

TOP 10 REASONS

To Adopt Advanced Simulation in your Design Process

3DEXPERIENCE® Works Simulation can help SOLIDWORKS® designers validate designs and make informed decisions throughout the product development process, even in the earliest design stages. The portfolio of cloud-based simulation tools covers a wide range of analysis types, including structural, fluid, plastic injection, electromagnetic, and others. Here are the Top 10 Reasons you may wish to adopt Advanced Simulation in your Design Process:

01 Reduce costs

Simulation enables companies to identify and rectify design flaws early in the development process, reducing the need for expensive physical prototypes and testing iterations. This leads to significant cost savings throughout the product lifecycle.

02 Accelerate time-to-market

By simulating various scenarios and conditions, engineers can accelerate the design process, allowing products to reach the market quicker. Rapid iterations and virtual testing streamline the development timeline, giving companies a competitive edge.



“ With **SOLIDWORKS** and **3DEXPERIENCE** Works solutions, we’ve not just developed an innovative product but have launched a revolution in the logistics operations that will fuel a sustainable business for years to come. ”

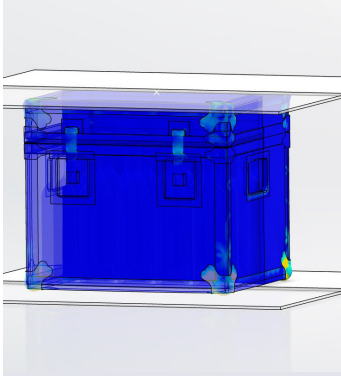
– Alok Das, Co-Founder
Qargos

03 Enhance product quality

Simulation helps in predicting and optimizing product performance, ensuring that designs meet or exceed quality standards. By simulating real-world conditions, such as stress, heat, or fluid dynamics, engineers can fine-tune designs for optimal performance and reliability.



Predicting and optimizing product **performance**



// Simulation can take the place of physical prototyping on jobs for which the customer wants proof of product performance, but even on projects for which the customer doesn't require a simulation run, providing customers with the results of simulations represents added value that contributes to improved customer satisfaction. //

- David Daou, Simulation Engineer
Wilson Case

04 Identify & mitigate risks

Simulating potential failures or operating conditions allows companies to identify and address risks early in the design phase. By proactively addressing issues, businesses can minimize the likelihood of costly recalls, warranty claims, or safety concerns post-production.

05 Innovate without limits

Simulation provides a platform for innovation by allowing engineers to explore a wide range of design possibilities without the constraints of physical prototyping. This encourages creativity and experimentation, leading to breakthroughs in product design and functionality.

06 Optimized performance

Simulation enables engineers to optimize product performance by fine-tuning parameters such as weight, material usage, and structural integrity. This leads to products that are lighter, stronger, and more efficient.

07 Build environment-friendly products

By simulating energy consumption, emissions, and environmental impact, companies can design more sustainable products. Simulation tools help in identifying opportunities for reducing waste, energy consumption, and carbon footprint.



Products that are **lighter, stronger,** and more efficient



// The main reason that we added the Structural Performance Engineer and Durability Performance Engineer roles are that they are more efficient, are more affordable due to cloud computing, and utilize the highly respected Abaqus solver ... And because **3DEXPERIENCE Works** simulation solutions utilize the Abaqus solver, we have no hesitation in taking on challenging and difficult projects because if we can't solve it with the Abaqus solver, no one can. //

- Tyler Cook, Operations Manager
Practical Engineering Solutions

08 Collaborate towards holistic solutions

Simulation on the **3DEXPERIENCE** platform fosters collaboration between different engineering disciplines, such as mechanical, electrical, and software engineering. By integrating simulations from various domains, companies can develop holistic designs that consider all aspects of product functionality and performance.



**mechanical, electrical, and
software engineering**



// Because of the more simplified process and speed associated with using Durability Performance Engineer, we've been able to shorten time to market by an additional 10 percent...In addition to the loss of revenue, <negative> claims typically result in a loss of customer trust and market share, both of which we need to avoid...The combination of **SOLIDWORKS** for design and Durability Performance Engineer for running simulations in the cloud gives us a seamless solution for a synchronized design modeling and simulation process, which is critically important for improving product reliability, durability, and performance. //

- Fernando Díaz, Engineering Manager
Resemin

09 Deliver mass customization

Simulation facilitates the customization and personalization of products to meet specific customer needs. By simulating variations in design parameters, companies can offer tailored solutions without significantly increasing production costs.

10 Capture knowhow and democratize engineering practices

Simulation allows companies to capture valuable engineering knowledge and best practices in digital form. This knowledge can be reused across projects, speeding up the development process and maintaining consistency in design methodologies.

In today's fast-paced and highly competitive market, the ability to innovate and bring high-quality products to market quickly is crucial for success. Advanced simulation tools are becoming an indispensable part of the design process, enabling engineers and designers to visualize, test, and refine their ideas with unprecedented precision and efficiency. Discover how these powerful tools can impact your business by contacting your local reseller.

More information can be found at
3DEXPERIENCEWorks.com

