Executive Summary

The COVID-19 pandemic-induced lockdowns and related global recession of 2020 have created a highly uncertain outlook for the labour market and accelerated the arrival of the future of work. The Future of Jobs Report 2020 aims to shed light on: 1) the pandemic-related disruptions thus far in 2020, contextualized within a longer history of economic cycles, and 2) the expected outlook for technology adoption, jobs and skills in the next five years. Despite the currently high degree of uncertainty, the report uses a unique combination of qualitative and quantitative intelligence to expand the knowledge base about the future of jobs and skills. It aggregates the views of business leaders—chief executives, chief strategy officers and chief human resources officers—on the frontlines of decision-making regarding human capital with the latest data from public and private sources to create a clearer picture of both the current situation and the future outlook for jobs and skills. The report also provides in-depth information for 15 industry sectors and 26 advanced and emerging countries.

The report’s key findings include:

- The pace of technology adoption is expected to remain unabated and may accelerate in some areas. The adoption of cloud computing, big data and e-commerce remain high priorities for business leaders, following a trend established in previous years. However, there has also been a significant rise in interest for encryption, non-humanoid robots and artificial intelligence.

- Automation, in tandem with the COVID-19 recession, is creating a ‘double-disruption’ scenario for workers. In addition to the current disruption from the pandemic-induced lockdowns and economic contraction, technological adoption by companies will transform tasks, jobs and skills by 2025. Forty-three percent of businesses surveyed indicate that they are set to reduce their workforce due to technology integration, 41% plan to expand their use of contractors for task-specialized work, and 34% plan to expand their workforce due to technology integration. By 2025, the time spent on current tasks at work by humans and machines will be equal. A significant share of companies also expect to make changes to locations, their value chains, and the size of their workforce due to factors beyond technology in the next five years.

- Although the number of jobs destroyed will be surpassed by the number of ‘jobs of tomorrow’ created, in contrast to previous years, job creation is slowing while job destruction accelerates. Employers expect that by 2025, increasingly redundant roles will decline from being 15.4% of the workforce to 9% (6.4% decline), and that emerging professions will grow from 7.8% to 13.5% (5.7% growth) of the total employee base of company respondents. Based on these figures, we estimate that by 2025, 85 million jobs may be displaced by a shift in the division of labour between humans and machines, while 97 million new roles may emerge that are more adapted to the new division of labour between humans, machines and algorithms.

- Skills gaps continue to be high as in-demand skills across jobs change in the next five years. The top skills and skill groups which employers see as rising in prominence in the lead up to 2025 include groups such as critical thinking and analysis as well as problem-solving, and skills in self-
management such as active learning, resilience, stress tolerance and flexibility. On average, companies estimate that around 40% of workers will require reskilling of six months or less and 94% of business leaders report that they expect employees to pick up new skills on the job, a sharp uptake from 65% in 2018.

• The future of work has already arrived for a large majority of the online white-collar workforce. Eighty-four percent of employers are set to rapidly digitalize working processes, including a significant expansion of remote work—with the potential to move 44% of their workforce to operate remotely. To address concerns about productivity and well-being, about one-third of all employers expect to also take steps to create a sense of community, connection and belonging among employees through digital tools, and to tackle the well-being challenges posed by the shift to remote work.

• In the absence of proactive efforts, inequality is likely to be exacerbated by the dual impact of technology and the pandemic recession. Jobs held by lower wage workers, women and younger workers were more deeply impacted in the first phase of the economic contraction. Comparing the impact of the Global Financial Crisis of 2008 on individuals with lower education levels to the impact of the COVID-19 crisis, the impact today is far more significant and more likely to deepen existing inequalities.

• Online learning and training is on the rise but looks different for those in employment and those who are unemployed. There has been a four-fold increase in the numbers of individuals seeking out opportunities for learning online through their own initiative, a five-fold increase in employer provision of online learning opportunities to their workers and a nine-fold enrolment increase for learners accessing online learning through government programmes. Those in employment are placing larger emphasis on personal development courses, which have seen 88% growth among that population. Those who are unemployed have placed greater emphasis on learning digital skills such as data analysis, computer science and information technology.

• The window of opportunity to reskill and upskill workers has become shorter in the newly constrained labour market. This applies to workers who are likely to stay in their roles as well as those who risk losing their roles due to rising recession-related unemployment and can no longer expect to retrain at work. For those workers set to remain in their roles, the share of core skills that will change in the next five years is 40%, and 50% of all employees will need reskilling (up 4%).

• Despite the current economic downturn, the large majority of employers recognize the value of human capital investment. An average of 66% of employers surveyed expect to get a return on investment in upskilling and reskilling within one year. However, this time horizon risks being too long for many employers in the context of the current economic shock, and nearly 17% remain uncertain on having any return on their investment. On average, employers expect to offer reskilling and upskilling to just over 70% of their employees by 2025. However, employee engagement into those courses is lagging, with only 42% of employees taking up employer-supported reskilling and upskilling opportunities.

• Companies need to invest in better metrics of human and social capital through adoption of environmental, social and governance (ESG) metrics and matched with renewed measures of human capital accounting. A significant number of business leaders understand that reskilling
employees, particularly in industry coalitions and in public-private collaborations, is both cost-effective and has significant mid- to long-term dividends—not only for their enterprise but also for the benefit of society more broadly. Companies hope to internally redeploy nearly 50% of workers displaced by technological automation and augmentation, as opposed to making wider use of layoffs and automation-based labour savings as a core workforce strategy.

- The public sector needs to provide stronger support for reskilling and upskilling for at-risk or displaced workers. Currently, only 21% of businesses report being able to make use of public funds to support their employees through reskilling and upskilling. The public sector will need to create incentives for investments in the markets and jobs of tomorrow; provide stronger safety nets for displaced workers in the midst of job transitions; and to decisively tackle long-delayed improvements to education and training systems. Additionally, it will be important for governments to consider the longer-term labour market implications of maintaining, withdrawing or partly continuing the strong COVID-19 crisis support they are providing to support wages and maintain jobs in most advanced economies.
Top 10 skills of 2025

- Analytical thinking and innovation
- Active learning and learning strategies
- Complex problem-solving
- Critical thinking and analysis
- Creativity, originality and initiative
- Leadership and social influence
- Technology use, monitoring and control
- Technology design and programming
- Resilience, stress tolerance and flexibility
- Reasoning, problem-solving and ideation

Type of skill:
- Problem-solving
- Self-management
- Working with people
- Technology use and development

What is the Share of Women in the Jobs of Tomorrow?

COVID-19 is pushing companies

- to scale remote work: 83%
- to accelerate digitalization: 84%
- to accelerate automation: 50%

Rate of automation

<table>
<thead>
<tr>
<th>Year</th>
<th>Human</th>
<th>Machine</th>
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<tr>
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<td>47</td>
</tr>
<tr>
<td>2020</td>
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Job landscape

By 2025, new jobs will emerge and others will be displaced by a shift in the division of labour between humans and machines, affecting:

**Growing job demand:**
1. Data Analysts and Scientists
2. AI and Machine Learning Specialists
3. Big Data Specialists
4. Data Scientists
5. Digital Marketing and Strategy Specialists
6. Process Automation Specialists
7. Business Development Professionals
8. Digital Transformation Specialists
9. Information Security Analysts
10. Software and Applications Developers
11. Internet of Things Specialists

**Decreasing job demand:**
1. Data Entry Clerks
2. Administrative and Executive Secretaries
3. Accounting, Bookkeeping and Payroll Clerks
4. Accountants and Auditors
5. Assembler and Fabricators
6. Business Services and Administration Managers
7. Client Information and Customer Service Workers
8. General and Operations Managers
9. Mechanics and Machinery Repairers
10. Material Recording and Stock-Keeping Clerks

**Sources:** Future of Jobs Report 2020, World Economic Forum.

Human Capital Investment

2 out of 3 employers expect a return on investment from reskilling within one year.

Reskilling needs

50% of all employees will need reskilling by 2025.

Time needed to start building new skills online in jobs of tomorrow

- **People and Culture, Content Writing, Sales and Marketing skills:** 1-2 Months
- **Product Development and Data and AI skills:** 2-3 Months
- **Cloud Computing and Engineering skills:** 4-5 Months

**Sources:** Custom data produced for the Future of Jobs Report, World Economic Forum.

Presents the days of learning needed for the average worker to gain the level of mastery through On-the-job learning.