Technical Support's New Frontier: Solving Root Causes, Not Just Symptoms

Research shows that even if manufacturers can fix problems, they struggle with underlying causes, highlighting the need for deeper expertise

Tokyo, Japan - September 2026



Hexagon' Advanced Manufacturing Report 2025, based on a Forrester Consulting survey of 1,000 manufacturing leaders across five sectors, reveals a critical gap in modern manufacturing. While 34% of manufacturers can resolve quality issues when they occur, they struggle to identify and eliminate the underlying causes.

Meanwhile, 40% say improving product quality takes too long, 30% cannot enhance quality during design phases, and 35% struggle with effective collaboration. What is more, according to the World Economic Forum, 74% of companies report an acute shortage of skilled workers, while over half of the manufacturing workforce will require upskilling by 2030. These challenges are demanding more from technical support than simple breakdown repair. And, as our conversations with manufacturers confirm, support now means much more than emergency response.

Strategic Transformation Partners

Modern manufacturers are discovering that technical support can drive business transformation. Giovanni Vasques de Freitas from CIM Automação works with Mitsubishi Electric on complex optimization projects that go beyond equipment repair. His team has "integrated countless projects and Products,

evolving from simple specification to the development and implementation of large-scale projects like building a factory or modernizing

manufacturing and production systems." A recent CO_2 reduction project required new understanding around IoT sensors, edge computing, and energy optimization; areas that extend well beyond traditional help desk support.

Similarly, Lucas Wosnieski, Executive Director at BW Máquinas Rotuladoras, cites how sustained partnerships enable digital evolution. "This partnership we've built has been going on for over five years now, and we've been able to innovate our machines in terms of automation, quality, and production," Lucas explains. "We've also moved into Industry 4.0: the communication that we've achieved through our partnership with Mitsubishi Electric allows us to have full access to our production machines from a single point. For both manufacturers, support means transformation rather than a maintenance and repair model.

Proactive Problem Prevention

Other manufacturers focus on prevention-based approaches that address root causes. Wu Wenwei from Hangzhou US Wheeler advocates for proactive approaches that address the design phase challenges identified in the Hexagon research. "We welcome the chance to participate in development of new equipment from early stages," Wu Wenwei states, while also seeking "more in-depth system training programs that significantly enhance our team's mastery and effective utilization of our systems."

This collaborative approach delivers results: "With Mitsubishi Electric's support, we rarely face problems because their expert engineering team demonstrates outstanding problem-solving capabilities with open communication channels enabling quick issue reporting."

Yang Chun from Suzhou DEYUNG illustrated the diagnostic dimension.
When Mitsubishi Electric specialists resolved persistent instability and frequent malfunctions in machining center systems, they permanently resolved what he calls a "longstanding technical bottleneck" through comprehensive analysis. "Their support is the linchpin of our reliable operations,"

Yang Chun explains. "They ensure our equipment maintains continuous high-efficiency operations and on-time delivery."

The Professional Perspective

From the perspective of professional support, Technical Support Engineer Heitor Nicoletti explains the comprehensive approach required: "Understanding that goes beyond the customer's request, grasping the impact of the situation and demonstrating expertise and knowledge to solve the problem." His experience managing complex installations, such as "15 inverters and 800 devices connected in closed loop", illustrates the systems thinking that modern manufacturing demands.

Technical Support Technician Everthon Gonçalves adds: "It goes beyond solving a technical problem; it's about understanding the customer's real needs in a moment of difficulty." For these professionals, the evolution from reactive repair to comprehensive problem-solving effectively addresses diverse customer needs across different industries and applications.

This evolution is evident in the diverse challenges technical specialists tackle. Artur Lenart, Automation Engineer at Mitsubishi Electric, recently developed a completely custom C++ application to control servo drives, building it from scratch through concept, programming, and final implementation at the client's production facility.

Meanwhile, other clients are experiencing immediate business impacts from this holistic approach. Mateusz Gierczak, CEO of GM Automatyka, reported a 13% efficiency improvement after Mitsubishi Electric optimized his machine program, gaining 0.2 seconds on a 1.5-second cycle time. However, what he values most is not just the technical solutions: “It's that 'someone always picks up the phone and provides real human help, not automated responses” - he adds.

Looking Forward

The Hexagon report confirms what manufacturers understand: they need more than breakdown repair services. As manufacturing complexity increases through IoT, AI, and Industry 4.0 technologies, traditional support models prove inadequate. With 94% of manufacturers expecting to hire or repurpose workers through smart manufacturing adoption, companies increasingly turn to specialists with expertise that internal teams cannot maintain.

As the World Economic Forum notes, over half of the manufacturing workforce will require upskilling by 2030, the gap between internal capabilities and technological demands will only widen, making partnerships with technical specialists not just beneficial, but essential for manufacturing competitiveness.

What support means depends on your role and challenges, but successful manufacturers understand that effective support has evolved beyond traditional definitions. Whether it means transformation enablement, digital evolution, proactive development, or problem prevention, modern technical support delivers value that extends beyond emergency response.

Sources:

1. https://go.manufacturing.hexagon.com/advanced-manufacturing-report-2025/
2. https://www.weforum.org/stories/2025/06/manufacturing-tech-usability/

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With more than 100 years of experience in providing reliable, high-quality products, Mitsubishi Electric Corporation (TOKYO: 6503) is a recognised 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 5,521.7 billion yen (U.S.$ 36.8 billion*) in the fiscal year ended March 31, 2025.

For more information, please visit https://www.mitsubishielectric.com/en/

*U.S. dollar amounts are translated from yen at the rate of ¥150=U.S.$1, the approximate rate on the Tokyo Foreign Exchange Market on March 31, 2025.

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For more about the story behind “Automating the World” please visit:

www.MitsubishiElectric.com/fa/about-us/automating-the-world

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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.

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