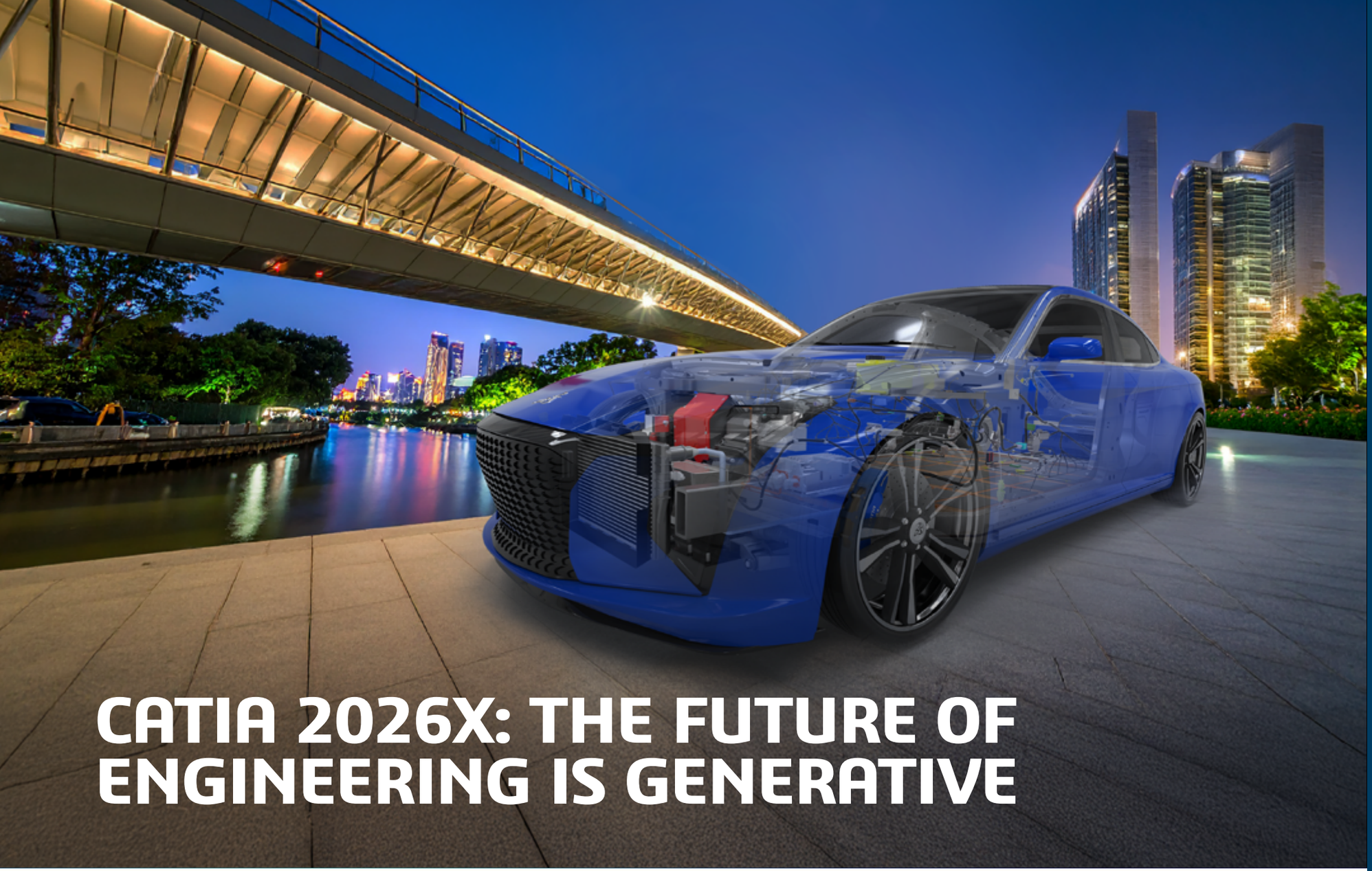


CATIA 2026X: THE FUTURE OF ENGINEERING IS GENERATIVE

DASSAULT SYSTEMES

Introduction

The Core Values Driving CATIA 2026X Innovation

Generative AI transforms the CATIA portfolio through specialized engineering **Virtual Companions** that accelerate development. By integrating **Generative Engineering** and the **Virtual Twin**, teams achieve continuous advancement, optimizing products for performance and sustainability. The release focuses on three fundamental values.

Augmented Engineering

Empower engineers with immediate access to corporate knowledge. Using natural language, CATIA anticipates intent and automates tasks, ensuring you start every design with confidence, never from scratch.

Space Of Possibilities

Generative AI connects Generative Engineering with the Virtual Twin to drive innovation. This enables rapid design exploration while simultaneously optimizing performance, compliance, and sustainability in one streamlined process.

Fit For Use - by Design

Ensure products are safe, robust, and manufacturable from the start. CATIA embeds quality and compliance checks directly into the design workflow, delivering market-ready innovation without compromise.

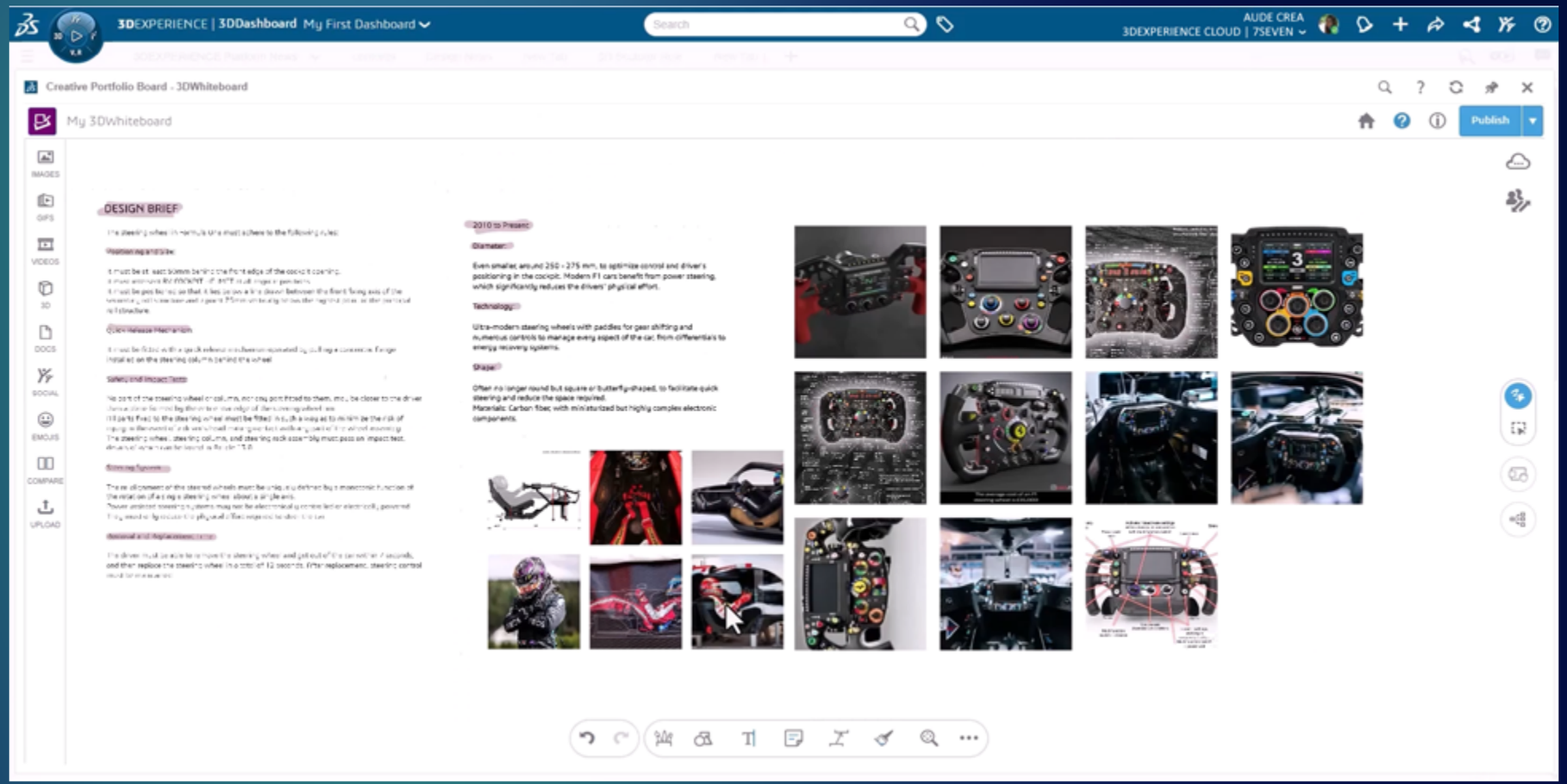
Design

Design & Styling - Boosted Innovation through Advanced Tools, Generative Design, and Immersive Sense Experience

CATIA 2026X's creative design capabilities provide a unified environment for driving innovation—blending intuitive user interfaces, powerful modeling, AI augmentation, and collaborative workflows. This chapter outlines the key enhancements introduced for design and styling professionals, along with their implications for productivity and creativity precision and efficiency.

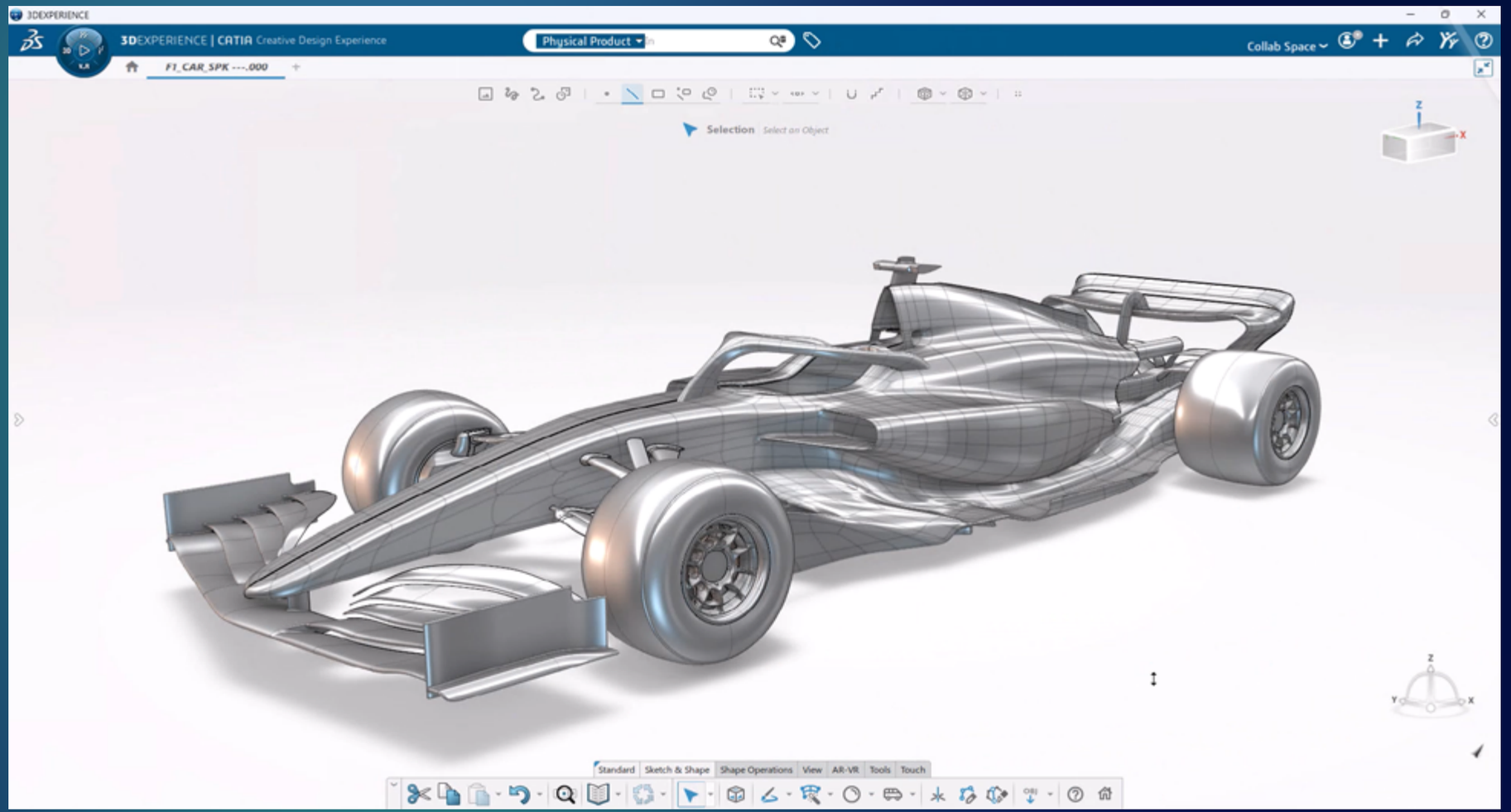
Creative Portfolio Board & Inspiration

CATIA introduces streamlined productivity for design teams through ready-to-use templates for mood boards, brainstorming sessions, planning, and collaborative workspaces. The Creative Portfolio Board ensures visual consistency and speeds up early-stage ideation. Amplifying inspiration, the new AI Image Generation (Beta) command leverages artificial intelligence to convert text, sketches, or reference images into highly realistic visuals. With multiple generation modes and style presets, designers can rapidly produce images that clarify ideas, enhance creativity, and engage teams during brainstorming



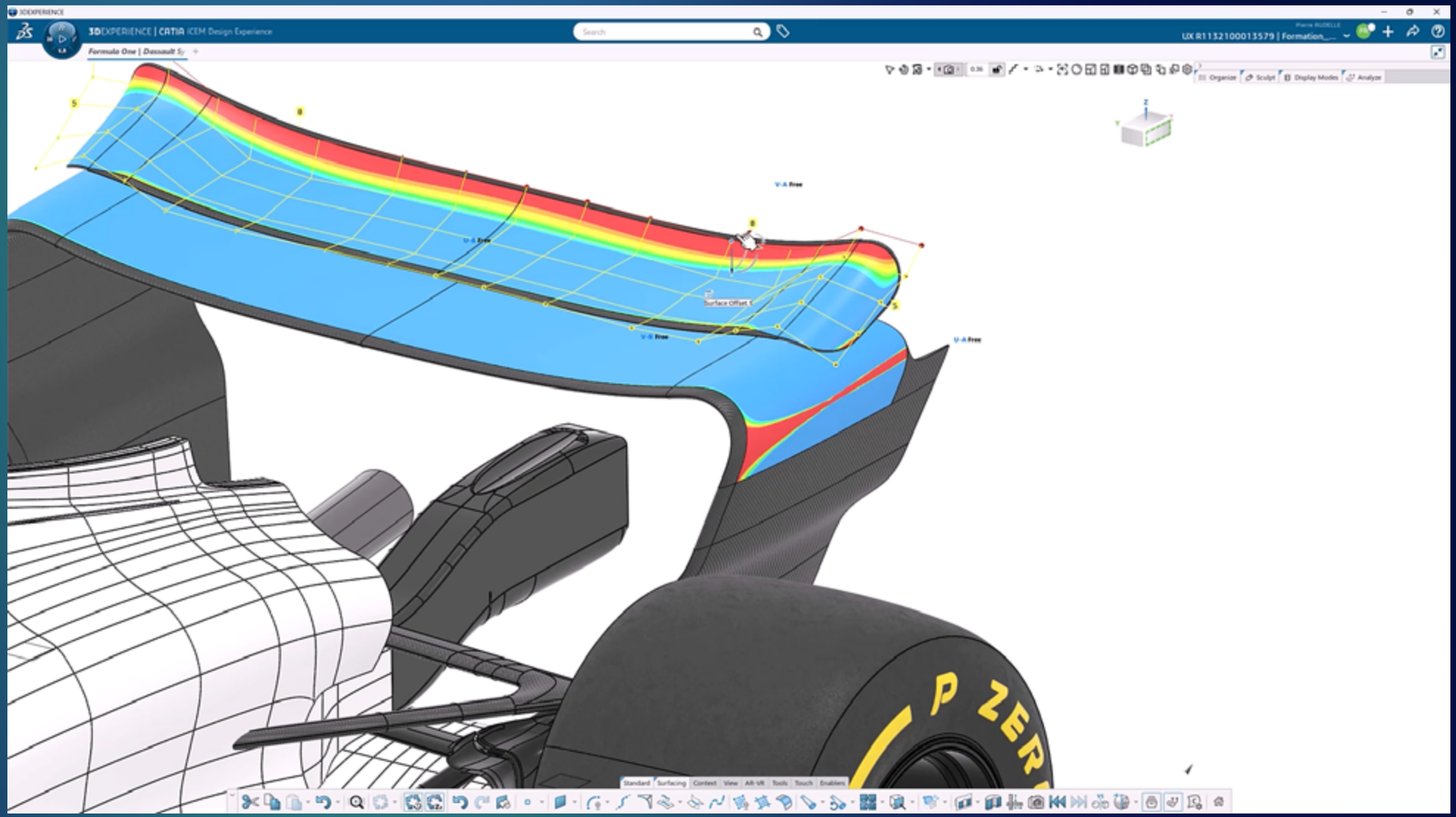
Advanced Creative and Conceptual Design

Delivering advanced subdivision surface modeling and mesh tools, CATIA 2026X excels at supporting complex, qualitative shapes required in automotive and industrial design. Gap modeling and enhanced mesh operations enable the design of intricate forms, while human-centric features in Human Experience Design Thinking—such as virtual twin representation and new finger tracking in Virtual Reality—enable detailed ergonomic studies. Designers are now able to manipulate and evaluate virtual objects with greater naturalism, ensuring product concepts account for real-world gestures and interactions.



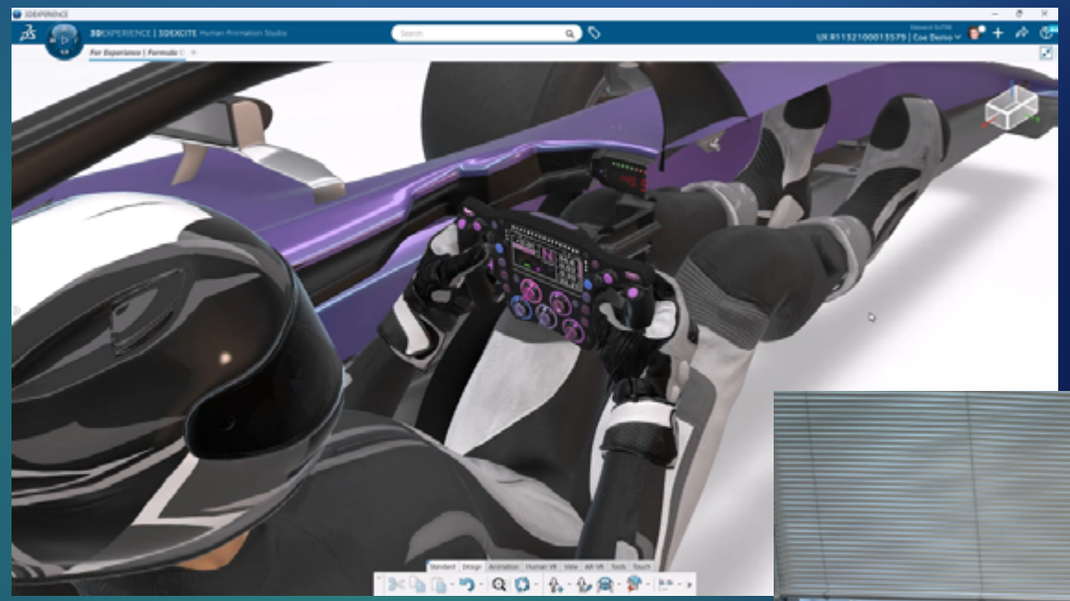
Surface Modeling and Sculpting for Class-A Quality

The ICEM Design eXperience provides exceptional usability in surface modeling, leveraging guided checks, robust symmetry commands, and new curve extrapolation capabilities. Sculpting workflows are improved by faster access to key tools and productivity accelerators, making the user interface intuitive and highly responsive. These enhancements, shaped by direct production feedback, result in more refined Class-A surfaces and consistent styling quality.



Reverse Engineering – From Real to Virtual

Designers can now accelerate the repositioning of scanned models, using rapid symmetry detection within the Digitized Shape Preparation tool. The upgraded Fictive Edge functionality retrieves and regenerates sharp character lines from meshes, subdivision, or NURBS surfaces, making it easy to convert physical design intent into high-fidelity digital assets.



Generative Design and Visual Scripting

For advanced concept and styling workflows, the **Visual Scripting for Generative Design Sequencer** introduces powerful features such as automated creation of complex styling fillets with G2 curvature continuity and advanced operator controls. Modular graph structures and isolated views promote clearer navigation and decomposing of complex design sequences. Upcoming AI-powered mesh generation from 2D images further accelerates 3D exploration and modeling for high-end design projects.

Immersive Visualization

Visualization is enhanced through the new ultrafast lightweight open function, allowing near-instant navigation of massive 3D datasets. Teams can capture comments directly in 3D with the **Product Perception Experience**, streamlining feedback and iteration. **Stellar Interactive** improves live rendering performance for rapid visual decision-making, while the immersive **3DLive for Apple Vision PRO** enables distributed design reviews and collaboration—with support for both local and multi-site sessions around a shared virtual twin.

Collaborative and Synchronous Design

The integration of **Multi-User Synchronous Modeling** carries over from the base CATIA platform, strengthening real-time collaboration regardless of geographic location. This is particularly valuable as projects grow in complexity and teams become increasingly distributed.

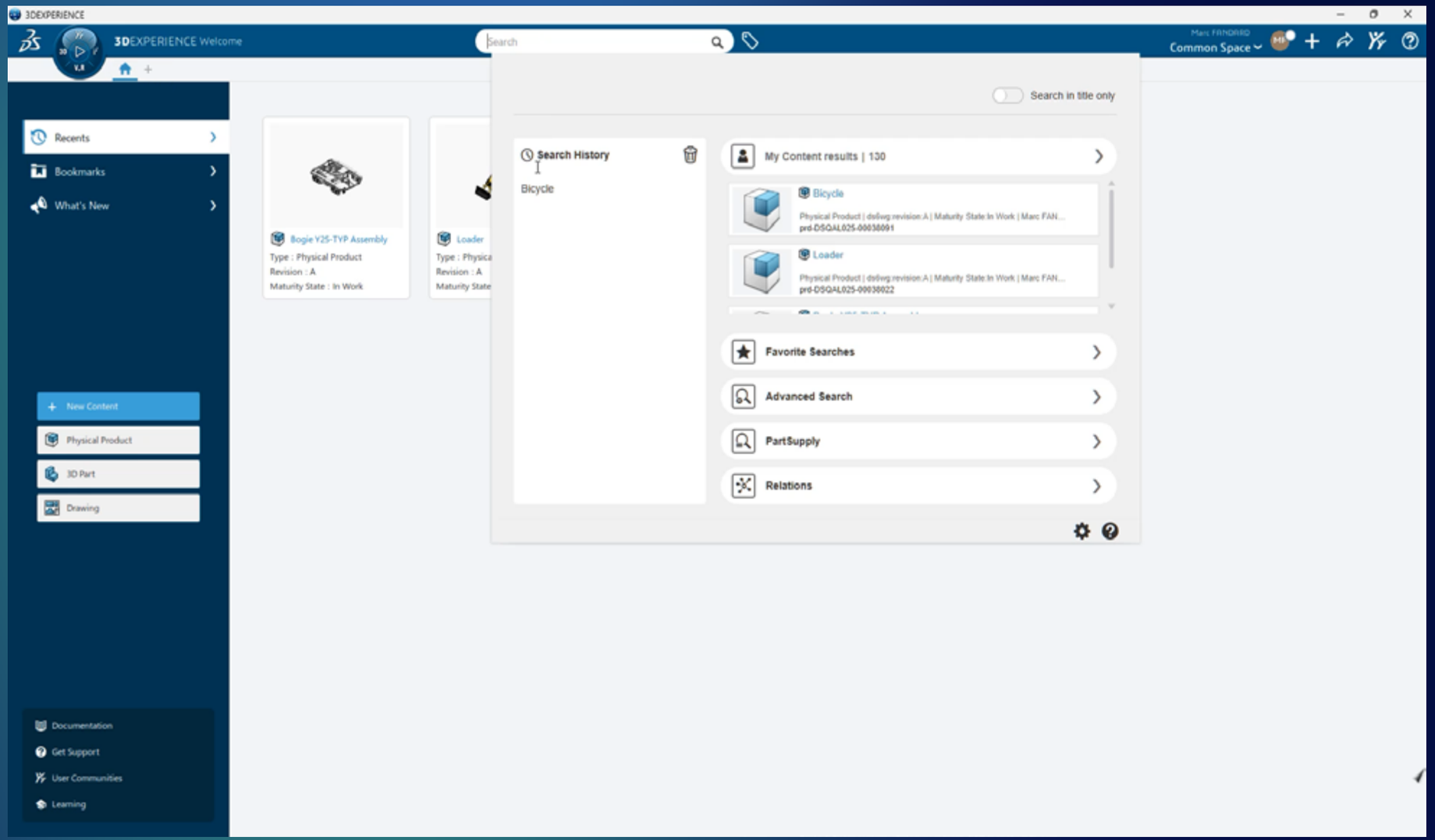
Impact on Creative Design Professionals:

CATIA 2026X's creative design suite enables faster ideation, seamless collaboration, and greater creative control. By merging AI-powered inspiration, immersive human experience tools, world-class surface modeling, and live review capabilities, the platform ensures that designers not only meet, but set, new industry standards—delivering products with higher impact, better ergonomics, and greater market appeal in significantly less time.

Engineering

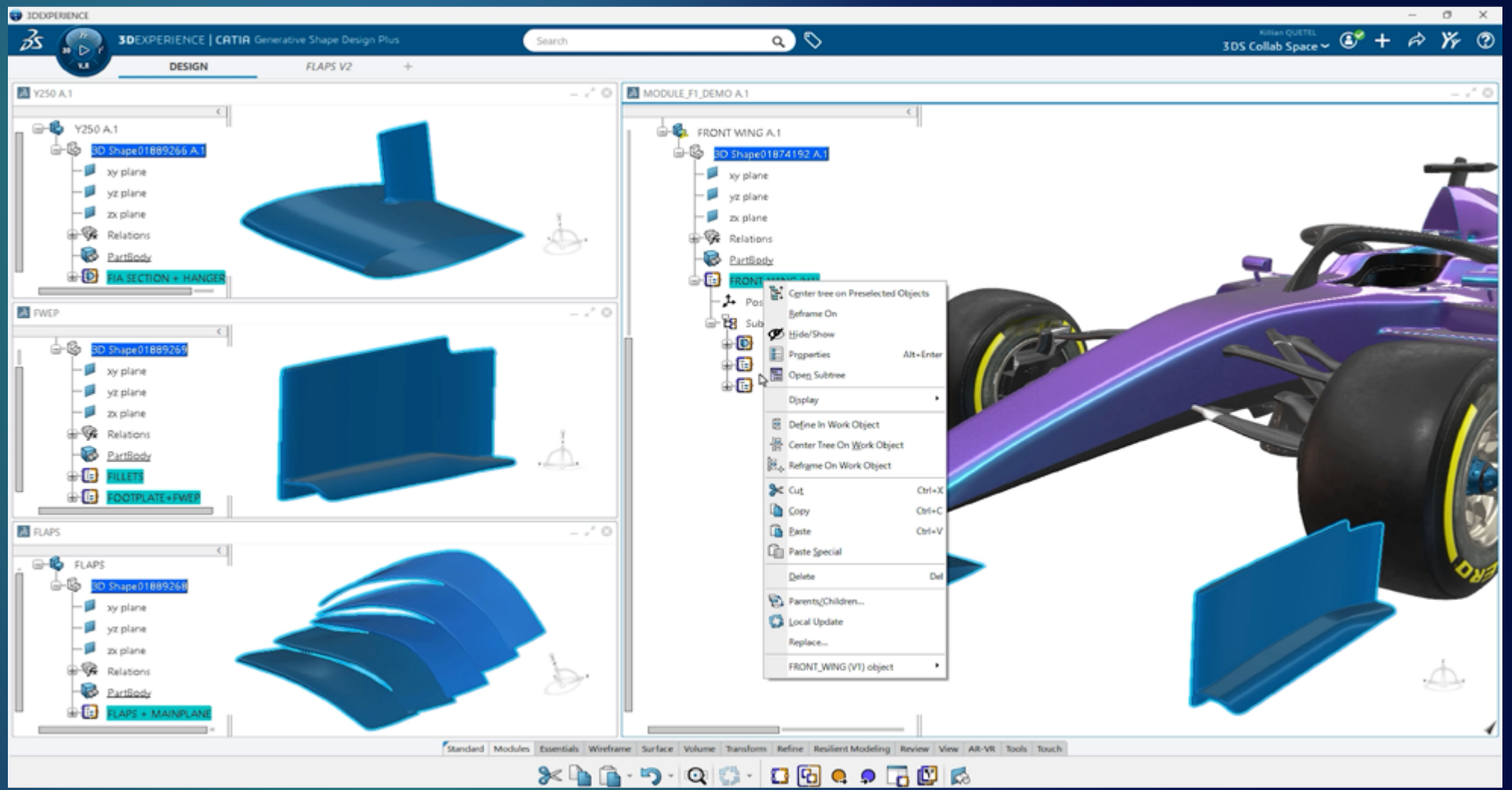
Welcome Page

The new **Welcome Page** streamlines the user experience by providing simplified access to favorite and recent applications and data. It also serves as a centralized hub for **"What's New"** content, ensuring all users are informed of the latest enhancements with each release.



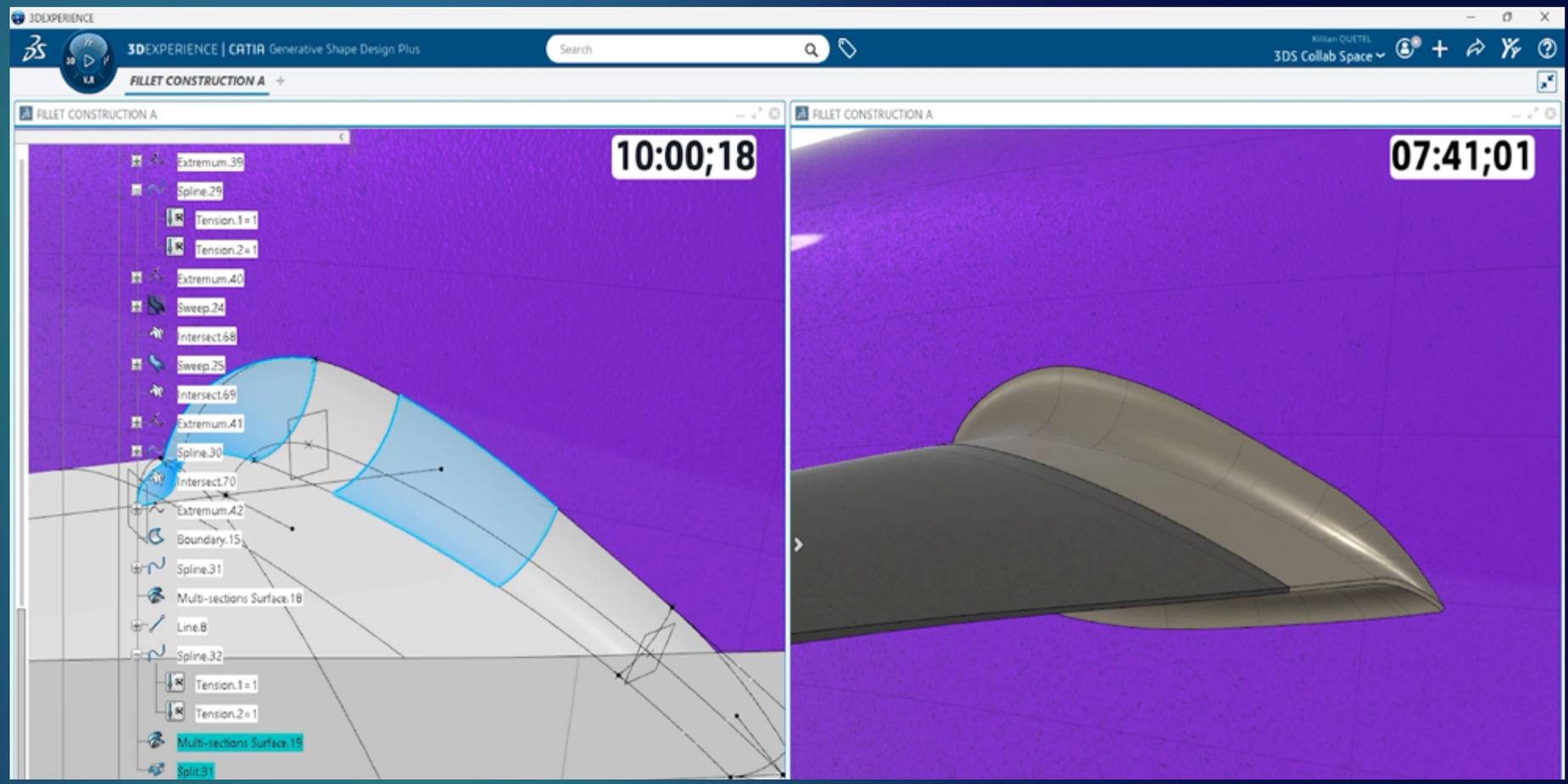
Modular Design Fundamentals

CATIA 2026X introduces modular design as a core capability, unlocking a new level of agility and resiliency in engineering models. Engineering teams can now create watertight design units—modules—that function as robust, auto-connecting templates across projects. This modular infrastructure supports surface and solid design, as well as visual scripting, streamlining complex project architectures and making it easier to explore alternatives with just a click. By providing rapid adaptability and future-proofing model robustness, CATIA positions modular design as a foundation for next-generation engineering practices.



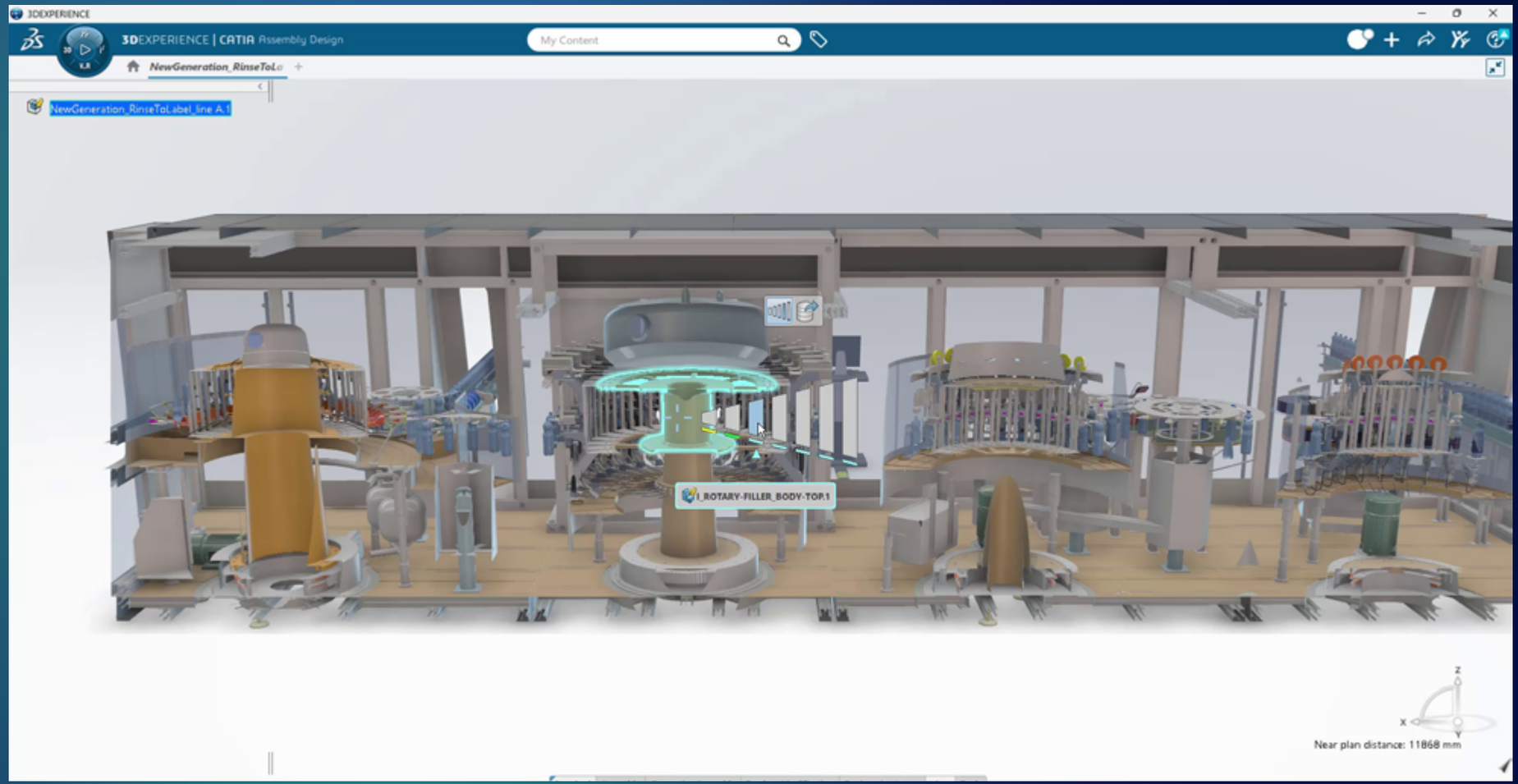
Command Intelligence

To accelerate productivity, the new Command Intelligence feature leverages AI-driven prediction and best practices capture, offering context-sensitive guidance that delivers the most relevant command and subtype with a single click. This speeds up workflows and supports onboarding for new engineers by proactively suggesting optimal actions, and applying proven know-how from experienced operators. The reduction in time spent locating commands and ensuring compliance with best practices can yield efficiency gains of up to 30%.
CATIA 2026X introduces modular design as a core capability, unlocking a new level of agility and resiliency in engineering models.



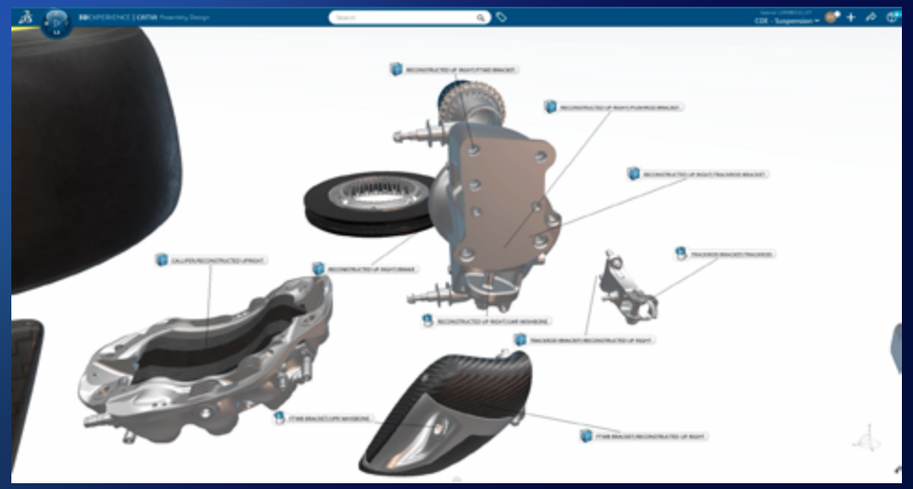
Lightspeed Virtual Twin Visualization

Navigating and managing large-scale assemblies is dramatically optimized through Lightspeed Virtual Twin Visualization. By generating a lightweight 3D representation of even the most complex assemblies in seconds, engineers can swiftly select sub-assemblies for focused authoring and make real-time decisions in context. This represents an unprecedented increase—up to



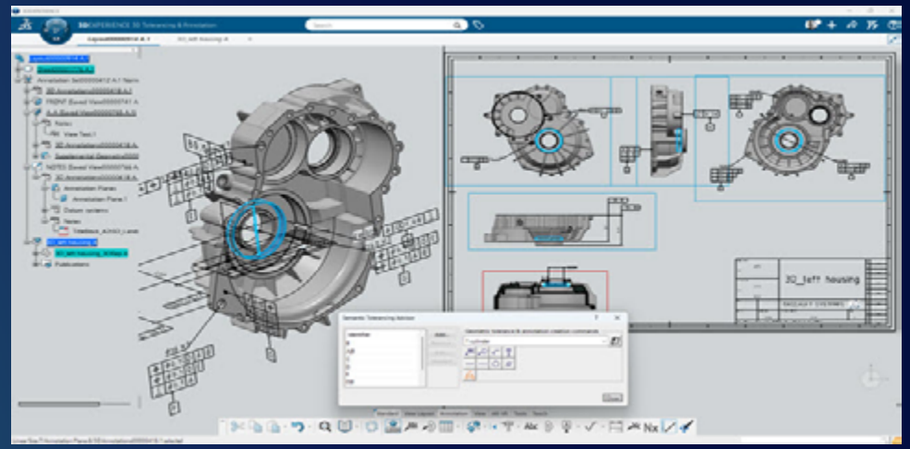
Generative Assembly

Generate assemblies automatically from parts and sub-assemblies, streamlining the process by enriching your design's semantics and generating relevant mechanical interfaces. This approach enables the automatic assembly of parts, whether sourced from suppliers or existing configurations, by predicting mechanical interfaces and enhancing the semantic quality of your design. By pairing and positioning components automatically, the system not only accelerates the assembly process but also creates an environment where further scenarios—such as kinematic validation and automated functional tolerancing—are seamlessly enabled. Mechanical interfaces serve as a key enabler in this workflow, driving greater accuracy, operational efficiency, and the overall robustness of engineering deliverables.



Engineering for Manufacturing

Engineering for Manufacturing is centered on reducing complexity in 3D engineering specifications by streamlining the creation and management of tolerancing and annotations. The approach enables independent lifecycle management of product and 3D annotation data, allowing teams to work concurrently and drive productivity. This capability enhances the efficiency of 3D GD&T (Geometric Dimensioning & Tolerancing), annotation processes, and 2D presentations, ultimately supporting a more agile and responsive engineering environment.

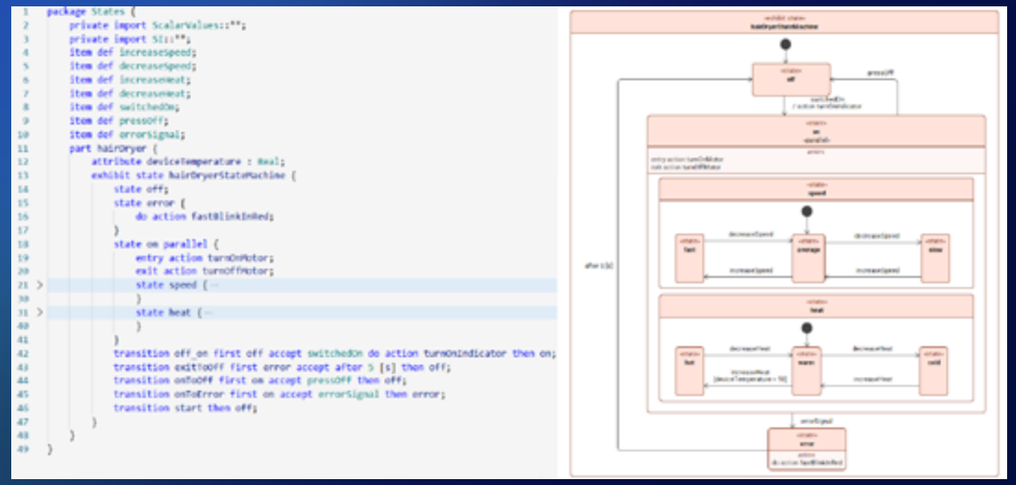


System Engineering

Model Based Systems Engineering

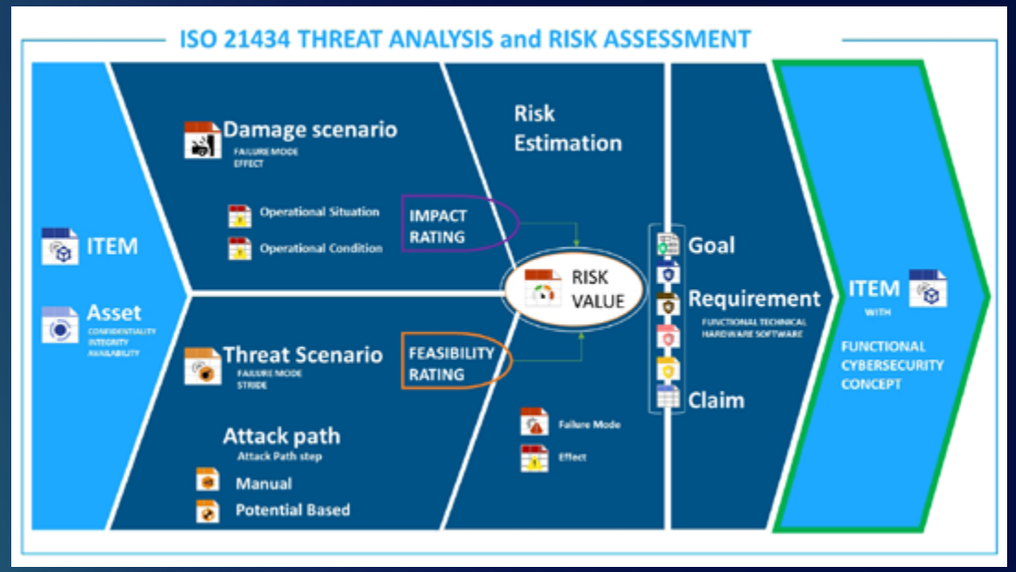
SysML V2 new standard supported

Model-Based Systems Engineering (MBSE) enters a new era with a new system modeling language SysML v2 which provides a significant step forward for MBSE adoption across industries. CATIA Magic provides the most advanced support of this new language with a seamless two-way synchronization between textual and graphical model representations.



Safe by design

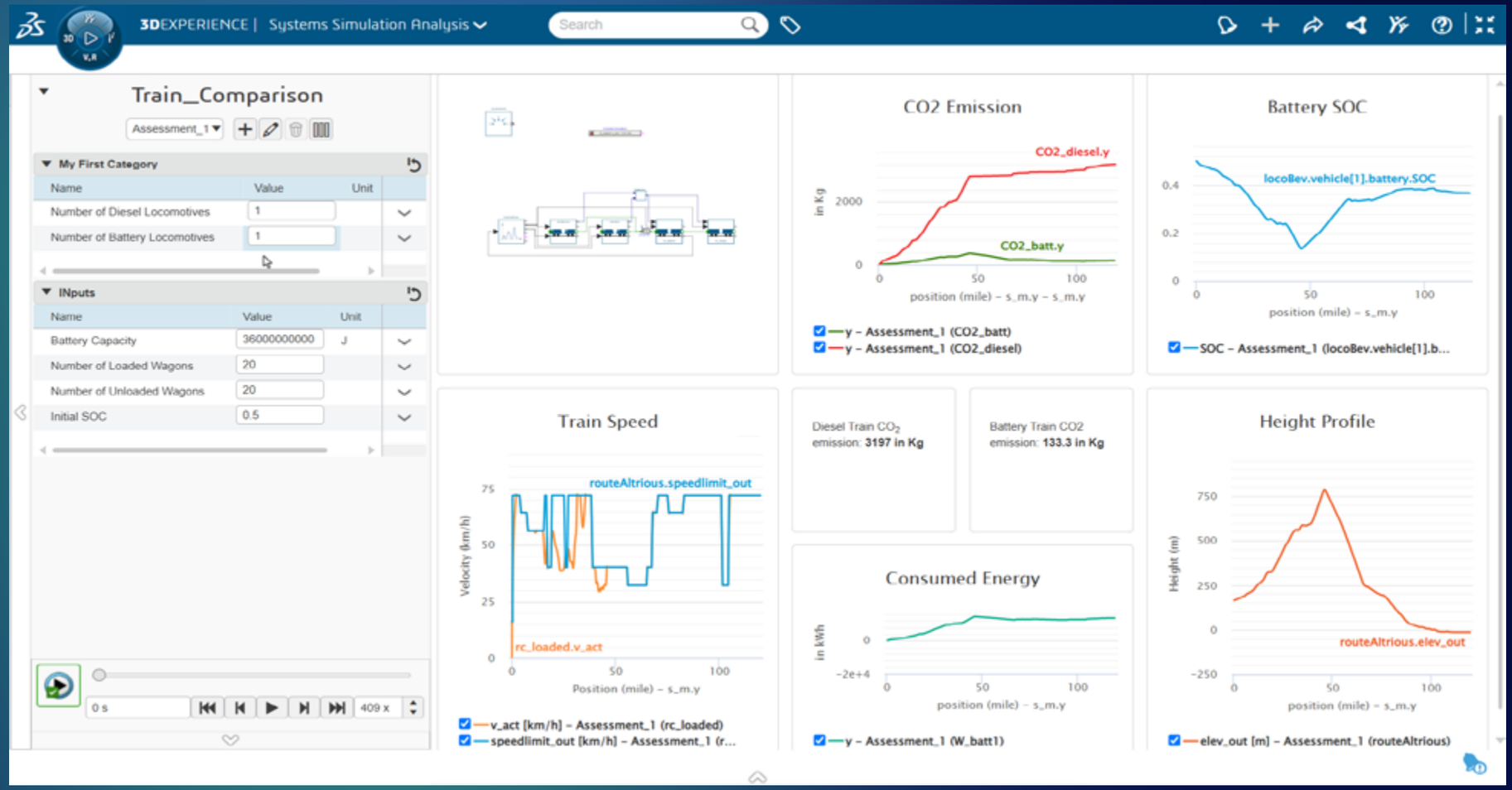
The new safety plugin in CATIA Magic will democratize model-based engineering for safety and quality domain providing dedicated project template and data model for assessments. It is standard-based following RAAML and industry standards (SAE J1739) and covers Failure Mode Avoidance and Failure Mode and Effect Analysis methodologies.



Cyber Systems Simulation

Sustainable Supply System Library

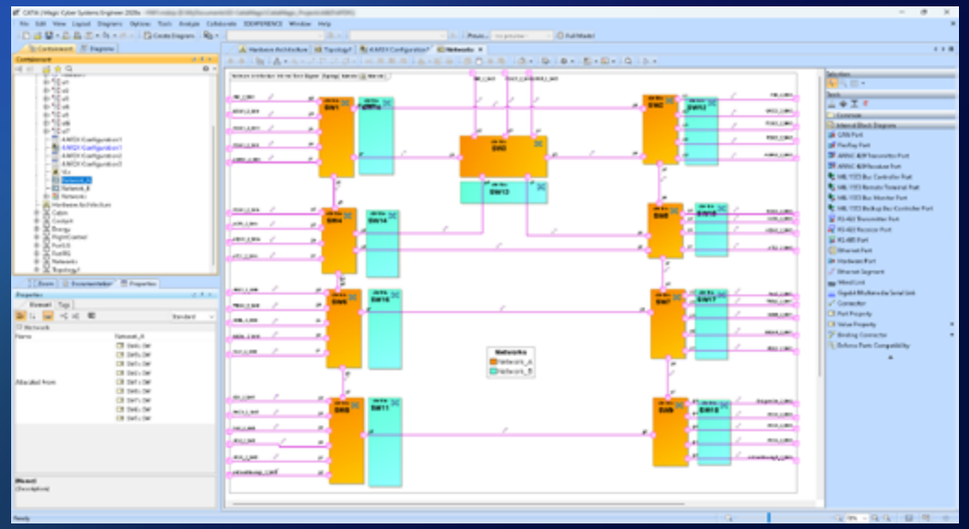
This new library, available in the Modelica language, enables the simulation of years of system operation in seconds, complementing KPIs and mathematical computation with simulation, capturing corner cases & domino effects.



Software Defined Products

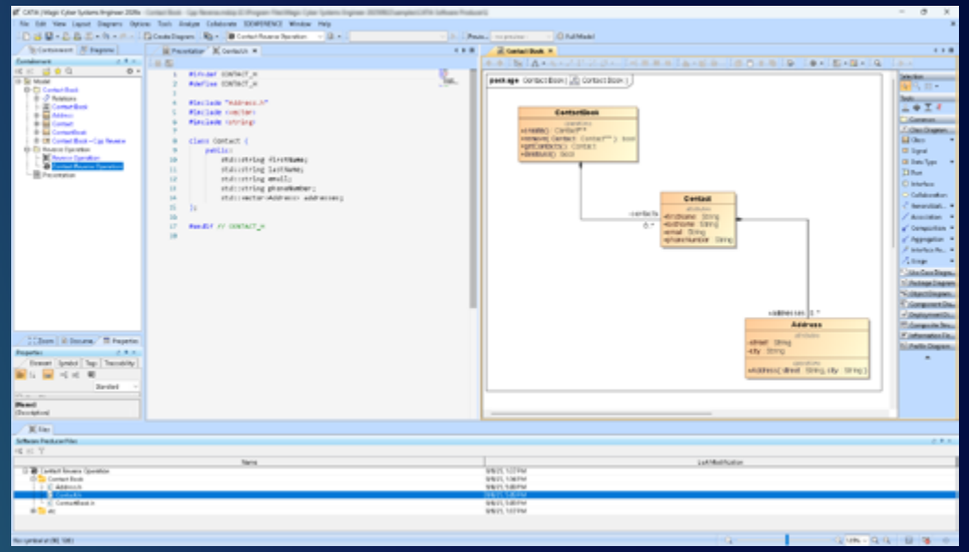
Electrical Electronics & Software Architect

The suite advances software-defined product development with strengthened round-trip workflows between systems models and code, integrating aerospace-specific protocols such as AFDX and MIL-STD-1553.



Software code generation

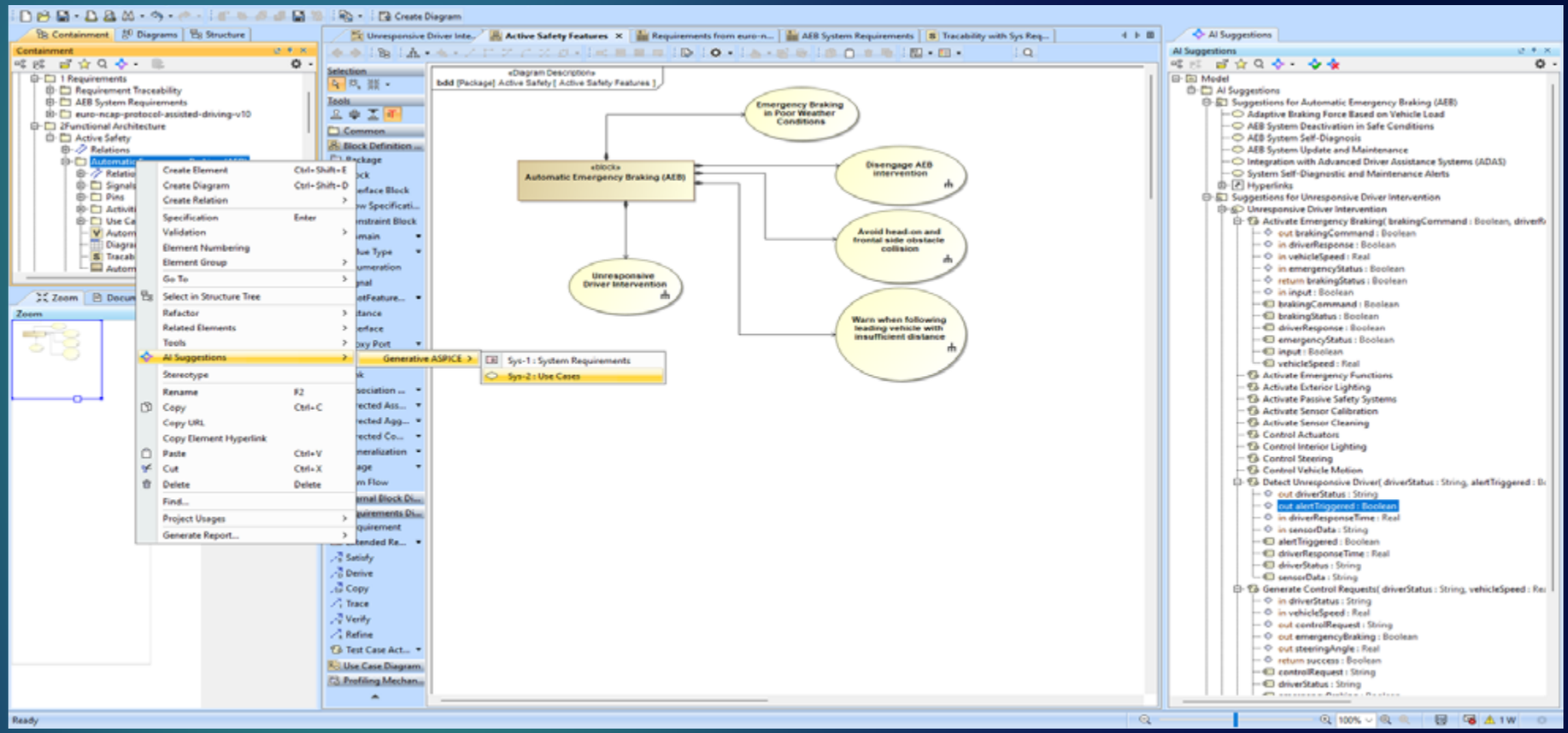
CATIA 2026X accelerates the development of software-defined products by closing the loop between engineering disciplines. The platform strengthens the round-trip strategy between models and code, ensuring seamless integration and alignment from system architecture to implementation.



Generative Experiences for Cyber Systems

Collaborative designer for CATIA Magic provides access to a new set of capabilities offered by the **3D**EXPERIENCE® Platform, in addition to the existing MBSE data governance.

Generative experiences for Model-Based Systems Engineering (Beta) provides a virtual companion to assist users in interacting naturally through natural language. Dedicated functionalities are also available as menus to suggest requirements and model modifications according to the model context.



Buildings and Infrastructure

Building Smarter Faster and Safer Buildings

Construction professionals face unique challenges including complex regulatory requirements, tight project schedules, and coordination across multiple disciplines. CATIA 2026X provides construction teams with advanced tools that address these challenges while improving project outcomes.

Buildings

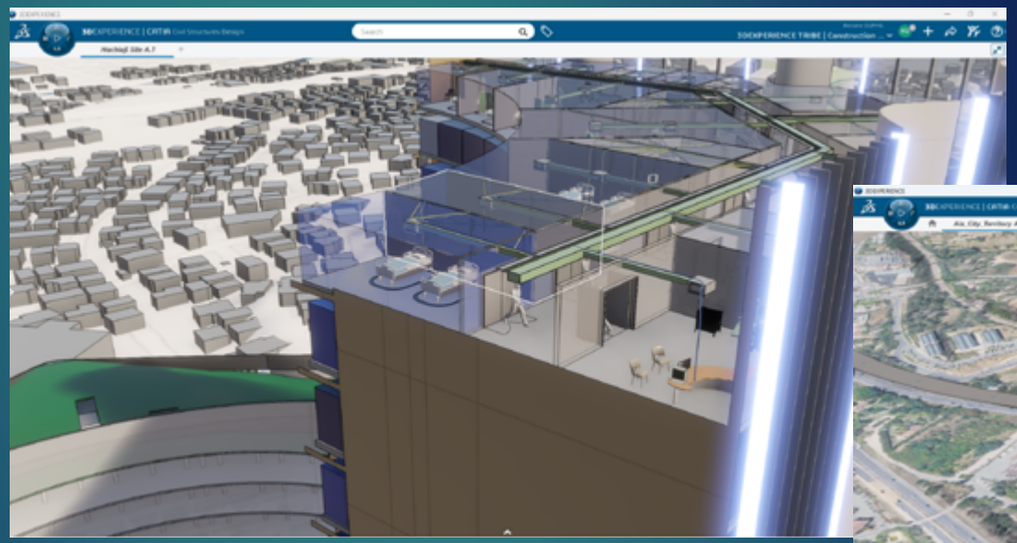
CATIA 2026x provides an advanced suite of capabilities for partition walls, openings, level surfaces, and a broader range of door and window types enable teams to generate more accurate models and automate the process of updating key components as projects evolve. These new features streamline coordination between disciplines, resulting in faster workflows, reduced design errors, and clearer communication among stakeholders. The ability to adapt swiftly to changes and maintain high model fidelity gives design and construction professionals a significant advantage in meeting demanding project schedules and delivering with quality.

Civil Infrastructure

For civil engineering teams, this release introduces smarter alignment and interchange tools to accelerate the planning and optimization of roadways and large-scale infrastructure. CATIA 2026X enhances vertical alignment representation, allowing for more accurate modeling and assessment of elevation changes and grades. Advanced interchange design capabilities make it possible to handle complex layouts with greater ease, ultimately improving the safety and integration of road networks within broader transit systems. Engineers benefit from tools that produce clearer 2D deliverables and enable more efficient iteration throughout the design process, supporting the delivery of infrastructure that meets high standards for usability, integration, and safety.

Impact on Construction and Infrastructure Professionals:

With purpose-built tools for both buildings and civil works, CATIA 2026X supports teams in executing complex projects with efficiency, clarity, and confidence. Enhanced modeling, automation, and coordination drive project success while supporting compliance and fostering integrated, future-ready environments.



Conclusion

CATIA 2026X delivers the tools and architecture needed to redefine innovation across design, engineering, systems, and construction domains. With a foundation built on **Augmented Engineering,** professionals are empowered to access the full breadth of organizational knowledge and harness intelligent tools that anticipate and support every step. The platform expands the **Space of Possibilities,** allowing teams to rapidly generate and evaluate relevant product alternatives guided by physics, system models, and real-world constraints. **Fit for Use by Design** is at the core, ensuring safety, compliance, and manufacturability are seamlessly integrated from the earliest design stages. Its **flexible, web-based architecture** and advanced AI workflows ensure that professionals **collaborate seamlessly and execute efficiently,** no matter their industry. This release empowers professionals to thrive in demanding environments, enabling them to develop solutions that align with business goals and modern challenges. With CATIA 2026X at the forefront of innovation, your team is equipped to shape the future today.

3DEXPERIENCE CATIA 2026X

Discover what becomes possible when cutting-edge technology meets engineering excellence.
Your next breakthrough awaits.

*For more information about CATIA 2026X capabilities and implementation support, **contact your Dassault Systèmes representative** or visit our website to explore detailed technical documentation and training resources.*

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Virtual Worlds for Real Life

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