

3D is the universal language

Dassault Systèmes' intuitive 3D approach to Product Lifecycle Management helps companies achieve levels of innovation, quality, cost reduction, and time-to-market that improves top line revenue while reducing operational costs. Our pace-setting solutions for PLM are embodied in four key brands — CATIA, SIMULIA, DELMIA, and ENOVIA—which form the industry's most comprehensive PLM software portfolio. Used separately or collectively, our proven applications define, simulate and optimize all products, processes and resources in an all 3D environment powered by an open development platform.



Design Manufacture Maintain

...anytime ...anywhere



For more information, visit our website at www.plmv5.com or call us at 1-800-382-3342



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Bombardier Aerospace Takes Off with ENOVIA

Technology, Planes and the People that Make Them.



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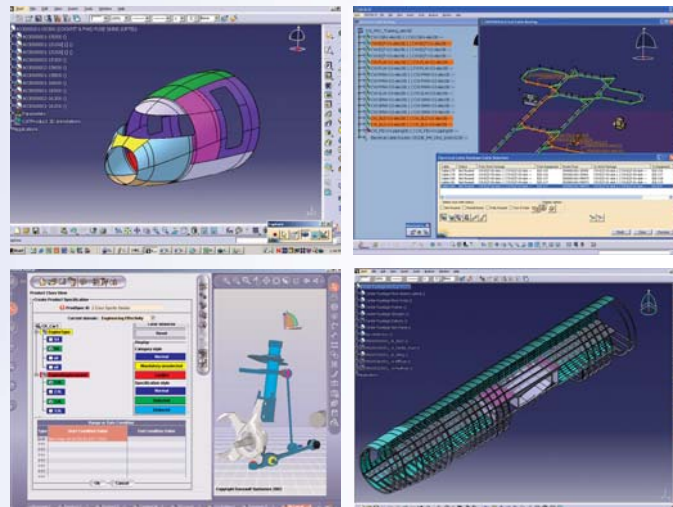
As the world's leading pioneer in product lifecycle management (PLM), Dassault Systèmes offers comprehensive solutions that provide a complete 3D vision of a product's lifecycle – from creation to manufacturing to maintenance. The backbone of the PLM solution is ENOVIA, providing centralized access and management of real-time 3D product and process knowledge created in CATIA and DELMIA.

Bombardier Aerospace, the world's third largest civil aircraft manufacturer, offers world-class aircraft for the business, regional and amphibious markets. A combination of strategic acquisitions since 1986 and the development of advanced, innovative technology has contributed to the successful growth of the company. To continue to meet its global manufacturing challenges, Bombardier Aerospace has implemented leading-edge product lifecycle management (PLM) solutions from the Dassault Systèmes V5 PLM portfolio.

Based in Montréal, Canada, this manufacturer of the renowned Learjet, Challenger and Global Express business jet families, the popular CRJ and Q Series regional aircraft, as well as the multi-mission Bombardier 415 amphibious aircraft, employs approximately 26,000 people worldwide. It contributes 55 percent to the revenue of parent company Bombardier Inc., an industry-leading manufacturer of innovative transportation solutions.

With global competition and technical advancements increasing, Bombardier Aerospace continues to invest in aircraft platforms that meet evolving customer needs. Since 1989, Bombardier Aerospace has developed an unparalleled 18 new aircraft programs and in its last fiscal year alone delivered a total of 337 aircraft.

However, with growth came complexity and diversity in processes, which required an IT environment that would



enable rapid progress. In 2001, faced with the negative impact of a downturn in the aerospace industry, Bombardier Aerospace reviewed its entire IT infrastructure and developed a vision and strategy for future growth based on a set of guiding principles (see back inside cover).

Following these principles, Bombardier Aerospace partnered with technology providers Dassault Systèmes and IBM to create a unified, data-centric development environment based on Dassault Systèmes V5 PLM Portfolio (CATIA, ENOVIA and DELMIA). Once this information "backbone" was in place, the implementation teams focused on optimizing critical data flows and high-level processes. This phased approach allowed engineering work to continue without disruption, while providing access to powerful, feature-based 3D design tools, up-to-date product, process and resource (PPR) information, and multidisciplinary collaboration.

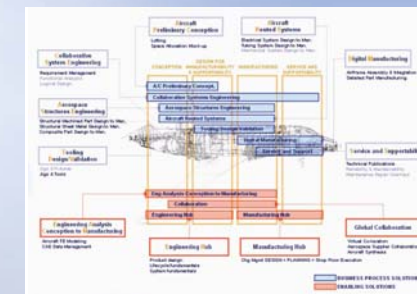
When combined with cross-functional training, mentoring and support, end users benefited early on. Designers could optimize products and components for design and manufacturability during the "virtual" phase of development when costs were low, and global teams could perform reviews using the same product data, accelerating time to revenue. Finally, to maintain productivity levels, technical specialists were organized into lean

support groups, where they could place razor-sharp focus on problems and improvements, then share "lessons learned" across the organization.

During this process of over-hauling its information infrastructure and evolving to a 3D-based PLM environment, Bombardier Aerospace has learned a great deal about the strength and flexibility of its people, and the power of technology. While the work continues, it's all systems go.

Bombardier Aerospace Guiding Principles

- Favor functional integration over best of breed applications.
- Enable systematic decommissioning of applications.
- Promote reusability of all target components.
- Employ a data-centric approach focusing on identification of Master Data.
- All data should be integrated and updated from one source application.
- Enable cross-functional processes and business strategies.
- Demonstrate the Value Proposition throughout the Architecture.
- Ensure overall alignment with Technology Target Architecture.
- Harmonize development operations with corporate direction.



"Our global teams need to be able to engineer and build more sophisticated aircraft faster than ever before, so we cannot waste time accessing or translating product data. ENOVIA V5 provides a vital component that helps get the right information to the right people at the right time, and in the right format."

Francois Caza,
Vice President and Chief Engineer,
Bombardier Aerospace

For more information, visit www.enovia.com
or contact plmus@ds-us.com



ENOVIA V5 solutions help global organizations drive innovation by providing centralized access and management of real-time 3D product and process knowledge, and the relationships needed to optimize quality, manufacturability, and profitability – from mock-up through manufacture and retirement.

ENOVIA 3d.com

Supports collaborative product development and decision-making through a common front-end, providing unified access to all applications and information sources across the extended Digital Enterprise.

Digital Mock-up (DMU)

Enables digital product simulation, analysis and validation, improving product quality and accelerating decision making by providing real-time insight into real-world product performance.

Virtual Product Modeling (VPM)

VPM is an intelligent data manager that leverages CATIA V5 knowledge to identify dependencies between design elements and evaluate the impact of design decisions, helping product designers innovate and collaborate early on and throughout the product lifecycle.

Lifecycle Applications (LCA)

Helps global manufacturing organizations manage the complexity of product development processes across distributed value chains and the entire product lifecycle—from concept to obsolescence.

Web-based Learning

An easy to use learning and support system that provides all the required information and training in one source for maximum assured productivity of the user community.

CAA-RADE

Provides the most complete set of tools, guides and APIs to support the development process, from the initial product definition to the final product packaging.

