



**World Economic Forum 2019:
Globalization 4.0 - Shaping a Global
Architecture in the Age of the Fourth
Industrial Revolution**



Colophon

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Disclaimer

This text aims to provide an extensive summary a.k.a. overview of the World Economic Forum 2019. Theme of 2018 was “Globalization 4.0 - Shaping a Global Architecture in the Age of the Fourth Industrial Revolution”. In this text we focus on three important themes discussed in Davos: Globalization, Education and Labor markets. As sources, we used the livestreams of all sessions, the articles, papers and reports that can all be found on www.weforum.org. We tried to remain as objective as possible, keeping close to these original sources.

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1 Globalization 4.0

1.1 Globalization 4.0¹

The challenges associated with the Fourth Industrial Revolution² are coinciding with the rapid emergence of ecological constraints, the advent of an increasingly multipolar international order, and rising inequality. These integrated developments are ushering in a new era of globalization. Whether it will improve the human condition will depend on whether corporate, local, national, and international governance can adapt in time.

Globalization 4.0 has only just begun, but we are already vastly underprepared for it. Clinging to an outdated mindset and tinkering with our existing processes and institutions will not do. Rather, we need to redesign them from the ground up, so that we can capitalize on the new opportunities that await us, while avoiding the kind of disruptions that we are witnessing today.

"If I had to select one sentence to describe the state of the world, I would say we are in a world in which global challenges are more and more integrated and the responses are more and more fragmented, and if this is not reversed, it's a recipe for disaster." - António Guterres

The unprecedented pace of technological change means that our systems of health, transportation, communication, production, distribution, and energy – just to name a few – will be completely transformed. Managing that change will require not just new frameworks for national and multinational cooperation, but also a new model of education, complete with targeted programs for teaching workers new skills. With advances in robotics and artificial intelligence in the context of aging societies, we will have to move from a narrative of production and consumption toward one of sharing and caring.

Like the revolutions that preceded it, the Fourth Industrial Revolution has the potential to raise global income levels and improve the quality of life for populations around the world. The changes that are underway today are not isolated to a country, industry, or issue. They are universal, and thus require a global response. Failing to adopt a new cooperative approach would be a tragedy for humankind. To draft a blueprint for a shared global-governance architecture, we must avoid becoming mired in the current moment of crisis management.

1.2 World economic forecast 2019

"What do you like when you're a cross country skier? Good visibility, no uncertainty, you like when it's kind of stable and eventually when it's a little bit downhill – risks down, no hazards along the way. The third thing you like is everybody skiing in the tracks.", Christine Lagarde says.

¹ Klaus Schwab

² The First Industrial Revolution used water and steam power to mechanize production. The Second used electric power to create mass production. The Third used electronics and information technology to automate production. Now a Fourth Industrial Revolution is building on the Third, characterized by a fusion of technologies that is blurring the lines between the physical, digital, and biological spheres.

Sadly, these conditions are not prevalent - prompting the IMF to revise its forecasts for global growth downwards. The latest update to the [World Economic Outlook](#) projects global growth at 3.5% in 2019 and 3.6% in 2020, 0.2 and 0.1 percentage points below last [October's projections](#).

While Lagarde didn't forecast a full-blown recession looming on the horizon, she painted a picture of rising risks as trade tensions, China's slowdown and geopolitical uncertainty all took their toll on the global economy's recent upswing.



1.2.1 Geopolitical Uncertainty

<https://www.weforum.org/agenda/2018/06/david-law-global-futures-3-scenarios/>

The world is still characterized by great uncertainty. Difficult relations with Russia and the middle East -especially Iran- remain to fuel uncertainty. Also, the trade war between the US and China raise great concerns. Will there be a new cold war with China? Probably not: the cold war was possible because Russia's isolation. Today, China (and Russia) are highly connected to the world. Both Chinese and American guests at the forum expressed to be optimistic about resolving this crisis.

1.2.2 The EU

Despite having one of the largest economies in the world, the European Union remains deeply divided. Rampant income inequality poses a key challenge to the economic bloc, and one that it will have to overcome if it is to survive. Obviously, Brexit and its uncertain outcome was often mentioned as a big risk. Remarkably, the topic was not discussed as extensively as you might expect. The opinions are quite in agreement. Europe cannot afford an uncontrollable risk; a deal has to be made or else the EU will be put back years and years. But most people seem to share the opinion that the Brits should vote again on this important topic.



France and the yellow jackets were seen as exemplary for the effects of non-inclusive globalization and should be used as a motivation to make sure that the benefits of globalization 4.0 are shared more equal and that people are not left behind.

<https://www.weforum.org/agenda/2019/01/in-a-world-becoming-more-polarized-europe-must-stay-united/>

2 What should work look like in the future?

Most of the jobs that will be available in 2030 don't exist yet, while jobs that were once reserved only for humans are now being done by machines. What impact will this have on people, businesses, and governments, and how do we reskill societies to manage these dramatic shifts?

2.1 Inclusion: education and Life Long Learning

Digital flows now exert a larger impact on GDP growth than merchandise trade, making it easier for companies to globalize with less capital-intensive business models, yet also opening new digital divides. How can we ensure that digital globalization is broad-based and inclusive? Michael Dell, Chairman and CEO of Dell Technologies notes that countries that are most robotized have lowest unemployment rates so doesn't think technology itself can be blamed for the divide.

He blames a talent and skills shortage, which he says needs to be taken seriously via lifelong training and mentorship. *"All of us collectively can do quite a lot to create opportunities so everyone can be included in this growth,"* he says.

It is important to re-skill the existing workforce so that skills sets can be effectively matched to jobs Important to re-skill the existing workforce. Important to match skill sets to jobs.

"We have to be re-skill, re-skill, re-skill. This is not one and done. It needs to be continuous," - Keith Block, Co-CEO Salesforce

The World Economic Forum advises that Life Long Learning must become a global entitlement; a fundamental right, as an extension on the right on education

We are in an education crisis; people are not learning what they need. To be able to reskill people we need to radically change our educational systems. (Paid) apprenticeships and close co-operation between businesses and schools have proven to be successful elements in this field.

there are a whole set of human skills that are going to be important in the future. The ability to interact with clients, global skills, when it comes back to digital, it's not just knowing how to code, it's how to use technology. Complex problem solving, agile thinking, things computers are not going to take that away any time soon.

EU countries have the best conditions for the needed upskilling (Switzerland #1 in the world). The central question is: how do we create true Life Long Learning?

2.1.1 Changing our educational systems

We need to change the fundamentals of our educational systems. We now mostly learn general knowledge from which we need to derive specific skills. However, the other way around is much more effective: learning specific skills (apprenticeships!) first and then abstract general knowledge from it.

Note that when you say that we need to reskill, you already assume that we started to skill in the wrong way.

Our educational systems have to shift from access to knowledge (which, today, can be done with the touch of a button) to focusing on the question what you can do with it

It starts at the early childhood; children are natural learners. They learn by playing and have a natural curiosity. These are fundamental for creativity and innovation at a later age. We need to stimulate this much more, also at a later stage of life. Instead of pushing children to become adults, we should stimulate adults to be more like children.

It is fundamental that we learn our youth how to learn – more specifically; not to lifelong learn. The key to do this is, of course, to make sure learning is fun. This means to avoid working with instructions and restrictions. We don't need people who follow orders; we need people who are creative, who can solve problems, who can work together well with others and who know something about programming.

Our schools learn us how to pass tests. But nobody will ever ask you: "solve this problem for me, but don't talk to anybody, don't use books or look on the internet for information!". Unfortunately, schools are still funded by how well their students perform on these tests. Especially test on content that hasn't fundamentally changed for over a century.

It is vital that we create learning environments that stimulate creativity and curiosity. Not only to teach our children the right skills, but also their teachers and ourselves because we all need these 21st century skills.

2.2 Who should pay for the reskilling revolution?

AI will replace masses of jobs but also create many others. That could happen in 1 of 2 ways. Either younger workers move into the new jobs, consigning older workers to the scrapheap. Or those existing workers can be reskilled.

A [new report](#) looks at the cost of reskilling workers displaced by the Fourth Industrial Revolution. But, as the data shows, if it's all left to employers, there'll still be a long way to go.

The report's conclusion is encouraging. It found that 95% of the 1.4 million US workers who are expected to be displaced in the next decade can be transitioned to new positions with similar skills and higher wages. But the total cost of reskilling all these workers is \$34 billion - an average of \$24,000 per displaced worker. So, who will pick up that bill?

Businesses need to weigh up the expenditure of redundancy pay and the cost of recruiting, along with the loss of productivity during the retraining period and the impact on staff motivation of any job losses.

For the government, the cost of not reskilling someone must be weighed against welfare payments, the missed opportunities of tax revenue and the wider societal implications of a loss of wellbeing. The report develops a model to weigh up these costs. The model shows that, with an investment of \$19.9 billion, the US government could reskill 77% of workers with a positive cost-benefit balance.

When it comes to the private sector, an overall investment of \$4.7 billion could reskill 25% of all workers in disrupted jobs with a positive cost benefit balance.

And - if public and private sectors worked together to ensure economies of scale and multi-stakeholder initiatives, those figures could be improved even further.

The transition towards a skilled workforce on the short term, will be ugly; it requires great speed, effort, resources and we started to late. We still react in “3.0 ways”

2.3 Inclusive access to technology

Ensuring financial inclusion is critical, and digitization can aid in ensuring this. It's important to open up the financial system to traditionally marginalized people and the opening up of technological access is key to achieving this. Poorer communities need access, especially as there is high creativity and entrepreneurship in such communities. Rising digital inequality is as dangerous as rising income inequality, which has become clearer as unrest around the world grows due to widening resource gaps.

While there's a digital divide, technology has made a significant contribution to society. We shouldn't overlook the role technology is playing to enable small and medium enterprises to scale up rapidly. This has also proven beneficial to women and other marginalized groups.

Digital equality in many ways is easier to solve than physical divides like ensuring access to clean drink water, globally.

2.4 Inclusion of Women

The future of work can create as many as 58 million new jobs. With adequate reskilling, 95% of the most immediately at-risk workers in the US would find good-quality, higher-wage work in growing job families. How can we ensure that women are appropriately represented in growing roles and sectors in the future?

<https://www.weforum.org/agenda/2018/12/glass-ceiling-cliff-women-leadership-fix/>

Women's participation is 20% less than men in labor markets at a global level. The fastest way to generate additional economic growth would be to include women in the workforce at all levels.

Women are particularly underrepresented in technology space, and there were many more women in this sector in the 1980s than there are today.

AI and machine learning are becoming fundamental to how all technology is built, when one considers phones, banking and many other products and activities. It's important, as we go forward, that we are designing and building that tech in the right way. Many algorithms are biased because they were designed and built by white males.

2.5 Inclusion of people with a disability

There are 1.3 billion people in the world currently living with a disability, both in visible or invisible form. People with disabilities are among the most marginalized populations in the world; and often deprived access to employment. 80% of disabilities are acquired between the ages of 18 and 64 – the workforce age. According to the ILO, the cost of exclusion of people with disabilities represents up to 7% of GDP in some countries.



With higher revenue, a strong company culture and brand, a disability-inclusive business strategy promises a significant return on investment.

Only business has the power to tackle this big problem. What are actions that business leaders take to recognize the value and worth of the 1.3 billion people living with a disability? The biggest challenge for business leaders is to talk about it with confidence and put it on the agenda.

If business includes people with disabilities, so will society. To develop a solution to this important topic, a new campaign holding business leaders to account on disability was launched in Davos: [Valuable 500's #Diversish](#) The campaign aims to release the social and economic potential of the 1.3 billion people around the world who live with a disability.

3 How do we make sure technology makes life better not worse?

Are we mastering technology, or is it mastering us? As the lines between privacy, identity and security become increasingly blurred online, how do we ensure we maximize the benefits of future technology without suffering its consequences?

3.1 Conditions for a better life with technology

In 2019, a lot of technology is reaching an important tipping point. Especially AI, Blockchain and the implementation of 5G networks. 5G will decentralize computing, data and digital services. This will result in a new focus on local economies. Therefore, it can/should be used to positively influence populists who are anti globalist.

<https://www.weforum.org/agenda/2019/01/here-s-how-5g-will-revolutionize-the-digital-world/>

All these new technologies will greatly impact society as we know it. To make our lives better, it should comply to a few demands and conditions:

1. It should be **inclusive**. Open to all and making use of the power of diversity. When designing goods and/or services, we should always start with inclusion in mind. If not, the product will exclude a lot of people; with a disability, but also left-handed people, etc.
2. The workforce is not yet ready for it; there is a great need to **reskill people**. New technology could and should aid in this
3. It needs to be **sustainable**. Where globalization 3.0 resulted in ecological disasters, 4.0 should be sustainable if it wants to be accepted by the masses.
4. It should create and sustain **trust**: trust in that it does not compromise our democratic processes, respects our privacy, is secure (against theft, fraud, etc.)

If globalization 4.0 and the technology that accompanies it complies to these demands, it can become a positive narrative. Globalization 3.0 does not have this positive image, in spite of the fact that it lifted a lot of people from poverty. In absolute numbers; we have less people living in poverty now, than 100 years ago, even though the world population is 7 times bigger.

3.2 Healthcare

The cost of poor health could reach 15% of GDP in advanced economies by 2050. Global spending on health will almost triple from \$9.21 trillion in 2014 to \$24.24 trillion in 2040. How can policymakers and health providers get better at preventing illnesses before patients arrive at the hospital door?

Prevention is better than cure. The world will be home to nearly 9.7 billion people by 2050, putting unprecedented stress on healthcare resources. Technology will help. But people also need to be motivated to lead healthier lives.

One of the biggest impacts of new technology - and perhaps the most life-changing - will be felt in healthcare. Diagnosis of illness will be fast and efficient, and medicine will be

highly personalized. Wearable technology will be the norm, and we'll know we are sick before we even get a single symptom. Meanwhile, new drugs will come to market at breakneck speed as clinical trials get faster and more accurate.

<https://www.weforum.org/agenda/2019/01/the-pharmaceutical-industry-must-be-a-driver-of-change-in-the-digital-era/>

3.2.1 Mental health

One in four people will experience mental illness in their lives, costing the global economy an estimated \$6 trillion by 2030. The biggest mental health problem in the world isn't depression, as you might expect: [it's anxiety disorder](#), which affects an estimated 275 million people worldwide. Companies have to create a mentally healthy and mentally friendly environment. A company can define it how they want and should take steps to deal effectively with depression in the workplace but there are a few basic principles: You need a peer program in place, you must have clear policies of non-discrimination and parity and if somebody takes a break for mental health-related issues and comes back to work there must be no discrimination.

3.3 Freedom of speech and defending the truth

The trust in our democratic institutions (the free press, among others) is actively being attacked. A healthy democracy is built upon a common view and element of this view is that you can't choose your own facts. Opinions as facts and facts as opinions are very dangerous.

With the declining trust in facts, trust in science and technology is also damaged. The dangers are multiple (anti-vaxxers, rise of populism, polarization, etc.). We should educate people better to recognize facts and fake news and the value of scientific knowledge. This education must take place at a very early age. The scientific community also has a duty to build a new narrative and engage in a continuous dialogue about what they are doing. They should also invest in good PR and advertising to explain their research to the public.

4 How do we create a fairer economy?

Rising middle classes in India and China have felt globalization's benefits, but there are still hundreds of millions of people living in conflict-ridden states who have been left behind. How do we create a global economy that works for the 99% and not just the fortunate few?

4.1 What should leaders do

1. Make sure to have a higher purpose, People come to your organization for its purpose, they stay for its culture. Be sure to make it measurable and make management and leadership accountable for it.
2. Invest greatly in (re)skilling people. The focus shifts from hiring people to reskilling them, because the global talent pool is limited. 1&2 are no. 1&2 on the list of demands by young people so these two points are extremely important to get and to keep new talent.
3. Focus on diversion/ inclusion; there is a lot of unused potential to be won here.
4. Technology is the baseline for winning (businesses should be intelligent; using data to really know your customer and provide him with innovative solutions and being completely transparent on how you use this data.

<https://www.weforum.org/agenda/2019/01/ceo-priorities-for-success-in-2019/>

Leaders have basically two crises: a trust crisis and a skills crisis. Although trust is at an all-time low, companies are being trusted more than governments –people especially trust their managers and their CEO's. This means that these CEO's have a responsibility to get involved in the dialogue with people and their governments; taking care of their employees.

To rebuild trust, it is vital to have a higher purpose and a strategy that involves all stakeholders. As a company you have to live according to this purpose and guard your brand accordingly. This is not only the right thing to do, but also more and more demanded by (potential) employees, customers, and other stakeholders.

Millennials are loyal to ideas, not to brands. As employees they want a unity between "making a living" and "contributing".

When asked if technology will make your life better, people are divided: about 50% says yes, 50% says no. We must make technology much more inclusive to gain more trust. You will not convince people of its benefits when their jobs are being taken away by it. We have to focus on (re) skilling people and hire people based on their skills or ability to learn them and not focus on top talent. The majority of the skills we need can be done by the majority of the people.

4.2 Redesigning our Social Systems

A lot of people don't receive the benefits from their hard work. To counter social unrest and populism, we must at least make sure that the social system is very good We should not protect jobs, but we need to protect people who cannot keep up with a social system

World Economic Forum 2019: Globalization 4.0 - Shaping a Global Architecture in the Age of the Fourth Industrial Revolution. An overview

that prevents people to fall below the poverty line We need to share the economic benefits more equally and create equal opportunities for everyone.

First, we need to (re)skill people in a way and on a scale that we have never seen before. People need to be (lifelong) educated and provided with access to technology. Second, we need to rethink our social contract. Possible elements of this new social contract are implementing adjustments for redistributions, a fixed income (quite expensive; 6,5% of GDP, fits developed countries), gradual taxation (better for developing countries). The advantage of a fixed income is that it provides a large sense of security. A sense of security is very important for the (mental) health of people and directly influences their productivity and creativity. Also, it supplies people with a basic sense of (republican) freedom.

Our current unemployment services (which costs billions) fail in 66% in helping people to a new job. This is because they are designed more than a century ago, to better distribute the benefits from the first industrial revolution.

- They do not fit with the challenges and problems of today. For example, 8 out of 10 jobs are not advertised but come from social networks. Without such networks, it is very hard to get a job.
- They do not fit our modern social structures. For example, they still assume that woman remain at home most of the time.
- They do not fit new kinds of inequality and poverty. For example, the lack of a good network.

Modern social systems should no longer be designed at the top and rolled out. Instead, people should be in the center of the design. Work in small groups; ask people what they really want and who they need to make this happen. With the use of technology, you can bring people together in networks and help them to help themselves. We need to develop the capabilities for this (networking, helping others, etc.) This way, you can replace social systems that only come into action when it is too late.