

## Faster to market with vehicles that delight

UGS Teamcenter helps reduce new development time by 25 to 40 percent

### MAHINDRA GROUP'S AUTOMOTIVE SECTOR



#### UGS PLM Software

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

#### ▶ Business initiatives

New product development  
Value chain synchronization  
Commonization and re-use

#### ▶ Business challenges

Ensure innovation and customer delight  
Bring new models to market sooner  
Increase number of product variants

#### ▶ Keys to success

Knowledge capture and re-use  
Multi-site, multi-CAD data interoperability  
Concurrent design across multiple facilities  
Complete elimination of non-value added activities

#### ▶ Results

25 to 40 percent reduction in time from concept to product launch  
Engineering change cycle reduced by half  
Concerns are resolved twice as fast  
50 percent reduction in BOM creation for prototypes and variants

#### Innovation and customer satisfaction

The Mahindra Group's Automotive Sector is India's fourth-largest automaker and the country's second-largest independent OEM. The company is in the business of manufacturing and marketing utility vehicles and light commercial vehicles, including three-wheelers. It has been the market leader in utility vehicles in India since its inception and currently accounts for about half of India's utility vehicle market. A strong product portfolio and a philosophy of customer satisfaction have driven solid growth in domestic sales (23 percent CAGR) over the past four years. The company employs 11,600 people.



Mahindra's automotive business views innovation and customer delight as the keys to continued growth. The company is continually working to bring new models to market sooner and to create more product variants. It is also working to eliminate non-value-added activities and to improve its ability to operate at multiple sites in multiple countries in the development of its vehicles.

#### Broadly implemented PLM

Since 1998, Mahindra's Automotive Sector has been using product lifecycle management (PLM) technology from UGS PLM Software, a global division of Siemens Automation and Drives, to address these challenges and to ensure a product development environment in which innovation thrives. Specifically, Mahindra is using the UGS Teamcenter™ digital lifecycle management software to enable: lifecycle data support, platform and variant management, multi-site data notification and synchronization, change management and support for concurrent development, project execution and monitoring, internal value chain support and support for business partners.

This solution was chosen based on the breadth of Teamcenter® functionality. The installation, which was done in phases, required minimal customization and was performed by an internal PLM support team using the implementation methodology and assistance from UGS PLM Software.

# SIEMENS

**Solutions/Services**

UGS Teamcenter

**Client's primary business**

The Mahindra Group's Automotive Sector is India's fourth-largest automobile company.  
[www.mahindra.com](http://www.mahindra.com)

**Client location**

Mumbai  
 India

**Special recognition**

Winner of  
 AP PLM Innovation Award 2007

***“For the organization as a whole, what Teamcenter means is a huge reduction in the time needed to bring a new vehicle from concept to launch.”***

*Prakash Deshkar  
 Senior Manager, PLM  
 Mahindra & Mahindra*

Teamcenter has now been deployed at eight locations, with 600 people taking advantage of its collaboration functionality, 30 people using its project management functionality and 150 using it for engineering-related activities.

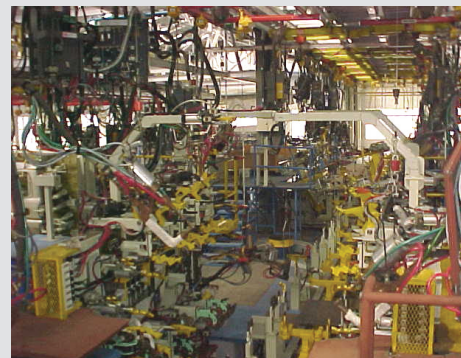
Today, Mahindra has a seamless, integrated environment for new platform development. Using Teamcenter, Mahindra has achieved multi-site and multi-CAD interoperability with complete project security and concurrent design across multiple locations. CAD, product, project and process data are managed in a single information vault. CAD data is available to each site on a real-time basis, and the company is now able to do packaging studies and clearance analyses across different CAD systems. The use of the JT format and Teamcenter's visualization capability is helping meet the company-wide strategic initiative of eliminating 2D drawings.

**Strong, documented benefits**

Mahindra's automotive sector credits many documented improvements to the use of Teamcenter. On an individual level, the company has seen an increase in productivity per employee. It attributes this productivity gain to effective document management and to the automation of routine tasks, which releases skilled personnel to perform their primary business functions. Non-value added activities such as CAD data conversion to IGES or STEP, have been completely eliminated.

In the design arena, both engineering change time and the time needed to resolve project concerns have dropped by 50 percent due to improved collaboration. Analysis preparation time has shrunk by 40 percent, and the creation of digital mock-ups goes twice as fast as previously due to the real-time, multi-CAD data integration and release management that is now handled by Teamcenter. The time needed to create bills of material for both prototypes and variants has dropped by 50 percent.

“For the organization as a whole, what Teamcenter means is a huge reduction in the time needed to bring a new vehicle from concept to launch,” says Prakash Deshkar, senior manager, PLM, Mahindra & Mahindra. “On the present program, Teamcenter is reducing that timeframe by 25 percent. For future projects, the company predicts a reduction of as much as 40 percent.



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