Moving ahead: the Future of Business in the U.S.

September 2019

IOE | A powerful and balanced voice for business

USCIB

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Abbreviations

AI	Artificial Intelligence
BIAC	Business at OECD
CEOE	Confederación Española de Organizaciones Empresariales
CIP	Business Confederation of Portugal
FOW	Future of Work
GAN	Global Apprenticeship Network
GIRN	Global Industrial Relations Network (of the IOE)
GOSH	Global Occupational Safety and Health (of the IOE)
G7	Group of Seven
G20	Group of Twenty
IDB	Inter-American Development Bank
ILO	International Labour Organization
IOE	International Organisation of Employers
IOT	Internet of Things
ITUC	International Trade Union Confederation
NGO	Non-governmental Organization
OECD	Organisation for Economic Co-operation and Development
SHRM	Society for Human Resource Management
SME	Small and Medium Enterprise
STEM	Science, Technology, Engineering and Mathematics
TUAC	Trade Union Advisory Committee at OECD
TVET	Technical and Vocational Education and Training
UN	United Nations
USCIB	United States Council for International Business
USDOL	United States Department of Labour
WB	World Bank Group
WEF	World Economic Forum

Acknowledgements

Executive Summary

The megatrends of the Future of Work: technology, changing demographics, climate change, shortage of skilled labour and globalization are today driving much of the international debate around social and labour policies. Various international agencies and regional groupings such as the OECD, WB, WEF, G7 and G20, are striving to find practical solutions for government policy makers, businesses and the workforce. The impact of these megatrends can already be felt by companies across all geographical regions, and various studies confirm technology as the number one 'disruptor' of all.

The USCIB/IOE survey in August 2019 found that:

- Most companies surveyed are familiar with FOW discussions and have not dismissed Future of Work as a passing trend;
- Companies agree on the importance of networking and working with external stakeholders that can help them on their journey;
- Some have not waited for governments to respond – some are already rolling out extensive training programs, learning academies for retail upskilling, hosting digital deep dives, planning sabbatical policies, etc;
- The HR department is seen as the most engaged internal business unit when it comes to addressing FOW issues, followed by the employee relations units. The same units are involved in collaboration efforts;
- The trends have changed the way businesses strategize and make decisions on human resources (reskilling, managing employee turnover, harnessing talent of an ageing workforce) and the way of using technology to serve clients better.

The report puts forward 10 key recommendations for companies in efforts to harness FOW opportunities:

1. Creating a conducive, open and attractive IT culture
2. Determining how to balance human with machine
3. Treating workers as customers
4. Understanding that taking small steps at a time is better than none
5. Understanding the importance of attracting a diverse workforce
6. Finding ways to cultivate loyal and engaged employees
7. Understanding that the workforce is more agile than employers think
8. The importance of creating a learning culture
9. Being open to adopt environmentally sustainable processes
10. The importance of regular engagements with USCIB

Most importantly, just as the government alone cannot solve society's biggest problems – businesses also need support and guidance from external stakeholders. The government and companies together, with the help of employer organizations, can come together, collaborate and develop collective solutions by seeking improvements in workforce skills, infrastructure, and the business environment.

What is the Future of Work?

Current literature and international debate point to four principal 'megatrends' that are shaping the world and driving the pace of change, namely**:**
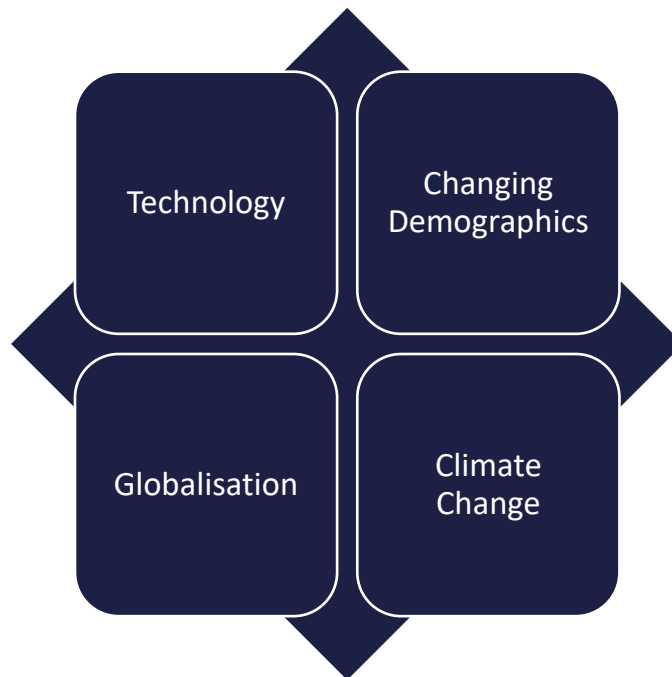
Interestingly, an ILO/IOE survey[1] on 500 C-Suite executives in 15 different countries effectively identified a **fifth trend: a shortage of skilled labour**.

None of these trends are new, but they are now occurring simultaneously and transforming the world of work and the future of business at a faster rate than before - much faster than we can realistically adapt. Businesses, governments, individuals and communities are obliged to deal with these transformations with utmost urgency, often as a matter of survival.

These profound changes impact the world of work in many ways, some are perceived to be negative and some as positive.

Technology
Technology is considered the most 'disruptive' megatrend. The opportunities and challenges that come with this megatrend are driving much of the debate around social and labour policies, including:
- The way we organise our work (working time, location, who will do the work, monitoring systems);
- The employment status of workers and the traditional definition of an employer – how these are linked to existing social protection models;
- The evolution and expansion of skills needed by industry (skills gap, shortages and mismatches);
- The quality of jobs and working conditions (wages, job security, etc);
- Employment rates – if automation will displace jobs;
- Workers of the gig economy;
- The nature and dynamics of social dialogue between employers and workers and industrial relations;

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[1] Changing business and opportunities for employer and business organisations report (https://www.ioe-emp.org/index.php?eID=dumpFile&t=f&f=135287&token=bfa4408cb2a0b9d5e08f3ff5ae09552c672dbc97)

- Existing education and healthcare systems;
- How policy-makers address issues linked to poverty, human rights, migration, informaility, the gender pay gap, perceived inequalities and the digital divide;
- Rules and regulations to govern all of the above.

Employer organizations such as the United States Council for International Business (USCIB) and international organizations such as the International Organisation of Employers (IOE) make it their business to ensure that the direction of these debates progresses in a way that promotes a strong private sector, encourages inclusive multilateralism and advocates for pratical and meaningful solutions especially during negotatiations of international labour standards and discussions of social and labour policies at all levels. Enabling a conducive environment for business to grow, thrive and innovate should be fully recognized as a key driver for economic growth, sustainable development and prosperity.

Changing demographics

The world is seeing an unprecedented ageing of populations in developed nations and at the same time, the developing world has a young population. Globally, the number of elderly people is expected to more than double by 2050, increasing from 841 million in 2013 to more than 2 billion[2]. The ageing population is already a reality for advanced economies, where it is putting enormous strains on social security schemes and healthcare systems. With a large proportion of workers reaching retirement age, the size of the working-age population is reduced, and the old-age dependency ratio grows. On the other hand, youth bulges offer great potential for the development of a country, but investments in education reforms, Technical and Vocational Education and Training (TVET) systems and incentives are needed to harness this potential. Youth unemployment poses, and will continue to pose, social and economic challenges globally.

> 62% of companies in Europe and 58% in Asia reported that a declining working age population will have a large impact on their business.
>
> 45% of businesses in Latin America and the Caribbean and 39 % in Africa, indicated the youth bulge would have a considerable impact for them.
>
> - ILO/IOE survey (2019)

Migration brings net positives for workers, businesses, economies, and society but can generate resistance that needs to be addressed. According to recent estimates, migrants made an absolute contribution to global output of roughly US $6.7 trillion, or 9.4 % of global GDP in 2015. Demographic changes in developed economies will demand an increase in migration from developing nations, as economies such as the United States of America, Canada, and the European Union require young workers to contribute labour and tax to balance out aging populations.

Globalization

Free trade, global customers and the commercial advantage of overseas employment have led to a truly international labour market, with significant implications for the future world of work. This is essentially the ability for organizations to work in a world where boundaries do not exist. The language one speaks, the currency one transacts in, and physical location are starting to matter less and less.

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[2] UN Report, World Population Agenda, 2015.
http://www.un.org/en/development/desa/population/publications/pdf/ageing/WPA2015_Report.pdf page 3

Boundaries to working with anyone, anywhere are disappearing and this trend can only continue. Economic integration and shifting geographic centers of power and production will require innovative governmental and business responses.

Climate change

The policy debate over the multi-faceted challenges of climate change is progressing at the international level. Various quarters are aware of the central aim of the Paris Agreement - to strengthen the global response to the threat of climate change by keeping a global temperature rise this century well below 2 °C above pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5 degrees.

> In 2018, extreme weather conditions such as drought, earthquakes, tropical cyclones, windstorm and flooding resulted in $215 billion in economic losses. Aon's latest Weather, Climate & Catastrophe Insight – 2018 Annual Report shows that the top 10 global economic loss events were all weather-related with the costliest being Hurricane Michael at $17 billion.

Business relations are increasingly shaped by environmental standards. The ILO/IOE survey found that 51% of businesses said that policymakers are increasingly demanding compliance with environmental targets. Companies headquartered in the United States of America and Europe are increasingly engaging in robust processes to mitigate adverse impacts on the environment in their global value chain. Non-governmental organizations (NGOs), trade unions and citizen-activists with smartphones can quickly identify and provoke global condemnation of poor working conditions or environmental standards if firms fail to act. Consumers moreover expect that companies will use their leverage to improve environmental standards in their supply chains.

Shortage of skilled labour

As mentioned earlier, the ILO/IOE survey on 500 C-Suite executives located in 15 different countries effectively identified a **fifth trend: the shortage of skilled labour**.

- A large proportion of businesses in the United States of America (61%), Brazil (70%), India (66%) and Germany (65%) agreed that businesses are looking for quite different skills in new recruits than three years ago. In a similar vein, executives across Bolivia (60%), Haiti (53%), China (47%), South Africa (51%) and Malaysia (63%) agreed in similar proportions that it is becoming harder to recruit people with the skills needed.
- 78% of executives indicated that updating the school and education curriculum to match the economy's needs would provide them with the skilled employees they require. This sentiment is particularly strong in emerging markets, rising to 79% of respondents in Latin America and 86% in Africa.
- Small and medium-sized enterprises (SMEs) are the most active supporters of changes in the skills agenda, with 84% of small businesses supporting updating education systems to meet skills needs.

> This data is consistent with research carried out by the Society for Human Resources Management (SHRM)[3]:
> - The 2019 SHRM Skills Gap report highlighted 83% of HR professionals say they have had difficulty recruiting suitable job candidates in the past 12 months. The most-sought after skills identified: Data analysis, science, engineering and medical, carpentry, plumbing, welding and machining. HR professionals say providing onsite and offsite training through seminars and workshops is a top way to address the gap. Succeeding in the global marketplace is all about talent.[4]

[3] The SHRM is ranked the 12th largest association in the United States in 2015, with more than 300,000 members from 165 countries.
[4] https://www.shrm.org/hr-today/trends-and-forecasting/research-and-surveys/Pages/Skills-Gap-2019.aspx

What are the international organizations and regional groupings saying about ways to tackle Future of Work challenges?

G20

In December 2018, the G20 Argentinian Presidency placed the Future of Work (FOW) agenda as a cross cutting theme spanning various work streams, notably in the Employment Working Group, the newly created Education Working Group, the Digital Economy Task Force under the Sherpa track as well as under the Finance track. G20 leaders adopted the Declaration on the FOW: https://www.consilium.europa.eu/media/37247/buenos_aires_leaders_declaration.pdf.

The G20 has a menu of policy options on the FOW[5]:
1) Harness the benefits of technology for growth and productivity:
   - Bridge the productivity gap between frontier and lagging firms
   - Close the technological divide between advanced and emerging market economies
   - Expand the technological frontier

2) Support people during transitions and address distributional challenges:
   - Facilitate labour mobility while ensuring adequate protection for all
   - Ensure the sustainability and adequacy of social protection for a changing workplace
   - Address distributional challenges and ensure equal opportunities beyond the transition

3) Secure sustainable tax systems
   - Adapt the tax mix to support inclusive growth and ensure sufficient tax resource
   - Leverage new technologies to modernize and strengthen the tax system

4) Ensure the best possible evidence to inform decision-making
   - Refine GDP and other macroeconomic measurements to better capture the value of technological advancements
   - Track the implication of new technologies on welfare, labour markets and human capital
   - Harness the power of data to achieve a more granular and timely understanding of the economy
   - Support regulatory authorities' enhanced understanding of new business models and future trends

5) Promote international cooperation

G7

Under Canada's 2018 G7 Presidency, the G7 Ministers of Employment and Innovation convened in Montréal in March 2018, under the overarching theme of 'Preparing for jobs of the future'. In efforts to prepare for the jobs of the future, it was proposed that the G7 Employment Ministers implement an integrated strategy that:
- Positions G7 countries to respond to the opportunities and challenges of the future of work;
- Launches a digital tool to support effective collaboration among G7 countries;
- Promotes women's economic empowerment;
- Sustains the dialogue into the future; and
- Demonstrates leadership to prepare the next generation of workers.

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[5] http://www.oecd.org/g20/g20_menu_of_policy_options_for_the_future_of_work_fwg-executive_summary.pdf

Last June 2019, a G7 social tripartite declaration was adopted: https://www.ioe-emp.org/index.php?eID=dumpFile&t=f&f=135728&token=08d1a7b12c153d79a81eaf4e0847dcee1c3b3739. In reference to FOW, the G7 members and international social partners (IOE, ITUC, TUAC and BIAC) will:

- Work to achieve effective responses to shape the future of work we want, improve the functioning of labour markets, with a specific emphasis on tripartism and social dialogue;
- Promote cooperation and coherence with a view to further integration of international labour standards across policies in three key areas of action: international financing programs, trade, and a sustainable and inclusive future of work;
- Call for high-level, consistent and regular discussions between the ILO, the OECD and other relevant international organizations, with the aim to regularly assess and report on the progress made, through their cooperation at the multilateral level, in achieving economic and social outcomes that are sustainable and fair, conducive for job creation and economic growth, and fully harness the opportunities which the future of work offers.

International Labour Organization

The International Labour Office established a Global Commission on the Future of Work comprised of 28 members representing diverse disciplines and social economic sectors. It was co-chaired by Stefan Löfven, Prime Minister of Sweden, and Matamela Cyril Ramaphosa, President of the Republic of South Africa. The ILO Chairperson and Vice-Chairpersons of the Governing Body, as well as the ILO Director-General were nominated as ex-officio participants. Mr. Mthunzi Mdwaba, the Employers' Vice-Chairperson of the ILO Governing Body and IOE Vice President, was one of the ex-officio participants.

The Global Commission launched a report *Work for a brighter future*[6] in January 2019, and made several proposals:

Increasing investment in people's capabilities
- Universal entitlement to lifelong learning
- Support people through future of work transitions
- Transformative agenda for gender equality
- Guarantee universal coverage of social protection from birth to old age

Investing in the institutions of work
- Establish a Universal Labour Guarantee
- Expand time sovereignty
- Promote collective representation of workers and employers and social dialogue
- Harness and manage technology in support of decent work

Investing in decent and sustainable work
- Promote investments in key areas for decent and sustainable work
- Reshape business incentive structures to encourage long-term investments

Mr. Mdwaba did not sign off on this report, together with the other ex-officio participants, as they considered some of the recommendations pose sustainability challenges (such as the concept of the universal labour guarantee, time sovereignty of workers, regulations on the platform economy, to name a few). This means that the report and its recommendations were not a tripartite product of the International Labour Organization constituents (employers, workers and governments) but constitute only the views of the Global Commission on the Future of Work. To see the full Employers' position on this report please go to: https://www.ioe-emp.org/index.php?eID=dumpFile&t=f&f=135116&token=4eccee0278ddbedce38557f369748044664cf499

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[6] https://www.ilo.org/global/publications/books/WCMS_662410/lang--en/index.htm

Furthermore, the Centenary Labour Conference last June 2019 adopted a Declaration for the Future of Work[7] and a resolution[8]. The Declaration highlighted some pertinent points, inter alia:

- The need to **reinvigorate** the Organisation (Preamble);
- The unique recognition (the first one for a text of this nature) of the **role of sustainable enterprises** as generators of employment, and promoters of innovation and decent work (Preamble of the Declaration);
- Harnessing the fullest potential of technological progress and productivity growth as one of the areas where the ILO must direct its efforts (Section II, A (ii)); **The reference to productivity and productive employment is mentioned at least 11 times in the text;**
- Placing a **significant focus on skills**. ILO needs to become a global leader in providing concrete key policy guidance to address skills gaps (Section II, A (iii)), which is not the case now; This was an important request from the Employers Group;
- Most importantly **the need for the ILO to support the role of the private sector as a principal** source of economic growth and job creation by promoting **an enabling environment for entrepreneurship and sustainable enterprises**, in order to generate decent work, productive employment and improved living standards for all (Section II, A (ix)). This is also an unprecedented recognition for a text of this nature;
- Promoting sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all (Section III, C).

World Bank

The World Bank (WB) released its 2019 flagship report *The Changing Nature of Work[9].* The main messages are:

- The nature of work is changing.
- Firms can grow rapidly thanks to digital transformation, which blurs their boundaries and challenges traditional production patterns.
- The rise of the digital platform firm means that technological effects reach more people faster than ever before.
- Technology is changing the skills that employers seek. Workers need to be good at complex problem-solving, teamwork and adaptability.
- Technology is changing how people work and the terms on which they work. Even in advanced economies, short-term work, often found through online platforms, is posing similar challenges to those faced by the world's informal workers.

The report proposed three solutions for governments:
1. *Invest in human capital* especially in disadvantaged groups and early childhood education to develop the new skills that are increasingly in demand in the labor market, such as high-order cognitive and socio-behavioral skills.
2. *Enhance social protection* to ensure universal coverage and protection that does not fully depend on having formal wage employment.
3. *Increase revenue mobilization* by upgrading taxation systems, where needed, to provide fiscal space to finance human capital development and social protection.

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[7] https://www.ilo.org/wcmsp5/groups/public/---ed_norm/---relconf/documents/meetingdocument/wcms_711674.pdf
[8] https://www.ilo.org/ilc/ILCSessions/108/reports/texts-adopted/WCMS_711659/lang--en/index.htm
[9] https://www.worldbank.org/en/publication/wdr2019

Other note-worthy points:
- During the process of technology adoption some workers will be replaced by technology. Workers involved in routine tasks that are "codifiable" are the most vulnerable.
- In the United States, replacing a low-quality teacher in an elementary school classroom with an average-quality teacher raises the combined lifetime income of that classroom's students by US$250,000.

FIGURE 1.1 **Estimates of the percentage of jobs at risk from automation vary widely**

% of jobs at risk of automation (range of predictions)

Country	High	Low
United States	47	7
Japan	55	6
Lithuania	56	5
Cyprus	61	5
Ukraine	40	5
Bolivia	41	2
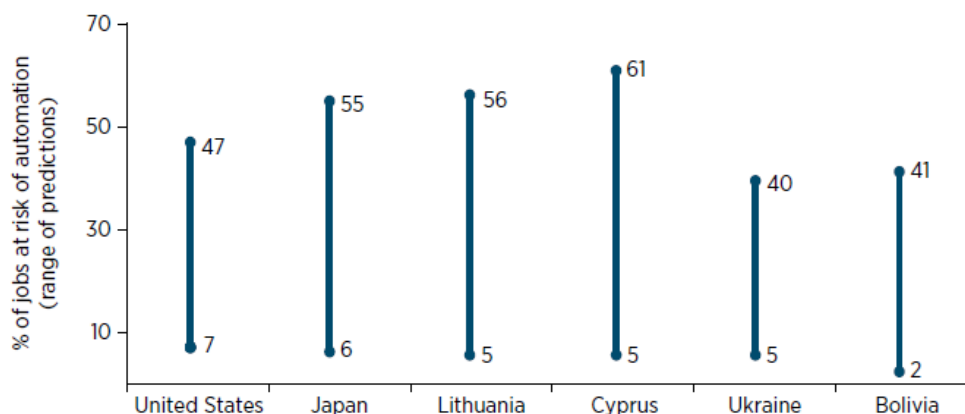
Sources: WDR 2019 team, based on World Bank (2016); Arntz, Gregory, and Zierahn (2016); David (2017); Hallward-Driemeier and Nayyar (2018).

Note: The figures represent the highest and lowest estimates of the percentage of jobs at risk of automation in economies for which more than one estimate has been produced by different studies. A job is at risk if its probability of being automated is greater than 0.7.

Organisation for Economic Co-operation and Development

The OECD's Employment Outlook[10] this year has FOW as its central theme. The key messages are:
- The future of work is now.
- Technology is reshaping how we work.
- Some tasks are being done by robots or offshored, and others are being created.
- Without the right policies in place, people are being left behind.
- We need to act now. The is a need for a new agenda for FOW that:
  - Addresses the skills deficit;
  - Takes a new approach to social protection and collective bargaining;
  - Provides investment targeted for those who need it most.

> Technological progress can generate more jobs than it destroys within a given industry.
> - OECD Employment Outlook 2019

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[10] https://www.oecd.org/employment/outlook/

Risk of job automation is real but varies greatly across countries

14%
32%

14% of jobs are at high risk of automation
32% of jobs could be radically transformed

Populations are ageing fast in OECD countries

53
28
20
1980   2015   2050

Number of 65+ year-olds per 100 people of working age in 1980, 2015 and 2050

Many workers do not have the right skills for the new jobs

6 out of 10 workers lack basic ICT skills
or have no computer experience
(Survey of Adult Skills in 29 OECD countries, 2012/15)

Adult training should better target the disadvantaged

80%   high skilled   full-time permanent   low automation
60%
40%   low skilled   self employed   high automation
20%
0%

Adults participation in training
by skill level, employment status and risk of automation

OECD negative findings:
- The OECD estimates that US$100–$240 billion is lost in revenue each year from base erosion and profit shifting by multinational companies.
- It argues that this amount is equivalent to 4–10% of global corporate income tax revenue.
- Another estimate suggests that multinationals shift close to 40% of their profits to tax havens, resulting in a loss of 12% of global corporate tax revenues.
- These losses are not equal across countries, however. Australia, Brazil, France, India, Japan, Mexico, and the United States, as well as much of Africa, are among the countries estimated to be most hurt by profit shifting.

US National Policies on the Future of Work

The US Department of Labor (USDOL) released a FOW paper series in 2016 in efforts to develop a comprehensive research agenda to analyze trends in domestic outsourcing in the U.S. – firms' use of contractors and independent contractors – and its effects on job quality and inequality. It reviewed definitions of outsourcing and limited existing data sources/empirical research. It also summarized theories that attempt to explain why firms contract out for certain functions and assess their predictions about likely impacts on job quality. Research investment will be a critical resource for policymakers and other stakeholders as they seek solutions to problems arising from the changing nature of work.

The National Skills Coalition stated on its website that the U.S. has virtually no national policy to work with industry to help them re-skill and retain current workers in their jobs. Faced with these potentially dramatic shifts in labor market demand, the U.S. needs a fundamental rethinking of our national policies around upskilling current workers and helping displaced workers transition to new opportunities.[11]

Nevertheless, the Government of the United States has committed to ensuring that the American workforce is prepared and equipped to fill vacancies in an increasingly dynamic labor market. The National Council for the American Worker was established about a year ago and is responsible for developing a national strategy for training and retraining students and workers to fill the more than 6 million jobs that are currently vacant. The Council convenes the executive branch, private employers, educational institutions, labor unions, other non-profit organizations, and State, territorial, tribal and local governments to collaborate on solutions that properly respond to the changing needs in the world of work. The Council is tasked with raising awareness of matters related to the importance of investments in skilling and science, technology, engineering and mathematics (STEM) education, job creation in emerging tech fields, trade and manufacturing opportunities and training programs. Recognizing companies for successful programs, increasing partnerships to provide training, education and apprenticeships, maintaining transparent, high quality job data and developing industry-recognized credentialing systems are additional mandates.

The American Workforce Policy Advisory Board was established to work in tandem with the Council by providing recommendations to effectively address the future of work. Government officials, NGO leaders, trade union representative, academics, and business leaders have been appointed to the Board to ensure a holistic approach to policy proposals. Over 200 companies and trade groups of all sizes have signed a Pledge to America's Workers, demonstrating their commitment to expanding programs that educate, train and reskill the workforce from high-school age to near-retirement. To date, over 8.9 million new opportunities have been pledged and through these pledges, American workers from all backgrounds will gain the knowledge needed to continue to contribute to a vibrant and changing labor market.

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[11] https://www.nationalskillscoalition.org/federal-policy/future-of-work

How is the biggest 'disruptor' of Future of Work affecting companies, and why should business leaders be concerned?

Technology constitutes the largest disruptor of all the megatrends, and necessitates a more in-depth analysis. Although cybersecurity has been a primary focus for business leaders, the impact of technology encompasses more than that one technology-related risk. Why should business leaders be concerned with the impact of technology? The answer is simple:

> Business survival will be determined by new technology and the efficiency of systems
> - Codeless Platforms inc.

The average lifespan of a company listed in the S&P 500 index of leading US companies has decreased by more than 50 years in the last century, from 67 years in the 1920s to just 15 years today[12]. Furthermore, according to Forbes, over a dozen major retailers filed for bankruptcy in 2018, including Sears, Diesel, Beauty Brands, Mattress Firm and many others[13]. Many are astounded to learn that 88% of the Fortune 500 firms that existed in 1955 are now gone. Companies such as Kodak, Blockbuster, Toys 'R' Us, Pan Am and Compaq were cited as companies which failed to innovate[14]. There are a variety of reasons for companies to exit the market but as the life expectancies of companies continue to shrink, business leaders must be more vigilant than ever in remaining innovative and future-proofing their businesses.

Organic growth has eluded many long-standing companies, and younger companies are outperforming these more established players.

The speed of disruption is accelerating …

Median age of S&P top 10, 2000	Median age of S&P top 10, 2018	Average S&P 500 tenure by 2027	Average age of a unicorn start-up	5-year valuation growth in post-IPO unicorns[1]
85 years	**33** years	**12** years	**6** years	**8.7** ×

… causing a steady decrease in the tenure of S&P 500-listed companies

Average company tenure on S&P 500, years measured as rolling 7-year average

Source: **https://www.mckinsey.com/industries/electric-power-and-natural-gas/our-insights/traditional-company-new-businesses-the-pairing-that-can-ensure-an-incumbents-survival**

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[12] https://www.bbc.com/news/business-16611040
[13] https://www.forbes.com/sites/chriswestfall/2019/04/09/walmart-announces-new-workforce-addition-robots-robotics/#4920a87d16ff
[14] https://www.collectivecampus.io/blog/10-companies-that-were-too-slow-to-respond-to-change

Innovation is often associated with start-ups. As a result, it is unsurprising that start-ups are leveraging technology and attracting capital in their efforts to disrupt through innovation. Some start-ups can quickly grow to become the so-called 'unicorns' and can seriously compete with multinationals.

A unicorn is a startup company founded after 2003 which has a current valuation of more than $1 billion

Some examples of just how exponentially fast technology is accelerating:

5G is 20X faster than 4G and has the ability to connect millions of devices (including smart phones) in real-time - videos will never buffer and calls will never drop out. Downloading a 2 hour movie usually takes 26 hours on 3G and 6 hours on 4G, but will only take 3.6 seconds on 5G.

3D Printing has enabled and facilitated the printing of settlements, space-stations, furniture, utensils, transportation, clothes, games, food, body-parts, and a long list of other assets through the transfer of a document containing such files. This list of printable items also expands to include glass, soybean base, wood filler, icing sugar, Nutella, metal, rubber, wood and even concrete to name a few.

Medical innovations include vaccines that were not there before, genomic directed clinical trials, gene editing using CRISPR, cell-free fetal DNA testing, cancer screening through protein biomarker analysis, frictionless remote monitoring and more.

French entreprenuer Franky Zapata invented a board that can take an individual to fly up to an altitude of nearly 500 feet - with the potential to go much higher - and a speed of 140 kms per hour.

McDonald's has been leading as a pioneer in productivity among employees, concepts and machines. The self-serve kiosks revolutionalised the fast food landscape dramatically.

Uber is taking the future of urban mobility seriously. There are plans to roll out Uber Air - an aerial ridesharing service. Melbourne joins Dallas and Los Angeles in becoming the first cities to offer Uber Air flights in 2020 (demo flights) and 2023 (commercial operations).

High speed travel technology has already taken the first step towards reality with the first test involving the Hyperloop One prototype propulsion system. Elon Musk, founder of the Hyperloop, intends to make this a reality before 2020, and has recently closed an $80 million funding round that includes investment from several other companies. When this emerging technology gets developed and implemented on a mass scale, it could solve many complex long distance issues. High-speed travel could also relieve over-crowded cities by decreasing carbon pollution and the need for urbanisation.

According to experts, renewable energy could minimise climate change and pollution on a global scale. Renewable energy includes technological inventions such as wind turbines, photovoltaic cells, concentrated solar power, geothermal energy, ocean wave power among others. Renewable energy is another great example of disruptive technology which could help accelerate sustainable development.

Africa will not just be a mobile-first continent - it's mobile only. By 2020, more people in Africa will have mobile phones than access to electricity. At least 93% have access to a phone cell service.

Drones are now commercially available and would make possible: photography, security surveillance, search and rescue, agricultural surveys, underwater inspections, mapping, building inspections, etc.

Advanced virtual reality is available commercially and may become even more advanced by being developed to help people enhance their memories or even mental wellbeing. Companies such as Void and Virtalis are already helping people experience new dimensions and things without limits.

Artificial intelligence has helped businesses achieve a competitive advantage in work processes, such as[15]:

- smart email categorization
- voice-to-text features
- smart personal assistants (Siri, Cortana, Google Now)
- automated responders and online customer support, process automation, sales and business forecasting
- spam filters
- smart devices that adjust according to behavior
- automated insights, especially for data-driven industries (e.g. financial services or e-commerce), smart searches and relevance features
- personalization as a service
- product recommendations and purchase predictions
- fraud detection and prevention for online transactions
- dynamic price optimization
- recommendations and content curation
- personalization of news feeds
- pattern and image recognition
- language recognition
- digest unstructured data from customers and sales prospects
- ad targeting and optimized, real-time bidding
- customer segmentation
- social semantics and sentiment analysis
- automated web design
- predictive customer service

> *"Automation actually helps humans to be more human –*
> *mundane jobs are automated, it reduces burnout and*
> *humans can focus on creativity and focus on creating"*
> – speaker at IBM's AI Virtual Summit 'AI and the Future of Work'

Furthermore, the United States is ranked no. 3 in the Global Innovation Index[16], after Switzerland and Sweden. This inevitably means that the number of competitive companies using innovations and the latest technologies is quite high, in all the domestic industrial sectors. Embracing innovation and technologies then is vital to business survival.

Global Innovation Index 2019 rankings

Country/Economy	Score (0–100)	Rank	Income	Rank	Region	Rank	Median 33.86
Switzerland	67.24	1	HI	1	EUR	1	
Sweden	63.65	2	HI	2	EUR	2	
United States of America	61.73	3	HI	3	NAC	1	
Netherlands	61.44	4	HI	4	EUR	3	
United Kingdom	61.30	5	HI	5	EUR	4	
Finland	59.83	6	HI	6	EUR	5	
Denmark	58.44	7	HI	7	EUR	6	
Singapore	58.37	8	HI	8	SEAO	1	
Germany	58.19	9	HI	9	EUR	7	
Israel	57.43	10	HI	10	NAWA	1	
Republic of Korea	56.55	11	HI	11	SEAO	2	
Ireland	56.10	12	HI	12	EUR	8	
Hong Kong, China	55.54	13	HI	13	SEAO	3	
China	54.82	14	UM	1	SEAO	4	
Japan	54.68	15	HI	14	SEAO	5	

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[15] https://www.nibusinessinfo.co.uk/content/examples-artificial-intelligence-use-business
[16] Co-published by Cornell University, INSEAD, and the World Intellectual Property Organization

USCIB/IOE survey on Future of Work

In August 2019, the USCIB and the IOE conducted a small survey on companies who are partners and members of the IOE's Global Industrial Relations Network (GIRN) and Global Occupational Safety and Health (GOSH) Network, in efforts to understand better the FOW landscape within the business community.

The main findings are:

- 86.96% of companies surveyed had had conversations on the FOW internally, 8.7% have not had conversations and do not plan to, and 4.35% have not had conversations but plan to.
- 63.64% of companies are already involved in FOW initiatives

- These FOW initiatives in the surveyed companies come in the form of:

1	More attractive working schemes, e.g. flexible work from any location up to 3 days p.w.; Sabbatical policy in planning; Digital Learning etc.
2	Extensive training programs and initiatives
3	Research studies, Conferences, Seminars, and Debates.
4	exchange with various external stakeholders and groups
5	Our CEO was on the ILO Global Commission on the Future of Work; we have (co-)organized FU.SE, a conference about the future of work, and we have published a number of publications.
6	We are engaged in conversations about the future of work with crucial stakeholders and we are taking initiatives to actively prepare our workforce for working is an environemt with new technologies (automation, digitalisation, etc.).
7	Absolutely, both when it comes to organising work, new ways of working, digitalisation etc.
8	We don't tend to call it "Future of Work" but we do call it things like talent acquisition or workforce development. It also tends to be handled by Human Resources who don't tend to engage with the ILO.
9	Currently considering member reskilling for future business
10	Examples: Training Commitment with U.S. Government, holistic "Great Workplace" plan for retail and supply chain workforce, 200+ Learning Academies operating for retail upskilling,
11	As a tecnologic COmpany we are very involved on that. We promove flexibility, onlife learning and new ways of working
12	Global HR digital deep dives

The internal business units leading the FOW initiatives are:
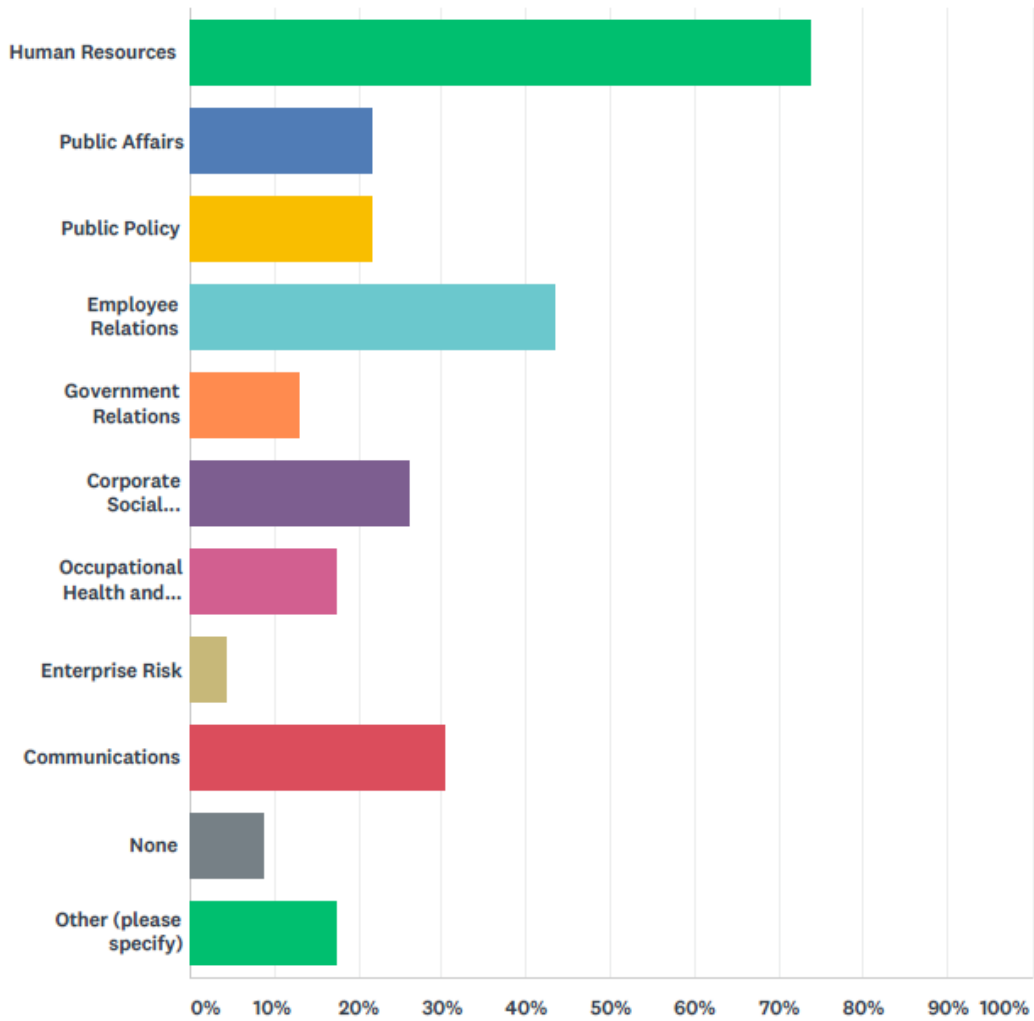
(Others include: Chief digital officer's department, operations department, technical department, retail, supply chain and eCommerce operations, manufacturing, technology, sales and marketing department).

**Companies engage with the following external stakeholders:**
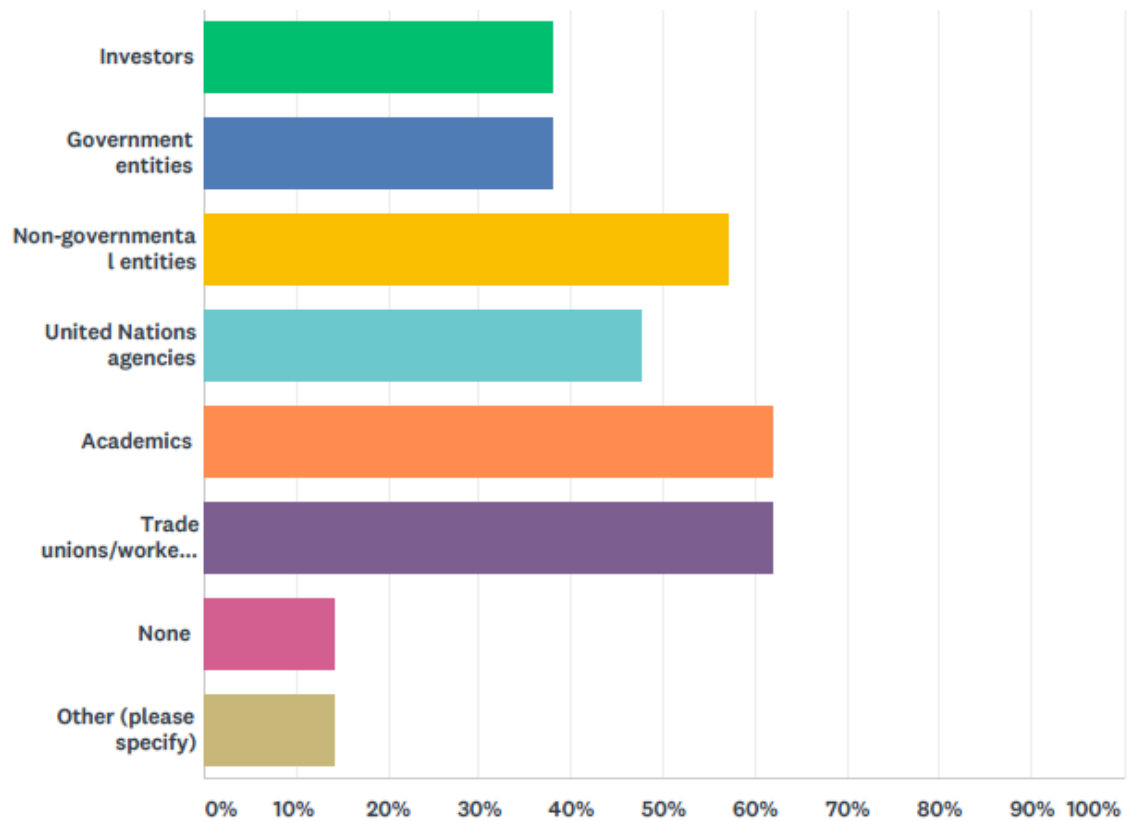
(Others include: Clients, consultants. A specific comment: "This is largely an internally-driven issue, it's about talent acquisition, retention, and upskilling. There is some interest in academia and trying to align future needs with current schooling, but this is still nascent and spotty (not a strategic approach)".

1	Trade Unions pull the topic, especially in regards to physical work at pos and aeging workforce
2	NGOs related to the industry, International unions federations, Communities linked to the CSR strategy
3	CIP has advisory committees and working groups dealing with the multiple dimensions of the future of work (like digitalization, robots, Industry 4.0, etc.). We also have external consultants and a partnership with a University.
4	Our Future of Work footprint is - among other things - a key differentiator towards our clients. Some of our stakeholders include the ILO, OECD, G20, EU Institutions, as well as employers federations including the IOE.
5	Impact of our business on the future of work is a sensitive topic. In order to keep our licence to operate we must explain our plans and engage with stakeholders we need support from.
6	As mentioned above, this is largely an internal issue of how our specific company attracts and retains talent for our specific needs. The ILO is definitely not perceived by our human resources professionals as being a key stakeholder who can help us address this issue in the markets that are important to us.
7	We work with external stakeholders but we aren't at the point yet where we can engage on fture of work matters as part of poicy making and strategy. It is more of information gathering from external stakeholders at this point
8	CEOE, layers, other entities, universities, erc...
9	External consultancy support, e.g. Gallup

Companies identified the FOW trends which affect business the most:

22
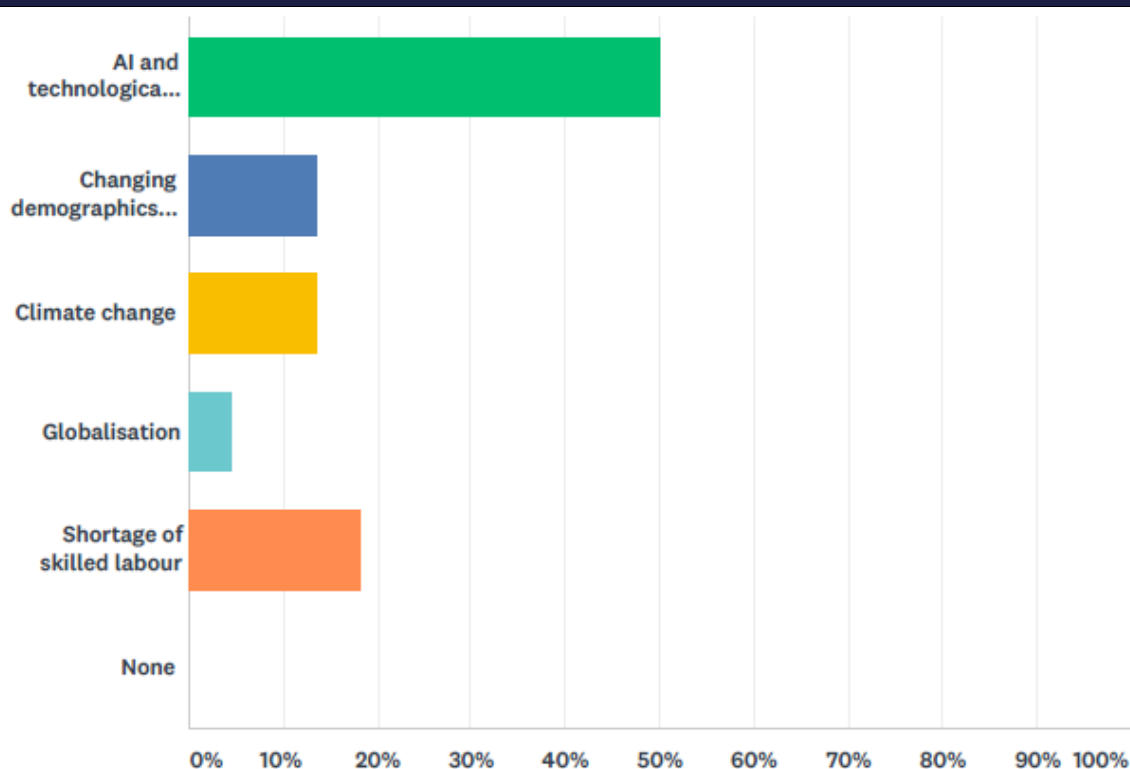
Companies provided additional information as to how the five FOW megatrends (AI and technological advances, changing demographics, globalization, climate change and shortage of skilled labour) affect their business decisions and/or affect their work:

#	RESPONSES
1	Our business model is wholesale. Therefore we need people on the sales areas.
2	Will threat job security of our current employee while company having insufficient workforce to cope with new business.
3	Renewing talent pipelines to sustain management and skilled employees turn-over, in an ageing picture
4	The 5 global trends are affecting companies' investments strategies and competitiveness, creating difficulties to working time arrangements and reducing company's workforce, mainly due to ageing of workers and consequent difficulties in adapting to new forms of work. Moreover, those trends will also affect Social Security systems and schemes.
5	new jobs will come, existing jobs will cease to exist
6	Our ability to serve our clients depends on the availability of talent with the right skills. Considering skills shortages, we are increasingly investing in upskilling programmes. Technological change also impacts the way we provide our services, e.g. via online platforms instead of brick-and-mortar employment agencies.
7	Environment, energy, climate change on one hand and new technologies on the other hand are topics that will in the next 30 years drive fundamental transformation of our business and our industry. This will change our assets, our use of energy, our technologies and our way of working.
8	Our network, technologies and solutions change how we interact and work. It changes societies. This is our business and this is our passion. Our employees are part of all of this by working together with colleagues and partners to bring on new and exciting challenges. With our technology and tools, we can make a real difference to the world, as well as to our own personal development.
9	We need more people with technological skills but we also still need front-line, guest-facing customer service professionals. We need a wide mix of talent, not just people with university degrees.
10	We will needto innovate to create uture customer demand through our products and services. This means that jobs that do not exist today will be important for our future survival
11	Labor shortage in US (nearing full employment) affects U.S. business capacity; climate change and accompanying erratic/extreme weather patterns directly impact retail volume and operations, local economies; AI/tech advances have largely improved how we buy, sell, and train our workforce
12	Most of them
13	- strategies are reflecting these trends
14	Connecting with consumers, potential and current employees in a digital world
15	Steel production and automotive will heavily be influenced in Carbondioxid reduction or the future of car mobility
18	AI is used in our products and more development will be put in it

Companies provided additional information on how to measure the initiatives in terms of progress:

1	Not measuring yet
2	Initiatives yet to be established.
3	Succession management, retention of young qualifies employees
4	Through the feedback of CIP's affiliated members and public opinion.
5	Our quarterly results are an important yardstick. Our business cannot be successful without adapting to the Future of Work!
6	We have publically committed to achieve concrete results within specific deadlines. We have no option but to deliver on these committments and are planning accordingly.
7	TBD but general human resource metrics like length of time for open positions or length of tenure in jobs are common metrics
8	No clear measurement yet. We set direction and determine whether we have achieved the direction or not.
9	Impact on key business performance metrics, workforce satisfaction feedback, customer feedback, key external stakeholder feedback, industry comparison metrics
10	We ask for the feedback of the Business and work with KPIs
11	- internal project progress measurements
12	functional strategic plans
13	I do not know how the business measure their initiatives
16	Customer satisfaction

> **Where applicable, some companies shared good practices to tackle the challenges which come with FOW:**

1	No
2	No
3	we are in a development stage
4	The most common measures being appointed as good practices are vocational training and lifelong learning. CIP is also involved in discussions at social concertation on the matter of work-life balance.
5	- We are working on an overview of our Youth Employability programmes. Happy to share that when it is finalized. - see https://gig-economy.adeccogroup.com/ - see https://future-skilling.adeccogroup.com/ - See WEC's www.socialinnovationstories.org
6	Don't wait until things happen to you. Lead the change, be transparent and communicate about it, involve and engage crucial stakeholders in order to build trust and support and ensure the organisation and the people are prepared for change and can be part of it.
7	These are very local issues. Specific sites need specific skills and have a specific talent pool. Mobility is not always an option (i.e., talented people may not want to move to our sites).
8	Not yet.
9	Establish a cross-functional leadership group with delegation and decision-making authority to ensure lateral communication and coordination of FOW efforts and initiatives. Prioritize internal communications as highly as external story-telling.
10	Smart working, flexibility ways of working, working agile, right of digital desconexión, etc...
11	- Intelligent Digital Workplace - Competence Impact Assessment - Manufacturing competence shift and learning agility - Autonomous working-groups
14	no

Brief commentary on the survey findings

Several commonalities and evolving patterns can be observed from the results:

- ✓ Most companies surveyed are familiar with FOW discussions and understand its impact on business and work streams.
- ✓ Those who are aware of the challenges have proceeded to make preparations and/or make changes within the company.
- ✓ None of the companies have dismissed FOW as a passing trend or a buzzword.
- ✓ Companies appear to be open to the idea of flexible working arrangements and new ways of working, using technology to facilitate this transition.
- ✓ Most companies understand the impact these trends have on the skilling of the workforce and how they see talent acquisition processes evolve.
- ✓ Companies agree on the importance of networking and working with external stakeholders that can help them on their journey.
- ✓ Some have gone the extra mile without waiting for governments response – by already rolling out extensive training programs, learning academies for retail upskilling, hosting digital deep dives, planning sabbatical policies, etc.
- ✓ The HR department is seen as the most engaged internal business unit when it comes to addressing FOW issues, followed by the employee relations units. The same units are involved in collaboration efforts.
- ✓ Interestingly, in reference to external stakeholders, companies engage mostly with academics and trade unions (governments and investors the least).

- ✓ Companies confirm that AI and technological advances affect their businesses the most – this is consistent to the findings of the ILO/IOE survey (56% of respondents identified technological innovation as the global trend having the greatest overall impact on business).
- ✓ Companies identify the shortage of skilled labour as the second most impactful trend on their businesses.
- ✓ The trends have changed the way businesses strategize and make decisions on human resources (reskilling, managing employee turnover, harnessing talent of an ageing workforce) and the way of using technology to serve clients better.
- ✓ Companies also are mindful of the importance of professional front-line, guest-facing customer service, more than before.
- ✓ They are also conscious on the need to innovate, to create future customer demand through products and services, including by creating new jobs that do not exist today.
- ✓ It remains to be seen as to how companies can start to effectively measure the success of these FOW initiatives.
- ✓ Most companies agree that prioritizing effective communication with stakeholders can help build trust and ensure people in the organization are ready to support change and be part of this change.

> "Don't wait until things happen to you.
> Lead the change, be transparent and communicate about it."
> – anonymous survey participant

10 recommendations to harness Future of Work opportunities

> The biggest roadblock to digital transformation is NOT technology - it's IT culture.
> - Appian, cloud computing company

What can companies do now? The following 10 recommendations are inspired by leading studies and discussions on FOW:

1. Creating a conducive, open and attractive IT culture

> 76% of businesses recognize that technological innovation gives them access to new markets
> - ILO/IOE survey (2019)

One change featured prominently in various technology-related discussions. It had little to do with upgrading to new techniques, sophisticated tools and technologies, or measuring and monetizing technology's impact. Rather, the dominant through line was the need to shift the mindset to create an IT culture that promotes more innovative, responsive, and meaningful consumer and employee connections.

Any discussion of the future of retail has to include Walmart. As of 2017, 90% of the US population lived within 10 miles of a Walmart store; with 11,766 locations worldwide and $514 billion in annual revenues, the discount store also has the distinction of being the largest private employer in the United States, with 1.5 million workers (2.2 million worldwide).

Soon, 1,500 autonomous floor cleaners, 1,200 truck unloaders, 900 in-store pick-up towers, and 300 shelf scanners will be deployed across hundreds Walmart stores around the country as the company aims to automate mundane, repetitive tasks. These new technologies include the Bossa Nova scanner, a machine the company introduced in 2016 to scan shelves and identify low-stock areas and mispriced or mislabeled items. Using machine learning, the Bossa Nova scanner scours dozens of aisles in less than an hour multiple times per day, a process that used to take numerous employees days to complete. Walmart's claims process was another area where the company leveraged new technologies to improve inelegant systems. In the past, associates and managers used email, paper and different applications to determine what to do with returned and damaged items — a time-consuming and sometimes wasteful process. Using IOT – including having sensors in freezers to signal when food expires and allowing employees to connect with their personal devices throughout the store helps. The application of blockchain to food safety enabled associates to identify the original source of the food supplier.

Walmart CEO Doug McMillon this year stated, "We've invested more than $4 billion over the past four years in higher wages, training and education. We've built 200 in-house training academies that teach retail and management fundamentals and focus on soft skills and leadership skills. We'll have trained nearly 500,000 associates by the end of the year. We're also offering a college benefit, where an associate can earn a college degree for the equivalent of $1 a day. We want every associate to be better off for having worked at Walmart. We've increased our starting wages by more than 50% in the last three years, and we've invested in parental leave and education benefits

at the same time"[17]. Management also introduced virtual reality goggles to train employees as well as an app, Spark City, that uses a game-type simulation to teach workers about store processes and customer service.

These are just some of the ways Walmart creates a conducive, open and attractive IT culture.

2. Determine how to balance human with machine, physical with digital and on-site with off-site opportunities.

> Offices of the future will be meeting places rather than workplaces.

This is about learning how to negotiate technological changes and to maximize strategy in order to better your business. When you have a fuller understanding of what this means for your business, you can achieve greater agility, higher productivity and a more engaged workforce. A misnomer about the future of work is that it is "just an HR thing." That is false. The future of work affects every department, and HR alone cannot deliver on it. Digital technologies can be constantly applied to save your employees time, enable them to make more strategic decisions and ensure your company maintains or grows market share constantly. Furthermore, with better data and analytics across your organization, HR should be able to predict when new employees or contractors are needed so that you have the right people at the right time. You absolutely should not wait for HR to advance your workplace. Every departmental leader should be asking for, rather demanding, a future of work budget today in order to survive -- and if you do it quick enough, you can outpace your competitors.[18]

Most successful companies have adopted increasingly aggressive strategies for finding critical high-skilled talent. Now they must expand that approach to include a wider range of employees. AT&T recognized that need in 2013, while developing its Workforce 2020 strategy, which focused on how the company would make the transition from a hardware-centric to a software-centric network.

The company had undergone a major transformation once before when it launched plans to use mechanical switchboards rather than human operators. But it carried that transformation out over the course of five decades! The Workforce 2020 transformation was much more complex and had to happen on a much faster timeline.

To get started, AT&T undertook a systematic audit of its quarter of a million employees to catalog their current skills and compare those with the skills it expected to need during and after its revamp. Ultimately, the company identified 100,000 employees whose jobs were likely to disappear, and several areas in which it would face skills and competency shortages. Armed with those insights, the company launched an ambitious, multiyear $1 billion initiative to develop an internal talent pipeline instead of simply playing the "spot market" for talent. In short, to meet its evolving needs, AT&T decided to make retraining available to its existing workforce. Since then, its employees have taken nearly 3 million online courses designed to help them acquire skills for new jobs in fields such as application development and cloud computing.

Already, this effort has yielded some unexpected benefits. The company now hires far fewer contractors to meet its needs for technical skills[19].

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[17] https://www.linkedin.com/pulse/preparing-future-work-doug-mcmillon/

[18] https://www.forbes.com/sites/forbescoachescouncil/2018/10/03/why-every-department-should-care-about-the-future-of-work-today/#5f63fb6547f4

[19] https://hbr.org/2019/05/your-workforce-is-more-adaptable-than-you-think

3. Treat workers as your customers

Engage your employees in the transition, rather than herding them through it. To succeed, employees can be offered pathways to professional and personal improvement—and they should be engaged in the process of change, rather than merely informing them that change is coming.

> Efforts to incorporate technology into the workplace often cause insecurity and anxiety rather than improving the experience, with communications technologies, in particular, creating an "always on" environment that can contribute to burnout, loneliness, and feelings of isolation. Firms should understand the full employee, just as marketers have learned to understand and address the full individual.
>
> While it can be argued anxiety, burnout, and loneliness are personal considerations, these generally have meaningful *professional* ramifications for business and human-resources leaders. They can lead to undesirable attrition, decreased levels of engagement, and lower productivity.
>
> By recognizing workers—like consumers—do not all have the same needs and using the power of predictive analytics, enterprises can understand employees individually to diagnose and identify intervention situations. One of the most critical factors when trying to combat anxiety is communicating authentically, sincerely, and with empathy. There is a positive message here: that despite the increasing incorporation of machines into the workforce for much of the repetitive or mundane aspects of work, there's a unique opportunity for humans to redefine their roles in the workplace around aspects that are uniquely human, such as imagination, creativity, curiosity, and emotional and social intelligence[20].

4. Small steps at a time are better than none at all

Business leaders may find FOW daunting and prefer to take conservative steps before jumping into perceived high-risk investment decisions. While researching on the trends and their impact, there are already small steps which can be taken internally. Given the speed of change, even short periods of inaction can cause a company to lose ground to a more dexterous competitor or a more nimble start-up[21].

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[20] https://www2.deloitte.com/insights/us/en/topics/talent/using-technology-for-employee-engagement.html
[21] https://www.hbs.edu/managing-the-future-of-work/Documents/Future%20Positive%20Report%205.20.pdf

Here are some good examples on how to start:

Earlier this year, the Inter-American Development Bank (IDB) launched a cartoon competition on FOW. Faced with an environment in which technology will transform both the way we work and the occupations we know today, this contest invited participants to use their creativity to show, through cartoons and illustrations, how they imagine technology will shape the future of work – and how robots can be allies of humans in the workplace.

Winners: Cartoon and Illustrators contest

WINNER CHOSEN BY THE JURY:
"La historia del robo"- Manuel González, Paraguay

WINNER CHOSEN BY THE PUBLIC:
"Fábrica de robots"-Luis Ganchala, Ecuador

Source: https://convocatorias.iadb.org/en/cartoons-2019

These kinds of informal activities among workers in the company encourage dialogue and promote fast learning of important issues.

With the understanding that FOW is not just an 'HR Issue', below are some of measures to unlock the opportunities created by the megatrends:
- Use data analytics, to help track flexible careers, a more fluid workforce, global mobility and an ever-increasing pace of business needs.
- Create a compelling and meaningful company culture to differentiate yourself as an employer and appeal to younger talent.
- Accompany digitization with programs to change employee attitudes and not just technology, and allow plenty of time to do so. Mindsets can take years to change and not just months.
- Get ready for lifestyle incentives and measuring performance based on qualitative as well as quantitative criteria.
- Get ready for change internally in your own HR organization, become centers of excellence and rethink how you allocate your own resources, for instance do you have enough dedicated staff assigned to digitization?
- Develop skills strategies and a culture of learning to help companies stay competitive and support the employability of workers.
- Develop strategies to tap into hidden talent pools including veterans and marginalized groups[22].

[22] https://www.pwc.ch/en/insights/hr/future-of-work.html

Technology can be used to manage inventory effectively.

A recent Gartner survey says that while 1.8 million jobs will be lost to software automation, 2.3 million will be created. Based on feedback from 100 retail executives, all from companies with more than $500 million in revenue, 99% reported some kind of inventory problem. Additionally, the survey revealed:
- 87% of respondents said inaccurate inventories are to blame for more lost revenue than stealing.
- 92% said their stores spend more time identifying inventory issues than they do implementing solutions.
- 81% said they feel their stores are only keeping pace or actually falling behind technologically, despite the availability of new technologies.

And perhaps most compelling:
- 76% said the introduction of robots in stores would improve employee productivity[23].

Companies need to establish dedicated organizational units to entrench AI. This is an important business tool that cannot be left using a bottom-up approach. Companies are devoting considerable financial resources to AI, and necessary skills and experience are too rare to assume that they will be scattered around the organization with little coordination or collaboration. Just as e-commerce led to Chief Digital Officers and groups to support online presence and commerce, AI will engender new competence centers or centers of excellence, and new roles within them. Deutsche Bank, J.P. Morgan Chase, Pfizer, Procter & Gamble, Anthem, and Farmers Insurance are among the non-tech firms that have created centralized AI oversight groups[24].

5. Research and develop new ways to attract a diverse, multi-generational workforce

> *"We need more people with technological skills but we also need front-line, guest facing customer service professionals. We need a wide mix of talent, not just people with university degrees"*
> – anonymous survey participant

It's a longstanding challenge for business leaders: how can you make workforce decisions for the future when there are so many variables? For many, one answer is to pay close attention to studies and trends that indicate where we might be going, so they can make the most informed decisions. In today's complex business environment, it's not enough to focus only on your own staff. Contractors and freelancers who supplement your workforce need to be a key factor as well[25]. 50.9% of the U.S. population will be freelancing in 2027[26].

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[23] https://www.forbes.com/sites/chriswestfall/2019/04/09/walmart-announces-new-workforce-addition-robots-robotics/#4920a87d16ff
[24] https://www.pwc.ch/en/insights/hr/future-of-work.html
[25] https://qz.com/work/1324292/gig-economy-data-why-the-us-department-of-labor-numbers-are-misleading/
[26] https://www.forbes.com/sites/forbescoachescouncil/2018/10/03/why-every-department-should-care-about-the-future-of-work-today/#5f63fb6547f4

Do you change your people, or change the way your people work?
Not only are the credentials on a resume practically useless in predicting how a job candidate will perform in a new environment, resumes are ingrained with bias. Job applicants with names of Indian, Pakistani, or Chinese origin are 28% less likely to get an interview than applicants with traditionally Anglo names.[27]

Do we want AI to replicate these unconsciously biased conclusions?
We can automate processes designed for diversity. AI can be used to screen job descriptions for phrasing that isn't accessible to all applicants, or to automate assessments that pinpoint indicators of future success. The fear of the future of work is that there will be a talent shortage, but removing these barriers opens up your candidate pool to an influx of diverse and qualified talent.

Companies have to gain clarity about their current skills base and the skills they will require in the future. They will need to expand their definition of "talent" beyond highly skilled workers with high educational attainment to encompass workers with the skills to do jobs that are chronically hard to fill. They will need to be more diligent in forecasting which middle-skills jobs will be integral to their future competitiveness and where they can source candidates with the right skills mix for those positions. Taking such measures will allow companies to develop plans for adapting to new technologies that change tasks, lead to new business models, or require enhanced skills.

Most workers felt that technology would have a positive impact on their future. Consider what happens at Expeditors, a Fortune 500 company that provides global logistics and freight-forwarding services in more than 100 countries. In vetting job candidates, Expeditors has long relied on a "hire for attitude, train for skill" approach.

Educational degrees are appreciated but not seen as critical for success in most roles. Instead, for all positions, from the lowest level right up to the C-suite, the company focuses on temperament and cultural fit.

Once on staff, employees join an intensive program in which every member of the organization, no matter how junior or senior, undertakes 52 hours of incremental learning a year. This practice supports the company's promote-from-within culture.

Expeditors' efforts seem to be working: Turnover is low (which means substantial savings in hiring, training, and onboarding costs); retention is high (a third of the company's 17,000 employees have worked at the company for 10 years or more); most senior leaders in the company have risen through the ranks; and several current vice presidents and senior vice presidents, along with the current and former CEOs, got their jobs despite having no college degree[28].

[27] https://www.weforum.org/agenda/2017/05/job-applications-resume-cv-name-descrimination/
[28] https://bigmond.com/2019/04/25/your-workforce-is-more-adaptable-than-you-think/

6. Cultivating loyal and engaged employees

Millennials in particular reveal that they expect much more from their employers. Millennial employees regard jobs as opportunities for growth, maturation, and development. They want to be part of a management culture that values the individual and places an emphasis on acquiring and improving skill (not just an informal and fun place to work). They want managers who care for them as individuals, not just as another line item on an accounting statement. Training opportunities such as equipping employees with financial skills – including how to budget, save, and invest – will put their minds at ease and empower them to focus more on work-related tasks. Providing positive reinforcement and feedback are important to millennial employees. By taking more time to let your employees know when they're doing well, you can arm them with the confidence they need to continue growing[29].

Embedding learning across the organization to help employees prepare better for the future can be done through various means. While in-house training is a time-honored concept, it needs to expand beyond formal classroom training to on-the-job learning, project-based staffing and learning, and incentives to encourage workers to learn on their personal time. Companies must realize that it is in their self-interest to establish systems and platforms that cultivate the skills of their incumbent employees through continuous learning. Employers and employees will need to enter into a learning contract that reflects a shared commitment to continuous learning and reskilling. Such a reciprocal arrangement will encourage employers to make the investment in training or tuition support needed to cultivate the latest skills for their organization—and it will help employees acquire the emerging skills and competencies they need for growth and prosperity.

In today's world, managers know that if they don't swiftly identify and respond to shifts, their companies will be left behind. So how can firms best prepare?

The office-furniture manufacturer Steelcase has come up with some intriguing ideas. One is its Strategic Workforce Architecture and Transformation (SWAT) team, which tracks emerging trends and conducts real-time experiments in how to respond to them. The team has launched an internal platform called Loop, for example, **where employees can volunteer to work on projects outside their own functions.** This benefits both the company and its employees: As new needs arise, the company can quickly locate workers within its ranks who have the motivation and skills to meet them, and workers can gain experience and develop new capabilities in ways that their current jobs simply don't allow. Employees at Steelcase have embraced Loop. Jill Dark, the director of the SWAT team says, "If you give people the opportunity to learn something new or to show their craft, they will give you their best work. The magic is in providing the opportunity."[30]

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[29] https://www.digitalistmag.com/future-of-work/2019/01/17/future-of-work-employers-who-genuinely-care-06195672

[30] https://hbr.org/2019/05/your-workforce-is-more-adaptable-than-you-think

7. Understand that the workforce is more agile than employers think

The Harvard Business School 2018 study on 11 countries—Brazil, China, France, Germany, India, Indonesia, Japan, Spain, Sweden, the United Kingdom, and the United States—gathered responses from 11,000 low income and middle skilled workers and 6,500 business leaders. The study found that the assumption that workers fear that technology will make their jobs obsolete was incorrect. A majority of the workers felt that advances such as automation and artificial intelligence would have a positive impact on their future. What concerned them most were the possibility of *other workers*—temporary, freelance, outsourced—of taking their jobs. Workers had low expectations of their governments playing a role in protecting them from technology. Instead, workers demonstrated a high sense of pragmatism, recognizing that their best defense against technological encroachment on their work lay in more training at work and more education. Workers recognized that they needed to prepare themselves to meet the challenges posed by the changing nature of work. Worldwide, three out of four workers perceived the need to prepare for the future of work; two out of three expressed confidence in their ability to prepare for the change. Workers were more than twice (46%) as likely to hold themselves responsible for preparing for the future, rather than believing the responsibility lay with national governments (20%) or their employers (19%)[31].

> Another interesting finding was discovered by the Pew Research Center. It highlighted that people in the United States are significantly more pessimistic about the labour market in general than about their own jobs. While 65% of respondents reported that 50 years from today automation will have taken over "much" of the work currently done by humans, 80% of them thought their own job would still exist in that time frame (Pew Research Center, 2016).

8. Don't just set up training programs—create a learning culture.

If companies today engage in training, they tend to do it at specific times (when onboarding new hires, for example), to prepare workers for particular jobs (like selling and servicing certain products), or when adopting new technologies. That worked well in an era when the pace of technological change was relatively slow. But advances are happening so quickly and with such complexity today that companies need to shift to a continuous-learning model—one that repeatedly enhances employees' skills and makes formal training broadly available. Firms also need to expand their portfolio of tactics beyond online and off-line courses to include learning on the job through project staffing and team rotations. Such an approach can help companies rethink traditional entry-level barriers (among them, educational credentials), think about the benefit of apprenticeships and draw from a wider talent pool.

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[31] https://hbr.org/2019/05/your-workforce-is-more-adaptable-than-you-think

As a business-driven and multisector alliance of private sector companies and international organizations, the Global Apprenticeship Network (GAN) is fusing education and employment through work-based learning to continuously future proof skills and competencies and ensure that all people can fulfil their potential and enjoy prosperous and fulfilling careers. To date, GAN has established 16 networks in Africa, Asia, Australia, Latin America and Europe. While GAN's Global Network is a strategic platform, GAN's local Networks promote on-the-ground work-based learning programs, including apprenticeships. Their fundamental role is to provide a foundation for GAN concepts that are adapted to the unique national context. More recently, through its "SkillingNow" initiative, GAN is amplifying its messaging on skilling and highlighting how this work contributes to the demands of the Future of Work in achieving the SDGs.

In Argentina, GAN is preparing staff to train and mentor apprentices in the workplace: in August 2019, the Argentine Industrial Union hosted the Train the Trainer Program, a three-day workshop organized by GAN Argentina and the Argentine-German Chamber of Industry and Commerce, during which more than twenty teachers, entrepreneurs, coordinators and tutors were trained to train young professionals within companies using the German vocational training model, i.e. the dual system. This training model enables young professionals to rapidly integrate the labor market. The model has a high success rate; in Argentina alone, there are more than 2,000 youths who have already passed through it, and more than 80% of them continue to work in their respective training companies. The model spans over two years, where young people combine theory and practice by attending classes and rotating through different departments within the training company. The tertiary degree resulting from the completion of this training is recognized by the European Union. The objective behind this methodology of education is to reduce the skills mismatch, i.e. bridge the gap between employability and the jobs available to young people, providing rich and productive experiences in their first work experience. The course is certified by the Chamber of Industry and Commerce as a way to promote professional development through education at work.

To tackle the complexity of technological advances happening with such speed, businesses need to take an active role in supporting their existing workforces through work-based learning. Please see below a list of a few practical examples illustrating some of the reskilling and upskilling initiatives undertaken by GAN members:

UBS
Currently, UBS has around 2,700 young people enrolled in one of its junior talent programs globally, ranging from apprentices to university graduates and being largely stable over the past five years. UBS has implemented diverse training programs for students and school leavers:
- Students benefit from training opportunities such as internships and graduate talent programs, available globally. In addition, MBA and veterans associate programs are offered in the United States.
- School leavers benefit from multiple apprenticeship programs such as apprenticeship in banking, the 18 month bank entry program for secondary school graduates (BEM), and IT training programs in Switzerland. UBS offers similar programs in other regions of the world, for example, the UK apprenticeship program for school leavers, and the four-year cadet program for high school graduates in Australia who will work at UBS during their entire university education in Front Office and Corporate Center functions.

Around three quarters of the apprentices and trainees remain with the bank after their training is complete and many of them assume key roles over time. To further nurture the talent pipeline in Switzerland, UBS has established a two-year development program for high performing individuals from the apprenticeship in banking and BEM program. Participants acquire specialist know-how, enhanced social and methodological skills, and intense foreign language training.

Accenture

As part of its corporate citizenship initiative "Skills to Succeed", Accenture advances employment and entrepreneurship opportunities for individuals around the globe, leveraging digital innovation to drive impact at scale. The company addresses—at scale—the global need for skills that open doors to employment and economic opportunity. To date, along with its strategic partners, Accenture has equipped more than 2.8 million people with the skills to get a job or build a business. The goal is 3 million people by the end of 2020.

Accenture has embarked on several initiatives to achieve this ambition. For example in the UK, the Skills to Succeed efforts help equip young people aged 15 to 24 – who are not in education, employment or training – with workplace and entrepreneurial skills through a free online learning program that offers three courses and 35 interactive online learning modules designed to help jobseekers build skills to choose a career; apply for and find a job; and be successful in a work environment. The character-based program engages participants with advanced learning technologies, gaming techniques, role-based simulations, telestrations, videos, quizzes and other interactive exercises. Young jobseekers are invited to access the online training through employment support programs run by Accenture's national Skills to Succeed delivery partners.

Many other initiatives worldwide contribute to the same goal. For example "Wired for Work", a collaboration in Indonesia and the Philippines which equips marginalized youth—with a special focus on women—with life skills and market-driven technical skills, or "Hour of code" which focuses on developing digital skills towards meeting the challenges of an increasingly digitalized economy, to name a few.

The Adecco Group

The Adecco Group helps to bridge this skills mismatch by providing guidance and training, delivered through its flagship programs, CEO for One Month and Experience Work Day, designed to provide insight and experience on skills vital to work.

CEO for One Month is The Adecco Group's global program that offers young people the opportunity to develop and showcase their leadership potential, to learn what it takes to succeed as a business leader, and to acquire the skills and experience needed to get a foot on the career ladder. At national level, the program selects one successful candidate from the application pool shadowing the relevant The Adecco Group's country-level CEO for one month, working side by side to experience and participate in the life of a senior business leader. Outstanding national participants are then selected for a global boot camp to decide an outright winner – the Global CEO for One Month – who will work alongside The Adecco Group CEO Alain Dehaze for one month. In 2019, The Adecco Group received more than 260,000 initial applications for the program. Those who failed to make it to the final round received information, tools and support that will help them move from the world of education to the world of work.

Experience Work Day is a global initiative that gives young people exposure to the world of work to help them make their first move into the labor market. On designated days, The Adecco Group opens its 700 offices and branches in 46 countries to nearly 9000 young people. Participants have the chance to shadow more than 4000 of The Adecco Group's employees in the departments and roles of their choice, learn more about their preferred jobs by almost literally stepping into their mentors' shoes, and improve their skills through workshops and coaching.

Zurich (Insurance Group)

Zurich believes that investing in young people equips them to be employees, customers and shareholders of the future; however, more importantly, it believes that such investment creates more cohesive and prosperous communities. Through their innovative apprenticeship programs Zurich supports youth empowerment, coding and workplace skills programs in markets across the world and

give existing employees opportunities to increase their knowledge and skills to enhance career opportunities through extensive online training, formalized mentoring and other skills-based services.

It is worth noting that Zurich's insurance Apprenticeship Program is the first to be certified by the U.S. Department of Labor. Zurich participates in the department's ApprenticeshipUSA initiative, which includes a network of more than 150,000 employers in more than 1,000 occupations. The initiative is dedicated to developing a new generation of workers to help the U.S. succeed in the 21st century economy.

Nestlé

Nestlé recognizes the role that the private sector can play to provide young people with professional development opportunities and promising career pathways. Through its Nestlé Needs YOUth Initiative, Nestlé aims to help 10 million young people worldwide to access economic opportunities by 2030, and therefore equip the next generation with the necessary skills in order to thrive in the world of work and help young people become inspiring leaders, successful agripreneurs, entrepreneurs and game-changers, regardless of their field or level of expertise.

The *Nestlé needs* YOUth initiative, which was successfully launched in 2013 and expanded in 2017 to encompass their entire value chain – from operations and supply, to agriculture and innovation. The initiative focuses on three key areas: Employment and Employability, Agripreneurship and Entrepreneurship, and aims to offer 45,000-50,000 apprenticeship and traineeship opportunities worldwide and providing 20,000-25,000 job opportunities for young people under 30 every year. For example, in the area of Agripreneurship, Nestlé is preparing the next generation of farmers by developing young people's agricultural and business skills and making farming an attractive and viable career option. In terms of entrepreneurship, Nestlé supports young entrepreneurs by helping them start and grow their business. In 2018, Nestlé launched the Social Investment Accelerator program to help young social entrepreneurs gain access to finance. Created in partnership with the Swiss Agency for Development and Cooperation and designed and led by Ashoka, the program aims to create growth and opportunity for young people worldwide, through finding the right types of financing for their business.

> GAN's 20x20x20 report scheduled to be published during fall 2019 provides additional case studies and further information on the initiatives undertaken by GAN members and networks to address the profound changes impacting the world or work. The GAN secretariat will share the report with USCIB for further distribution.
>
> As part of the Invitation to Partner, interested companies are invited to contact the GAN Global office in Geneva, Switzerland in order to engage further on the topic of #SkillingNow.

9. Be open to adopt environmentally sustainable processes

> There can be no healthy people, without a healthy planet – Al Gore

There is much to learn from Coca Cola, which celebrates its 133th anniversary this year. In efforts to create a world without waste, CEO James Quincey stated, "We're making progress. For instance, our global recovery rate is now at 59%. In some countries we are using more than 25% recycled materials in our bottles and cans. And in four countries, we developed a plastic bottle made from 100% recycled material. While we continue to work toward our goals, we are inspired by others working to find solutions, too. The momentum exists, but it's clear no one can do this alone. This collective challenge is immense, and for real change to occur, it will take companies, governments, and NGOs to come together. That's why we recently announced we're inviting other companies to access our PlantBottle technology, so it will be broadly available, including to our competitors.

As the world's first, fully-recyclable PET plastic bottle made partially from plants, PlantBottle is a game changer. This will help put more bioplastics in packaging across different industries to show the true impact PlantBottle can have. We're also building long-term partnerships, like with the World Economic Forum's Global Plastic Action Partnership, which works toward eliminating plastic pollution by building a circular economy.

And we're investing in partners like Circulate Capital, which helps small companies with a big vision bring it to life. In October, Circulate Capital announced the creation of The Ocean Fund, a $90 million effort to address the plastic pollution crisis in our oceans and environment funded by Danone, Dow, PepsiCo, Procter & Gamble, Unilever and Coca-Cola. Our investment also includes dedicated R&D to explore ways to make recycling better and more accessible in more places. Late last year, we announced two recycling investments. We're working with Loop Industries, Inc. to accelerate the use of recycled content and PET in our plastic bottles and we've invested in Ioniqa Technologies, a company that upcycles PET to give the material a more useful life. These are just some of the ways working together has made a difference on our journey to a world without waste."[32]

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[32] https://www.coca-colacompany.com/stories/together-we-can-change-our-future

10. Regular engagements with your national employer organization

The USCIB is the major gateway between American companies and the international community such as those represented at the IOE, ILO and the United Nations, and has the latest information on the developments and policy recommendations on the Future of Work. Make use of international networks to build a global knowledge repository of good practices.

Conclusion

These proposed recommendations are by no means exhaustive, companies are encouraged to customize their own unique solutions comparable to their capacities and levels of development. Every company's journey to the Future of Work will have a different starting point depending on business strategy, industry drivers, and market dynamics. Business leaders need to conclude which of these trends constitute the greatest threats and which offer the greatest opportunities. It is hoped that these recommendations can shed light on the need to embrace technology, in order to fully harness the opportunities of the future.

Most importantly, just as the government alone cannot solve society's biggest problems – businesses also need support and guidance from external stakeholders. The government and companies together, with the help of employer organizations, can come together, collaborate and develop collective solutions by seeking improvements in workforce skills, infrastructure, and the business environment. This is the only way to ensure the productivity, sustainability and competitiveness of individual businesses, whilst helping the workforce navigate through the complex world of the future.

Further reading

IOE *Understanding the Future of Work Brief* (2017)
(https://www.ioe-emp.org/index.php?eID=dumpFile&t=f&f=128041&token=b24f69097f4681e635121c33c4f6f761011a508f)

IOE *Understanding the Future of Work Executive Summary* (2017)
(https://www.ioe-emp.org/index.php?eID=dumpFile&t=f&f=128002&token=cf212c5fdc20dd63ee909184dbd10747158c2ce3)

IOE/ILO Report *Changing business and opportunities for Employer and Business Organisations* (2019)
(https://www.ioe-emp.org/index.php?eID=dumpFile&t=f&f=135287&token=bfa4408cb2a0b9d5e08f3ff5ae09552c672dbc97)

IOE Guidance Note on the ILO Global Commission on the Future of Work report (2019)
(https://www.ioe-emp.org/index.php?eID=dumpFile&t=f&f=135116&token=4eccee0278ddbedce38557f369748044664cf499)

World Bank Development Group, *Changing nature of work (*2019)
(https://www.worldbank.org/en/publication/wdr2019)

For more info: https://www.ioe-emp.org/en/policy-priorities/future-of-work/

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