



The State of the Connected Frontline Manufacturing Worker, 2021

A new international research report exploring frontline manufacturing workers' views on their jobs, the usage of workplace technology, and the pandemic's continuing impact.

Introduction:

Frontline Manufacturing Workers Around the World: What Now?

It's been nearly two years since COVID-19 began taking its life-upending toll on people, countries and the world at large. **Throughout this time, what became clear is that humans are still at the heart of manufacturing and supply chains.** Whether they're on the line at the factory or en route transporting goods, workers in manufacturing and production play a critical role in keeping companies and economies productive and sustainable.

But recognition alone is not enough. In recent months, not only has the world laid bare the fragility of global supply and demand, but the "Great Resignation" of the workforce has brought enormous challenges to even the most advanced nations and companies. Labor shortages at this scale are, in many ways, collective demands for change and empowerment, especially on the frontlines. And this is not a short-term issue. The manufacturing skills gap in the United States is predicted to leave as many as 2.1 million jobs unfilled through 2030.¹ Germany, Europe's largest economy, projects that its workforce will shrink by about 4 million by 2030 as the baby boomer generation retires.²

How do today's frontline manufacturing workers perceive their jobs, their future, and the role of technology and digital tools in an increasingly complex environment?

Parsable, provider of [Connected Worker](#)[®], the leading platform for frontline industrial work, recently conducted an international survey of 1,400 frontline manufacturing workers based in the United States, Germany, France, Spain and the United Kingdom to get the latest pulse on their professional situation and outlook, technology usage, and productivity.

¹ Deloitte, *Creating Pathways for Tomorrow's Workforce Today*, 2021

² Federal Ministry for Economic Affairs and Energy

Key Findings

More needs to be done, particularly on investing in digital tools, to stem the global labor shortage crisis.

Nearly one in three (29%) Generation Z respondents, aged 18-24, plan on staying in their current job for less than two years. On average, across all age groups, nearly half (45%) say the opportunity to work in a more modern/digital environment would be part of their decision to leave their current employer. This includes providing mobile technologies, such as a smartphone or tablet, to help them do their jobs better; across all ages, only 41% say their companies have done this.

While frontline manufacturing workers are receptive to technology, inefficient workflow and communication processes remain.

The vast majority (81%) of respondents still rely on paper-based processes to follow instructions and/or keep track of their work – even though 80% have no concerns with using digital tools. This receptivity is common across the four generations (Generation Z, millennials, Generation X and baby boomer) that are all likely to be working together.

Frontline manufacturing workers feel a greater sense of pride about their jobs; catching COVID-19 is now less of a safety concern overall.

On average, 52% of respondents feel more valued as a frontline worker since the COVID-19 pandemic started, although less than half (42%) report that their companies have implemented new technology to help them work better as a result of the pandemic. Additionally, less than one in four (22%) report that a primary safety concern on the job is getting infected with the coronavirus, suggesting more confidence in health and safety measures.

45%

want to work in a more digital environment

81%

still use paper-based processes for work

52%

feel more valued since the pandemic

Parsable conducted a survey of currently employed, non-managerial frontline manufacturing workers based in the United States, Germany, France, Spain and the United Kingdom. The survey was fielded in September 2021, and received 1,400 completed responses across the five countries.

Key Takeaway

To Keep Workers, Access to Mobile-based Digital Tools is Vital

Mobile devices and the use of mobile-based apps, photos, videos and gifs are nearly ubiquitous in the consumer world, at any age; In the United States, 95% of people say they own a mobile phone, and in Europe, a median of 93% report owning one.³ Yet only 41% of frontline manufacturing workers surveyed across countries say their companies provide mobile technology to help them do their jobs better. Workers based in the U.S. reported slightly higher (45%) than the overall average. In France, that number fell to 30%.

Younger workers are more likely to leave their current employers for one that offers a more modern, digital workplace, including mobile technology: 55% of respondents aged 18-24 and nearly half (49%) of those aged 25-34 say access to technology factors into such a decision, versus 25% of those aged 55 and older. This is aligned with the overall trend of younger workers being less committed to their companies: 29% of respondents aged 18-24 plan on staying in their current frontline manufacturing role for less than two years; in contrast, 65% of those aged 55 and older have been in their current jobs for 10 years or more.

Convincing younger generations that manufacturing is a future-focused, technologically advanced career choice will become increasingly critical as the industrial skills gap continues to widen. Providing mobile-based digital tools and on-the-job learning opportunities – in the formats they're accustomed to – are now tablestakes to ensure employees feel valued.

“What’s important is that you have a faith in people, that they’re basically good and smart, and if you give them tools, they’ll do wonderful things with them.”

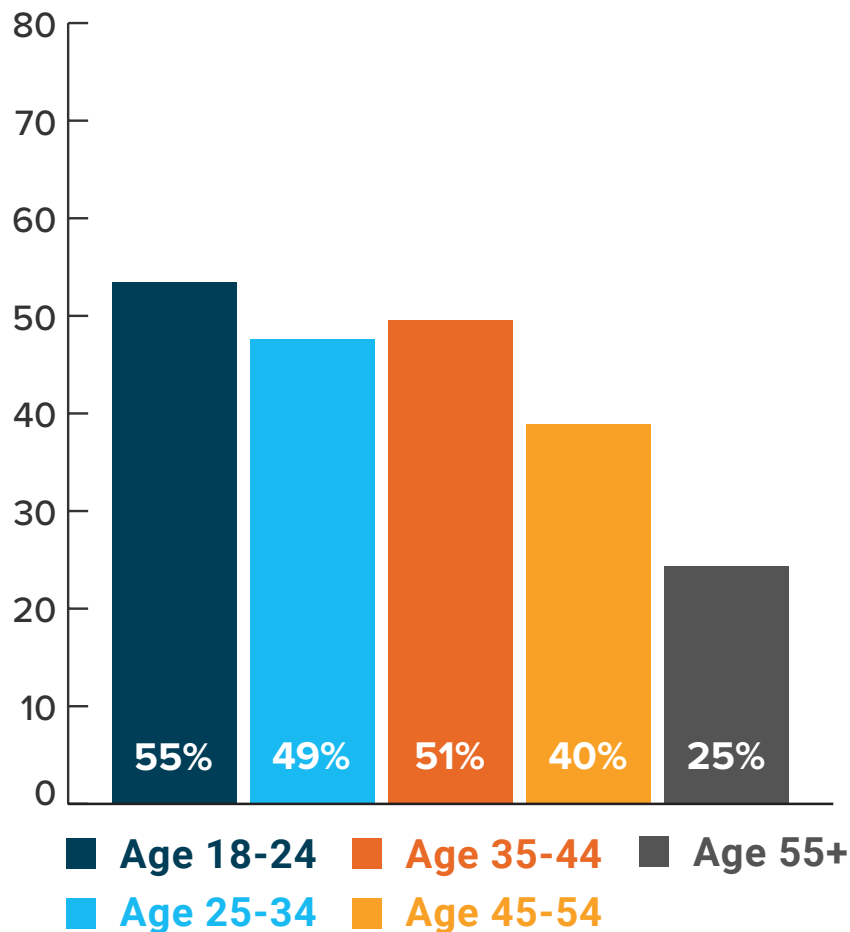
–Steve Jobs

³ Pew Research Center, *8 Charts on Internet Use Around the World as Countries Grapple With COVID-19*, 2020

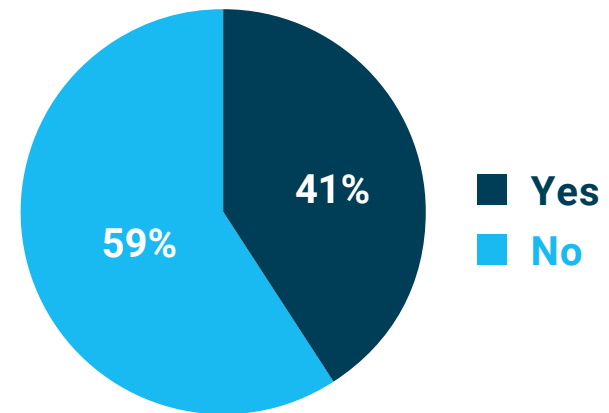
Key Takeaway

To Keep Workers, Access to Mobile-based Digital Tools is Vital

The opportunity to work in a more modern/digital environment would be part of my decision to leave my current employer.



Has your company given you any mobile technology (smartphone, tablet, wearable, etc.) to help you do your job better?



Key Takeaway

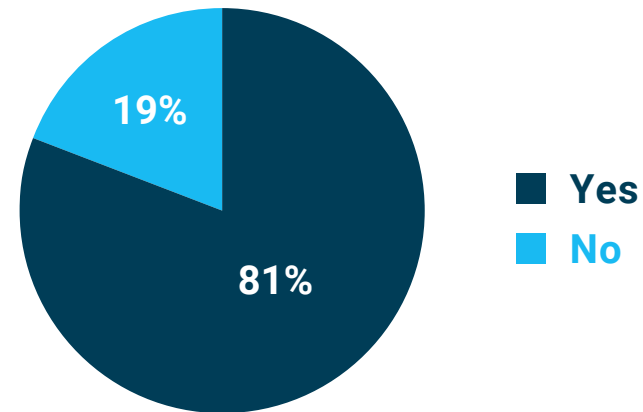
Analog Processes Remain Prevalent on the Factory Floor

Although today's manufacturing facilities are far more technologically advanced thanks to the prolific rise of robotics, artificial intelligence, IoT devices and more, the way that frontline workers follow work procedures and collaborate with each other has largely been unchanged. The majority (81%) of frontline manufacturing workers report using paper to perform and track their day-to-day job execution; this is despite 80% having no problems using software and other digital tools – including those aged 55 and older (81%). In Germany, specifically, 95% of respondents in the 55-and-older age group have no issues. So, while much of the focus has been on younger workers being digital natives, this suggests older workers are just as comfortable using technology in their jobs and for training.

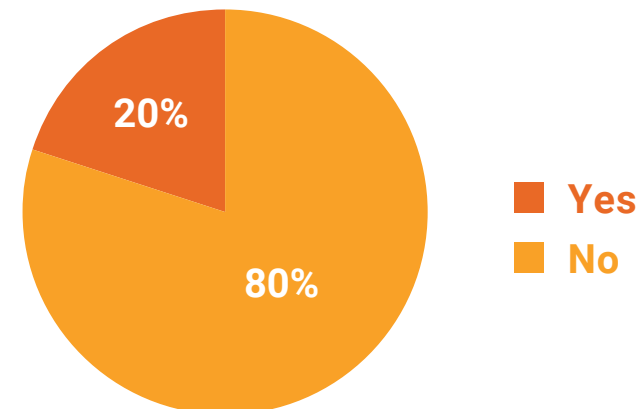
When it comes to communicating with other team members, the top methods that workers rely on are verbally in-person (76%) and by phone (43%) – neither of which provide the visibility and traceability that digital channels offer.

As data – and more importantly, data insights – become a vital competitive differentiator, manufacturers can no longer continue relying on analog-based communication and record-keeping. Every data point becomes an opportunity for improvement, and digital processes and collaboration among employees, teams and sites are essential to efficiently capturing and acting on that data.

Do you use/rely on paper to follow work instructions and/or track your work?



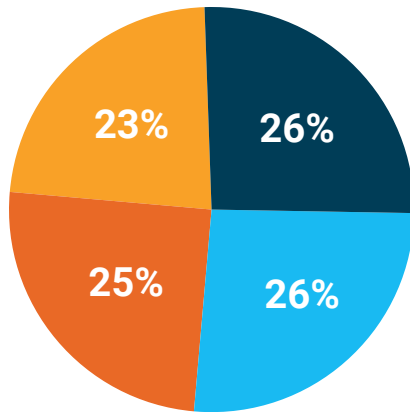
Do you have any concerns about using digital tools (specifically software, applications, etc.) in the workplace?



Key Takeaway

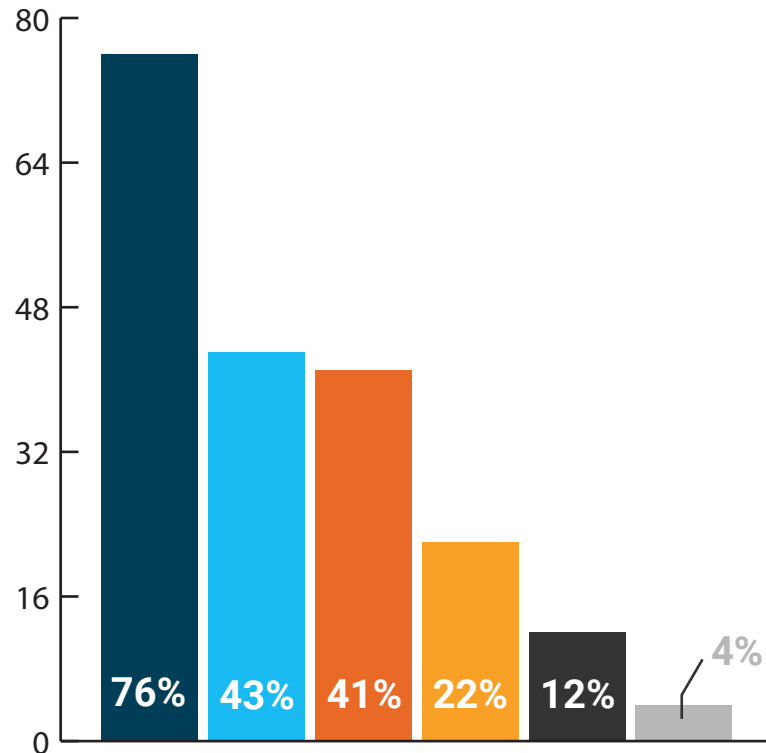
Analog Processes Remain Prevalent on the Factory Floor

What type of digital solution would help you work better the most?



- A mobile device in place of paper
- Text messaging or online chat to connect quickly and easily with colleagues/report issues
- Online, in-the-moment remote guidance from experts and colleagues
- Immediate access to online training or informational content

How do you communicate with other team members?



- Verbally in-person
- Phone
- Email
- Software/digital tools (instant message, etc.)
- Notes on paper
- Kanban board/whiteboard

Key Takeaway

COVID-19 Pandemic Improved Worker Self-Perception, Highlighted Tech Benefits

While many desk-based employees have been able to work remotely during the pandemic, most deskless workers – which make up 80% of the global workforce⁴ – continue to report to work onsite. For those in essential roles, the public spotlight has helped boost a sense of pride. Overall, 52% of frontline manufacturing workers say they feel more valued as a result of the pandemic.

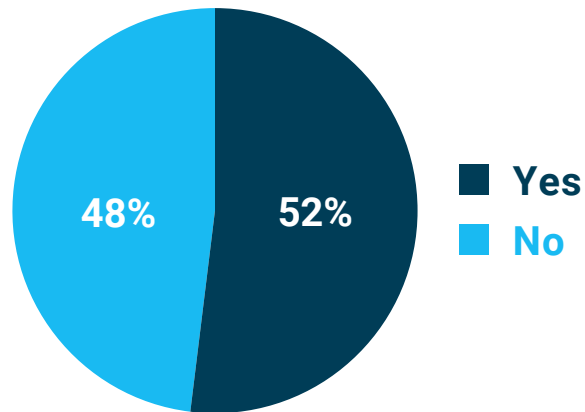
On average, U.S.-based frontline manufacturing workers feel a greater sense of pride in their work since the COVID-19 pandemic started, with 63% saying yes, versus their combined European counterparts in the U.K., Germany, France and Spain (which report an average of 50%).

When asked if their companies rolled out new technology to help them work better because of the pandemic, 42% said yes. Of those, the biggest benefit of the new technology is increased safety (33%); this aligns with the 22% of overall respondents (less than one in four) reporting that their primary safety concern at work is getting COVID-19.

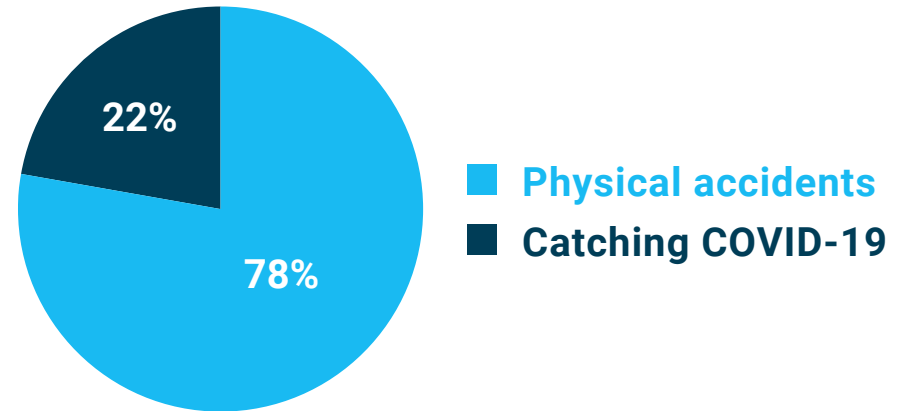
The initial onset of the pandemic highlighted how quickly enterprise technology could be rolled out. What would typically take several months to fully implement were adopted within a few weeks, particularly in the urgent context of worker health and safety – like setting new standard operating procedures (SOPs) for personal protective equipment (PPE) requirements, hand-washing and symptom checks. Through this experience, manufacturers now realize that digital transformation can be accomplished by “quick win” improvements in safety, productivity, quality and sustainability.

⁴Emergence Capital, *The Rise of the Deskless Workforce*, 2018

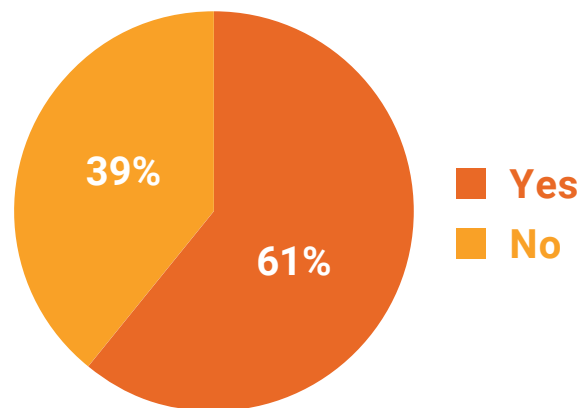
Do you feel more valued as a frontline worker because of the COVID-19 pandemic?



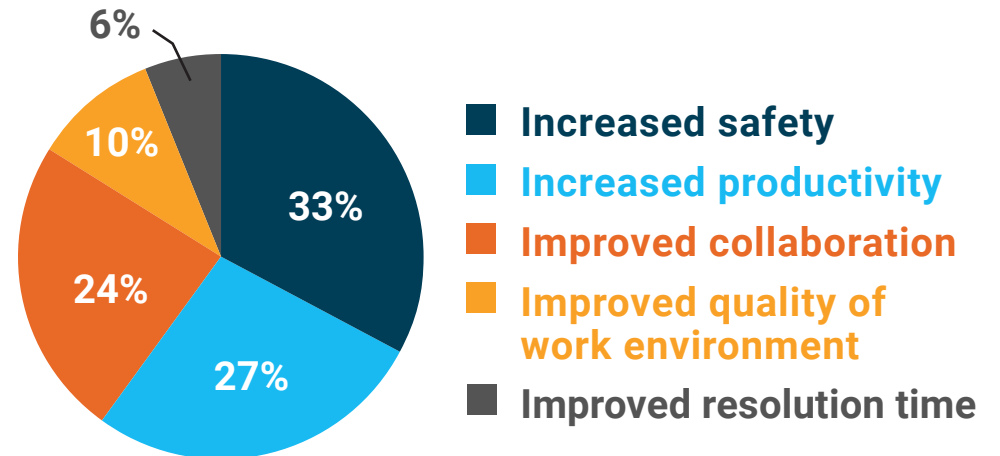
What is your primary safety concern at work?



Do you believe management listens to recommendations that employees make for improvements in your work environment?



What has been the biggest benefit from the implementation of new technology to help you work better, as a result of the COVID-19 pandemic?



Conclusion:

The Time Is Now to Connect and Empower the Frontline Manufacturing Worker

Now more than ever, it's clear that frontline manufacturing workers want and deserve digital technology that helps them do their jobs better. It goes beyond highlighting and acknowledging their work; it's about improving their lives and experiences by connecting them to people, information, systems and machines. How can you put this into action? Here are a few considerations:

1. Start small.

Think about which processes could be the easiest and quickest to transfer to a digital format, so that work execution data (and areas for improvement) isn't lost in a paper binder or a conversation over walkie-talkies. Maybe it's a safety walk, clean/inspect/lubricate (CIL) procedure, or pre-trip truck inspection. Also consider what processes are similarly carried out in multiple plants or sites, so that it's easier to expand once you've got a few data points to demonstrate success.

2. Get early results.

Once your teams have been given the right digital tools, set baseline metrics early on so you can clearly measure the impact of digital versus analog processes and communications. Metrics could be as simple as time spent on a specific procedure, production output on a specific line, or number of calls/notifications for assistance.

3. Move quickly.

The pandemic and resulting labor shortage have made it clear: Companies that don't act quickly are at an enormous disadvantage. Agility across value chains is the new, post-pandemic imperative. Whether it's implementing new technology or re-imagining the way you hire, train and upskill employees, the organizations that move fast and have a plan to scale will have the competitive edge.



Grupo Bimbo QSR: A Connected Worker Success Story

Grupo Bimbo, the world's largest bakery, used Connected Worker by Parsable to digitize and standardize SOPs related to Safety Incident Investigations and Safety Observations across 20 plants in 10 countries. Deployed in eight languages within eight weeks, Parsable now enables safety data capture by Grupo Bimbo associates on the bakery floor. Dashboards provide leadership with real-time visibility into safety at enterprise-wide, regional, and facility-specific levels. Grupo Bimbo's Connected Worker program supports improvements to bakery-wide safety performance and the working environment, an important part of the company's sustainability goals.

Appendix

The State of the U.S. Frontline Manufacturing Worker, 2021

Nearly two years into the COVID-19 pandemic, it's clear that humans are still at the heart of manufacturing and production, particularly those at the frontlines. But recognition alone is not enough, amidst labor shortages and the “Great Resignation” of the workforce.

In September 2021, Parsable conducted a international research survey exploring frontline manufacturing workers' views on their jobs, the usage of workplace technology, and the pandemic's continuing impact. The survey was deployed in the United States, United Kingdom, Germany, France and Spain.

This Appendix focuses on results in the U.S.¹ To identify trends over time, some questions are identical to a similar survey dispatched in the U.S. in December 2020.

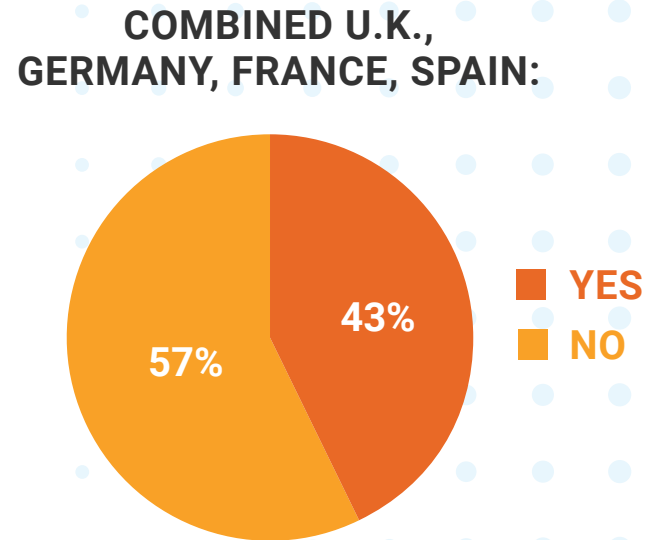
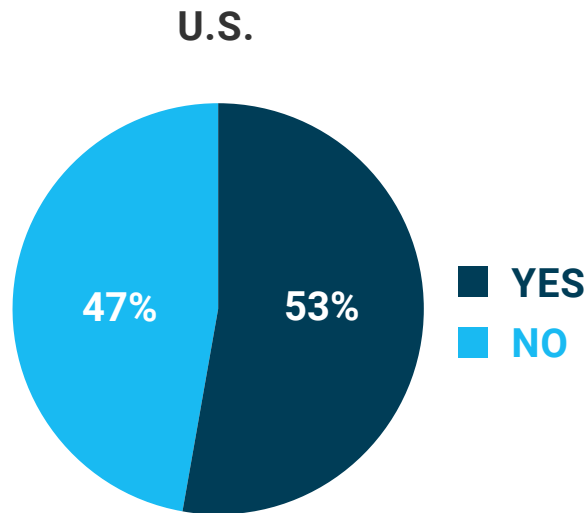
¹ Survey Methodology: Parsable surveyed 1,000 U.S.-based frontline manufacturing workers in September 2021. Respondents reported being currently employed in manufacturing, with a hands-on, non-managerial job in production, operations, maintenance or EHS (environment, health and safety).

Key U.S. Findings:

To Keep Workers, Access to Mobile-based Digital Tools is Critical

More than half (53%) of U.S.-based frontline manufacturing workers say the opportunity to work in a more modern/digital environment would be part of their decision to leave their current employer. This is compared to 43% of workers in the U.K., Germany, France and Spain combined.

Would the opportunity to work in a more modern/digital environment be part of your decision to leave your current employer?

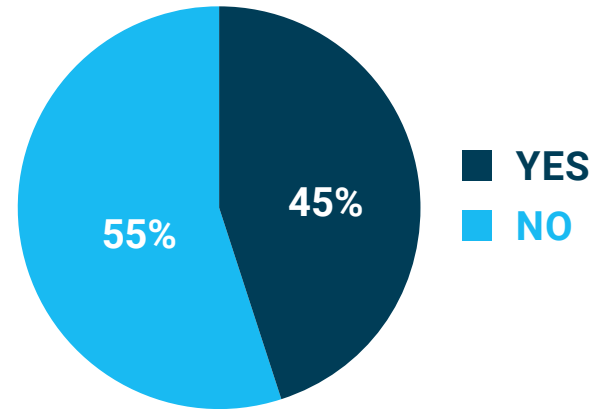


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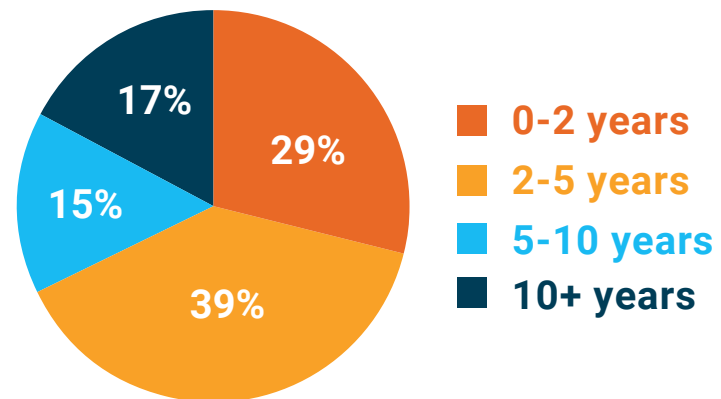
Less than half of workers (45%) have been given any mobile technology (smartphone, tablet, wearable, etc.) to help them do their jobs better. In 2020, 47% said yes.

Has your company given you any mobile technology (smartphone, tablet, wearable, etc.) to help you do your job better?



Nearly one-third of Generation Z respondents (aged 18-24) intend to leave their current company within two years.

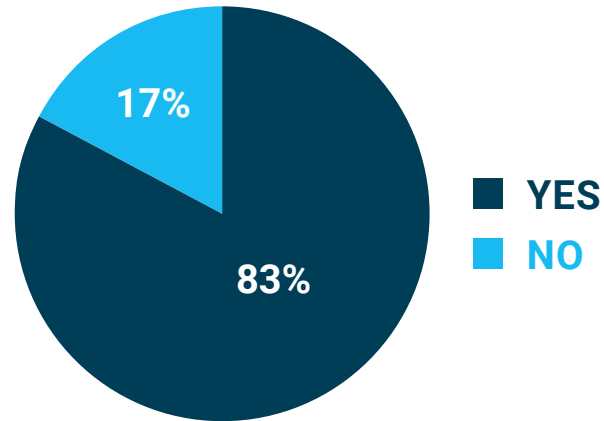
How long do you intend to stay at your current job? (Gen Z respondents)



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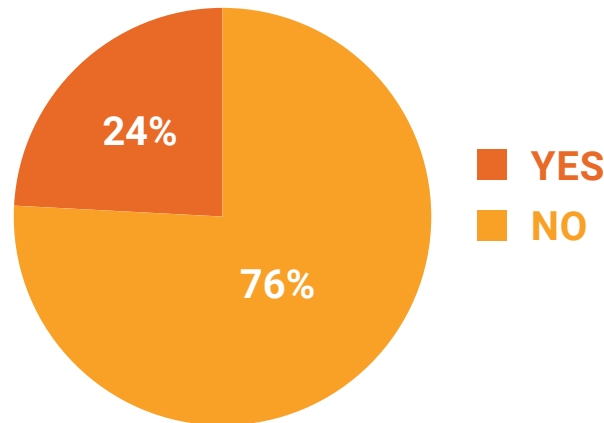
Eighty-three percent of frontline workers in America still use paper to follow work instructions and/or to track their work. This is up from 79% in 2020.

Do you use/rely on paper to follow work instructions and/or track your work?



Most frontline workers, across generations (Generation Z, millennials, Generation X, baby boomers), have no concerns about using digital tools on the job – an increase of four percentage points since 2020, when 72% had no concerns.

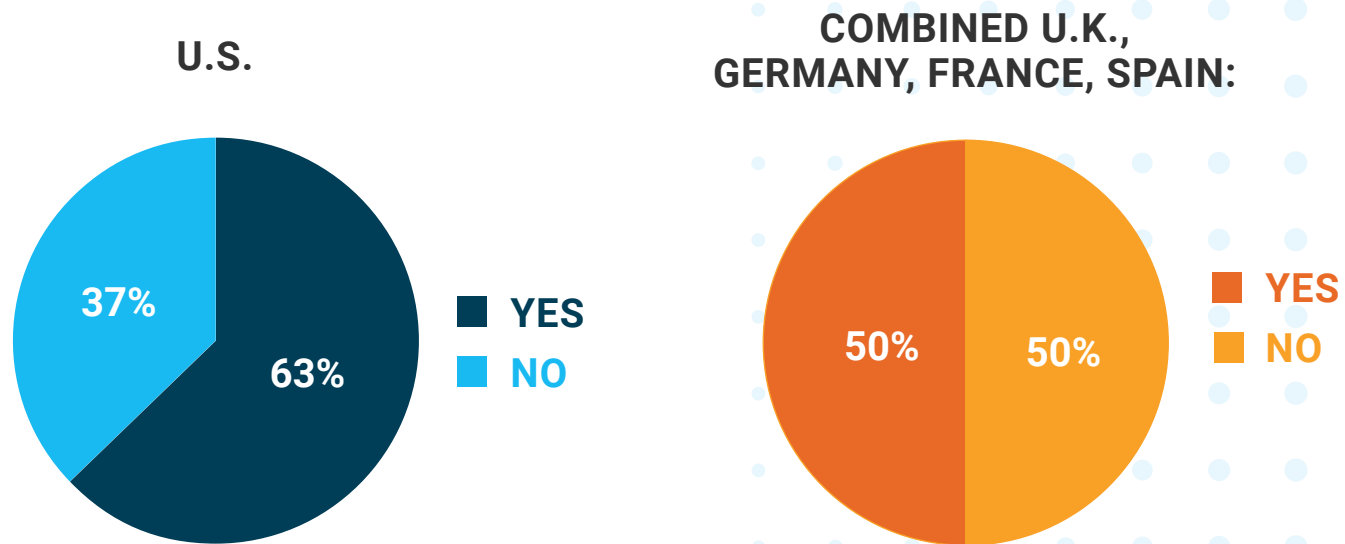
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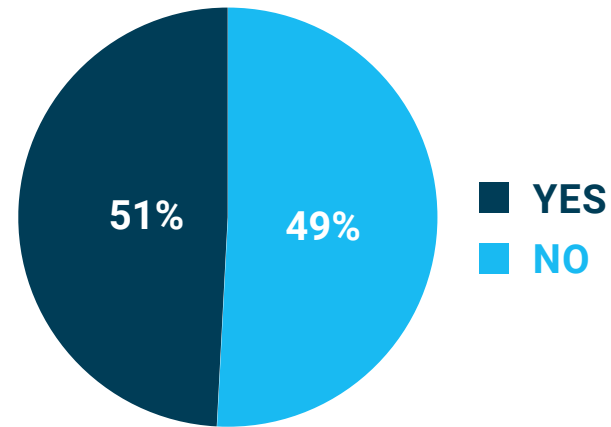
Do you feel more valued as a frontline worker because of the COVID-19 pandemic?



COVID-19 Pandemic Improved Worker Self-Perception, Highlighted Tech Benefits

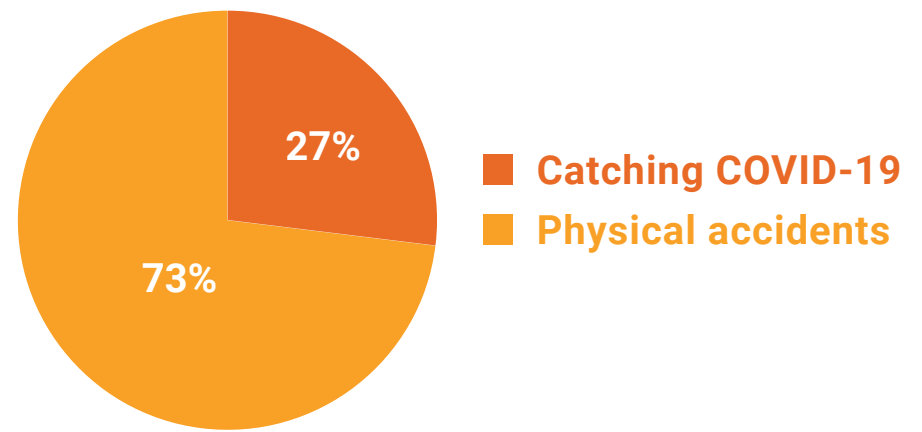
However, only about half (51%) of U.S.-based workers say their companies have implemented new technology to help them work better as a result of the pandemic.

Has your organization implemented new digital tools to help you work better, as a result of the COVID-19 pandemic?



Less than one in three (27%) report that their primary safety concern is getting infected with COVID-19, suggesting more confidence in health and safety measures.

What is your primary safety concern at work?



About Parsable

Parsable empowers industrial workers with modern digital tools to improve productivity, quality, safety and sustainability. Connected Worker® by Parsable transforms static, paper-based procedures into mobile and interactive work instructions, enabling workers to leverage multimedia formats and collaborate in real time. With Parsable, companies gain unprecedented insight into human work by capturing essential data to improve their operations and meet ESG (environmental, social and governance) goals. For more information, visit www.parsable.com.

A photograph of a male industrial worker wearing a white hard hat, safety glasses, and a grey work jacket with reflective yellow stripes. He is looking down at a tablet computer he is holding. The background shows industrial machinery, including a large white machine with a blue connector and a black flexible hose. The image has a blue tint and a pattern of white dots of varying sizes.

About Parsable

Parsable empowers industrial workers with modern digital tools to improve productivity, quality and safety. Connected Worker® by Parsable transforms static, paper-based procedures into mobile and interactive work instructions, enabling workers to leverage multimedia formats and collaborate in real time. With Parsable, companies gain unprecedented insight into human work by capturing essential data to improve their operations. A member of the World Economic Forum's Centre for the Fourth Industrial Revolution, Parsable is trusted by top global companies in the manufacturing, energy, consumer packaged goods, chemical, aerospace, industrial equipment, automotive and packaging industries. Learn more at parsable.com.

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