

# Product Synthesis solutions



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Get it right first time!

The extensive range of tools provided with CATIA product synthesis solution set provides easy automation and validation of design and manufacturing data. This also allows the effective capture and reuse of corporate know-how. Some of the highlights include:

Focus on the knowledgware solutions

The CATIA knowledgware solution set turns implicit design methods into explicit knowledge for obtaining the optimum design.

- **The core capabilities of CATIA V5**—Enjoy the power of product synthesis embedded within its easy-to-use multi-discipline tools. The CATIA V5 knowledgware solution turns implicit design methods into explicit knowledge and allow users to capture and reuse corporate know-how throughout the product lifecycle. Users can add and share this extra intelligence in every phase from design to manufacturing, for simple applications or enterprise-wide deployment.
- **The capture of expertise and automation of business processes**—The knowledgware solutions combine the power of explicit rules that define the product behavior, with interactive capture of design intent as the design is built. As a result, the system acts as an expert advisor to guide users through the tasks, warning them of rule violations and conflicts, thus automating design generation and reducing risk. The full power of your accumulated product knowledge can be embedded directly in the design, by storing it in catalogs. It can also be leveraged through the use of custom applications based on CATIA V5 processes, allowing designers to accelerate and secure the design process cycle time, while being more innovative.
- **Knowledgware tools to explore more of the benefits of design alternatives and automated goal-driven design optimization**—The knowledgware solutions permit users to assess and quickly determine the best alternative for a design amongst numerous combinations of parameters and constraints. Its ability to take multidisciplinary specifications into account, such as distance, cost, volume and time, across all the CATIA V5 products, enables users to perform powerful and complete assessments of designs.
- **Assured design consistency and quality**—knowledgware solutions ensure compliance to best practices and corporate standards. Users can validate their designs and ensure acceptable development standards are maintained enterprise-wide. They also assure designers of the quality of their design, enabling them to make the right decisions, faster.
- **Solutions that facilitate brainstorming and innovation**—Functional and conceptual definition optimization tools are designed to formalize designs. This allows users to detect engineering problems in the functional definition of the system at the conceptual development stage. They can then use solution guidance and links to knowledge databases as a powerful tool for solving them.

## Focus on DMU solutions

CATIA DMU solutions support complex DMU reviews and simulations for quick and efficient engineering and process decisions.

- **Dramatically reduced costs and design cycle time**—DMU solutions enable people involved in engineering and process decisions to perform a number of time and cost-saving functions. These include collaborative and immersive visualization, navigation, review and simulation of digital mock-ups and technical data of any complexity. Leveraging collaborative design review methodologies across the extended enterprise, DMU solutions allow customers to place the digital product definition at the center of their development process, transforming product information into business intelligence for fast and decisive project decisions.

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- Proven support for all DMU needs—DMU solutions offer a unique and extensive combination of scalable applications. They can be used by all user profiles and all levels of specialization in the enterprise at any stage of the digital product development. They also address requirements from design review to quality verification and simulation. Built on the industry-leading CATIA V5 architecture of Dassault Systèmes, this solution set delivers seamless interoperability, reduced training and support requirements, ease of installation and enhanced team collaboration. This enables an accelerated response to business needs and investment protection. Its complete 'plug and play' design review environment and extensive, realtime, multi-user conferencing and reporting capabilities allow all team members to collaborate in a completely interactive review process.

- **Increased levels of responsiveness throughout the design chain**—DMU solutions exploit e-business characteristics throughout the product lifecycle, and are a key component of the digital enterprise. They form a platform on which customers can achieve a real competitive edge through product innovation. DMU solutions strengthen communication across the extended enterprise by providing advanced tools to support collaborative design and manufacturing decisions. Their tight integration with ENOVIA® VPLM solutions contributes to raise extended enterprise performance.

### CATIA—Business Knowledge Process Definition 3 (KD3)

The KD3 configuration accelerates a company's business processes, while ensuring compliance with its best practices to take advantage of its intellectual capital. It offers users access to set advanced design parameters as well as knowledge capture and optimization tools. These features are used to define standard rules and checks for design quality assessment. Users can optimize the design process by exploiting the synergy between the suite of powerful CATIA V5 knowledge tools and its ability to maximize the value of corporate knowledge with V5-empowered best-practice workbenches. 'Capture, reuse, automate, explore, optimize, validate', is the unique philosophy that guides the KD3 configuration: Get it right first time!