



LEADING A FUTURE-READY BUSINESS: Vision 2025 Changing Talent and Workplace

On pace to effectively compete?

Canon Business Process Services in association with Hanover Research reviews today's hyper-competitive business environment and its future trajectory. The culmination of digital business, disruptive technologies, cultural and demographic forces, put unprecedented demands on business leaders to navigate the opportunities and threats.

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Accelerating technological innovation is disrupting established business principles within companies and across industries, and moving businesses towards a radically different future environment.

This unprecedented pace of change creates a mandate for businesses to reinvent their operations, restructure their product offering, and rethink the way they create value. To survive long term, they are forced to adapt and find new emerging opportunities.

With this backdrop, Canon Business Process Services (Canon) in association with Hanover Research, a leading market research firm, surveyed the environment to better understand the forces that are driving change in business and how they may shape business towards 2025.

Changing Talent and Workplace

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EXECUTIVE SUMMARY

The next ten years promises to be a tumultuous and transformational period due to the confluence of changing labor demographics and rapid changes in the technology. As a result the talent and workplace of the future will be redefined. This report analyzes the impact of changing demographics, notably an aging population, and the impact a growing skills gap in some industries will have on the workplace.

The growing presence of a new generation of employees will bring different attitudes to the workplace. Greater flexibility, a blurring of professional and personal goals, and tools for a more collaborative working environment are some of the common demands that leaders will encounter. Required skill sets will shift along with accompanying management structures as increasing automation of knowledge work gathers pace. According to one estimate, up to 45 percent of activities that individuals are currently paid to perform in the United States can be automated. In the face of these changes, successful leaders will focus on individual employee characteristics to attain full engagement, and will allow recognition and personal development to carry as much importance as salary and job title.

Key Findings

- Business leaders must address the shifting business process landscape in order to remain competitive in a new paradigm wherein new tools affect human behaviors as never before. Leaders must work to integrate new technologies with new employee attitudes. With “analog” generations moving into retirement and Millennials taking their place, human as well as technological factors will drive significant changes.
- Implications of an aging population will be felt across industries, with experienced employees leaving the workforce and being replaced by Millennials who have grown up in the digital world and have radically different expectations. The future of the workplace will feature new approaches to recruiting and retaining talent. Technological trends will be reinforced by the growing gap between requirements and available skills inherent in a more dynamic economic environment.
- Renewed focus on core competencies will push business leaders to find expert service providers who can execute talent management strategies at increasing levels of complexity.
- The concept of the workplace will change as employees seek greater flexibility and personal lives become more intertwined with work.
- Contrary to previous expectations, many large companies are expanding suburban campuses and blurring the margins between work and personal life. Geographic structures and flexible work arrangements will be important considerations in the new paradigm, further complicating relationships between employers and employees and molding the definition of company boundaries.

TALENT AND THE WORKPLACE

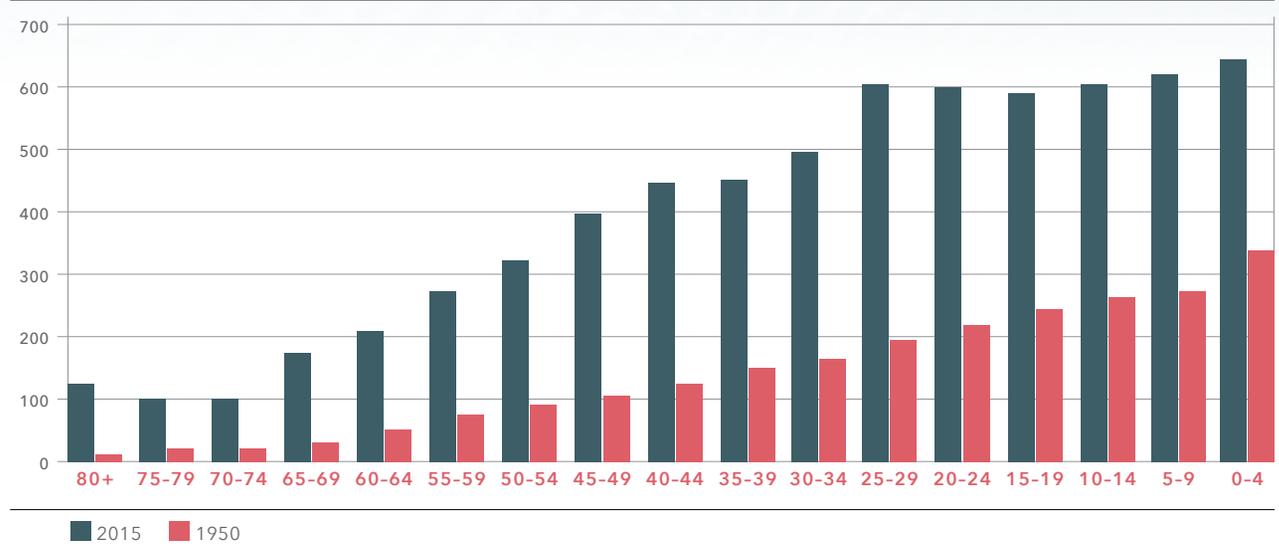
Technology is a critical enabler of business, but the turbulence of the digital age goes well beyond technological tools, however powerful they may be. In this section we examine critical human trends that will affect the business environment of 2025. Forces of demography and culture are combining with the effects of technological change to increase uncertainty for business leaders. Populations are aging and emerging markets are introducing new and often unfamiliar opportunities to global firms. Indeed, the ranks of “global” firms are swelling as digital tools expand the reach of formerly local and regional operations. Perhaps most importantly, changes across all of these dimensions are non-linear as technology interacts with demography to produce younger generations with different expectations of their work, life, vendors, employers, and leaders.

Demographic changes are reshaping the global population, driving change in everything from healthcare markets to benefits packages to national employment policies. Technology is also changing how we think about physical space. The flexibility enabled by technologies such as mobile computing, IoT, and 3D printing are opening up new opportunities for dispersed workforces while at same time the need for

collaboration in an increasingly knowledge-based economy pushes companies to bring people together. Proliferation of digitally facilitated interpersonal networks are pushing the job market into overdrive, as are new expectations of younger generations who have no intention of working for the same firm for an entire career. Among all of these factors, the elephant in the room is automation, which is creeping ever-further into knowledge work and

threatening to upend the nature of employment as we know it. While software robots will not come to run the world in the next decade, we will see new levels of efficiency and shifts in the industry mix as traditional businesses learn to accomplish the same work with fewer people. Building a future-ready business means balancing these forces and learning to use new and powerful tools to bring order to an increasingly complex world.

Figure 3.1: Global Age Distribution, 1950 and 2015 (Millions)



Source: UN Population Division¹¹³

¹¹³ “World Population Prospects, the 2015 Revision.” United Nations Department of Economic and Social Affairs Population Division. <http://esa.un.org/unpd/wpp/Download/Standard/Population/>

DEMOGRAPHY AND THE FOUNDATIONS OF THE BUSINESS ENVIRONMENT

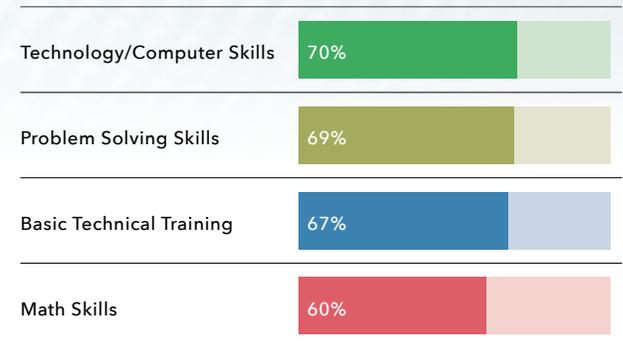
While changing population demographics is an issue outside the control of business leaders, they must develop strategies to address potential effects. By 2025 the global population will have grown by one billion, reaching a total of eight billion people.

Moreover, the fastest growing demographic will be the over-65 age group.¹¹⁴

The implications of an aging population will be felt across industries. Aging populations mean that older, experienced employees are leaving the workforce in large numbers. The skills gap is already a concern among business leaders, and by 2025 the situation is expected to worsen as 2.7 million professionals exit the manufacturing workforce alone.¹¹⁵ Estimates indicate that in the U.S. 3.5 million manufacturing jobs will need to be filled between 2015 and 2025, but the skills gap will result in two million jobs remaining vacant.¹¹⁶

The decade ahead is expected to exacerbate current trends wherein employees lack technical skills in an increasingly sophisticated workplace. A survey of more than 450 executives highlights that employees are currently most deficient in technology and computer skills.¹¹⁷ Problem solving skills, basic technical training, and math skills are also areas of concern. Figure 3.2 illustrates the magnitude of the problem.

Figure 3.2: Percentage of U.S. Executives Dissatisfied with Employee Skills



Source: Deloitte, The Manufacturing institute survey of more than 450 respondents¹¹⁸

¹¹⁴ "Demographic and social change." PwC. <http://www.pwc.com/gx/en/issues/megatrends/demographic-and-social-change-norbert-winkeljohann.html>
¹¹⁵ "US manufacturing faces a two-million-worker shortage over the next decade." Deloitte. February 25, 2015. <http://www2.deloitte.com/us/en/pages/about-deloitte/articles/press-releases/skills-gap-public-perceptions.html>
¹¹⁶ Ibid.
¹¹⁷ "The skills gap in U.S. manufacturing 2015 and beyond." Deloitte. 2015. <http://www2.deloitte.com/content/dam/Deloitte/us/Documents/manufacturing/us-pip-the-manufacturing-institute-and-deloitte-skills-gap-in-manufacturing-study.pdf>
¹¹⁸ Ibid.

DEMOGRAPHY AND THE FOUNDATIONS OF THE BUSINESS ENVIRONMENT

The roles for which executives are most concerned about the skills gap are engineers, skilled production workers, and researchers/scientists: all jobs that may not be well-suited for automation. To combat the skills shortage, executives indicate that a greater emphasis on internal employee training and development programs will be the most effective tool and a key competitive advantage.¹¹⁹ As illustrated in Figure 3.3, greater outreach within the community is the next most widely cited initiative on which executives will focus their attention.

This will be another contributing factor in the drive for increased development of cloud and IoT technology.¹²⁰ Not only must businesses across industries cope with regulation in the healthcare sector, but they must manage the transition from the older to the newer generation. With the senior company ranks raised in the age of analog and younger workers raised in the age of digital, conflict is bound to arise.

Figure 3.3: **Percentage of U.S. Executives Who Believe an Initiative is Extremely or Very Important to Mitigate the Skills Gap**



Source: Deloitte, The Manufacturing institute survey of more than 450 respondents¹²¹

¹¹⁹ Ibid.

¹²⁰ "Health Care 2025: How Mega Trends Will Shape Sustainable Care." Op. cit.

¹²¹ Ibid.

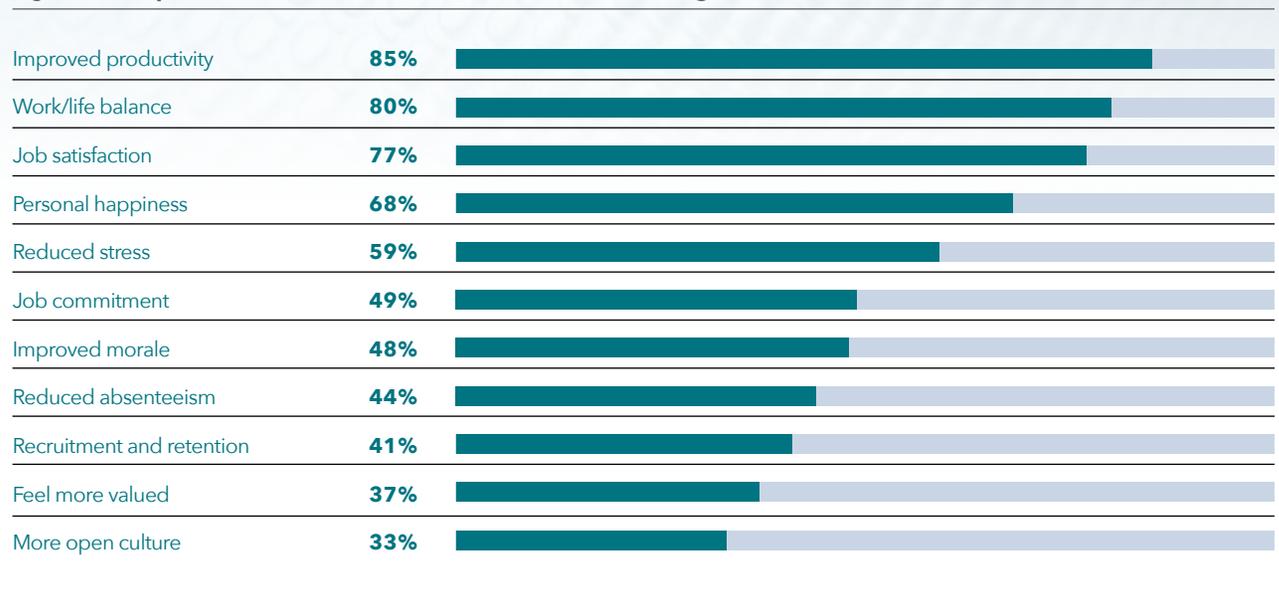
MANAGING A DYNAMIC WORKPLACE

Mobile Internet and cloud computing are opening up new possibilities in how employees engage with their employers. As described above, new business models are being created wherein the boundaries between employees and contractors are blurring.

For example, drivers employed by Uber occupy a gap in the regulatory structure unanticipated by existing labor laws. Such business models can generate conflict and uncertainty as new rules of the game are developed. Some companies are becoming little more than marketplaces bringing together buyers and sellers in new and creative ways that bypass bricks and mortar altogether, as Uber has done for transportation and TaskRabbit for household errands.

In addition to new business models, employers are becoming more flexible in where and when their employees work. Figure 3.4 displays the greatest benefits they report as a result of the changes. Contrary to the consensus of several years ago, however, all forces are not pulling apart the traditional corporate campus. Knowledge work is increasing in importance with the rise of digital business, and knowledge work requires collaboration.

Figure 3.4: **Expected/Perceived Benefits of Flexible Work Arrangements**



Source: Chess Media Group¹²²

MANAGING A DYNAMIC WORKPLACE

It is uncertain whether the need for collaboration that is pulling corporate workspaces together or the need for flexibility that is pulling them apart will ultimately prevail. Trends in corporate campuses illustrate this dichotomy. Several prominent companies are investing heavily in the concept, while others are moving away from the campus model as employees seek greater flexibility. It is too early to say whether the centrifugal forces of mobile technology and cloud computing will overcome the gravitational effects of collaboration in a world where innovation is the key to survival. Many organizations have moved toward geographically distributed business models, only to find that disconnected employees are unsatisfied and lack unity of purpose. Others have seen increased levels of employee satisfaction with greater levels of flexibility. The appropriate balance will vary by industry

and organizational culture, but will surely be different from traditional arrangements.

Employers are considering a range of other options beyond mobile workstyles to inject more flexibility into their labor force. Half plan to increase their use of contingent labor, and a solid majority plan to outsource more processes altogether. Forces driving these decisions go far beyond the possibility of telework. Technology is breaking down organizational barriers and allowing firms to focus more precisely on what they do best.

COMPETITION FOR TALENT

An increasingly interconnected world and availability of data will bring new approaches to recruiting and retaining talent.

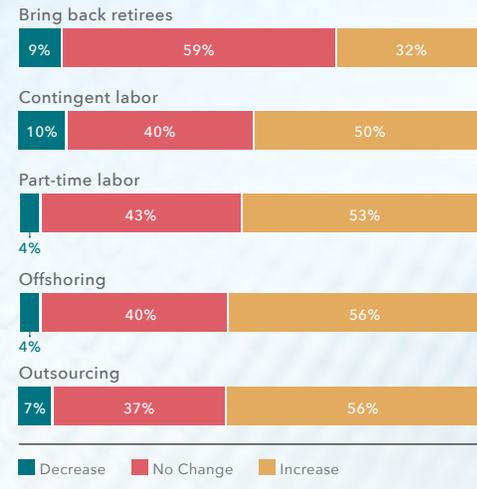
Technological trends will be reinforced by the growing gap between requirements and available skills inherent in a more dynamic economic environment. Moreover, expectations are for recruitment processes to become more targeted, adapting the “attraction approach” to be faster and more efficient through greater use of apps and online channels.¹²⁴

Technology is shaping the attitudes of younger generations, which will affect talent management practices as much as the tools themselves. The Millennial generation, in particular, has very different attitudes toward work: 70 percent plan to work independently at some point in their lives. Along this dimension opinions are radically different between emerging and developed economies. Perhaps surprisingly, 82 percent report this preference in the former and only 52 percent in the latter.¹²⁵

Millennials also hold different attitudes toward business and their role in it. While 71 percent believe that business increases prosperity, as many as half believe that business leaders should do more to address resource scarcity, climate change, and income inequality.¹²⁷ Training and flexible work hours rank more highly than cash bonuses in lists of most valued benefits, and 71 percent globally would like to eventually work outside their home country. This proportion remains high even in developed nations like the United States, where 58 percent want to work abroad.¹²⁸

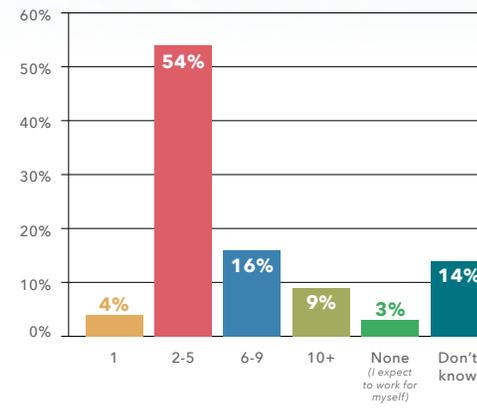
In its people and its places, the workplace is growing more dynamic by the day. Few clear answers exist about what the landscape will look like in 2025. What is clear is that the world will look very different than it does today.

Figure 3.5: Plans to Inject Flexibility into Workforce Composition



Source: ISS¹²³

Figure 3.6: “How many employers do you expect to have in your career?” (Asked of Millennials)



Source: PWC¹²⁶

¹²³ “ISS 2020 Vision: Scenarios for the future of the Global Facility Management Industry.” ISS, October 2011.

¹²⁴ Ibid.

¹²⁵ “Big demand and high expectations.” Deloitte, January 2014. <https://www2.deloitte.com/content/dam/Deloitte/global/Documents/About-Deloitte/gx-dtl-2014-millennial-survey-report.pdf>

¹²⁶ “Millennials at work: Reshaping the workplace.” PWC, 2011.

¹²⁷ “Big demand and high expectations,” Op. cit.

¹²⁸ “Millennials at work: Reshaping the workplace.” Op. cit.

AUTOMATION OF KNOWLEDGE WORK

Knowledge work automation is typically defined as the use of computers to perform tasks that rely on complex analyses, subtle judgment, and creative problem solving.¹²⁹ In the past five years, the number of intelligent digital assistants has increased by more than 400 million.¹³⁰

As many as 78 percent of managers believe that successful enterprises will manage intelligent machines alongside their employees.¹³¹ One study estimates that nearly half of current jobs in the United States are at risk of being displaced by computerization.¹³² Implications for the global economy are significant. Knowledge workers make up nine percent of the global workforce, or over 230 million people.¹³³

Automation of critical business tasks will provide benefits across a variety of industries: banks will approve mortgages in minutes; hospitals will reduce errors through consolidated, daily admission reports; and insurance companies will virtually eliminate re-work by entering claims correctly the first time.¹³⁴ Adoption of automation technology by businesses has already had a notable impact on cost savings. A 2015 survey of 537 executives found that nearly 20 percent

reported cost savings of more than 15 percent from process automation over the past year.¹³⁵ Firms who don't take advantage of these opportunities will fall further behind the rapidly advancing frontier of their competitive space. Falling costs will be accompanied by increasing levels of service and the ability to more precisely target products and services to narrower segments of the customer base. Impact on established practices will be transformative.

¹²⁹ "Disruptive technologies: Advances that will transform life, business, and the global economy." Op. cit.

¹³⁰ Ibid.

¹³¹ Daugherty, P., P. Banerjee, and M.J. Biltz. Op. cit.

¹³² Cukier, K. "Big Data and the Future of Business." Reinventing the Company in the Digital Age. OpenMind, BBVA.

¹³³ "Disruptive Technologies: Advances that will transform life, business, and the global economy." Op. cit.

¹³⁴ "The Robot and I: How New Digital Technologies Are Making Smart People and Businesses Smarter by Automating Rote Work." Cognizant. January 2015. <http://www.cognizant.com/InsightsWhitepapers/the-robot-and-i-how-new-digital-technologies-are-making-smart-people-and-businesses-smarter-codex1193.pdf>

¹³⁵ Ibid.

AUTOMATION OF KNOWLEDGE WORK

Automation will replace between 110 million to 140 million workers globally over the next decade.¹³⁷ Median estimates predict that the incremental productivity increases from automation will have between \$5.2 trillion and \$6.7 trillion in annual economic impact by 2025.¹³⁸ Key occupations to be affected by automation and follow-on economic effects are outlined in Figure 3.7. Clerical, customer service, and sales roles involving answering questions or completing tasks for other workers and customers will be affected on the largest scale. A key factor in automation will be advances in natural user interfaces, such as software that understands and acts on questions using ordinary speech.¹³⁹

According to a McKinsey study of the automation potential for U.S. jobs, up to 45 percent of activities that individuals are currently paid to perform can be automated. These activities represent about \$2 trillion in annual wages.¹⁴⁰ As the following figure illustrates, production occupations face the highest automation potential in the United States, followed by office and administrative support occupations.

Figure 3.7: Impact of Knowledge Automation on Occupations in 2025

Knowledge Worker Occupations	Potential Annual Impact in 2025	Scope in 2025	Productivity/Value Gains in 2025
Clerical, Customer Service, and Sales	Clerical: \$1.1-1.3 trillion Customer Service and Sales: \$0.6-0.9 trillion	- \$4.4 trillion in worker costs - 125 million knowledge workers	- \$35,000 value per full-time equivalent (FTE) of additional productivity
Education, Healthcare	Education: \$0.8-1.0 trillion Healthcare: \$0.3-0.4 trillion	- \$2.8 trillion in worker costs - 55 million knowledge workers	- \$50,000 value per FTE of additional productivity
Science & Engineering and IT	Science & Engineering: \$0.6-0.7 trillion IT: \$0.4-0.5 trillion	- \$2.2 trillion in worker costs - 35 million knowledge workers	- \$60,000 value per FTE of additional productivity
Managers	\$0.8-1.1 trillion	- \$2.9 trillion in worker costs - 50 million knowledge workers	- \$60,000 value per FTE of additional productivity
Finance, Legal	Finance: \$0.4-0.5 trillion Legal: \$0.2-0.3 trillion	- \$1.5 trillion in worker costs - 25 million knowledge workers	- \$65,000 value per FTE of additional productivity

Source: McKinsey¹³⁶

¹³⁶ Chui, M., et al. "Four fundamentals of workplace automation." McKinsey, November 2015. http://www.mckinsey.com/insights/business_technology/four_fundamentals_of_workplace_automation

¹³⁷ "Cognitive Robotic Process Automation Poised to Disrupt Knowledge Worker Market." KPMG. June 26, 2015. <http://www.kpmg-institutes.com/institutes/shared-services-outsourcing-institute/articles/2015/06/rpa-disrupt-knowledge-worker-techtarg.html>

¹³⁸ [1] "Disruptive technologies: Advances that will transform life, business, and the global economy." Op. cit. [2] MGI. "Ten IT-enabled business trends for the decade ahead." Op. cit.

¹³⁹ [1] "Disruptive technologies: Advances that will transform life, business, and the global economy." Op. cit. [2] MGI. "Ten IT-enabled business trends for the decade ahead." Op. cit.

¹⁴⁰ "Disruptive technologies: Advances that will transform life, business, and the global economy." Op. cit.

AUTOMATION OF KNOWLEDGE WORK

In the coming years, automation will encounter a number of implementation challenges, particularly the fact that it is a relatively novel system with a small number of vendors promoting its use.¹⁴² Figure 3.8 provides an overview of the likelihood that automation will lead to job losses in certain occupations.

Contrary to perceptions, growth in automation will see some jobs increase in value. Most notably, there will be a greater need for workers who have a deep understanding of statistics and analytics. Such workers could command a higher premium, possibly slowing some companies' desire to automate.¹⁴³ Smaller numbers of more capable workers will fundamentally change management expectations and demand more of managers that remain. Technological and human factors will interact unpredictably, increasing uncertainty faced by tomorrow's business leaders.

While innovation has historically replaced lost jobs with new, unforeseen roles, recent trends in automation have led to more job losses than gains.¹⁴⁴ Even if new jobs arise, many experts believe that humans will be unable to adapt at the pace required to meet emergent needs, leading to large-scale displacement and the potential for social strife.

Figure 3.8: **Estimated Probability that Automation Will Lead to Job Losses (1=certain)**

Occupation	Probability of Job Losses
Recreational therapists	0.003
Dentists	0.004
Science & Engineering and IT	0.007
Managers	0.02
Chemical engineers	0.06
Editors	0.17
Firefighters	0.40
Health technologists	0.43
Economists	0.55
Machinists	0.65
Word processors/typists	0.81
Real estate sales agents	0.86
Technical writers	0.89
Retail salespersons	0.92
Accountants and auditors	0.94
Telemarketers	0.99

Source: University of Oxford¹⁴¹

¹⁴¹ "The Future of Employment: How susceptible are jobs to computerization?" University of Oxford. September 2013. http://www.oxfordmartin.ox.ac.uk/downloads/academic/The_Future_of_Employment.pdf

¹⁴² "Business Process Outsourcing Services in the U.S." IBISWorld. July 2015.

¹⁴³ "Ten IT-enabled business trends for the decade ahead." Op. cit.

¹⁴⁴ "What work will look like in 2025." Op. cit.

THE BUSINESS LANDSCAPE IN 2025

Demographic and cultural changes will build momentum in the coming years, with profound effects on the business landscape of 2025.

Two critical opposing forces are at play: the centralizing force of a knowledge economy requiring close collaboration, and the de-centralizing force of mobile technology that frees workers from the constraints of the office. Different businesses will manage these forces in different ways based on their culture, goals, and external constraints.

The corporate campus will grow in importance for many businesses relying on close collaboration between employees. Innovation will be driven by communities expressly designed to foster productive human interaction. The “company town” will lose its historical connotations of exploitation and become a means for the most successful firms to compete for talent. Younger generations less motivated by salary will want to live and work in an environment that fosters success, and companies best able to provide that environment will attract the best and the brightest.

At the other end of the spectrum, some businesses will find greater value in putting their employees closer to the customer. In this model, corporations will attract talent by offering flexibility and a blend, rather than simply a balance, between private and work lives. Younger generations are less tied to one place, which has historically led to less attachment to employers. Successful businesses will incorporate this desire for personal mobility into their operations, and will even turn it to their advantage by leveraging dispersed workforces who are close to the customer but still connected to the home office to a degree not possible even a few years ago.

SUMMARY

A range of demographic, business, and technological shifts will by 2025 significantly disrupt where and how we work.

Demographically, the increasing number of aging workers leaving the job market will create a skills gap in mathematics, science, and technology that younger, less experienced workers will struggle to meet. These demographic shifts will also bring in a large number of workers whose attitudes towards work and workplace arrangements diverge significantly from prior generations. Business leaders will need to work with a mobile generation which values independence and flexibility.

At the same time, factors such as the rise of collaboration-driven knowledge work and population movements of younger workers towards urban areas are leading businesses to try different approaches. Some are

consolidating their workforces in corporate campuses as others opt for smaller offices distributed throughout urban areas. The rise of technology that connects employers with potential employees will lead business leaders and recruitment professionals to use these means to attract individuals in remote regions as well as develop complete skill set profiles to find the right match. As knowledge work becomes more automated over time, business leaders will need to attract a smaller number of high-skill workers. They will simultaneously have to adapt to the realities of social displacement that will arise as automation encroaches upon knowledge work.

ABOUT THE CONTRIBUTORS

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Hanover Research is a global research and analytics firm that provides high quality, custom research through a cost effective model.

We deliver customized, timely and authoritative insights to clients in the corporate, education, and healthcare sectors, enabling them to make informed decisions, identify and seize opportunities, and heighten their effectiveness.

Learn more at www.hanoverresearch.com

About Canon Business Process Services

Canon Business Process Services offers a comprehensive portfolio of managed services and technology for information and document management, business process outsourcing and specialty workforce services.

Combining singular experience and domain knowledge, we enable organizations to improve operational performance while reducing costs and risks.

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