

INFORMATION TECHNOLOGY

VOLVO

The partnership between Volvo IT & Dassault Systèmes

Volvo IT and Dassault Systèmes' Consulting & Services partnership is mainly aimed at helping Nordic industries maintain and strengthen their competitive edge. This is achieved by providing them with solutions enabling them to create, simulate and manage products across their entire life cycle.

Volvo IT has been implementing Dassault Systèmes' product-based PLM solutions including CATIA®, ENOVIA®, SMARTEAM®, for many years. The wide range of joint expertise in this sector, coupled with Volvo IT's knowledge of both the automotive and manufacturing industries, are key factors for successful PLM projects.

Together, the partners can bring more value to customers in the PLM sector by providing products and services that produce a successful solution.

Volvo IT provides specialist skills and cost-effective solutions for all areas of industrial IT, from product development to sales and the aftermarket. Volvo IT's range includes superior data centre operations and IT infrastructure. Volvo IT also delivers PLM services based on the Dassault Systèmes PLM product suite.

Dassault Systèmes develops and markets 3D PLM (Product Lifecycle Management) application software and services that support industrial processes and provide a 3D vision of the entire life cycle of products from conception to maintenance. Its range includes 3D PLM integrated solutions for product development (CATIA®, DELMIA®, ENOVIA®, SMARTEAM®), from the initial concept to the arrival of the finished product on the market.

VOLVO

Volvo Information Technology AB

www.volvoit.com

Volvo Information Technology provides the Volvo Group, Volvo Car Corporation and selected customers with specialised skill and cost-effective solutions for all areas of industrial IT, including superior data centre operations and infrastructure.

PRODUCT DEVELOPMENT SOLUTIONS

DIGITAL MOCK-UP FOR VOLVO PARTS

REFERENCE CASE

Key success factor: up-time!

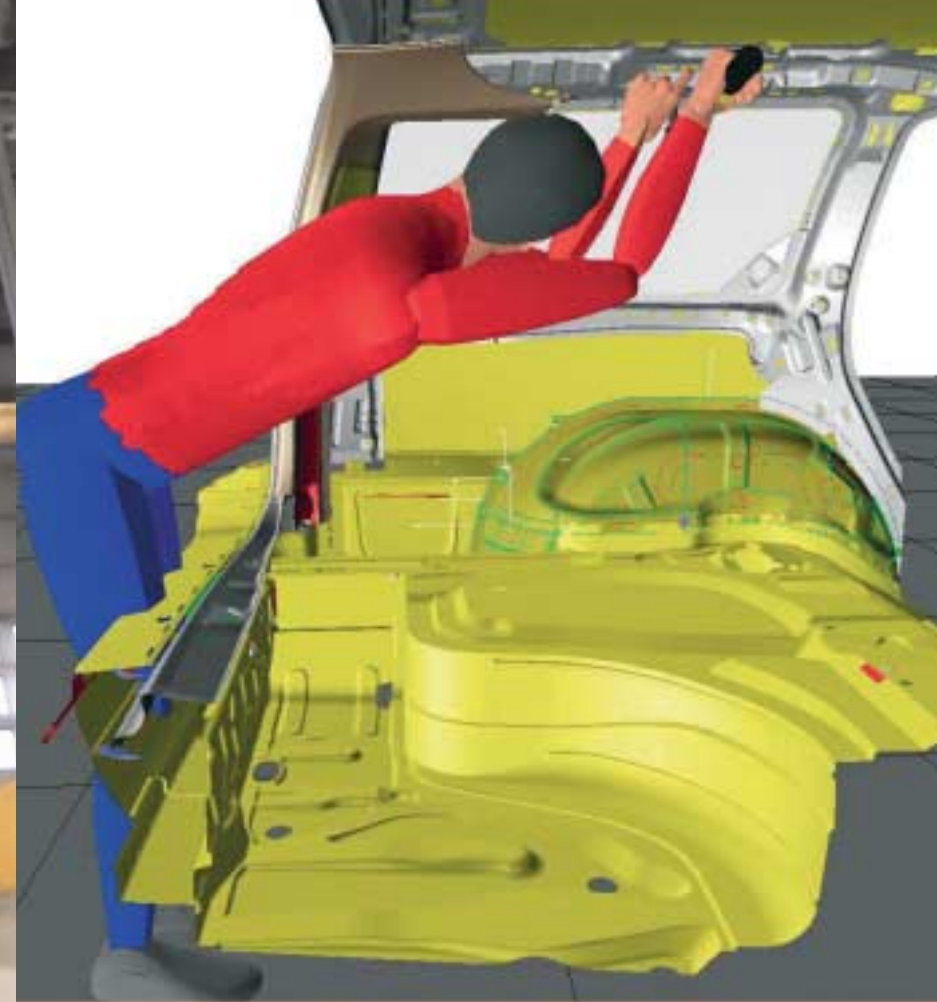
When the wind whips up the chill factor in the snowy wilderness north of the arctic circle, a truck driver prefers to remain inside his truck. He wants a truck that works. But if something goes wrong, he wants it to be fixed quickly. A truck in a workshop costs money.

Up-time is essential for businesses based on Volvo's buses and trucks. The vehicle must be easy to service, wherever in the world it's being driven.

Volvo Parts is responsible for supplying spare parts to the Volvo Group and workshops. They supply aftermarket manuals, software for vehicle diagnostics and standard times for servicing. Everything serves to raise up-time and lower service costs.

But as products are developed more quickly and fewer prototypes are made, Volvo Parts faces new demands for producing manuals and instructions. Volvo Parts must start its analysis with a virtual prototype in order to meet targets concerning short service cycles for the end-user.





Solution: Digital Mock-Up

Volvo IT was called in at an early stage to increase the efficiency of Volvo Parts' activities within verification and analysis of serviceability. Volvo IT's business management consultants identified that better utilisation of Dassault Systèmes products within DMU would improve efficiency and boost know-how within the company.

By transferring CAD information from product development into the ENOVIA DMU Navigator, Volvo Parts can enter the product's life cycle much earlier. There's less dependency on physical prototypes. Analysis of serviceability can start earlier and if errors in the design are discovered they can be fixed right away. The cost of the design changes is reduced because resources haven't yet been committed in later stages of the process, such as fittings and manufacturing.

"At the start of a serviceability project it's hard to say how much work will be needed. That puts demands on resources and planning. DMU makes it easier to make these key assessments. You foresee the problems and see where you can save time," says Kjell-Ove Johannesson at Volvo Parts.

The technical work involves taking CAD models from a multi-CAD environment and converting them into a neutral format that can then be brought into the ENOVIA DMU Navigator from Dassault Systèmes.

DMU: Digital Mock-Up

DMU is a virtual version of your product that makes it possible to create all the simulations needed for product development, manufacturing and the aftermarket. DMU creates new conditions for development by utilising digitally-stored data to visually represent 3D models of products and production processes in a factory.

DMU enables the integration of CAD and PDM processes by using visuals and simulations that can be understood by all departments. Previously, it was necessary to use physical objects to analyse and verify tests. With DMU, simulation of products and production processes are made and virtual objects are used for testing, allowing rapid assessment and results.

The method engineer can then make an analysis of serviceability before the technical writer and illustrator can start using the DMU materials.

"The DMU solution helps to create more detailed images. You get a quicker overview to draw conclusions from, which means you draw smarter, more intelligent pictures," says Michael Christiansen at Volvo Parts.

Result: Cost savings

"By testing prototype serviceability in virtual environments, problems can be seen, worked through and resolved at an early stage in their lifecycles. This means fewer product tests and changes compared to the number of tests performed in the past, which means lower costs, less physical prototypes and faster production," states Kjell-Ove Johannesson at Volvo Parts.

With ENOVIA DMU Navigator, Volvo Parts can align to the design process within product development. A well-developed virtual prototype produces a more efficient product, which in turn means better value for the customer, better serviceability, with less maintenance and warranty costs. This is a major step towards the PLM vision.

Volvo IT and Dassault Systèmes close collaboration ensured a fast implementation of ENOVIA DMU Navigator and optimised Volvo Part processes to underpin and maintain its competitiveness.

PLM: Product Lifecycle Management

PLM stands for Product Lifecycle Management and is a framework of processes, methods and tools used to manage all product information during the complete product lifecycle. The aim of PLM is to seamlessly link all products related activities from concept study to produced product and to make the overall industrial process more effective and efficient. By combining tools such as CAD, DMU and PDM and disciplines such as mechanical engineering, electrical engineering, software development, manufacturing and aftermarket in one solution and let them cooperate in one process and with one product description, this vision is realised.