

Upgraded PLM System Resulted in Optimized Product Design & Development for a Leading Seating Systems Manufacturer



SITUATION

The opening up of emerging economies fuelled by the rising demand of automobiles pushed manufacturers to produce more comfortable and lightweight seats, at lower costs. The customer had to look to improve the efficiency of product design and development to cater to these demands of consumers.

IMPACT

The customer had an outdated product development system, which was done in-house with huge investments in manpower and time. It needed to be upgraded to improve application performance and better manage CAD design data. The design process was not optimal and the product development processes and strategizing had to be streamlined to make it more competitive in the market.

RESOLUTION

ITC Infotech helped the customer improve their agility in developing new products, and introducing product enhancements while staying within cost targets and tight schedules. ITC Infotech delivered high quality product designs and system performance leading to more than 50% savings in operational costs.

The Customer

The customer is a leading manufacturer of engineered seating systems and mechanisms. It designs and manufactures recliners, latches, and specialty mechanisms for passenger vehicles. The customer is a major global supplier of seating systems to the automotive industry with clients across North America, Europe and Asia.



The Need

The customer needed to optimize its product design while also improving quality. They wanted to do this by leveraging engineering design support in key areas like concept, detailed design, prototyping, analysis and simulation and testing and validation.

This was in response to the changes in automotive seating systems industry that had moved from the traditional basic seats to an advanced seating system and since there was an emerging market need. The new systems can be customized to the requirements and adhere to the changing environmental and regulatory concerns.

The product development system at Fisher Dynamics was also outdated and needed to be upgraded to improve application performance and to better manage CAD design data.

The Solution

ITC Infotech set up an Extended Engineering Centre (EEC) in India for the Customer, to help them with both product design and to manage its design process and product data. This enabled ITC Infotech to be closely involved with the customer, at every step of the product design and development process.

ITC Infotech provided the necessary infrastructure and established processes for quality and information security incorporating best practices, accelerators, process models, frameworks, controls and benchmarks based on its experience and expertise in delivering similar large scale global projects. ITC Infotech set up a specialized technical team and established its key capabilities on product tolerance stack up analysis by using CETOL software, CAE and Crash. An in-house Prototype test lab for supporting product development was also set up.

The other major features of the engagement are:

Highlights

- Provided specialized product design services with concept and detailed design, packaging studies, design studies and prototyping of recliners (both manual and power), latches (high mount, bumper and floor latches), tracks and head restraints
- Studied product design with tolerance stack up analysis
- Enabled prototype development with 3D printing and development of functional prototypes
- Provided meshing, analysis and reporting with CAE and structural simulation

- Supported product testing and validation focusing on strength testing, endurance testing, functional and endurance testing and rigid body dynamics – MDO
- Upgraded Windchill PDMLink 8.0 M030 to Windchill 9.1 M050 and also provided seamless integrations to CATIA, UG and Pro/E using Workgroup Manager - with capabilities for fast indexing

Business Benefits

ITC Infotech provided the following benefits to the customer in the engagement:

- Enabled savings of about 50% in operational costs of design
- Helped optimize the entire product development process, resulting in fast track innovation
- Enabled faster scale up by providing technical expertise and access to matured engineering processes
- Provided significant improvement in design cycle time due to improved collaboration enabled by CAD integration
- Reduced the cost of maintenance in PLM upgrades that came about due to consolidate hardware for entire IT systems on a common platform
- Improved end user satisfaction significantly as a result of improved performance of the upgraded PLM system

ITC Infotech's PLM Practice

ITC Infotech shares a decade-long strategic partnership with PTC and is a leading provider of PTC Suite of Products. We have Centres of Excellence in specialized PLM technologies and are frontrunners in innovative methods, processes and skills in the PLM space. ITC Infotech has the largest number of PTC certified consultants and seasoned industry experts within depth knowledge of PLM.

The company has worked with some of the leading Aerospace & Defence, Automotive, Industrial Equipments, Hi-tech, Oil & Gas, Retail, Apparel and Footwear (RFA) and Consumer Goods companies across the world.

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