Automation Architects: The True Role of Technical Support Specialists

Interview with Shizuo Kumekawa,
Global Support Group (GS), Mitsubishi Electric Corporation.
Tokyo, Japan - September 2026



Shizuo Kumekawa

Source: Mitsubishi Electric

"When people hear 'technical support,' they think of someone rushing to fix a broken machine. The reality? Emergency repairs are maybe 10% of what we actually do. The other 90% is about preventing problems before they happen, optimizing production efficiency, implementing new technologies, and continuously searching for better solutions. That requires thinking like a solution architect, and not a repair technician."

We spoke with Shizuo Kumekawa, an experienced technical support specialist at Mitsubishi Electric with over 20 years in the industry, who uses real case studies to explain why technical support means much more than responding to breakdowns and repairs.

Interviewer: That's quite a claim. Can you elaborate on what that 90% really looks like?

Shizuo Kumekawa: Absolutely. Let me give you a concrete example. My colleague Artur was asked to develop a completely custom C++ application to control servo drives. This wasn't standard programming – he built it from scratch, from initial concept, through programming phases to final implementation at the client's production facility. That's pure solution engineering, not support in the traditional sense.

The stereotype is that we sit by a phone waiting for emergency calls. In reality, I spend more time in design meetings with clients than I do troubleshooting failures. We're partners in their strategic planning, not just their emergency contacts.

Interviewer: How did this evolution happen? When did technical support become a strategic partnership?

Shizuo Kumekawa: It's been gradual over the past decade, but the acceleration has been dramatic in recent years. Manufacturing complexity has exploded: we're not dealing with simple mechanical systems anymore. Today's production lines integrate IoT sensors, AI decision-making, predictive analytics, and Industry 4.0 technologies..

In another example a client told me: "We've moved into Industry 4.0. The communication we've achieved through our partnership allows us to have full access to our production machines from a single room." That wasn't a repair project. It was a complete digital transformation we designed together over five years.

Interviewer: Five years? That sounds more like a consulting relationship than traditional support.

Shizuo Kumekawa: Exactly. That's what I mean by being automation solution architects. We don't just fix what's broken; we design what's optimal. Another client put it perfectly: they said our support "serves as a silent guardian that secures both the equipment's stable production and the customers' experience." Silent guardians don't just respond to problems; they prevent them through careful planning.

Interviewer: Can you walk us through what this approach looks like in practice?

Shizuo Kumekawa: Sure. Take root cause analysis, something we do constantly. Traditional support might fix a symptom and move on. We dig deeper. I had a colleague working with a textile manufacturer who faced persistent instability in their machining systems. Traditional troubleshooting had failed repeatedly because it addressed individual components rather than system interactions.

Our approach was completely different. We spent days analyzing how 15 different inverters and 800 interconnected devices operated as a complete system. We identified the underlying interaction patterns that were causing the instability. The client called it resolving a "longstanding technical bottleneck" but really, we redesigned how their entire system communicated with itself.

Interviewer: That sounds incredibly complex. How do you develop these capabilities?

Shizuo Kumekawa: It comes from understanding that our job is, as a colleague puts it, "understanding beyond the customer's request, grasping the impact of the situation." We're not just solving the immediate technical problem: we're understanding the customer's real needs in moments of difficulty.

This requires intensive research processes when confronting problems. The satisfaction comes not from quick fixes, but from the sense of accomplishment when reaching complete solutions that transform how clients operate.

Interviewer: What about the business impact? Are clients seeing measurable results from this approach?

Shizuo Kumekawa: Absolutely. For instance, a CEO of an automation company saw immediate impact when we optimized their machine program. We analyzed their program backup and gained 0.2 seconds on a 1.5-second cycle

time; that's a 13% efficiency improvement just from program optimization. But what he values most isn't just the technical improvements; it's that "someone always picks up the phone and provides real human help, not automated responses."

Another client told us: "With your support, we rarely face problems because your expert engineering team demonstrates outstanding problem-solving capabilities." But notice: they "rarely face problems" not because we're great at fixing them, but because we're great at preventing them.

Yet another client described our support as "the linchpin of reliable operations" that "ensures continuous high-efficiency operation and on-time delivery." That's not repair language; that's partnership language. We're integral to their operational success, not just their emergency response.

Interviewer: This seems to require a completely different skill set than traditional technical support.

Shizuo Kumekawa: It does. We need to understand IoT sensors, edge computing, environmental algorithms, energy optimization: expertise that goes far beyond traditional repair services. We worked with another client on a CO_2 reduction project that required integrating all of these technologies. That's not a support ticket; that's industrial engineering.

But it's also about collaboration skills. Clients are asking to "participate in development of new equipment models from early stages" and seeking "in-depth system training programs." We're not just service providers; we're knowledge partners helping them build internal capabilities.

Interviewer: But you still do emergency repairs, right?

Shizuo Kumekawa: Of course. Yes, we do emergency repairs: one of our clients had a robot collision due to a programming bug, and we diagnosed the physical damage and replaced the damaged parts within 24 hours. That's the classic 'fix what's broken' support people imagine. But with that same client, we also did extensive program optimization work that significantly improved their production efficiency, the 13% improvement I mentioned earlier. The emergency repair was one incident, but the optimization work is the ongoing value we deliver.

Interviewer: How do you see this role evolving further?

Shizuo Kumekawa: I think we're moving toward automation architects becoming as important as internal production and maintenance engineers. With the shortage of specialists in manufacturing, companies increasingly rely on our diverse experience across multiple industries and clients. We've seen dozens of different production environments, various challenges, and successful solutions.

The future automation architect will be someone whose varied experience across many clients makes them valuable advisors for production strategy and technical decisions. When internal teams lack the experience or resources, we can guide direction and suggest specific solutions based on our broad exposure to different industries and technologies. That's not traditional technical support; that's expertise-based partnership.

Interviewer: What would you say to someone who still thinks of technical support as just "fixing broken things"?

Shizuo Kumekawa: I'd tell them that's like thinking an architect is someone who patches roofs and fixes holes in walls. Yes, architects can fix structural problems, but their real value is in designing buildings that don't develop those problems

in the first place, and creating spaces that enable people and businesses to thrive. That's what automation architects do. We design production systems that don't just work: they excel. We create production environments that don't just avoid problems: they continuously optimize themselves. Emergency response might be 10% of what we do, but design and optimization? That's the other 90%, and it's where the real value lies.

The best part is when clients realize this transformation. They stop calling us for emergencies and start inviting us to planning sessions. That's when you know you've evolved from being a repair technician to being an automation architect.

Interviewer: Thank you very much for this conversation.

Shizuo Kumekawa: Thank you too.

About Mitsubishi Electric Corporation

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.

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, computerised 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 leveraging 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:

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

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.

*e-F@ctory and iQ Platform are trademarks of Mitsubishi Electric Corporation in Japan and other countries.

*Other names and brands may be claimed as the property of others.

*All other trademarks are acknowledged