SIEMENS

INDUSTRIAL MACHINERY

D'ANDREA

Using digital transformation to streamline complex production processes across two sites

Products

NX, Teamcenter

Business challenges

Meet evolving customer expectations

Manage increased product complexity

Reduce programming and setup times

Eliminate bottlenecks due to disconnected processes

Keys to success

Embrace digital transformation of the manufacturing process

Automate NC programming of all the machine tools using one CAM system

Define optimized machining process to maximize throughput

Simulate manufacturing processes to eliminate production errors

Use NX and Teamcenter to realize an end-to-end digital thread

Results

Streamlined production across two sites and product lines

Increased agility in meeting customer requests

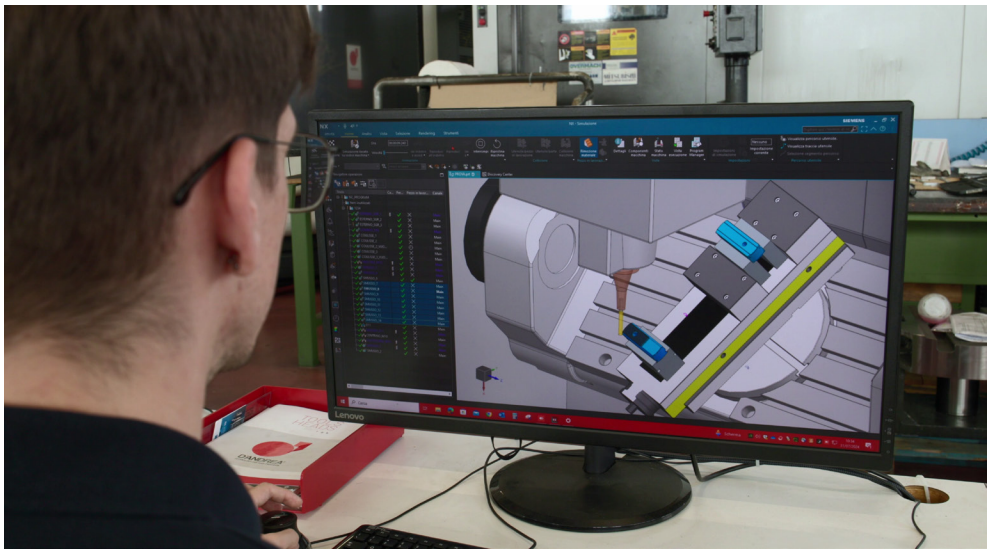
D'ANDREA uses NX and Teamcenter to enhance response to customer requests and reduce development time by 75 percent

Building on tradition with continuous innovation

D'ANDREA is a family-owned Italian company and a recognized leader in high-precision tooling for machine tools. Built on three generations and 74 years of experience, the company combines precision and innovation to support evolving manufacturing needs. "Today we are a completely different company, but our commitment to continuous innovation continues," says chief executive officer (CEO) Amadeo D'Andrea, reflecting the company's evolution while staying true to its roots.

What started with manufacturing a manual facing head for turning operations has grown into a global business with two factories in Lainate and Molise, Italy. The Lainate facility specializes in facing heads, while the Molise factory focuses on tooling. With 70 percent of its business coming from exports and customer expectations constantly rising, D'ANDREA continues to adapt, innovate and lead, not just keeping up with the market, but setting the pace with help from Siemens Digital Industries Software.

D'ANDREA operates in a competitive global market dominated by large enterprises, facing mounting pressure to deliver high-precision tooling solutions faster with uncompromising quality and reliability. Meeting these challenges requires

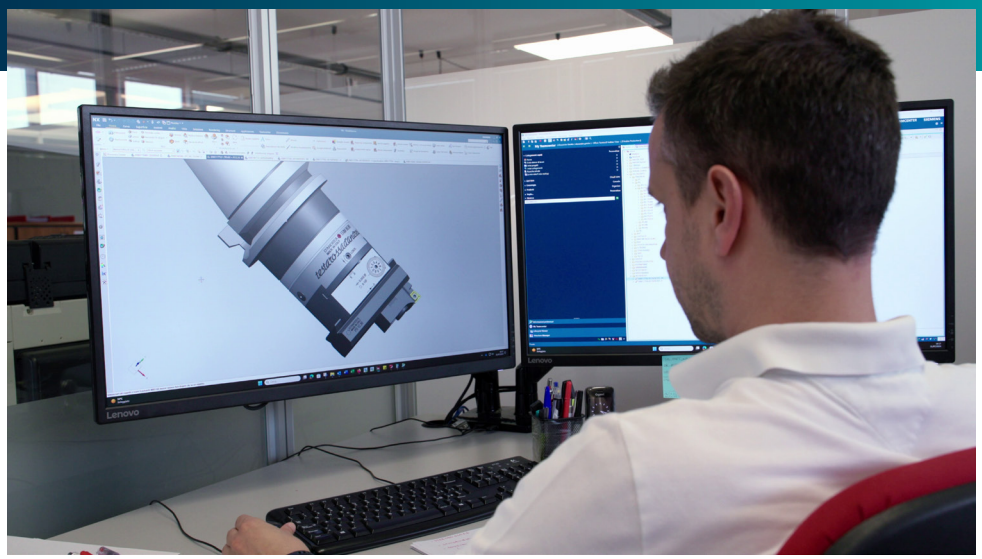


Results *(continued)*

Reduced development time from eight to two hours

Reduced programming time by 50 percent

Accelerated time-to-market by 3X



"With our former CAD system, it could take an entire day of production to add one item. Now using NX and Teamcenter, we can do it in just two hours."

Alessandro Castellini
R&D Manager
D'ANDREA

accelerating production timelines while maintaining the flexibility to adapt to diverse and evolving customer requirements.

Connecting CAD, CAM and PLM

At D'ANDREA every precision tool begins as a 3D model in the engineering department. Designers use NX™ CAD software to create detailed geometry, embedding product manufacturing information (PMI) like dimensions and tolerances directly into the model. It is not just a design, it is the foundation for everything that follows.

All this data is managed centrally in Teamcenter® software, which serves as the digital backbone, keeping critical design information organized, accessible and connected across departments.

Everyone works from a single, reliable source of truth. There are no duplicated files or disconnected workflows. There is clarity from concept to production.

This is a significant shift from how the company operated in the past.

Alessandro Castellini, research and development (R&D) manager at D'ANDREA, says, "With our former CAD system, it could take an entire day of production to add one item. Now using NX and Teamcenter, we can do it in just two hours."

This change has streamlined more than just design time. It has strengthened how D'ANDREA innovates, connecting data, accelerating decision-making and creating a smarter path from idea to finished tool.

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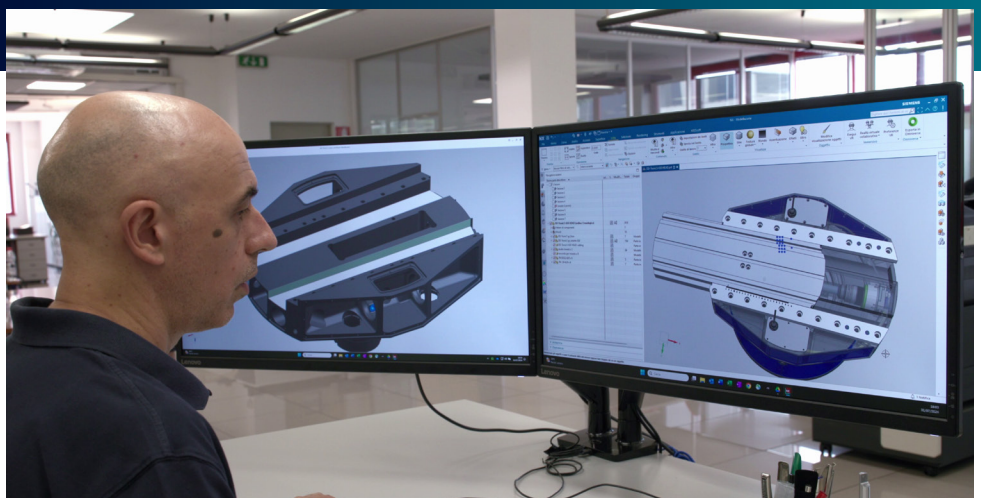
Michele Martinelli
Shop Floor Manager
D'ANDREA



"With NX Cam, we see how the part will be made. We can understand even if there are collisions and we are also able to measure the piece before finishing the project."

Michele Martinelli
Shop Floor Manager
D'ANDREA

Driving efficiency in CNC programming

D'ANDREA has a fleet of high-end computer numerical control (CNC) machines on its production floor: double-turret lathes, 5-axis milling centers and other advanced setups designed for complex, precision machining. But no matter how powerful the equipment, it all comes down to the programming behind it. That's where Siemens' NX CAM comes in.

For Ihor Tymoschenko, a computer-aided manufacturing (CAM) programmer at D'ANDREA, the shift to NX CAM was about more than just changing software. It was about simplifying complexity. "NX CAM gives me everything in one place," says Tymoschenko. "I can program both turning and milling without switching between systems. It helps me see the full picture of the process, from the tools I use to how each operation fits together."

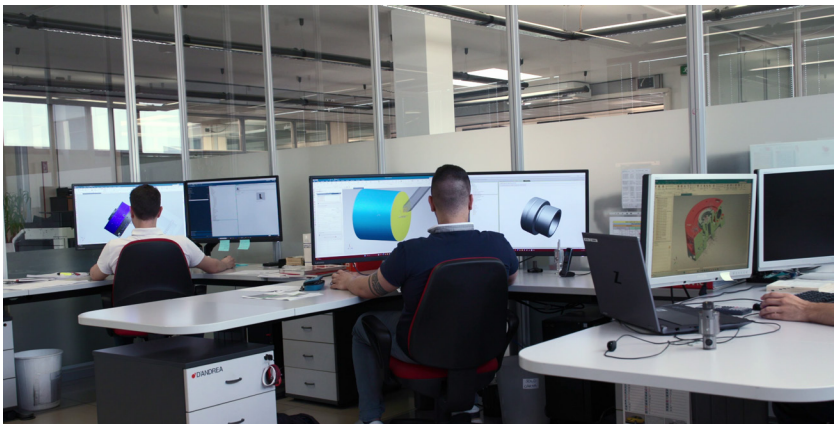
The feature-based machining capabilities have changed the way D'ANDREA approaches programming. Instead of creating toolpaths from scratch, NX CAM automatically recognizes part features and defines the best machining strategies and tools to manufacture the part. What used to take hours of manual input now takes a fraction of the time.

"Programming times with NX CAM has been reduced by approximately 50 percent, and the waste is almost zero as we can program and simulate using the digital twin," says Michele Martinelli, shop floor manager. "With NX Cam, we see how the part will be made. We can understand even if there are collisions and we are also able to measure the piece before finishing the project."

This provides an important edge in a business that handles a wide variety of custom parts in small batches.

Simulation has been another game changer. With a full digital twin of the machining process, engineers can test and tweak everything before it reaches the shop floor. They can spot possible collisions, adjust toolpaths and refine strategies without risking materials or machine downtime.

For D'ANDREA, that means fewer surprises, faster setups and more time with spindle cutting chips. Using NX CAM isn't just making the process faster; it's making it



smarter, more predictable and more sustainable, helping D'ANDREA maintain its reputation for excellence in tooling innovation.

With the support of Siemens partner ATS, D'ANDREA receives ongoing training and expert guidance, which is critical for adopting new technologies and maximizing the value of its digital investment.

Using NX and Teamcenter to connect design to production

Driving innovation at D'ANDREA in precision tooling means managing complexity at every step, from product design to machining and assembly. But fragmented systems and siloed workflows were slowing progress and introducing risk.

To tackle this, D'ANDREA adopted NX and Teamcenter to establish a fully connected digital thread, bringing together design, engineering and production into one integrated environment. This shift wasn't just about digital tools; it was about building a smarter, faster and more reliable way to manufacture. NX and Teamcenter are part of the Siemens Xcelerator business platform of software, hardware and services.

"Using a single system is one of the basic aspects to increase our efficiency and also to reduce the possibility of error," says Castellini.

Now, every team works from a single source of truth. By using Teamcenter to manage product and process data, D'ANDREA has centralized control over part families and variants, which is crucial in a market that demands both standardization and customization.

NX plays a key role in reducing design complexity. Engineers model a base component once, then apply parametric variations to generate multiple sizes instantly. This minimizes repetitive work and cuts lead times for custom tools.

"Using NX in combination with Teamcenter, we have a unique source of data that can be seen by each department from R&D and design to production," Castellini explains.

This integrated approach has redefined how D'ANDREA plans and produces parts. From rapid quoting to accurate CNC programming, the entire process flows faster with fewer errors and more control at every stage.

Evolving from a family business to a digital manufacturer

The shift to digital hasn't changed D'ANDREA's identity, it has reinforced it. The company remains family owned, but now it operates with the speed, scale and intelligence of a digital enterprise.

"From a family company, step by step we became a digital company and now we can compete with the industry's giants," says Matteo Romic, the sales and marketing manager at D'ANDREA.

This digital capability means faster time-to-market. Projects that once took weeks can now be delivered in just a few days. Internally, teams collaborate more closely across design, engineering, sales and production. Externally, customers receive faster quotes, tighter tolerances and more flexible solutions.

Siemens Xcelerator solutions, including NX and Teamcenter, have helped D'ANDREA build a scalable infrastructure that can be adapted to future technologies, including cloud-based collaboration, artificial intelligence (AI) driven optimization and smart automation.

The company is now exporting highly sophisticated facing heads and modular tooling systems not only across Europe but to growing markets in Asia. This kind of growth would have been difficult to achieve without the agility that is a product of digital transformation.

D'ANDREA's journey shows how digitalization enables traditional manufacturers to accelerate innovation, remain competitive and build a strong foundation for the next generation.

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Alessandro Castellini
R&D Manager
D'ANDREA

Solutions/Services

NX CAD
siemens.com/nx

NX CAM
siemens.com/nx

Teamcenter
siemens.com/teamcenter

Customer's primary business

D'ANDREA is a world leader in the production of high-precision accessories for machine tools. The entire production of tool holders and modular systems and CNC heads lines for cutting and boring is developed at the headquarters in Lainate (Milan) and Castel Del Giudice (Isernia), Italy.
dandrea.com/en/index.html

Customer location

Lainate
Italy

Siemens partner

ATS
ats-global.com

D'ANDREA is ready for the future

D'ANDREA's story isn't just about adopting new tools; it's about building a company culture that values heritage and change.

From its founding in 1951 to today's global operation, D'ANDREA has remained committed to precision, quality and customer focus. What's different now is the speed, flexibility and confidence enabled by a connected engineering and production environment.

Using NX and Teamcenter, D'ANDREA has streamlined its workflows, reduced lead times and created a digital thread that connects the entire organization. This transformation has enabled smarter design, faster manufacturing and a stronger position in the global market.

D'ANDREA shows how tradition and innovation can go hand in hand. It demonstrates how a family-owned company with decades of tooling expertise can embrace Siemens' integrated digital solutions to shape the future of precision manufacturing and confidently compete with the world's largest enterprises.

Siemens Digital Industries Software

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