

The BCG logo is rendered in a large, white, serif font. The letters are bold and closely spaced, with the 'C' and 'G' having a slightly irregular, hand-drawn quality. The background behind the logo is a dark teal color with a complex network of thin, light-colored lines connecting various points, creating a web-like or neural network pattern.

THE BOSTON CONSULTING GROUP

THE *NEW NEW* WAY OF WORKING SERIES

Twelve Forces That Will Radically Change How Organizations Work



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Twelve Forces That Will Radically Change How Organizations Work

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AT A GLANCE

After a yearlong analysis of the global work landscape, BCG has identified 12 forces in four main areas that are triggering exponential changes in the way organizations function. Some companies are already adapting to these megatrends. All others, across industries and geographic markets, must do so or risk being left behind.

TWO SETS OF TRENDS AFFECT THE DEMAND FOR TALENT

Technological and digital productivity will transform the world of work, and companies will create value in new ways, by becoming more agile and innovative.

TWO ADDITIONAL SETS OF TRENDS AFFECT THE SUPPLY OF TALENT

Resources will be distributed unevenly because of changing demographics and shifts in geopolitical and economic power, and the work environment will evolve, with a greater emphasis on diversity, entrepreneurship, and professional purpose.

COMPANIES NEED TO REIMAGINE HOW THEY WORK





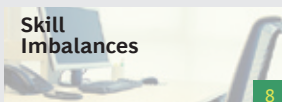

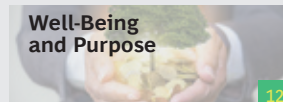
Leaders will need to function with more fluid boundaries between what is inside and outside the company. Speed and agility will be essential, and companies will need to continually develop—and redevelop—employees, particularly in digital skills.

A TIDAL WAVE OF CHANGE is coming that will soon make the way we work almost unrecognizable to today’s business leaders. In an age of rapidly evolving technologies, business models, demographics, and even workplace attitudes—all shifting concurrently—change is not only constant but also exponential in its pace and scope. Companies from startups and online businesses to incumbents in all industries will experience the effects in far-reaching and transformational ways.

During a comprehensive, yearlong analysis of the global work landscape, The Boston Consulting Group identified 60 major trends propelling this tidal wave, which we’ve grouped into 12 primary forces. These forces, or megatrends, fall into four categories. The first two address changes in the demand for talent: technological and digital productivity and shifts in ways of generating business value. The second two address changes in the supply of talent: shifts in resource distribution and changing workforce cultures and values. (See Exhibit 1. For a list of all 60 trends, see the Appendix.)

Together, these forces will revolutionize the way that work gets done in companies and will compel leaders to rethink even the most basic assumptions about how their organizations function. They will need to discover new ways of organizing, performing, and leading, along with new approaches to recruiting, developing, and engaging employees. All this in organizations with limitless data, open boundaries,

EXHIBIT 1 | Twelve Powerful Forces Will Revolutionize How Organizations Function

Changes in the demand for talent	Technological and Digital Productivity	Automation  1	Big Data and Advanced Analytics  2	Access to Information and Ideas  3	
	Shifts in Ways of Generating Business Value	Simplicity in Complexity  4	Agility and Innovation  5	New Customer Strategies  6	
	Changes in the supply of talent	Shifts in Resource Distribution	A New Demographic Mix  7	Skill Imbalances  8	Shifting Geopolitical and Economic Power  9
		Changing Workforce Cultures and Values	Diversity and Inclusion  10	Individualism and Entrepreneurship  11	Well-Being and Purpose  12

Source: BCG research and analysis.

employees and machines working side by side, and rapidly evolving employee value propositions.

BCG has assessed the impact of these megatrends on organizations. In this report, the first in the *New New Way of Working* series, we identify several companies that are leading the way. Yet most organizations still have far to go.

Changes in the Demand for Talent

Six of the forces we identified are having a profound effect on the demand for talent. (See Exhibit 2.) We categorize them into two groups:

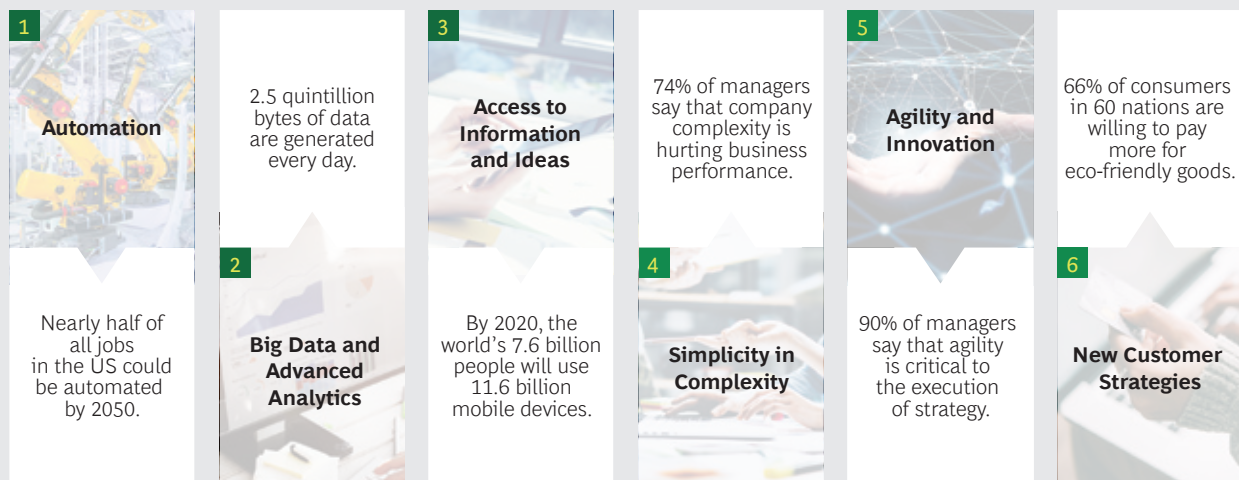
- **Technological and digital productivity:** automation, big data and advanced analytics, and access to information and ideas
- **Shifts in ways of generating business value:** simplicity in complexity, agility and innovation, and new customer strategies

TECHNOLOGICAL AND DIGITAL PRODUCTIVITY

The three trends in the realm of technological and digital productivity are arguably creating the most significant changes worldwide. Enabling advances deemed unlikely even a decade ago, they are transforming the world of work in unprecedented ways. Automation is replacing jobs; big data and advanced analytics are unlocking vast customer, operational, and employee insights; and increased access to information and ideas is blurring the boundaries of traditional institutions.

Automation. Although companies have been gradually automating for decades, recent advances in areas such as robotics and artificial intelligence are not only obligating people to work side by side with machines but are also creating replacements for human workers—even in fairly sophisticated jobs.

EXHIBIT 2 | Six Forces Will Reshape the Demand for Talent



Sources: Oxford; IBM; Broadband Choices; Cisco; Nielsen; BCG analysis.

For example, Amelia, a cognitive agent developed by IPsoft, can assume a variety of service desk roles, including technology support, customer care, and procurement processing. In manufacturing, industrial robots already handle a number of repetitive production tasks. These robots once cost upwards of \$500,000 and were fairly limited in their abilities. Today's robots, such as Baxter, by Rethink Robotics, cost only \$22,000 for a basic model and are flexible and trainable.

Automation will replace assembly line and office workers even as companies require increasing numbers of programmers and other highly skilled digital talent, along with an enormous upgrade in the skills and capabilities of these workers. As machines assume a greater role in the workplace—turning virtual reality into the new reality of the working world—humans will clearly have to adapt.

Companies will need to develop talent in rapidly emerging areas such as data analytics (including data mining and collection), app development, and user experience design. In fact, nearly every organizational role will eventually require the use of sophisticated technology. In response, individuals and organizations will have no choice but to invest in massive, ongoing skill development programs. Similarly, executives will need to become far more comfortable leading in a digital world—a potential challenge given that many people with the best digital skills are often younger than leadership team members and have different working styles.

Big Data and Advanced Analytics. The past two decades have seen unprecedented gains in the storage, processing, and transmission of data, leading to an explosion in the amount of information available to businesses around the world. An iPhone 7 has more processing power than the entire NASA organization had in 1969. Advanced analytics, in turn, makes it possible to analyze enormous amounts of unstructured data, improving forecasting and decision making as never before. Through the use of big data and advanced analytics, companies are now able to improve marketing, productivity, and other essential aspects of their existing operations, lower costs, and gain real-time insights into promising new approaches and opportunities. BCG estimates that big data and advanced analytics could unlock more than \$1 trillion in value annually by 2020.¹

Moreover, data analytics can be used to improve employee management and engagement. Companies such as VMware, Saberr, and Humanyze are using “people analytics” to predict affiliation and retention and to better understand team dynamics. These and other analytic capabilities will transform HR, along with every other business function, enabling the delivery of highly customized and effective service to internal and external customers.

The implication for management teams is clear: companies will need to adopt analytics in every aspect of their operations. Once a novelty, the technology will become a basic competitive requirement. As a result, leadership teams will need mechanisms for capturing, cleaning, aggregating, and analyzing data. They will also need to rely on data, rather than their gut instinct, in decision making.

Access to Information and Ideas. The ability to tap information and ideas from anyone, anywhere, is multiplying exponentially, both for individuals and for busi-

As machines turn virtual reality into the new reality of the working world, humans will clearly have to adapt.

Through
crowdsourcing,
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upfront investment.

nesses. As the cost of technology—including both hardware and data—continues to fall and global internet penetration expands, recent advances in cloud computing and storage are lowering the cost of access and processing. The implications are wide-ranging: people can be continuously connected, access data from any location, work remotely with ease, and collaborate with their global colleagues in real time. They need not even be employees: at several leading IT companies, outside contractors make up almost half of the full-time staff.

Rapidly expanding access is giving rise to crowdsourcing and the sharing economy. The most innovative solutions today are being developed by people around the world who come together in online communities, internet platforms, and digital ecosystems that disrupt the traditional models of venture funding, product development, and product life cycle management.

Crowdsourcing communities such as Kaggle and InnoCentive allow companies to “rent” talent without much upfront investment. Instead of hiring full-time employees, companies can staff projects with the specific expertise needed. And freelancers come with the added benefit of being well-connected to developments in the wider industry, unlike employees, who tend to get caught up in internal dynamics. Allstate, the insurance giant, is using Kaggle to host competitions to solve business challenges. One such competition led to an algorithm for claims predictions that was 271% more accurate than Allstate’s existing model.²

In this environment of temporary and virtual teams, leaders will need to adapt to increasingly blurry boundaries between employees and contractors. They will also need to rethink the way they engage with talent and how they get their work done.

SHIFTS IN WAYS OF GENERATING BUSINESS VALUE

Advances in digital productivity have many benefits, but they also increase complexity and accelerate business cycles. In response, companies need to put a premium on simplicity, agility and innovation, and understanding the needs of customers.

Simplicity in Complexity. Organizations tend to respond to new challenges by adding teams, functions, and departments. As organizations grow, their structure becomes increasingly complicated. New silos develop, the number of stakeholders involved in decision making increases, and interdependencies between functions multiply. The plethora of stakeholders, decision rights, processes, and policies slows down every decision and hinders collaboration across departments, reinforcing the silo effect.

Not surprisingly, organizational complexity imposes a tremendous cost, both in terms of managers’ ability to meet their goals and employees’ engagement and productivity. It is often at the root of a company’s inability to make quick decisions and innovate rapidly. A BCG survey of business leaders found that three-quarters believed complexity was making it harder to meet business goals. Yet only 17% thought that their current efforts to simplify would resolve the issue.

Organizations must learn how to manage complexity in entirely new ways if they hope to thrive, understanding how to get results without adding more layers, pro-

cesses, and silos. BCG's Smart Simplicity helps organizations deal with complexity.³ The central premise of the approach is that rather than adding organizational elements, leaders need to understand desired employee behaviors and then reshape the context in which employees work so that they make the right decisions on their own.

Agility and Innovation. A number of innovative approaches that began in software development are now being adapted by organizations for non-IT products and processes—including agile, scrum, kanban, design thinking, and other creative methodologies. For example, Bosch, one of the largest automotive suppliers in the world, recently employed flexible organizational structures and agile methods to halve its usual development time for calibrating hardware and software components for electric vehicles.⁴

Bringing such approaches to day-to-day work beyond IT requires organizations to become far more fluid than the traditional rigid structures allow. In addition, companies must create room for experimentation, rapid prototyping, the testing of new ideas, and the introduction of a fail-fast innovation culture. Most important, new, agile work processes call for entirely new skills, attitudes, and knowledge on the part of employees. Nonetheless, such measures can increase employee satisfaction because they empower widely autonomous teams and treat all opinions as equally valuable.

ING, one of the world's largest banks, has overhauled its operating model in the Netherlands to create a scaled agile organization. The company began this multi-year transformation by focusing on changing employees' behavior. It introduced a new way of working, breaking up internal silos and creating small, interdisciplinary teams with members from IT, marketing, product management, business units, and other functions. These "squads" had the authority to develop a new product or process from start to finish and then focus on a new mission. Over time, the model was scaled up and rolled out across the organization. Already, the move has significantly increased the pace of development in several areas, boosting speed to market and reducing the size of the workforce by up to 30% in some departments.⁵

New Customer Strategies. Boundaries between companies and consumers are fading as people, informed and enabled by the internet, become more aware and demanding. They want personalized offerings and will collaborate with companies to help develop the products and services they desire. Procter & Gamble, for example, is now getting information about the shelving of its products in major retail chains directly from individuals in the stores. The company works with Gigwalk, a startup with a network of more than 1 million paid "Gigwalkers," who check up on product displays and availability. In this way, P&G can easily track its execution in retail stores and quickly make changes to improve performance. (Even as companies encourage customers to share information, they must protect the privacy and data of those customers.)

People also want the businesses they frequent to provide more than just value: they want to see socially and environmentally responsible behavior as well. Organizational goals, then, must go beyond profitability to include the subjective aspects of

Boundaries between companies and consumers are fading as people, informed and enabled by the internet, become more aware and demanding.

corporate responsibility across the value chain. In response, many companies will need to adopt an entirely new approach to engaging customers, continuously evolving their value propositions to stay ahead of the competition.

Changes in the Supply of Talent

As these six forces propel a variety of changes in the demand for talent, six social, economic, political, and technological forces are shaping the supply. We have divided these forces into two groups. (See Exhibit 3.)

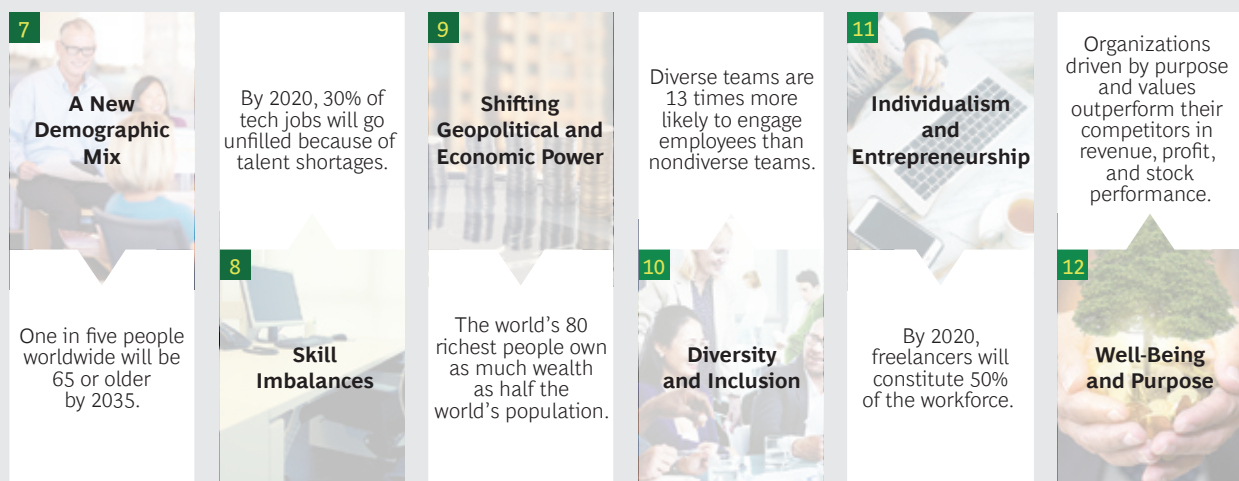
- **Shifts in resource distribution:** a new demographic mix, skill imbalances, and shifting geopolitical and economic power
- **Changing workforce cultures and values:** diversity and inclusion, individualism and entrepreneurship, and well-being and purpose

SHIFTS IN RESOURCE DISTRIBUTION

An increasingly dynamic global economy has led to shortages of skilled, knowledgeable employees in some markets and may create a surplus of less-skilled workers in others. As Baby Boomers age, the demand for scarce and specialized talent grows, and as talent disperses as a result of various geographic, economic, and political factors, companies will be increasingly challenged to attract and retain the highly skilled people they need.

A New Demographic Mix. The global population is aging. After rapid population increases during the 20th century, birth rates have stalled—and even reversed—in many regions. By 2035, one in five people worldwide will be 65 or older. On the basis of several simulations using demographic data and global trends, BCG

EXHIBIT 3 | Six Forces Will Transform the Supply of Talent



Sources: United Nations Population Division; IDG; Oxfam; American Express Open Network; Forbes; BrightHouse.

projects a global workforce crisis within the next 15 years, with a labor deficit in most of the 15 largest economies, including in three of the four BRIC nations. Given that these 15 economies make up 70% of global GDP, the crisis will affect almost every large multinational company.⁶

At the same time, in some emerging markets, the number of young people is still increasing rapidly. But many of them do not acquire the skills that would make them employable. The challenge is to help them develop those skills, or—for some young people—to increase their mobility so that they can find jobs elsewhere.

Meanwhile, millennial and Generation Z digital natives are entering the global workforce with new expectations and orientations. In their search for a healthy work-life balance and opportunities for self-expression, they are harder to please than their predecessors. They are also harder to retain.

These demographic shifts will put pressure on companies to devise entirely new ways to attract, retain, and develop talent across locations and age groups. They will need to hold on to experienced older workers and find ways to facilitate the transfer of those workers' deep knowledge to incoming generations. For example, Bosch has started an initiative in which older and younger employees from different divisions (with at least a ten-year age difference) meet on a regular basis in order to learn from each other. The young employees learn best practices and get career advice, while the older workers gain insight into new technologies and the use of social media.⁷

Skill Imbalances. The skills and capabilities businesses require are rapidly evolving. Even as automation may yield a surplus of unskilled and semiskilled labor, the digitalization of products and services is creating an enormous demand for skilled digital talent. Nearly half of US and German companies in a BCG survey cited the lack of qualified employees as the biggest constraint to a full digital transformation. In addition, according to a Gartner study, a third of all technology jobs will go unfilled by 2020 because of talent shortfalls. Perhaps that's why some US colleges now offer majors in programs that didn't even exist five years ago, such as robotics engineering, game design, cybersecurity, and data science.⁸

Companies are trying a variety of unconventional methods, such as “acqui hiring,” to bring in digital talent.

Companies are trying a variety of unconventional methods to bring in digital talent. Facebook, for example, has “acquired” the employees of more than a dozen companies—buying these companies as much or more for the employees as for the business itself. Meanwhile, Citigroup and others are introducing online gaming apps, either as recruiting tools or to identify hidden skill sets among employees.

Others are attempting a more sustainable remedy for skill shortages: developing them among the existing workforce, including among many of the employees potentially displaced by automation. Given that many universities are already overwhelmed with demand, the responsibility for this radical retraining will likely fall into the hands of business. Moreover, programs designed for the academic domain are increasingly ineffective in building the skills required in the modern workplace. Instead, companies are turning to organizations such as Udacity, edX, and Coursera, which allow people to receive training while working full-time.

Geographic, economic, and political developments are blocking the smooth flow of talent to areas of demand.

For many companies, incubating talent internally is more likely to pay off than depending on the marketplace. To that end, GE has introduced a mobile application that prompts employees to work on development areas and provides real-time feedback. The company expects this app eventually to replace traditional performance management.

Regardless of their current talent situation, companies should systematically analyze future supply and demand for various jobs under different scenarios and then plan accordingly. This approach, known as strategic workforce planning, helps businesses ensure that they will have enough people with the appropriate skills.⁹

Shifting Geopolitical and Economic Power. Talent is more mobile than ever, with workers willing to cross borders and cultures to improve their career prospects. Yet a number of geographic, economic, and political developments are blocking the smooth flow of talent to areas of demand, thereby compounding the overall talent shortage.

The first such development is the emergence of “digital hot spots,” such as Silicon Valley, where a high concentration of capital, universities, and entrepreneurial enterprises draws disproportionate numbers of technologically skilled candidates. Of the more than 60 hot spots worldwide, nine out of ten are in the United States. Companies will need to learn how to compete for talent in these locations while developing talent in other areas.

The second is growing protectionism and rising anti-immigration sentiment in many regions of the world today, exemplified by Britain’s vote to leave the European Union. This trend is forcing global companies to grow their operations or find talent elsewhere—even in markets where they have no existing interest.

Third, income disparity is increasing, especially in developed and rapidly developing regions. The top 1% of the global population currently owns 48% of the wealth and is projected to own 54% by 2026. As a result, the migration of workers from the poorest and most rural areas to the richest and most urban areas is accelerating, as is the desire of employees to work virtually. Yet, more worryingly, the rising disparity also means that more and more people are being left behind on the education front, unable to afford the ongoing training or reskilling they need to compete.

Large organizations can address these pressing talent issues by establishing a presence in digital hot spots or helping new hot spots emerge. They can take full advantage of cloud computing and other technologies to create virtual teams and mechanisms for collaboration across regions. Finally, they can think about how to address the growing income gap: providing training and educational opportunities to some of the world’s poorest populations would help to reduce the talent shortage worldwide while creating a socially responsible environment that attracts and retains highly skilled employees.

CHANGING WORKFORCE CULTURES AND VALUES

As the skill shortage increases, new attitudes among talented people are also changing the workplace—in particular, the growing preference for independent work in-

stead of dedicated corporate careers. Many people are also stressing the importance of three areas: diversity and inclusion, individualism and entrepreneurship, and well-being and purpose.

Diversity and Inclusion. As values change across the business landscape, diversity and inclusion, often seen as “nice to have,” are increasingly becoming a necessity—and for good reason. The business case has never been stronger, as studies show that diverse teams are much more likely to foster employee engagement and improve business performance.¹⁰

At American Express, women make up more than half of the workforce and 21% of the board, while 48% of senior management team members are women and/or minorities. The company uses diversity to improve innovation and productivity and to reach customers in various demographic segments. Kimberly-Clark increased the proportion of women at the director level and above by 82% from 2010 to 2014 by building a diversity analytics team assigned to “hardwire” diversity into the business. As Sue Dodsworth, the company’s chief diversity officer, explained in *Fortune*, “We want to look, think and behave like the people who use our products. If we don’t represent them, we’re not necessarily making all the right decisions.”¹¹

Some companies are turning to technology to help them improve diversity. For example, the use of new technology and online communities can help prevent a high bias rate in recruiting. Apple uses a blind recruiting application that hides candidates’ names, photos, and dates in order to mitigate unconscious bias in hiring decisions. Pinterest and American Express are using Jopwell, a career advancement platform for black, hispanic, and Native American students and professionals.

Companies can achieve significant business outcomes from diversity only if they make it a part of their core strategy. Not only will they improve performance, but they will position themselves as a force for economic and social equality.

Individualism and Entrepreneurship. Independence is becoming the dominant motivator for a large section of the population, particularly for millennials (born from the early 1980s to the mid-1990s) and Gen-Zers (born in the mid- to late 1990s and after). These younger people tend to get bored doing the same kind of work for long stretches, and they are especially interested in independent careers. Empowered by digital platforms and ecosystems, many are choosing entrepreneurship and self-employment over traditional corporate employment.

Among those still interested in corporate jobs, many are keen to experiment with new ideas, take long career breaks, and even work part-time as a volunteer or freelancer in entirely new fields. A recent survey found that 79% of Gen-Zers want to integrate education with work and 42% expect to become entrepreneurs.¹² In addition, one study estimates that freelancers will make up half of the full-time workforce by 2020.¹³

As organizations begin to rent rather than hire talent, they will have to make do with a lower level of commitment. They will need to create career paths and roles to serve the entrepreneurial aspirations of the highly skilled talent they seek. And

The young people who are still interested in corporate jobs are keen to experiment with new ideas, take long career breaks, and work part-time in new fields.

leaders will have to tailor their leadership style to the hyperindividualized environment, finding new ways to empower and inspire individuals and teams in their dispersed organization.

Well-Being and Purpose. Millennials and Gen-Zers, who are taking on an ever-increasing role in the workplace, want more from their jobs than just competitive compensation: they are looking for well-being. In a recent survey, 62% of millennials said they want a career with social impact, and 53% said they will work harder to increase that impact.¹⁴ Companies such as Sony are tapping into these aspirations by making social work a part of their internship curriculum. And the benefits go both ways. A recent study by BrightHouse, an ideation and branding company within BCG that helps companies become more purpose driven, found that companies with a culture based on shared values outperformed their competitors in revenue, profit, employment growth, and stock performance.¹⁵

Moreover, one in five employees said they would be willing to give up 5% of their salary in exchange for working from home one or two days a week.¹⁶ Offering flexible schedules and investing in the health of employees—with initiatives such as improving indoor air quality and providing ergonomic furniture and fresh food—are ways that companies are meeting this need. Businesses such as Google, Chevron, and JPMorgan Chase are already implementing such programs and realizing benefits, including fewer sick days, lower insurance premiums, and more-productive employees.¹⁷

As a result of these powerful attitudinal shifts, companies will need to begin making job offers that go far beyond traditional compensation and perks, offering instead a comprehensive set of flexible work and development opportunities that appeal to the personal aspirations and values of their employees. Moreover, they will need to begin defining their organizations in terms of a unique purpose and work to ignite a passion for that purpose. In the future, organizations will be judged not just for the quality and price of their products but for who they are—in relation to their customers, their employees, and society as a whole.

The New Age of Work

What changes will these trends bring? As companies respond to the 12 forces, we expect several key developments in the next few years.

- Companies will develop a more fluid sense of what is inside and what is outside their boundaries. They will move beyond rigid distinctions between employees, outside suppliers, and customers, developing platforms to promote collaboration among all stakeholders. Eventually, as value chains break up into networks and platforms, the role of the organization will shift from that of a controller of resources to that of a facilitator of ecosystems and a conduit for realizing individual aspirations.
- Speed and agility will be essential to competitiveness. Many companies will look to break up entrenched departments and reporting lines, opting to organize work in smaller and more agile interdisciplinary teams. These teams will learn

Organizations will be judged not just for the quality and price of their products but for who they are—in relation to customers, employees, and society.

to work in short “sprint” cycles to produce minimal viable products and services, solicit feedback on them, and refine them through rapid iterations. Individuals will rotate among projects, training, internal incubators, and even social impact initiatives. These agile and innovative approaches, along with design thinking and other related methodologies, will soon become the norm, not just in IT (where they originated) but across functions and practices.

- Companies will continually develop (and redevelop) their people, so that they are equipped to deal with the tidal wave of change. They will also inculcate diversity, inclusion, and flexibility in their corporate DNA. They will shift from HR processes, policies, and systems to problem-solving interactions. And as flexible, cloud-based software replaces traditional documentation and controls, HR will customize its interfaces with employees to better support individual needs and desires.
- The increased prevalence of digital technology and artificial intelligence will lead to new job functions and categories—but also to shortages of people with the skills needed to fill those roles. Many companies will need to focus more on developing digital skills among their current workers or identifying and recruiting potential new hires. In addition, companies will need digital bridge builders: intermediaries between employees with specialized digital talent and those in nontech roles.

Smart leaders will monitor these changes and experiment with new ways of working that align with their company’s context and capabilities. In addition, they will define their businesses not in terms of their competitive advantages but in terms of the purpose that makes them relevant in a rapidly evolving world.

THESE 12 TRENDS are complex and interrelated. To cope with them, companies need a well-thought-out strategy that can translate into concrete interventions. Those that do not develop such a strategy may soon find themselves bumping up against nimbler rivals, unable to adapt to the disruption in time.

In future publications in the *New New Way of Working* series, we will discuss the implications of these trends in more detail as we explore the following topics:

- Organizational structures that support more agile and nimble ways of working and allow for open boundaries
- New ways of developing talent, including leadership talent, that incorporate technology and analytics
- New models for managing change in an environment of always-on transformation
- The value and importance of a corporate purpose, not just as a fad but as a differentiator and a source of competitive advantage

Companies will continually develop (and redevelop) employees so that they are equipped to deal with the tidal wave of change.

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APPENDIX

Our yearlong analysis revealed 60 trends, which we consolidated into 12 megatrends in four areas.

TECHNOLOGICAL AND DIGITAL PRODUCTIVITY

Automation: Industry 4.0; artificial intelligence, machine learning, and wearables; digital channels; augmented reality; and robotics

Big Data and Advanced Analytics: Predictive technology, integrated tools to optimize performance, social media insights, behavioral sensors, and big data

Access to Information and Ideas: Cloud-based technology and the “Internet of everything,” open-source software and processes, open innovation and peer-to-peer technology, decreasing degrees of separation, and new capital and infrastructure platforms

SHIFTS IN WAYS OF GENERATING BUSINESS VALUE

Simplicity in Complexity: The value of simplicity, lean methodologies, the evolution from silos to more holistic organizations, specialization, and organizational complicatedness

Agility and Innovation: An accelerating pace of change, increasing uncertainty and black-swan events, exponential organizations, agile development, and digital stakes and subsidiaries

New Customer Strategies: Personalization and premium products and services, the sharing economy, data security, ethics, and the environment

SHIFTS IN RESOURCE DISTRIBUTION

A New Demographic Mix: The “demographic dividend,” talent scarcity, aging populations, multiple generations in the workforce, and talent imbalances

Skill Imbalances: New skills, waning skill life, formal curricula and development, digital late-comers, and skills education and reach

Shifting Geopolitical and Economic Power: Disparity in wages and economic growth rates, multiple centers of power, urbanization and resource depletion, migration, and the rise of the middle class in developing countries

CHANGING WORKFORCE CULTURES AND VALUES

Diversity and Inclusion: Multiculturalism, racial and ethnic diversity, gender equality, value pluralism, and equitable economic development

Individualism and Entrepreneurship: Freelance work versus employee loyalty, risk taking and entrepreneurship, multidisciplinary pursuits, talent renting and freelancing, and individualized aspirations

Well-Being and Purpose: Desire for personal, social, and communal impact; reflection and purpose; self-expression; appreciation and respect; and physical and mental health and balance

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3/17



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