CASE STUDY

PRECISION COATING REALIZES MANUFACTURING EFFICIENCIES WITH DATA-DRIVEN INSIGHTS FROM PLEX

Precision Coating engineers innovative surface modification solutions to enhance the value and performance of medical wires, devices, and instruments. The company's best-in-class processes and technology enable breakthrough property characteristics and the industry's highest first-pass yields. The team works closely with customers to create custom applications that deliver functional performance, quality and regulatory compliance, and cosmetic integrity. With over 65 years of experience and operating locations in the US and Costa Rica, Precision Coating provides a seamless supply chain experience. It is committed to fulfilling the exacting demands of medical manufacturing across all major geographic hubs.

Location:
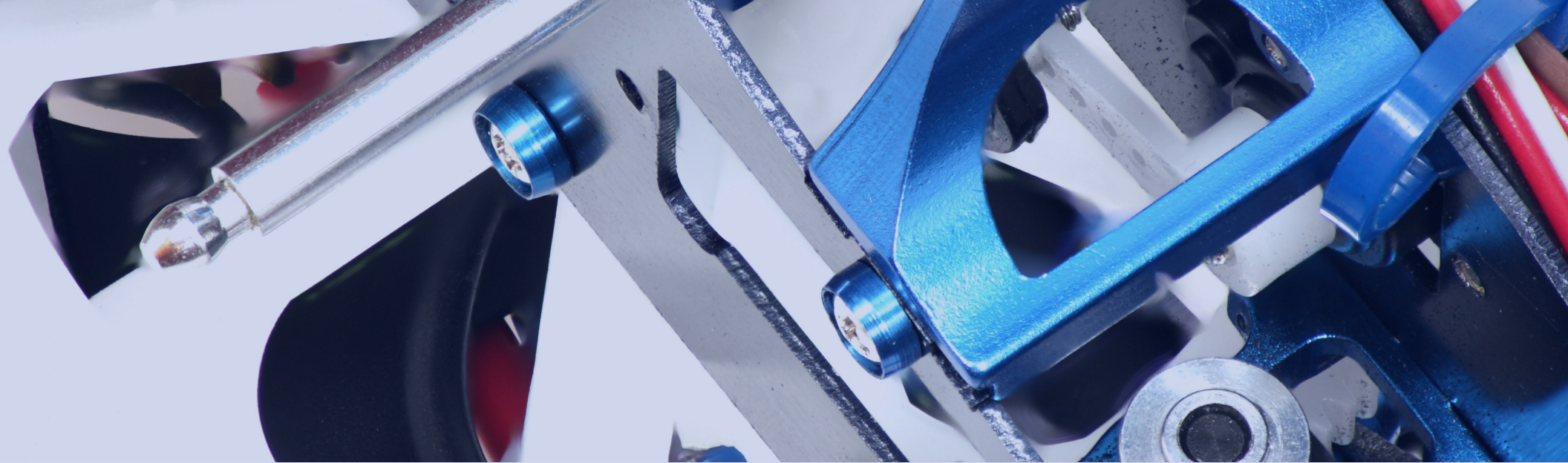Hudson, MA

Industry:
Medical

Results

Streamlined multiple systems in multiple locations into one single source of truth

Increases profit through real-time insights into actual manufacturing costs

Enhanced critical communication channels between Quality and Manufacturing

Booming Business Reveals Short-comings of Disparate Systems

Precision Coating is committed to offering its customers complex surface technology solutions, including masking and coating applications, value-added surface treatments, and marking technologies. By working closely with its customers in the medical device industry, Precision Coating engineers product-specific applications that enhance biocompatibility, durability, lubricity, and dielectric strength. Additionally, Precision Coating is ISO 13485 and ISO 14001 certified, which signifies the company's commitment to meeting medical industry quality and regulatory standards and stringent environmental sustainability goals.

After years of expansion, Precision Coating had evolved to rely on multiple highly custom-configured systems to run their business that fell short of serving their continued needs through organic growth and acquisition. Six different systems were used across the company's three locations, requiring significant manual reconciliation. Additionally, the team relied on Excel and paper to record data for processes not captured within any of their software.

Precision Coating identified the need for a system that would provide a single source of truth across all locations to increase visibility into its business data and Key Performance Indicators and facilitate faster, more reliable decision-making. By implementing a new, scalable solution, the company could move away from the disparate systems it had outgrown and upgrade to smart manufacturing.

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After a fifteen-month assessment, a cross-functional Selection Committee of eight **employees unanimously voted Plex the best-fit system for Precision Coating's needs, with manufacturing execution at its core.** The cloud-based Plex Smart Manufacturing Platform offered a single source of truth enterprise-wide with a real-time view of the production lifecycle across all plants, allowing Precision Coating to drive performance, increase revenue, and reduce costs.

Precision Coating focused on four main objectives in their search for a solution that encompassed a Manufacturing Execution System (MES), Quality Management System (QMS), and Enterprise Resource Planning (ERP):

1) Increasing productivity
2) Improving capacity to drive KPIs
3) Simplifying, while turbocharging, reporting
4) Increasing customer satisfaction

Eight potential software solutions were reviewed during the evaluation and eventually narrowed to four frontrunners. Nearly thirty employees participated in the needs assessment and selection process to identify the most valuable features of an ideal system to ensure an effective assessment of the current-future-ideal states and garner buy-in from the team that would ultimately utilize the solution. This helped the company align on main priorities, including ease of use, documentation and training, quality compliance supporting its ISO certifications, and more.

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Accelerating Time to Value with Plex Professional Services

Precision Coating's implementation of Plex kicked off in August of 2021 at the company's Hudson, Massachusetts location. With the help of the Plex Professional Services team offering insights and best practices, the project team comprised executive sponsors, a steering committee, a core implementation team, and site champions.

"Professional Services support was essential to our success. We had excellent knowledge of our business processes and the requirements of a medical device manufacturer. However, we had limited knowledge on the team of systems implementation. The Plex team was able to help us adapt our processes to align better with the workflows built into the system, define our data needs and migration pathways, and structure our reports. We also found Plex executive leadership very supportive and committed to the Medical Device manufacturing industry vertical, as we helped them understand some of the unique requirements of our regulated environment," noted Bill Ellerkamp, President of Precision Coating.

The company started by raising orders and process sheets in the new Plex system and following procedures with employees. A regular communication cadence ensured that all team members understood the implementation process from start to finish, emphasizing how the Plex platform, including MES, QMS, and ERP, would impact every aspect of business, from planning to producing to reporting.

After going live at their headquarters in July of 2022, Precision Coating then went live in Costa Rica and their remaining US locations. They applied lessons from their original implementations to streamline the process at the additional facilities. Jon Audette, Director of Business Planning and Analysis, stated that the team was "able to go live and be comfortable on day one" at the rest of their launches following the initial implementation in Hudson.

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Taking Control of the Plant Floor with Data-Driven Insights

With a real-time view of their entire production lifecycle across all plant locations in one system, Precision Coating has increasing visibility to profit through insight into actual manufacturing costs available through Plex MES and ERP. With intuitive dashboards that help examine its production, **Jon Audette stated, "Plex helps us to understand by product and by Value Stream what our costs are, as opposed to figuring it out at the end of the month."**

For example, before Plex, when production issues arose, employees had to review every process sheet scanned manually. Now, this information can be searched quickly and efficiently in Plex MES, which saves time and mitigates potential costly quality issues, a key focus as an ISO-certified company serving the medical industry. This is just one example of possible process improvements that are helping the company achieve its goal of increasing productivity and reducing costs. A greater understanding of costs leads to better communication and, ultimately, more satisfied customers. Additionally, they are working toward proper inventory management and achieving 100% inventory accuracy.
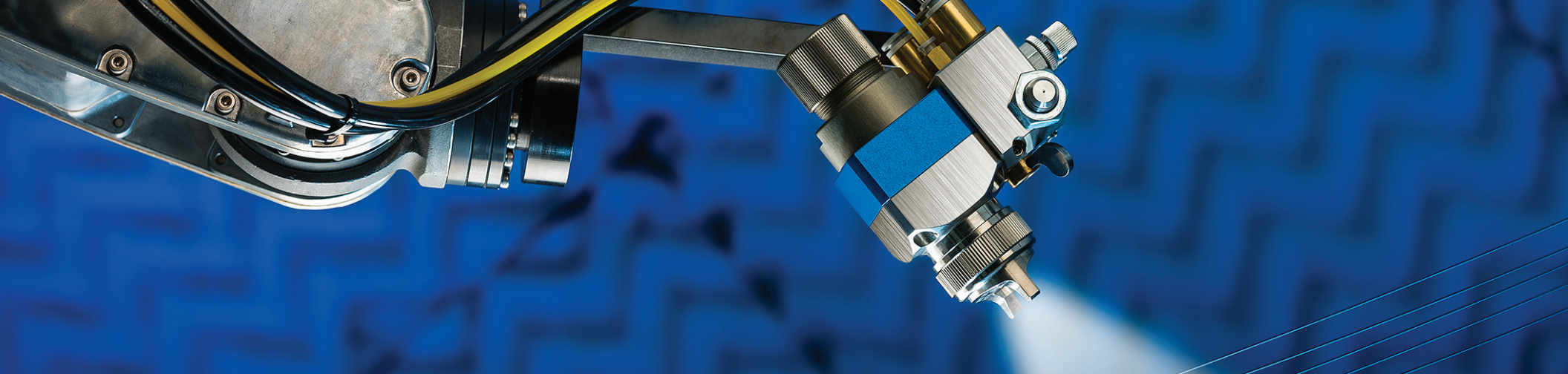
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"As a single source of truth, Plex enables the team to be on the same page when Engineering, Manufacturing, Quality, and others collaborate on many different items at any given time. Liam Clegg, Quality Manager at the Hudson facility, said, "Plex allows for the possibility of creating reports that can be used both daily, for communication between Quality and Manufacturing, and at a monthly and quarterly level for reporting to and by senior leadership, and everything in between."

Liam Clegg
Quality Manager, Hudson.

Before Plex, the team dealt with pen and paper for many necessary steps like process sheets and job sheets, opening the door to manual errors and quality issues. Now, everything is digital, "and the operators are cool with this," noted Michael Draheim, Lab Manager at the Hudson plant. Using programmable, searchable data in Plex, such as chemical expiration dates, is helping prevent or mitigate costly problems. Precision Coating specifically elected to launch PLEX in both English and Spanish to facilitate ease of use for a significant Spanish-speaking direct labor workforce.

Through Plex, Precision Coating is focused on lean and automated processes, creating digital paper trails and centralizing reporting for more records instead of the previously used paper and Excel-based methods. With increased digital functionality, Plex is also helping Precision Coating become a greener company. Walter Romero, General Manager at Precision Coating in Costa Rica, stated, **"Plex helps us to be greener as we've [nearly] gotten rid of paper and gone digital."**

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Helping Empower Employees through Communication & Visibility

The cloud-based nature of Plex has helped increase visibility and alignment and facilitated company-wide standardization and communication across its United States and Costa Rica locations. Plex's single source of truth and powerful reporting allows everyone to stay on the same page and collaborate more efficiently in the same system, tuned into the priorities and goals. Amit Jonchhe, General Manager of the Woonsocket plant, noted, "Plex offers great planning opportunities, as well as a clear picture and understanding of the process."

Plex's multi-lingual and multi-currency format was also a critical feature supporting enhanced communications. Precision Coating's Costa Rica location has Spanish-speaking employees and a different currency than its US-based counterparts. Senior Director of Commercial Operations, Nilsa Marino, said, "Plex has allowed us to look at the whole business and each location daily. Day-to-day communication is more visible to those who need it."

With Plex's user-friendly interface, operators and others with boots on the ground learned and adapted quickly and can teach others around them. Customizable, automated reports and better search functions have saved the company time and improved employee productivity. People are energized and motivated because their ideas are now being heard with more frequency and increased action, and there is little time lag in seeing the impact of the work.

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> " Before PLEX, various systems were used to achieve the company's objectives in financial, process, and quality terms. Plex has generated a positive impact on the integration and visualization of the systems. I believe Plex will take the company to the next level globally. "

Ricardo Sequeira
Group Quality Systems Manager

Looking to the Next Stage of Growth with Plex

The Precision Coating team knows they have yet to fully leverage all the efficiencies within their suite of Plex MES, QMS, and ERP solutions, such as product amount tracing, variable BOM, costing and margin calculations, and more. However, the team has plans to bring additional modules online and continue exploring Plex functionalities gradually, such as machine integration and Industrial Internet of Things (IIoT). While there

is room to improve as employees adjust to the new system, the potential is limitless, and the Precision Coating team is confident that they made the right choice in Plex.

With its team on board with Plex and a growing number of in-house "Plexperts" to depend on, Precision Coating's aim to increase productivity, improve capacity to drive KPIs, simplify reporting, and increase customer satisfaction is in reach.

ABOUT PLEX

Plex, by Rockwell Automation, is a leader in cloud-delivered smart manufacturing solutions, empowering the world's manufacturers to make awesome products. Our platform gives manufacturers the ability to connect, automate, track, and analyze every aspect of their business to drive transformation. The Plex Smart Manufacturing Platform™ includes solutions for manufacturing execution (MES), ERP, quality, supply chain planning and management, asset performance management, production monitoring, process automation and analytics to connect people, systems, machines and supply chains, enabling them to lead with precision, efficiency and agility. To learn more, visit **www.plex.com**

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