



Powering human impact with technology

Technology contributes to making work better for humans and humans better at work™

Coauthored by Martin Kamen, Tara Mahoutchian, and Nate Paynter.

New workplace technologies are emerging that don't just augment human workers but actually help them improve their own personal and teaming capabilities—helping humans become better humans and teams become better teams. This is more than just wearables. It's technology supporting humans in countless ways to foster new behaviors and help workers become better versions of themselves.

THE RELATIONSHIP BETWEEN intelligent technology and workers has evolved significantly over time. At first, technology was used as a substitute for workers, automating them out of tasks that were dull, dirty, dangerous, or disconnected. Next, it was used to augment workers, functioning alongside them as a tool that provided additional or enhanced capabilities and insights. We referenced these trends in previous reports as superjobs¹ and superteams², which have

continued to accelerate thanks to how technologies are advancing. Now, we're seeing technologies emerge that aren't just a substitute or supplement for workers but actually help them improve who they are—enabling humans to become better humans and teams to become better teams.

For example, Gogi Anand from LinkedIn shared, “The whole employee experience is about to be turned upside down by technology, and it's going

to be very beneficial for people. For example, when I do presentations, I get prompts from Speaker Coach within Microsoft Teams, and it tells me how quickly I'm speaking, or if I'm dominating a meeting. It gives me instant feedback that helps me become a better presenter. When I look in my recognition platform, AI nudges me to be more inclusive in my language. This type of technology will be really helpful for both information workers and frontline workers.”³

Leveraging principles from psychology, anthropology, sociology, and behavioral science, these innovative technologies are reshaping the boundaries of how we define and improve human, team, and organizational performance. Intelligent devices powered by AI, in particular, are providing an ever-growing volume of performance-related information to enhance human impact at work. In fact, some studies estimate that AI and machine learning will contribute to a 37% increase in labor productivity by 2025.⁴

SIGNALS: THIS TREND APPLIES TO YOU IF ...

- Multiple, competing technology solutions are leading to workforce exhaustion, productivity plateaus, and team dysfunction
- Your technologies are focused on and designed for organizational performance, rather than human and team performance
- Your technology investments are measured solely on cost and ROI, rather than human outcomes



The readiness gap

According to the Deloitte 2023 Global Human Capital Trends survey, more than 90% of surveyed business leaders believe that using such technology to improve work outcomes and team performance is very important or important to their organization’s success. Yet only 22% believe their organizations are very ready to use technology to improve work outcomes and team performance.

FIGURE 1

The readiness gap for harnessing technology

Using technology to improve work outcomes and team performance is very important or important to my organization's success

93%

My organization is very ready to use technology to improve work outcomes and team performance

22%

Source: Deloitte 2023 Global Human Capital Trends survey.

While many organizations have implemented traditional workplace technologies to drive better work outcomes, many are currently cautious about embracing new intelligent technologies that are more experimental in nature. However, they see the opportunities ahead. Forty-two percent of business leaders expect that over the next 2–4 years, technology will help drive better organizational outcomes by nudging workers and teams to perform better.

The new fundamentals

Enable technology to work on the worker (and the team). The traditional view of technology as a substitute or supplement for human labor is too narrow. Moving forward, you need to harness technologies that help your people

and teams become the best possible versions of themselves. This means nudging them to learn new behaviors, correct old behaviors, and sharpen skills. For example, successful and error-free surgeries in the operating room (OR) require finesse, but determining the exact amount of pressure to apply on the instrument is challenging for surgeons. Technology provides surgeons with smart scalpels and forceps that allow them to gauge and adjust pressure in real time, subsequently improving precision and patient outcomes.⁵

Use interventions and nudges to make humans better. Technology can also aid humans in improving on things that are “fundamentally human.” Given the traditional view of technology as a substitute or supplement for humans, it’s ironic to think of technology being used to make humans more human. Yet that’s exactly what we’re talking about here. Technology can help us get better at what we already do best—things like driving well-being, practicing emotional intelligence, and fostering creativity and teaming, which technology itself can’t do.

Helping humans become better versions of themselves is a worthwhile endeavor on its own. However, from a business perspective, it has the valuable fringe benefit of making people better at their jobs, thereby boosting engagement and performance. Building on the surgery example from the previous fundamental, technologies are also monitoring care team members’ time in the OR and cross-referencing that time with error data for the relevant type of surgery, to deliver alerts about fatigue risk. Not only does this improve outcomes for the patient, it also improves well-being for the surgical team.

Scale insights for greater impact. Beyond the individual and team impact, this technology–human team collaboration can also drive impact through insights at scale. All this technology, whether it’s used for nudging, collaboration,

training, or another purpose, creates data “exhaust.”⁶ This data is a powerful tool all on its own. Following the surgical example, technology aggregates the data about finesse adjustments, time in-surgery, and errors, to draw insights across an entire hospital or health system to inform changes to workforce practices like shift length, scheduling, or equipment investments. This type of information could then be used to elevate performance and outcomes across workers, teams, the organization, and the ecosystem.

This imagined future isn’t just possible; in many cases, it’s already here. And its potential impact is even greater when applied not just to individuals, but also to teams (and to networks of connected teams pursuing adjacent goals). The result is improved performance, learning and development, communication, and collaboration. Executives who responded to the Deloitte 2023 Global Human Capital Trends survey believe in the benefits of enabling technology and teams to collaborate to drive outcomes, with one in three reporting an increase in financial performance as a result of their approach to technology and team collaboration.

Current experiments: What leading organizations are exploring

- **Humu** analyzes company data and worker feedback to identify changes likely to improve workers’ happiness, performance, and retention.⁷ The technology is like a virtual personal coach, using AI to mine worker surveys and other data inputs to identify which behavioral changes could help workers and organizations reach their goals. It then sends workers tailored nudges that appear in email, Slack, or Microsoft Teams. The nudges are aimed at changing behaviors, often with explanations or links to research about why the behaviors matter. As workers (and the people around them) report improvement, machine learning helps the system move on to additional goals.
- **Ultranaughts** is using Teams and Slack bots to eliminate barriers that made it challenging for neurodivergent people to find a home in tech companies.⁸ The company’s CEO empowered employees to create their own personal “biodex”—a quick-start guide to working with them so people with diametrically different styles can immediately understand how to best collaborate.
- **Drishti’s** action recognition technology, which is enabled by AI and computer vision, allows DENSO, a Japanese auto component manufacturer, to generate real-time, continuous analytics on manual tasks performed by its production employees.⁹ The resulting data set gives production managers the ability to quickly identify and eliminate bottlenecks, improve processes, boost efficiency, and prioritize tasks. Drishti CEO Prasad Akella noted, “We’ve found that employees at factories are excited to use Drishti because it helps them train continuously without interference from a manager. The system nudges the line associate when a mistake happens, giving him or her the opportunity to fix the problem, unbeknownst to anyone else.”
- **Dawn Avatar Robot Café** in Tokyo has robot servers that are operated remotely by people who can’t leave their home due to disability, childcare, or other reasons.¹⁰ These remote-controlled robot avatars were designed to make the workplace more accessible, giving the remote café workers more opportunities to interact with others and expanding the pool of potential café workers.

The path forward

FIGURE 2

Survive. Thrive. Drive.

<p style="text-align: center;">Survive</p> <p style="text-align: center;"><i>Remain viable in the marketplace</i></p>	<p style="text-align: center;">Thrive</p> <p style="text-align: center;"><i>Differentiate to gain competitive advantage</i></p>	<p style="text-align: center;">Drive</p> <p style="text-align: center;"><i>Lead the market by radically innovating and transforming</i></p>
<ul style="list-style-type: none"> • Understand how the technology in place impacts the workforce experience as you automate and augment work • Remove technology barriers for cross-team collaboration • Define measures of success for team performance, inclusive of technology 	<ul style="list-style-type: none"> • Incorporate nudging technology in your digital transformation journey • Prioritize the “moments that matter” for human–technology collaboration, and the investments needed to address them • Understand and address risks of humans and technology working together (e.g., configure technology to mitigate unconscious bias) 	<ul style="list-style-type: none"> • Embed purpose into the enterprise tech strategy by choosing technologies whose functionality and capability help enable the organization’s purpose • Enable technology-driven insights on human performance, which contribute to development opportunities and performance recognition decisions • Measure technology investments against their ability to improve worker and team performance and human outcomes (e.g., well-being, engagement)

Source: Deloitte analysis.

Looking ahead

As we move from the information age to the imagination age, technology is evolving from helping workers produce outputs to enabling humans and teams to focus on outcomes, making work better for humans and humans better at work™. These outcomes have downstream effects on customers, product quality, site safety, the environment, and beyond. Realizing this value requires organizations to move away from outdated views of technology as a productivity enhancer and embrace the potential of intelligent technologies to enable human and team impact, powered by technology.

You’ll know your organization is making progress if workplace technology is improving teamwork and

helping teams stay connected, and if workers are improving their personal capabilities with more time to focus on high-value cognitive tasks such as creativity, ideation, and innovation. These workplace technologies will also play a significant role in enabling other trends in this report, such as worker data, workforce ecosystems, and the future of the workplace.

Deloitte’s 2023 Global Human Capital Trends survey polled 10,000 business and HR leaders across every industry, with 105 countries participating. The survey data is complemented by interviews with executives from some of today’s leading organizations. These insights gathered shaped the trends in this report.

Endnotes

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Acknowledgments

Martin Kamen, Tara Mahoutchian, and Nate Paynter coauthored our 2023 Global Human Capital Trends discussion on “Powering human impact with technology.”

The authors would like to thank **Gogi Anand** (LinkedIn) for his contributions to this chapter.

The authors would like to thank **Caroline Kelson, Michael McLaughlin, and Avalon Potter** for their outstanding contributions to this chapter.

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