



Shaping the future of manufacturing through a connected workforce

How human-centered
technology is transforming
the shop floor



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Shape the future
with confidence



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Building connected workplaces at the intersection of people, data and processes, underpinned by artificial intelligence (AI)

Connected manufacturers integrating people, data and AI are two and half times more likely to achieve measurable improvements in productivity and safety.

The manufacturing industry stands at a critical juncture, facing several urgent workforce challenges that threaten its future. Namely, as baby boomers retire, decades of experience and knowledge are walking out the door. A significant gap in information sharing is emerging, compounded by younger generations who often see manufacturing as an industry that hasn't kept pace with modern technology.

To change that perception, manufacturers must create human-centered, connected workplaces where people and technology work in sync.

That means providing knowledge directly to workers when and where they need it – and using AI to simplify, guide and accelerate every shift.

This isn't about adding another tool – it's about rebuilding the way work gets done, so every person on the line can learn, adapt and contribute faster. The next generation of digital innovation is transforming how people, data and processes come together on the factory floor. One of the most promising breakthroughs in this regard is “connected worker” technology.



A new era in knowledge transfer and efficiency

The connected worker framework signifies a revolutionary shift that goes beyond the simple integration of AI. It focuses on capturing and transferring knowledge at an unprecedented scale, helping enable organizations to disseminate critical information related to tasks effectively. This empowerment allows workers to operate with greater efficiency and precision. The implications of this shift are profound, reminiscent of the transformative impact of the last industrial revolution, as the widespread availability of knowledge is set to fundamentally reshape the manufacturing landscape. For the first time, knowledge can move as efficiently as the products being made.

In addition to knowledge transfer, the need to minimize rote tasks through automation is crucial. For instance, AI can optimize maintenance scheduling, allowing organizations to free up

valuable human resources for more complex, higher-skilled work. In an industry where human capacity is often the most constrained resource, AI can unlock this potential by streamlining operations and enhancing overall productivity.

Helping enable operators to lead the charge in refining workflows

Connected Manufacturing thrives on the principle that every operator's input is crucial to continuously improve. The platform uses information provided by workers to refine, update and improve processes and that input stretches beyond just one factory location.

For instance, if an operator in a facility in Germany swiftly resolves a production issue, the remedy is documented and shared instantly across the entire organization. When a similar challenge

arises in the US, teams can tap into proven fixes without waiting for handovers or cross-time-zone meetings. This rapid access not only helps accelerate problem-solving but also cultivates a culture where operators feel their contributions are valued and impactful.

Companies that embrace human-centric approaches are

2.6x

more likely to succeed than those that do not.¹



Connected worker technology: the next evolution in manufacturing

This is where the EY Connected Manufacturing offering, built on ServiceNow's Industrial Connected Workforce product, comes into play. ServiceNow provides a robust GenAI-enabled software platform that unifies digital workflows and real-time data, which supports manufacturers to optimize both workforce productivity and safety. The EY team brings a wealth of knowledge and experience in technology, a deep understanding of client challenges and a workforce-focused approach to change management.

The connected worker methodology embodied in the Connected Manufacturing platform offers a transformative option for routine and standard work in manufacturing.

Its primary goal is to provide a unified view that monitors all tasks and connects workers to essential knowledge in their workflow. This platform marks a significant advancement over the traditional manual and time-consuming processes. When knowledge is captured and digitized, learning happens in real time, not in outdated training sessions.

The payoff is immediate. By automating the organization of daily standard work, the connected worker platform streamlines task assignment and scheduling based on predefined plans. The result is a workforce consistently engaged in the right tasks at the right times, eliminating redundant efforts and significantly enhancing workflow.

20%+

improvement in overall equipment effectiveness (OEE) achieved within 20 weeks

Source: EY digital manufacturing transformation case

Technology as a strategic investment

Instead of viewing technology as an end goal, organizations should see it as a strategic investment that provides tangible evidence of meaningful change. By focusing on technologies that improve human capabilities, companies can drive real behavioral change on the production line. This emphasis on the connected digital worker not only supports employees but also highlights the critical role of standardized processes in achieving operational success.

With Connected Manufacturing, manufacturers can achieve superior efficiency and effectiveness in task execution on the production line. This innovative approach simplifies operations and helps empower employees to perform at their best, driving productivity and success in an increasingly competitive landscape. Key features and functions of the Connected Manufacturing platform include:

- Automated task assignment (based on available workforce): The platform dynamically assigns tasks based on the available workforce, allowing optimal resource utilization.
- User-centric task management: Workers benefit from a clear view of their tasks and schedules, allowing for better focus and prioritization.
- Dynamic task allocation: The system adapts to emerging challenges, supporting workers to address issues as they arise.
- Standard work library: A preconfigured library of best practices streamlines processes and provides consistency across operations.
- On-the-job learning: The platform supports robust knowledge management through multimedia functionality and real-time collaboration with professionals as needed.

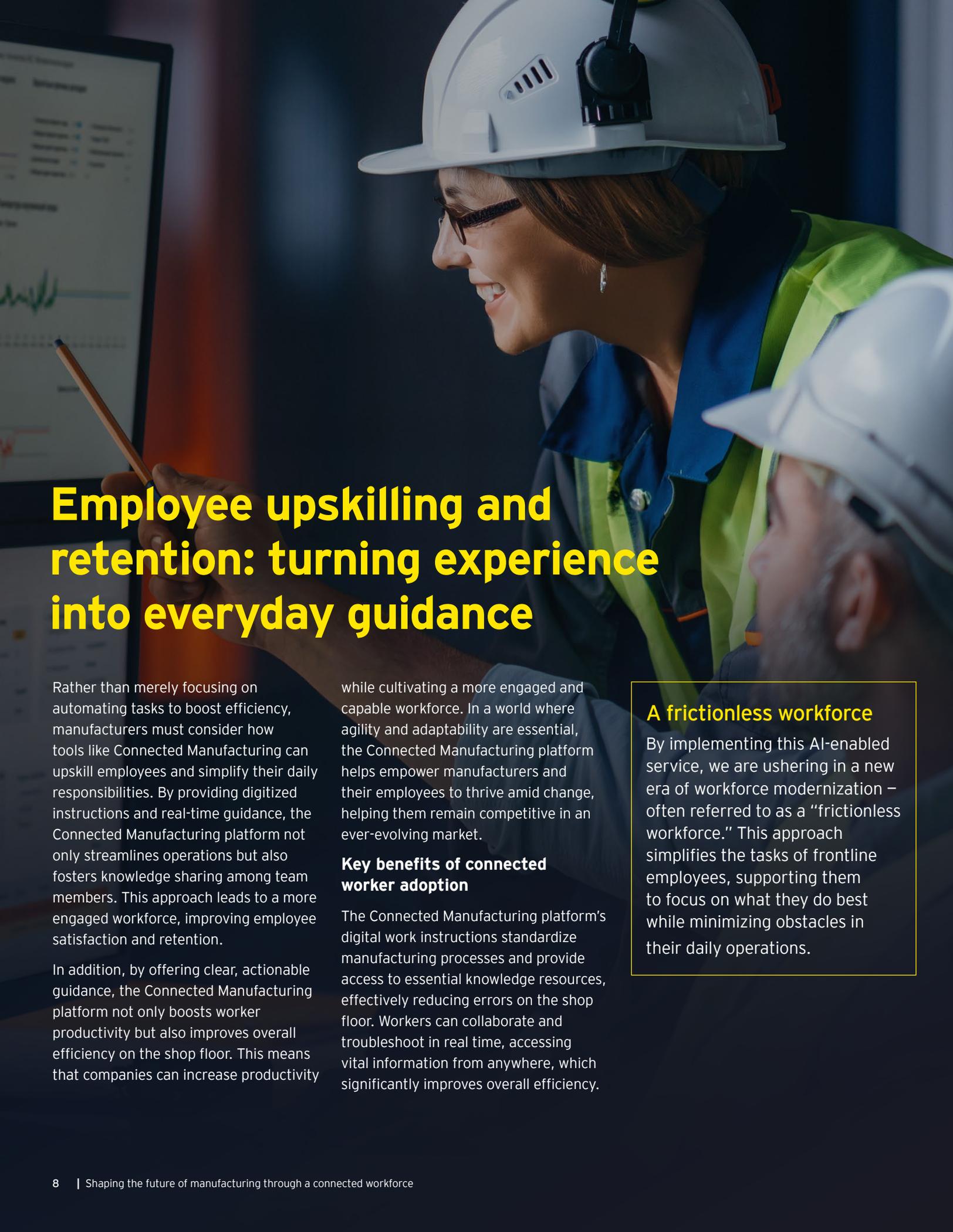


Role-based impact: how connection changes every job

When manufacturers align digital workflows with workforce needs, they don't just modernize production – they help people thrive in environments where AI amplifies their strengths. AI brings intelligence to every process, and connection brings meaning to every role:

- **Plant managers:** Gain real-time visibility into performance across lines and shifts, helping enable faster data-driven decisions.
- **Frontline workers:** Receive step-by-step guidance when they need it, with instant access to subject-matter professionals when something unexpected arises.
- **Quality and safety leaders:** Use AI-powered checklists that catch issues before they become incidents with traceability.
- **Operations leaders:** Are able to balance workloads, optimize scheduling and use AI insights to reduce bottlenecks.
- **HR and training managers:** Can shorten onboarding time, capture institutional knowledge and supports continuous learning.





Employee upskilling and retention: turning experience into everyday guidance

Rather than merely focusing on automating tasks to boost efficiency, manufacturers must consider how tools like Connected Manufacturing can upskill employees and simplify their daily responsibilities. By providing digitized instructions and real-time guidance, the Connected Manufacturing platform not only streamlines operations but also fosters knowledge sharing among team members. This approach leads to a more engaged workforce, improving employee satisfaction and retention.

In addition, by offering clear, actionable guidance, the Connected Manufacturing platform not only boosts worker productivity but also improves overall efficiency on the shop floor. This means that companies can increase productivity

while cultivating a more engaged and capable workforce. In a world where agility and adaptability are essential, the Connected Manufacturing platform helps empower manufacturers and their employees to thrive amid change, helping them remain competitive in an ever-evolving market.

Key benefits of connected worker adoption

The Connected Manufacturing platform's digital work instructions standardize manufacturing processes and provide access to essential knowledge resources, effectively reducing errors on the shop floor. Workers can collaborate and troubleshoot in real time, accessing vital information from anywhere, which significantly improves overall efficiency.

A frictionless workforce

By implementing this AI-enabled service, we are ushering in a new era of workforce modernization – often referred to as a “frictionless workforce.” This approach simplifies the tasks of frontline employees, supporting them to focus on what they do best while minimizing obstacles in their daily operations.



The platform features “single pane of glass” dashboards that offer quick access to visual data and information necessary for troubleshooting and decision-making – all consolidated onto a single user experience. This integration of knowledge capture and sharing between internal teams drives continuous improvement, helping enable workers to access and improve digital work instructions, training materials and real-time data on equipment performance and production processes.

Communication and collaboration are also streamlined. Workers can easily connect with supervisors, engineers and colleagues via a mobile app or other digital channels, helping them receive real-time guidance and support when addressing issues on the shop floor.

The Connected Manufacturing platform also integrates seamlessly with other ServiceNow applications, creating a comprehensive solution for managing manufacturing operations.

The Connected Manufacturing platform offers a range of compelling benefits that can transform your manufacturing operations.

They include:

- **Increasing productivity and reducing downtime:** With real-time data and easy access to critical information, workers can quickly

identify and resolve issues as they arise. This proactive approach not only minimizes disruptions but also improves overall operational efficiency.

- **Providing access to safety procedures:** By providing access to essential safety procedures and guidelines, Connected Manufacturing empowers workers to recognize and avoid potential hazards. This commitment to safety not only protects employees but also fosters a culture of care within the organization.
- **Promoting continuous improvement:** The Connected Manufacturing platform promotes continuous improvement by addressing a common challenge in many organizations – knowledge transfer, retention and AI-driven insights. Valuable insights and experience often reside solely in the minds of senior employees, creating a risk of losing that knowledge as they retire. Connected Manufacturing facilitates the capture and sharing of this critical information, helping enable organizations to help enhance their processes and operations over time.
- **Workflow integration:** By using ServiceNow's workflow orchestration along with its data fabric connectors, every worker's tasks can essentially be digitized and integrated with their broader IT, OT and ERP systems that are enriched with EY leading practice methodologies.

Frontline worker experience and retention

Shop-floor employees often deal with complex and ever-changing information from multiple sources to complete their daily tasks, requiring them to adapt to new technologies and training methods. This is a challenging work environment, and it's difficult to attract talent for these jobs. The Connected Manufacturing solution modernizes the workplace experience, making it easier and more efficient for frontline manufacturing workers to do their jobs. This upskills current workers, makes the jobs more desirable and retains workers.



Navigating change to build a connected future

Technology alone doesn't transform an organization – people do. Tenured and experienced employees may worry that digital tools will add complexity, while newer hires expect technology that feels familiar and intuitive. While many employees resist change, younger workers – often newer to the organization – are quick to leave if they don't see it. These younger employees crave flexibility, such as improved work-life balance, which can sometimes clash with the preferences of their more seasoned counterparts.

Initially, fear and resistance are common reactions to change. However, as team members engage and collaborate, they often transition from skepticism to acceptance, even

if they aren't champions of the new approach yet. The key to easing this transition lies in demonstrating how changes can simplify their work.

The key is to show how connected systems make work easier, not harder. When employees see that digital workflows eliminate frustration, reduce errors and improve safety, adoption follows naturally.

By focusing on clear communication, hands-on training and visible results, leaders can turn skepticism into advocacy and build momentum for broader transformation.

By sector: where connection makes the biggest impact

Industrial products: Digitizing maintenance, automating scheduling and providing real-time shift visibility keeps throughput high and downtime low.

Life sciences: Connected worker tools improve precision and compliance, reducing risk and facilitating traceable, audit-ready production.

Consumer and retail: On-the-floor visibility and AI-guided training help manage seasonal employee fluctuations and improve consistency across sites.



The path forward: leveraging Connected Manufacturing

As the manufacturing industry confronts the dual challenges of an aging workforce and a shifting perception among younger generations, the need for innovative solutions has never been more pressing. Connected Manufacturing platform, developed through the strategic alliance between EY teams and ServiceNow, stands at the forefront of this transformation. By harnessing the power of AI and connected worker technology, manufacturers can not only address workforce shortages but also help enhance operational efficiency and employee engagement.

In a rapidly evolving market, the ability to adapt and innovate is crucial. The Connected Manufacturing platform offers manufacturers a comprehensive solution that integrates seamlessly with existing systems, creating a unified approach to managing operations. As organizations prioritize the development of a connected workforce, they position themselves not only to survive but also to thrive in an increasingly competitive landscape.

Summary

The future of manufacturing will be shaped by how well companies blend human skill with digital precision. The organizations that connect their people as effectively as their machines will lead the next era of productivity.

By investing in connected worker technology today, manufacturers can safeguard institutional knowledge, reduce downtime and make their workplaces a space where people want to build careers – not just fill shifts.

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