Complex disruptions to the Future of Work

Macro trends, realities and market insights that shape the future of work

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Research Overview

WBCSD has reviewed a broad spectrum of research and perspectives to provide condensed insights, tailored to a business audience. This provides a common entry point for member companies to cut through the noise, navigate the issues and engage with the current debate.

This document contains the results of WBCSD research and analysis focusing on two areas:

1. **The context for the future** - *To provide a shared understanding of the current situation and the imperative for action. What are the macro trends and realities that will impact the future of work?*

2. **People and market insights** - *To uncover the demand and market readiness for positive action. How are people's needs and desires changing, and how are they showing up in the jobs market and workplace?*

To produce this analysis, we analyzed eleven reports published by leading organizations on the Future of Work (see here for summaries of the 11 reports). From those reports, we identified the trends being highlighted as major forces behind the current changes in the world of work.

We built upon the details of these trends and their implications for business with insights from a wide range of sources including technology-focused organizations, academic reviews, polling organizations, media and consumer insight organizations, and mainstream news channels.

Information sources for WBCSD research:

11 key reports from the following organizations:

A wide range of additional sources (not exhaustive):

WBCSD Analysis

In combination, existing research and insights indicate that the future of work is facing complex disruption at the hand of three inter-connected forces. Effectively navigating this turbulent time is imperative to avoid jobless growth, income inequality and social instability.

Rapid technology evolution
The unprecedented pace of development and adoption of new technologies (most notably artificial intelligence, robotics, platform technologies and blockchain) are raising concerns of mass job displacement and job losses while accelerating changing work patterns and challenging how commerce and companies' function.

Global socio-economic polarization
This is exacerbated by global socio-economic polarization – driven by climate change, rising inequality, shifting demographics, migration pressures, increasing urbanization and political backlash against globalization – all of which impact on the global labor market.

Workforce expectation shifts
Meanwhile, the expectations of the workforce are shifting. Income security, transparency, inclusion and equity are now fundamental requirements, while the ability for companies to provide flexibility, opportunity and meaning are becoming critical differentiators.

Rapidly evolving technology

- Robots & Artificial Intelligence
- Platform economy
- Communication & collaboration technology
- 3D/4D printing, Virtual Reality & Blockchain

Socio-economic challenges

- Climate change
- Income inequality
- Digital divide
- Demographics
- (De-)globalization
- Migration
- Urbanization
- Political backlash

The rise of individualism

- Income security
- Meaning
- Community
- Growth
- Opportunity
- Flexibility
- Autonomy
- Equity
- Social concern
- Confidence
- Trust in business

The adoption of **ROBOTS** is accelerating worldwide, threatening manufacturing jobs…

..whilst the rise of **ARTIFICIAL INTELLIGENCE** is changing the value of professional work.

THE GIG ECONOMY is creating new relationships between people and organizations…

..leading to exploitation and opportunity in equal measure.

Emerging technology is transforming the world of work…

Meanwhile, work is leaving the office..

..and adoption of **ADVANCED COMMUNICATION AND COLLABORATION TECHNOLOGY** accelerates changing work patterns.

Radical innovations such as **3D/4D PRINTING, VIRTUAL REALITY & BLOCKCHAIN** promise even more dramatic change..

challenging the idea of commerce and the concept of the company.
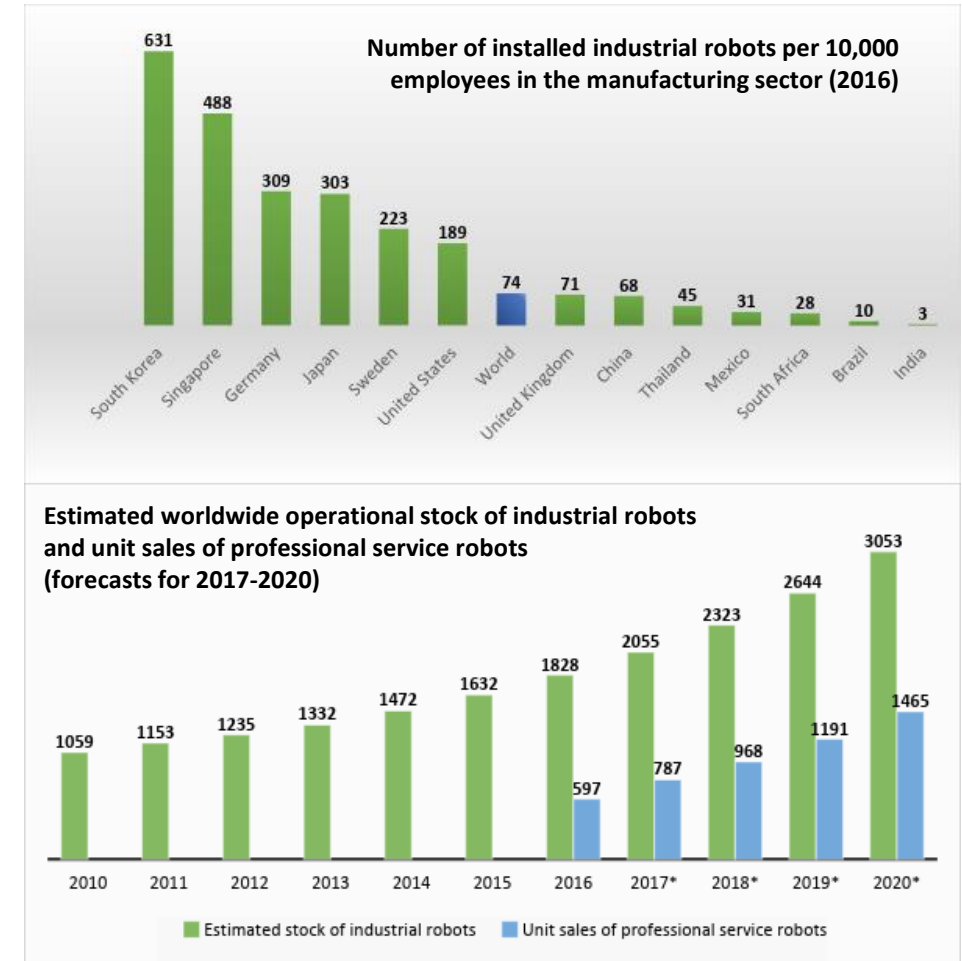
THE ADOPTION OF ROBOTS IS ACCELERATING WORLDWIDE

Millions of blue collar jobs are at risk

The manufacturing sector still dominates the picture of robot deployment (IFR Industrial Robots), with adoption rates accelerating in every country.

In 2017, there were on average 74 robot units per 10,000 human workers. There are projected to be 294,000 robots adopted worldwide in 2018. South Korea has the greatest robot-to-human density, with 631 robot units per 10,000 human workers. China is currently below the worldwide median but has the largest potential market for robotic process automation.

Investment in Robots projected to reach $94 Billion in 2018 according to the Worldwide Semiannual Robotics & Drones Spending Guide.

And 800 Million jobs - ⅕ of the global workforce – are at imminent risk of tech unemployment due to 'robotic process automation' (McKinsey Global Institute 2017).

Number of installed industrial robots per 10,000 employees in the manufacturing sector (2016)

Country	Robots
South Korea	631
Singapore	488
Germany	309
Japan	303
Sweden	223
United States	189
World	74
United Kingdom	71
China	68
Thailand	45
Mexico	31
South Africa	28
Brazil	10
India	3

Estimated worldwide operational stock of industrial robots and unit sales of professional service robots (forecasts for 2017-2020)

Year	Estimated stock of industrial robots	Unit sales of professional service robots
2010	1059	
2011	1153	
2012	1235	
2013	1332	
2014	1472	
2015	1632	
2016	1828	597
2017*	2055	787
2018*	2323	968
2019*	2644	1191
2020*	3053	1465

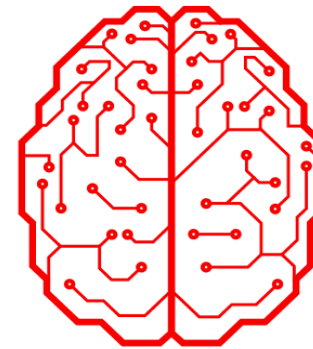Source: IFR (2017): World Robotics 2017

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WHILST ARTIFICIAL INTELLIGENCE CHALLENGES THE VALUE OF PROFESSIONAL WORK

Millions more jobs in white collar industries under threat

Bots - i.e. computer programs that perform tasks such as searching and compiling information on the internet (web crawlers), or interacting with humans (chatbots) - are a good example of the rise of digital technology in our daily lives. Machines may not be indistinguishable from humans in text-only conversations yet, but often we are not aware that we are interacting with bots because they don't need a physical appearance to carry out tasks for us.

Whilst Robotic Process Automation threatens employment in manual sectors, AI promises perhaps even greater disruption to professional work. A figure of no less weight that Stephen Hawking forecasted the wholesale restructuring of office work through the application of AI. According to the PwC Economic Outlook report, this could be as many as 30% of (UK) jobs made redundant by the imminent application of Artificial Intelligence.

Projections of widespread disruption of industry work is supported by the investment into AI made by enterprise software providers. IBM, SAP, Oracle, Microsoft, Alphabet, Amazon...all are building AI layers into their core offerings. The coming future is not just 'AI' but 'ubiquitous AI'

THE TURING TEST
Alan Turing proposed "intelligent" machines would be indistinguishable from humans in text-only conversations

1950

DEEP BLUE
Defeated Garry Kasparov, Chess World Champion

1997

WATSON
Defeated Ken Jennings & Brad Rutter, the two most successful contestants ever, in Jeopardy, but struggled on clues with few words

2011

ALPHAGO
Defeated Lee Sedol, "Go" World Champion, runner-up for Science's "Breakthrough of the Year"

LIBRATUS
Defeated four professional poker players in a No-Limit Texas Hold'em tournament; learned how to bluff

2016

Source: Oracle (2017) Chatbots 101

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PLATFORM BUSINESSES HAVE CREATED NEW RELATIONSHIPS BETWEEN ORGANISATIONS AND WORKERS

Rise of the 'gig economy'

The past decade has seen the emergence of 'just-in-time' delivery of labour - gig workers in the platform economy. This was perhaps the inevitable extension of the 'software-as-a-service' model which now dominates how we buy software, renting the usage without taking the ownership and responsibility.

Distinct from earlier period of freelancers / consultants, which were typically sourced via 3rd party recruitment agents, these new gig workers are on-boarded by a platform business as independent businesses themselves. They are then matched to work opportunities by the platform, who typically also handles the rate, service delivery standards, cash collection and payment.

From generalists like Upwork, Amazon Mechanical Turk, TaskRabbit, Fiverr, to specialist niche platforms like Paws (vets), Urban Massage (masseurs), Treatwell (beautificians), Uber (transport), Deliveroo (food delivery), and to expert platforms like Lexoo (lawyers), CoMatch (Management Consultants), every industry now seems to have a platform.

The open market, where workers and employers had to find each other through job adverts and recruitment agents, is giving way to a new form of business which operates as both agent and market.

How will the following employee types change as a share of your total labor force over the next 10 years?

	Significant decrease	Moderate decrease	About the same	Moderate increase	Significant increase	Net increase - decrease
Outsourced workers	4%	4%	42%	39%	10%	41%
SOW consultants	2%	12%	33%	40%	14%	39%
Freelancers	3%	8%	47%	33%	10%	32%
Agency temporary workers	6%	14%	36%	36%	7%	23%
Internal temporary workers	6%	9%	57%	21%	7%	13%
Independent contractors	9%	17%	38%	28%	7%	9%
Part-time employees	5%	10%	63%	19%	2%	7%
Full-time employees	8%	36%	37%	15%		-24%

N=180

Source: Randstad Talent Trends Report 2018

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LEADING TO OPPORTUNITY AND EXPLOITATION IN EQUAL MEASURE

Types of Gig Worker

Gig working for platform businesses have excited the public interest in recent years with high profile cases concerning the likes of Uber and Deliveroo. The story of exploitation can readily be told as gig workers lack employee rights and protections such as paid holiday and paid sick leave, as well as regular hours and consistent income.
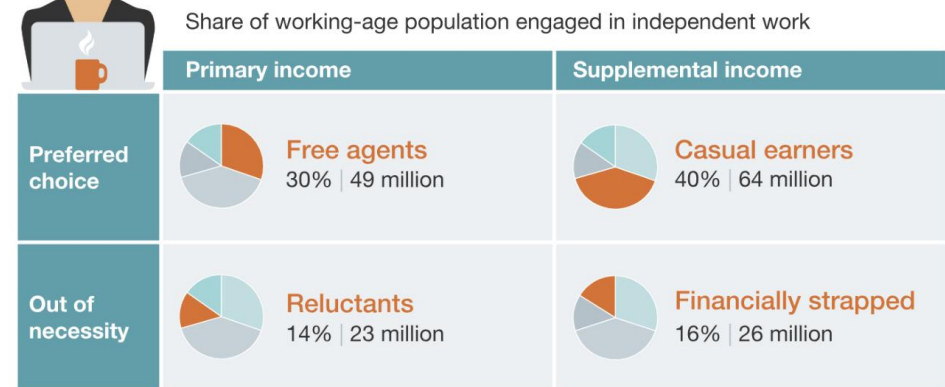
However, it seems that many gig workers want to work in this way, tempted by the flexibility, the lack of monopolization of time, the earnings potential and the lack of management overhead. For many, a gig is not a career, but a 'side hustle', an opportunity to generate revenue whilst other priorities with family, education or even other work projects take precedence.

We now know that we have different types of gig worker who often occupy different economic categories and have had different career trajectories. Consequently, their attitude and desire for gig work is often divergent and we are beginning to deepen our understanding of these different groups and build a more nuanced view of these new types of worker and their needs.

McKinsey Global Institute 2016, describes 4 categories: Free agents, Casual earners, Reluctants & Financially strapped, which we can make use of here.

Independent workers generally fit into four segments.

Share of working-age population engaged in independent work

	Primary income	Supplemental income
Preferred choice	Free agents 30% | 49 million	Casual earners 40% | 64 million
Out of necessity	Reluctants 14% | 23 million	Financially strapped 16% | 26 million

Source: 2016 McKinsey Global Institute survey of ~8,000 US and European respondents

McKinsey&Company

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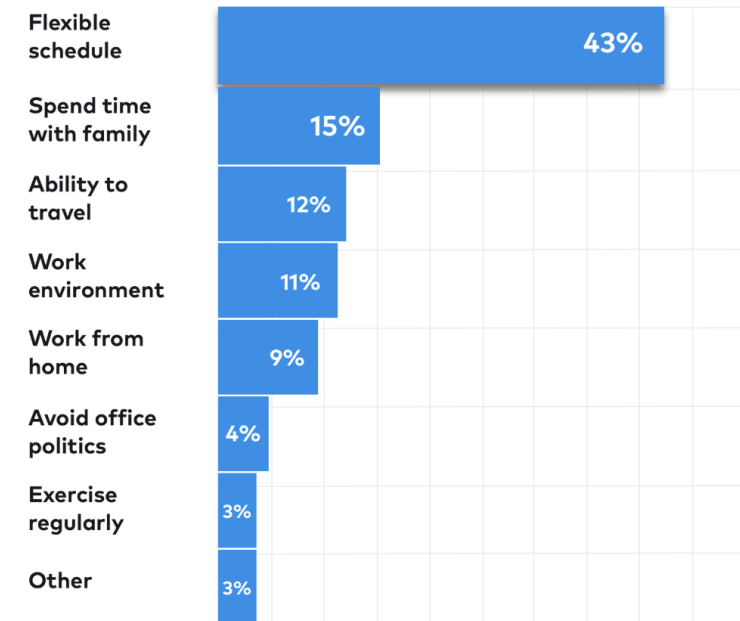# MEANWHILE, TRADITIONAL WORK IS LEAVING THE OFFICE

Rise of remote working

An earlier wave of technology innovation - fibre optic broadband, wireless mobile communication, mobile computing, and VoIP services has led to rapid and surprisingly smooth rise of remote working. Widely adopted by consumers ahead of the enterprise, video, social networking and mobile tech capabilities, these have given rise to rapid and accelerating trend of remote working.

In a recent study, Switzerland-based serviced office provider IWG found that 70 percent of professionals already work remotely — a phenomenon known as telecommuting - at least once per week. 43% of US workers reported spending at least some of their working time out of the office.

Interestingly, 90% of 100% remote workers do not see themselves ever working again in a office. 94% of 100% remote workers would encourage their co-located friends to give remote a try.

The rise of remote work is due to both push and pull drivers - employees who increasingly demand flexibility that comes from working-from-anywhere, and employers who reduce fixed costs, expand talent tool, retain workers for longer and gain increased productivity.

What's the biggest benefit to working remotely?

Benefit	Percentage
Flexible schedule	43%
Spend time with family	15%
Ability to travel	12%
Work environment	11%
Work from home	9%
Avoid office politics	4%
Exercise regularly	3%
Other	3%

Source: State of Remote Work report for 2018, Buffer, Hubstaff and Workfrom

SUPPORTED BY THE RISE OF ONLINE COMMUNICATION AND COLLABORATION SPACES

Communication

Widespread consumer adoption of video and chat communication technology has educated the workforce on how to conduct conversation online and in real time from anywhere in the world with decent wifi. These techniques have seamlessly flowed into the workplace, as workers default to more efficient modes of conversation to 'get things done'.
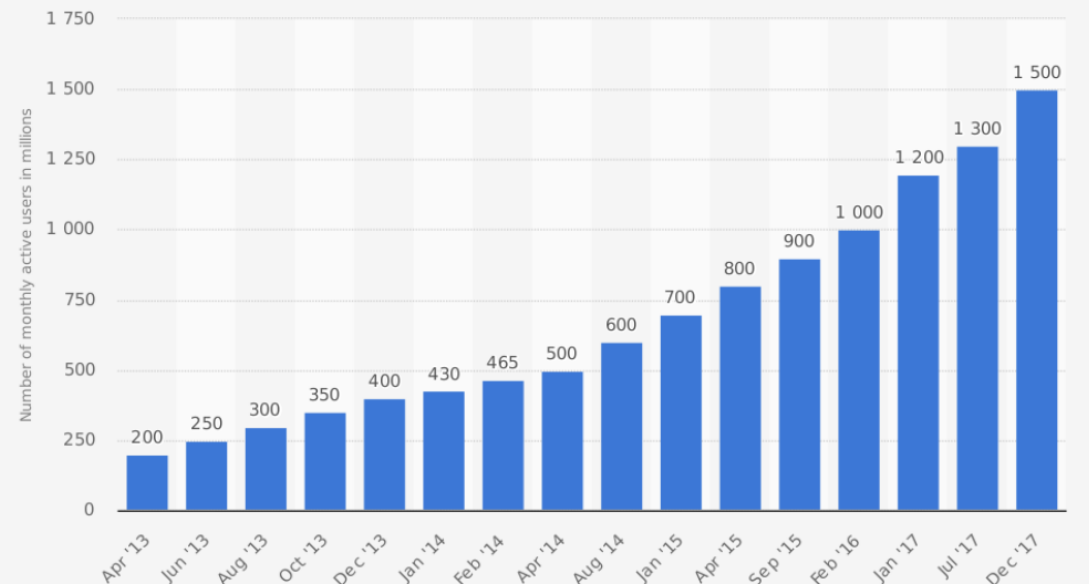
Even in traditional environments, like politics, we have seen members of the 'baby boomers' conduct on-the-spot collaboration which sometimes coalesce into persistent forms of group organization to exercise power through the use of consumer technology.

Collaboration

Increased communication frequency leads to increased instances of collaboration. Supported by the rise of low cost, high fidelity cloud storage services provided by the most reputable technology companies in the world, employers have taken the leap into the cloud in order to reap the benefit to productivity of employees working simultaneously on shared pieces of work.

The market is confident in the continued growth of online collaboration spaces. Even upstart challenger services like Slack, are now valued in the multiple billions.

Number of monthly active WhatsApp users worldwide from April 2013 to December 2017 (in millions)

Number of monthly active users in millions

Month	Users
Apr '13	200
Jun '13	250
Aug '13	300
Oct '13	350
Dec '13	400
Jan '14	430
Feb '14	465
Apr '14	500
Aug '14	600
Jan '15	700
Apr '15	800
Sep '15	900
Feb '16	1 000
Jan '17	1 200
Jul '17	1 300
Dec '17	1 500

Sources
WhatsApp; Facebook
© Statista 2018

Additional Information:
Worldwide; WhatsApp; April 2013 to December 2017

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RADICAL INNOVATIONS PROMISE EVEN MORE DRAMATIC CHANGE (1)

3D / 4D Printing

3 Dimensional printing is the deposition of material in successive layers to create a 3 dimensional object. 4D printing uses the same process but adds the dimension of transformation over time, where the printed object is programmed to react the environment and change its shape or properties after it has been printed.

According to Wohler Report 2018 the value of the 3D Printer industry alone (that is, the market for the devices that do the printing) was $7 billion in 2017, with 528,952 desktop 3D printers sold worldwide, nearly doubling the number of units sold in 2015. Projections for the overall size of the 3D/4D printing market shows compound growth.

Key Applications

Housing is one the most obvious applications of 3D printing, not only printing parts which can transported to the assembly site, but also for the entire printing of major elements of small units onsite. The implications for manufacturing, machining, warehousing, freight, logistics - even trade / commerce itself - are clear.

Global Estimates for 3D Printing Market 2020 to 2025

BILLIONS

Source: ARK Investment Management LLC
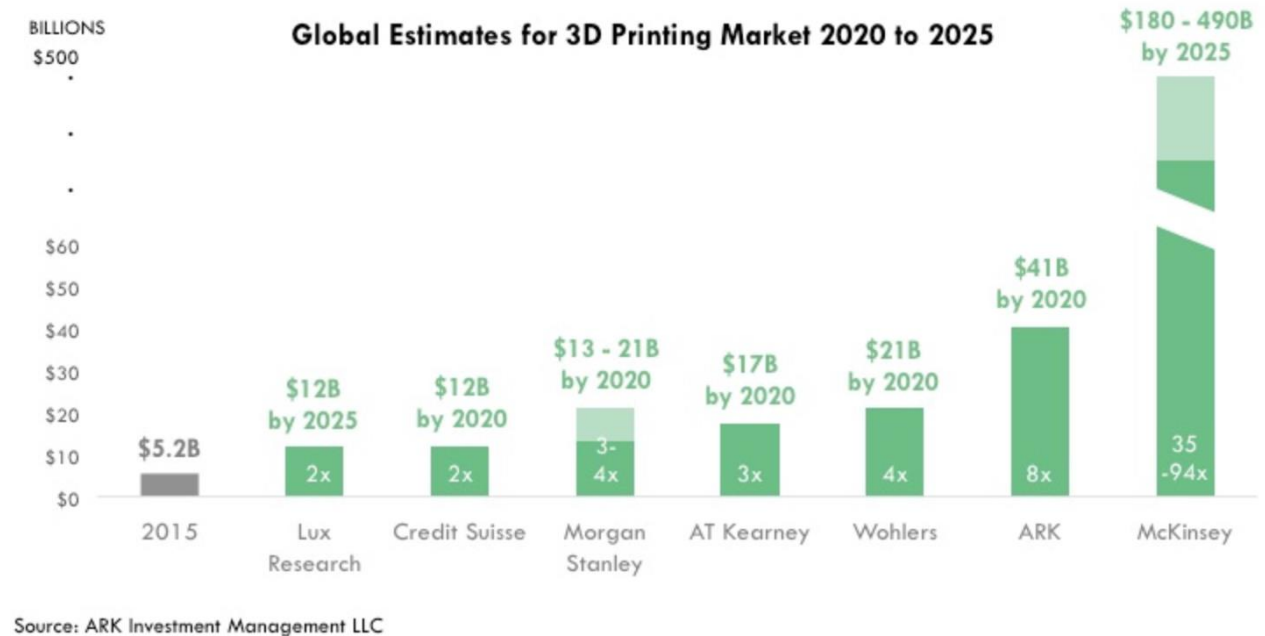
RADICAL INNOVATIONS PROMISE EVEN MORE DRAMATIC CHANGE (2)

Commitment from Big Tech to Immersive tech

'Immersive Reality', as AR/VR has been in the hype cycle for the past decade, without really breaking through its niche in the VR gaming sector, frustrated by the high cost and low consumer appeal of AR/VR headsets.

Major commitments to Immersive technology by 4 of the 'Big Five'' technology companies - Alphabet, Facebook, Microsoft and Apple - are likely to accelerate consumer adoption through the channels we already use - mobile and web.

If business adoption follows the consumer adoption trends, we should see immersive technologies have a similar impact to video technology ten years ago - a curiosity before ubiquity.

Use cases in the world of work

There are already some interesting case studies in the use of immersive technology in the world of work. In job advertising (Jaguar Land Rover / Gorrilaz), in job assessment (Lloyds Banking Group) in job training (Walmart Black Friday simulator), in employer branding (WeWork AR video) and in even in the creation of an entirely virtual organisation (eXp Realty virtual office island).
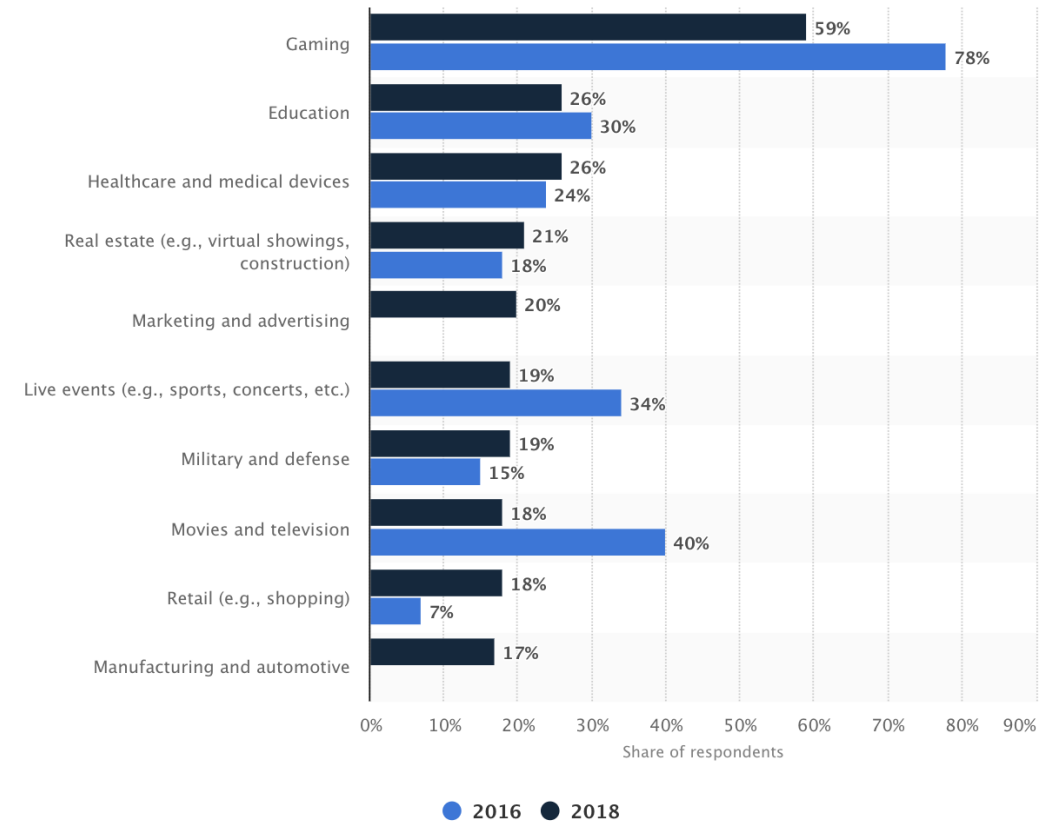
Source: Perkins Cole 2018 AR / VR Survey

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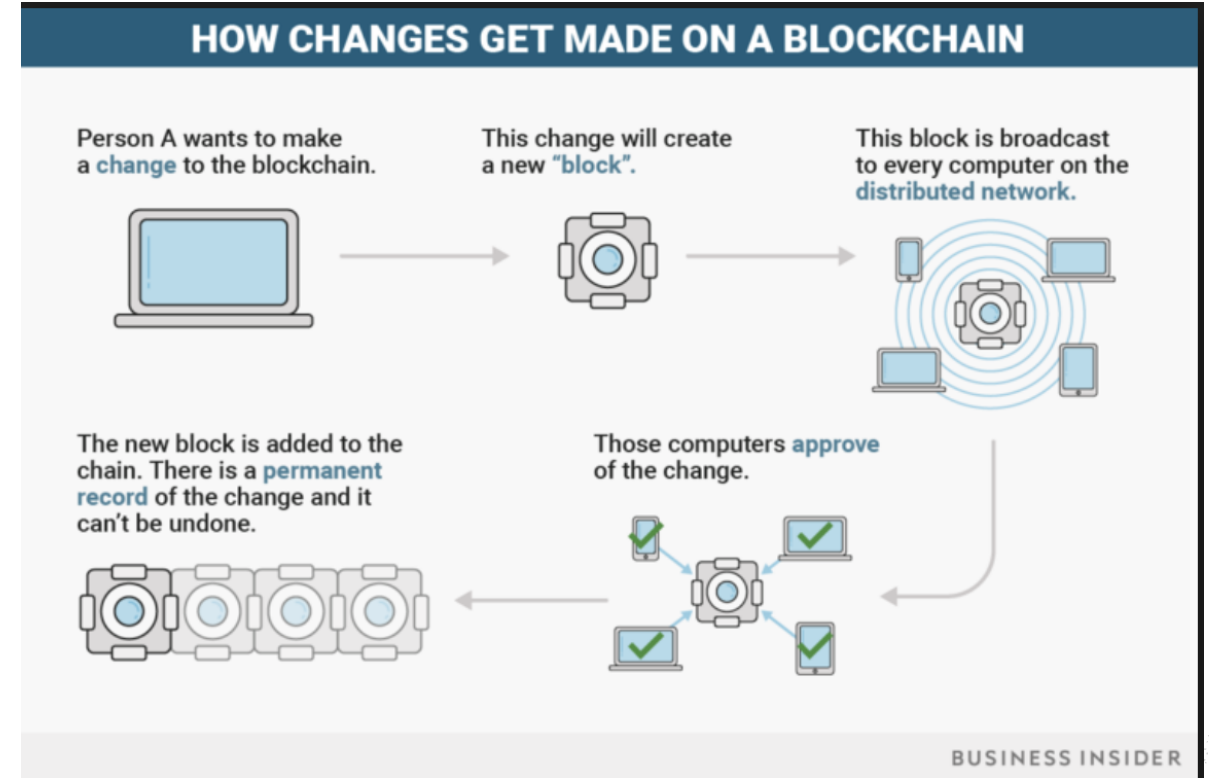# CHALLENGING EVEN THE IDEA OF THE COMPANY ITSELF

Blockchain Beyond the Hype

The hype behind blockchain has faded in 2018 with the precipitous decline in the value of cryptocurrencies since it's peak in late 2017. However, it would be a mistake to write off the technology as a fad. Indeed, we may be entering into a phase of maturation where ideas in how to implement blockchain beyond crypto currencies become realised.

The potential of blockchain is this: to have an immutable and decentralised store of truth. The World Economic Forum's 'Blockchain Beyond the Hype' outlines a methodology on how businesses can assess the suitability of a blockchain solution to problems.

Smart Contracts

Smart contracts are self executable digital contracts on a blockchain which operate on an If-This-Then-That (IFTTT) basis. Applications range from digital rights (music), healthcare (secure healthcare records), government (especially in validating electoral votes), banking operations (secure transactions) to professional and personal identity (passports, certifications, qualifications)

HOW CHANGES GET MADE ON A BLOCKCHAIN

Person A wants to make a **change** to the blockchain.

This change will create a new "**block**".

This block is broadcast to every computer on the **distributed network**.

The new block is added to the chain. There is a **permanent record** of the change and it can't be undone.

Those computers **approve** of the change.

BUSINESS INSIDER

Climate Change

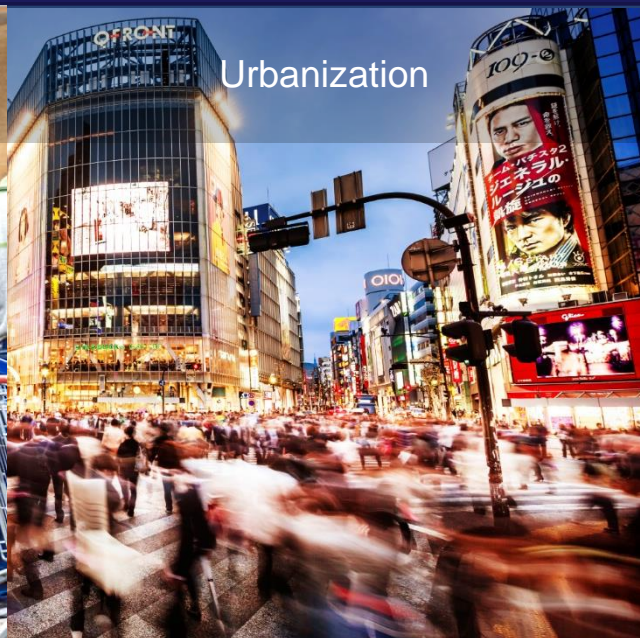Income Inequality

Digital Divide

Demographics

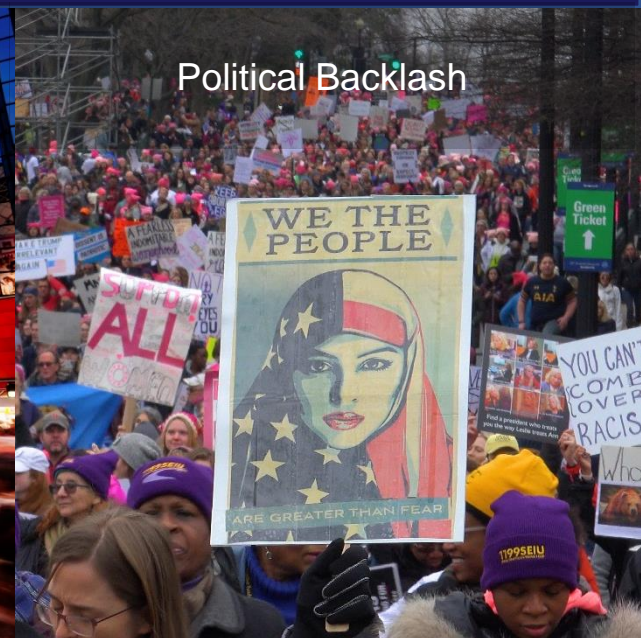..complicated by global socio-economic trends..

(De-)Globalization

Migration

Urbanization

Political Backlash

CLIMATE CHANGE

The shift to a green economy highlights the need for a 'just transition'.

Continued environmental degradation resulting in soil degradation, floods and extreme weather events poses serious risks to the jobs and livelihoods of millions of people, with the effects felt most severely among already vulnerable groups (ILO Inception Report on the Future of Work).

Transitioning to a green economy is expected to create net job growth. According to the ILO's World Employment and Social Outlook 2018, 24 million jobs could be created, against 6 million jobs being lost in transitioning to a green economy.

These numbers raise optimism, but structural transformation and significant adaptation of existing jobs will be unavoidable. In fact, the profound transformations that are especially necessary in oil, coal and heavy industries have the potential to leave many workers and whole communities stranded. To address this risk, the international community has recognized the importance of a "just transition" that shifts the economy towards environmental sustainability without losing sight of the need to create decent work opportunities and quality jobs (OECD).

Energy sustainability and employment in 2030

Employment by sector (percentage difference)
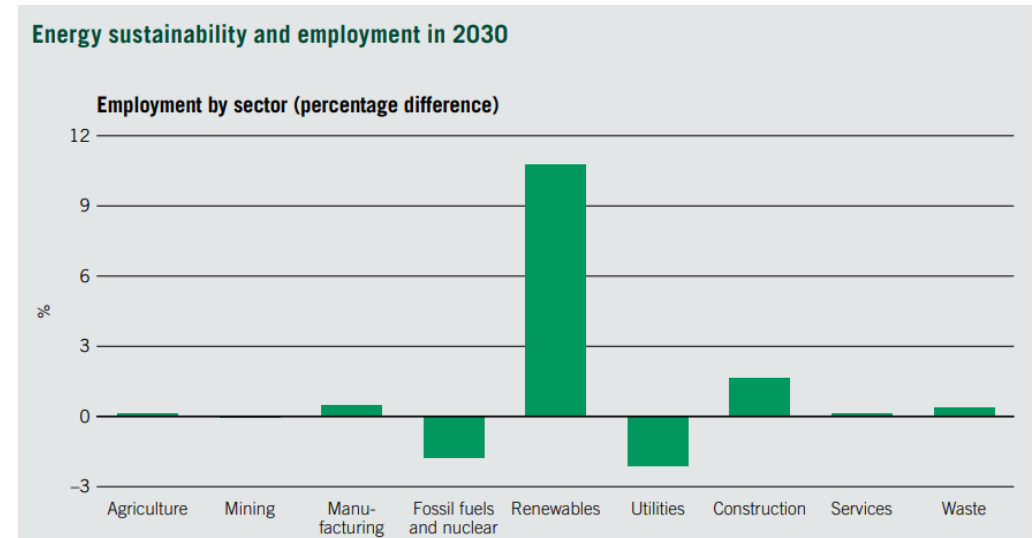
Source: ILO World Employment and Social Outlook 2018

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GROWING INCOME INEQUALITY

Automation will disproportionately affect groups that are already vulnerable.

Overall, income inequality in terms of labor income share has increased in most regions of the world (ILO Inception Report on the Future of Work). Reported job losses or reduction in pay or work hours due to automation are especially prevalent among young people, workers in part-time or non-regular employment, low-skilled or lower educated workers, women and immigrants (Pew). Middle-skilled jobs are losing ground, compared to low and high skilled ones, pushing inequality higher on political agendas (OECD, Randstad).

Women's economic participation and opportunity is the only sub-index in WEF's Gender Gap Index that shows negative progress. It has in fact reverted back to its status of 2008, widening the gender gap and leading to forecasts of the gap not being closed for another 217 years. Women remain underrepresented in tech-related education and jobs, curbing their future chances of participating in a highly digitalized world.

Globally, over 70 million young people of working age are looking for a job, and more than 160 million are working, yet they continue to live in poverty (ILO Decent Jobs for Youth). Considering the large cohorts of young population ready to enter the market in developing and emerging countries, equipping them with relevant skills and ensuring job growth will be crucial to avoid growing inequalities and social frustrations.

job polarization in OECD countries
1996-2015, change in employment share, in percentage points

low skill   middle skill   high skill

source: OECD - Employment outlook 2017

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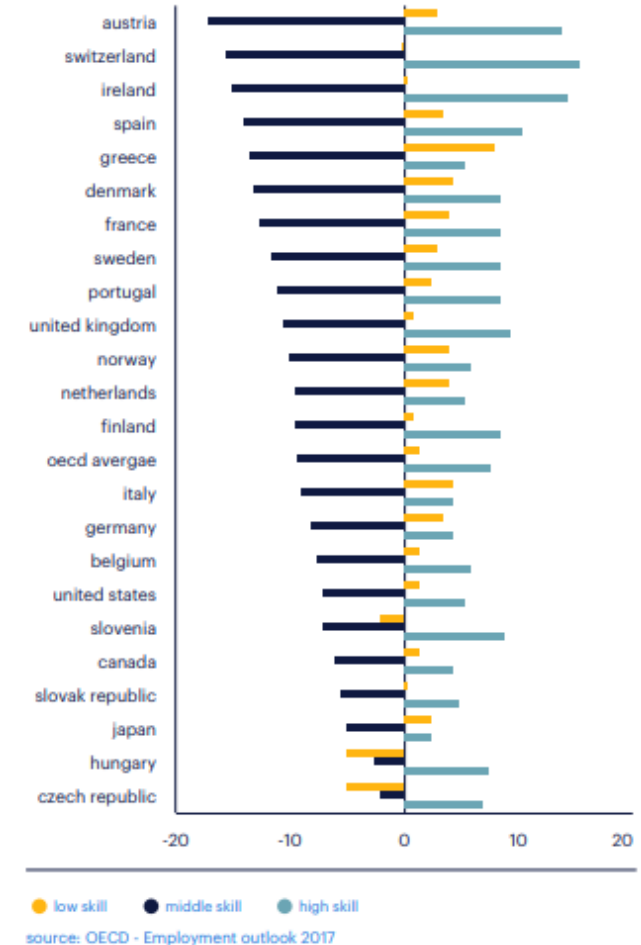
GROWING DIGITAL DIVIDE

The global skills gap is at an all-time high.

Globally, the skills gap, i.e. the difference between jobs required to carry out a job, and the skills workers actually possess, is growing, reaching an all-time high in Manpower's 2018 Talent Shortage Survey. 45% of companies reported difficulties in finding the right candidates, with the number ballooning to 67% for companies with more than 250 employees.

The inability to find appropriately skilled workers can be the result of different factors. Restrictive immigration policies or a shrinking working age population, either due to aging or to emigration, can limit the pool of available talent (Manpower).

In the context of fast automation and technological developments, companies are not only struggling to attract applications, but also to find candidates with a good mix of technical and human skills (Manpower). As the pace of changing skill sets speeds up, this challenge could grow even further, dampening economic growth and further exacerbating inequalities (WEF).

% of companies facing difficulty hiring
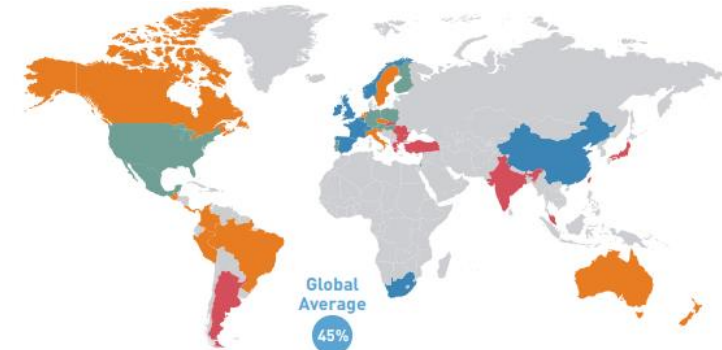
Countries and Territories Facing Difficulty Hiring

| Least Difficulty | Below Average Difficulty | Above Average Difficulty | Most Difficulty |

Source: Manpower (2018) Talent Shortage Survey

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CHANGING DEMOGRAPHICS

## Population growth in developing countries will lead to labor surplus..

The current world population of 7.6 billion is expected to reach 8.6 billion by 2030, and 9.8 billion by 2050. While there are currently twice as many children under the age of 15, than people over 60 (26% versus 13% of the world population), by 2050 these two cohorts will both account for the same amount of people. Declining fertility rates and rising life expectancy are leading to an aging population globally, although with variations between regions and countries (UN).

Economies with large proportions of youth entering the labor market face increasing demand for jobs and rapid urbanization rates. Often, in these countries investment in human capital, especially in health and education systems is inadequate, limiting the country's productive potential (ILO).

..while aging populations in many developed countries will lead to labor shortages

On the other hand, countries with aging populations face shrinking labor supply and increased pressure on public finances and social security systems, and placing a burden on the economy's productivity (ILO). Automation is one of the possible solutions to address shrinking workforces in aging societies and boost productivity and economic growth (McKinsey).

Figure 1.11. Economic old-age dependency ratio
(ratio of the population aged 65+ to the working-age population aged 15–64)
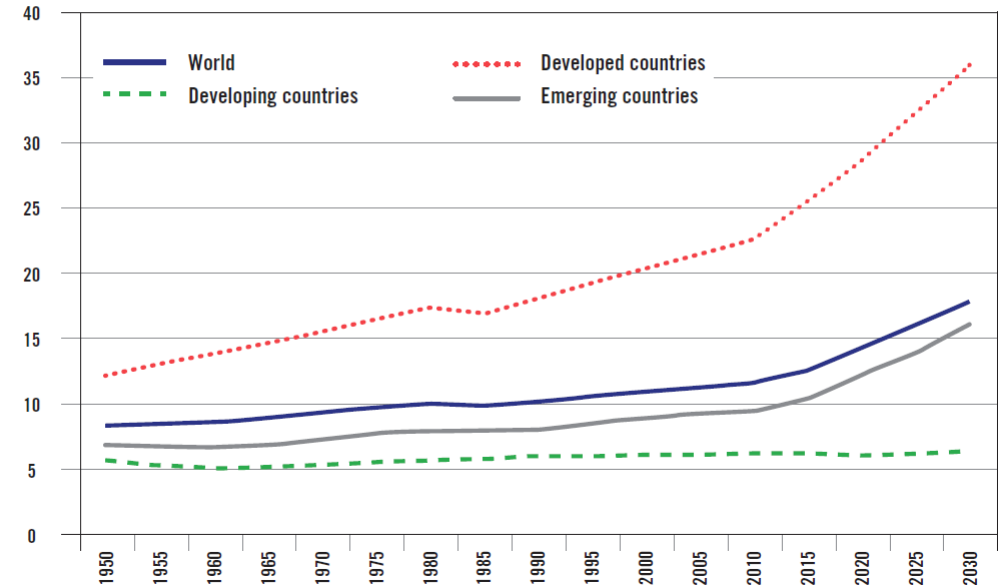
Source: ILO (2017) Inception Report for the Global Commission on the Future of Work

INCREASING MIGRATION PRESSURES
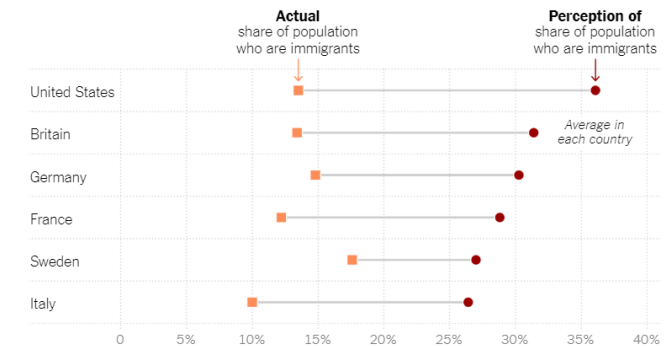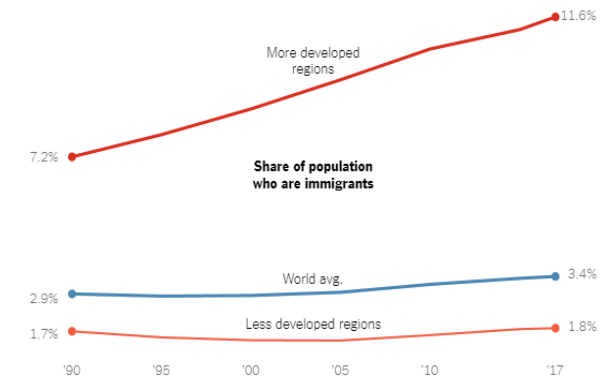
Migration bring opportunities and challenges

International migration has grown rapidly since the 2000, with the latest data from the United Nations accounting for 258 million people living in a country other than where they were born.

On the one hand migration has often been considered a way of counterbalancing ageing populations, on the other hand, migrants are also among the most vulnerable groups of society, facing lower pay and longer work hours as well as early job loss in times of economic downturn.

Migrants face additional challenges in perception, as people consistently overestimate the number and unemployment levels of migrants, while underestimating their levels of education and financial independence (Harvard University).

This increases pressure on the social contract, leading to political and social backlash, particularly in countries with representative democratic systems of government.

Immigrant populations have risen sharply in most advanced nations

11.6%

More developed regions

7.2%

Share of population who are immigrants

World avg. — 3.4%

2.9%

Less developed regions

1.7% — 1.8%

'90 '95 '00 '05 '10 '17

	Actual share of population who are immigrants	Perception of share of population who are immigrants
United States		
Britain		*Average in each country*
Germany		
France		
Sweden		
Italy		

0   5%   10%   15%   20%   25%   30%   35%   40%

Note: For the United States, the number of actual immigrants includes estimates of the illegal immigrant population | Source: "Immigration and Redistribution," 2018. Alberto Alesina, Armando Miano and Stefanie Stantcheva (Harvard University)

Source: New York Times (2018) based on UN DESA The International Migration Report 2017

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INCREASING URBANIZATION

Relentless rise of the megacities

55% percent of the global population currently lives in urban areas. Maintaining their growth trends, by 2050 cities might be hosting 68% of the population, with almost 90 % of this growth happening in Asia and Africa (UN).
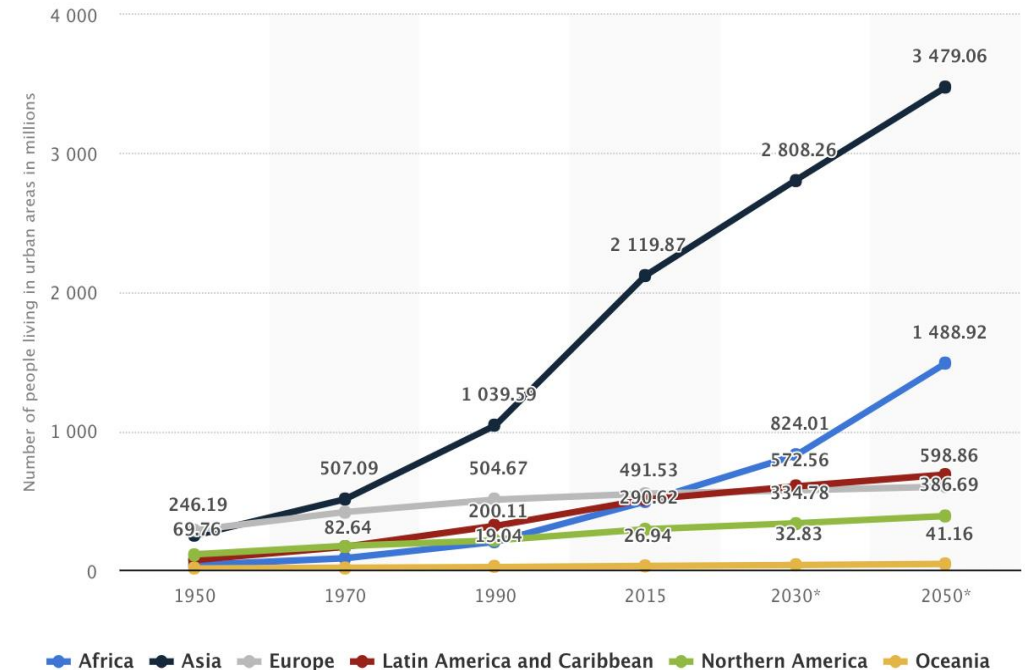
However, the speed and scale of urbanization brings many challenges, including meeting accelerated demand for affordable housing, well-connected transport systems and other infrastructure.

Urbanization also known to exacerbate income inequality. Large cities are places that produce disproportionately larger rewards and more significant penalties for the 'winners' and 'losers' of the economic game.

Politics: Town vs City

Internal movement of people from town to city creates a number of second order effects - higher property prices, greater labour market liquidity, higher demand for innovation, greater consumer density, industry network effects - all in all, a greater concentration of economic power.

This has not been matched by a corresponding movement of political control, and politics of the last 2 years has seen a clear and consistent pattern across all democracies - towns elect the governments, whose policies are often at odds with the greatest cities.

Number of people living in urban areas in millions

	1950	1970	1990	2015	2030*	2050*
Asia	246.19	507.09	1 039.59	2 119.87	2 808.26	3 479.06
Africa	69.76	82.64	200.11	491.53	824.01	1 488.92
Europe			504.67		572.56	598.86
Latin America and Caribbean				290.62	334.78	386.69
Northern America		19.04	26.94		32.83	41.16

● Africa ● Asia ● Europe ● Latin America and Caribbean ● Northern America ● Oceania

© Statista 2018

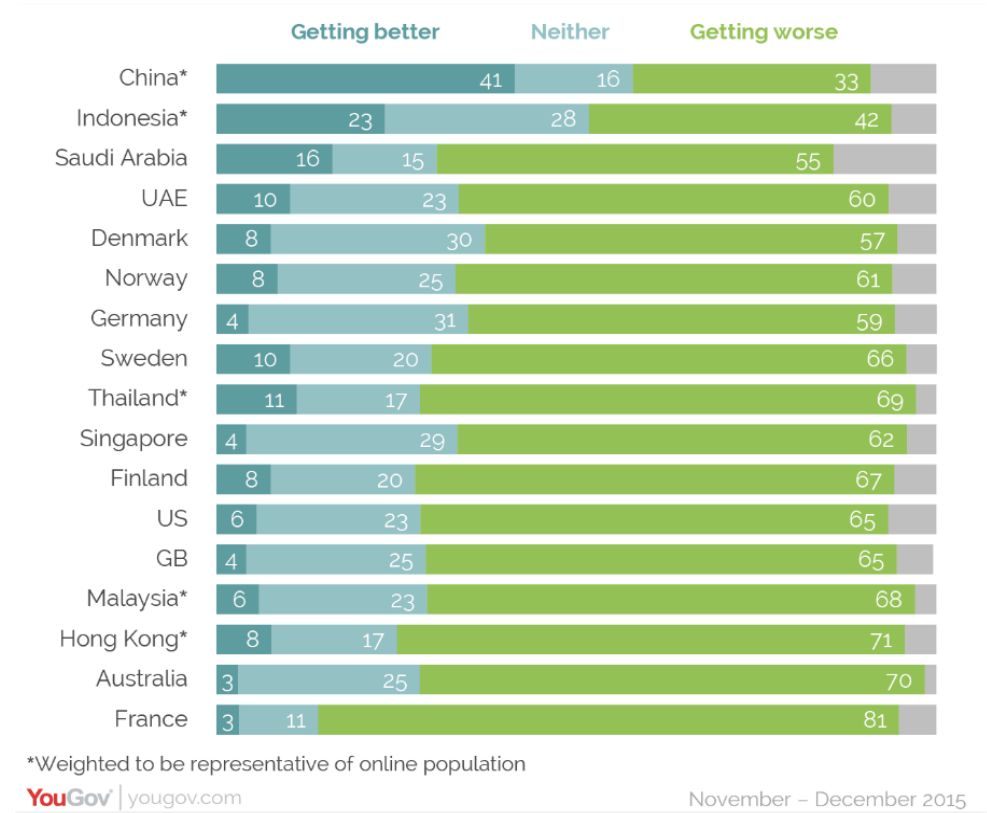# ALONG WITH GLOBAL POLITICAL & SOCIETAL BACKLASH

Against Globalization

Globalization has been a defining feature of the world economy leading to the internationalization of production, finance (including remittances), trade and migration. As such, globalization has been the main driving force behind the creation of global supply chains, allowing for tasks and activities to be fragmented and offshored to countries with cheaper labor (ILO).

However, we cannot avoid discussion of the visible global backlash against globalization, especially in the heartlands of those countries who promoted it. Perhaps starting from the financial crisis of the 2008, followed by a decade of austerity born by those least able to afford it, along with the sense that the 'elite' used systemic power to avoid penalty and continue much the same as before. The ideas of free trade, and free movement of labor and finance, previously sacrosanct, are under assault from left and right in an increasingly polarized political environment.

Against Democracy

The idea of democracy as an inherently sensible system of government is also under assault, again from both left and right. With populist leaders in US, Hungary, Poland, Austria, along with traditionally authoritarian states like Russia, Turkey and China, we are seeing the erosion of the pillars of democracy in favor of strong man leadership. There have already clearly been implications for the future of work through the manifestation of populist policies

	Getting better	Neither	Getting worse
China*	41	16	33
Indonesia*	23	28	42
Saudi Arabia	16	15	55
UAE	10	23	60
Denmark	8	30	57
Norway	8	25	61
Germany	4	31	59
Sweden	10	20	66
Thailand*	11	17	69
Singapore	4	29	62
Finland	8	20	67
US	6	23	65
GB	4	25	65
Malaysia*	6	23	68
Hong Kong*	8	17	71
Australia	3	25	70
France	3	11	81

*Weighted to be representative of online population

YouGov | yougov.com

November – December 2015

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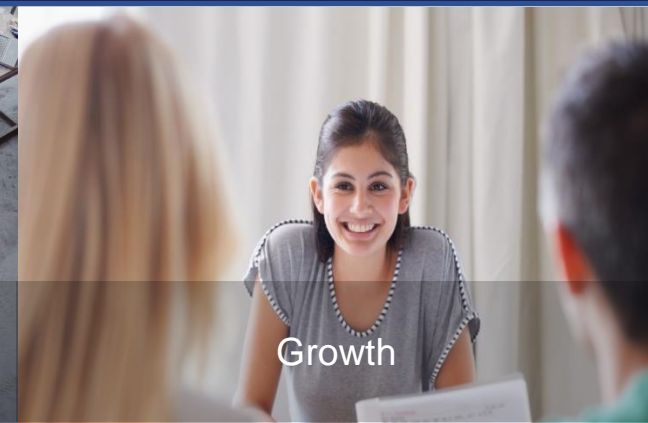# ..Making it harder to meet people's shifting expectations.

Income Security

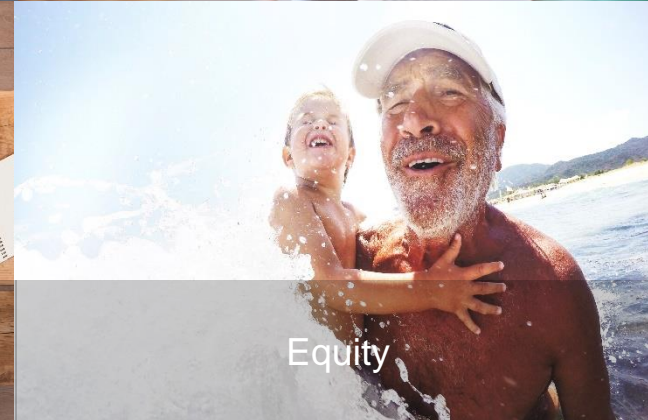Meaning

Community

Growth

Opportunity

Flexibility

Autonomy

Equity

Social Concern

Employment Confidence

Trust in Business

ONE NEED IS UNIVERSAL: JOB SECURITY

People's motivations for work vary across the globe, but job security is fundamental

Regardless of where people come "job security" is seen to be very important, and is consistently ranked as more important than "high income" (ILO Inception Report on the Future of Work).

In developing and emerging economies, work is strongly associated with the need to make a living. However, if we were to remove the necessity of a job to satisfy basic needs, we see significantly smaller variations across the world. Globally, only 39% of people define work as merely a way of earning an income.
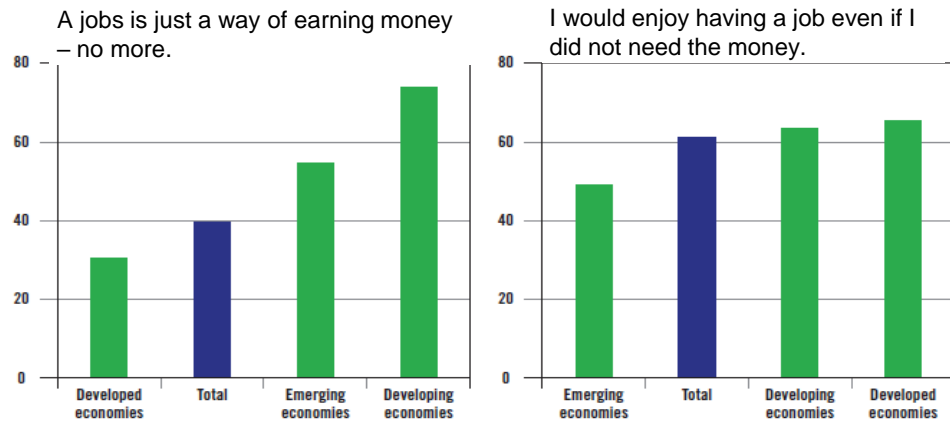
Share of individuals who see "job security" and "high income" to be important or very important in a job.
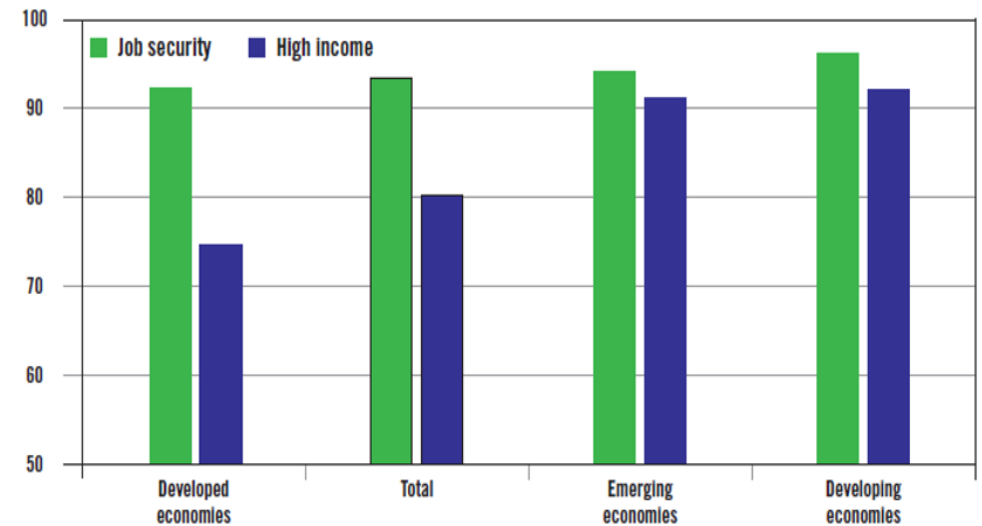
Source: ILO (2017): Inception Report for the Global Commission on the Future of Work

A jobs is just a way of earning money – no more.

I would enjoy having a job even if I did not need the money.

WORKERS ALSO INCREASINGLY SEEK MEANING IN THEIR WORK

The need for and meaningful work

It's not news that going to work is often the dominant waking activity in most of our lives. For many of us, work plays such an important role that we often include it as a central building block for our personal identity.

Providing 'good work' is becoming an important consideration for companies and governments. And, increasingly, people seek to meaning in their work - to understand how it contributes to society and the organization they work for the organization they work for (HBR).

Motivation, productivity and performance are tightly linked to a workers ability to find this meaning. It is important that employers understand how to connect the tasks their workers to with the outcomes of that work.

In the modern, globalized, tech enabled economy with its focus on profit and productivity, work is often disaggregated into repetitive tasks where the fine output is remote and distant to the supply chain of workers creating that output.

For this reason a company's mission, culture and purpose have received growing attention in recent years.

Source: ILO (2017): Inception Report for the Global Commission on the Future of Work

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AS WELL AS A SENSE OF ENGAGEMENT WITH OTHERS

Dangers of the Disengaged workforce

Disconnected workplaces have been linked to nearly 40% higher rates of absenteeism, 50% higher rates of bodily accidents and 60% higher rates of avoidable errors.

Further studies have shown that a connected and engaged workplace fosters higher rates of self reported job satisfaction, improved job performance and increase rates of retention.

Workers increasingly recognize the value of an employer which fosters engagement across the workforce. A big part of fostering happiness in the work environment means creating opportunities for meaningful connections between co-workers, even if they do not have operational proximity.

Finally, a recent study on Millennials, who will soon become the largest segment of the workforce, revealed that being connected in an authentic way with peers, colleagues, family and friends was an essential criteria for them when selecting an employer.

Companies rated "best places to work" outperform the S&P 500 Index

Note: Shows the value of $1,000 invested in the S&P 500, and in companies that were rated the best places to work by Glassdoor.

Source: [1].

IZA World of Labor

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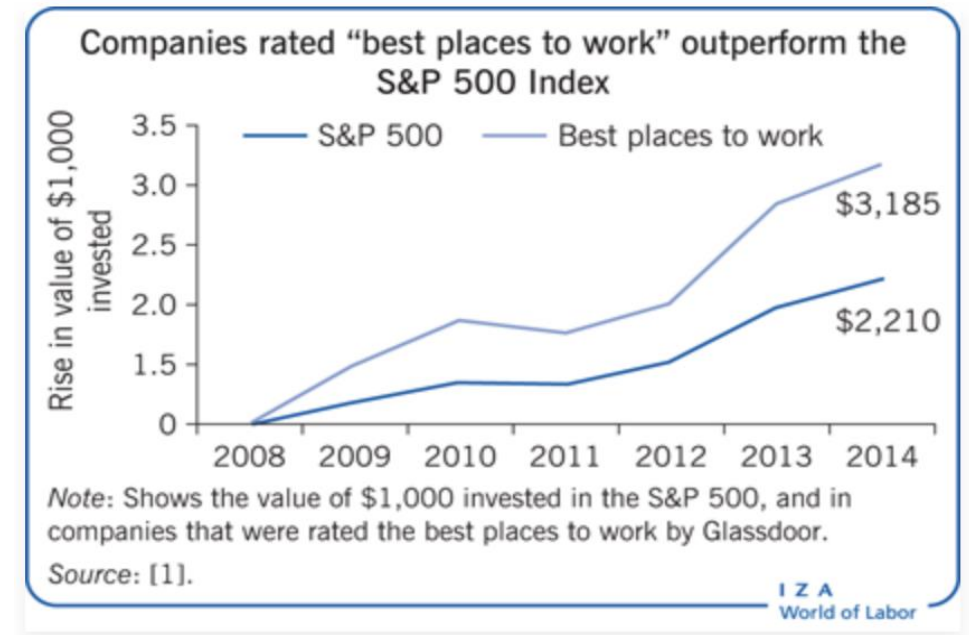
PERSONAL AND PROFESSIONAL GROWTH

People value professional and personal growth

Workers, especially those who are committed to their chosen career path are deeply interested in professional development and becoming an expert in their field. Motivations might come from the respect and recognition that comes from career progression, to the financial benefits that go with it. It might also be that developing individual strengths and feeling capable in the performance of challenging tasks is it's own reward.

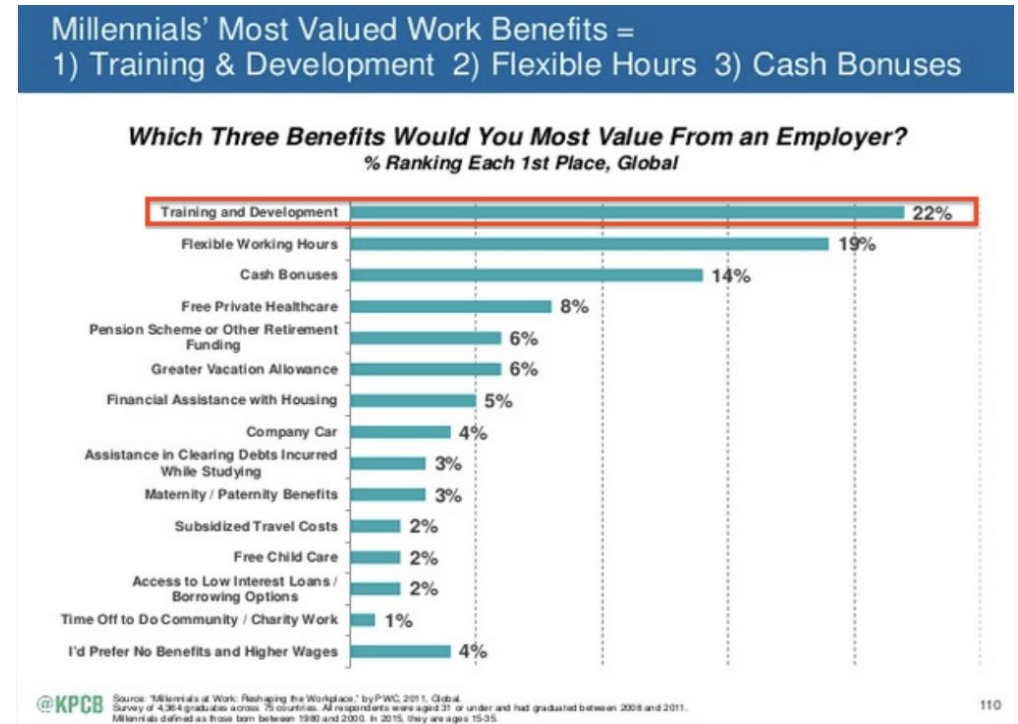Worker morale is also tightly bound to utilization - the feeling that being fully utilized to the maximum potential. Studies have shown that it is demotivating for many workers to be under-used and under-challenged in their work.

Finally, workers increasingly understand that in a world of accelerating technological change, new skills acquisition and development is their best defense against technology disintermediation.

It is worth mentioning that research evidence does not support claims of the attitudes and values of Millennials (those born between 1982 and 2000) at work being different. Differences between generations of workers have existed throughout history and can in fact be attributed to specific ages rather than specific generations. (HBR, CNBC)

Millennials' Most Valued Work Benefits =
1) Training & Development 2) Flexible Hours 3) Cash Bonuses

Which Three Benefits Would You Most Value From an Employer?
% Ranking Each 1st Place, Global

Benefit	%
Training and Development	22%
Flexible Working Hours	19%
Cash Bonuses	14%
Free Private Healthcare	8%
Pension Scheme or Other Retirement Funding	6%
Greater Vacation Allowance	6%
Financial Assistance with Housing	5%
Company Car	4%
Assistance in Clearing Debts Incurred While Studying	3%
Maternity / Paternity Benefits	3%
Subsidized Travel Costs	2%
Free Child Care	2%
Access to Low Interest Loans / Borrowing Options	2%
Time Off to Do Community / Charity Work	1%
I'd Prefer No Benefits and Higher Wages	4%

@KPCB   Source: "Millennials at Work: Reshaping the Workplace," by PWC, 2011, Global. Survey of 4,364 graduates across 75 countries. All respondents were aged 31 or under and had graduated between 2008 and 2011. Millennials defined as those born between 1980 and 2000. In 2015, they are ages 15-35.

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# EMPLOYERS THAT SUPPORT CONTINUOUS OPPORTUNITY

It's not the job today, but the job tomorrow

People increasingly understand that the 'job-for-life' social contract is now no longer realistic or even desirable in the modern world. They increasingly want to work with employers who can provide future opportunities in the mid and long term, beyond their current role.

As job search shifts from an episodic mode of opportunity-seeking in fixed cycles to a more persistent mode of network building and the continuous acquisition, if not acceptance, of new opportunities, the rate of 'churn' for workers is increasing. Workers today are expected to have at least 10 jobs before they reach 40 years old as Millennials begin to dominate the workforce.

The increase of churn is eroding the stigma behind switching jobs. 'Job hopping' - with its attendant connotations of rootlessness and lack of loyalty - is fading away as an accepted term to describe worker decision making.

Employers who are organizationally agile, with low bureaucratic overhead, which facilitates both horizontal and vertical movement of employees, hold a competitive advantage for the recruitment and retention of future talent

Job Turnover 5 Years After Graduation for 2006-2010 Group
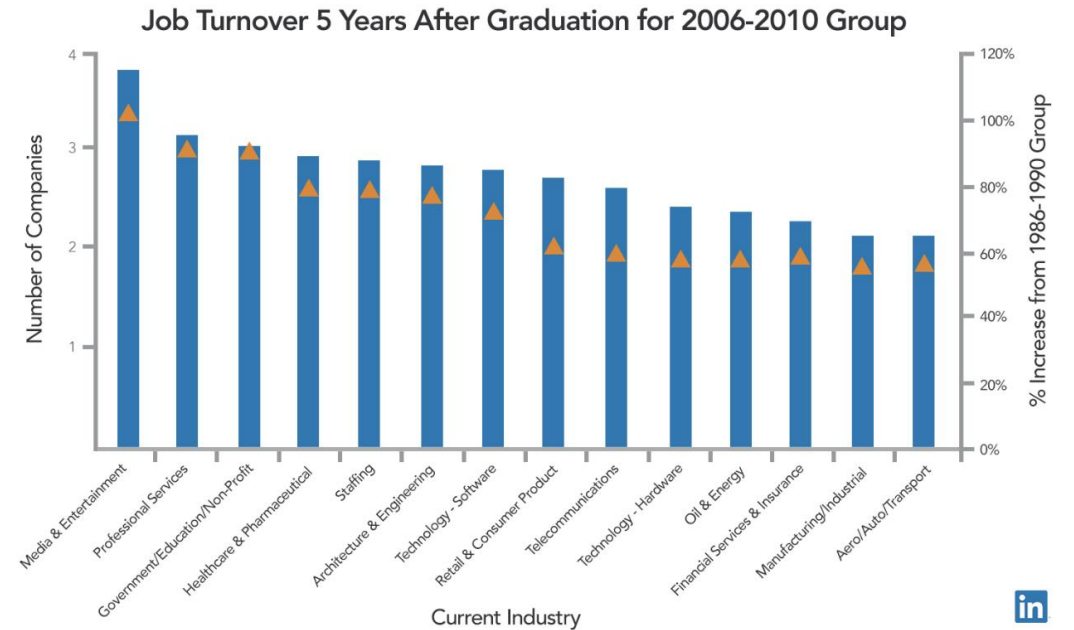
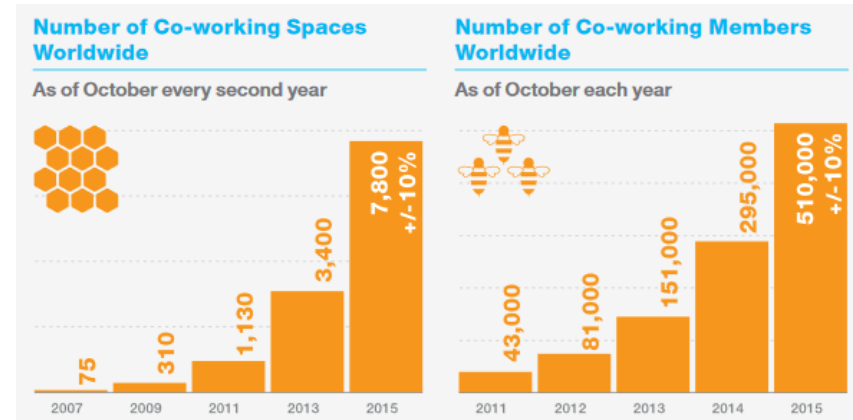# GREATER FLEXIBILITY ON WHERE AND WHEN TO WORK

People are seeking increased flexibility and connectivity..

The rise of the internet, cell- and smartphones, videoconferencing and cloud computing have given rise to a significant movement around telecommuting. Working from home and co-working spaces are its most prominent expressions, and give workers the choice and flexibility to adapt to their respective needs and wishes, from spending more time with family members and reducing unpleasant commuting time, to connecting and working with like-minded people on joint projects.

..but are concerned about work-life balance.

Despite recent progress and international regulations, balancing time between work and private life remains a challenge, especially in developing and emerging countries and for female workers worldwide.

While tech provides greater autonomy, it is also associated with higher levels of work intensity and insecurity. Intermittent work, unemployment and underemployment have profound consequences for the well-being of workers and their families and communities. Developing countries have now ranked psychosocial risks second, after injury and accident prevention, among workplace issues requiring urgent attention (ILO Inception Report on the Future of Work).

Number of Co-working Spaces Worldwide
As of October every second year

Year	Value
2007	75
2009	310
2011	1,130
2013	3,400
2015	7,800 +/-10%

Number of Co-working Members Worldwide
As of October each year

Year	Value
2011	43,000
2012	81,000
2013	151,000
2014	295,000
2015	510,000 +/-10%

Source: Knoll (2016): The Rise of Co-Working

Benefits and Perks

Gap between the percent of employees who say they would leave a job for a perk and the percent of employees who say their company offers that perk

	Employees who would change jobs to have %	Employees who say their company offers %
Flexible working location where you can choose to work off-site full time	35	12
Profit-sharing	40	20
Flexible working location where you can choose to work off-site part time	37	24
Retirement plan with a defined benefit (pension)	51	43
Monetary bonuses	54	47
Flextime	51	44

Source: Gallup (2017): State of the American Workforce

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AND GREATER AUTONOMY ON HOW WORK IS DONE

Autonomy & Empowerment

In the past, traditional organizational cultures have called for strict oversight over how work is performed.

However, studies show work environments that are more autonomous in nature have not only higher job satisfaction amongst the employees, but also better productivity. In Results-Only Work Environments, or ROWEs, employees are empowered to make local decisions on such matters as tools, team collaborators, process and tempo. With management shifting from 'micro-managing' worker tasks to the provision of oversight on the operation and the outputs, workers have the opportunity to deliver the results in a way which they often know best.

Employee autonomy has also shown benefits in employee happiness and consequently, employee retention. Workers who have a greater sense of autonomy naturally accrue responsibility for their work and increasing become more invested in a successful outcome.

"I like agile working as it increases my productivity, creativity and job satisfaction (i have more autonomy in how I work)" (%)

	Global average	APAC average	China	Malaysia	Hong Kong SAR	Singapore
All	81	90	92	92	89	87
Men	81	90	91	92	89	87
Women	81	90	93	92	89	86
18 - 34	82	91	95	91	88	85
35 - 54	81	89	88	92	90	88
55 - 67	79	89	93	100	82	86

"At my employer, we still work in a traditional manner; everyone works at the office during opening hours." (%)

	Global average	APAC average	China	Malaysia	Hong Kong SAR	Singapore
All	68	79	81	77	85	76
Men	68	78	78	74	83	77
Women	67	81	85	79	86	74
18 - 34	71	81	80	80	84	81
35 - 54	67	77	81	72	84	72
55 - 67	61	80	100	78	86	75

Source: Randstad Workmonitor Q1 2018 results

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FAIRNESS WITH COLLEAGUES, COMPANIES AND IN SOCIETY

We all want a fair shake
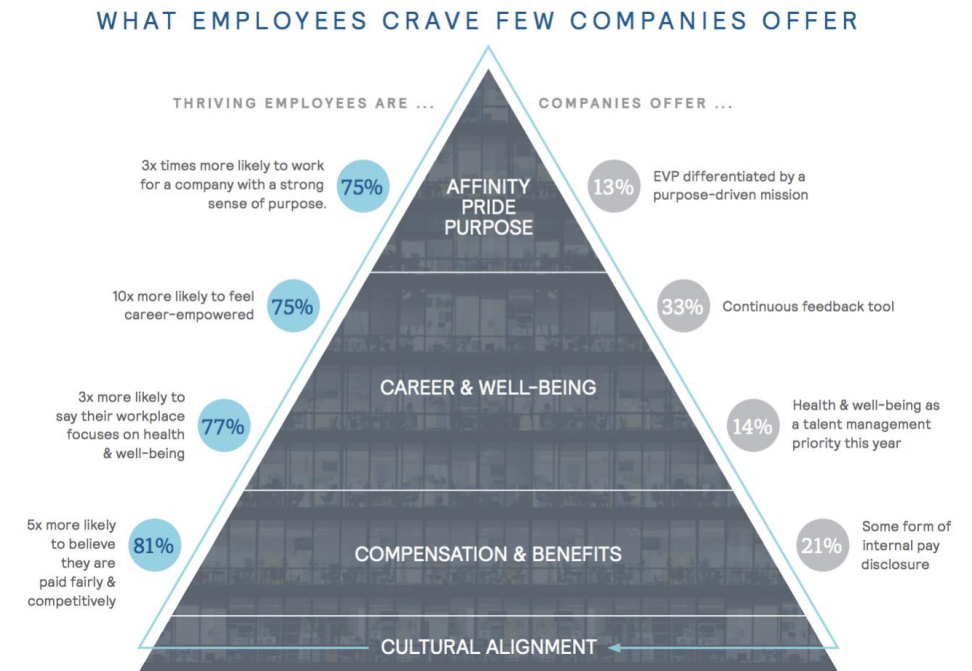
Humans appear to have a hard wired sense of fair play.

From an evolutionary perspective, this predisposition is important for us to be able to help each other. Human cooperation, after all, is based on reciprocal altruism.

We can often forget this in the world of work, where we can mistakenly believe that the economic exchange of wages for labour is the only relationship that runs between employer and employee. In order to cooperate effectively, we must be able to do more - to track input / output and create trust amongst the employees that the system will distribute rewards and penalties fairly.

Employees' perceptions of workplace policies for rewards, pay, promotion, and assignments can be critical to productivity, happiness and even employee health

It is important to note that fairness is a not about giving employees what they want. It is about ensuring transparency in how decisions are made, keeping and maintain common rules, avoiding exceptions, consistent policing of infractions and an inclusive, empathetic approach to new initiatives.

WHAT EMPLOYEES CRAVE FEW COMPANIES OFFER

THRIVING EMPLOYEES ARE ...   COMPANIES OFFER ...

3x times more likely to work for a company with a strong sense of purpose.   **75%**   AFFINITY PRIDE PURPOSE   **13%**   EVP differentiated by a purpose-driven mission

10x more likely to feel career-empowered   **75%**   **33%**   Continuous feedback tool

CAREER & WELL-BEING

3x more likely to say their workplace focuses on health & well-being   **77%**   **14%**   Health & well-being as a talent management priority this year

5x more likely to believe they are paid fairly & competitively   **81%**   COMPENSATION & BENEFITS   **21%**   Some form of internal pay disclosure

CULTURAL ALIGNMENT

Source: Mercer 2018 Global Talent Trends Study

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PEOPLE ARE WORRIED ABOUT IMPACT OF TECHNOLOGY ON SOCIETY

## People worry about the impact of technology on society

Studies indicate that people are more concerned about the impact of technology on society in general, rather than on their own job. Respondents to a study by the Pew Research Center expect inequality and unemployment to rise, and show low confidence about possible positive impacts of technology on people and the economy.

In general, higher educated and white collar workers seem to be more optimistic than blue collar workers about their employment opportunities in a more automated and digital world. Unemployed people and those who already experienced a reduction in pay or work hours or even job loss due to automation tend to be more pessimistic about the impact of technology on their job (PEW, Gallup).

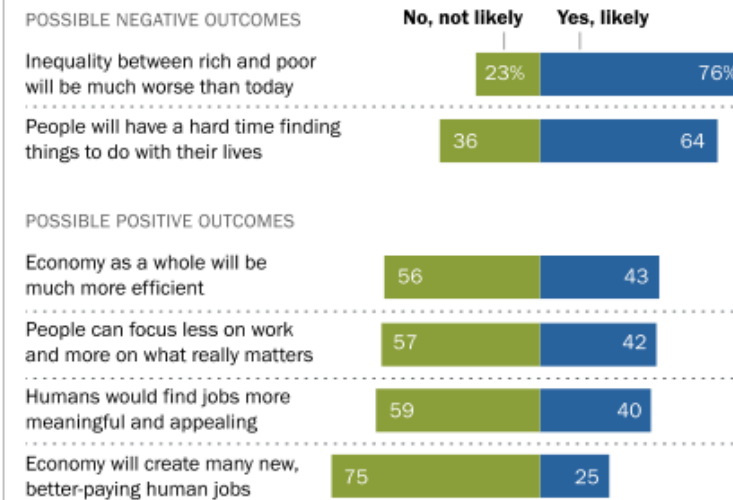**2018 Global Risk Report:**

Top three interconnections:

- Adverse consequences of technological advances
- Unemployment or underemployment
- Profound social instability

Profound social instability

Adverse consequences of technological advances

Unemployment or underemployment
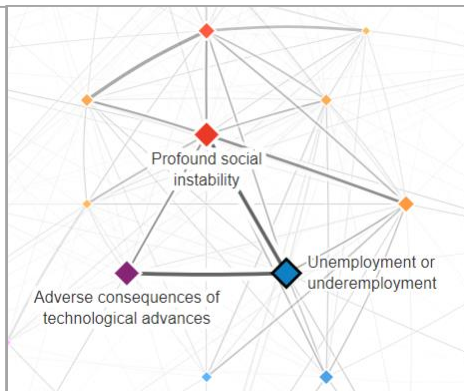
Source: WEF (2018) "The Global Risks Report"

Public expects more negative than positive impacts from widespread automation of jobs

% of U.S. adults who say _____ is likely to result if robots and computers are able to perform many of the jobs currently done by humans

POSSIBLE NEGATIVE OUTCOMES	No, not likely	Yes, likely
Inequality between rich and poor will be much worse than today	23%	76%
People will have a hard time finding things to do with their lives	36	64

POSSIBLE POSITIVE OUTCOMES		
Economy as a whole will be much more efficient	56	43
People can focus less on work and more on what really matters	57	42
Humans would find jobs more meaningful and appealing	59	40
Economy will create many new, better-paying human jobs	75	25

Note: Respondents who did not give an answer are not shown.
Source: Survey conducted May 1-15, 2017
"Automation in Everyday Life"

PEW RESEARCH CENTER

AMERICANS WHO SAY AI WILL ELIMINATE MORE JOBS THAN IT CREATES

73%

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BUT FEEL CONFIDENT ABOUT THEIR FUTURE EMPLOYMENT
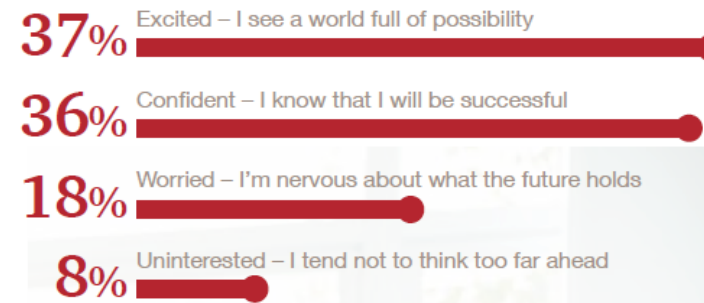
..but many remain confident about future employment

Despite the media attention and myriad of reports estimating how many jobs could potentially be lost or displaced due to advanced technologies, the majority of people seems to be confident about future employment (Eurobarometer, CNBC, PwC, Inc.).

Most of us have extensive exposure to technology in our private lives, and welcome its perks. Technology is viewed by many as assisting our work (vs replacing it) and allowing us to shift our focus to more important, valuable, productive and fulfilling tasks.

In addition to shifting humans to more inspiring activities, automation allows dangerous tasks to be carried out by robots, reducing occupational stress and accidents.

Besides the benefits in terms of making work safer or more engaging, several economies embrace automation to address specific societal challenges like shrinking workforces (Reuters, CNBC) or already have systems in place that help mitigate the impact of automation on people and society (NY Times), both factors that build people's confidence in future employment despite automation.

Figure 1: When you think about the future world of work as it is likely to affect you, how do you feel?

- **37%** Excited – I see a world full of possibility
- **36%** Confident – I know that I will be successful
- **18%** Worried – I'm nervous about what the future holds
- **8%** Uninterested – I tend not to think too far ahead

73% think technology can never replace the human mind.

37% are worried about automation putting jobs at risk – up from 33% in 2014.

Source: PwC (2018) Workforce of the future

AMERICAN WORKERS WHO WORRY ABOUT LOSING THEIR JOBS TO AI

23%

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PEOPLE TRUST BUSINESS BUT HAVE HIGH EXPECTATIONS

People trust business, but have high expectations

Trust in business – as measured in the latest Edelman Trust Barometer – has increased in 14 out of 28 markets, and is playing a crucial role in times of political uncertainties and decreasing trust in government.

More importantly, companies have allies in their employees, who consistently trust their employers more than business in general.

This trust in business is accompanied by high expectations towards business and in particular towards CEOs. 64% say that CEOs should take the lead on change rather than waiting for government to impose it and building trust is regarded as their number one responsibility, beating high quality of products and services; business decisions reflecting company values; and profits and stock prices increasing.

Here again, companies have powerful allies in their employees, regarded as more believable than CEOs, but also expected to speak up if they see their company doing wrong, support their companies causes and community activities, and pressure management to weigh in on social issues.

Speak up if they see their company doing wrong	Support their company's causes and community activities	Pressure management to weigh in on social issues
82%	**80**%	**61**%

based on data from Edelman (2018) Trust Barometer

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Lead.
Transform.
Succeed.
2018.

WBCSD Contacts

Kitrhona Cerri
Director, Social Impact
cerri@wbcsd.org

Davide Fiedler
Manager, Social Impact
fiedler@wbcsd.org