



ARCHITECTURE, ENGINEERING & CONSTRUCTION

DESIGN FOR FABRICATION

Connect Your Design Data from Concept to Fabrication



MAXIMIZE PROJECT VALUE WITH EXTENDED COLLABORATION AND INDUSTRIALIZED PROCESSES

Most Architecture, Engineering & Construction (AEC) projects bring together an entirely new team of designers, fabricators, and contractors—all operating within their own systems, elaborating on design data, but never fully sharing knowledge. Fragmentation has historically led to construction waste at levels of more than 25 percent through redundant designs, idle labor, and rework. **Design for Fabrication** based on Dassault Systèmes' **3DEXPERIENCE®** platform, creates a single source of truth for construction projects. By adopting seamless collaborative processes, multiple project stakeholders can realize significant savings in time and money, and improve quality.

KEY BENEFITS

- **The capability to design anything**
Comprehensive modeling capabilities and the scalability of the cloud
- **Design for manufacturing and assembly**
Achieve broad project control. Reduce waste and rework by extending models into manufacturing and assembly
- **Single 3D version of the truth**
“Same page” authoring tools scale to huge amounts of data, enabling coordination across the whole supply chain
- **The power of the 3DEXPERIENCE platform**
A multi-BIM approach to project development using a truly collaborative environment

AN END-TO-END SOLUTION FOR ARCHITECTS, ENGINEERS, CONTRACTORS, FABRICATORS AND BUILDING PRODUCT MANUFACTURERS

Design for Fabrication serves as a single source of truth for construction projects by seamlessly blending data from the design phase into shop drawings. Through an industrialized construction process, design models become the basis for fabrication. This shared model can significantly reduce the waste and rework found in the traditional design and construction process—and yield big rewards for project owners and stakeholders.

SIMPLE FUNCTIONALITY THAT SUPPORTS COMPLEX PROJECTS

Design for Fabrication supports the development of both conceptual and detailed models of construction projects in a single resource. You can easily extend details from design through fabrication and into the construction phase. Many of the point solutions on the market today contribute to the silo effect—AEC professionals send data downstream to the next contractor, rarely collaborating to optimize design details and scheduling. **Design for Fabrication** collapses knowledge silos by promoting the seamless transfer of information from design through fabrication and into construction. Through close collaboration, project teams can prevent many of the most common project problems.

Design for Fabrication supports an intelligent environment where user-defined features can easily control complex designs. Changes made to a single element can be reflected and adapted across an entire project.

You can plan a project using dynamic tools that validate project requirements as you work; and then detail the shape of the overall project, customize repeatable elements, and add data to the overall structure using comprehensive design tools that enable the design model to be extended into shop drawings and a complete bill of materials.

THE COLLABORATIVE INTELLIGENCE THAT SETS DESIGN FOR FABRICATION APART

Most BIM solutions currently on the market are optimized for design. The detailed information created in these models might not reflect the fabricator’s needs, and must still be converted into usable shop drawings.

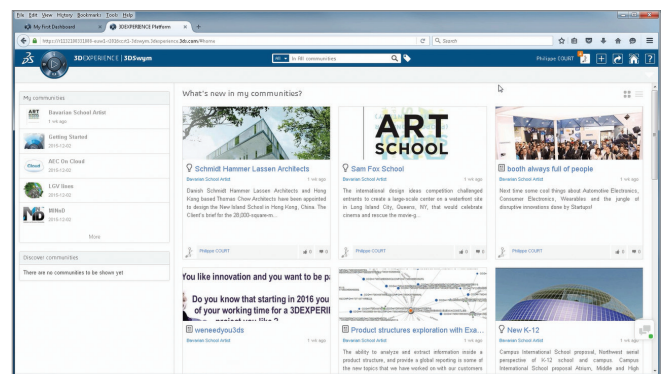
Design for Fabrication bridges this gap by creating a model from which design and fabrication professionals both can work.

WITH THE DESIGN FOR FABRICATION INDUSTRY SOLUTION EXPERIENCE, YOU CAN:

- Design and simulate any building, structure, building element, or object from the conceptual level down to the fasteners
- Use integrative, parametric, associative, and computational modeling methods to increase productivity and optimize project value through iterative design
- Combine talent, technique, and technology to deliver high performance, value, and efficiency while reducing waste and embodied energy
- Leverage the insight and data of experts across the supply chain to create an informed design

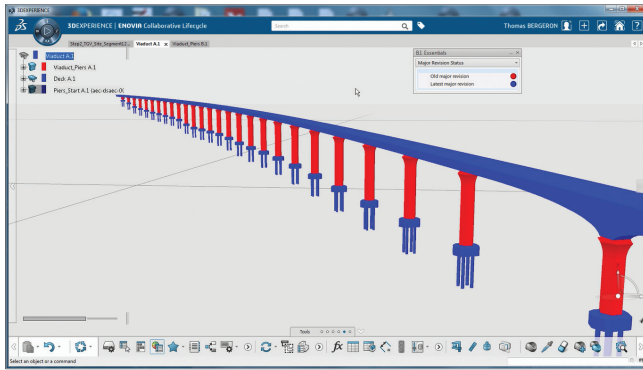
DESIGN FOR FABRICATION

The **Design for Fabrication** Industry Solution Experience, built on the cloud-based **3DEXPERIENCE**® platform, efficiently and consistently covers project requirements end-to-end: from planning and design to fabrication and execution. **Design for Fabrication** promotes a highly collaborative approach, linking the appropriate technologies.



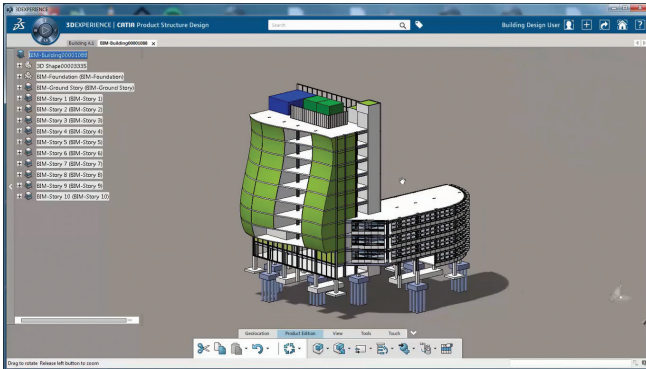
The 3DEXPERIENCE PLATFORM

The **3DEXPERIENCE** platform provides solutions for every organization in a company to help create value and differentiating consumer experiences. With a single, easy-to-use interface and simultaneous, real-time access from anywhere, it powers design, analysis, simulation, and intelligence software in a new class of collaborative, interactive environment. It is available on premise and in public or private cloud.



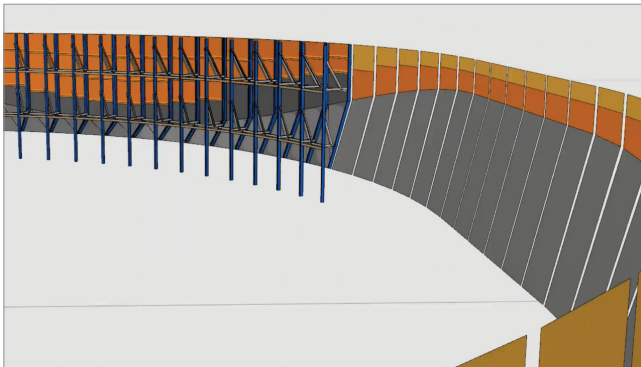
CIVIL DESIGN

Collate, model, and simulate point clouds, terrain, earthworks, hydrology, geology, alignments, and more for large projects, such as roads, rail, tunnels, bridges, etc. Use civil IFC data types.



BUILDING DESIGN

Design and simulate any building, structure, building element, or object. Mock up all projects from office furniture to industrial sheds to ultra-custom stadiums.



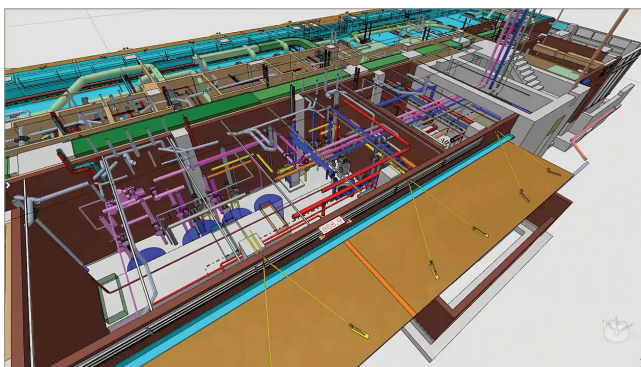
FAÇADE DESIGN

Design and simulate any building envelope from the conceptual level down to the profiles and fasteners. Design and document metal panel, glazed, double curvature, pneumatic, tensile, and more facades in both the installed and unfolded patterned states.



STRUCTURE DESIGN

Model, simulate, and analyze any structural element for concrete and steel frame, precast, façade, bridge, tunnel projects, and more.



SYSTEMS DESIGN

Plan, model, and simulate any building system element for any scale of project from single occupant to campus and city infrastructure. Design modular plants and runs to reduce field clash and shorten schedules.

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“Apart from facilitating our design work, the 3DEXPERIENCE platform makes communication much faster and easier, and this translates into substantial cost savings.”

Lv Wei Zhang, association chief engineer in SMEDI's IT Center

“What the 3DEXPERIENCE platform does is it allows for that kind of collaboration to happen, starting at the predesign stage and watching the model, which is actually organic, alive and changing, grow through to construction or manufacture.”

Chris Sharples, founding partner at SHoP Architects

“The future has never been more exciting. We have all these capabilities with the 3DEXPERIENCE platform that allow us to push the limits of architecture.”

L. William Zahner, president and CEO, ZAHNER

“New technologies, such as the 3DEXPERIENCE platform, are enabling the AEC industry to automate processes and create a lot of value.”

Javier Glatt Co-founder and CEO, CadMakers

Learn more about Design for Fabrication at: www.3ds.com/designforfab

Our 3DEXPERIENCE® platform powers our brand applications, serving 12 industries, and provides a rich portfolio of industry solution experiences.

Dassault Systèmes, the 3DEXPERIENCE® Company, provides business and people with virtual universes to imagine sustainable innovations. Its world-leading solutions transform the way products are designed, produced, and supported. Dassault Systèmes' collaborative solutions foster social innovation, expanding possibilities for the virtual world to improve the real world. The group brings value to over 210,000 customers of all sizes in all industries in more than 140 countries. For more information, visit www.3ds.com.

