The Human Side of Digitalization: Manufacturing's New Focus on Employee Well-being

The manufacturing sector is witnessing a profound transformation in which automation's impact extends beyond productivity metrics. This shift represents a new approach to digital transformation, one in which employee well-being takes center stage.

The Manufacturing Institute's findings show that over 80% of manufacturing workers express high job satisfaction, with 76% explicitly appreciating their involvement in workplace decision-making processes. Deloitte's analysis reinforces this finding, showing that manufacturers who combine automation investments with robust employee development programs achieve more substantial retention rates and create safer work environments. Advanced automation systems reduce exposure to hazardous conditions while maintaining high operational standards, directly contributing to improved workplace satisfaction.

"The digital transformation in manufacturing creates an unprecedented opportunity to enhance workplace quality. Production operators experience relief from repetitive tasks while maintenance specialists transition from reactive troubleshooting to strategic, predictive approaches.

This transformation creates more engaging work environments and opens new career development opportunities," explains Piotr Siwek, Mitsubishi Electric Factory Automation Global MCoE Manager.

Technology as a Safety Guardian

Advancements in industrial automation and related safety systems are transforming workplace protection. Robots and cobots now handle and monitor hazardous tasks like heavy lifting and chemical processing, reducing worker exposure to immediate injuries and long-term health risks.

Beyond robotics, modern manufacturing integrates multi-layered safety architectures within highly transparent, elaborate digital systems. Safety PLCs monitor and control critical functions, while light curtains, laser scanners, and interlocking machine guards create secure environments. Safety-rated motion control ensures machines stop immediately when risks are detected.

IoT and AI-driven analytics further enhance safety by predicting equipment failures and identifying hazards before they occur. Real-time monitoring, mobile alerts, and digital twins allow safety teams to respond quickly and train workers in virtual environments, improving preparedness without physical risk.

Upskilling and Job Creation

Automation is reshaping manufacturing jobs by taking over repetitive tasks, allowing workers to focus on strategic, higher-value activities like data analysis and decision-making. As robots and cobots handle routine operations, the demand for skilled roles grows.

A study by MIT and Boston University highlights how automation boosts productivity, driving labor demand. The World Economic Forum predicts digitalization will create more jobs than it replaces, requiring skilled workers to program, maintain, and repair advanced systems.

To keep pace, companies must invest in upskilling programs, equipping employees with the expertise needed for evolving roles. This shift not only enhances efficiency but also improves job satisfaction by offering more engaging and future-proof careers.

Manufacturing's Human-Centric Future

Global industry leaders increasingly recognize that the next phase of manufacturing excellence extends beyond technological capabilities.

"The transformation unfolding across modern manufacturing facilities reveals a fundamental truth: when technology enhances human capabilities rather than replacing them, it creates more engaging, fulfilling, and inclusive work environments. This shift demonstrates how innovation and employee development naturally reinforce each other, driving both operational excellence and workplace satisfaction," concludes Siwek.

As digital transformation reshapes the industry, its true value lies in its ability to improve the human experience. By prioritizing employee well-being alongside smart automation, manufacturers are creating a future where efficiency and workplace satisfaction go hand in hand, forming the foundation for long-term industrial success.

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Originally (initially) released in English.

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About Mitsubishi Electric Corporation

With more than 100 years of experience in providing reliable, high-quality products, Mitsubishi Electric Corporation (TOKYO: 6503) is a recognized world leader in the manufacture, marketing and sales of electrical and electronic equipment used in information processing and communications, space development and satellite communications, consumer electronics, industrial technology, energy, transportation and building equipment. Mitsubishi Electric enriches society with technology in the spirit of its "Changes for the Better." The company recorded a revenue of 5,257.9 billion yen (U.S.$ 34.8 billion*) in the fiscal year ended March 31, 2024.
For more information, please visit www.MitsubishiElectric.com
**U.S. dollar amounts are translated from yen at the rate of ¥151=U.S.$1, the approximate rate on the Tokyo Foreign Exchange Market on March 31, 2024.*

About Mitsubishi Electric Factory Automation Business Group

Offering a vast range of automation and processing technologies, including controllers, drive products, power distribution and control products, electrical discharge machines, electron beam machines, laser processing machines, computerized numerical controllers, and industrial robots, Mitsubishi Electric helps bring higher productivity – and quality – to the factory floor. In addition, its extensive service networks around the globe provide direct communication and comprehensive support to customers. The global slogan "Automating the World" shows the company's approach to leverage automation for the betterment of society, through the application of advanced technology, sharing know-how and supporting customers as a trusted partner.

For more about the story behind "Automating the World" please visit:
https://www.MitsubishiElectric.com/fa/about-us/automating-the-world/index.html

About e-F@ctory

e-F@ctory is Mitsubishi Electric's integrated concept to build reliable and flexible manufacturing systems that enable users to achieve many of their high speed, information driven manufacturing aspirations. Through its partner solution activity, the e-F@ctory Alliance, and its work with open network associations such as The CC-Link Partners Association (CLPA), users can build comprehensive solutions based on a wide ranging "best in class" principle.

In summary, e-F@ctory and the e-F@ctory Alliance enable customers to achieve integrated manufacturing but still retain the ability to choose the most optimal suppliers and solutions.