

Industrial machinery and heavy equipment

## Metalfor

Designing and developing next-generation agricultural machinery for South America and the world

### Products

NX, Teamcenter

### Business challenges

Correctly implement new systems

Reduce administrative effort required to create and manage engineering knowledge

Reduce product development time

Eliminate blueprints on the factory floor

Ensure that each product is completed according to the latest product revision

Comply with quality standards

Provide a central repository for all engineering knowledge

### Keys to success

Large-scale stability

Centralization of information

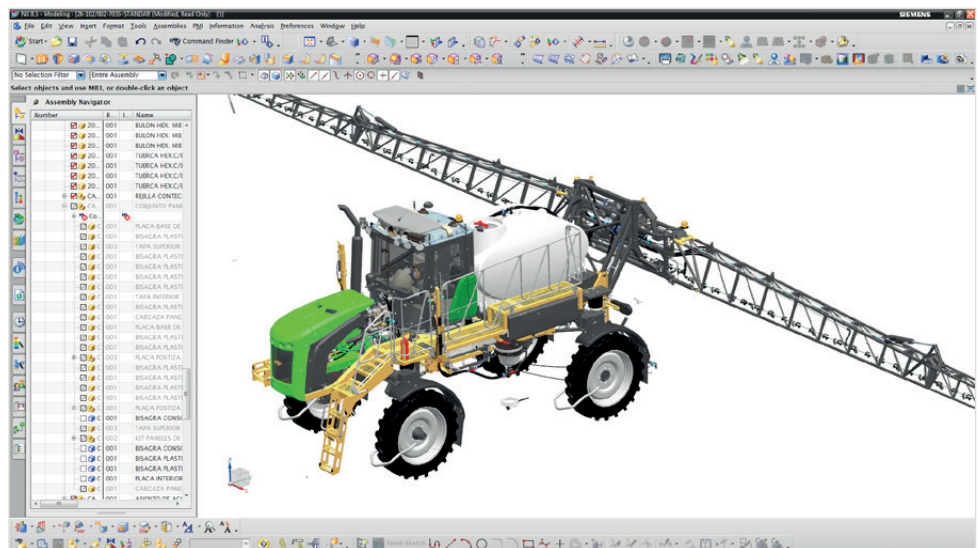
Simplified information administration

### Results

50 percent increase in production

Much more stable platform for solving administrative issues

Efficient implementation in only eight months



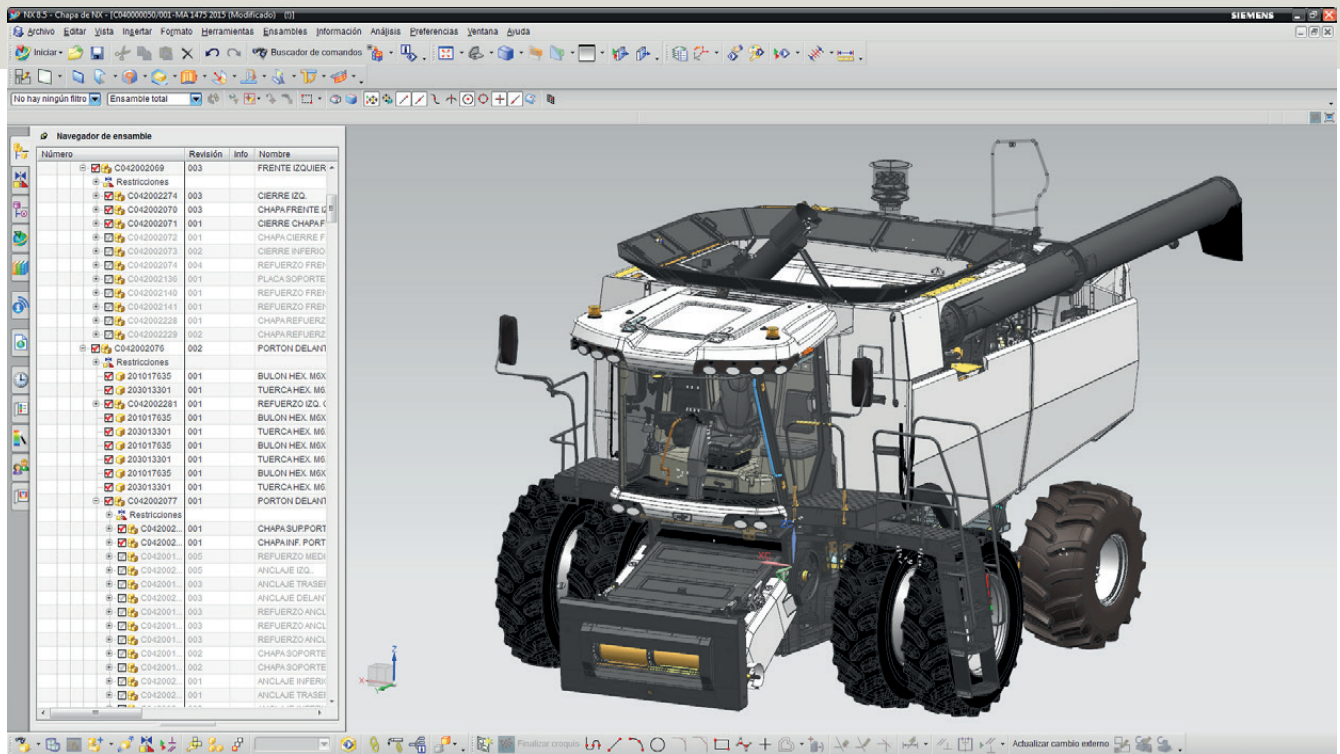
### Metalfor uses NX and Teamcenter solutions to comprehensively improve processes

#### Implementing PLM solutions to centralize processes and unify administration

Metalfor is an Argentinian company that designs and manufactures agricultural machinery at three production plants in Argentina and Brazil. The company's product line includes sprayers, fertilizer spreaders, combines, trucks, hoppers and machinery for processing fruits and vegetables.

Given its need to accelerate design and manage a large number of models and machines, parts and subassemblies, Metalfor needed two solutions: a high-performance design system and a system for managing the engineering knowledge of all of its locations, as some of its products include more than 40,000 parts.

After a precise study of Metalfor's needs, product lifecycle management (PLM) specialist Siemens PLM Software proposed replacing the company's old computer-aided design (CAD) system with NX™ software and Teamcenter® software.



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Product Engineering Manager  
Metalfor

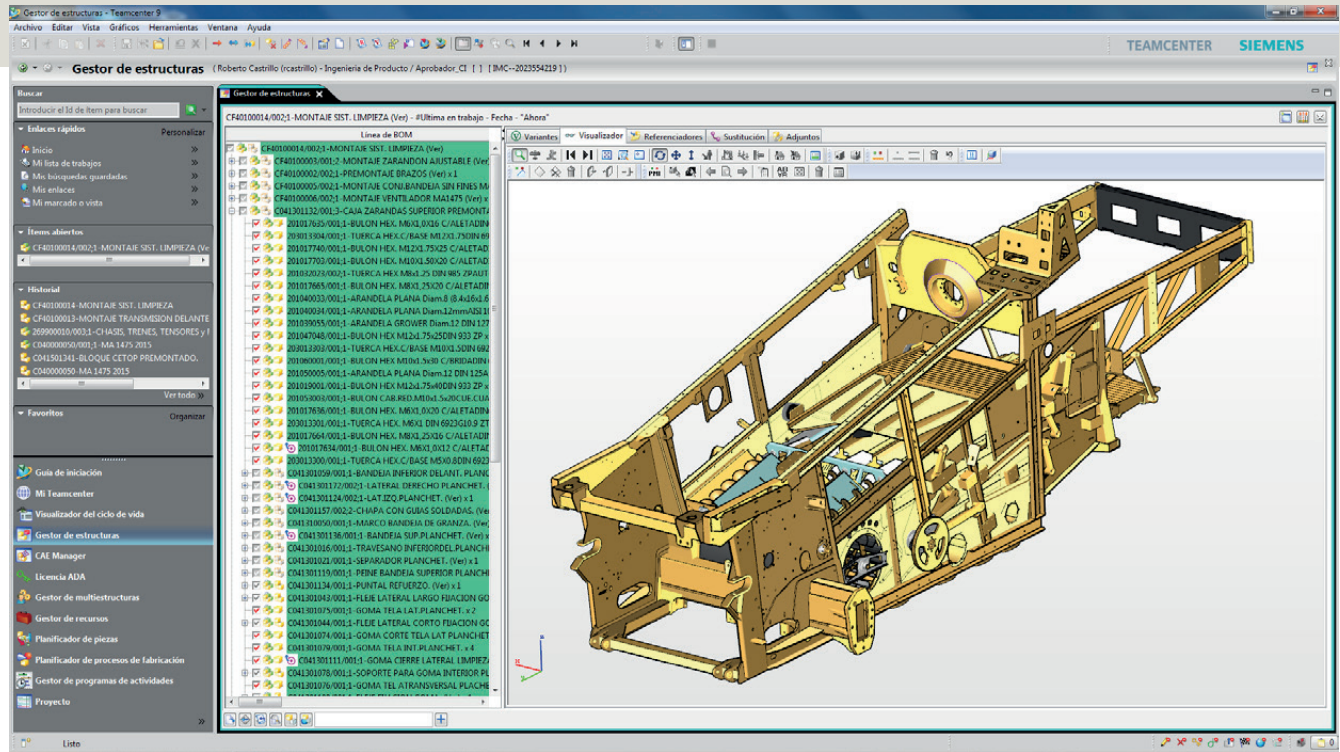
“Our designers couldn’t continue working without a management system, and that was when we decided to migrate toward a PLM solution,” explained Roberto Castrillo, product engineering manager at Metalfor. “The performance of Siemens’ solutions, along with the work of their solution partner X-Plan, helped us fully utilize the resources that NX and Teamcenter provide in just eight months.”

With a well-planned and successful implementation process, Metalfor replaced the CAD system, and migrated more than 100,000 design files from the old system into NX. The company also implemented Teamcenter, synchronizing the databases with those of Metalfor’s enterprise

resource planning (ERP) system. Implementing the two solutions at the same time allowed Metalfor to deploy the new system all at once.

Metalfor works on large-scale projects requiring diverse teams, each of which is responsible for a different part of the product’s lifecycle. Using NX to share data enables collaborative engineering among the team members and simplifies management from many different workstations.

All of the Metalfor’s engineers work with Teamcenter and NX, and the company has also installed terminals with access to product information in all of its plants. This broad access to product data has



significantly reduced the need to print engineering drawings.

### Visible results in the short term

NX has helped Metalfor improve engineering output, design quality, and engineering and manufacturing speed. The software assists in the modeling, design, finite element analysis simulation and product assembly. X-Plan, Siemens PLM Software's channel partner in Argentina, manages software licenses, supports Metalfor during software implementation, and delivers long-term support for the growth and rollout of the solutions.

During the implementation process, Metalfor decided to incorporate its quality management system into Teamcenter as well, using the solution to handle nonconformities through workflows and engineering changes. The workflow-based system is an important advantage for Metalfor, as it enables the company to refine and improve its internal approval processes and to improve efficiency by enforcing best practices.

"Diversification is one of our primary business objectives, as is accommodating the needs of our agricultural clientele not only with regards to our products, but also our services," asserts Castrillo. "Our workflow system allows us to maintain control over documents, access rights and revision status for each project. This integrated management system makes it possible for the work to be shared, involving each team's unique talents in terms of technology, design and innovation."

### Continuous improvement in manufacturing

"Agricultural machinery is very complex, and centralized information is key," adds Castrillo. "With NX, we achieved greater stability in large assemblies, while Teamcenter helped us increase our speed by centralizing all of our information and making reports and reviews available to the entire team in real time. Our next challenge is to improve in the area of manufacturing."

Metalfor is beginning to test the manufacturing capabilities of Teamcenter, with the end goal of incorporating processes in the

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## Solutions/Services

NX

[www.siemens.com/nx](http://www.siemens.com/nx)

Teamcenter

[www.siemens.com/teamcenter](http://www.siemens.com/teamcenter)

## Customer's primary business

Metalfor is a leading manufacturer of sprayers, harvesters and other agricultural equipment. At its plants in Marcos Juarez and Noetinger in Argentina and Ponta Grossa in Brazil, Metalfor designs and manufactures these machines, which are exported to various countries.

[www.metalfor.com.ar](http://www.metalfor.com.ar)

## Customer location

Córdoba  
Argentina

## Partner

X-Plan S.R.L.

[www.x-plan.com](http://www.x-plan.com)

database to reduce manufacturing cycles for its products. The company's production planning sector, which puts together the biannual production program, was also included among Teamcenter users to enable plant personnel to obtain the information needed to execute the manufacturing.

Metalfor is also using the product and manufacturing information (PMI) capabilities of the solution. The 3D annotation tools of PMI will help engineers to instantly determine design metrics and clearly convey the designers' intent to the rest of the

team. The company also plans to use the NX and Teamcenter solution to manage bills of materials and bills of process.

"Having a list of materials beginning with the engineering of the product will allow us to compare and check that all of the information and materials necessary are present, without missing a single component," concludes Castrillo. "Without a doubt, incorporating the manufacturing capabilities will be a great help in improving the engineering, design and production cycles of the products."

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## Siemens PLM Software

Americas +1 314 264 8499  
Europe +44 (0) 1276 413200  
Asia-Pacific +852 2230 3308

[www.siemens.com/plm](http://www.siemens.com/plm)

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