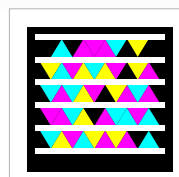


Renault drives the customer experience with Version 6

By Lisa Roner]

At Renault, bringing high quality, affordable vehicles that meet the market's expectations for advances in customer experience and environmental responsibility are not just lofty goals, but the key tenets of doing business. To successfully deliver on these challenges and set itself clearly apart from its competitors, Renault chose Dassault Systemes' Version 6 PLM platform as the cornerstone of its global automotive engineering processes.

VERSION 6



Use your smartphone to learn more about how Renault uses Version 6

Renault wanted an enterprise-wide PLM solution that would effectively address issues of standardization for its processes and design tools. With more than 40% of its engineers located outside of France in "technocentres" in Romania, India, Korea, South America and Spain, the company needed a global engineering tool that would allow its designers to effectively and efficiently collaborate around the globe.

"To achieve our strategic growth plans, we need to ensure our performance in R&D and investments. And that performance depends on reducing development cycle times and standardizing the components we develop," says Odile Desforges, EVP, Engineering and Quality, Renault. "It became immediately obvious to us that Dassault Systèmes, with its programs, software, and tools was the company best suited to address our needs."

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Olivier Colmard, vice president, Information Systems for Engineering & Quality, Renault

Renault also sought a solution that would allow it to easily access and manage all of the company's data – from product design and process to simulation, testing and resources information – while ensuring its traceability.

"We wanted a single PDM that could be deployed worldwide to cover all of Renault's needs for data

management across product, process, simulation and performance," says Olivier Colmard, vice president, Information Systems for Engineering & Quality, at Renault. "This new tool, in addition to being modern and efficient, must facilitate collaborative design between our corporate technocentre and Renault's other technocentres around the world. In addition, we sought a solution that would support openness to outside collaborators, suppliers, our Alliance partner Nissan and other partners such as Avtovaz and Daimler as part of Renault's extended enterprise."

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Colmard. "Version 6 met these requirements, while offering a strong dose of ergonomics over older systems. It was important for us to simplify 3D navigation through a vehicle or engine that allowed access to all of our engineering documents or deliverables."

COLLABORATION WITH 3DLIVE

Colmard says through Renault's Quick Win deployment approach the company has been able to implement 3D collaboration with 3DLive among its sites. The immediate and future benefits are clear, he explains.

"First, we can measure savings in travel time. We no longer have to send our Romanian and Korean designers to France and vice versa. This saves the time, cost and the environmental

impacts of travel," Colmard says. "And we also have the ability to understand each other better and interact more easily with colleagues in foreign languages through the common language of 3D drawings or scans. I think there are real benefits to working around a screen together, even if it's remotely with 3DLive."

DATA ACCESS AND MANAGEMENT WITH VERSION 6

A single database prevents problems with data reconciliation, says Jean Pierre Chatenet, NewPDM Architect & Functional Infrastructure manager at Renault. The appeal of one repository with fast response times for users regardless of geographical location, he says, was a key reason for choosing Version 6. "We needed a system that was quite independent of latency," he stresses. >>



Document management also is vastly improved with Version 6, Colmard says. "Through our Doc Eng Project, we're able to manage our engineering deliverables," he explains. "Before, to be honest, our documents were scattered and poorly managed. With Version 6, we'll have full traceability of all of our deliverables. The documents are easily accessible and, in some cases, even rework is avoided, since at any moment you can refer to past studies and transmit know-how and results to downstream teams."

In the two years since its selection of Version 6, Renault has worked closely with Dassault

Systemes to enhance and implement Version 6 in a variety of pilot and production projects that are beginning to prove its integral value to Renault's future and help keep it a step ahead of its competitors.

With PDM Test, Renault will be managing all the results of its physical or bench testing centers. And Colmard says PDM Calculation allows the company to store and manage both the input data for simulations and calculations, including aerodynamic and other tests required by regulators, and the results of each of these calculations for the different versions and configurations of the digital models its engineers use. Eventually, he says, these solutions will be deployed throughout the company.

A SINGLE PLATFORM YIELDS ONE VERSION OF THE TRUTH

Renault also sought a single, integrated platform for all of its PDM/PLM tools. "In the past, we had CATIA V5 with a variety of PDM/PLM solutions," Chatenet says. "We saw with functional design, for instance, it was difficult to use CAD from one vendor and PLM from another. Because we had CATIA and did not want to change, Version 6 with CATIA V6 completely integrated was an obvious choice. It guarantees relationships between objects are managed and we know we'll be able to better manage functional design."

Being able to display the complete digital mock-up of a car or engine in real time is another key advantage, Chatenet says. "This was a dream when I started with PLM 20 year ago, but we saw three years ago that with Version 6 it was quite possible," he says. "You can view parts, explode sections, get drawings – all in real time."

Chatenet says because Version 6 enables even those not skilled in the use of CATIA to access and view digital mock-ups, an advantage Renault calls democratization, DMUs can be used to navigate, review and retrieve information. "You can quickly assess the level of maturity of a design and even casual users can see where there are problems or where validation is still required," he says.

Once Version 6 is fully implemented and all engineering information is inside the same system, Chatenet says, Renault will be able to manage the associativity or digital continuity among different domains or clusters of information that today are split between different systems. "For example, today inside DMU, we manage parts, but not welding points and process information like body-in-white assembly



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graphs are in another system," he explains. "With Version 6, it will be managed in the same system with relationships between process information, function and part instance through strong relationships between BOM and DMU."

"As you know, the car has become a complex system," Colmard explains. "With more electronics, computers and on-board telematics, we need a tool to manage all this complexity and systems engineering using NewPDM allows us to do that. Also we can manage and test physical simulation data and results to optimize our systems and processes. And the level of digital continuity Version 6 provides will allow us to leverage engineering data in marketing and even after-sales activities such as repair and diagnostics. There is a digital continuity from start to finish, from design to the customer."

Since September 2011, Renault engineers use CATIA V6 and ENOVIA V6 for PDM on a new

engine project. Chatenet says all of the parts for the motor will be designed and managed using Version 6. And plans are underway for a new vehicle project to begin using Version 6 at the beginning of 2012.

DRIVER EXPERIENCE


Renault's end goal is always to provide its customers with the best vehicle possible at an affordable price. For drivers, Colmard says, there is a clear quality issue. "Through the kinds of tools Version 6 provides, there is an efficiency of design that allows us to ensure that we do many good things with maximum return of experience and knowledge embedded into our products," he says. "The quality axis is very important."

Colmard believes Version 6 can help Renault meet its responsibilities and commitments to its customers. "Our goal is to design vehicles that are both effective and as efficient as possible, while being affordable and offering maximum benefits to the passenger," he explains. "It is clear that with a tool like Version 6, our

NewPDM program will enable us to better manage different configurations and optimize the maximum weight, aerodynamics, etc., while effectively reducing our time to market and meeting our customers' expectations.

PARTNERING WITH DS

Renault is proud of its partnership with DS to develop next generation solutions that meet the unique needs of the automotive industry. The company praises DS R&D as a strong force for innovation and believes its PDM solutions are a tipping point for the industry.

"Together, we are not doing another optimization of an existing generation of PDM, but a new generation of PLM 2.0 based on the processes and needs we have at Renault," Colmard says. He believes Renault's partnership with DS to develop new solutions gives his company a leg up on its competitors on implementation of Version 6. 

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