



# Enquip

Improves manufacturing performance by 30% with CATIA and ENOVIA

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**Marcello Pecci**  
Head of Process Engineering  
Enquip

### Challenge

Enquip wanted to sharpen its manufacturing processes by promoting collaboration and innovation among teams and by maximizing use of company hardware and manufacturing equipment assets.

### Solution

The company chose an integrated PLM solution of CATIA and ENOVIA SmarTeam to streamline manufacturing and shorten product delivery times.

### Benefits

Enquip has realized significant gains in productivity by increasing manufacturing equipment use and standardizing manufacturing processes, and was able to reduce overall manufacturing costs.





## Product quality and sustainable development

Enquip is a Brazilian company founded in 1983 and located in the southeastern state of Rio de Janeiro. It develops and manufactures industrial equipment for use in cargo handling solutions and products such as hydraulic winches and electric or pneumatic telescopic cranes. These products are used in the energy, shipbuilding and construction industries and Enquip serves businesses across the nation including renowned companies such as Petrobras and its suppliers.

With a focus on delivering high quality solutions, Enquip has stringent product development and manufacturing processes in place to support its commitment to social and environmental responsibility. It is a certified ISO 9001 firm and it has invested in technology solutions toward sustainable development.

## CATIA and ENOVIA for a PLM approach

In its efforts to optimize manufacturing processes and use of existing hardware and machines, Enquip faced a key challenge – how to expand and improve management of its engineering data, a function that was previously limited due to integration and programming issues with production equipment. In 2009, ENQUIP chose CATIA and ENOVIA SmarTeam to perfect its technology in the areas of product design, finite element

simulations, kinematic analysis, and parametric detailing in production. Enquip required an integrated PLM solution that was both robust, came with technical support, and was easy to integrate into existing software solutions.

With CATIA and ENOVIA SmarTeam, Enquip staff now manages the development of manufacturing equipment virtually, but also validates manufacturing operations first using simulation to test the operation of the machines and the processes beforehand.

## Performance improves by 30%

With DS PLM solution, Enquip has significantly improved the programming and simulation of its machining processes. "With CATIA and ENOVIA, we noticed a 30% improvement in overall manufacturing performance and a significant step forward in the quality of our products, all resulting in the improved use of our machines," said Marcello Pecci, head of Process Engineering, Enquip.



The results attained were exceptional and exceeded expectations. The new PLM rollout was a success and it positively impacted the entire organization.

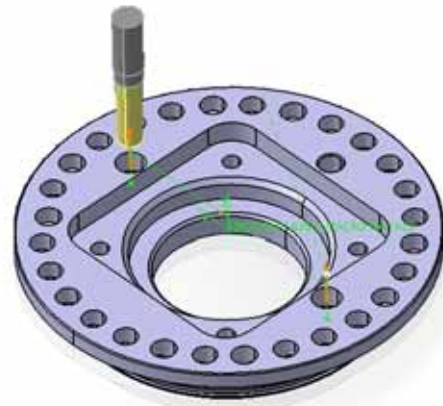
**Marcello Pecci**  
Head of the Process Engineering  
Equip

The optimization of CNC programs has also resulted in better use of machine resources and a more dedicated and trimmed production cycle.

With an accurate design plan, one that was tested virtually, Equip made better use of its raw materials and avoided environmental waste. Complex geometrical models that before required a great deal of programming time became easier to execute, and as a result, the machining cycle per part produced was cut significantly. The savings in time translate into increased resources that can be invested in the development of new products. "The results attained were exceptional and exceeded expectations," said Marcello Pecci, head of Process Engineering, Equip. "The new PLM rollout was a success and it positively impacted the entire organization."

By integrating all manufacturing processes into a single workflow, the company now has a "best practices" model that protects its intellectual property and allows Equip to reuse successful manufacturing processes in other areas. The DS PLM solution also allows Equip to quickly alter product designs throughout manufacturing in order to comply with any last-minute market changes or industry requirements.

 CATIA  ENOVIA



**Dassault Systèmes**  
10, rue Marcel Dassault  
78140 Vélizy-Villacoublay  
France  
Tel: +33 (0) 1 61 62 61 62

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