The interconnected future:
megatrends for work, collaboration and communication in 2040
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About this research

*The interconnected future* is a report from Economist Impact, commissioned by Cisco Webex, exploring key global trends for the next 20 years and their impacts on the world of work, collaboration and communication.

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Introduction

The sudden and shifting global landscape of the past few years has accelerated decades long transformations in work, communication and collaboration, and has catalyzed a renewed sense of possibility for a world that looks much different from today’s. A new, digitally native generation of highly skilled workers have battled recessions and layoffs to enter the workforce almost completely online, while veteran workers saw the ways in which they communicated and worked transformed completely. The question of how to use the present moment of flux to establish a better future looms large for policymakers and business leaders alike.

This Trend Report aims to provide a launching point to examine this future. Looking towards 2040, it offers a brief overview of current and forthcoming drivers of major change, all with the potential to reshape society. These trends are not exhaustive, but reflect important global forces. They encompass a wide array of topics that are infrequently presented as a unified and interconnected system, spanning global demography; geopolitics and macroeconomics; social services and governance; climate; automation, jobs and education; corporate responsibility and worker power; and connectivity and interaction.

These trends will form the cornerstones of four potential futures for 2040, to be published in the coming months.
Rapidly aging populations in high- and middle-income countries, along with unequal projections for population growth, have significant implications for workforces. At the same time, inter-state migration is on the rise, and urbanization is accelerating worldwide. Businesses will want to take advantage of growing markets—for customers, suppliers, partners and talent—in new corners of this more-metropolitan world.

Global population growth is slowing, according to the UN, albeit unevenly. More than half of the world’s population growth between now and 2050 is expected to occur in Africa, offering a burgeoning labor pool, while Europe’s population is projected to shrink. In addition, the amount of older people (65+) around the world is rapidly increasing, and by 2050 two-thirds of this cohort will be living in low- and middle-income countries. Developments in biotechnology have implications for increased life expectancy as personalized treatments for diseases such as cancer continue to evolve, although there are serious risks that these developments will not be accessible to many. Regardless, the speed of global aging has myriad global ramifications and will be particularly important for the labor markets in many countries as workforces gray. Migration is a commonly proposed strategy for addressing such concerns.

Around the world, people are on the move in greater numbers than ever before, marked by an increase of 51 million international migrants between 2010 and 2019 to a total of 272 million. Destinations vary, and political and social tensions frequently accompany these movements. Yet, broadly, there is a positive consensus: the majority of civilians in migrants’ top destinations say that immigrants strengthen their countries, according to Pew. This consensus likely reflects the powerful boon migrants offer the workforces of their new homes.
Nearly two-thirds of the world’s migrants live in just 20 high-income countries and typically make up a larger proportion of working-age persons than national populations. These workers contribute to the economies of both their chosen and home countries, often via remittances in the latter case. While remittance flows plummeted during the early pandemic, they continue to comprise an important form of global redistribution. According to Indhira Santos, global lead for labor and skills in the Social Protection and Jobs Global Practice at the World Bank, current remote working trends could also open up new opportunities for countries to become intermediate or regional hubs for skilled workers who may not be able to migrate to their chosen final destination. In addition, she states, “maybe there is a world where it’s not necessarily migration from low income or middle income to high income, but also more migration within regions for example,” citing the case of Kenya in Africa.

By 2050 close to three-quarters of the world’s population is projected to live in cities. While this turns cities into major drivers of economic growth and could support global decarbonization, this shift has significant implications for infrastructure and quality of life, presenting challenges in housing, transportation, homelessness and inequality. Smart urban planning will be more important than ever, and the growth of cities will offer new opportunities for reimagining local (and “hyperlocal”) communities, forms of urban collaboration and business.

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Massive relief programs have helped to keep the worst economic impacts of the pandemic at bay in much of the world, but rising geopolitical and global economic tensions create long-term risks for economies and jobs. In addition, the very nature of globalization is in question, as the US's economic prominence recedes and nations turn towards self-reliance in the name of economic security. This could unlink international value chains and spur near-shoring.

The pandemic fundamentally altered global economies. Governments around the world stepped up relief programs to offset unemployment and recession, but pandemic losses in GDP are yet to be recouped. At the individual level, rapid inflation is shaking confidence and renewing questions about fair worker compensation. Wage increases have not been significant enough to compete with the soaring costs of goods and services during the pandemic, and in the US real wages have declined over the past year once inflation is factored in. Globally, the International Labor Organization found that even in countries where unemployment did not increase significantly, average wages remained stagnant or declined as working time and nominal wages were reduced. Decades-long growth in the "global middle class" has petered out. Taken together, these trends suggest a growing tension between businesses and workers. Amid this friction looms a fear of the next financial crisis and accompanying layoffs.

**Geopolitics and macroeconomics**

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Shifts in geopolitics further complicate this landscape. As the US’s global influence recedes, experts hope to predict how power will be rebalanced globally—and who will step into the void. When it comes to China’s relationship with the world, it remains clear that economic interdependence will persist due to deep trade and investment ties. However, China’s path forward remains murky, and the country’s bid towards greater self-sufficiency has implications for how businesses are able to use data, as well as trade and acquire raw and intermediate products, all of which could impact global supply chains, workforces and communication. Meanwhile, Russia is taking aggressive measures to re-establish its sphere of influence by invading Ukraine, testing the resolve of NATO and other Eastern European nations in the process.

At the same time, global markets are shifting. Firms’ ability to set prices within competitive markets may be increasing in many high-income countries, which can create undue power for top employers in the long run, but the market concentration observed within many countries could also be a result of more robust international competition. Inequality is particularly worrying, with income disparities and a lack of opportunities increasing for over 70% of the world’s population in recent years.

The entire nature of globalization seems to be in question: even its advocates have recognized “widespread support for controls on cross-border economic flows” in the wake of border closings and nationalist policies during the pandemic. It is unclear if this bias towards self-reliance (also known as autarky) will persist. Yet this isolationist trend comes at a time when “coming governance challenges are increasingly globalized”, according to Anna Ohanyan, professor of political science and international relations at Stonehill College, raising questions around the willingness of international actors to collaborate in order to address future challenges. The shape of these forces will ultimately have enormous ramifications for who does what work, and where.
National efforts to promote living standards and equity have taken a backseat to crisis response. Much of the progress made towards gender equality in high-income countries has been reversed, while an increased focus on healthcare and racial equality creates questions for the future. Ongoing policy approaches that promote and value care work will be particularly important for creating inclusive economies.

There are reasons to be hopeful about long-term trends in global living conditions, which remain better than at any point in history, but there is much more progress to be made when it comes to effective social services and governance. Innovation has taken a backseat to crisis response, further stalling the ability of governments to formulate forward-looking, rather than reactive, policy. These questions around the future of living conditions—which are especially significant with an increased demand for remote work—create uncertainty for employees.

Universal healthcare remains one of the UN’s Sustainable Development Goals and is critical to the World Bank’s goals of “ending extreme poverty and increasing equity and shared prosperity”. Around 100 million people per year are pushed into extreme poverty because of healthcare spending—a trend that has significant implications for longevity, people’s ability to work, and quality of life in many emerging markets, but also the US, where access to healthcare is often tied to employment.
The movement for gender equality is struggling to make significant progress, especially in the wake of the pandemic, which reversed much of women’s workforce gains made in high-income countries as a record amount of women were forced to leave their jobs. Women’s advancement and representation have plateaued in many areas, as they remain underrepresented in leadership roles and the workforce writ large due to discrimination and the restrictions of unpaid domestic work. Global approaches towards issues of gender equity in the coming decades will have enormous ramifications for economies and labor markets.

So too will approaches to “women’s work.” While this work (such as cooking, cleaning, or caring for children and the elderly), typically performed by women, is not assessed as economic activity due to its devaluation by a patriarchal society, it is estimated that if compensated it would contribute anywhere from 10% to 60% of countries’ GDPs. There are increasing calls for governments to find more adequate ways to compensate or subsidize workers for this labor, or to create better systems entirely so caregivers don’t have to drop out of the workforce.

Meanwhile, global strategies of alliance building, evidence gathering and progress monitoring for gender equality are also being applied to strategies for racial equality as businesses grapple with a reckoning around their discriminatory practices; powerful global movements over the past years have spotlighted the need for reform in a constantly diversifying world.
Climate

The threat of climate change weighs heaviest on people who are already marginalized and underserved as governments continue failing to act in the face of extreme and increasing weather disasters. Climate-induced migration will intersect with urbanization to shape future centers of commerce and power. Businesses and individuals are faced with questions of responsibility in the absence of a co-ordinated global effort, and the risk of climate-induced global economic contraction remains high.

Climate change looms over the future of economics and public infrastructure. The Economist Intelligence Unit estimates that climate change will trim 3% off global output by 2050, with more drastic forecasts predicting that the global economy could lose 10-18% of its total value by the same year. Any decline in the global economy will have enormous ramifications for workers. Poorer nations, which are far less responsible for the historical emissions driving climate change, are predicted to suffer disproportionate losses, further burdening economies less prepared to take the hit. Those most affected reside in the Global South, and the most vulnerable populations are those already in overburdened, underserved and economically distressed communities, marking climate change’s propensity to exacerbate existing inequalities.

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The number of cities exposed to extreme temperatures is expected to roughly triple by 2050, by which time 800 million city dwellers will be at risk from storm surges and flooding. As countries continue to urbanize at record paces—which is necessary for job acquisition—these weather events have significant implications for individuals’ quality of life and where they choose to relocate.

Strategies for the future remain murky, as decarbonization commitments remain far short of needed targets and global debates over how to reduce greenhouse gas emissions continue. Decarbonizing the power sector will require a co-ordinated, multi-faceted approach. Developing countries must be better integrated into future frameworks, as their energy consumption has skyrocketed in tandem with population and economic growth. These countries are faced with the question of how to use energy in a way that guarantees both their economic growth and sustainability. Meanwhile, businesses are faced with questions of responsibility to local communities and the environment in the absence of major national or global changes. At the same time, stakeholders must also grapple with adapting to climate change, a task that will require considerable, co-ordinated effort and investment given current emissions trajectories.
Rapid technological advancements, including artificial intelligence (AI), will reshape the future of jobs. There may be less risk of job destruction than many pundits claim, but jobs will transform nonetheless. As industries shift, there are significant implications for necessary upskilling and new educational models that will allow people to remain competitive in the face of changing employment landscapes.

Even if the promised tsunami of automation never hits, the tide continues to rise. The bleeding edge of AI keeps advancing, with new technologies and multi-modal systems—those that can receive or output multiple kinds, or mismatched types of data—advancing. A future with self-learning AI could be around the corner, but even if it is not, using automation to perform basic tasks will continue to become mainstream, as will the importance of human-AI collaboration in the workplace. In general, as coding becomes more streamlined and accessible over time, all types of users will be able to develop software using simplified tools.

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other innovations across the world of work, like additive manufacturing technologies that offer to simplify and streamline manufacturing processes, and contribute to the long-term streamlining of global manufacturing processes.

However, there are good reasons for cautious optimism. New evidence offers hope that predictions of widespread automation-driven unemployment may have been unwarranted, but reaffirm that worker transitions will grow increasingly commonplace. This has been a historical trend, as new technologies often help meet pent-up demand and create new jobs rather than eliminate them. Thus, even as automation leads to shifts in the types of jobs available, entrepreneurs and entrenched business interests will undoubtedly develop creative new services and products, and improvements to existing ones, to establish roles that might be unimaginable now. Advances in networking and broadband such as 5G (and soon 6G), quantum technologies, immersive virtual reality (VR) and augmented reality (AR), blockchain and cryptocurrency, and new biotechnology (such as gene editing), to name a few notable emerging technologies, will likely play a part in creating these new fields and jobs.

New jobs demand new skills, though. In addition to advanced technical abilities, soft skills and the types of integrative, cross-cutting and creative thinking beyond the reach of machines are set to become more prized. Workers who find their skills outmoded will have to retrain, which calls for new educational models, more funding for retraining and sensitivity to the difficulties of career shifts. Global primary school enrollment has stalled, and there are long-term warning signs that the level of learning in primary schools is at risk. Much attention will be needed on primary, as well as secondary and tertiary education to ensure future populations are ready to embrace new jobs.

All advancing technologies—not simply AI—are likely to pose challenges for policymakers, who must strike a hard-to-reach balance between proactive and reactive approaches. In the former, policymakers risk missing the mark and stifling innovation while providing only limited benefit to citizens. In the latter, the unique contours of new technologies may become more evident, but it may be too late to avoid harm.

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Corporations are faced with questions of responsibility to both their workers and society at large. There is increased pressure for a better quality of life as workers and employers alike begin to question the inequalities and failings of existing systems amidst recent shifts in the structure of work. All these forces have renewed calls for a more comprehensive reimagining of the standard relationship between employers and employees.

The sudden shift in working patterns at the pandemic’s onset placed a spotlight on the relationship between employers and employees. Corporations aiming to attract top talent are expanding their focus on employee wellbeing, fearing labor mobility and disaffection, although it remains to be seen whether this focus on employees will persist within less-competitive labor markets.

For private- and public-sector organizations of all shapes and sizes, issues of diversity, inclusion and equity in the workplace have become prominent. If this trend persists, it will shift the composition of the global business class and influence corporate strategy. It may also lose steam and peter out, revealed to be little more than lip-service. This is true as well of the broader environmental, social and governance (ESG) concerns that are beginning to play a more important role within corporations and global financial markets. An enormous body of evidence demonstrates that...
ESG efforts likely offer significant benefits for firm performance—or, at worst, are neutral. In the past decade, there has been a fivefold increase in corporations mentioning “ESG” in earnings calls, and over 90% of the world’s largest companies now report their ESG performance.

Given the pandemic’s impact on remote work, all signs indicate that we have passed a point of no return regarding traditional notions of the office. According to Economist Impact research, the rate of fully in-person work has dropped by over half globally among knowledge workers. While worker demands for autonomy will remain robust, with over two-thirds of knowledge workers currently hoping for more work flexibility of location and hours than their organization is planning on providing, accedence to these demands will be contingent on persistent productivity and profitability. These will combine with the already in-progress shifts towards non-standard forms of employment, such as gig and temp work, to fully reshape the link between employers and employees, as well as relationships between employees.

Governments are also reconsidering their citizens’ ties to the workplace, hoping to balance the seemingly (but perhaps not truly) competing interests of productivity and competitiveness with wellbeing. This is most evident in the revived focus on shorter workweeks, now being reinvestigated across Europe and North America, and implemented throughout Iceland after a successful trial of a four-day week. Proponents are hopeful that these policies could be a manifestation of the nearly century-old claim that growth should render upon society an era of increased leisure.

Finally, as the global share of income that ends up in the hands of workers, rather than investors, creeps downward over the years, stakeholder of all kinds are imagining what it might look like to better support workers, whether through new policies around taxation and distribution, worker organization, or new corporate ownership structures.
Rising internet access along with increasing speed and availability through next-generation technologies (such as 5G and the Internet of Things, or IoT) offer promise for improved quality of life and global community. However, these innovations also raise new concerns regarding cyberattacks, mass surveillance, digital barriers and disinformation/misinformation. They will also redefine our relationships with technologies, for better or for worse.

According to UN estimates, over 60% of the world’s population now has internet access, roughly double from ten years prior. This leap in connectivity is reshaping society, opening once-isolated locations and people to a range of new opportunities for employment, services, education, leisure and more, promoting inclusion and human rights. Growth trends in connectivity remain steady, but last-mile challenges threaten to slow this growth moving forward. For instance, the number of people around the world without electricity access is estimated to have risen by 2% in 2021, largely thanks to electrification challenges in Sub-Saharan Africa. These challenges are particularly worrisome given persistent gender divides in internet access and a higher rate of reliance on the internet for services such as education in low-income countries, despite poorer quality of internet access.

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For those who do have access, next-generation connectivity (5G and beyond) and the growth of the IoT are poised to revolutionize the way that we connect with physical objects, and how they connect with one another, increasing both the number of interlinked objects and the volume of data that flows between them. The large-scale use of 5G portends changes in connectivity, upgrading the speed, reliability and efficiency of communication across nearly all sectors. It’s not only our objects that will find new ways to connect, but also ourselves. Vast new pools of capital are flowing into the so-called metaverse and Web 3 technologies, set to establish immersive new digital experiences. A range of AR and VR tools, motion sensors, haptic devices (which work through touch) and even burgeoning brain-computer interfaces may redefine how we interact with our digital environments and one another in all realms of life. Ultimately, the extent to which this explosion in connectivity and interaction becomes a global boon rather than another driver of inequality will be closely tied to trends in global connectivity.

Regardless of who is able to participate in this great connectivity boom, it carries serious risks. Cyberattacks have jumped in frequency, scale and impact as connectivity spreads and the physical world intermeshes with the digital. Internet freedom and digital trade could deteriorate if governments rush to entrench control over their populaces rather than embracing openness of ideas. Ubiquity of devices could come to mean ubiquity of surveillance, especially as more sophisticated AI-based signal processing arrives in tow. More sophisticated channels will spring up, through which bad-faith actors spread misinformation and disinformation—only 44% of respondents in a global survey from Reuters say they trust news most of the time. A rise in misinformation and disinformation could also throw fuel on the fire of an already escalating debate around intermediary liability (the extent to which digital platforms and content providers are responsible for their users’ posts).

While our devices and interfaces promise to improve quality of life, they threaten to estrange and distract us from the messiness of the non-digital rather than allow us to more deeply engage. Joanna Zylinska, professor of media philosophy and critical digital practice at King’s College London, believes current thinking on AI overlooks this aspect of the human-technology relationship. She notes that “there should be more exploration of the ongoing reconfiguration of human modes of thinking and human perception by computation.”

Even as a connected, open, thriving and engaged trustworthy version of the future is foreseeable, so too is one that is limited, walled-off, surveilled and enervated.
Looking ahead

**The future rests on a knife's edge.** It is not out of reach to envision a world where, with co-ordinated effort, global inclusion and equity drive economic growth and thriving international and local communities, amid new and enriching uses of technologies and collective, robust efforts to combat climate change. So too is there a clear future where good jobs become more scarce; lack of access to essential services magnified; and communities and individuals more isolated, fearful and threatened as a small coterie of global elites further consolidates power and wealth. These seven megatrends pose significant uncertainty and will shape where, how and with whom people around the world work, communicate and collaborate.

In the next report in this project, Economist Impact will dive into such futures, envisioning scenarios for 2040 that can help leaders better understand the impacts that choices today can have on tomorrow.
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