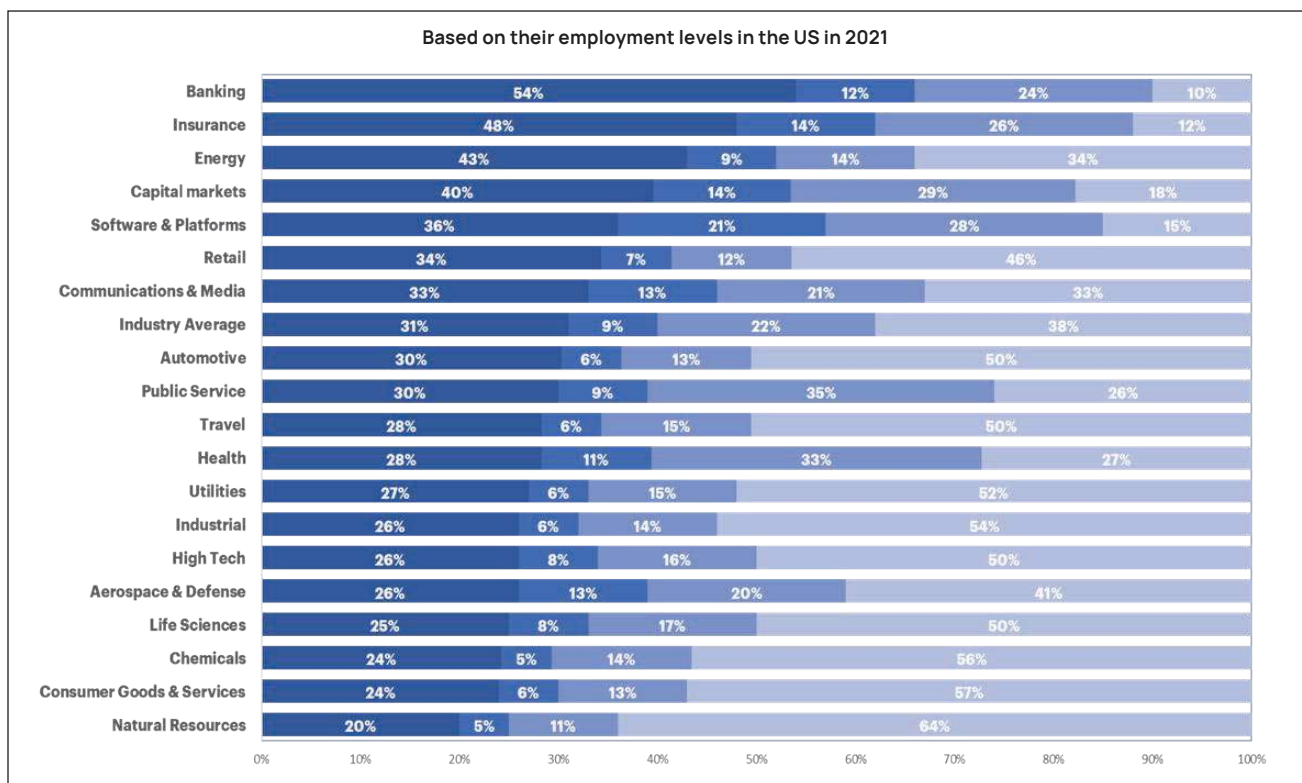
14% of a workday at the low end to 76% at the high end. In 7 out of 22 occupation groups (see Figure 2), Generative AI can affect more than half of all hours worked.

Governments and business leaders will need to work collaboratively to reinvent work to find a path to generative AI. This will involve taking concerted efforts towards job redesign, task redesign and reskilling people. Ultimately, every role in an enterprise has the potential to be reinvented, once today's jobs are decomposed into tasks that can be automated or assisted and reimagined for a new future of human + machine work. Workers will need to adapt to the fast-changing environment by acquiring new skills and expanding their capabilities to remain relevant in the evolving work landscape shaped by technological advancements. We will cover the skilling needs in the next chapter.



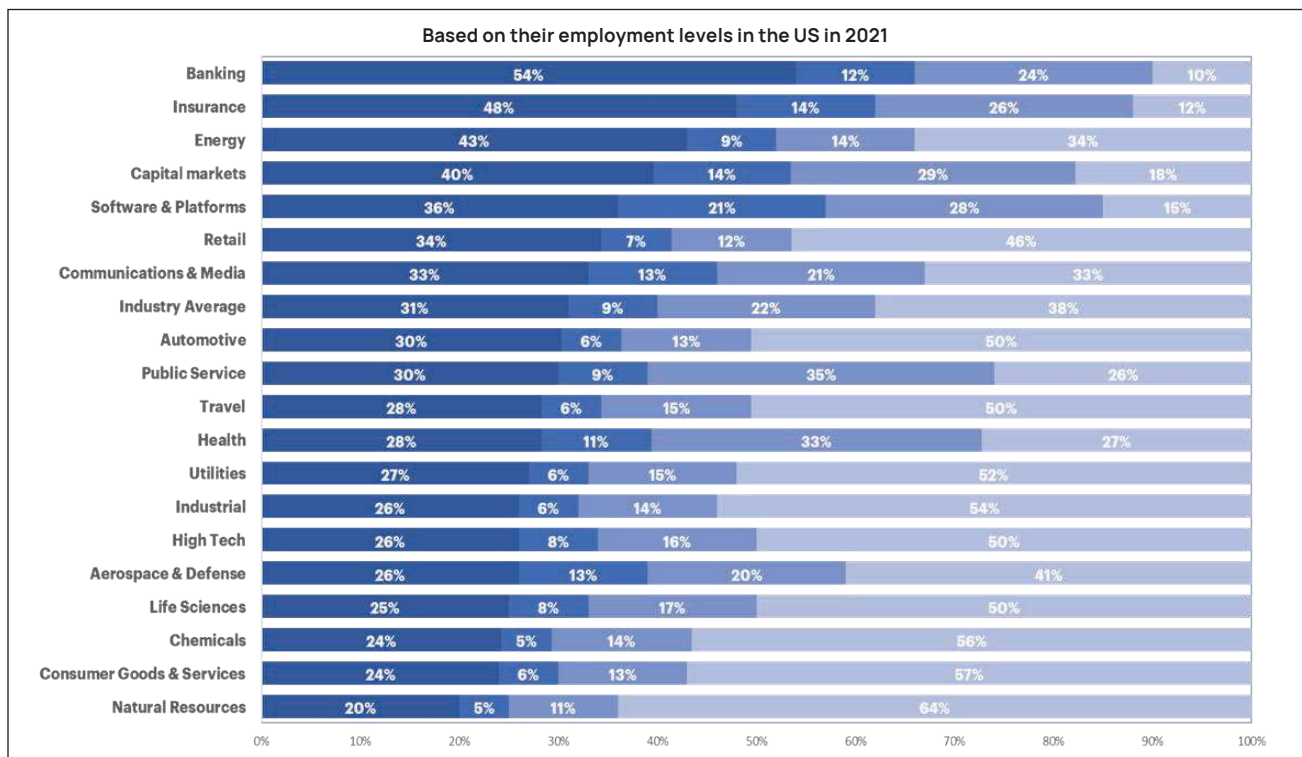
- 6 Goldman Sachs, 2023. The Potentially Large Effects of Artificial Intelligence on Economic Growth. Retrieved from: https://www.key4biz.it/wp-content/uploads/2023/03/Global-Economics-Analyst_-The-Potentially-Large-Effects-of-Artificial-Intelligence-on-Economic-Growth-Briggs_Kodnani.pdf
- 7 Forbes, 2023. Which Jobs Will AI Replace? These 4 Industries Will Be Heavily Impacted. Retrieved from: <https://www.forbes.com/sites/ariannajohnson/2023/03/30/which-jobs-will-ai-replace-these-4-industries-will-be-heavily-impacted/?sh=4431068a5957>
- 8 OECD. 2021. Policy Brief on the Future of Work Retrieved from: [what-happened-to-jobs-at-high-risk-of-automation-2021.pdf](https://www.oecd.org/policy-brief-on-the-future-of-work-2021.pdf) (oecd.org)

Figure 1. Work time distribution by industry and potential AI impact



Source: Accenture Research based on analysis of Occupational Information Network (O*NET), US Dept. of Labor; US Bureau of Labor Statistics.

Figure 2. Work time distribution by major occupation and potential AI impact



Source: Accenture Research based on analysis of Occupational Information Network (O*NET), US Dept. of Labor; US Bureau of Labor Statistics.

Ensuring co-existence of machines and humans in new ways of working

In the future of work, humans and machines will collaborate as co-piloted workforces to achieve better outcomes. To fully realise the benefits of this partnership, it is crucial to enhance acceptance of this change among employees and equip them with the necessary skills to stay future-ready. However, there are challenges to ensuring the co-existence of machines and humans in new ways of working. These include issues of trust, as well as the need to balance the benefits of automation with the potential social and economic impact on workers.

Unlike other major innovations, the evolution of AI and automation will happen in parallel with adoption because the breakthrough is significant. Therefore, business leaders must start the arduous work of reinventing jobs and creating the most effective mix of human, automated, augmented, and emergent tasks specific to their companies. This approach enables ongoing disruption while inspiring human creativity to solve previously unsolvable problems.

To overcome challenges and tackle these changes responsibly, G20 nations should collaborate with stakeholders, including employer organisations, employees, and local authorities, to develop policies that safeguard workers while supporting technology-utilising companies. Through this approach, governments can foster innovation, ensure responsible technology use, and equitably share the benefits across society and business.⁹



1.2 Support growth in the emerging sectors by bringing together the right combination of jobs and skills

Jobs in the green economy

The rise of jobs in the green economy is a key aspect of the future of work as the world moves

9 HBR, 2023. Generative AI Will Enhance – Not Erase – Customer Service Jobs. Retrieved from: <https://hbr.org/2023/03/generative-ai-will-enhance-not-erase-customer-service-jobs>

towards building a more sustainable economy to combat climate change and meet net-zero carbon targets. G20 nations will need to create new jobs that can support this transition, requiring a significant investment in infrastructure, education, training, and technology.

Many countries and companies are already taking steps to create jobs in the green economy. Governments around the world have implemented policies and programmes to promote renewable energy and energy efficiency, such as feed-in tariffs, tax incentives, and energy efficiency standards. Companies are also adopting sustainable business practices, such as using renewable energy sources, reducing waste, and designing products with a lower environmental impact.

What the numbers show

- The world lacks social and green jobs needed to provide a more inclusive, socially mobile, and sustainable economy and society. Meeting these needs requires over 60 million social jobs and 12 million green jobs¹⁰
- In 2021, the green economy generated 12.7 million jobs worldwide. The bulk of these jobs were in Asia, which accounted for 63.6% (8 million) of new jobs. China alone accounted for creation of 5.4 million jobs¹¹
- India accounted for about 18% of global hydropower employment, followed by Brazil, Vietnam, Pakistan, United States, Russia, and Colombia¹²
- In Brazil, 2.5% start-ups work on environmental solutions and renewables, whereas 20% of the nation's start-ups have workers with green skills, more than the global average of 18%¹³

10 WEF. 2023. The Social and green jobs the world needs to fill. Retrieved from: <https://www.weforum.org/agenda/2023/01/social-green-jobs-sustainable-world-davos23/>

11 Renewable Energy and Green Jobs 2022. Retrieved from: <https://theprint.in/economy/india-among-leaders-in-green-jobs-generation-creates-employment-for-8-63-lakh-in-2021/1143118/>

12 Global Green Skills Report 2022. Retrieved from: <https://economicgraph.linkedin.com/content/dam/me/economicgraph/en-us/global-green-skills-report/global-green-skills-report-pdf/li-green-economy-report-2022.pdf>

13 IRENA. 2022. Renewable Energy and Jobs Annual Review. Retrieved from: <https://www.irena.org/publications/2022/Sep/Renewable-Energy-and-Jobs-Annual-Review-2022>



- India's goal towards 500 GW of non-fossil-fuel energy sources by 2030 could create 3.4 million new job opportunities (of short or long duration), or about 1 million direct full-time equivalents¹⁴

Initiatives by governments

- In Brazil, the Federation state of Parana has developed a set of professional profiles to target sustainable and productive growth. This involved studying current roles, breaking them down at a skill and technology level and superimposing potential strategies on them. This study resulted in the identification of nearly 227 professional profiles basis technological trends across 12 industries
- **Germany's renewable energy act:** The German government implemented this act to increase the use of renewable energy sources and promote job creation in the green energy sector. The act has been successful in creating over 400,000 jobs in the renewable energy industry¹⁵
- **South Korea's green new deal:** The South Korean government has launched a Green New Deal initiative to create over one million jobs in the renewable energy and eco-friendly sectors by 2025. This initiative involves investment in renewable energy, green infrastructure, and sustainable transportation¹⁶
- **Japan's cool biz initiative:** The Japanese government launched the Cool Biz initiative to reduce energy consumption and promote sustainability by encouraging businesses to adopt casual dress codes during the summer months. This initiative has resulted in job creation in the textile industry and reduced carbon emissions¹⁷

- **Australia's renewable energy target:** The Australian government implemented a Renewable Energy Target to increase the use of renewable energy sources and create job opportunities in the green energy sector. This initiative has led to the creation of over 21,000 jobs in the renewable energy industry¹⁸

Capture value through inclusion of the silver economy

By 2050, one in five people in the world is projected to be 60-plus in age. Regionally, this trend will be the most pronounced in Europe and Asia, where every third person will be over 60. As people live longer and healthier lives and the birthrate falls to historic lows, the demographic of G20 countries will continue to change significantly over the coming decades. As per OECD, estimates project that the number of people over 65 for each working-age person will at nearly double in most G20 countries by 2075.¹⁹

The slowing growth of the working-age population will weigh on GDP per capita growth in most economies, especially if shrinking and aging populations result in slower investment and productivity growth. On the contrary, multiple studies have shown aging populations have favourable impacts on labour productivity as they continue to contribute to society and to economic growth even after retirement. Estimates put the global value of this new market of senior economy at USD 15 trillion²⁰.

Concrete actions are required today to ensure the inclusion of the silver economy. Eradicating ageist stereotypes and related discriminations would be the foundation on which this economy can be built. In addition to this, principles of lifelong learning, digital skilling, and flexible ways of working (which are all covered in later chapters) have the potential to transform the silver economy in the future.

14 IRENA. 2022. Renewable Energy and Jobs Annual Review. Retrieved from: <https://www.irena.org/publications/2022/Sep/Renewable-Energy-and-Jobs-Annual-Review-2022>

15 IEA. 2023. German's Renewable Energy Act. Retrieved from: <https://www.iea.org/policies/12392-germanys-renewables-energy-act>

16 South Korea's Green New Deal. United Nations Development Program. 2021. Retrieved from: <https://www.undp.org/blog/south-koreas-green-new-deal-year-transition>

17 Energy Saving Campaigns in Japan. 2020. Retrieved from: <https://www.japantimes.co.jp/news/2020/05/01/business/cool-biz-energy-campaign/>

18 Renewable Energy Target. Australian Government Clean Energy Regulator. 2022. Retrieved from: <https://www.cleanenergyregulator.gov.au/RET/About-the-Renewable-Energy-Target>

19 OECD. 2023. Labour Force Statistics – Old-age dependency Ratio. Retrieved from: <https://data.oecd.org/pop/old-age-dependency-ratio.htm#indicator-chart>.

20 Georgetown University. 2018. The Rise of the Silver Economy. Retrieved from: <https://msb.georgetown.edu/news-story/rise-of-silver-economy/>



Capture value through inclusion of the care economy

The care economy is a critical part of the broader economy, encompassing the production, distribution, and consumption of goods and services related to the care of people, including children, the elderly, and people with disabilities. This can include both paid and unpaid care work, such as childcare, teaching, eldercare, and domestic work. The care economy, however, is often undervalued, and this often leads to difficult conditions for care workers, who are mostly women and those from marginalised groups.

Currently, women spend more than four times the amount of time than men on unpaid care work. In India, women's unpaid work is valued at as much as 3.1% of India's GDP²¹. This unpaid work in turn limits women's participation in the labour force and perpetuates gender inequalities.

Governments, along with social partners, can take several steps to boost labour force integration for informal caregivers and invest in the care economy amid the growing demand for health and care services after the pandemic. While care jobs are already a growing sector, more work needs to be done to ensure these jobs are highly skilled and are compensated accordingly. Given the multiple economic and social payoffs, addressing this care gap through a robust, well-regulated care sector should be an urgent priority.



1.3 Promote inclusivity and flexibility at the workplace to foster equality

Establishing healthy workplaces is crucial not only for reducing poverty and inequality but also for driving productivity, enhancing human wellbeing, and promoting economic and social development.

21 The State of Employment in India. Oxfam. 2019. Retrieved from: <https://www.oxfamindia.org/news/employment-in-india-indiaspend-quotes-oxfam-india>

It also builds a more resilient and sustainable economy, equipping it to tackle future challenges. G20 nations can take steps towards promoting diversity and inclusion by subscribing to the United Nations' Sustainable Development Goals (SDGs) and establishing regular data collection and analysis mechanisms. The SDGs offer defined goals and metrics to increase diversity and inclusion, providing a comprehensive framework for enabling a healthy workplace.

Encourage remote and flexible working conditions

The COVID-19 pandemic, along with the rise of Industry 4.0 technologies (such as AI, ML, blockchain, and automation), has accelerated the trend towards flexible work arrangements, including remote and hybrid work models. Accenture's future of work survey found that 83% of workers prefer the hybrid work model, and 63% of high-growth companies have implemented "productive from anywhere" workforce models to facilitate changing preferences²². Hybrid environments are likely to promote better work experience as people feel connected and a sense of belonging with their employer.

The shift towards voluntary remote and hybrid work has the potential to promote greater equality in the workforce, reducing the impact of geographic barriers that have traditionally limited job opportunities for certain groups, particularly those residing in small towns. Employers can attract a wider range of talent, promoting diversity and inclusiveness. The rise of co-working spaces in tier 2 and tier 3 cities, small towns, and rural areas also further contributes to breaking down these barriers by allowing businesses to expand and adapt to local conditions, leading to holistic regional development across multiple dimensions²³.

22 Accenture Future of Work Study Research 2022. Retrieved from: <https://www.accenture.com/us-en/insights/consulting/future-work>

23 Collaborative workspaces in small towns and rural areas. ResearchGate. 2021. Retrieved from: https://www.researchgate.net/publication/352029896_Collaborative_workspaces_in_small_towns_and_rural_areas_The_COVID-19_crisis_as_driver_of_new_work_models_and_an_opportunity_for_sustainable_regional_development

Globally, 70% of the workforce has some level of caregiver responsibility and, as a result, flexible working arrangements, such as telecommuting or flexible scheduling, help address work-life balance challenges and accessibility issues²⁴. These issues also disproportionately affect certain groups, such as women and people with disabilities.

However, the hybrid work model is not without its challenges, specifically in the areas of employment and labour laws, data privacy, and tax compliance, which must be addressed by G20 nations to ensure legal compliance and safe, healthy work environments while remaining inclusive and flexible. To ensure that the needs of both employees and employers are met, depending on the industry in which the company operates, G20 nations can take specific steps, such as:

- Reviewing and updating labour laws and regulations, making them more flexible to support the effective implementation of flexible work arrangements
- Providing guidance and support to employers to ensure that their remote work policies comply with legal requirements
- Collaborating with businesses on creating awareness on issues such as employment contracts, a safe and healthy work environment, tax requirements, and confidential data protection to address legal risks associated with remote and hybrid work arrangements

Prioritise infrastructural inclusion

To ensure a more equitable and sustainable future of work, it is crucial for G20 nations to prioritise infrastructural inclusion. This involves investing in physical infrastructure that is accessible and sustainable, as well as digital infrastructure such as high-speed broadband and digital tools.

- **Sustainable infrastructure:** One way to promote sustainable infrastructure is through investments in public transit systems. For example, Canada has made significant investments in transport systems, including electric buses and light rail, to improve accessibility and minimise carbon emissions²⁵
- **Accessible infrastructure:** Accessible infrastructure is also important, as it ensures workplaces are physically accessible to all workers. Governments must invest in necessary infrastructure, such as wheelchair ramps and accessible restrooms, for the inclusion of people with disabilities and other marginalised individuals. Australia's Disability Discrimination Act mandates employers to provide reasonable accommodations. This may involve workplace modifications, assistive technologies, or flexible work arrangements²⁶
- **Digital Infrastructure:** Governments must also prioritise the development of digital infrastructure, including high-speed broadband, data centers, etc. to ensure that workers have access to the tools and resources they need to participate in the digital economy. India's Digital India initiative focuses on expanding digital infrastructure, including internet connectivity and digital literacy programmes, to bridge the digital divide and promote digital inclusion²⁷

To facilitate infrastructural investments, governments can foster public-private partnerships that bring together resources and expertise from both sectors. Such partnerships can incentivise private sector investment in sustainable and inclusive infrastructure projects. By prioritising infrastructural inclusion, G20 countries can develop policies and regulations that promote equitable and sustainable growth for the future of work.

25 Government of Canada. 2021. Government of Canada investing to electrify transit systems across the country. Retrieved from: <https://www.canada.ca/en/office-infrastructure/news/2021/03/government-of-canada-investing-to-electrify-transit-systems-across-the-country.html>

26 Australian Human Rights Commission. 2014. Disability Discrimination. Retrieved from: https://humanrights.gov.au/sites/default/files/GPGB_disability_discrimination.pdf

27 Indian Ministry of Electronics and IT. 2022. Achievements Made under Digital India Programme. Retrieved from: <https://pib.gov.in/PressReleaselframePage.aspx?PRID=1885962>

24 Accenture Future of Work Study Research 2022. Retrieved from: <https://www.accenture.com/us-en/insights/consulting/future-work>



Leverage ALMPs to promote equality and inclusivity in the workforce

To address increasing inactivity, promote greater inclusion, and reduce inequalities, Active Labour Market Policies (ALMPs) provide targeted support for vulnerable groups such as youth, women, minorities, and people with disabilities. Flexible labour markets enable businesses to adjust to changing labour demand and help overcome structural barriers to employment, such as discrimination, lack of access to training, and inadequate social protection, facilitating the implementation and effectiveness of ALMPs.

These policies involve a range of interventions, including job training and education programmes, employment subsidies, public works programmes, and job search assistance. Job training and education programmes aid workers to learn the skills needed to adapt to changing labour market needs. Subsidies provide financial incentives for employers to hire and train workers from disadvantaged groups. Public works programmes, which require government-funded projects, can create new jobs while job search assistance programmes can aid in connecting job seekers with potential employers.

Inclusion of labour market flexibility is crucial for the implementation of Active Labour Market Policies and the creation of open, dynamic, and inclusive labour markets. Labour market flexibility allows businesses to adjust to changes in labour demand, while also providing workers with opportunities for career growth and development. Open and dynamic labour markets promote inclusivity of workers from diverse backgrounds and help tackle structural barriers to employment such as discrimination and the lack of access to training. Inclusive labour markets prioritise the needs of vulnerable groups by providing targeted support via ALMPs. By embracing labour market flexibility, B20 nations can create a more resilient, adaptable, and inclusive labour market that supports economic growth and enhances social welfare

Initiatives in France and Spain: Several G20 nations have successfully implemented Active Labour Market Policies. France launched a youth engagement contract in March 2022, which provides customised and strengthened assistance to young individuals aged 16 to 25 with disabilities who are far from attaining employment. Meanwhile, Spain has broadened the scope of its employment policies by adding several priority groups, such as

people with limited intellectual capacity, migrants, beneficiaries of international protection, female victims of gender-based violence, people belonging to ethnic minorities, and workers from sectors undergoing restructuring²⁸.

Inclusive leadership

Inclusive leadership capabilities are a critical path dependency for organisations seeking to foster a culture of inclusiveness. Leaders must recognise the importance of diversity and inclusion and actively work to promote these values in the workplace. They must also prioritise employee well-being and mental health, creating an environment that is supportive and inclusive. By doing so, leaders can increase employee engagement, productivity, and retention while fostering a culture of innovation and creativity.

Inclusive leadership should be embedded into skilling strategy and priorities as well. As organisations prioritise skilling, reskilling, and upskilling initiatives, it is crucial to recognise the importance of inclusive leadership capabilities in driving success. Inclusive leadership should be at the center of these initiatives, ensuring that leaders are equipped with the skills and knowledge necessary to create a supportive and inclusive work environment. By prioritising inclusive leadership in skilling initiatives, organisations can not only enhance their diversity and inclusion efforts but also drive innovation, productivity, and overall success.



1.4 Ensure mental well-being of the workforce

The COVID-19 pandemic has had a profound impact on mental health worldwide. The pandemic has brought

28 OECD Employment Outlook 2022: Building Back More Inclusive Labour Markets. Retrieved from: https://www.oecd-ilibrary.org/sites/1bb305a6-en/1/3/2/index.html?itemId=/content/publication/1bb305a6-en&csp_=296f5ed49e92996368e2944737646de3&itemGO=oecd&itemContentType=book

unprecedented levels of stress and uncertainty caused by the fear of infection, loneliness, suffering and death for oneself and for loved ones, grief after bereavement and financial worries. All these factors have together contributed to increased anxiety, depression, and other mental health conditions and made strengthening mental health systems urgent all over the world.

Recognise the mental health crisis

According to the World Health Organisation, the global prevalence of anxiety and depression increased by a massive 25% in the first year of the pandemic. Young people have been left vulnerable to social isolation and disconnectedness as they faced extended school and university closures. Women have faced greater stress in homes, with 45% of women estimated to have experienced some form of violence, either directly or indirectly, during the first year of the pandemic²⁹.

The pandemic also had a significant impact on the mental health of the workforce. More people reported burnout as they had to deal with increased workload with fewer resources, concerns about job security while dealing with pandemic-related challenges and increased social isolation due to containment measures. At the same time, the pandemic made it harder for people to access mental health resources, as some providers reduced their services or shifted to virtual platforms that were not accessible to everyone.

Ensuring the mental well-being of the workforce is critical for achieving sustainable and inclusive economic growth. While the focus on mental wellness during the pandemic has been on stress and uncertainty caused by fear of infection, there is an opportunity to adopt a more expansive and comprehensive approach to addressing mental health in the workplace.

Initiatives by Governments

The increase in mental health issues has prompted governments to initiate steps to promote their populations' mental well-being

- The EU has launched the Joint Action on Mental Health (ImpleMENTAL) to implement a national level suicide prevention programme. It has also funded the online tool iFightDepression, where health professionals provide guidance to users on any question, they may have³⁰
- Australia in 2021-22 announced it will invest USD 2.3 billion in the National Mental Health and Suicide Prevention Plan, which will involve building 57 mental health treatment sites for adults. Since March 2020, nearly USD 3.3 billion has been invested to address aspects around mental health³¹
- Canada has announced USD 100 million investment to support projects that promote mental health and prevent mental illness in populations disproportionately affected by COVID-19³²
- In 2020, the Ministry of Labour, Argentina, launched a national campaign called "Salud en el Trabajo" aimed at promoting mental health in the workplace. The campaign provides resources and tools for employers and employees to address issues such as stress, anxiety, and burnout³³

Fill the gaps in mental health care

While some governments have taken a few steps to address the mental health crisis, funding towards mental wellbeing has remained limited worldwide. Global governments spent on average just over 2% of their health budgets on mental health, the WHO found³⁴. The structural challenges associated with mental health remain. These include access to professional help, financing mental health support and the taboo associated with seeking mental health help.

30 European Journal of Mental Health. JA-ImpleMENTAL.. 2021. Retrieved from: https://academic.oup.com/eurpub/article/31/Supplement_3/ckab164.240/6405118

31 Australian Government Department of Health and Aged Care. 2021. Investments in mental health and suicide prevention. Retrieved from: <https://www.health.gov.au/news/budgets-historic-23-billion-investment-in-mental-health-and-suicide-prevention>.

32 Government of Canada. 2022. Investments in mental health. Retrieved from: <https://www.canada.ca/en/public-health/news/2022/11/government-of-canada-invests-447k-to-support-mental-health-through-ottawa-youth-mental-health-project.html>

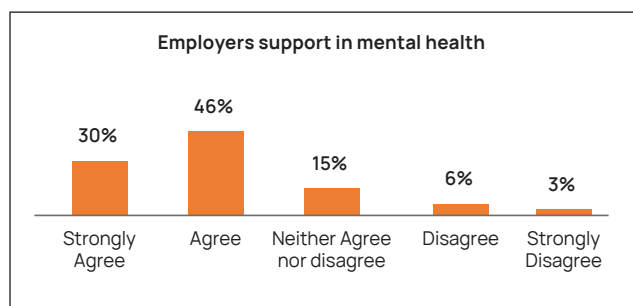
33 Investments in Mental Health in Argentina. 2021. Retrieved from: <https://www.paho.org/es/noticias/7-10-2021-argentina-presenta-nuevo-plan-nacional-salud-mental-junto-con-ops>

34 Open Access Government. 2022. Government spend on Mental Health. Retrieved from: <https://www.openaccessgovernment.org/who-budget-on-mental-health/130792/>

29 The impact of COVID-19 on mental health. WHO. 2022. Retrieved from: <https://www.who.int/news/item/02-03-2022-covid-19-pandemic-triggers-25-increase-in-prevalence-of-anxiety-and-depression-worldwide>



Governments and employers must address the mental health impact of the pandemic with urgency. Employers can take steps to support the mental health of their employees by providing access to mental health resources, promoting work-life balance, and creating a supportive workplace culture. Employers have taken some lead in combating the mental health crisis, with 49% of HR executives stating their organizations plan to offer increased mental health benefits or coverage to employees in 2023³⁵.



Source: Accenture Research

Recommended policy actions

Governments, social partners, and businesses can play a role in providing resources to support mental health, including mental health hotlines, support groups, and mental health services. In Minneapolis, public-private partnerships have led to more than eight initiatives that improve care for those with mental illness, lessen the need for emergency services, and lower costs. The programme provides 24/7 medication access, benefiting around 350 patients yearly. The result is fewer hospitalisations, jail visits, and homelessness, as well as thoughts of self-harm. A similar project in St. Paul, Urgent Care for Adult Mental Health, serves over 2,500 people yearly, with an estimated 10% avoiding emergency room visits. Accessible care reduces costs by preventing crises from occurring.³⁶

They can:

- **Create policies that promote mental well-being:** Governments can collaborate with employers to create policies that promote mental well-being in the workplace. Employers can provide input on the practicalities of implementing these policies in the workplace
- **Provide training and education:** Governments can invest in mental health workforce development through funding for education and training programmes, scholarships, and loan forgiveness programmes. Employers can train employees and managers to recognise the signs of mental health issues and to promote mental well-being in the workplace
- **Create supportive workplace environments:** Governments can support employers by providing resources and guidance on creating a mentally healthy workplace culture
- **Promote access to mental health resources:** Employers can promote access to mental health resources, such as employee assistance programmes and mental health benefits, which can be made available through health insurance plans. Governments can support employers by providing resources and guidance on creating a mentally healthy workplace culture
- **Encourage community and social support:** Governments and employers can encourage community and social support by providing opportunities for team-building activities, mentoring programmes, and volunteer opportunities
- **Expand tele-mental health services:** Governments and businesses can expand access to mental health care services by supporting the use of tele-mental health technologies, which allow mental health care providers to offer remote consultations and treatment to patients in remote or underserved areas

³⁵ SHRM. 2022. 2022-2023 State of the Workplace Report <https://www.shrm.org/hr-today/trends-and-forecasting/research-and-surveys/Documents/2022-2023%20State%20of%20the%20Workplace%20Report.pdf>

³⁶ Business Wire, 2018. Public-private partnership improves care for mental health, reduces costs. Retrieved from: <https://www.businesswire.com/news/home/20181002005993/en/Report-Public-private-partnership-improves-care-for-mental-health-reduces-costs>



1.5 Empower SMEs, start-ups and women-led enterprises to drive economic growth

Support financing and development of SMEs and start-ups

Small and medium-size enterprises contribute significantly to economies around the world and are seen as the main actors of both national and regional development in many countries. They are crucial to achieving various socio-economic objectives, such as higher growth of employment, output, the promotion of exports and fostering entrepreneurship. Recent studies show that SMEs account for 60-70% of jobs in OECD countries, including a major share of gig work and green economy roles. In emerging economies, formal SMEs alone contribute up to 40% of national income (GDP)³⁷. However, a large share continues

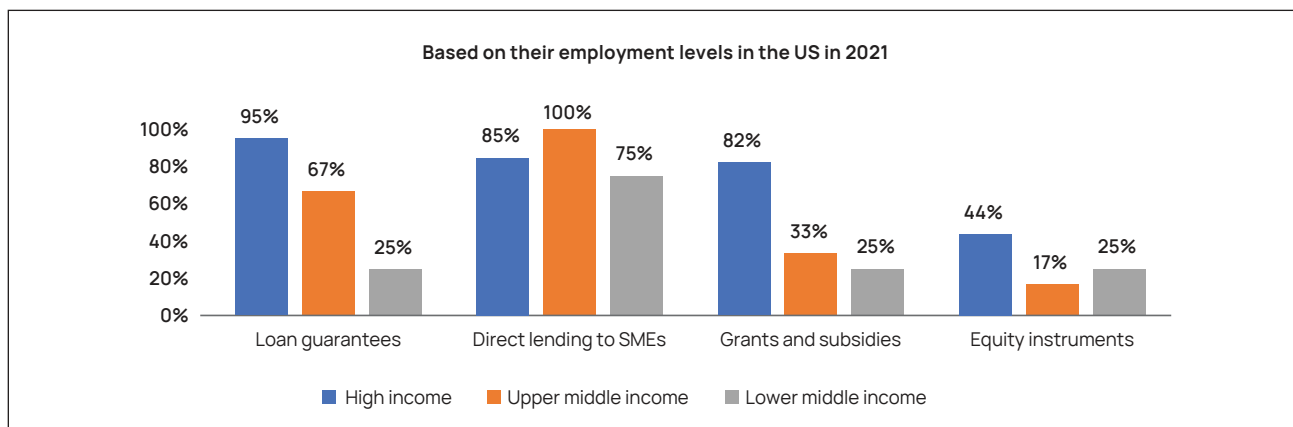
to operate as informal enterprises, particularly in informal economies, being the source of livelihood for nearly 4 billion people³⁸.

Policymakers and other stakeholders must work to create an environment that supports the growth and development of these businesses to create jobs, drive economic growth, and support the future of work.

Provide financial support

Access to financing is often a major challenge for SMEs as these businesses do not have the collateral or credit history required to secure bank loans. To address this issue, many governments and financial institutions have introduced various initiatives, such as specialised funds, to provide financing options for SMEs, for example the Credit Guarantee Fund Trust for Micro and Small Enterprises (CGTMSE) launched by India.³⁹ Industry associations can popularise this collateral-free loan scheme to entrepreneurs and can take support of state governments in this regard. Additionally, alternative financing options, such as crowdfunding and peer-to-peer lending, have emerged in recent years, making it easier for small businesses to access the capital they need.

Figure 2. Support measures adopted by countries in response to the pandemic, grouped by income levels



Source: OECD (2021), "An in-depth analysis of one year of SME and entrepreneurship policy responses to COVID-19: Lessons learned for the path to recovery", OECD SME and Entrepreneurship Papers, OECD, Paris.

37 SME's role in job creation: OECD. Retrieved from: <https://www.oecd.org/cfe/smes/2090740.pdf>

38 Department of Economic and Social Affairs. MSME and their role in SDG. Retrieved from: https://sustainabledevelopment.un.org/content/documents/26073MSMEs_and_SDGs.pdf

39 CGTMSE Scheme, India: https://msme.gov.in/sites/default/files/CredirGuranteeFundScheme_1.pdf



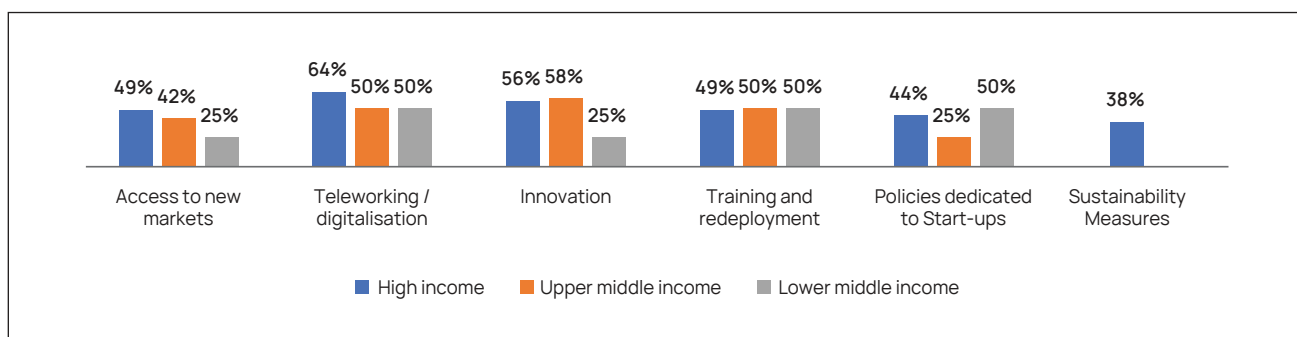
Offer development support

In addition to financing, SMEs also require access to development support to bring them under the formal economy. SMEs that operate informally often feel burdened with complex regulations and tax requirements that can be difficult to navigate, especially for new businesses, leading to reduced productivity and competitiveness. If the regulatory apparatus is complex and imposes extensive costs, it serves as a primary disincentive for firms to register. By reducing regulatory and tax compliance requirements, governments can create a more favourable environment for SMEs to operate in, enabling them to focus on innovation, expansion, and job creation. Governments can also focus on providing mentorship, training, and networking opportunities as these can help small business owners acquire the skills needed to grow their businesses and take advantage of new opportunities.

Development of more business incubators using the vast educational infrastructure will help bridge the industry academia gap while promoting start-ups. The next chapter will cover skilling opportunities and government initiatives on skilling in more detail.

And lastly, governments must provide infrastructure access to SMEs to foster growth. This includes physical infrastructure, such as transportation and communication networks, as well as digital infrastructure, such as high-speed internet and online platforms. Support for the acquisition and transfer of new technologies is also a major factor for these companies to develop new business models and access different markets. These infrastructure investments can help small businesses reach new markets, access new customers, and streamline their operations.

Figure 3: Policies implemented by countries to support SMEs, grouped by income



Source: OECD (2021), "An in-depth analysis of one year of SME and entrepreneurship policy responses to COVID-19: Lessons learned for the path to recovery", OECD SME and Entrepreneurship Papers, OECD, Paris

Protect start-ups after economic shock

Start-ups have emerged as key drivers of economic growth and job creation in recent years. Young firms account for about 20% of total employment and create almost half of all new jobs on average across OECD countries.⁴⁰ In the US, innovation by young firms account for half of the productivity growth.⁴¹ In China, the start-up industry's value to GDP has

doubled to nearly 40% in the last 10 years⁴². Despite their importance and potential, start-ups were the most vulnerable during the pandemic as the outbreak dried up demand and funding. Many countries have taken measures to sustain short-term liquidity needs, such as loan guarantees, direct lending, grants, or subsidies to support the financially fragile start-ups in the times of crises like the COVID-19 pandemic.

⁴⁰ OECD. DynEmp: Measuring job creation by start-ups and young firms. Retrieved from: <https://www.oecd.org/sti/dynemp.htm>

⁴¹ National Bureau of Economic Research: <https://www.nber.org/papers/w27015>

⁴² The growth and future of Digitisation. Beijing Review. 2013. Retrieved from: https://www.bjreview.com/Opinion/Voice/202302/t20230213_800321688.html

Some initiatives taken by G20 nations:

- India, which has the third largest start-up ecosystem in the world valued at USD 340 billion, used the start-up India initiative to ensure funding and industry support. Germany created a €2 billion start-up booster fund to support start-ups, modern technology companies and small businesses⁴³. The fund supported venture capital investors who make funds available to creative fledgling firms⁴⁴
- UK set up Coronavirus Future Funds to issue convertible loans between £125,000 to £5 million to innovative companies facing financing difficulties due to the COVID-19 outbreak⁴⁵
- France launched an exceptional emergency plan of nearly 4 billion euros to help start-ups⁴⁶

Tackle short-term challenges

As start-ups play a critical role in economic growth and job creation, it is imperative for G20 nations to build an ecosystem conducive to their growth and sustenance. Here are a few policy actions they can take to help them overcome short-term challenges.

- Support short-term financial needs through low-interest loans and government grants
- Raise awareness about existing measures and support initiatives to help start-ups
- Promote investments in skills and online training to prevent skills depreciation and encourage upskilling of start-up workers
- Collaborate with industries to design a standardised training curriculum
- Support start-ups in strategic sectors to support local business innovation

Promote women-led enterprises and web-based communities

Women entrepreneurs face various challenges in establishing and growing their businesses as they are often disadvantaged due to social norms, cultural practices and biases that limit their access to resources and opportunities. Their top challenges are:

- **Lack of capital:** Women entrepreneurs find it difficult to secure funding for their businesses due to several reasons, including gender biases in the financial system. Interestingly, financial institutions have reported that female borrowers have a 53% lower rate of non-performing loans compared to male clients. Closing the credit gap of USD 1.4 to USD 1.7 trillion for WSMs in emerging markets would alone result in an average of a 12% increase in annual incomes by 2030⁴⁷
- **Limited access to networks:** Women are also less likely to have access to networks of investors or mentors who can provide them with guidance and funding, limiting their opportunities to gain the skills and knowledge necessary for business success
- **Social and cultural norms:** Social and cultural norms also limit women's participation in the formal economy, particularly in male-dominated industries, pushing them to operate in the informal sector, where they have limited access to social protections and resources

Promoting women-led enterprises and web-based communities can increase the visibility of women entrepreneurs and help them access funding, networking, and mentorship opportunities. It can also create a more supportive environment for women entrepreneurs to grow and succeed, addressing some of the gender-based barriers that women face in accessing finance and resources. Over the past few years, there has been a growing recognition that women-led enterprises can be powerful drivers of economic growth and development.

42 The growth and future of Digitisation. Beijing Review. 2013. Retrieved from: https://www.bjreview.com/Opinion/Voice/202302/t20230213_800321688.html

43 India now home to 100 unicorns with a combined valuation of USD 340 billion. Retrieved from: <https://www.dealstreetasia.com/stories/india-100-unicorns-valuation-290933>

44 Bloomberg. 2022, Germany's Help to Startups. Retrieved from: <https://www.bloomberg.com/news/articles/2020-04-01/germany-to-help-startups-with-2-2-billion-assistance-package>

45 UK Government. 2020. UK Government's Covid Future Fund. Retrieved from: <https://www.gov.uk/guidance/future-fund>

46 Reuters. 2020. France's European Support Plan Retrieved from: <https://www.reuters.com/article/us-health-coronavirus-france-tech-idUSKBN21C0R9>

47 International Finance Corporation Gender finance gap. Retrieved from: https://www.ifc.org/wps/wcm/connect/publications_ext_content/ifc_external_publication_site/publications_listing_page/closing-the-gender-finance-gap-through-blended-finance



Studies have established that women can improve the level of entrepreneurial activities in their countries. In India, women-led enterprises have performed significantly better than other enterprises in terms of productivity and export shares⁴⁸.

Initiatives by G20 nations

G20 leaders had first committed to “women’s full economic and social participation” in Los Cabos in 2012.⁴⁹ In Brisbane, the G20 then set the ambitious goal to reduce the gender gap in labour market participation by 25% by 2025⁵⁰. Under the Italian presidency in 2021, G20 leaders acknowledged the need to address the dearth of female-led tech start-ups and close the gender gap in science, technology, engineering, and mathematics (STEM) fields.⁵¹

Several G20 countries have also launched various programmes to promote women’s entrepreneurship.

- India has introduced multiple government schemes – Pradhan Mantri Jan Dhan Yojana (PMJDY), Pradhan Mantri MUDRA Yojana (PMMY), start-up India, and Stand-Up India– to promote women entrepreneurs. By 2030, an estimated 30 million women owned MSMEs are expected to flourish in India, providing employment to nearly 150 million people⁵²
- Brazil’s “Women in action” programme is a government initiative designed to support and promote women entrepreneurs. The programme focuses on providing access to training and education, financial support, and networking opportunities for women entrepreneurs⁵³

Progress towards parity

The Global Gender Gap Report 2022 shows that while the share of women in leadership has been increasing over time, women have not been hired at equal rates across industries. On average, more women have been hired into leadership in industries where women were already highly represented, limiting progress in parity⁵⁴. Governments and organisations need to take more steps to address the challenges women entrepreneurs face and create an enabling environment for women to start and grow successful businesses.

Women’s representation in the workforce:

The current global labour force participation for women is just under 47% compared to 72% for men⁵⁵. Women also tend to be overrepresented in certain types of vulnerable jobs: men are more likely to be working in own-account employment while women are more likely to be helping in their households or in their relatives’ businesses.

Impact of digitisation on women: While digitisation offers new opportunities across the world and holds promises for enhanced productivity growth, it also brings the risk of the current gap widening as most jobs and daily activities will need basic digital literacy to engage with a digital economy. A 2019 UNESCO report found that women represent only 29% of science R&D positions globally and are already 25% less likely than men to know how to leverage digital technology for basic uses.⁵⁶

B20 India is a Co-Chair of a B20 Indonesia legacy project entitled the One Global Women Empowerment (OGWE) initiative. The aim of OGWE is to advance inclusive, resilient, and sustainable global economic growth by empowering women in business and women at the workplace. Looking ahead, and during the B20 India Presidency, OGWE’s plan is to ensure continuity in the advocacy for women empowerment between the B20 presidencies, facilitate peer learning and steer collective action.

48 Frontiers. 2020. Women Entrepreneurship: A Systematic Review to Outline the Boundaries of Scientific Literature. Retrieved from: <https://www.frontiersin.org/articles/10.3389/fpsyg.2020.01557/full#B86>

49 Oxfam Publishing: <https://ciaotest.cc.columbia.edu/pbei/oxfam/0032484/index.html>

50 G20 Labour and Employment Ministerial Declaration. 2021. Retrieved from: https://www.g20.org/content/dam/gtwenty/about_g20/previous_summit_documents/2021/G20-2021-Labour%20and%20Employment%20Ministerial%20Declaration.pdf

51 G20 Italian Presidency: https://www.g20.org/content/dam/gtwenty/about_g20/previous_summit_documents/2021/declaration-of-g20-digital-ministers-2021final.pdf

52 India Brand Equity Foundation. 2022. Women Entrepreneurs Shaping the Future of India. Retrieved from: <https://www.ibef.org/blogs/women-entrepreneurs-shaping-the-future-of-india>

53 Ministry of Social Development, Argentina. 2015. Ellas Hacén. Retrieved from: <https://www.desarrollosocial.gob.ar/wp-content/uploads/2015/07/1.-M-s-sobre-Ellas-Hacen.pdf>

54 WEF. 2022. Global Gender Gap Report. Retrieved from: <https://www.weforum.org/reports/global-gender-gap-report-2022/>

55 ILO. 2022. Gender Gap in Employment. Retrieved from: <https://www.ilo.org/infostories/en-GB/Stories/Employment/barriers-women>

56 UNESCO. 2022. Harnessing the Power of Artificial Intelligence for Women Around the World. Retrieved from: <https://www.unesco.org/en/articles/harnessing-power-artificial-intelligence-women-around-world>

Recommended policy actions

- **Incentivise businesses to develop training, mentoring, and capacity-building programmes for women employees:** Companies should be incentivised to develop training, mentoring, and capacity-building programmes for women employees. They should invest in supporting women employees through industry-tailored technical and core work skills education programmes to empower their professional and personal competencies to unleash their potential and help them advance in pursuing a meaningful and fulfilling career
- **Ensure financial inclusion:** Governments can create programmes that provide access to finance for women entrepreneurs, such as loan guarantees, venture capital, or microfinance. They should also ensure women use bank accounts, and not cash, to access benefits and wages, as India did with its Jan Dhan Yojana⁵⁷
- **Promote gender-sensitive policies:** Governments shall promote gender-sensitive policies and regulations that help level the playing field for women-led businesses
- **Leverage web-based communities:** Governments can also support initiatives that provide women with mentorship and networking opportunities, as well as access to finance and training programmes. They can also use social media to connect women entrepreneurs with mentors, investors, and potential customers
- **Empowering women with digital skills:** Adopting an organisation-wide digital strategy can empower workers to innovate and solve real problems using emerging technologies. However, women significantly rank lower in digital skills than the global average. A 2019 UNESCO report found that women represent only 29% of science R&D positions globally and are already 25% less likely than men to know how to leverage digital technology for basic uses⁵⁸

Organisations need to promote gender diversity and invest in digital skills training to boost performance and innovation while staying relevant in a rapidly changing digital landscape

- **Creating work-life enhancement that works for women:** Organisations are increasingly evaluating how work affects the personal lives of their employees. Women report lower work-life enhancement than the global average⁵⁹, which can be addressed by introducing more family-friendly policies, flexible schedules, and remote work options. Programmes that offer childcare or eldercare support are also essential to promote gender equality in caregiving responsibilities. Maximising work-life enhancement will not only advance gender equality but also promote employee well-being and productivity



1.6 Bridge the formal-informal workforce divide for a more inclusive economy

Address the challenge of informality

The high incidence of the informal economy is a significant challenge for the G20, particularly in the aftermath of COVID-19, as it is linked with weaker economic outcomes, including lower government resources to combat recessions, lower per capita incomes, greater poverty, less financial development, and weaker investment and productivity. A significant aspect of the future of work is reducing informality to create more inclusive, resilient, and sustainable economies that benefit all citizens.

57 PMJDY. 2022. PMJDY. Retrieved from: <https://pmjdy.gov.in/>

58 UNESCO. 2022. Harnessing the power of AI for women around the world. Retrieved from: <https://www.unesco.org/en/articles/harnessing-power-artificial-intelligence-women-around-world>

59 Accenture, 2022. Future of Work. Retrieved from: <https://www.accenture.com/content/dam/accenture/final/accenture-com/document/Accenture-Future-of-Work-IWD-Research-2023-FINAL.pdf>



Inequality in the workforce is not only due to a lack of jobs but also their quality. More than 60% of the global workforce works in the informal economy, which creates significant challenges around decent work deficits.⁶⁰ The lack of formal employment also limits the fiscal space and capacity of States to provide access to public services to all and ensure appropriate redistribution through social transfers and tax systems. It hinders the governments' scope of action and the ability to invest in social and public infrastructure and develop effective policy mechanisms that address inequality.

By addressing informality, G20 nations can create a more sustainable and equitable future of work while also driving inclusive economic development. It requires coordinated efforts from governments, the private sector, and other stakeholders to create a conducive environment for formal employment, promote entrepreneurship, design viable social protection systems, and enhance public infrastructure.

Increasingly, many people are in forms of work, such as part-time work, fixed-term contracts and working through private employment agencies, which can offer a stepping-stone to employment, especially for workers who face higher barriers on the labour market such as young, low-skilled, and migrant workers.⁶¹ A formal economy has a significant positive impact. It can:

- Increase government revenue by expanding the tax base
- Provide better working conditions and job security for the workforce
- Promote social inclusion by extending legal protections and benefits to more workers
- Foster entrepreneurship by giving businesses access to finance, markets, and other resources

G20 nations can take several steps to remove policy irritants that promote informality and bring down the cost of formalisation. This includes measures such as streamlining the registration process for business, reducing the costs of compliance with regulations and taxes, and providing

support for small and informal businesses to transition to the formal sector. Governments can also implement labour regulations that encourage formal employment and provide incentives for formalisation.

Role of gig and platform economy

Any efforts to effectively enhance the level of formal economy must encompass the gig and platform economy, which exists at the intersection of both formal and informal economies.

The gig and platform economy has witnessed a significant rise in recent years, transforming the way people work and engage in economic activities. Enabled by technological advancements, these flexible and on-demand work arrangements have created new opportunities in labour markets globally.

The platform economy has delivered significant economic value globally by:

- Improving labour market efficiency
- Providing access to work for marginalised workers
- Supplying work opportunities for highly skilled but disconnected workers
- Offering flexibility in terms of location and work hours

Platform work has provided workers with greater flexibility and the ability to adapt their income and consumption in response to labour market shocks, such as unemployment. During the COVID-19 pandemic, platform work played a crucial role in mitigating economic disruptions by offering diverse job opportunities, whether through location-based platforms (e.g., delivery, transport, care) or online web-based platforms (e.g., consultancy, software design). Platforms also contribute to employability and training, with new platform workers developing valuable skills for future work prospects.

Platform work plays a crucial role, especially in developing countries, in facilitating the transition to formal employment. Platforms, as formal entities, contribute to increased formality by engaging traditionally excluded workers, providing written contracts, benefiting not only workers but also governments by generating additional tax revenue, and creating the conditions for increasing individual-level safety nets.

60 ILO: https://www.ilo.org/global/about-the-ilo/newsroom/news/WCMS_627189/lang-en/index.htm

61 ILO, 2021. Inequalities and the world of work. Retrieved from: https://www.ilo.org/wcmsp5/groups/public/--ed_norm/--relconf/documents/meetingdocument/wcms_831542.pdf

62 NITI Aayog. 2022. India's Booming Gig and Platform Economy. Referenced from: https://www.niti.gov.in/sites/default/files/2022-06/25th_June_Final_Report_27062022.pdf



Recent policy developments

In many countries, protections are connected to an individual's employer rather than the individual. But for platform economy to fully transition to formal economy, existing safety nets will have to be expanded so that workers can avoid the crude choice between flexibility and security. At the national level, many innovative social and policy solutions are being developed for platform work, ensuring that social protections are flexible and adaptable to accommodate new ways of organising work.

- **Jurisdiction-level policy development:** India passed legislation in 2020 that requires platform companies or aggregators to contribute towards a social security fund for gig and platform workers⁶³. According to the Code, "platform work" refers to "an employment form in which organisations or individuals use an online platform to access other organisations or individuals to solve specific problems or to provide specific services in exchange for payment." While platform workers are not employees, they are entitled to specific social security benefits such as insurance coverage, health and maternity benefits, and old age protection. This law could serve as a model for other countries as it highlights the need for policymakers across the globe to consider innovative solutions that promote the formalisation of gig work while also ensuring that workers have access to essential social protections
- **Platform business models:** There has been considerable progress by companies on offering social protections to those that engage with work on their platforms. In France, Deliveroo offers sick pay to its riders free of charge. This is provided irrespective of whether the sickness is related to the work through the platform⁶⁴
- **Worker advocacy:** Across different countries, we are also seeing some innovation from worker groups, sometimes in collaboration with platforms, to develop innovative models for organising, representation and advocacy. Chile explicitly allows for the creation of trade unions

of independent contractors but does not allow these associations to engage in strike action or collective bargaining. In India workers only gain collective bargaining rights if their trade union gets recognised. Selected provinces in Canada allow 'dependent contractors' (an intermediate worker classification) to unionise⁶⁵

Recommended policy actions

The emergence of the platform economy has created new challenges that require careful consideration and regulatory oversight. B20 can play a crucial role in promoting policies that support the interests of businesses, workers, and society. Here are some important considerations:

- **Adopt jurisdiction specific solutions to address platform work diversity:** Platform work varies significantly across different national realities, markets, and labour market segments. Hence, it is essential to adopt a tailored, granular, and national/regional approach in dealing with this facet of the economy. Regulation must maintain the flexibility that many workers desire
- **Integrate sustainability and value in social protection systems:** Social protection systems need to be sustainable and have value. Safety nets should support labour market transitions and new ways of working that meet the growing demand for more flexible options. Besides basic social protections around welfare and safety, these social protections should enable upskilling and reskilling and promote quality transition support through private and public means
- **Improve access to social infrastructure:** Governments should partner with businesses to connect the billions of people still unable to access the online community and economy. Digital infrastructure including social infrastructure and digital skills development should be accessible to everyone, not just in urban areas but also in rural areas and for labour market groups like elderly, female, youth, and workers with disabilities

63 India, IT For Change. 2020. Statement issued by an Alliance of Labour Unions and Civil Society Organisations. Retrieved from: <https://itforchange.net/labour-law-platform-workers-rights-data-digital-economy#>:

64 Deliveroo, France: <https://www.businessinsider.com/deliveroo-will-pay-sickness-and-injury-benefits-if-the-law-changes-2017-7>

65 Federal Standards of Protection, Canada: <https://www.canada.ca/en/employment-social-development/corporate/portfolio/labour/programs/labour-standards/reports/issue-paper-federal-protections-workers-standard.html>



This will enable people to make the most of online opportunities for services provided through platform work and enhance social mobility, especially in underserved communities

- **Ensure a level playing field:** Policymakers and stakeholders within the system need to ensure that there are appropriate arrangements in place to ensure that regulatory overlaps and policy gaps are minimised. It is essential to have a level playing field among platforms and across all labour market intermediaries
- **Promote tripartite social dialogue for governance:** Tripartite social dialogue is necessary for the governance of platform work. Policy outcomes take strong political will, trust, effective coordination, allocation of resources, and related factors, by governments and their social partners. The level of industrial relations and culture that comes with it also plays a role. By embracing these considerations, B20 can promote policies that support the growth of the platform economy while ensuring that it contributes to the well-being of people, businesses, and society as a whole



1.7 Foster an enabling environment for businesses to grow, thrive, and innovate

The B20's primary goal is to provide a platform for businesses to engage with G20 leaders and contribute to shaping global economic policies. Creating an environment for businesses to grow, thrive, and innovate is critical because it drives economic growth and creates jobs, which benefits not only businesses but also society. By creating favourable conditions for businesses, including access to finance, skilled labour, and technological infrastructure, governments can promote innovation and competitiveness. Additionally, by reducing bureaucratic barriers and fostering an

open and transparent regulatory environment, businesses can operate more efficiently and effectively.

Recommended policy actions

B20 can take various actions to create an enabling environment for businesses to grow, thrive, and innovate:

- **Engage with G20 leaders:** B20 can engage with G20 leaders and provide recommendations on policies that support economic growth and innovation. This can include policies that promote entrepreneurship, reduce trade barriers, and enhance access to finance
- **Facilitate public-private partnerships:** B20 can facilitate public-private partnerships to improve infrastructure and promote investment in areas, such as transportation, energy, and telecommunications, which benefit businesses
- **Advocate for regulatory reforms:** B20 can advocate for regulatory reforms that reduce bureaucratic barriers and promotes an open and transparent business environment. This can include policies that enhance intellectual property protection, reduce corruption, and promote fair competition
- **Encourage investment in education and skills training:** B20 can encourage investment in education and skills training to promote a skilled workforce that can meet the needs of businesses in the 21st century. This can include policies that promote vocational education and training, apprenticeships, and lifelong learning
- **Promote sustainability:** B20 can promote sustainability by encouraging businesses to adopt environmentally friendly practices that reduce their carbon footprint and promote a circular economy. This can include policies that promote renewable energy, reduce waste, and enhance biodiversity
- **Advocate for digitalisation:** B20 can advocate for digitalisation by promoting policies that enhance access to digital technologies and infrastructure, including 5G, cloud computing, and artificial intelligence. This can include policies that promote digital entrepreneurship, protect personal data, and enhance cybersecurity

- **Promote diversity and inclusion:** B20 can promote diversity and inclusion by encouraging businesses to adopt policies that promote gender equality, diversity, and inclusion. This can include policies that enhance equal pay, eliminate discrimination, and promote work-life balance
- **Enhance access to capital:** B20 can enhance access to capital by advocating for policies that promote access to finance, including venture capital, angel investing, and crowdfunding. This can include policies that reduce regulatory barriers and promote financial literacy
- **Foster innovation ecosystems:** B20 can foster innovation ecosystems by promoting collaboration between businesses, academia, and government. This can include policies that promote technology transfer, intellectual property rights, and commercialisation of research
- **Encourage international cooperation:** B20 can encourage international cooperation by promoting policies that reduce trade barriers, enhance cross-border investment, and promote global standards. This can include policies that promote multilateralism, enhance intellectual property protection, and promote sustainable development

To design and implement an ideal incubating environment for businesses to grow, thrive, and innovate, multiple stakeholders will have to come together and work in harmony:

- **Governments:** Governments play a critical role in implementing policies that enable businesses to grow. They can adopt regulatory reforms that reduce bureaucratic barriers, enhance access to finance, and promote trade and investment. They can also invest in infrastructure, education, and skills training to promote economic growth and innovation
- **Business associations:** Business associations, including B20, can play a critical role in advocating for policies that support economic growth and innovation. They can engage with governments to provide recommendations on policies that benefit businesses, promote public-private partnerships to improve infrastructure, and foster innovation ecosystems
- **Financial institutions:** Financial institutions, including banks, venture capitalists, and angel investors, can play a critical role in enhancing access to capital for businesses. They can invest in new and innovative businesses, provide financial products and services that support entrepreneurship, and promote financial literacy
- **Academia:** Academia can play a critical role in promoting innovation by conducting research that leads to new products and services, developing skilled workers, and providing technology transfer. They can collaborate with businesses and government to develop modern technologies, promote commercialisation of research, and enhance intellectual property protection

B20 nations have been proactive in introducing a range of policies that drive regulatory reform and enable businesses. Here are a few such examples of policy interventions in critical areas.

- **Infrastructure investment:** The United States government passed the Infrastructure Investment and Jobs Act, a USD 1.2 trillion infrastructure investment package that will fund improvements to transportation, water, and broadband infrastructure⁶⁶
- **Access to finance:** The Indian government launched the Start-up India Seed Fund Scheme, which aims to provide seed funding to eligible start-ups. The scheme also includes a mentorship programme and other support services to help start-ups grow⁶⁷
- **Sustainability:** The European Union has implemented the European Green Deal, a comprehensive plan to make the EU's economy more sustainable. The plan includes policies to reduce greenhouse gas emissions, promote renewable energy, and enhance biodiversity⁶⁸

66 The White House. 2021. President Biden Announces Support for the Bipartisan Infrastructure Framework. Retrieved from: <https://www.whitehouse.gov/briefing-room/statements-releases/2021/06/24/fact-sheet-president-biden-announces-support-for-the-bipartisan-infrastructure-framework/>

67 The Start-Up India Seed Fund Scheme. Retrieved from: <https://seedfund.startupindia.gov.in/about>

68 European Commission. European Green Deal. Retrieved from: https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal_en



- **Innovation ecosystems:** South Korea's government has implemented policies to promote innovation ecosystems, including the creation of the Korea Innovation Center, a government-funded organisation that provides support services to start-ups and promotes technology transfer⁶⁹
- **Regulatory reform:** Mexico's government passed the Federal Law for the Protection of Industrial Property, which enhances intellectual property protection and promotes innovation. The law includes provisions to streamline patent registration, enhance copyright protection, and improve trademark protection⁷⁰



1.8 Dialing up the role of public and private partnerships

Public and private employment services can play an essential role in facilitating job recovery in the global labour market. Public employment services, such as national or regional/local employment agencies, can offer a range of services to both job seekers and employers, including job listings, skill assessments, and training programmes. These services can help job seekers identify job opportunities that match their skills and qualifications, while also helping employers find suitable candidates for their job vacancies. Private employment services, such as recruitment agencies and staffing firms, by virtue of their strong relationship with clients across many sectors of the economy, and a network of local branches, are very well suited to match supply and demand.

69 SeoulZ. 2022. Korean Agencies that support Start-ups. Retrieved from: <https://www.seoulz.com/korean-government-agencies-that-support-startups/>

70 International Trade Administration. 2022. Protecting Intellectual Property – Mexico. Retrieved from: <https://www.trade.gov/country-commercial-guides/mexico-protecting-intellectual-property>

Private Employment Agencies can also play a critical role in facilitating demand-driven cross-border mobility. These services can offer more specialised recruitment services and have access to a broader network of employers and job seekers. They can also provide additional support to international job seekers, such as visa and immigration assistance, relocation support, and language training.

In the context of future of job recovery, public and private employment services are complementary, and should not be seen as being in competition. In many cases, private employment services can provide support to job seekers without the use of taxpayer money, which means public employment services can focus their resources where they are most needed. Ideally, both parties should collaborate closely to provide a more comprehensive set of services to job seekers and employers. Concrete and actionable policy options for policymakers and social partners to implement on all levels of labour market governance that pave the road to sustainable Job Recovery are as follows connecting job seekers and employers. Rather than competing, public and private services should be seen as complementary, and if they collaborate closely, they can provide comprehensive services to promote sustainable job recovery.

Public employment services, such as national or regional and local employment agencies, can offer various support services to both job seekers and employers, including job listings, skill assessments, and training programmes. On the other hand, private services, such as recruitment agencies, have strong industry relationships and specialised recruitment capabilities. They can provide support to job seekers without the use of taxpayer funds, which means public employment services can focus their resources where they are needed most.

Private services can also facilitate demand-driven, cross-border mobility and provide additional support to international job seekers through visa and immigration assistance, relocation support, and language training. Policymakers and social partners can leverage both services to pave the road to sustainable job recovery. They can implement the following steps to maximise the results.

To address informal economy and promote employment generation and wealth creation, B20 can take the following steps:

- **Promote collaboration between public and private employment services:** Encourage public and private employment services to work together, supporting joint job fairs, training programmes, and sharing best practices to provide comprehensive services to job seekers and employers
- **Foster partnerships between businesses and employment services:** Encourage businesses to partner with employment services to provide additional support to their employees, such as language training or career development programmes
- **Support the development of regional employment services:** Encourage the development of regional employment services tailored to the specific needs of different regions and industries
- **Simplify business registration and start-up procedures:** Create a single, easy-to-use business registration form in plain language, use a single identification number, eliminate non-value-added steps, and consider adopting automatic business registration processes to eliminate delays
- **Build flexible labour laws:** Ensure a level playing field between formal and informal businesses, and protect workers with a robust

social protection system, including basic healthcare benefits, income security, and targeted income support for poor workers, while reducing informality by promoting labour law flexibility

- **Provide access to credit:** Microfinance and micro-credit provide affordable financial services to informal workers and businesses, allowing them to make deposits, transfer funds, access insurance, and invest. Prioritise Skill Development and Education: Include entrepreneurship, business, and management skills in public education curriculums, emphasising the importance of formality and compliance with regulations in areas like taxation and employment⁷¹

The International Labour Organisation's Global Business and Disability Network (GBDN) presents a great model of a public-private employment service that could be relevant to B20's efforts. The GBDN is designed to promote disability-inclusive workplaces and enhance the employment prospects of people with disabilities by bringing together businesses, governments, and disability organisations. The GBDN offers training for employers, networking opportunities, and support for disability-inclusive recruitment practices. B20 could collaborate with the GBDN to develop initiatives that promote the recruitment and employment of people with disabilities across different countries.⁷²

71 IOE. 2021. Report on the Informal Economy. Retrieved from: <https://www.ioe-emp.org/index.php?eID=dumpFile&t=f&f=155931&token=27b9b511c79c9bd920ca46fb21517f9074209889>

72 ILO – Global Business and Disability Network. Retrieved from: <https://www.businessanddisability.org/>.



Recommendation 2

Accelerate workforce skilling to adapt to changing industry demands

Policy actions

- 2.1 Predicting the skills needed for future of work using technology driven framework
- 2.2 Leverage technology to minimise gap between skilling and jobs of tomorrow
- 2.3 Expand scope of digital skills libraries
- 2.4 Develop employable skills through education
- 2.5 Partner with private entities to enhance workforce skills
- 2.6 Promote continuous learning and upskilling through lifelong learning
- 2.7 Develop green skills for sustainability and adapting climate change along with skilling for silver and care economy

The digital era is revolutionising how we work, and it is crucial for the G20 to skill the talent required for Industry 4.0 and beyond. According to the World Economic Forum, 50% of all employees worldwide will need reskilling by 2025 due to adopting modern technology. By 2027, over two-thirds of skills considered important in today's job requirements will change. A third of the essential skills in 2025 will consist of technological competencies not yet regarded as crucial to today's job requirements.⁷³

While some employers do anticipate the need for reskilling, just 37% of HR professionals stated that upskilling and reskilling the current workforce were likely to be top priorities for their organizations in 2023.⁷⁴

These projections present an urgent need for large-scale upskilling and reskilling. In this chapter, we will focus on how G20 countries can accelerate the skilling of their workforces and people entering the workforce to make them future ready.

73 WEF. 2020. These are the top 10 job skills of tomorrow, Retrieved from: <https://www.weforum.org/agenda/2020/10/top-10-work-skills-of-tomorrow-how-long-it-takes-to-learn-them/>

74 SHRM. 2022. 2022-2023 State of the Workplace Report <https://www.shrm.org/hr-today/trends-and-forecasting/research-and-surveys/Documents/2022-2023%20State%20of%20the%20Workplace%20Report.pdf>





2.1 Predict the skills needed for future of work using technology-driven framework

As workplaces evolve rapidly due to increasing digitisation, it is becoming increasingly important to identify and classify the skills necessary for the future. To predict and design the workforce of tomorrow by measuring demand at a skill level, an approach that combines quantitative and qualitative methods is required. The approach should use:

- Quantitative employment projections by industry as well as geography, based on macroeconomic modelling and trajectory studies
- Qualitative methods, including think tanks, and economic forums comprising businesses, government, and academic institutions to build in foresight for the upcoming decade

Skills prediction to bridge demand and supply gap

To predict and anticipate the necessary skills, there is a need to develop a framework using skill ontology, which can be used to identify the skills that will be required in the future and compare them to the current skill sets of the workforce. To build a skill ontology map, countries need to:

- Collect talent demand data (job postings), supply data (employee profiles), and secondary data (recognised benchmarks such as ESCO) from the past several years by consolidating and systemising public databases of jobs
- Apply machine learning algorithms to collected data to create skill profiles of current/future roles
- Use skills ontology to graph the interrelationship of current roles and skills with future ones and score skill proximities to identify skill needs and pathways

This approach helps organisations identify the gaps that exist between current and desired skill levels and develop targeted training and development programmes to bridge those gaps. By doing so, organisations can remain competitive and achieve their strategic objectives and better prepare their employees for the changing nature of work, which can improve productivity and reduce the risk of job displacement. Fostering productivity in the workforce is crucial for any organisation's success. When employees are productive, they can complete their work efficiently and effectively, which leads to increased output, profitability, and growth for the organisation. Productive employees are also more engaged and motivated, leading to higher job satisfaction and lower turnover rates. Furthermore, a productive workforce can help to improve customer satisfaction and overall business performance.

For this solution to function sustainably, large-scale businesses need to update the workforce's skill levels continuously, deconstruct job roles to tasks and skills, and feed the information to AI/ML powered techniques, such as contextual similarity algorithms and network graphs. These AI/ML frameworks would help create a skill adjacency map which would be critical when considering transitioning existing employees to a new role or matching demand to supply. At an SME level, implementing all of the suggested steps might be difficult, given their constraints, so they can start with incorporating the steps which require low capital or transformation in functioning.

For instance, Accenture's applied intelligence study, using skill ontology in the energy sector, found that there is an increasing emphasis on skills such as manufacturing resource planning, advanced inventory management systems and logistics analysis, and a shift away from traditional skills such as commercial driving, material flow management and operations analysis.⁷⁵ Broader strategic and analytic capabilities, with the ability to optimise across value chains, are also more in demand than specialised skills, such as deep expertise in petro-technical areas, the study found. These pathways will depend on an industry's trajectory, which can be used to identify the skill requirement and build the required training systems.

⁷⁵ Accenture Applied Intelligence Study, 2021, Retrieved from: https://www.accenture.com/_acnmedia/PDF-162/Accenture-Applied-Intelligence-Revealing-Hidden-Skills-Energy-Workforce.pdf



Initiatives by governments on skills anticipation / forecasting

- Germany and Italy use tools such as skill forecasts, skill surveys, skill assessments and employee-employer studies to produce and assess data. The forecast data is used to project market prospects for job seekers and the data also feeds into into policymaking to cater to changing market needs
- The European Center for the Development of Vocational Training (CEDEFOP) has investigated how to anticipate skills and how information on skills demand available in online job vacancies (QJVs) can be used to generate more detailed skills information for the EU along with tools such as the European skills forecast, the European skills and jobs survey and the European skills index⁷⁶

Define standards for skills

Skill standardisation, the process of aligning skills to a shared set of rules at a national or international level, will be crucial to developing a skilled workforce that can adapt to the demands of a rapidly changing job market. This approach gives employers the confidence to make a hiring decision as it gives them a way to measure the competency level in these skills. In addition, it allows educational institutions to offer more personalised and faster qualification or requalification solutions for people.

While this is an ambitious demand of the G20, taking up pathfinder programmes to evaluate the robustness of this concept would be welcome, given the potential this possesses. For instance, if a company wants to hire someone who is good at "programming," they need to have a common definition of what "programming" as a skill means and how they would measure "good." That way, talent suppliers can train people in line with that definition and the unit of measurement. As a result, this approach benefits both employers and job seekers. G20 nations can use this approach to improve global competitiveness, promote labour mobility, enhance the quality and relevance of education and training, and encourage investment.

They can create a standardised framework where each employee will be mapped to a certain skill set. This framework can be benchmarked internationally, with a country level customisation, for example with the ESCO.

While the challenge to standardisation is very real, B20 can seek inspiration from businesses on the progress and impact being made around facilitating this talent and skill mobility within an organisation, to understand how it could be scaled to a global model. Many organisations, across industries and geographies, have been widely applauded and recognised for successfully establishing foundational standard skills framework within the organisation to ease movement of talent and skills across the organisation.

Every time an employee picks up any vocational training, which can be recorded through micro certificates, or changes their employment, the framework will get updated to reflect the status change. This can then be updated against a unique identifying number, such as the Aadhaar for India, EKTP for Indonesia and myKad for Malaysia. Bilateral and multilateral agreements or MOUs can be used to standardise these national skill levels. For example, India's NCrF can be standardised to VET and ESCO to ensure parity of competency in skills across geographies. Another example is the European Credit System for Vocational Education and Training (ECVET)⁷⁷. It is understood that data privacy concerns of individuals are of paramount consideration, and initiatives must be taken up with requisite sensitivity.

Countries can also incentivise standardisation. Financial incentives can be in the form of tax credits, grants and lowered cost of loans and non-financial incentives can include recognition, awards, certifications, and accreditations. For e.g., in Canada, the Red Seal Programme provides a national standard of excellence for skilled trades. The programme certifies individuals who meet a national standard in their trade, ensuring a consistent level of quality across the country⁷⁸.

⁷⁶ CEDEFOP. 2018. Skills forecast: trends and challenges to 2030. Retrieved from: https://www.cedefop.europa.eu/files/3077_en.pdf

⁷⁷ CEDEFOP, European Credit System for Vocational Education and Training, Retrieved from: European credit system for vocational education and training (ECVET) | CEDEFOP (europa.eu)

⁷⁸ The Canadian Institute for Blended Learning, 2020, Is Certification worth the effort, Retrieved from: <https://www.gov.uk/government/news/uk-government-launches-taskforce-to-support-drive-for-2-million-green-jobs-by-2030>



Employ skill matching frameworks

The G20 can employ a skill matching framework that matches job seekers with appropriate job opportunities based on their skills, knowledge, and experience to reduce the impact of the current skills gap and meet the demands of the rapidly changing global economy. This will be an ideal way to complement the standardisation of skills.

This is observed as we see the rapid digitisation and rise of new economies that have shifted skill requirements and created demand for new skills, but this demand is often geography, sector, and skill specific. For example, the UK Government has launched a Task Force to support the drive for 2 million jobs in the green economy by 2030⁷⁹. As per a WEF study, countries like Australia, Brazil, China, Germany, India, Japan, South Africa, Spain, United Kingdom, and the United States need over 12 million or 66% more jobs in the green economy to meet their environmental objectives. From a sector perspective, Healthcare needs 33.1 million, Education needs 21.3 million, Care needs 9.8 million, Agriculture and Forestry need 11 million, etc.⁸⁰ Employers can use the framework to identify candidates who are the best match for their requirements and job seekers to identify job opportunities that align with their skills and interests.

Initiatives by governments

India Skills report is one such attempt to bridge the gap between education and industry at the national level. It is a matchmaking report between education institutes and industry. It classifies employability by state, which tells companies and governments about job demand and talent supply in various parts of the country⁸¹. Another such initiative is the Skills Matching and Jobseeker Support (SMJS) programme in Australia. The SMJS programme is designed to help job seekers find suitable job opportunities by providing them with personalised job search assistance and support.

Standardising the frameworks

Countries can standardise these programmes against international frameworks to enable mobility for workers and enable business to fill their talent needs more quickly. For example, the European Qualification Framework (EQF) can be used as a model to create the common skills matching framework⁸². The EQF acts as a translation device to make national qualifications apply across Europe. The G20 can use that model and add standardised skill assessments in that reference framework for matching skills to job roles. It will build confidence in the private sector and industries, lift the geographical restrictions on certain jobs and enable workers to earn more for their skills.



2.2 Leverage technology to minimise gap between skilling and jobs of tomorrow

G20 nations should leverage technology to close or minimise the gap between the skill levels of the workforce and the jobs of tomorrow. They can use technology to create personalised and adaptive learning experiences for individuals, making them competitive in the job market and future-proofing their jobs as well as enabling them to contribute to economic growth and to promote social mobility.

According to the World Economic Forum, the three primary technologies making headway in making learning accessible, engaging, and relevant are AI, AR, and VR, and wireless networks⁴⁵:

- **AI technology:** Can make learning more engaging as training material can be tailored based on individual needs. It can also make learning more flexible with virtual feedback. AI can also help teachers create didactic resources, educational assessments and increase the time they dedicate to mediating student learning

79 UK Govt – Press Release, 2020, UK government launches Task Force to support drive for 2 million green jobs by 2030, Retrieved from: <https://www.gov.uk/government/news/uk-government-launches-task-force-to-support-drive-for-2-million-green-jobs-by-2030>

80 World Economic Forum, 2023, Jobs of Tomorrow. Retrieved from: https://www3.weforum.org/docs/WEF_Jobs_of_Tomorrow_2023.pdf

81 India Skills Report 2023. Retrieved from: https://do3n1uzkew47z.cloudfront.net/siteassets/pdf/ISR_Report_2023.pdf

82 Europa.. The European Qualifications Framework (EQF). Retrieved from: <https://europa.eu/europass/en/europass-tools/european-qualifications-framework>



- **Augmented and virtual reality:** AR and VR technologies make learning more interactive and, thereby, more engaging. An initial step can be to enrich traditional teaching materials like textbooks. At another level, learning experiences can be developed that facilitate the development of technical or socio-emotional skills. Simulators are also a valuable tool to optimise the learning process
- **Wireless network:** Mobile phones, tablets and e-readers with broadband connectivity could be the long-sought answer to bring high-quality, multidisciplinary education to people everywhere, especially the world's poorest or most isolated communities⁸³
- **Advanced digital skills:** artificial intelligence, big data, natural language processing, cybersecurity-related skills

It is important to map where in terms of digital literacy the workforce stands today to understand skilling requirements and develop strategies accordingly. Standardisation of digital competencies is important as it establishes a common framework for understanding and evaluating digital skills.

Additionally, skills like cybersecurity have increased in demand over the last few years due to rise in cybersecurity attacks, which are being driven by growing digital adoption. As a result, governments and organisations across the globe are focusing on implementing stringent cybersecurity policies. As per a recent survey by the World Economic Forum, 59% of businesses will find it challenging to address a cybersecurity incident due to the shortage of skills. More than 3.4 million people are needed worldwide to bridge the existing cybersecurity skill gap⁸⁴.

The European Union's DigComp framework is one such successful initiative that outlines digital competencies individuals need for operating in a digital society. The framework provides benchmarks for digital competencies that are widely adopted and integrated into national policies and strategies for digital skills development. It ensures individuals have the skills required to succeed in a digital economy and provides employers with a common framework for evaluating the digital competencies of their workforce.

To achieve these desired outcomes, governments need to first increase foundational digital literacy across all levels of education, from primary schools to universities. And secondly, they need to prioritise the training of teachers to improve their digital skills, which will translate to better-equipped students who can succeed in a rapidly digitising world.

Increase digital literacy to create equitable digital economy

Governments should ensure everyone can participate in the digital economy and benefit from its many advantages, regardless of their background or socioeconomic status. For this, governments need to focus on universal digital literacy. UNESCO broadly defines digital literacy as "the ability to define, access, manage, integrate, communicate, evaluate, and create information safely and appropriately through digital technologies and networked devices for participation in economic and social life."

Digital literacy skills can be categorised into three levels:

- **Basic skills:** hardware, software and internet/Information and Communications Technology (ICT) tasks
- **Intermediate skills:** critically evaluate technology or create content

Recommended actions to increase digital literacy

- **Develop basic digital skills in underserved areas:** Governments should make digital skills part of the curriculum at the certification level. They can also offer digital skills training programmes that are accessible to everyone, including those in rural or remote areas or those belonging to disadvantaged communities. In Hungary, for example, the new national development plan calls for enhancing the digital literacy of disadvantaged adults. The objective is to provide training in digital skills to 2.6 million low-skilled adults from disadvantaged regions⁸⁵

83 UNESCO – Importance of Mobile Technology for enabling education Retrieved from <https://en.unesco.org/news/mobile-technology-key-bringing-education-all-says-broadband-commission#>.

84 World Economic Forum, Cybersecurity skill gap. Retrieved From: <https://www.weforum.org/agenda/2022/12/how-boosting-diversity-cybersecurity-skills-gap/>

85 Hungary new development plan. Retrieved from: https://extranet.who.int/countryplanningcycles/sites/default/files/planning_cycle_repository/hungary/80825_umft_angol_4_teljes.pdf

- **Improve online training and apprenticeship programmes for various occupations:** Governments should invest in removing the barriers to online delivery of training for crafts-related occupations, such as weaving and woodworking, or training with a work-based component, such as apprenticeships and internships, which are difficult to replicate in an online environment. Governments can support frontier technologies such as AI and VR to simulate the required environment online by accelerating the learning process and engaging students in interactive hands-on activities. For example, the Morgan State University in the US is using virtual reality to deliver its nursing programme⁸⁶
- **Reduce the digital gender divide:** Only 57% of women in the least developed markets have internet access compared to 62% of men⁸⁷. Governments need a multi-pronged approach to address the root causes of this digital gender divide, such as hurdles to access, affordability, lack of education and technological literacy, inherent bias, and socio-cultural norms. They can take a series of steps, such as increasing access through cheaper broadband internet and affordable devices, targeted training programmes for women and girls and awareness campaigns, to address gender stereotypes
- **Establish digital platforms for collaborative learning:** Emergence of digital platforms for collaborative learning have enabled learners to collaborate with their peers and mentors, share ideas and experiences, and get feedback on their work. This has the potential to enhance the learning experience and make it more effective
- **Provide digital degree apprenticeship programmes:** Skills for the digital economy require apprenticeship programmes at a higher education level, making the case for increased adoption of degree apprenticeship programmes. Digital degree apprenticeships programmes designed by leading employers in the digital sector can equip apprentices for work in a wide

range of graduate-level technology roles, including cybersecurity analyst, data analyst, business analyst, network engineer, software engineer, and many more. For e.g., Accenture has launched free cybersecurity upskilling programme to fulfill 1 million entry level jobs.⁸⁸ Members of the G20 can implement fluidity across borders to leverage these skilled professionals for employment opportunities beyond geographical boundaries

Train the trainers to enable digital literacy for the next generation

To prepare the next generation for the digital workforce, it is essential that teachers and instructors have the knowledge and skills necessary to teach digital literacy. Investing in teacher training and professional development programmes can have a positive impact on employability. Students who are taught by digitally fluent educators are better prepared for the workforce as they have the skills and knowledge to use the latest digital tools and technology. Despite the positive impact, little attention has been given to providing teachers with adequate training. In OECD countries, only 56% of teachers have received training in the use of ICT (Information and Communication Technology) for teaching as part of their formal education or training, and just 43% of teachers feel well or very well prepared in employing ICT for teaching.⁸⁹

The global disruption caused by the pandemic has added to the urgency of investing in teacher training and professional development programmes. Many education systems pivoted to remote learning during the pandemic with deployment of multi-modal strategies like online, TV, and radio education. Countries best able to respond to COVID-19 educational disruptions were those that could build on the implementation of long-established ICT in education masterplans and the continuous development of digital learning systems, digital learning resources, and teachers' pedagogies for digital and/ or distance learning.

86 Morgan State University: <https://www.morgan.edu/news/morgan-partners-with-verizon-to-provide-experiential-learning-opportunities-for-students>

87 ITU, 2022. Bridging the digital gender divide. Retrieved from: <https://www.itu.int/en/mediacentre/backgrounders/Pages/bridging-the-gender-divide.aspx>

88 Accenture launched Cybersecurity skilling program. Retrieved from: <https://fortune.com/education/articles/accenture-launches-free-cybersecurity-upskilling-program-in-effort-to-fill-1-million-entry-level-jobs/>

89 OECD. 2019. Countries must make teaching more financially and intellectually attractive. Retrieved from: <https://www.oecd.org/education/countries-must-make-teaching-profession-more-financially-and-intellectually-attractive>.



For e.g., Türkiye introduced a remote learning platform through an online digital education system that reached nearly 18 million students and more than 1 million teachers⁹⁰.

Recommended actions to enable digital literacy for teachers

- G20 nations need a global-level strategy with a nation-level customisation of teacher training, curriculum, evaluation, and school assessment. They need to set up a collaborative Task Force that includes government representatives, education institutions, IT industries and teacher groups to push teacher training and set up a nodal agency to ensure trust
- Governments can track teachers' competence in digital learning using standardised tools, such as UNESCO's ICT Competence Framework for Teachers (CFT)⁹¹, to support the retraining of teachers to teach using digital methodologies and technologies
- Governments should include ICT in the curricula for all future teachers. Training in ICT may be a compulsory subject, a core-curriculum option, or an optional strategy. Teacher training institutes should be equipped with the required infrastructure and trainers to enable their students
- Governments can organise online refresher courses for teachers sharing best practices, novel approaches and latest tools and learning methodologies at regular intervals



2.3 Expand scope of digital skills libraries

A digital skill library can also become a crucial part of the response to the challenge of shifting

skill requirements. Countries can either set up skill libraries or expand the scope of their current ones by integrating them with centralised bodies for skilling to improve the skilling outcomes. Digital skill libraries also help with the standardisation of skills as they function as a sole source of learning material for different sets of people. They can function as a benchmark for employers to train and upskill their workforce.

Initiatives by governments

The nature of the skills library can vary from country to country as they tackle specific use cases and work with a specific set of stakeholders.

India: The National Digital Library of India provides user-specific services, such as exam preparation for school and college students and job aspirants. Services are also provided to researchers and general learners who wish to upskill themselves. One of the key aspects of NDLI is the flexibility it offers as training material is available in 10 languages and can be accessed via books, audio books, lectures, video lectures, presentations, simulations, lecture notes, and question papers and solutions. In 2020, NDLI reached out to students with 35 million academic contents⁹².

Integration with centralised bodies for skilling

The value of a digital skill library, regardless of the specific use case, can be maximised by integrating it with the centralised bodies for skilling. Those organisations can provide additional features to a skill library, such as personalised learning pathways and widely accepted certificates, to enhance the value of the training resources available through the skill library, and leverage the data and analytics provided by the digital skill library to gain insights into emerging skill needs and better tailor its training programmes to meet those needs.

90 World Bank Group, 2021. Remote Learning during Covid 19. Retrieved from: <https://documents1.worldbank.org/curated/en/160271637074230077/pdf/Remote-Learning-During-COVID-19-Lessons-from-Today-Principles-for-Tomorrow.pdf>

91 UNESCO: <https://www.unesco.org/en/digital-competencies-skills/ict-cft>

92 National Digital Library of India, 2020. National Digital Library of India Reaches Out to Students Amid COVID-19 Lockdown. Retrieved from: <http://ndlproject.iitkgp.ac.in/news/media-coverage/national-digital-library-india-reaches-out-students-amid-covid-19-lockdown>



Recommended actions

- Identify existing digital skill libraries along with large-scale private players that align with the overall goals and objectives
- Create partnerships that enable those centralised bodies to access their content such as cooperation agreements with specialised bodies such as the US: O*NET / SOC and others like the European ESCO/EURES
- Align the content on digital skill libraries with the overall learning outcomes and goals
- Evaluate the quality and effectiveness of the training resources continuously to ensure they meet the needs of learners
- Offer support to learners through online forums, mentorship programmes, and other resources to enhance their learning experience



2.4 Develop employable skills through education

As industries evolve and modern technologies emerge, the skills required to be successful in the workforce have changed as well. However, education has not always kept pace, and this is reflected in the employability statistics.

The statistics also reveal the scale of the shortage of people with critical job skills. While leaders everywhere are aware of the possible consequences, in the form of social and economic distress, governments have realised the need to develop effective responses and have been working towards the same.

Learning crisis

The pandemic deepened the learning crisis in schools. It delivered the worst shock to basic education in a century. The State of Global Learning

Poverty found that learning poverty has increased by a third in low and middle-income countries, with an estimated 70% of 10-year-olds unable to understand simple written text. This rate was 57% before the pandemic⁹³.

Education for education's sake is much harder to impart, particularly in a world where the jobs market is being squeezed and the economy is struggling to recover in the wake of COVID-19. It has become essential to enhance the employability of students right from the school level, and not just in higher education.

To tackle this crisis, many countries around the world are focusing on basic education and revamping their systems through programmes such as India's NEP-2020 and National Assessment Programme - Literacy and Numeracy (NAPLAN),⁹⁴ France's Refondation de l'École (School Reform),⁹⁵ and Saudi Arabia's Education and Training Evaluation Commission (ETEC) Reforms.⁹⁶ G20 nations can take a series of policy actions to prepare students for their careers from an early age. This includes updating the curriculum, investing in EdTech, providing career guidance, and focusing on blended education.

Update curriculum for employability

G20 nations need to update school and higher education curriculums and align learning outcomes to employability to prepare students for the future workforce.

Recommended actions

- **Engage with Industry Experts:** Governments can engage with employer organisations to understand the demands of the job market and identify the specific skills that are in high demand and are required for the workforce of the future

93 UNICEF. 2022. The state of global learning poverty. Retrieved from: <https://www.unicef.org/media/122921/file/StateofLearningPoverty2022.pdf>

94 https://www.education.gov.in/sites/upload_files/mhrd/files/NEP_Final_English_0.pdf

95 France: https://www.cairn-int.info/article-E_RIEF_036_0015-the-french-law-reform-refondation.htm

96 Saudi Arabia: <https://www.arabnews.com/tags/saudi-arabia%E2%80%99s-education-and-training-evaluation-commission>



For example, SENAI in Brazil has a comprehensive methodology to engage industry experts in a technical committee approach. A panel is built with education experts and experts from industry to produce professional profiles connected with dynamic industry scenarios.⁹⁷ Another example can be CII Institute of Logistics, which offers courses and training programmes to enhance the skills of professionals in the logistics and supply chain management sector. The institute collaborates with industry experts to design and deliver courses that are relevant and practical⁹⁸

- **Identify and incorporate skills in demand:** Governments should identify the skills that are in high demand in the job market by analysing job postings, conducting surveys, and consulting industry experts and incorporate those skills in curriculum design. This can involve revising existing courses, developing new courses, or incorporating EdTech tools to provide additional training and support. For example, the Finnish government updated its national core curriculum in 2014 to include coding and robotics as compulsory subjects in primary and secondary schools continuously updating it for grades 1-6 in 2017 and adapting it for grades 7, 8 and 9 by 2019⁹⁹
- **Provide incentives:** Governments can incentivise educators to update their teaching methods and incorporate modern technologies in their classrooms. This can include offering training programmes, providing funding for modern technologies, and rewarding innovative educators. For example, the Singapore government established the Skills Future Study Awards in 2015, which provide financial support for educators to upgrade their skills and knowledge¹⁰⁰
- **Evaluate effectiveness:** Governments and education providers should evaluate the effectiveness of the updated curriculum by tracking the employment outcomes of graduates.

This can help to identify areas for improvement and ensure that the curriculum provides the skills that are in demand. It is also important to establish strategy and programmes that can follow the students' professional life

- **Leveraging existing expertise:** Governments can repurpose the knowledge base of mature workers by organising training sessions led by them, providing them with an opportunity to share their skills and experiences with the incoming generation of employees

Invest in EdTech

To bridge the learning gap and help students stay up to date with the latest knowledge and skills, G20 nations should invest in educational technology (EdTech). EdTech growth has been driven by the K-12 segment, higher education, and upskilling, with Massive Open Online Courses (MOOCs) and distant education becoming more popular. Two factors behind this growth are access to resources, such as online courses, digital textbooks, educational games, and career readiness, as EdTech can provide practical skills and experience. Investing in EdTech can have a significant impact on students' employability, promote access to education, and have positive social and economic impacts. Governments can create and track investment indicators in educational technologies, considering variables such as courses and students reached. Several G20 nations have launched initiatives to use EdTech to make education accessible to everyone. These include:

- Germany's Digital Pact¹⁰¹, which aims to provide funding for the development of digital education infrastructure, purchase of hardware, training of teachers, and support for digital learning in schools
- Australia's "Learning from Home,"¹⁰² supports the goal of making education accessible to everyone by providing online learning resources and tools to ensure continuity of education during times of disruptions

97 SENAI: <https://www.portaldaindustria.com.br/senai/en/>

98 CII Institute of Logistics: <https://www.ciilogistics.com/>

99 Finnish National Agency for Education, National Core Curriculum for Basic Education. Retrieved from: <https://www.oph.fi/en/education-and-qualifications/national-core-curriculum-basic-education>

100 Skill Future Study Awards Retrieved from: <http://skillsfuture.gov.sg/studyawards>

101 Germany's Digital Pact: <https://national-policies.eacea.ec.europa.eu/youthwiki/chapters/germany/87-fostering-the-creative-use-of-new-technologies>

102 Australia: <https://www.education.wa.edu.au/learning-at-home/learning-resources-from-across-the-nation>

- Japan's EDUNET supports the goal of making education accessible to everyone by leveraging technology to provide remote learning opportunities and improving digital infrastructure in schools, thereby expanding educational access and opportunities for students
- South Korea's EBS¹⁰³ promotes accessible education using technology, providing digital content and online learning resources to students
- India's e-Pathshala¹⁰⁴ promotes the use of digital technology to provide accessible and inclusive education to all
- **Raise awareness:** Governments should focus on reaching underserved populations, such as low-income individuals or individuals from marginalised communities, by partnering with community organisations or providing targeted outreach efforts

Provide career guidance

Career guidance through counsellors will be a valuable resource for students as they look to enter the job market at the time of changing job roles and employers' shifting skill requirements. Counsellors help students explore different career options, identify their strengths and interests, develop job search skills, and guide them on how to achieve their career goals. In a recent OECD survey, 81% of students said they would want labour market information, 78% said they would seek job search support, while 35% said they would want support related to searching for a job in another country¹⁰⁵.

Counsellors can leverage technology tools such as psychometric tests that help assess, measure, and identify personality traits of an individual along with their skills and intelligence. This helps the counsellors guide students by matching their skills and interests to a suitable career.

Recommended actions

- **Increase the reach:** Governments can ensure career guidance is delivered through various bodies, such as public employment services, education and training institutes or dedicated career guidance services to reach more people. Governments can also develop online career guidance platforms, chatbots, or mobile apps that provide personalised career advice and support
- **Provide funding:** Governments can allocate funds and resources to establish career counselling centers or provide support to existing career counselling organisations. This could include offering training and certification programmes for career counsellors
- **Partner with employers:** Career counselling can also be delivered through employers or industry bodies as it aids learners and job searchers in developing a deeper understanding of career paths. Companies can arrange activities such as career talks, CV workshops, mock interviews, job fairs, job shadowing and mentoring to guide students
- **Partner with universities:** Companies should collaborate with universities to develop joint training and upskilling programmes. This partnership will facilitate the exchange of expertise, provide education on emerging skills to employees, and integrate companies' best practices into university programmes, benefiting students and young professionals
- **Adopt a youth-centric approach:** Companies should put meaningful youth engagement and comprehensive skills development of youth at the core of their education policy to ensure higher and faster employability, better career opportunities and a smooth integration of young professionals at the workplace. This also involves allocating funding to support youth-driven initiatives which aim to multiply knowledge and improve the life of communities beyond the mere business scope

103 South Korea's EBS: <https://global.ebs.co.kr/>

104 India's e-Pathshala: <https://epathshala.nic.in/>

105 OECD, 2022. Leveraging career guidance for adults to build back better. Retrieved from: <https://www.oecd.org/coronavirus/policy-responses/leveraging-career-guidance-for-adults-to-build-back-better-ab7e7894/>



- **Set up tracking mechanisms:** Governments must ensure that students are getting the right guidance. Schools and educational institutions must invest in hiring trained career counsellors and equipping them with the right tools to guide students

Increase access to blended education

Blended education is a model where learners engage in a mix of classroom-based and online learning using digital resources at their own pace and receiving personalised feedback from instructors. Students see benefits such as increased access and improved engagement, while educational institutes see improvement in retention rates and reduction in costs. To develop effective blended education models, institutions must invest in technology infrastructure, instructional design, and teacher training. G20 governments can support blended learning by funding technology and tools, providing professional development opportunities for educators, and ensuring student learning outcomes are prioritised through clear objectives, data tracking, policy updates, and regular assessments. Many governments have taken initiatives to ensure high-quality blended education. Examples include the Indian government's SWAYAM platform, which offers free online courses and resources to students across the country¹⁰⁶ and the EU's Erasmus+ programme, which supports the development of blended learning in higher education institutions across Europe.¹⁰⁷

Ensure smooth school-to-work transition

Apart from interventions such as updating the curriculum, providing career counselling, and introducing blended learning, governments can also use a targeted approach to ensure mobility from education to employability through approaches such as credit and transfer frameworks, specialised funding models and work-based training.

- Create a seamless school-to-job transition by urging companies to work closely with education institutions. They can equip students with practical knowledge of excellence and provide recent graduates with faster employment opportunities
- Create a standardised system, which accounts for both traditional qualifications and skills learners have gained via internships, live projects, or online courses to signal value and fit to employers. One example of such a framework is India's National Credit Framework (NCrF), which aims at integrating academic education and skilling in India. The NCrF is a unified credit accumulation and transfer framework applicable to school, higher and vocational education. It assigns credit-based value to various levels of learning, including academic, skilling, and experiential learning⁴⁹
- Introduce funding models that support a range of education and training programmes, including online courses, apprenticeships, and part-time programmes within and across countries. For example, the UK Indonesia Strategic partnerships 2022- 2024 laid out a roadmap to improve transnational education, TVET, EdTech, research collaboration and English and teacher training, which will ensure higher employability, standardisation of skills and education on the skills of tomorrow⁵⁰
- Focus on work-based learning approaches that can aid in the mobility between skilling and education. For example, the German education system integrates job-based practical learning in the curriculum. The country's dual-track vocational training programme, known as the VET, provides a skilled professions to half a million apprentices every year¹⁰⁸

106 Swayam. Retrieved from: <https://swayam.gov.in/>.

107 Erasmus+. Retrieved from: <https://erasmus-plus.ec.europa.eu/>

108 Clean Energy Wire, 2018. Germany Vocation Education and Training. Retrieved from: <https://www.cleanenergywire.org/factsheets/how-germanys-vocational-education-and-training-system-works>

Target programmes for disadvantaged communities

Ensuring that disadvantaged communities are not left behind in the transition from school to the workforce is a critical aspect of promoting equity and social mobility. It requires a concerted effort from multiple stakeholders, including governments, social partners, community organisations and local businesses. Many governments across the world have launched such initiatives in collaboration with international organisations and private companies.

- The STAR programme in Bangladesh provides an alternative learning pathway to the most disadvantaged and vulnerable out-of-school adolescents to bring them back to learning and give them opportunities for work. Supported by the Bangladesh Rural Advancement Committee (BRAC), ILO and UNICEF, it provides these adolescents with six months of training that includes on-the-job apprenticeships, and technical and soft-skills training. The programme has reached 35,777 adolescents and a tracer study indicated that 77 % of the graduates have transitioned to employment¹⁰⁹
- JP Morgan, in collaboration with the Indian Government and World Bank, facilitated transition from school to work for girls and young people from disadvantaged communities. The grant is helping freshly graduated students with skills in the banking, financial services, and insurance sectors by providing them with apprenticeship opportunities in banks and microfinance institutions¹¹⁰



2.5 Partner with private entities to enhance workforce skills

Form sectoral skill councils

To address the current and future skills need gap, G20 nations can develop skill councils with representatives from the government, industry associations, trade bodies and other relevant stakeholders that work towards the development and enhancement of skills in a particular sector or industry. These councils can provide training and education, establish standards, and promote innovation and best practices. The councils tie in with G20 Skills Strategy, which was launched in 2016 to promote and support the development of a skilled workforce globally¹¹¹.

Skill councils have several advantages in bridging the skill gap and increasing employability of job seekers as they provide industry-relevant training through industry exchanges, increase training effectiveness through standardised training, promote innovative training methods and technologies and address shortages in high-demand sectors. For example, set up in 2009 in India, the National Skill Development Corporation (NSDC) is a public-private partnership which has trained nearly 2 million people and placed nearly 0.2 million people by 2020¹¹². As of 2022, it has partnered with nearly 700 training providers across 560 job roles¹¹³. The NSDC has established several sector-specific skill councils, such as the Retailers Association's Skill Council of India and the Automotive Skills Development Council, to develop training programmes that are relevant and specific to the needs of those sectors. These councils work closely with industries to identify their specific skill needs and provide relevant training.

109 Generation Unlimited, Global Initiative on Decent Jobs for Youth, 2020. Creating and sustaining successful school-to-work transitions. Retrieved from: <https://www.generationunlimited.org/media/2971/file/Action%20Guide%20-%20School%20to%20work%20transition.pdf>

110 World Bank Blog, 2021. Private sector comes on board to upgrade the skills of India's youth. Retrieved from: <https://blogs.worldbank.org/endpovertyinsouthasia/private-sector-comes-board-upgrade-skills-indias-youth>

111 OECD, 2015. The G20 Skills Strategy. Retrieved from: <https://www.oecd.org/g20/topics/employment-and-social-policy/The-G20-Skills-Strategy-for-Developing-and-Using-Skills-for-the-21st-Century.pdf>

112 National Skill Development Corporation. Retrieved from: <https://nsdcindia.org/about-us>

113 National Skill Development Corporation. Retrieved from: <https://nsdcindia.org/partners>



Establish community-based vocational training programmes

Community-based vocational training programmes aim to provide job-related training to economically and socially disadvantaged individuals who cannot access traditional education or job training programmes. These programmes rely on the involvement of community-based organisations, local businesses, training institutions, and government agencies. Delivery channels can include community centers, vocational schools, and online platforms, and partnerships with local employers can provide hands-on training and work experience. Governments must involve local structures and individuals in governance and programme development as these programmes are decentralised and reliant on community participation.

Germany's Apprenticeship Programme is an example of community-based vocational training in a G20 nation that offers accessible, relevant, and high-quality vocational training to young people between the age of 16 and 25 years¹¹⁴. The programme is a collaboration between the government, industry, and vocational schools. The industry provides on-the-job training, vocational schools provide theoretical education, and the government offers financial support to both employers and apprentices. The programme offers training programmes that are developed in partnership with the industry to ensure that apprentices acquire skills that are in demand in the labour market. The programme has a successful track record of placing graduates in jobs, as employers are encouraged to hire the apprentices after they complete their training.

Promote active learning approaches

G20 governments should promote active learning as it promotes skill development by enabling students to learn through experience, practice, and reflection. It is an instructional approach that engages students through hands-on activities, problem-solving, and collaboration. Active learning approaches can take many forms, including apprenticeships, group work,

peer-to-peer teaching, problem-based learning, case studies, simulations, and project-based learning. These approaches encourage students to be active participants in the learning process, and not passive recipients of information. These approaches, especially apprenticeships, also help overcome the "work-inexperience" trap as the apprentice acquires skills in a structured manner that is closely matched with the demands of work. A study on Indian SMEs done by the ILO revealed that the benefits of offering apprenticeship training surpass the cost if the apprentices are retained. Similarly, in Canada, the average benefit of apprenticeships to employers was 1.38 times the average cost¹¹⁵.

One example of an active learning approach used by a G20 nation is the "Inquiry-based learning" approach used in science education in Australia¹¹⁶. It is a student-centered approach that involves students asking questions, making observations, and conducting investigations to develop their understanding of scientific concepts while keeping real-world relevance by using technology integration (online database, simulations, data analysis, etc.)

Foster skill development in SMEs

Since SMEs account for many jobs in most countries, any initiative to upskill and reskill the workforce must include them. However, these enterprises often do not have sufficient resources to train and upskill their workers either because of the prohibitive costs of training or non-availability of specialised services.

Governments can play a crucial role in facilitating reskilling and upskilling programmes for workers in SMEs by filling these gaps. They can partner with industry associations, technology firms, educational institutions and EdTech firms to develop tailored training programmes that align with the specific needs of the enterprises.

114 Apprenticeship Program in Germany. 2023. Retrieved from: <https://en.life-in-germany.de/apprenticeship-in-germany/#:~:text=An%20apprenticeship%20in%20Germany%20lasts,in%20a%20special%20vocational%20school.>

115 IZA, World of Labor, 2014. Do firms benefit from apprenticeship investments? Retrieved from: <https://wol.iza.org/uploads/articles/55/pdfs/do-firms-benefit-from-apprenticeship-investments.pdf>

116 Australian Government Department of Education, 2021. Australian Curriculum. Retrieved from: <https://www.education.gov.au/australian-curriculum/national-stem-education-resources-toolkit/i-want-know-about-stem-education/what-works-best-when-teaching-stem/inquiry-based-learning>



Governments can also foster partnerships between large corporations and SMEs in their supply chain. The large firms can provide specialised training and support to help these smaller businesses scale up and become more competitive. Some largescale examples of Public Private partnerships include the Global Apprenticeship Network (GAN), Microsoft's Global Skilling Initiative, Amazon's small business accelerator programmes and Facebook's She Means Business¹¹⁷.

Governments and international institutions can also provide financial and tax incentives for SMEs to undertake training. The incentives can be structured in a way that encourages maximum participation. They can also introduce grants to cover the costs associated with the training, such as course fees, materials, and equipment. The Indian government had launched one such training initiative called the FutureSkills Prime programme¹¹⁸. Launched in partnership with the IT industry led by NASSCOM, the programme focuses on emerging technologies.

Other initiatives

G20 governments can also promote other measures to leverage the resources, expertise, and innovation of the private sector to address skill gaps and improve the employability of workers. By working together, governments and private organisations can create more effective and sustainable solutions to address skill gaps and support economic growth. Some of these measures are skill-first hiring, PPP-based skill development, integrated training, and social dialogue.

Skill-first hiring: This approach can improve workplace diversity by widening the candidate pool, reducing skill gaps, and helping employers future-proof their workforce. Governments can help companies tap into a pool of skilled workers using the skills matching framework. One example of this approach is IBM's "New Collar Initiative"¹¹⁹. This initiative includes partnerships with community colleges and other training programmes to provide

workers with the necessary skills to succeed in technology jobs. LinkedIn's research suggests that hiring practices rooted in skills rather than qualifications have the potential to increase productivity and labour market equity¹²⁰. To advance this, governments may consider:

- Encouraging businesses to adopt skills-based job descriptions that focus on the specific skills and abilities required for the job, rather than relying on traditional qualifications such as degrees and years of experience
- Promoting the use of skill assessments and other objective measures of skills and abilities to help businesses identify and evaluate candidates based on their actual abilities, rather than their credentials or prior work experience
- Supporting the development of alternative credentialing systems, such as industry certifications and micro-credentials, which can provide individuals with a more targeted and flexible way to develop and demonstrate their skills

Social dialogue: Social dialogue, both tripartite and bipartite, involving a range of stakeholders can help identify the specific skill gaps that exist within a particular industry or sector and develop effective solutions to address these gaps. Stakeholders can include workers, trade unions, employers, training providers, and government representatives. The National Skills Coalition (NSC) in the US is an example of social dialogue implementation to address skills development and job training issues¹²¹. The NSC has advocated for increased federal funding for job training programmes, more support for apprenticeships, and the creation of a national credential system that would help workers demonstrate their skills to employers.

PPP-based skill development: Governments can collaborate with private sector organisations to identify skill demands for the future, develop skill-based standards and qualifications, set up mechanisms for assessment and certification, and introduce workplace learning. In India, Pradhan Mantri Kaushal Vikas Yojana (PMKVY) is being set up

117 OECD. 2021. The Frontiers of Digital Learning: bridging the SME digital skills gap. Retrieved from: <https://www.oecd.org/digital/sme/events/Frontiers%20of%20Digital%20Learning%20-%20Key%20Highlights%20-%20June%202021.pdf>

118 Ministry of Electronics & Information Technology, 2022 Future Skills Prime Program. Retrieved from: <https://futureskillsprime.in/>

119 IBM, 2022. The IBM apprenticeship program. Retrieved from: <https://www.ibm.com/blog/jobs/the-ibm-apprenticeship-program-no-degree-no-problem/>

120 LinkedIn, 2023. The Next Era of Work Will Be About Skills, Not Pedigree. Retrieved from: <https://www.linkedin.com/business/talent/blog/learning-and-development/the-next-era-of-work-will-be-about-skills-not-pedigree>

121 National Skills Coalition 2023. Retrieved from: <https://nationalskillscoalition.org/>



as a public-private partnership initiative under which ITIs (industrial training institutes) present across India function as hubs of VET¹²².

Integrated training: The goal of integrated training is to provide learners with a comprehensive set of skills that are relevant to their chosen career or industry. These programmes can enhance the capacity and employability of the targeted trainees as it covers all facets of skill development such as basic training, skill upgrading, advanced training in emerging technologies, training of trainers, orientation towards modern technology and managerial skills. One example of integrated training used by a G20 nation is the “Dual Vocational Training” (DVT) system in Germany¹²³. The DVT system combines practical on-the-job training with classroom instruction, providing learners with a comprehensive set of skills and knowledge that are relevant to their chosen career.

Development of core work or social skills of workforce: Besides digital and technical skills, core work skills such as empathy, emotional intelligence, adaptability, and critical thinking are increasingly recognised as vital for workforce development. These enduring human capabilities are essential for success in a rapidly changing job market. When designing skilling initiatives, it is crucial to prioritise these capabilities that will remain important today and, in the future, regardless of any disruptions. The LinkedIn 2023 Top 5 Soft Skills (creativity, persuasion, collaboration, adaptability, and emotional intelligence) align with these enduring human capabilities that will continue to be crucial going forward.¹²⁴



2.6 Promote continuous learning and upskilling through lifelong learning

G20 nations should focus on promoting lifelong learning as the demand for new skills and knowledge and the pace of change grows in the global economy. Lifelong learning is essential for individuals to stay relevant, adapt to changing job requirements, and increase their chances of upward professional mobility. Adults who continue learning are more likely to get employed, perform better than their peers, and earn higher wages.

Lifelong learning as a concept has wide acceptance among governments, employers, and individuals, but adoption has remained low and unequal. For instance, in the EU, where the administration is looking to make lifelong learning a right for everyone, only 1 in 10 adults has participated in training. The participation levels are lower among less qualified and unemployed workers¹²⁵. This disparity in lifelong learning is also present in OECD countries. Around 40% of adults participate in job-related training annually, and they are disproportionately highly skilled. The average incidence of adult learning among the low skilled is just over 20%¹²⁶. Further, the COVID-19 induced shutdowns of economic activities decreased workers' participation in non-formal and informal learning by 18% and 25% respectively.¹²⁷

122 Pradhan Mantri Kaushal Vikas Yojana (PMKVY). Skill India. Retrieved from: <https://www.pmkvyofficial.org/>

123 German Govt. Dual vocational training system - Make it in Germany. Retrieved from: <https://www.make-it-in-germany.com/en/study-training/training-in-germany/vocational/dual-system>

124 LinkedIn top 5 soft skills: <https://www.linkedin.com/pulse/top-5-soft-skills-employers-want-you-have-jessica-chen>

125 UNESCO, 2022. The right to lifelong learning: Making it a reality for all in Europe. Retrieved from: <https://thelifelonglearningblog.uil.unesco.org/2022/06/10/the-right-to-lifelong-learning-making-it-a-reality-for-all-in-europe/>

126 OECD, 2020. The potential of online learning for adults: Early lessons from the COVID-19 crisis. Retrieved from: <https://www.oecd.org/coronavirus/policy-responses/the-potential-of-online-learning-for-adults-early-lessons-from-the-COVID-19-crisis-ee040002/>

127 OECD. 2019. Adult learning and COVID-19. How much informal and non-formal learning are workers missing. Retrieved from: <https://www.oecd.org/coronavirus/policy-responses/adult-learning-and-COVID-19-how-much-informal-and-non-formal-learning-are-workers-missing-56a96569/>

Governments face multiple challenges in promoting lifelong learning, such as unequal access, expensive programmes, limited high-quality courses, technological barriers, mismatched learning preferences and delivery formats, and recognition of prior non-traditional learning. Plus, difficulties in balancing work and learning commitments can limit opportunities for individuals. Overcoming these challenges is vital for ensuring equal lifelong learning opportunities for everyone.

Recommended policy actions

- **Develop a framework for lifelong learning:** G20 nations should develop policies and programmes that promote continuous education and prioritise equity in skill development. This includes collaborating with stakeholders, supporting adult learning programmes, promoting digital literacy, recognising prior informal learning, creating, and implementing a strategy for micro certifications, and creating flexible learning pathways. This framework must be aligned with competency standards to facilitate the transition of workers. CEDEFOP's analytical framework for developing upskilling pathways for low-skilled adults can serve as a useful model¹²⁸

For example, Germany's dual vocational training system combines classroom education with on-the-job training, offering lifelong learning opportunities. This approach means that Germany has become a European powerhouse in terms of exports thanks to well-qualified workers entering the workforce at an early age¹²⁹

- **Assist employers with incentives and guidance:** Policymakers should assist employers through financial incentives and instructional guidance to promote ongoing education. This may include grants, tax credits,

and subsidies for training programmes, apprenticeships, and internships. For instance, Canada's Apprenticeship Job Creation Tax Credit provides tax incentives to employers who hire and train apprentices¹³⁰

- **Bridge learning gaps with technology:** Online courses, virtual training programmes, and digital learning platforms provide flexibility for learners, especially for career transitions. Governments need to ensure inclusiveness and accessibility for adults with lower digital skills and limited access to computer and internet facilities. Singapore's SkillsFuture initiative includes online learning platforms and provides credits that individuals can use for skills training courses¹³¹
- **Provide financial support to workers:** Governments can provide tax credits, grants, scholarships, income-contingent loans, and education savings accounts to make education and training more accessible to workers, especially those from underrepresented or disadvantaged groups. For example, the French government's Compte Personnel de Formation (CPF) provides annual training funds to all employees (€800 for unskilled workers, €500 for full-time, skilled workers.¹³² Similarly, Australia's Higher Education Loan Programme (HELP) provides income-contingent loans for tertiary education¹³³
- **Encourage transformational upskilling:** Governments should focus on designing specific programmes that target in-demand skills for mid-career workers or those in declining industries. The United Kingdom's National Retraining Scheme focuses on upskilling and reskilling workers in industries undergoing technological change¹³⁴

128 CEDEFOP's analytical framework:
<https://www.cedefop.europa.eu/en/publications/8130>

129 How Traditional Education Is Failing Our Job Seekers. Forbes. 2022. Retrieved from: <https://www.forbes.com/sites/forbesbusinesscouncil/2022/12/26/how-traditional-education-is-failing-our-job-seekers/?sh=66d1e4345d07>

130 Government of Canada. 2022. Tax deductions for employers of apprentices. Retrieved from: <https://www.canada.ca/en/services/jobs/training/support-skilled-trades-apprentices/tax-deductions-employers.html>

131 MySkillsFuture. 2023. SkillsFuture Credit. Retrieved from: https://www.myskillsfuture.gov.sg/content/portal/en/career-resources/career-resources/education-career-personal-development/SkillsFuture_Credit.html

132 European Centre for the Development of Vocational Training

133 Parliament of Australia. 2023. Higher Education Loan Program (HELP) and other student loans. Retrieved from: https://www.aph.gov.au/About_Parliament/Parliamentary_departments/Parliamentary_Library/pubs/rp/rp2223/Quick_Guides/Higher_Education_Loan_Program

134 UK Parliament. 2021. Upskilling and retraining the adult workforce. Retrieved from: <https://researchbriefings.files.parliament.uk/documents/POST-PN-0659/POST-PN-0659.pdf>



- **Linking learning outcomes to career advancement opportunities:** Governments can promote lifelong learning by linking learning outcomes to career growth, creating certification systems, and evaluating progress through performance reviews. The European Commission has proposed the European Year of Skills for 2023, aiming to raise the percentage of adults in training and employment to meet EU 2030 social targets of at least 60% in training yearly and 78% in employment¹³⁵

Stakeholder roles in lifelong learning

To promote and support lifelong learning initiatives, several stakeholders play a unique role globally:

- **Government:** The government invests in education and training programmes, develops policies, and provides incentives for individuals and companies to participate
- **Employers:** Employers should collaborate with educational institutions to develop customised training programmes that enable workers to learn new skills
- **Educational institutes:** Educational institutes should develop courses and training programmes for various industries and sectors, utilising technology to provide online and remote learning options
- **Workers:** Workers should take responsibility for their development by seeking out training opportunities and participating in lifelong learning programmes
- **Industry associations:** Industry associations can collaborate with employers and institutes to design and deliver training programmes, advocate for policies that support lifelong learning, and provide financial and other support to workers to participate in such programmes



2.7 Develop green skills for sustainability and adapting climate change along with skilling for silver and care economy

According to the World Economic Forum, nearly 1.75 billion jobs are dependent on a stable climate. In response, governments around the world need to take proactive measures to address this challenge and equip their workforces for the shift towards a sustainable economy.¹³⁶ One key aspect of their approach will be to identify the necessary skills required for the transition. Governments must recognise the need to identify and understand the specific competencies and knowledge that will be essential in a sustainable economy. This includes not only technical skills related to renewable energy, conservation, and environmental management but also broader skills like critical thinking, problem-solving, and adaptability. Many governments worldwide are already investing in identifying the necessary skills and providing training for reskilling, upskilling, and cross-skilling, and making structural changes to employment. But governments must recognise that the transition to a sustainable economy requires a multidisciplinary approach and that discussions on green skills should extend beyond a narrow set of competencies. They also need to foster collaboration between different sectors and disciplines to ensure a holistic understanding of the skills and knowledge needed to tackle environmental challenges effectively. By prioritising the development of green skills, governments can strive to achieve carbon neutrality and create a workforce that is well-prepared for the challenges and opportunities of a sustainable future.

¹³⁵ European Commission

¹³⁶ WEF, 2022. The green skills imperative: How can we create a future that works for all? Retrieved from: <https://www.weforum.org/agenda/2022/09/green-skills-workforce-better-world/>



Key skills in the green economy

In this transition toward a sustainable economy, green skills should not be limited to those working in renewable energy. LinkedIn's jobs in the green economy report highlights non-traditional jobs in the green economy like fleet managers, data scientists, and health workers that will increasingly require green skills. The core green skills must include skills for sustainable energy and environmental management, green finance and investment, sustainable supply chain management,

and sustainable product design and development. Policy makers should take a comprehensive approach that encompasses not only STEM skills but also non-STEM skills to ensure the success of green economic transitions¹³⁷. The World Economic Forum recommends a range of skills, including science, engineering, planning, agriculture, environmental justice, entrepreneurship, business, sales, marketing, and customer service, which are all crucial in this transition.

Track key training needs

Industry	Employment effect	Type of restructuring	Training needs
Renewable Energies: Wind, wave, and tidal power, solar, hydro, nuclear, biomass, geothermal	Gaining	Absorbing workers from other industries	Skills in upgrading energy efficient solutions, management, project management and entrepreneurship. Retraining for manufacturing workers, engineers, installers, technicians, ops, and maintenance specialists
Green Building and retrofitting	Stable or gaining	Restructuring within the construction industry and through the value chain	Skills in energy efficient and green technologies, new materials, energy auditing and certification
Transport	Stable or gaining*	Intra-industry restructuring	Retraining and skills for various public transportation jobs
Recycling and Waste Management	Gaining	Intra-industry restructuring	Retraining from waste collection to recycling and upskilling on methane and energy recovery
Water Resource Management	Gaining	Intra-industry restructuring	Skills in water conservation, efficient usage, wastewater treatment

*Although taxi drivers lose jobs basis shift to public transport¹³⁸

137 WEF. 2021. These are the skills young people need for Green Jobs of the Future. Retrieved from: <https://www.weforum.org/agenda/2021/08/these-are-the-skills-young-people-will-need-for-the-green-jobs-of-the-future/> .

138 ILO. 2011. Greening the global economy- the skills challenge. Retrieved from: https://www.ilo.org/wcmsp5/groups/public/@ed_emp/@ifp_skills/documents/publication/wcms_164630.pdf



Recommended policy actions

1. Build a green skills framework: G20 nations should develop a green skills framework that can identify and define the transformative capacities needed for a green economy and can measure the impact of the policy changes. For the framework to be exhaustive and inclusive, policymakers need to integrate the perspectives of various stakeholders from both government and non-governmental organisations (including employer organisations) working in climate, education, and allied sectors. The framework methodology requires countries to consider the context, identify challenges, develop an action plan, assign roles and responsibilities, and secure financing for implementation. Governments should regularly monitor and evaluate progress, adjust the strategy, and action plan, as necessary. The metrics should include both qualitative and quantitative data, such as number of jobs in the green economy, reduction in carbon emissions, energy efficiency improvements, waste reduction, number of sustainable product and service offerings developed, and total investment made in green technologies.

2. Invest in key technologies: Emerging green technologies, such as renewable energy, smart grid, green building technology, and waste management technology, etc. will play a critical role in the transition to a sustainable economy and provide the foundation for the development of jobs in the green economy. Governments should invest in these technologies to increase opportunities for workers to develop and apply green skills in the workplace.

3. Upskill and reskill workers in other sectors: Governments should prioritise the upskilling and reskilling of the workforce in other sectors to help them transition to emerging industries and occupations. The focus should be on retraining and development of portable skills to encourage occupational mobility as many jobs in these sectors are likely to be impacted or phased out altogether.

The green skill requirements can be mapped to existing skills, and reskilling and reemploying can be planned accordingly. Here are a few examples of how reskilling and upskilling programmes can be designed for workers in other sectors:

- **Mining, oil and gas:** Coal mining and oil and gas extraction workers can be reskilled to work in the renewable and nuclear energy sector. For instance, workers can be trained in solar panel installation, wind turbine maintenance, or battery storage systems
- **Manufacturing:** Workers in manufacturing and other manual labour-intensive industries can be upskilled to work with robotics and automation systems. For example, workers can learn how to programme and operate robots in factories
- **Construction:** Construction workers can be trained to work with eco-friendly materials and building techniques. For example, they can learn how to build green roofs, or work with recycled materials
- **Transportation:** With the rise of electric and autonomous vehicles, other sector workers can be reskilled to work in electric vehicle manufacturing, charging station installation and maintenance of autonomous vehicles

Spain's Just Transition Strategy, launched in 2019, is one such example of a larger decarbonisation effort that outlines a structured, participatory process to protect coal miners (and power plant workers) and plans for the economic future of coal regions. Coal mine employment in the country has shrunk from 45,000 in 1990 to about 1,700 today. The strategy aims to ensure that the shift from traditional industries is fair and equitable for workers and communities that have been affected by the economic distress. The government has committed significant resources to support the implementation of the strategy, including the creation of a 250-million-euro fund to support the development of new, sustainable industries and businesses¹³⁹.

4. Integrate green skills into education: Governments should go beyond reskilling and upskilling adults for green sector jobs and prioritise transforming education to address climate change across all industries. Green skills should be integrated into curriculum and training programmes, starting from primary school to higher

¹³⁹ European Trade Union Confederation. Spain guarantees a just transition for miners. Retrieved from: <https://www.etuc.org/en/spain-guarantees-just-transition-miners#:~:text=A%20pact%20between%20the%20social,down%20in%20the%20near%20future>

education and vocational training. For example, business schools in India are preparing MBA graduates for sustainability careers, and the number of graduates choosing the oil and gas industry has seen a 40% drop¹⁴⁰. Countries can create new courses and programmes dedicated to green skills or incorporate them into existing ones. These initiatives can align with the skills identified by the green skills framework. Additionally, educational institutions, especially colleges, need to address the "management challenge" highlighted in the Green Jobs Report (UNEP) by developing awareness, new perspectives, and managerial capacity

5. Develop partnerships with industry:

Countries can work with industry bodies to identify the specific skills and competencies needed for jobs in the green economy, and to develop training and education programmes that meet industry needs. This can involve providing financial incentives for industry to invest in training and education and to create new jobs in the green economy

6. Promote sustainable development among SMEs:

To promote sustainable development among SMEs, governments should collaborate with industry associations and business networks to develop training programmes focused on building green skills. These programmes can help SMEs identify opportunities to reduce their environmental impact, adopt sustainable business practices, and develop sustainable products and services. Governments can also incentivise SMEs sustainability by providing financial support and tax incentives for businesses that demonstrate a commitment to sustainability. This can help SMEs overcome initial costs, such as investing in energy-efficient equipment or developing sustainable products. By supporting the development of green skills among SMEs, governments can help drive the transition to a more sustainable economy and create new opportunities for green jobs in the green economy. It is essential to ensure that these programmes are accessible and affordable for SMEs and that they are tailored to the specific needs of each business

140 Financial Times, 2021. MBA graduates take on a green hue as fewer choose fossil fuel careers. Retrieved from: <https://www.ft.com/content/bc80f1ec-6164-4d7d-a2b4-e6981eabbfbc>

Initiatives by governments

Many governments around the world have launched industry partnerships to develop programmes that meet the needs of the green economy. For example, the US has launched the Lithium-Battery Workforce Initiative, which will support five pilot training programmes in the energy and automotive sectors as well as promote workforce partnerships between industry and labour along the domestic lithium battery supply chain.¹⁴¹ India has formed a Skill Council for Green Jobs to work towards capacity building for green businesses. The council has launched a "Rozgar" portal to make job opportunities with coveted employers in the green energy sector accessible to all.¹⁴² Many governments have recognised the importance of skilling initiatives in supporting SMEs and have implemented programmes to support them. For example:

- **Germany:** The German government has implemented the "Training Offensive for Small and Medium-Sized Enterprises" initiative, which provides financial support to SMEs to train their employees. The programme aims to improve the competitiveness of SMEs by providing them with a skilled workforce¹⁴³
- **Canada:** The Canadian government launched the "Canada Job Grant" programme, which provides funding to SMEs to train their employees. The programme aims to address skills shortages and improve productivity in SMEs¹⁴⁴
- **India:** The Indian government launched the "Pradhan Mantri Kaushal Vikas Yojana" (PMKVY) initiative, which provides skill training to youth and unskilled workers. The programme aims to increase the employability of the workforce and support the growth of SMEs¹⁴⁵

141 National Energy Technology Laboratory. Battery Workforce Initiative. Retrieved from: <https://netl.doe.gov/bwi>

142 National Skill Development Corporation. Skill Council for Green Jobs. Retrieved from: <https://sscj.in/>

143 OECD, 2021. SME and Entrepreneurship Outlook, Germany, 2021 Retrieved from: <https://www.oecd.org/cfe/smes/Germany.pdf>

144 MentorWorks, Canada. Canada Job Grants. Retrieved from: <https://www.mentorworks.ca/government-funding/human-resources-and-training/canada-job-grant-cjg/>

145 Pradhan Mantri Kaushal Vikas Yojna, India. Retrieved from: <https://www.india.gov.in/spotlight/pradhan-mantri-kaushal-vikas-yojana#tab=tab-1>



- **Mexico:** The Mexican government has implemented the "National Programme for Entrepreneurship" initiative, which provides support to SMEs in the form of training, mentorship, and access to financing. The programme aims to promote entrepreneurship and support the growth of SMEs¹⁴⁶
- **Japan:** The Japanese government launched the "J-Startup" initiative, which provides support to start-ups through training, mentorship, and access to financing. The programme aims to promote innovation and support the growth of SMEs¹⁴⁷

Skilling for silver and care economy

The reality of the 21st century is that, for the first time in human history, there are more senior citizens than young workers. People are living longer, healthier lives, and the birthrate is at a historic low.

G20 countries will undergo significant demographic change due to aging over the next decades. The speed of population aging has been particularly fast in Japan, where the share of the population aged 80 years is expected to rise to 15% by 2050. In the Republic of Korea, the share of the population over 80 will be nearly the same as Japan by 2050. The number of people over 65 for each working-age person will at least double in most G20 countries by 2060, and the share of people over 80 in the world's population will triple.¹⁴⁸

The slowing growth of the working-age population will weigh on GDP per capita growth in the coming decades in most economies, especially if shrinking and aging populations, result in slower investment and productivity growth. On the contrary, aging populations have favourable impacts on labour productivity, as evidenced in multiple studies. Aging generates an increase in the needs of the elderly that are not as high as originally thought, and older individuals in good health tend to contribute long after retiring by providing compensated and uncompensated labour. Thereby,

these findings demonstrate that, particularly in developed countries, older individuals contribute to society and to economic growth even after retirement. Estimates put the global value of this new market of silver economy at USD 15 trillion.¹⁴⁹

Why there is a need to leverage: By 2050 one in five people is projected to be aged 60-plus. Regionally, this trend is set to be most pronounced in Europe and Asia, where around one-third of the population will be over 60¹⁵⁰. The concept of aging at work comes from the urgent requirement to help the aging workforce of the contemporary industries to maintain productivity while achieving a work and private life balance.

To enable economic productivity to be maintained, there is a need to involve the silver economy. Including the silver economy will also have the dual benefits of doing good for society while doing well for the bottom line. European seniors (+65) have a disposable income of USD 3.7 billion/year (€ 3.5 billion).¹⁵¹ In 2025, spending by +50 Europeans will make up 32% of EU GDP, and 38% of employment.¹⁵²

Leveraging the silver economy

- **Eradicating ageist stereotypes:** All institutions of society - from policymakers to employers and from healthcare professionals to influencers - must take a stand to end age-based discrimination in all forms and settings. These include increasing intergenerational conversations, policy actions, cross-generational mixing, etc. It is seen that older workers with high job satisfaction without age-based discrimination remained longer in the workforce

146 OECD. 2021. SME and Entrepreneurship Outlook, Mexico. 2021. Retrieved from: <https://www.oecd.org/cfe/smes/Mexico.pdf>

147 Japan's J-Start-Up Initiative. Retrieved from: J-Startup. Retrieved from: <https://www.j-startup.go.jp/en/>

148 OECD, 2017. Health at a Glance. Retrieved from: https://www.oecd-ilibrary.org/docserver/health_glance-2017-en.pdf?expires=1685369326&id=id&accname=guest&checksum=11910D3692FD9DAFE5003F581ED66CD3

149 Global Coalition of Aging. 2019. The Rise of Silver Economy. Retrieved from: <https://globalcoalitiononaging.com/2018/05/29/the-rise-of-the-silver-economy/>

150 WHO. 2022. Aging and Health. Retrieved from: <https://www.who.int/news-room/fact-sheets/detail/aging-and-health>

151 European Commission, 2019. Aging Europe. Retrieved from: <https://ec.europa.eu/eurostat/documents/3217494/10166544/KS-02-19%E2%80%91EN-N.pdf/c701972f-6b4e-b432-57d2-91898ca94893>

152 European Commission, Oxford Economics, 2018. The Silver Economy. Retrieved from: https://publications.europa.eu/resource/cellar/2dca9276-3ec5-11e8-b5fe-01aa75ed71a1.0002.01/DOC_1

- **Reframing the workplace to fully leverage the contributions of all generations:** Instituting upskilling and reskilling of employees to keep pace with changing societal needs and continuous technological innovation and ensuring representation of workers of all ages in key councils and committees is important. Employers should work towards reducing work-related hazards (e.g., noise, vibrations, etc.) to prevent health problems
- **Investing in lifelong learning:** The growth of the aging workforce and emerging technologies change the work environment, generating a need to train older workers to improve their skills. Many mid-career and older employees require refresher training in areas from information technology to functional disciplines to management methods. Research has also suggested that 57% of US adults (50 and above) are willing to learn new skills if requested by their current or potential employer while two in five (42%) are interested in receiving additional job or skill training of any kind if it were available for free¹⁵³
- **Promoting flexibility of work:** Many mature workers want to keep working but in a less time-consuming and pressured capacity so that they may pursue other interests. Flexibility (through job sharing, telecommuting, compressed workweeks, and part-time schedules) should be ensured both at the location and timing of the work but also in terms of career path
- **Bridging the digital divide:** There is a need to engage adults, caregivers, families, communities and all stakeholders through partnership and co-creation. Increasing legislation and on-ground support can help in delivering digital training. Korea launched the Digital Divide Act in 2000, which enabled the dispatch of IT-skilled youths to help in sensitisation and training of places in need of IT expertise¹⁵⁴

There are several ways to approach skilling for senior workers:

- **Identify emerging trends and skill requirements**
- **Consider upskilling or reskilling**
- **Seek out training and development opportunities**
- **Volunteer or take on new projects**
- **Network and build relationships**

Care economy is an economy where we recognise and support teachers, healthcare providers and childcare workers—people whose work is essential to our lives and work, and who enable our economies to function. Women currently spend more than four times the amount of time than men on unpaid care work. Currently, women's unpaid work is valued at 3.1% of GDP in India. The unpaid care work is not properly defined, which leads to its undervaluation. This in turn leads to lower wages and poor working conditions in care sectors, which are over-represented by women. This calls for key reforms in the policies favourable for women participation in workforce.

The G20 Health Working Group (HWG) was established under the German Presidency in 2017 to develop a shared international agenda on issues such as strengthening health-care systems, reducing malnutrition, health-crisis management and scaling up the fight against pandemics.¹⁵⁵ In 2020, the outbreak of the COVID-19 pandemic dominated the work of the HWG. The access to vaccines, therapeutics and diagnostics was at the core of the G20 agenda.

153 AARP. 2022. Job Reskilling and Upskilling among 50+. Retrieved from: <https://www.aarp.org/research/topics/economics/info-2022/reskilling-workforce-trends-older-adults.html>

154 Ministry of Foreign Affairs. 2000. Korean National Strategy to close digital divide. Retrieved from: <https://www.mofa.go.jp/policy/economy/asem/seminar/asem1/session/p19.html#>:

155 G20 Health Working Group: <https://www.g20.org/en/workstreams/shepa-track/#>:



The Inter-Ministerial Committee for Care Policies, created in February 2020, creates a space for government officials to articulate different initiatives that seek to transform cultural and economic patterns that reinforce inequality gaps. The Committee aims to further “policies that contribute to a fairer social organisation of care, which achieve a better family and social redistribution of the task, as well as better redistribution between genders, and that contribute to recognising care as a need, as a job and as a right”¹⁵⁶. The group brings together 12 agencies of the executive branch, including the Ministry of Women, Gender, and Diversity (which coordinates said Committee), Ministry of Economy, AFIP (tax agency), PAMI (pension social services), ANSES (social security agency), Ministry of Social Development and Ministry of Education, among others.¹⁵⁷

According to a report on the jobs of tomorrow from the World Economic Forum, around 40% of all projected job opportunities in emerging professions will be created in the care sector between 2020 and 2023.¹⁵⁸ The growing demand for health and care services has the potential to generate significant job opportunities, while boosting labour force integration for informal caregivers. While care jobs are already a growing sector, more work still needs to be done to ensure these jobs are high-skilled and are also compensated. There are major gaps in funding, delivery, and regulation, leading to suboptimal quality of care. Given the multiple economic and social payoffs for families and entire economies, addressing this care gap through a robust, well-regulated care sector should be an urgent priority.

Here are some ways to ensure skills for the care economy:

- **Pursue formal education**
- **Seek out training and development opportunities**
- **Volunteer**
- **Network**

156 Ministry of Economy, Argentina. 2022. The Value of Care: A Strategic Economic Sector A Measurement of Unpaid Care and Domestic Work in the Argentine GDP. Retrieved from: https://www.argentina.gob.ar/sites/default/files/the_value_of_care.pdf

157 Inter-Ministerial Committee for Care Policies: <https://cabsec.gov.in/cabinetsection/interministerialconsultation/>

158 World Economic Forum. 2023. Future of Jobs Report. Retrieved from: https://www3.weforum.org/docs/WEF_Future_of_Jobs_2023.pdf





Recommendation 3

Boost global workforce mobility to match skill demand with supply

Policy actions

3.1 Remove policy barriers to enable cross-border mobility

3.2 Leverage technology to enable cross-border mobility

3.3 Build a universal labour information management system (ULIMS)

3.4 Domestic actions to enhance cross-sector mobility

Our world has become more interconnected, especially since the onset of the pandemic. The global workforce has expanded, stretching across international borders, and working from anywhere. As a result, global labour mobility today is no longer restricted to the physical migration of labour. The technological shifts, accelerated by COVID-19, have transformed work and production structures.

But regulatory requirements regarding mobility have not kept up with these changes and have instead grown increasingly complex. Many countries have even introduced protectionist restrictions against the movement of people, reversing previous gains. This has had a negative impact on skill matching and most employers have had to deal with increasing worker shortages. Talent shortage reached a 16-year high in 2022 and three out of four employers have reported difficulty in finding the talent they need¹⁵⁹. However, among organizations that have hired foreign-born talent, nearly 2 in 3 (65%) report it has been somewhat

(53%) or very successful (12%) in addressing hard-to-fill positions¹⁶⁰.

This skill mismatch in various parts of the world often results in employers being unable to fill available vacancies despite high and persistent levels of unemployment. And the resulting labour friction negatively affects economic growth, labour market outcomes and workers' productivity. The cost of mismatch is 3% of output on average but varies between 1% and 9% across countries¹⁶¹.

In this chapter, we will focus on how G20 countries can ease cross-border mobility. The policy actions within this recommendation contribute to the achievement of SDGs 8.b (develop and operationalise a global strategy for youth employment and implement ILO's Global Jobs Pact) and 10.7 (facilitate orderly, safe, regular, and responsible migration and mobility of people, including through the implementation of planned and well-managed migration policies).

¹⁵⁹ Manpower Group. Talent Shortage Study. Retrieved from: <https://go.manpowergroup.com/talent-shortage>

¹⁶⁰ Workplace Immigration, 2023 SHRM (January 2023 SHRM Research Institute survey of 2,505 organizations) <https://advocacy.shrm.org/wp-content/uploads/2023/04/SHRM-Workplace-Immigration-Research-2023-1.pdf>

¹⁶¹ IZA Institute of Labor Economics, 2020. Output costs of Education and Skill mismatch Retrieved from: <https://www.iza.org/de/publications/dp/12974/output-costs-of-education-and-skill-mismatch>



3.1 Remove policy barriers to enable cross-border mobility

G20 nations should devise a policy framework to enable faster and easier workforce mobility to address the growing shortage of highly skilled workers in several member countries. Skills shortages are becoming more pronounced due to factors such as demographic changes, declining labour force participation and technological advancements, and the G20 needs a mobility strategy that addresses the shortcomings in national policies, which limit the supply of skilled workers.

Worker shortages: Many countries are short of workers. And the labour force participation rate tells us the story of the thinning workforce. The key indicator has been on a steady decline since 1990, dropping from 65% in 1990 to 58.9% in 2021¹⁶². This decline is projected to continue until at least 2030 and is expected to worsen the worker shortage in many countries. For example, Canada had 915,500 unfilled positions in the fourth quarter of 2021. That is up by 63% compared to 2020¹⁶³. In the U.S., organizations in critical industries like healthcare (59%), manufacturing (58%) and education (57%) are most likely to report workforce disruptions because of a shortage of workers¹⁶⁴. Germany, Europe's largest solar market, is predicted to lack 5 million workers by 2030, according to the German Economic Institute, as long-term falling birth rates reduce the number of people entering the job market¹⁶⁵.

Demographic changes: One significant factor driving the downward trend in participation rates is the ongoing exit of older individuals from the workforce. And this trend is expected to continue exerting pressure in the years ahead. In many countries, the workforce is getting older and retiring, leading to a decline in the number of working-age people and contributing to worker shortages.

According to the United Nations, the proportion of the global population aged 60 years and older is projected to increase from 15% in 2015 to 22% in 2050¹⁶⁶. The OECD reports that the share of the population aged between 20 and 64 has been declining since 2010, and by 2060, less than 10% of the population will belong to the traditional working ages¹⁶⁷.

Technology advancement: The rapid technological development has also created a demand for highly skilled workers and contributed to the need for cross-border mobility to fill these skill shortages. In many industries, such as engineering, information technology and healthcare, there is a shortage of workers with the skills and qualifications needed to perform specialised tasks. It would help to have a unified registry of skills taxonomy across countries that enables skills of people across geographies to be recognised in a uniform manner.

To address these challenges, it has become imperative for the G20 to build a cross-border agile workforce governed completely by demand. By allowing workers to move freely between countries, employers can access a larger pool of talent and fill critical skills gaps and individuals can find more opportunities for personal and professional growth, cultural immersion, and exposure to innovative ideas and perspectives. The mobile workforce also diffuses knowledge both directly and indirectly across borders. This can boost global innovation performance, with benefits accruing to both sending and receiving countries.

162 World Bank, 2023. Gender Data Portal. Retrieved from: <https://genderdata.worldbank.org/indicators/sl-tlf-acti-zs/?view=trend>

163 CBC, 2022. Retrieved from: <https://www.cbc.ca/news/business/job-skills-shortage-1.6409237>

164 Workplace Immigration, 2023 SHRM (January 2023 SHRM Research Institute survey of 2,505 organizations) <https://advocacy.shrm.org/wp-content/uploads/2023/04/SHRM-Workplace-Immigration-Research-2023-1.pdf>

165 Reuters, 2023. Solar skills shortage, <https://www.reuters.com/business/energy/solar-skills-shortage-threatens-eu-targets-2023-02-16/>

166 UN 2017. World Population Prospects. Retrieved from: https://www.un.org/development/desa/pd/sites/www.un.org.development.desa.pd/files/files/documents/2020/Jan/un_2017_world_population_prospects-2017_revision_databooklet.pdf

167 OECD. 2020. Promoting an age inclusive workforce. Retrieved from: <https://www.oecd-ilibrary.org/sites/237dd702-en/index.html?itemid=/content/component/237dd702-en#chapter-d1e1091>



Barriers to mobility

The barriers to mobility refer to the factors that limit an individual's ability to move freely across borders. The following are some of the most common barriers to mobility.

- **Legal and regulatory hurdles:** Different countries have different laws and regulations governing the entry and stay of foreign workers. Obtaining the necessary visas and work permits can be a time-consuming and costly process and navigating the legal system to understand various tax laws, labour laws, and employment regulations can be complex
- **Skills recognition:** The qualifications of skilled workers may not be recognised in another country, resulting in workers being unable to find employment that matches their qualifications or being forced to work in jobs that are below their skill level. Currently, there is a lack of standardised procedures to establish equivalency for many qualifications across countries. This gap requires many individuals to spend critical time studying and retaking similar exams that they have already cleared in another country, instead of working
- **Cultural differences:** Individuals may find it difficult to adapt to a new environment and work with people from diverse backgrounds. These differences can lead to challenges in communication, social interactions, customs, work-life balance, and management styles
- **Financial barriers:** Moving to a new country or region can be an expensive affair, with costs including travel, accommodation, and living expenses. Workers may also face challenges in accessing credit or financial services in a new location
- **Health concerns:** Individuals may be reluctant to move to a new country if they have concerns about equal access to healthcare, safety, or environmental conditions

168 UN, 2018. Global Compact for Safe, Orderly and Regular Migration. Retrieved from: https://refugeesmigrants.un.org/sites/default/files/180713_agreed_outcome_global_compact_for_migration.pdf

169 SingaporeInfopedia 2018 India-Singapore Comprehensive Economic Cooperation Agreement. Retrieved from: https://eresources.nlb.gov.sg/infopedia/articles/SIP_2018-01-08_142045.html#Singapore%20Comprehensive%20Economic%20Cooperation%20Agreement%20%28CECA%29,review%20has%20been%20ongoing%20since%2011%20May%202010

170 Ministry of Foreign Affairs Japan. 2011. Comprehensive economic partnership agreement Between Japan and the republic of India. Retrieved from: https://www.mofa.go.jp/region/asia-paci/india/epa201102/pdfs/ijcepa_ba_e.pdf

Policies that can enable cross-border mobility

Pathfinder projects can play a key role in enabling cross-border mobility by testing new policies, approaches, and technologies that can facilitate movement across national borders. Here, B20 can embrace the actions as agreed in the Global Compact on Migration, and not reinvent the wheel on this¹⁶⁸. These projects are often designed to address specific challenges or barriers to mobility. Some of the examples include the following:

- **Bilateral or multilateral agreements:** To facilitate the movement of people across borders, countries can negotiate free trade agreements that include provisions for temporary work visas or mutual recognition of professional qualifications. They can also sign international social security agreements that allow workers to receive social security benefits, such as pensions and healthcare, when they move across borders during the service period. India, for instance, has signed several bilateral agreements with other countries to facilitate the movement of people across borders. For example, the India-Singapore Comprehensive Economic Cooperation Agreement includes provisions for temporary work visas for certain categories of workers¹⁶⁹, and the India-Japan Economic Partnership Agreement includes provisions for mutual recognition of professional qualifications¹⁷⁰
- **Simplify visa processes:** Countries can streamline visa processes and reduce barriers to entry for workers across varied skill levels. For instance, Japan's 2018 Basic Policy on Economic and Fiscal Management and Reform¹³¹ includes a provision for creating a new class of work visa for unskilled foreign labour to fill workforce shortages in select industries. This is a major reversal of the government's earlier plan, which actively welcomed foreign labour with specialised knowledge or skills but maintained its ban on unskilled labourers from abroad who might otherwise be admitted to compensating for domestic labour shortages. In the U.S., 57% of organizations report that they would benefit from an increase in legally authorized workers on visas¹⁷¹

171 Workplace Immigration, 2023 SHRM (January 2023 SHRM Research Institute survey of 2,505 organizations) <https://advocacy.shrm.org/wp-content/uploads/2023/04/SHRM-Workplace-Immigration-Research-2023-1.pdf>



- **Facilitate intra-corporate cross-border mobility:** Private players/corporates can be actively involved in cross-border mobility through set global directives around intra-corporate transfer. For example, The EU's Intra-corporate Transferees Directive (ICT) is designed to facilitate cross-border mobility for skilled employees within multinational companies¹⁷². The directive aims to simplify and harmonise the rules for intra-corporate transfers between EU member states by establishing common criteria for entry and residence of intra-corporate transferees. Similar initiative can be taken across G20. Establishing smoother legal migration policies for the future focused on employee well-being is essential in attracting a younger workforce to manage the demographic challenge of an aging population. For instance, teleworking can help maintain employment and allow for increased employee autonomy. However, these and other flexible working arrangements must be regulated to mitigate their potential negative effects, such as the need to have policies ensuring a "right to disconnect" from work¹⁷³
- **Mutual recognition of qualifications:** Countries and organisations can agree to recognise each other's professional qualifications through MoUs or bilateral and multilateral agreements, making it easier for individuals to work in a foreign country without having to repeat their education or training. To ease accounting processes, ACCA has collaborated with various countries for recognition such as CA Australia, HKICPA Hong Kong etc¹⁷⁴. Another example is the MoU on Education signed at the India-UK trade talk (2022), where two MoUs were signed, encouraging mutual recognition of higher education degrees¹⁷⁵
- **Develop labour market information systems:** Governments can develop information systems that provide data on job vacancies, skill requirements, and other labour market information that can help individuals make informed decisions about seeking work in another country. For instance, Canada has implemented a Job Bank system that provides information on job vacancies, skill requirements, and other labour market information to help individuals make informed decisions about seeking work in Canada¹⁷⁶
- **Promote gender-inclusive schemes:** Create flexible and inclusive labour mobility programmes that align with local and national labour market demands and the available skill pool, catering to various skill levels. These programmes should accommodate temporary, seasonal, circular, and fast-track employment, addressing labour shortages effectively. To achieve this, it is crucial to establish adaptable, interchangeable, and unbiased visa and permit alternatives, encompassing permanent and temporary work, multiple-entry study, business ventures, visitation, investment, and entrepreneurship
- **Address forced migration:** Cooperate to identify, develop, and strengthen solutions for migrants compelled to leave their countries of origin due to slow-onset natural disasters, the adverse effects of climate change, and environmental degradation, such as desertification, land degradation, drought, and sea level rise. This includes creating strategies for organised relocation and visa options when it is not feasible for them to adapt or return to their original nations
- **Reunify migrant families:** Facilitate access to procedures for family reunification for migrants at all skills levels through appropriate measures that promote the realisation of the right to family life and the best interests of the child, including by reviewing and revising applicable requirements, such as income, language proficiency, length of stay, work authorisation, and access to social security and services
- **Support cultural exchange programmes:** Governments can support cultural exchange programmes that allow individuals to work and live in another country for a specific period, promoting cross-cultural understanding and facilitating the transfer of knowledge and skills.

172 EU's ICT: https://home-affairs.ec.europa.eu/policies/migration-and-asylum/legal-migration-and-integration/work/intra-corporate-transfers-directive_en

173 ILO, 2023. Working time around the world. Working time around the world: Flexible working hours can benefit work-life balance, businesses, and productivity (ilo.org)

174 Member recognition agreements for ACCA members

175 Economic Times – Framework agreement for skilling and mobility

176 Govt. of Canada. Job Bank. Retrieved from:<https://www.jobbank.gc.ca/aboutus>



Japan has implemented a "Working Holiday" programme that allows young people from certain countries to work and live in Japan¹⁷⁷. Canada has implemented an "International Experience Canada" programme that allows young people from certain countries to work and live in Canada for a time period¹⁷⁸

- **Ensure equal labour rights:** Provide migrant workers engaged in remunerated and contractual labour with the same labour rights and protections extended to all workers in the respective sector, such as the rights to just and favourable conditions of work, to equal pay for work of equal value, to freedom of peaceful assembly and association, and to the highest attainable standard of physical and mental health, including through wage protection mechanisms, social dialogue, and membership in trade unions
- **Improve national policies:** Develop and improve national policies and programmes relating to international labour mobility, including by taking into consideration relevant recommendations of the ILO General Principles and Operational Guidelines for Fair Recruitment, the United Nations Guiding Principles on Business and Human Rights, and the IOM International Recruitment Integrity System (IRIS)



3.2 Leverage technology to enable cross-border mobility

The global talent market has become increasingly interconnected, precipitated by accelerating digital transformation and the changing contours of work, and hastened by the COVID-19 pandemic. These technological shifts are making it easier to navigate some of the complexities in cross-border mobility and connect talent with job opportunities across the world. From virtual communication platforms to blockchain and payment solutions, technology is providing innovative solutions to

support the movement of talent. By leveraging these technologies, countries can improve the mobility of workers in several ways.

- **Digital platforms:** Countries can develop digital platforms that connect employers and job seekers across borders. These platforms facilitate the exchange of information, including job postings, resumes, and job requirements, allowing employers to find skilled workers regardless of their location
- **Task localisation:** Task localisation enables cross-border mobility by creating a virtual skill pool. This approach involves breaking down complex tasks into smaller, more specialised components that can be performed remotely by workers from distinct locations. By leveraging digital platforms and communication technologies, organisations can access a global pool of skilled workers and distribute tasks to them based on their specific expertise and availability. It allows for greater flexibility and agility in the way work is organised and performed, enabling companies to tap into the skills of workers across the world without the need for physical mobility. Additionally, it can lead to cost savings and efficiency gains by reducing the need for travel and on-site work, as well as allowing for round-the-clock work across time zones
- **Digital identity and credentials verification:** Countries can leverage technologies such as blockchain and biometrics to verify the identity of skilled workers, making it easier to validate their qualifications and credentials. For example, a blockchain-based system can store a worker's passport and details of education, training, and work experience. This would simplify the process when they apply for jobs or visas, reducing administrative burdens and costs
- **Global mobility management software:** Countries can provide centralised tools to organisations to facilitate global workforce mobility. This type of software allows companies to manage visas, tax compliance, and other administrative tasks.

177 Ministry of Foreign Affairs of Japan. The Working Holiday Programs in Japan. Retrieved from: https://www.mofa.go.jp/j_info/visit/w_holiday/index.html#:

178 Canada Visa, 2022. International experience Canada Program. Retrieved from: <https://www.canadavisa.com/international-experience-canada-program.html#>:



For example, Australia has implemented a digital platform called ImmiAccount to facilitate visa applications for people seeking to work or study in Australia¹⁷⁹. The platform enables users to apply for visas, upload supporting documents, and track the progress of their application. ImmiAccount also provides a range of tools to help employers manage the visa application process for their employees, including the ability to create and manage sponsorship agreements and monitor the status of visa applications

- **Grievance handling:** Countries can use technology to address issues related to workplace disputes, discrimination, and harassment. These platforms provide a secure and confidential way for workers to report issues and can streamline the process of handling grievances. They can also provide a centralised system for tracking and monitoring complaints. For example, in the Philippines, the Overseas Workers Welfare Administration (OWWA) operates an Electronic Case Registry and Response System (e-CARES) where migrant workers can register complaints. The e-CARES system classifies the nature of the complaint, assigns the case to the overseas post concerned, and allows migrants to track the progress of the case online. The e-CARES system also keeps a record of pre-departure educational programmes attended, welfare assistance programmes and services used, and requests for assistance (RFAs) made in the case of complaints¹⁸⁰
- **Data security:** Governments should implement robust cybersecurity measures and regulations to protect the personal information of workers and employers and build trust and confidence in the digital platforms and technologies used for talent management and recruitment. For example, end-to-end encryption can secure communications across borders, biometric authentication can help authenticate individuals' identities when accessing sensitive information or systems, and AI and ML can detect and prevent cyber-attacks, with advanced algorithms that can identify potential threats and anomalies in real-time.



3.3 Build a universal labour information management system (ULIMS)

Developing a Universal Labour Information Management System (ULIMS) based on existing national-level Labour Market Information Systems (LMIS) can help create a more seamless global labour market, benefitting workers, employers, and governments.

By providing centralised information about labour market trends such as employment, job vacancies, job classification, skills demand, and training opportunities, ULIMS can increase cross-border mobility of workers and facilitate the matching of skills with job vacancies. It can also provide information and analysis for stakeholders and alert policymakers of potential skill shortages, enabling proactive measures to address these challenges.

The G20 must take a leadership role in developing a framework for data collection, sharing, and analysis, as well as exchanging best practices in data governance. The framework would ensure consistent and comparable data collection and analysis across countries, leading to better anticipation of changes and preparation accordingly.

How it would work

The ULIMS would provide stakeholders with a comprehensive picture of the global labour market by collecting, processing, and analysing data from different countries and helping to resolve the information asymmetry. The flow of information would be as follows:

Data collection and transmission: The national-level labour management systems would all serve as a gateway to this universal portal.

¹⁷⁹ Australian Govt. ImmiAccount. Retrieved from: <https://immi.homeaffairs.gov.au/help-support/applying-online-or-on-paper/online>

¹⁸⁰ ILO.2018. Digitisation to promote decent work for migrant workers in ASEAN. Retrieved from: http://www.oit.org/wcmssp5/groups/public/--asia/--ro-bangkok/--sr-o-bangkok/documents/publication/wcms_713546.pdf



Many countries, such as Australia, Denmark, France, South Africa, UK, and USA, have already established these LMIS based on ILO guidelines. Other sources of data collection can be national credit systems, digital employee libraries and job banks. The participating countries would collect and compile labour market information in a standardised format, including information on labour force participation, employment rates, job vacancies, and skills demand.

Data analysis and dissemination: The ULIMS would use advanced data analytics and artificial intelligence to analyse the collected data and identify emerging trends and patterns. The findings and insights from the analysed data would then be shared with participating countries and other stakeholders, such as employers, workers, and training providers. The data should be presented in an easy-to-understand format, such as interactive dashboards or visualisations, and be updated dynamically to ensure a minimum lag in decision making.

Data utilisation: The data would be used by participating countries and stakeholders to inform policy decisions, anticipate emerging skills needs and develop training programmes. For example, if a particular skill is in high demand in a certain region or industry, workers could be trained or encouraged to develop those skills, and employers could adjust their hiring strategies accordingly. Governments can then identify these skill gaps and sign bilateral and multilateral agreements to create easier and faster channels for migration between nations. The utilisation of ULIMS can be automated to an extent by creating mobility agreements between governments of employers and job seekers once a skill match crosses a certain threshold. These agreements can have a specified duration, which will be decided upon and listed on the portal to avoid any migration issues. The respective governments will periodically track and monitor the contracts to ensure that both parties are fulfilling their obligations. The ULIMS can also be integrated with the centralised bodies to assess the skills and competencies of employees, identify skill gaps, and develop training plans.

Major Stakeholders and Their Role

Stakeholders	Needs	Value
Employers	Employers seek cross-border mobility as they will be able to access a larger pool of skilled workers and more accurate and up-to-date information on labour market trends and skill requirements	They could use the ULIMS insights to adapt and tailor their hiring strategies and invest in training programmes to develop the skills of their employees
Jobseekers and Students	Jobseekers and students want access to more jobs beyond their national borders, which could help them find better-paying jobs that match their skills	Workers would benefit from having more information on skill requirements, which could help them make informed decisions about their education and training
Educators and training providers	Educators and training providers will benefit from having access to reliable and up-to-date global data, which can inform their teaching activities	Use the insights to design and implement effective training programmes and educational curricula that align with labour market needs
Policymakers	Policymakers seek access to more comprehensive and reliable labour market data, which can inform their policy decisions	Use the cross-country data to inform policy decisions related to labour market regulation, immigration, and education and training policies. They can also measure the impact of their policies

Stakeholders	Needs	Value
Employers	Labour market researchers want more comprehensive and real-time data to analyse what is happening in the labour market and why	Use the data to conduct research on trends and identify areas of skill shortages and mismatches, as well as opportunities for job creation and economic growth
Job Portals	Job portals would need access to accurate and up-to-date labour market data, including job vacancies, labour demand, and supply trends	Use this data to provide more targeted job listings in specific regions and match job seekers with relevant job opportunities

How to overcome potential challenges

Creating a centralised ULIMS would present significant challenges, primarily related to standardising data collection and ensuring data security.

Data collection: A key challenge would be ensuring the accuracy and reliability of the data collected from the various sources. The data may be inconsistent, incomplete, or out-of-date as data limitations affect not only complex issues, such as informality and employment protection, but also labour market indicators. This would make it difficult to draw any meaningful conclusions.

Data security: It may also be difficult to persuade all countries to participate and contribute data to the ULIMS, as some may be reluctant to share labour market information for political or economic reasons. Secondly, data privacy and security concerns may arise, as sensitive information about individuals and companies may be shared across borders.

To overcome these challenges, the G20 can consider a pilot programme that would provide an opportunity to evaluate the framework for data collection, sharing, and analysis, identify any gaps or inconsistencies in the data, and refine the system accordingly. It would also help build trust among countries and stakeholders, as they would be able to see the benefits of participating in the ULIMS firsthand. Furthermore, piloting would provide an opportunity to assess the data security protocols and ensure that sensitive information is protected.

The G20 nations can also take several other steps, such as learning from the experiences of national-level LMIS, partnering with international organisations such as the ILO, and involving other

stakeholders, including industry and civil society organisations, to ensure that the system meets the needs of all relevant parties.

- Firstly, the G20 would have to develop standardised data collection methods and ensure that data is consistent and comparable across different countries. The initiatives listed in the second recommendation to standardise skill training and assessment would also help regulate the skill supply side data
- The G20 would have to invest in capacity building technology and infrastructure to ensure all countries can effectively collect and manage labour market information. It would also have to invest in supporting the analysis and dissemination of labour market information
- It would have to establish a framework for data sharing and ensure that data is secure and confidential to address potential concerns about data privacy



3.4 Domestic actions to enhance cross-sector mobility

Cross-sector mobility refers to the movement of individuals across different industries or sectors in their career paths. It is becoming increasingly important for the workforce as it enables individuals to develop new skills, gain diverse experiences, and broaden their knowledge base.



Cross-sector mobility also promotes collaboration and knowledge-sharing between different industries, leading to the emergence of innovative ideas and solutions. In addition, it allows for a more dynamic and adaptable workforce, capable of responding to changes in the labour market and the economy.

In response to the increasing demand for a diverse set of skills across various industries, cross-sector mobility has become a significant area of focus for B20 nations. To enhance cross-sector mobility, these nations can take several domestic level actions:

- Developing training and education programmes that equip individuals with the skills needed to transition between sectors. This could include providing opportunities for upskilling and reskilling, as well as offering apprenticeships or internships that provide practical experience in different industries
- Encouraging collaboration between sectors to promote knowledge sharing and learning. This could involve creating cross-sectoral partnerships or encouraging industry associations to facilitate knowledge exchange and collaboration
- Supporting policies and initiatives that promote diversity and inclusion in the workforce. This could include providing support for individuals from underrepresented groups to access training and education opportunities and creating policies that promote equitable recruitment and retention practices across sectors
- Encouraging the development of transferable skills and competencies that are relevant across different industries. This could involve creating frameworks that identify the key skills and competencies needed for cross-sector mobility and providing training and support to develop these skills
- Establishing incentives and programmes that encourage employers to hire individuals with cross-sectoral experience

This could include creating tax incentives or subsidies for employers who hire individuals from different sectors or providing recognition and awards for organisations that demonstrate a commitment to cross-sectoral collaboration

- Activation policies can also play a crucial role in enhancing cross-sector mobility by providing support to individuals who are currently unemployed or underemployed. This could include programmes that provide financial assistance, training opportunities, or job placement services. Activation policies can help individuals overcome barriers to entering different sectors and facilitate their transition to new industries
- In addition to promoting diversity and inclusion in the workforce, B20 nations can focus on inclusion of groups with a distance to the labour market, such as individuals with disabilities or those from marginalised communities. This could involve creating targeted programmes that provide specialised training and support to individuals from these groups, as well as creating policies that promote equitable access to education and training opportunities
- To increase supply from those who may not fit into traditional job patterns, B20 nations can focus on creating more agile and flexible labour markets. This could include promoting the gig economy and creating policies that support alternative forms of work, such as part-time or remote work. By creating more flexible job opportunities, B20 nations can tap into a wider pool of talent and enable individuals to engage in cross-sector mobility without having to completely transition out of their current industry or job

Germany's commitment to cross-sector mobility and collaboration is evident through various policy initiatives and industry partnerships. For example, the National Platform for the Future of Mobility (NPM) brings together stakeholders from different sectors to develop strategies for sustainable and integrated mobility solutions¹⁸¹.

181 NPM. 2021. The Future of Mobility. Retrieved from: <https://www.plattform-zukunft-mobilitaet.de/en/>

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Network partners



Knowledge partner





10 11 12 13 14 15 16 17 18 19 20 21 22 23

About B20 India

Business 20 (B20) is the official G20 dialogue forum with the global business community. Established in 2010, B20 is among the most prominent Engagement Groups in G20, with companies and business organizations as participants. The B20 leads the process of galvanizing global business leaders for their views on issues of global economic and trade governance and speaks in a single voice for the entire G20 business community.

Each year, the G20 Presidency appoints a B20 Chair (an eminent business leader from the G20 host country), who is supported by a B20 Sherpa and the B20 secretariat. The B20 aims to deliver concrete actionable policy recommendations on priorities by each rotating presidency to spur economic growth and development.

The B20 bases its work on Task Forces (TFs) and Action Councils (ACs) entrusted to develop consensus-based policy recommendations to the G20 and to international organizations and institutions. The B20 officially conveys its final recommendations to the G20 Presidency on the occasion of the B20 Summit.

As India holds the Presidency of G20 in 2023, India will host the eighteenth G20 Summit in New Delhi. The Confederation of Indian Industry (CII) has been appointed as the B20 India Secretariat for India's Presidency. CII, as the B20 India Secretariat, will host the B20 India Summit in New Delhi from 25-27 August 2023.

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