



CASE STUDY

Makino Addresses the Skills Gap, Amps Up Service Management with AI



Featuring **KEN CREECH, DIRECTOR OF CUSTOMER SUPPORT**
Technical Operations – Americas at Makino

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Makino has long been recognized as a global leader in CNC machining center design and digital innovation. The company's horizontal machining centers, vertical machining centers and are sold in 41 countries and are widely recognized as the most advanced machining centers in the world.

In the wake of the Covid-19 pandemic, Makino recognized the need to make some adjustments in its service business. First the company shifted toward more data-driven decision making. **“We saw the opportunity for a reset, and we knew that reset needed to be led by data rather than gut feelings or historical precedent,”** says Ken Creech, Director of Customer Support, Technical Operations – Americas at Makino. “The time had come to move beyond ‘this is how we’ve always done it, so this is how we’ll continue doing it.’”

Further, Makino knew it needed to adapt to the ways the pandemic had changed the talent landscape. “The workforce changed a lot after Covid,” says Creech. “Some of it for the better. None of it negative, but some of it quite challenging.”

Adapting to the realities of today's talent landscape

Makino began by analyzing what actions it could take to make headway, putting focus on thinking more holistically. The company developed a multi-faceted approach that would include changes to training, the development of career pathing to help attract new talent, ensuring salary levels were fair and competitive, and determining where technology could help lessen the skills gap between the most experienced and least experienced technicians.

“We expanded training and worked across the company to create a flow chart to show new hires that had just graduated from college with their engineering degree not only how they could progress within Makino, but in how many different directions,” explains Creech. “The historical norm was a very traditional step pattern from engineer to tech support to team lead, but we knew this had to evolve. We worked across the company to give options across disciplines and throughout the business. We can't double their pay and maintain economic viability, but what we can do is satisfy another need, which was showing them options for upward mobility.”

The company understood the importance of properly enabling its engineers for success and knew it needed to take steps to narrow the gap between its most experienced and newest employees. “An engineer on-site not having access to the information they need to do the job is stress inducing to the highest level,” Creech reflects. **“Having to call someone for the answer, standing in front of a customer billing a couple of dollars a minute, waiting for someone to call you back. The customer is glaring at you, wondering why the person on the other end of the phone isn't the one there instead – it's a lot of stress.”**

Makino knew there was an opportunity in leveraging technology to work smarter. “There’s a limit to what you can do with classroom time. It’s incredibly time-consuming, and the younger workforce doesn’t have the tolerance for it. We knew we needed a far more modern approach,” says Creech.

“Ask Makino” – AI-powered assistance at the point of need

Makino has a longstanding relationship with IFS for Service Management and Creech knew that the rich history of data within the system could support the company’s new data-driven approach. The IFS platform supports every facet of Makino’s service operations, including customer history, management of all work orders, tracking equipment and scheduling service activities.

“We had a huge database of information within IFS, we simply needed to dig into how best to use it to measure what we’d been doing and determine what works and what doesn’t,” explains Creech. “We began using dashboards within IFS to evaluate what we were doing and how. **We found that our internal lost cost (time not billed, concessions, etc.) was in the double-digits, varying between 10-15%.** The skills gap was illustrated by examples of where the same job would take engineers markedly different lengths of time to complete.”

As Makino learned from its data, the company recognized that AI held the key to putting that data to its best use to narrow the skills gap. Creech chose Aquant AI, which transforms data into expert-level guidance, delivering the right answer for every interaction, customized to each user, job, and machine. **“I really appreciated that Aquant is focused on service,” says Creech, “but for us to bring our strategic vision to life, IFS had to be willing to collaborate. We found IFS was very customer-centric in their response to our request to pair their technology with Aquant, which we appreciated because our company is the same way. The engineers from IFS and Aquant, along with my internal team, worked hand in hand to make the tools work seamlessly together.”**

Within IFS Field Service Management, there’s an “Ask Makino” button where users can go to receive AI-powered guidance from Aquant, pulling from Makino’s rich data to serve up the information needed in the moment. “That disparity between an engineer doing a job in eight hours versus another in 30 came down to the less experienced engineers needing to read through 100 service reports to find the information they needed to do the job,” explains Creech. “We began with uploading all our service manuals so that someone could just ask Aquant a question and it would go retrieve the specific information needed and serve it up, in seconds.”

When you stop to think about the evolution from carrying paper manuals to scrolling through PDFs and sifting through service reports to applying the power of AI, it’s a really impressive transformation. “No more starting with the appendix and searching. No more scrolling a mouse bar or hoping Alt F1 works,” says Creech. **“Now our engineers just ask a plain language question and Aquant will go hunt down the answer, quickly. It’s a big wow factor.”**

From knowledge management to self-service and a 15% increase in remote resolution

While Makino's initial use case was to serve up answers to support engineers on site as needed, enabling less experienced engineers to be both more effective and more efficient, the company's eyes were soon opened to what more was possible. **"It became clear that this 'Ask Makino' functionality was something our customers could use, and that was when we stepped into the next level by tailoring the solution to enable customer self-service,"** says Creech. **"Now their maintenance employee can go into the portal and find out how to try and address an issue on their own, increasing the likelihood of faster resolution."**

Expanding remote resolution became a focus, too. This is accomplished by equipping the technical support staff to use the system for triage. "The further we get on, now triage comes into play. **Using Aquant to aid in troubleshooting is where we really begin to leverage all that data we have. With 20 years of data in IFS, there's huge potential for heat mapping and narrowing down root cause,"** explains Creech. **"We've begun adding in more sophisticated hydraulic and electrical diagrams and it's been a big step."** Our first goal was to narrow the skills gap, and the second is to improve First Time Fix Rates."

Over the last three years, Makino's overall "reset" has allowed the company to increase remote resolution by 15%.

AI Readiness & Change Management

The buzz around AI elicits both excitement for what it can do as well as trepidation for what it will change, and whether a business is ready for that change. "One of the biggest struggles we had early on was getting people past the idea that this was here to replace our technical support staff," Creech shares. "The primary methodology I used was to change the way the technical support team thought about their job. We hadn't been doing a very good job of measuring what we should have been measuring. We were measuring response time, so how quickly we answered the phone rather than how quickly actually we took care of the customer. Moving to mean-time-to-resolve encouraged the team to focus on how often they can fix an issue without dispatching a field service engineer and helped them see how the tool can be valuable in achieving this objective."

The technical support staff, comprised of the most experienced former field engineers, missed spending some time on site with customers, so Makino worked that into the redefined role. Now that they spend less time in menial conversations, they spend more time on harder solves and also spend some time doing on-site resolution. “I reiterated that **this isn’t about taking jobs, but rather pushing to get to the point where when the customer calls, they’ve already answered basic questions**, which allows our team to start with the technical troubleshooting and really use their knowledge to help move the needle.”

Creech was surprised that Makino faced less resistance to AI by older employees than he’d expected, but where extra encouragement was needed the company relied on incentives and internal influencers. “We picked people on our implementation team that were mavens who were friendly with everybody to help spread the word through the organization and highlight the benefits,” he says.

To prepare for using Aquant AI, Creech says that Makino spent about three months on manual efforts to ready its data. “We had some up front manual effort to create a common language, making sure wording was consistent, etc.” he says. “And now I have three tech writers on the team to feed Aquant. They’re taking data that’s in people’s heads, in service reports, and turning it into processes and procedures. It’s helped us clarify what we need to focus our documentation generation on.”

The prep work Makino did on its data also helped to ensure accuracy. **“When Aquant gives an answer, you give a thumbs up or thumbs down, so it’s being evaluated continuously as it’s used,”** says Creech. “But when we were getting ready to use it, **we won a lot of people over by bringing our smartest, most technical people into the room to ask it questions. We knew they were going to try and trick it, but it never once failed to say ‘I don’t know, I don’t have enough information’ rather than providing an inaccurate or false response.** I attribute that in large degree to our upfront effort with the data and making sure it understood the interconnectedness of our systems.”

Looking ahead: Smarter service, anytime

While Makino is very happy with the value Aquant and IFS have already brought to its business, the company also knows that the journey has only just begun.

Creech shares his vision for what’s next: “Our vision is that if a customer at 11:00 at night has a machine go down on second shift, he can go into triage and start working through the decision tree to narrow it down. See a part will be needed and order it straight from there, that has been bounced against the bill of materials for that machine, so he knows he’s getting the exact right part. If an engineer is needed, they can arrive alongside the part the next day. And this has all happened while we’re sleeping – this second shift person getting the same exact service they would if it were 10:00 the next morning over the phone.”





See Service AI in Action

Aquant is an Agentic AI platform for service professionals working with complex equipment. It delivers expert-level answers instantly by capturing documented and institutional knowledge – improving machine troubleshooting, cutting costs, and turning service into a revenue engine. With Aquant AI, service professionals can be ready for anything.

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