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A Connected Operation

By harnessing the collective value of data-driven systems, this moldmaker takes a proactive approach to continuous improvement and customer satisfaction.

Sitting with Don Dumoulin in his second-floor office at Precise Mold and Plate in Columbus, Indiana, one detects an air of confidence and ease with a touch of that “kid-in-a-candy-store” excitement. Since acquiring the moldmaker and specialty machining company in January 2013, Dumoulin has been steadily, strategically applying time-tested business practices while investing in new equipment and, expressly, in operations-enhancing software systems, with the intent of raising the bar on its manufacturing methods as well as its approach to marketing and customer service. Most of the company’s processes today resemble those of a Fortune 500 organization. And it’s no wonder.

“I was raised in big companies,” Dumoulin says. A Ball State University graduate, the first 10 years of his career, at Procter & Gamble, focused on brand management, sales and marketing strategies for products like Crest and Pepto Bismol. Fast forward through a successful career that also included leadership roles at Glaxo-Smith-Kline, Roche Diagnostics, Empi Recovery Sciences, Donjoy Orthopedics (now DJO Global) and finally King Systems Corp., an injection molder and manufacturer of anesthesia and respiratory equipment. After retiring from running these large OEMs, Dumoulin found that he needed something “productive” and different to do, so he purchased Precise.

Established in 1978, Precise employs 55 workers who design and build injection molds ranging in size from 200 to 1,200 tons for the automotive, medical, industrial and consumer goods industries. The company also provides repair and maintenance of mold tooling, as well as fabrication of custom plates and precision weldments. All operations are housed in a 44,000-square-foot facility.

For the first 90 days after he purchased Precise, Dumoulin says he just walked around and asked people to tell him about what they did and what they liked about the operation. “I found there were guys with a lot of experience who were languishing mid-organization when their talents could have been put to better use,” he says. “The guys showed me examples of how they could really excel at their craft by focusing on fewer tasks and of how we might be able to accelerate our training of new employees. After these one-on-one and small-group discussions, it made sense to move some individual contributors into leadership roles.”

Creating a new organizational chart was just the initial step towards a bigger end goal. “Collectively, our craftsmen had a wealth of subject-matter expertise on all facets of mold



Precise Mold and Plate CEO Don Dumoulin (center) and his management team implemented enterprise resource planning software, ISO certification, and a digital marketing and customer relationship management system to increase accountability, quality and customer satisfaction. Data collected is used to identify the company’s operational strengths as well as to drive improvement.

Images courtesy of Precise Mold and Plate.



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manufacturing, mold repair and plate fabrication. The same is true with our sales and administrative teams,” Dumoulin says. “While it’s great to have so much ‘tribal knowledge,’ it doesn’t really help an organization unless that intellectual capital can be collected, catalogued and shared across the entire organization.” With that in mind, Dumoulin determined there were three things needed to transform the business: enterprise resource planning (ERP) software, ISO certification, and a digital marketing and customer relationship management (CRM) system.

A comprehensive management program like this requires significant time and energy from all levels of an organization. However, understanding that no shop



Chris Watson (left) and Lee Fields finalize cutting paths for a new mold build. From the moment a job is quoted, Precise Mold and Plate’s ERP system tracks every action on every machine using computer terminals located at every workstation. The ERP system is also instrumental in scheduling machine time to boost shop efficiency.

can shut down for a couple of months to allow employees to focus solely on implementation of these systems, Dumoulin applied for and ultimately won a technology grant from the state of Indiana that provided help. Sponsored by the Indiana Economic Development Corp., a team of mechanical engineers and PhDs from Purdue University was assigned to each of five Indiana-based manufacturers, including Precise. At Precise, the academic experts examined operational processes and ultimately devel-

oped detailed process maps for everything from order entry through manufacturing and shipping to billing.

Improving Decision-Making with End-to-End ERP

One of the most impactful changes that Dumoulin initiated was the use of an ERP system “end to end” on every job, which has helped boost the shop’s on-time-delivery rate to an average of 97.5 percent over the last six months from about 80 percent before the system was in place. The E2 Shop System software from ShopTech stores data from job quoting and scheduling to purchasing, employee time tracking, inventory management and more in a centralized database so that the data can be quickly and easily accessed, shared and evaluated. Because the ERP system’s machine scheduling function monitors every job and every machine, work flow can be controlled and jobs can be scheduled for peak efficiency, he says.

Computer terminals at every machining station add to work efficiency and accountability. “Our employees don’t clock in at the door anymore. Instead they clock in at their stations when they open a job, giving us firm data on everything that happens in the shop,” Dumoulin says. “It’s no longer ‘I think or I feel,’ it’s now ‘What does the data tell us?’ It’s a culture shift that’s bringing a discipline to the organization in a way that makes each employee say ‘I’m accountable for what I’m doing, and I want to do what’s best for the customer,’ and that focus is driving improved results.”

The ERP system also helps Precise’s management team make data-driven decisions every day, he says. For example, there is a benefit to knowing the average amount of time it takes to create an eight-cavity mold with a five-axis mill, he explains, as such knowledge can be instrumental in scheduling machine time for

the craftsmen and can optimize utilization of an expensive machining center.

Implementing an ERP system also provided a high degree of transparency to the management team. "We sometimes laugh at ourselves when thinking about how we used to track jobs with note cards every day," Dumoulin says. "Even the most skeptical person has seen the advantage of real-time cash flow projections and robust accounts payable and receivable tools."



These financial controls are especially important since Precise has accelerated its purchase of new machining technology in the past 24 months. "Yes, the cost to acquire new machining equipment is significant," Dumoulin says. "We're able to rationalize these equipment purchases because we have access to real-time data. Not just manufacturing data, either. For the first time ever, we truly understand the ebb and flow of quote volumes and the timing of decision cycles. All of this information is used to create probabilistic sales forecasts for each segment of our business."

Establishing Quality and Efficiency Targets with ISO

Following installation of and training on the ERP system, Dumoulin and his management team set out to earn ISO 9001:2008 quality certification for the shop. Some employees initially questioned the need for an ISO 9001 system since customers were not requesting it. "I explained that it's going to teach us discipline, and once we have it, it will be immensely advantageous to our customers due to better quality and efficiency," he says. "The ISO certification process is an enormously painful undertaking, but we did it in 60 days, wall to wall, and received our certification in under five months."

ISO certification requires documentation of the entire manufacturing process, from product design through delivery. That task was made easier because Precise's management team could leverage data collected by the ERP system to write about the shop's procedures. The team also was able to collect and analyze a wide range of production data to establish quality and efficiency targets.


Achieving ISO certification is not a one-time effort. Annual audits must be conducted to maintain the certification, and demonstrating continuous improvement lies at the heart of the ISO audit process. At Precise, for example, production data collected using the ERP system is being used to isolate challenges in manufacturing processes and, in some cases, identify potential problems before they emerge. Dumoulin says team leaders have analyzed production data over time




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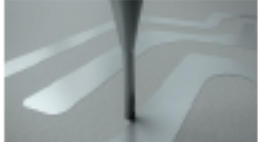


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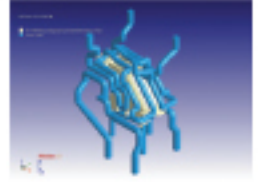
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to eliminate bottlenecks and inefficiencies, reducing the amount of rework, and the number of returns and complaints. More broadly, he says, the ISO certification process demonstrated to the management team that each customer defines quality from their own unique perspective, and that an orientation toward quality can be applied to every functional area within Precise, from marketing through billing, and everything between.

Optimizing Marketing and CRM

Ten months ago, the company installed HubSpot's all-in-one marketing software to automate marketing email and social media campaigns with other inbound and outbound marketing tactics. Precise's marketing director, John Rowe, deployed the cloud-based product to create an integrated digital platform for the company's inbound marketing (newsletters, technical articles, blog posts, customer survey results and white papers used to draw prospective customers to the company's website for more information), with more traditional outbound marketing tactics like trade show participation, email marketing, advertising and direct mail.

The software also includes web hosting, search engine optimization and data analytic tools that help Rowe measure the effectiveness of marketing efforts. It incorporates a CRM function that enables data analytics for virtually every aspect of the customer acquisition process. For example, four times a year, Rowe pulls the sales data collected from every job quote issued to try to analyze the results of sales and marketing efforts. He can see the number and type of jobs won during that quarter; how many decisions were made, and how many quotes went unanswered, and then can evaluate not just the ratio of jobs won to jobs lost but also the reasons attributed to those wins and losses. All of the data can then be compared with data from prior quarters for insight on how the team might improve its marketing and sales effectiveness.

"Since October 2015, we have issued roughly 1,700 quotes," Rowe says. "This volume of quote data gives us a granular view of each stage of the marketing and sales processes. We need to know what, besides price, causes us to win or lose quotes, and this post-decision assessment, combined with our semi-annual customer surveys, gives us a 360-degree perspective. In short, we use this rich, multi-layered data to improve the effectiveness of customer acquisition and retention."

Like many other mold manufacturers, Precise's "customer-first" approach is its primary competitive advantage, Dumoulin says. One piece of that approach is maintaining close contact with customers via frequent face-to-face



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meetings. Precise also takes advantage of data analytics to identify customer-specific insights that can be used to drive improvements in customer acquisition and loyalty.

Twice a year, the company uses Survey Monkey to conduct online surveys of every customer for whom it has completed a project in the previous six months. The survey covers 19 criteria and includes questions about innovation, precision and accuracy, pricing competitiveness, ethics, use of technology, and more. "Using the same criteria over multiple surveys provides longitudinal data that shows us how clients rate us at that point in time, and how that rating might have changed over time," Rowe says.

In addition to sharing survey results with customers (which he says has increased the survey response rate by 50 percent), Precise also maintains regular contact with customers during individual projects. During any given job, the customer will receive weekly project reports, generated by the ERP system, that graphically illustrate progress on each job. "For example, a report might say something like: You have a project here with us for three weeks. It requires 19 different steps and, in percentage terms, we've now completed 87 percent of the project. Work continues on the remaining 13 percent, and we expect to deliver your project on time," Dumoulin says.

A Platform for Growth

Now that all of these improvement measures are in place at the company, Dumoulin says the immediate emphasis is on organic growth, and he says he believes this is very achievable in light of ongoing machine investments, an energetic management team, and a continuing focus on quality systems like the ERP and HubSpot. "I think of Precise as a platform business," he says. "First, we've built something with which we're winning a higher percentage of quotes, so our organic growth rate is accelerating. Second, we are actively investigating 'bolt-on' acquisition opportunities."

Acquisitions of other moldmaking or specialty manufacturing shops would serve to increase the company's geographic footprint and/or increase its competitiveness in high-growth segments such as aerospace, medical technology and government contracts, he says.

"At the end of the day, it's all about getting the job done correctly the first time, at a fair price, and delivered on time," he says. "None of that is remotely possible in today's global sourcing environment without a disciplined, data-driven approach to marketing, manufacturing and customer relations." [MMT](#)

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