

What the Industrial Goods Workforce Wants

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By Christoph Hilberath, Rebecca Russell, Rainer Strack, Orsolya Kovács-Ondrejko, Jens Baier, Pierre Antebi, and Kate Kavanagh





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This article is part of BCG's [Decoding Global Talent series](#), which investigates how work gets done around the world to uncover long-term workforce trends.

The industrial goods sector is under pressure.

Companies must continue their **digital transformations** to modernize, and they must **operate more sustainably** to address climate issues. At the same time, they have to deal with a raft of workforce challenges, including declining interest in relocating for work, competition for new hires with in-demand skills, shifting employee expectations, and challenges arising from the ongoing global COVID-19 pandemic.

But the situation isn't all bad. Both knowledge workers and blue-collar workers in frontline jobs are eager to learn new skills that would open the door to new opportunities. Many are keen to work for companies that share their beliefs about social issues and the environment.

These and other insights come from a worldwide survey of approximately 16,600 employees working in more than 20 different job categories at **industrial goods** companies. (See [Exhibit 1](#).) They were among the 209,000 people in 190 countries polled by BCG and The Network, a global alliance of recruitment websites, for the ongoing [Decoding Global Talent](#) series. (See the sidebar, "Methodology.")

To address employees' concerns and become employers of choice for both knowledge workers and frontline workers, industrial goods companies must improve their value proposition. They need to formalize the ad hoc flexibility that they began to offer during the pandemic and permanently incorporate the aspects of work that employees say are important into their corporate culture. And industrial goods companies must offer their employees training to develop new skills, in the ways in which they prefer to learn.

A Workforce Hit Hard by the Pandemic

The last few years have been rough for many industrial goods employees, whether they design jet engines, formulate specialty chemicals, build cars, or mine ore.

More employees of industrial goods companies lost jobs or had their work hours cut during the COVID-19 crisis than almost any other industry except for travel and tourism, media, and professional services.

The effects varied substantially by the type of job and the industry subsector. Frontline workers were the most affected. These workers have a high-school education or equivalent and work in (or are looking for work in) positions that require manual labor, such as in manufacturing, mining, agriculture, and logistics. More than one in five frontline workers (21%) were laid off, the second highest share of workers to lose their jobs because of the crisis of any industry we studied, after travel and tourism (34%). Another 20% of industrial goods frontline workers were forced to work fewer hours. (See [Exhibit 2](#).)

Knowledge workers were also affected, though not as severely. Fourteen percent of the industry's knowledge workers—including engineers, scientists, managers, and other college-educated professionals in white-collar jobs—were laid off, and an additional 17% had their hours cut.

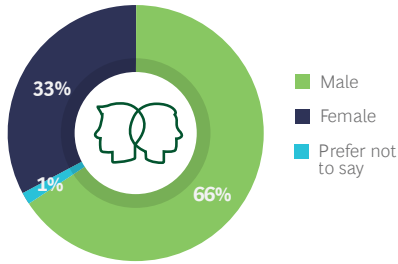
Some industrial goods industries felt the effects of the pandemic more than others. In many regions, companies in mining, construction, and agribusiness continued to operate more or less as usual. Others—such as automotive, aerospace, and chemical companies that sell more discretionary B2B products—shut down temporarily, although demand for many of those products has since recovered.

Exhibit 1 - Demographics of Industrial Goods Respondents

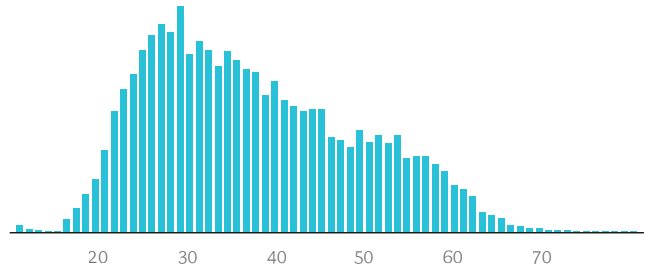
Total industrial goods respondents

16,568

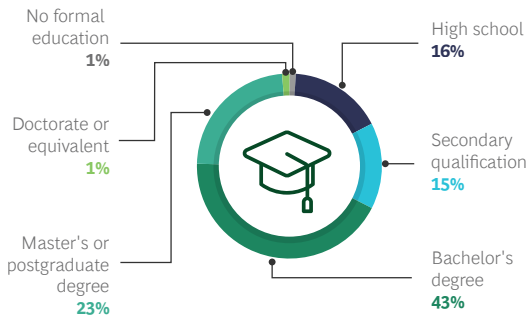
Gender



Age distribution



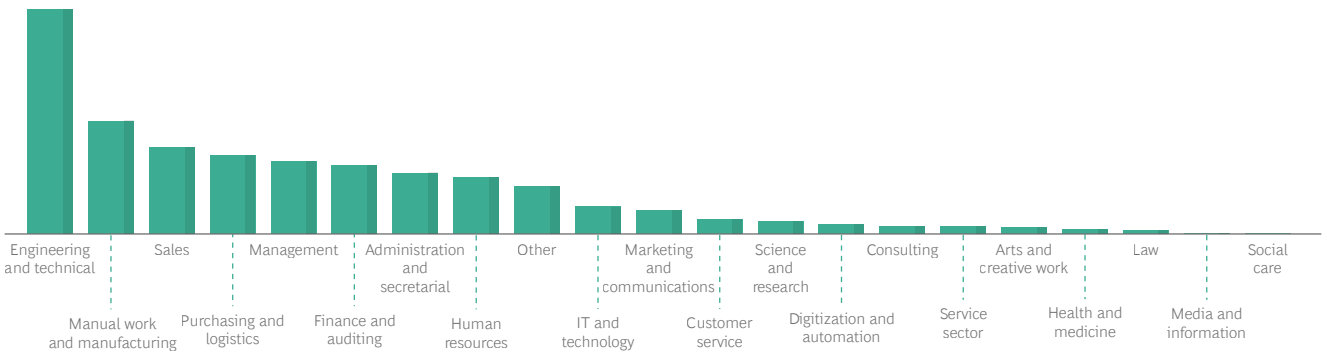
Education



Locations with the most respondents



Job roles of currently employed respondents



Source: 2020 BCG/The Network proprietary web survey and analysis of 16,568 industrial goods workers.

Note: Percentages may not total 100% because of rounding; in addition to currently employed respondents, 31% of total respondents were unemployed and looking for work.



Methodology

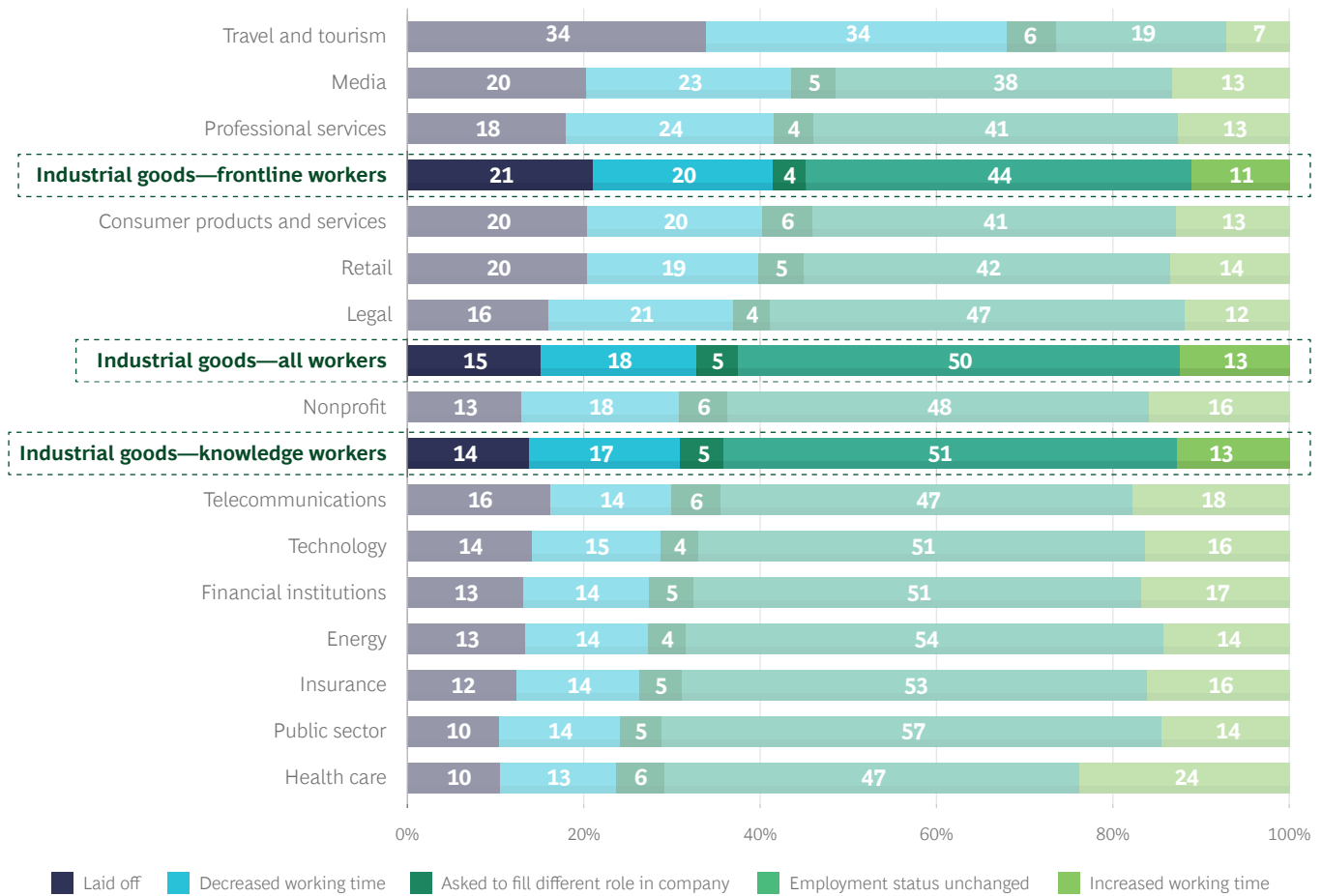
BCG and The Network, together with its affiliate organizations, conducted the survey underlying this report in October and November 2020. All told, 208,807 people, in 190 countries, participated. Of this total, 16,568 respondents worked in more than a dozen industrial goods industries, including agriculture, automotive, aerospace and defense, building materials, chemicals, engineered products, metals and mining, and transportation and logistics. Respondents include knowledge workers and frontline workers, who we define as those with a high-school education or equivalent who work in or are looking for work in positions that require manual labor, such as in manufacturing and logistics. Men constitute 66% of respondents; women, 33% (1% preferred not to say). The majority of respondents (63%) are 26 to 45 years of age; in terms of education, the largest portion (43%) have a bachelor's degree or above.

The 40-question survey elicited workers' attitudes regarding a variety of topics, including their willingness to work abroad, the countries other than their own in which they would most like to work, and the impact of COVID-19 on their work preferences, employment, and willingness to learn new skills. The information gathered in the survey, including workers' nationalities and job roles, made it possible to analyze their attitudes along a variety of parameters.

Survey results have been published in several reports detailing how the pandemic has changed employees' preferences for physical and virtual mobility, how they want to work, and their willingness to learn new skills or change careers to stay competitive.

Exhibit 2 - Frontline Industrial Workers Fared Poorly During the COVID-19 Crisis

Impact of COVID-19 on employment by industry



Source: 2020 BCG/The Network proprietary web survey and analysis of 16,568 industrial goods workers.

Given the pandemic’s effect on the industrial goods workforce, it should come as no surprise that employees have grown less satisfied with their jobs, as indicated by several key measures of workplace sentiment. (See Exhibit 3.) Workers’ feelings about their own well-being, work-life balance, and effectiveness declined from 2018 to late 2020. Satisfaction with the quality and style of their organizations’ leadership and with team collaboration also fell significantly since our last survey.

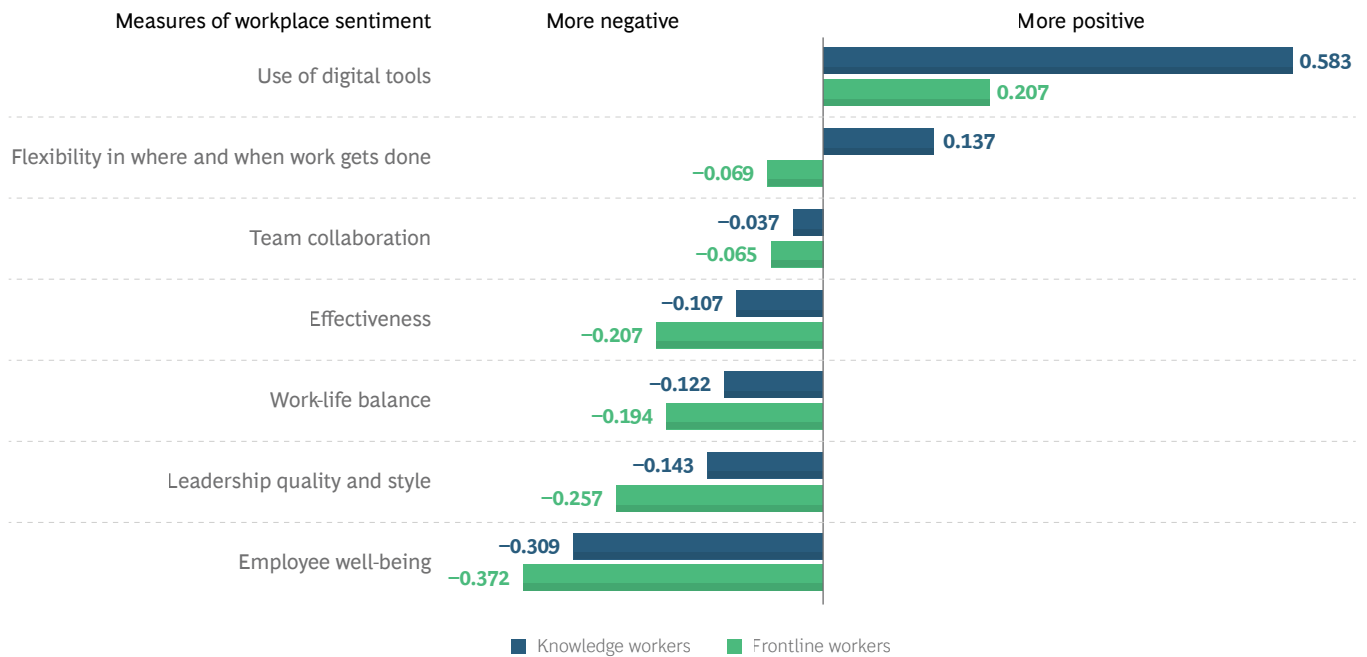
Frontline workers have more negative feelings than their white-collar counterparts about almost every aspect of work. Their feelings could reflect the disconnect between the autonomy they want over their schedules and the realities of the work conditions that industrial companies can offer. The sentiments could also signal a general frustration with working in new ways that the pandemic created, a situation that remains unsettled as companies continue to fine-tune workplace policies.

Twenty-one percent of frontline workers were laid off during the pandemic, and another 20% were forced to work fewer hours.



Exhibit 3 - Satisfaction with Most Aspects of Work Suffered

Frontline workers felt the effects of the COVID-19 crisis more acutely than knowledge workers



Source: 2020 BCG/The Network proprietary web survey and analysis of 16,568 industrial goods workers.

Note: Scores based on scale ranging from +2 (strongly positive) to -2 (strongly negative).

Feelings about using new work tools are a bright spot among otherwise downbeat sentiments about work. People in industries of all kinds who switched to working remotely over the past two years came to depend on digital tools such as Zoom, Slack, and Microsoft Teams to communicate and collaborate. At industrial goods companies, both frontline employees and knowledge workers feel good about their use of new work tools. Knowledge workers are particularly enthusiastic about the new tools, and they reported feeling fairly positive about the increased flexibility they have over where and when they work.

A Massive Shift in How the Industrial Goods Workforce Wants to Work

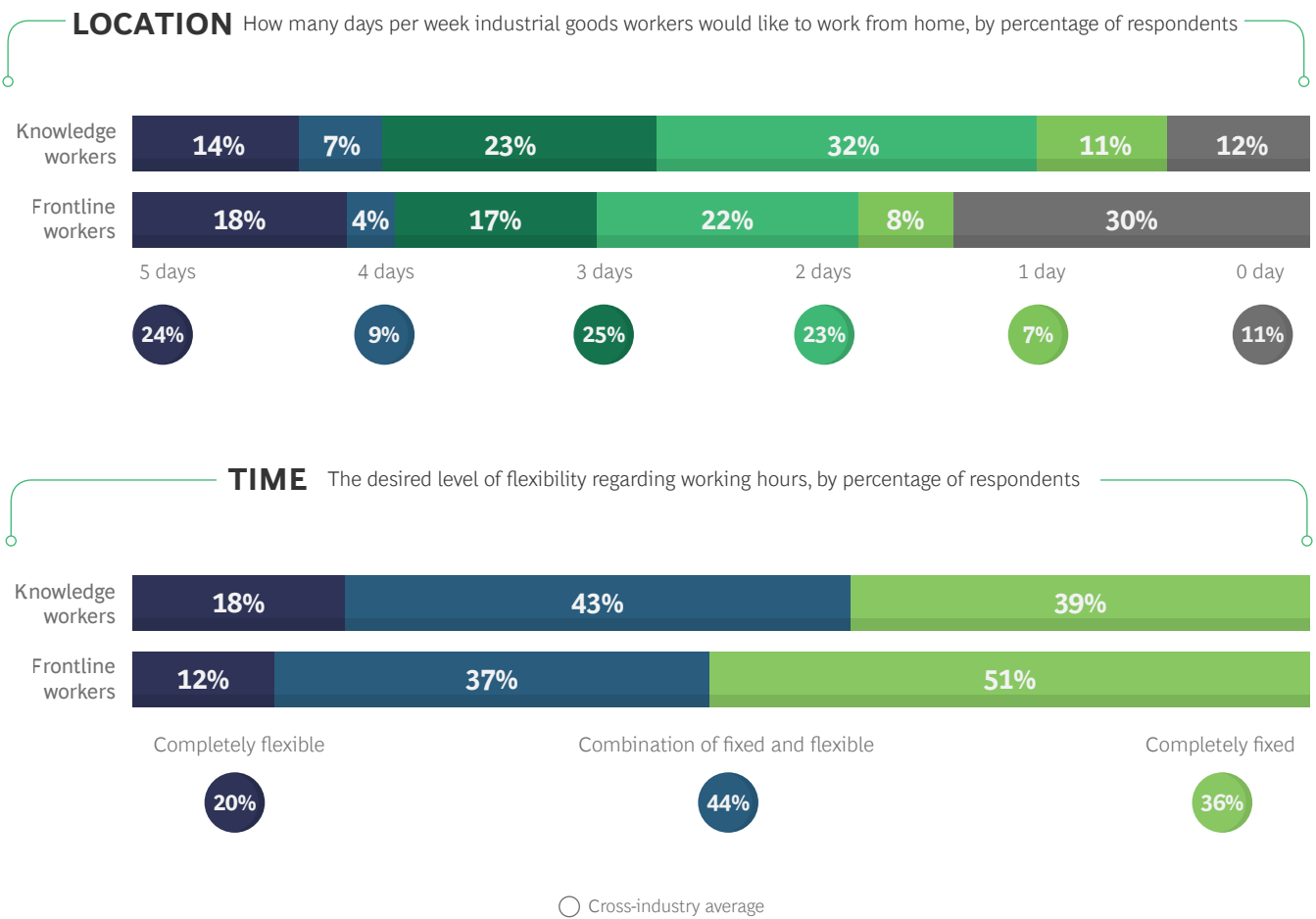
Industrial goods employees were forced to embrace new ways of working during the pandemic, and the change has affected how they want to work in the future.

The share of industrial goods sector knowledge workers doing their jobs remotely some or all the time was slightly higher than the cross-industry average, increasing from 25% before the pandemic to 42% by the end of 2020.

During the crisis, many frontline workers whose jobs required them to be onsite continued to work at mines, factories, or other production facilities. But a portion shifted to working offsite, which could explain why the number of frontline industrial goods employees working remotely increased from 15% before the pandemic to 23% in 2020. Some mining companies limited worksite access to essential workers and shifted frontline personnel such as electrical engineers and HR staff who normally would work onsite to remote work. An automotive parts manufacturer kept production line, safety, and quality personnel on site but switched engineers, HR personnel, planners, and other nonessential frontline staff to remote work. In these instances, remote workers dialed into meetings, used video calls for inspections, and visited worksites only when it was absolutely necessary.

Now that the industrial goods employees of all kinds have adapted to new ways of working, they want to retain flexibility over where and when they work. A full 88% of the industry’s knowledge workers want to work remotely at least some of the time. (See Exhibit 4.) Of those, the largest number—55%—would prefer to work remotely two or three days a week.

Exhibit 4 - Industrial Goods Employees Want Flexibility in Where and When They Work



Source: 2020 BCG/The Network proprietary web survey and analysis of 16,568 industrial goods workers.

In addition, 70% of frontline workers would prefer to work remotely at least some of the time, although the practicality of offering such an arrangement could vary widely by industry and role.

Along with flexibility in where they work, 61% of knowledge workers and 49% of frontline workers want more say over when they work. That began happening during the pandemic. For instance, some industrial-sector companies that previously offered flexible schedules only to women returning to work from parental leave began to offer flexible schedules to more types of employees. For frontline workers, more flexible schedules could mean offering more options for weekly schedules or hourly shifts.

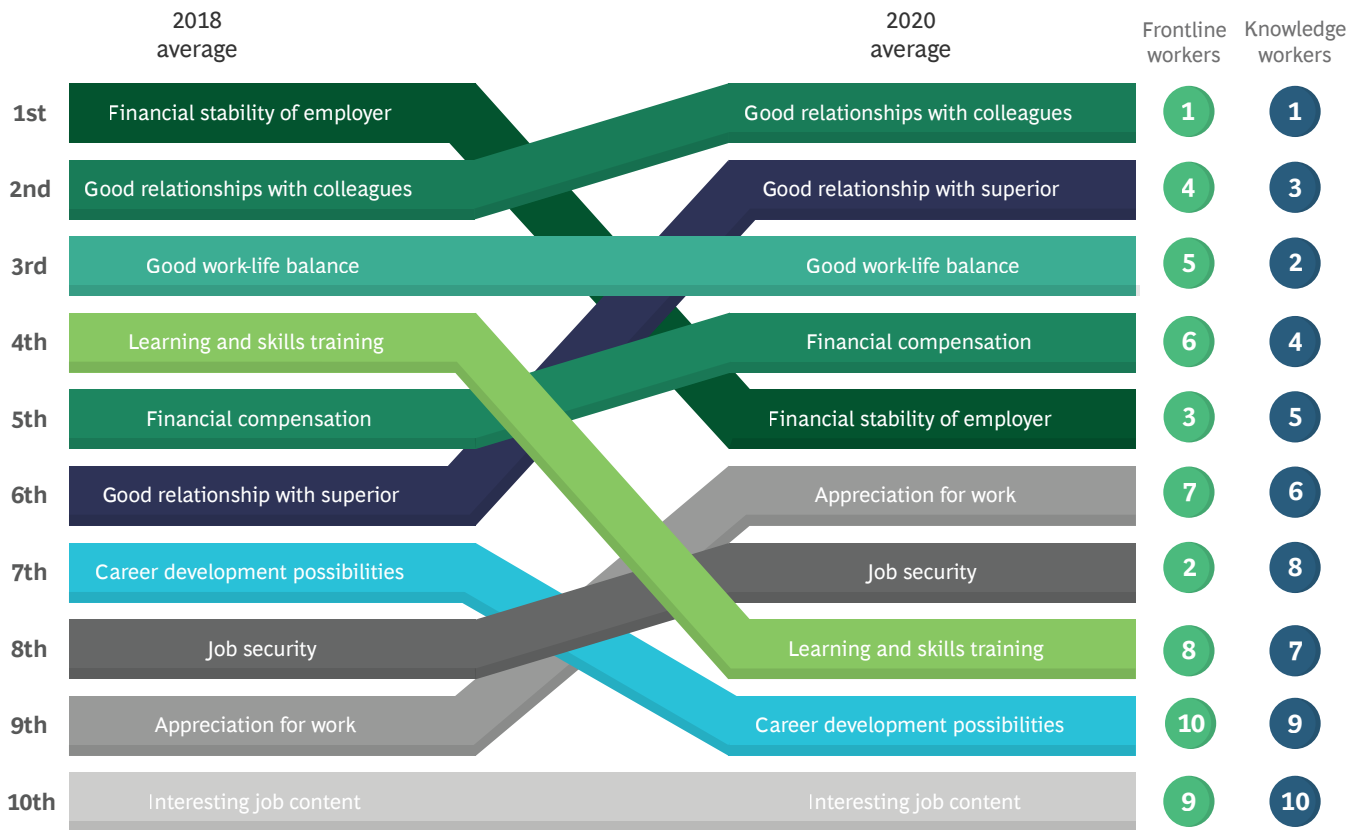
The Shifting Importance of What Matters Most on the Job

The pandemic did more than shift where and when industrial goods employees want to work. It changed the aspects of work that they value the most.

Maintaining good work relationships and a good work-life balance became more important to industrial goods workers of all kinds during the pandemic. In fact, the perceived value of solid relationships with colleagues was strong enough to displace the financial stability of an employer from its top-priority spot in our previous survey. (See Exhibit 5.) Maintaining a solid relationship with a superior also increased in importance during the pandemic for all types of industrial goods workers.

Exhibit 5 - Industrial Goods Workers' Priorities Have Shifted

Ranked based on importance of each job element to respondents



Source: 2020 BCG/The Network proprietary web survey and analysis of 16,568 industrial goods workers.

Maintaining a good equilibrium between work and other aspects of life remained one of the top five elements of work that these employees value most. But financial security took on new importance, no doubt because of the pandemic, with financial compensation and the financial stability of an employer appearing among the six most important work elements for both knowledge workers and frontline workers. The most significant difference between the groups is job security, which became more important to frontline workers during the pandemic, an indicator of the effect that the crisis has had on this particular group.

One industrial agriculture company took several steps to ensure it cultivated the parts of the job that employees appreciate, including having a good rapport with supervisors. The company provided supervisors with leadership coaching, where they learned how to hold regular check-ins with direct reports and use the meetings to assess how people were doing. Although these are common leadership tasks, the supervisors hadn't always done them consistently or well, so the change had a material impact. To address employees' desire for a better work-life balance, the company provided all staff with access to an employee-assistance program that included mental and financial well-being services.



Now that employees have adapted to new ways of working, they want to retain flexibility over where and when they work.

The pandemic isn't the only crisis the world has had to contend with in recent times. The past several years saw the rise of the #MeToo movement, Black Lives Matter protests, political upheavals, devastating wildfires on multiple continents, and other climate catastrophes. It's led employees to become more attuned to workplace values and, should they be looking for a new job, to where a prospective employer stands on the issues.

Three-quarters of employees working in the industrial goods sector agree that environmental issues have become more important to them, and 57% would exclude from a job search companies whose beliefs about the environment do not match their own.

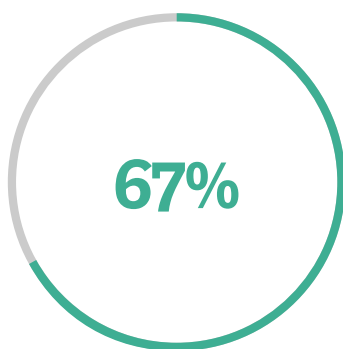
By the same token, 73% of industrial goods employees of all kinds agree that diversity and inclusion have become more important to them in recent times, and 53% would exclude from a job search companies whose beliefs about social justice issues do not match their own.

Interest in Virtual International Jobs Increases as the Appeal of Working Abroad Declines

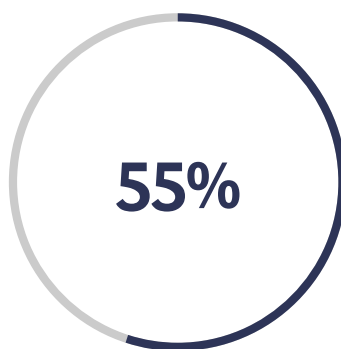
Employees' interest in remote work has led them to consider working virtually for an employer based in a different country or region. In fact, 55% of industrial goods workers would be open to working remotely for an employer headquartered outside their own country. Industrial goods employees are most interested in working virtually for organizations headquartered in Germany, followed by the US, Australia, and Canada. (See Exhibit 6.)

Employing people outside of a company's home base offers access to new talent pools and, in particular, people with digital and AI skills who can supplement a local workforce. But such a workforce expansion may be complicated by the need to deal with regulatory, salary, and cultural issues.

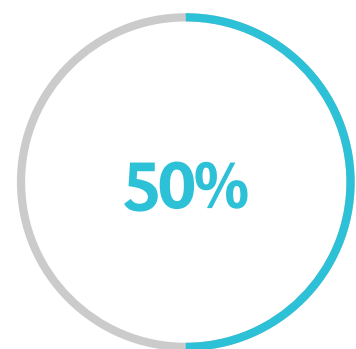
Fewer employees are keen to physically move to a different region for a work opportunity, continuing a decline we've tracked since our first global talent survey in 2014. Just 50% of the industrial goods workforce was willing to move abroad for work in 2020, compared with 67% in 2014. The portion of industrial goods workers who would consider an international move for a work opportunity includes both knowledge workers and frontline workers willing to relocate for well-paid assignments.



Of industrial goods workers would move to a different location for work in 2014

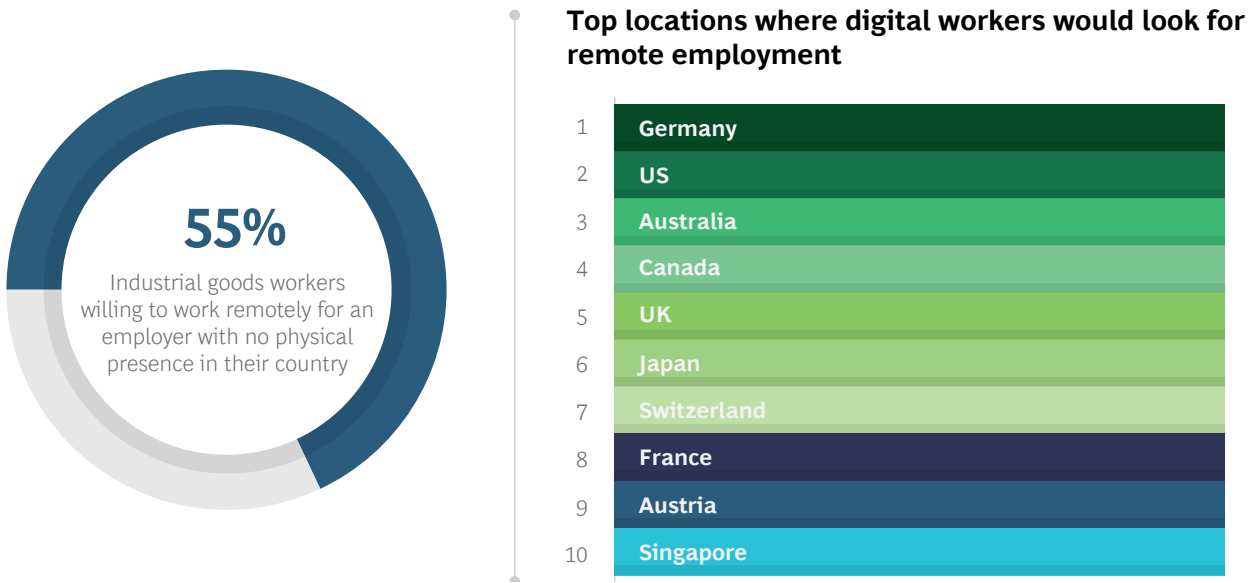


Of industrial goods workers would move to a different location for work in 2018



Of industrial goods workers would move to a different location for work now

Exhibit 6 - Most Industrial Goods Workers Are Open to Virtual Mobility



Source: 2020 BCG/The Network proprietary web survey and analysis of 16,568 industrial goods workers.

Since our last survey, Germany overtook the US as the top destination for an overseas assignment for industrial goods workers. Other top locations include Canada, the US, and Australia. In 2018, Japan barely made it into the top ten places that industrial goods employees would consider for an international relocation. But by late 2020, increased interest in working there moved the country to the number five spot. It's indicative of the Asia-Pacific region's emergence as a go-to destination for a foreign relocation for industries of all kinds.

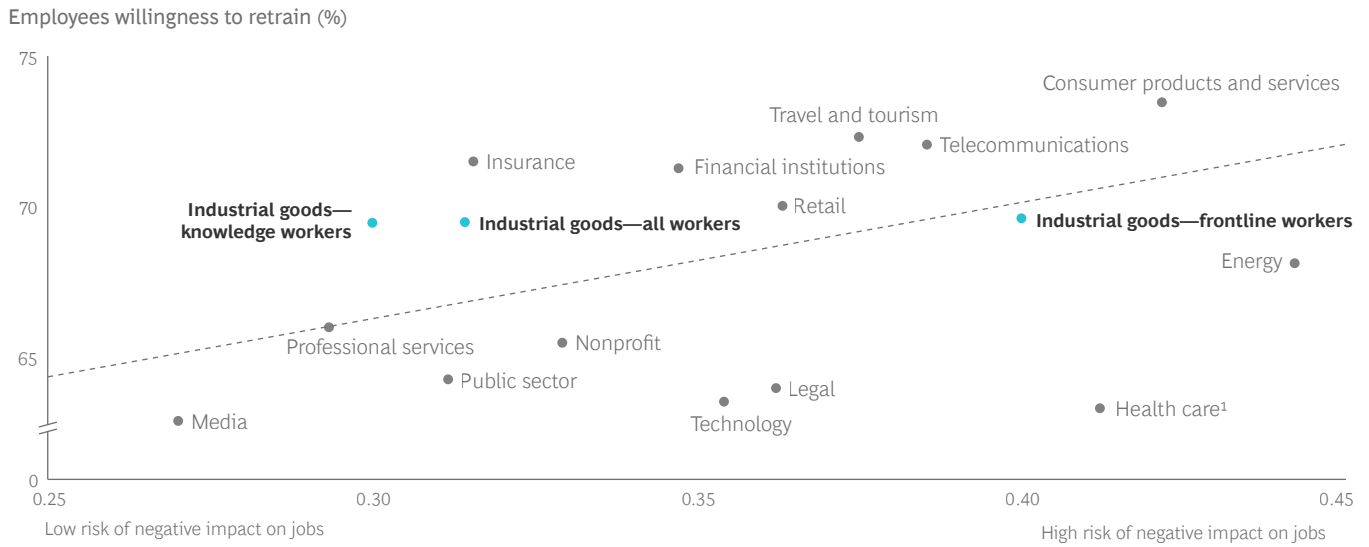
Industrial Workers Are Eager to Learn—Though Some Spend Relatively Little Time on Training

On top of having their work hours cut or, in some cases, losing their jobs, industrial goods workers are fearful of the increased threat that automation poses to their livelihoods and are willing to reskill or upskill as a result. Of the industrial goods workforce, 45% of frontline workers and 39% of knowledge workers said that the issue of having their jobs automated or replaced by robotics became more important to them in the past year.

Almost seven in ten (69%) of all industrial goods employees are willing to retrain, slightly higher than average for jobs across all industries. (See Exhibit 7.)

Exhibit 7 - A Majority of Industrial Goods Workers Are Open to Reskilling

Correlation of job security and willingness to learn new skills for industrial goods workers and workers in other industries



Source: 2020 BCG/The Network proprietary web survey and analysis of 16,568 industrial goods workers.

Note: Job risk reflects two factors: the extent of the impact of the pandemic and the perceived threat from automation according to workers in the industry.

¹Outlier exempted from trend line.

Frontline workers aren't much more willing to retrain than knowledge workers even though they are more likely to believe automation could negatively affect their jobs.

Early- and mid-career employees are more willing than most to reskill, possibly because they have more years left on the job than older workers during which they could put new skills to use. Industrial goods employees in Africa and the Middle East are more willing to spend time learning new skills than respondents from Europe and America.

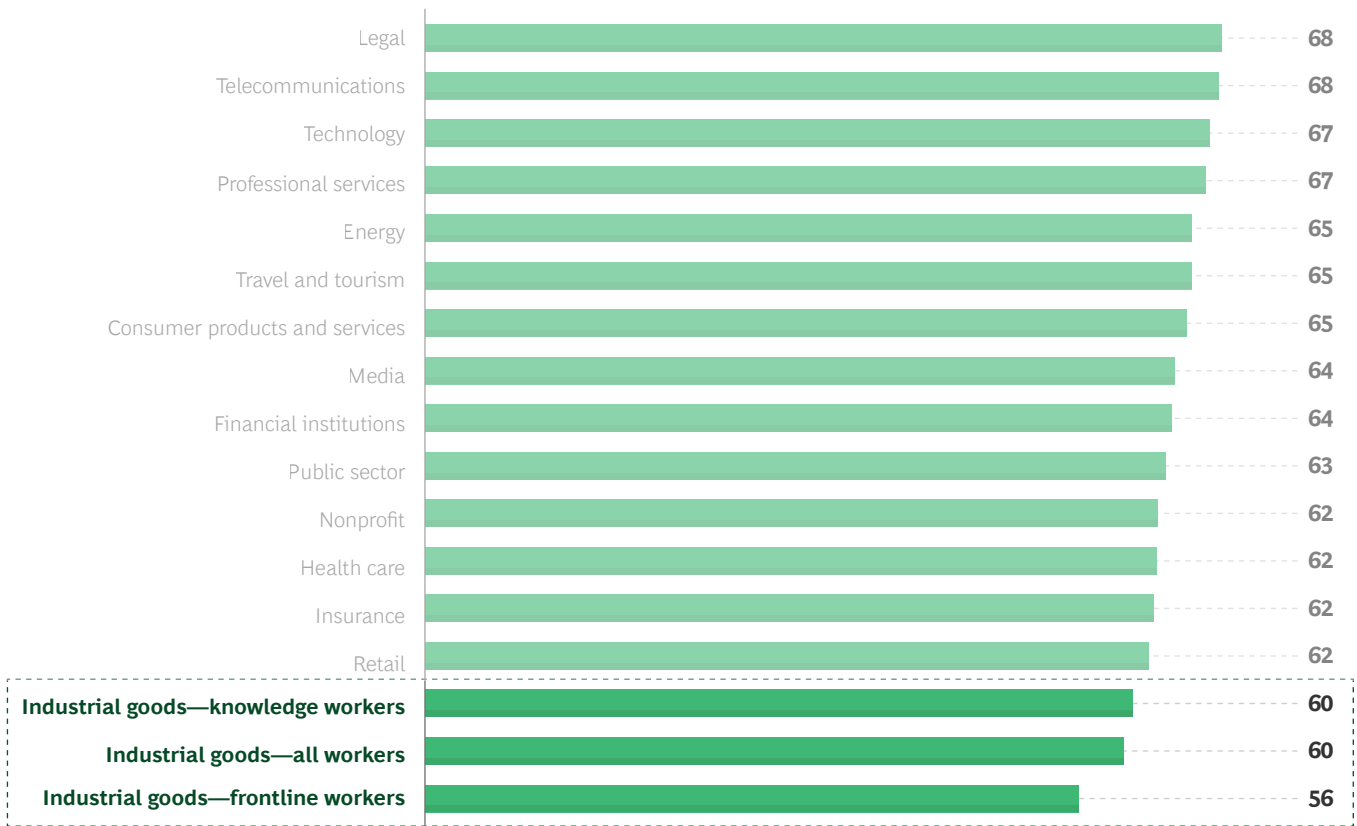
A significant portion of the industrial goods workforce spends a good amount of time each year training on new skills. Sixty percent of employees of all kinds devote at least a few weeks a year to training. (See Exhibit 8.) The portion of knowledge workers who spend a couple weeks a year on training equals the industry average.

But only 56% of frontline workers train to that extent, and it's the lowest proportion for any of the industries we surveyed. The low level of training could be the result of industrial goods companies focusing training for frontline workers on health, safety, and environmental issues rather than upskilling. It could also stem from the fact that some portion of these workers who mentor or are mentored on the job—such as master tradespeople and apprentices—don't necessarily classify that as training even though it is. It could also be an artifact of the nature of the work that some frontline workers perform, which does not easily lend itself to training.

If given the opportunity, however, both knowledge and front-line industrial goods workers would train for future-proof roles for which there is high demand. We found that these employees would be interested in upskilling or reskilling for a new role in digital or IT or for adjacent job roles. In addition, industrial goods workers would upskill for management jobs, though that interest is stronger among knowledge workers than among frontline personnel.

Exhibit 8 - Industrial Goods Workers Spend Relatively Little Time on Learning

Percentage of respondents who spend at least a few weeks a year on learning by industry



Source: 2020 BCG/The Network proprietary web survey and analysis of 16,568 industrial goods workers.

Whether they are picking up new skills for their existing position or reskilling for a new one, industrial goods workers prefer to learn online. (See Exhibit 9.) That’s in keeping with a cross-industry trend that saw the pandemic boost digital modes of learning. Since 2018, industrial goods workers’ use of online educational institutions such as digital academies and massively open online courses (MOOCs) increased by 14% and use of mobile apps increased by 12%.

Knowledge workers are close to twice as likely as frontline workers to use online learning institutions. Both groups like to use mobile apps for learning in almost similar numbers.

Five Ways to Attract and Retain the Industrial Goods Workforce

The pandemic was an unanticipated pilot of new ways of working. Companies across all industries transitioned to digital and remote work whether they were ready or not. Industrial goods companies in particular had to **accelerate their transition to digital**. Now they must figure out how to make the changes permanent in a way that works for both the business and a divergent workforce.

Develop a strategic workforce plan. A strategic plan improves recruiting and offers a path for upskilling. A company can start by analyzing the current workforce against anticipated future needs by job category. A well-developed strategy should identify the types of skills that the organization may need within each category, the mechanisms required to obtain them, and the roles that reskilling and upskilling could play.

Exhibit 9 - More Industrial Goods Workers Like Learning Online

Percentage of respondents who used a given resource to train and develop their skills

Rank among respondents	2018		2020		Frontline workers	Knowledge workers
		Average		Average		
1	On-the-job training (including coaching and job rotation)	66%	On-the-job training (including coaching and job rotation)	66%	71%	65%
2	Self-study	64%	Self-study	62%	52%	65%
3	Conferences and seminars	35%	Online educational institutions (such as digital academies and MOOCs)	44%	28%	48%
4	Traditional educational institutions (academic and vocational)	30%	Conferences and seminars	41%	22%	45%
5	Online educational institutions (such as digital academies and MOOCs)	29%	Traditional educational institutions (academic and vocational)	35%	28%	36%
6	Mobile apps	23%	Mobile apps	33%	31%	34%
7	Government programs	6%	Government programs	14%	15%	11%

Source: 2020 BCG/The Network proprietary web survey and analysis of 16,568 industrial goods workers.

Note: MOOCs = massive open online courses.

By planning ahead, it’s possible to build upskilling into people’s daily work, which is how the industrial goods workforce prefers to learn. Having a strategy also makes it easier to adapt plans in real time as new economic or other conditions develop. A cohesive plan also makes it easier to articulate the company’s employer brand to potential new hires.

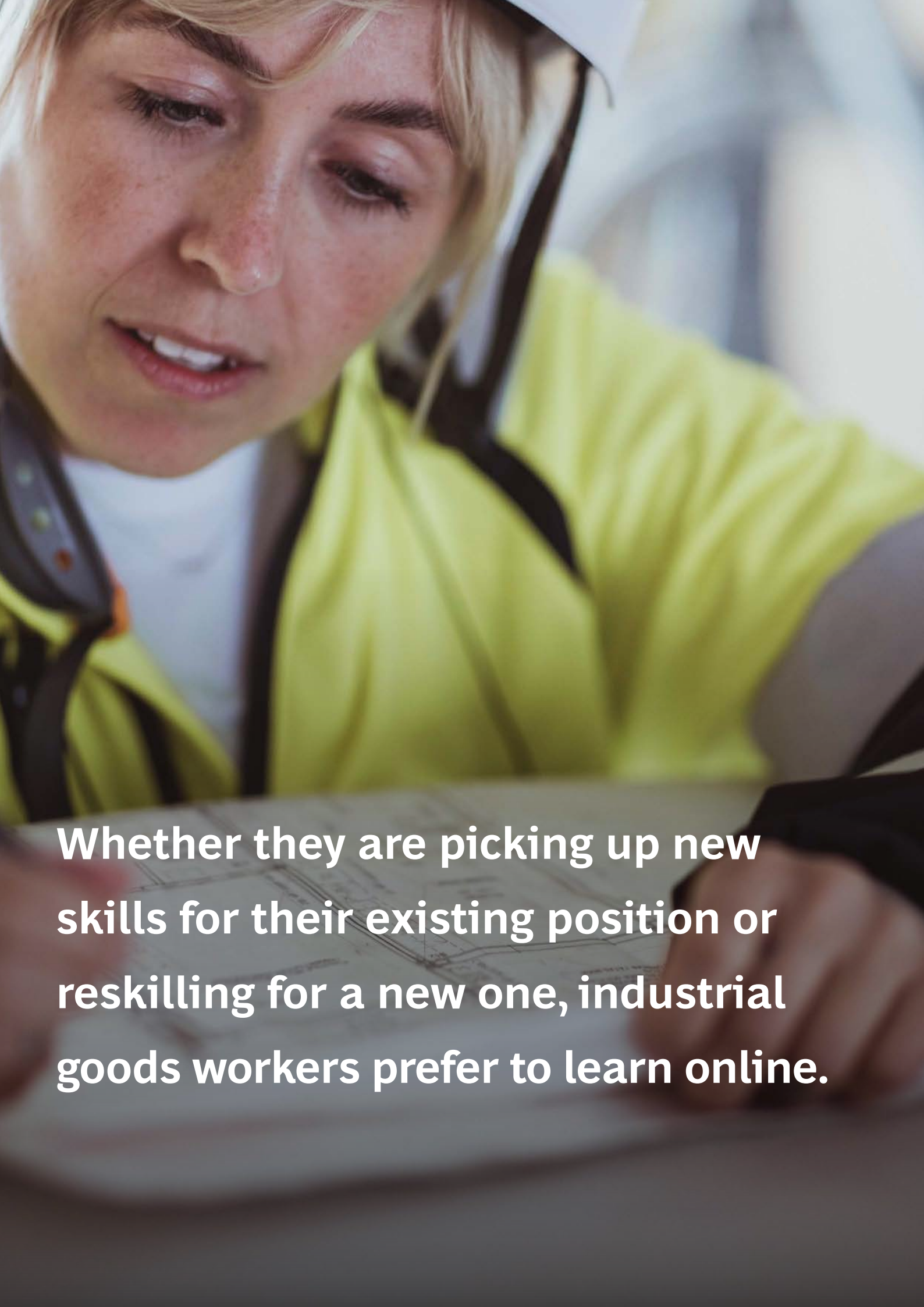
Provide flexibility that works for employees and the business. Use lessons from the pandemic to formalize policies for flexible work. Such arrangements should support employees’ desire for flexibility with structures and initiatives that preserve the quality of their work life, including working “when and where they get the best results,” as a leader at one industrial goods company put it.

Industrials also need to rethink frontline workers’ shifts and schedules. One mining company made itself more attractive to miners who must work 12-hour days and live onsite during shifts by giving them the choice of working 4 days on, 3 days off, or 14 days on, 7 days off. Another mining company that flies miners to remote worksites switched to offering two weeks on and one week off, or four weeks on and two weeks off.

At companies with unionized workforces, offering more flexibility may require adapting existing collective-bargaining agreements. Before that can happen, companies have to understand what their workers want and how they can provide those working conditions.

Be open to new sources of recruiting, including remote workers. Companies that need to recruit can seek talent in overlooked or upcoming areas or tap people who would be willing to work remotely from a different region or country. It isn’t an option for all industrial goods positions, but it could help employers based in areas with significant competition for knowledge workers by expanding the talent pools they can choose from.

Companies in all kinds of industries have long relied on outside staffing agencies to hire additional talent when needed. Today, there are new options, including gig economy platforms for sourcing work to a growing cadre of **on-demand digital workers**, including remote workers based in a different region.



Whether they are picking up new skills for their existing position or reskilling for a new one, industrial goods workers prefer to learn online.

Cultivate elements of the job that matter to workers.

To keep employees happy and engaged, industrial goods companies must cultivate an environment that contributes to good relationships between supervisors and their direct reports and among coworkers, two aspects of work that we know are important to both knowledge workers and front-line personnel in industrial goods. Leaders can contribute to such an environment by being actively engaged, working in a collaborative way, and providing feedback. This effort also means helping direct reports understand the connection between what they do and the organization's broader purpose and goals.

Offer skill-building opportunities through people's preferred learning channels. We know industrial goods employees of all kinds are eager to pick up new skills, but not all spend as much time as workers in other industries on learning. Leaders at industrial goods companies can rectify this by investing in and encouraging people to learn new skills that the organization needs in order to prosper. By applying data analytics to their people needs, they can understand the similarities between different job profiles and determine which people could be upskilled into in-demand positions.

Any skill-building program should be designed to provide the needed capabilities at a reasonable cost and speed. Companies can provide skill training through online classes and other digital tools, which industrial goods employees favor. And they should integrate learning into daily work, as our previous research has shown that the **best way to learn new skills is to use them every day**. When it comes to upskilling industrial goods talent, organizations should cede at least some control to these workers, since they prefer self-directed learning.

To attract and retain the talent they need, industrial goods companies must consider what their people feel and say about work and then use those insights to strengthen their value proposition for employees. Changes could entail creating strategies and policies that account for two different employee groups, which could result in policies that are more complicated than in the past. But that could be what it takes to hang on to valued workers and attract talent in the future.

About the Authors



Christoph Hilberath is a managing director and partner in the Melbourne office of Boston Consulting Group and a member of the People and Organization and Industrial Goods practices. You may contact him by email at hilberath.christoph@bcg.com.



Rebecca Russell is a managing director and partner in BCG's Melbourne office and a member of the Industrial Goods, Operations, and People and Organization practices. You may contact her by email at russell.rebecca@bcg.com.



Rainer Strack is a senior partner emeritus and senior advisor. You may contact him by email at strack.rainer@bcg-emeritus.com.



Orsolya Kovács-Ondrejko is an associate director in BCG's Zurich office and a member of the People and Organization practice. You may contact her by email at kovacs.orsolya@bcg.com.



Jens Baier is a managing director and senior partner in BCG's Düsseldorf office. You may contact him by email at baier.jens@bcg.com.



Pierre Antebi is a co-managing director of The Network and the business marketing director at Figaro Classifieds. He is based in Paris. You may contact him by email at pierre.antebi@the-network.com.



Kate Kavanagh is a co-managing director of The Network and the group international sales director at StepStone. She is based in the UK. You may contact her by email at kate.kavanagh@stepstone.com.

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For Further Contact

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