

SAVING TIME AND MONEY

LEVERAGING DATA TO INNOVATE AND MAKE BETTER DECISIONS

READY FOR CUSTOMER DEMAND

LEAN CLOUD-BASED APPROACH SETS THE STAGE FOR FUTURE GROWTH



Maximizing current and future performance is a top priority for CEOs. Being competitive today requires more than incremental improvements. CEOs and senior leaders need to evolve the way businesses are run to find new, more sustainable ways of managing a business and bringing products to market.

Technology plays a significant role in enabling business transformation. Cloud-based solutions, such as **3D**EXPERIENCE® Works, enable greater business agility by uniting the entire product life cycle: ideation, design, simulation, manufacturing, and marketing services, providing continuity and traceability. Digitalizing and connecting all areas of the business allows organizations to modernize how they innovate, operate, and ultimately deliver value to customers.

3DEXPERIENCE Works is a business innovation portfolio that connects all the people, data, and applications in a single, unified, collaborative environment, enabling everyone involved in product development to contribute to the innovation process. It leverages the cloud-based **3D**EXPERIENCE platform and combines the power of SOLIDWORKS® with industry-leading tools from Dassault Systèmes for design, simulation, manufacturing, and marketing. When every stakeholder has real-time access to the right tools and information, businesses can increase collaboration, improve productivity, and accelerate innovation.

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DDDROP B.V.

dddrop B.V., a provider of innovative advancements in industrial 3D printer technology, has embraced the future of collaboration in the cloud because it aligns well with the company's structure. "We need a solid method for collaborating remotely on product development and also for launching products, both of which **3D**EXPERIENCE Works solutions provide," shared Alfred Uytdewilligen, CEO of dddrop.

"The **3D**EXPERIENCE platform and **3D**EXPERIENCE Works solutions are much more than radical evolutions of the SOLIDWORKS portfolio," Uytdewilligen says. "The **3D**EXPERIENCE platform represents an entirely new way of working that has allowed us to reshape the company to support greater collaboration, innovation, and productivity," Uytdewilligen continues. "It's much more than a development platform. It's a product-launching platform in which not everybody is using a SOLIDWORKS seat. Instead, each person has access to the tools and portions of the process that affect them. The **3D**EXPERIENCE platform stretches out the SOLIDWORKS portfolio for use in collaborative spaces in the cloud. We work in a way that was simply not possible before. Using the combination of SOLIDWORKS desktop tools and cloud-based **3D**EXPERIENCE Works solutions provides us with the best of both worlds while we prepare for the collaborative cloud-based development of the future."



The **3DEXPERIENCE** platform represents an entirely new way of working that has allowed us to reshape the company to support greater collaboration, innovation, and productivity,"

- Alfred Uytdewilligen, CEO, dddrop B.V.



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SMARTFLYER LTD.

Smartflyer, LTD. is on the threshold of a new era in aviation, developing the world's first pure electric, electric/gas hybrid, and electric fuel cell aircraft. When Rolf Stuber, CEO and design head, founded Smartflyer in 2016, he realized that the team of highly trained specialists from diverse disciplines would need to be able to collaborate effectively and securely in order to develop its innovative products and succeed commercially.

"The solution for this is modern tools that are made for addressing these challenges," shares Stuber. With a highly complex, interdisciplinary project like the development of an electric hybrid aircraft, the team must be able to access the information they need to complete their work at any time, from anywhere, and with any device, which is possible with **3D**EXPERIENCE Works.

Moreover, when the geographically dispersed team needs to get together to collaborate or conduct design reviews, **3D**EXPERIENCE Works communication and visualization tools make these meetings seem like everyone is in the same room. "With **3D**EXPERIENCE Works solutions—as well as SOLIDWORKS CAD for construction, SOLIDWORKS Simulation for analysis, and SOLIDWORKS CAM for production—we have very powerful tools that simplify our working life and enable us to put our ideas into practice," Stuber explains.



With a highly complex, interdisciplinary project like the development of an electric hybrid aircraft, the team must be able to access the information they need to complete their work at any time, from anywhere, and with any device..."



- Rolf Stuber, CEO, Smartflyer, LTD

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NASKA ROBOTICS, GMBH

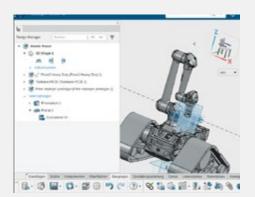
NASKA robotics GmbH is leveraging **3D**EXPERIENCE Works solutions to complete research and development of its RockFarm robotic system for the mineralization of carbon dioxide to fight the effects of climate change. "We needed a design tool that was both easy to use and operated inside a browser in the cloud across our [geographically] distributed team," notes Dr. Tobias Brett, CEO of NASKA. "We chose the design tools on the **3D**EXPERIENCE platform because they operate the closest to how SOLIDWORKS works." NASKA adopted 3D Sculptor and 3D Creator on the **3D**EXPERIENCE platform because the tools meet the team's industrial design, mechanical design, and life cycle management needs and function in a web browser in the cloud.

Developing its unique RockFarm robotic system with the **3D**EXPERIENCE Works portfolio, connected to the **3D**EXPERIENCE platform, has been especially helpful for NASKA because of the time and cost savings that the German startup has realized. "Because our design tools operate in a browser and our data infrastructure is in the cloud, we've avoided the heavy upfront capital investment in hardware that startups have historically faced," Brett points out.

"We're saving additional money in the form of time savings related to our workflow," Brett continues. "[**3D**EXPERIENCE Works solutions] gave us a fast start working with colleagues who are not experienced in CAD and if one person becomes a bottleneck, we can quickly hand off some of that work to another team member and eliminate potential delays."



Because our design tools operate in a browser and our data infrastructure is in the cloud, we've avoided the heavy upfront capital investment in hardware that startups have historically faced,"



- Dr. Tobias Brett, CEO, NASKA robotics, GmbH RESHAPING THE FUTURE OF COLLABORATION

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To read the full NASKA robotics RockFarm story, click here.



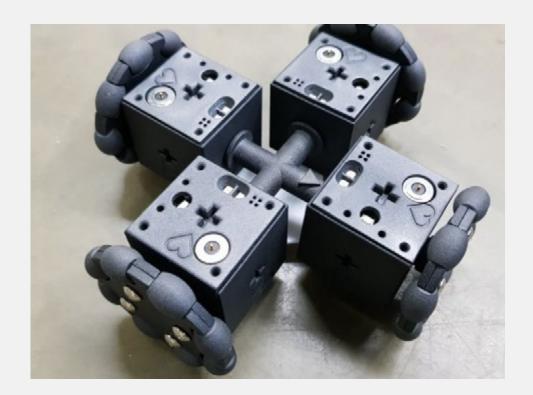
ROBORISEN

RoboRisen, a research-oriented company that develops the educationally focused PingPong robotic system, was looking to improve product development and manufacturing efficiencies when they moved to the **3D**EXPERIENCE Works solutions, resulting in shorter design cycles, reduced prototype costs, and improved quality.

SOLIDWORKS and **3D**EXPERIENCE Works solutions, enabled Roborisen designers to easily collaborate and manage product design data without the significant investments in IT staffing or hardware. With **3D**EXPERIENCE Works cloud data management solutions in addition to SOLIDWORKS software, the company was able to resolve many quality and data management challenges.

"Collaboration has become very simple and convenient. Data can be checked at any time, from anywhere, in the cloud. With these improvements, our product development period has been shortened by about 20 percent," shared CEO, Dr. Sangbin Yim.

Additionally, the **3D**EXPERIENCE Works portfolio helped RoboRisen reduce prototyping costs by 30 percent, decrease defects related to revision errors by 20 percent, and improve collaboration and communication dramatically.



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- Dr. Sangbin Yim, CEO, RoboRisen

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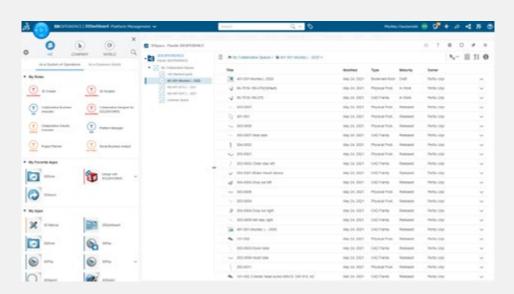
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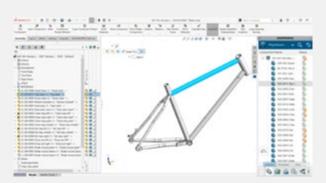
PÄSSILÄ BICYCLES

Pässilä Bicycles, an innovative developer of titanium mountain bike frames, was able to slash their prototyping cycle from three months to three weeks with **3D**EXPERIENCE Works. "The **3D**EXPERIENCE platform not only gives us a cloud-based collaborative workspace, but also a place to store and manage data accurately and securely," shares Pässilä Bicycles CEO Markku Hautamäki. "With **3D**EXPERIENCE Works solutions, we have the transparent data management system that we need to control revisions and their potential impact on product quality." Having all the real-time data accessible in one place also helps leadership and executive teams make better business decisions and avoid costly mistakes. "Using **3D**EXPERIENCE Works solutions, we can better visualize how the frame will look and make sure that all of our clearances are adequate to prevent collisions and interferences before building a prototype," continues Hautamäki





With **3D**EXPERIENCE Works solutions, we have the transparent data management system that we need to control revisions and their potential impact on product quality."



- Markku Hautamäki, CEO, Pässilä Bicycles

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EXTREME ANALYSES ENGINEERING

Simone Bernardini is CEO of the Italian amusement parks and rides engineering company Extreme Analyses Engineering. He believes that simulation combined with additive manufacturing holds the key to dramatically reducing rollercoaster development and running costs. And he's using the **3D**EXPERIENCE platform to create virtual twin experiences, a real time virtual representation of a product or a system that can be used to evaluate all scenarios and predict the outcomes. "Using virtual twin experiences, we can clearly define a new concept and virtually create and test a prototype to determine exactly how a ride will behave before physically building it," he said. "Our simulations accurately recreate real conditions to support decision making."

"We didn't want to have to transfer data between applications, risking losing information and intelligence along the way," Bernardini said. "We wanted to manage all communication in a single place and that's where the **3D**EXPERIENCE platform came up. We were already using SOLIDWORKS for design and had begun to explore the capabilities in SIMULIA for simulation. Our aim was to achieve process automation and take away the time-consuming nature of running analyses." Today, Extreme Analyses Engineering uses the **3D**EXPERIENCE platform on the cloud with SOLIDWORKS, SIMULIA and ENOVIA to bring its additive manufacturing vision to life.



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- Simone Bernardini, CEO, Extreme Analyses Engineering RESHAPING THE FUTURE OF COLLABORATION

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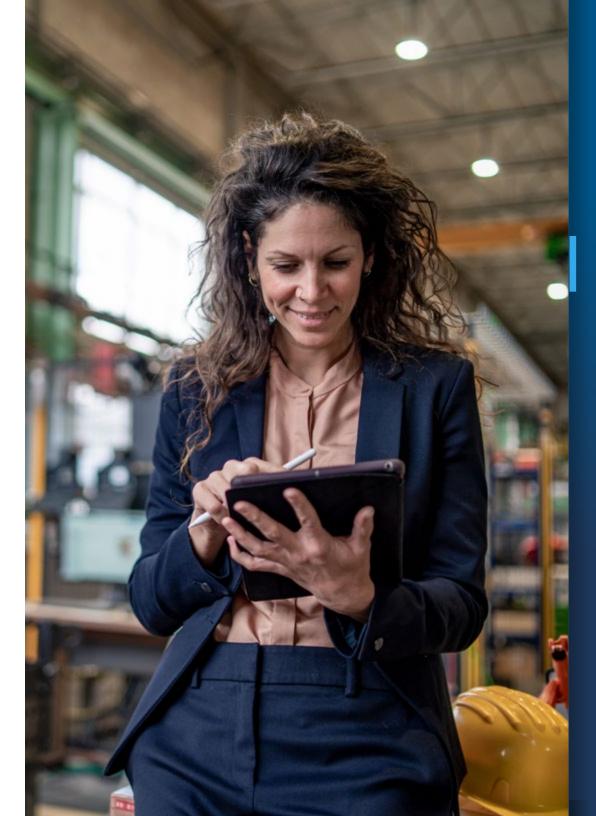
READY FOR CUSTOMER DEMAND

A business innovation portfolio helps organizations deliver new levels of customer value by incorporating customer feedback and market research into the innovation cycle.

The single product definition approach enables a continuous feedback loop incorporating changes quickly, identifying new opportunities, unlocking new markets, and increasing current market share. Incorporating customer feedback throughout the design process prevents defective parts from being made and delivered to the customer, increasing profitability and customer satisfaction.

Pässilä Bicycles CEO Markku Hautamäki finds that "Using **3D**EXPERIENCE Works solutions, we are better positioned to continue to meet customer demand for complexity, innovation, and customization."

Extreme Analyses Engineering has been able to speed up product development and provide their customers with significant cost savings. "We estimate that our clients can save around 30 percent in development and running costs. From ideation to production, we are much faster," expressed CEO Simone Bernardini.



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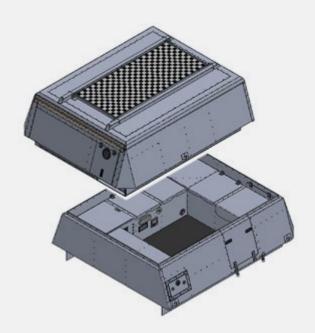
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SKINNY GUY CAMPERS

Skinny Guy Campers is developing the next generation of pickup truck camper products with **3D**EXPERIENCE Works solutions, which provide them with the flexibility, agility, and cost controls that the startup needed to get through the initial R&D phase. Connecting to the platform also provides the company with the product development foundation it needs to support future growth and expansion.

"**3D**EXPERIENCE Works gives us the ability to develop our products, scale up as we grow, and expand into new locations," Jason Bontrager, owner and CEO of Skinny Guy Campers explains. "One of the reasons that I wanted our product development to be in the cloud is that we plan on eventually building and assembling products in other places, Bontrager adds.





3DEXPERIENCE Works gives us the ability to develop our products, scale up as we grow, and expand into new locations"

- Jason Bontrager, Owners and CEO, Skinny Guy Campers

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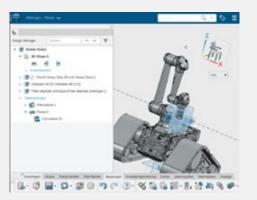
DEXAI ROBOTICS

Dexai Robotics is also leveraging **3D**EXPERIENCE Works to set the stage for sustained growth. Dexai Robotics is revolutionizing the food industry through the development of Alfred, a robotic sous-chef that helps restaurants and commercial kitchens boost productivity while addressing many operational challenges specific to food service businesses. "As we grew and continued to advance the technology," Co-founder and CEO Dave Johnson recalls, "we realized that we would need product data management and product lifecycle management [PLM] tools to continue to support growth." Dexai Robotics added cloud-based PLM tools available as part of the **3D**EXPERIENCE Works portfolio to its existing SOLIDWORKS installation to accelerate its development of Alfred, resulting in increased design visibility and optimized design time. This also allowed the growing development team to move quickly from R&D to multiple restaurant placements.





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- Dave Johnson, Co-founder and CEO, Dexai Robotics

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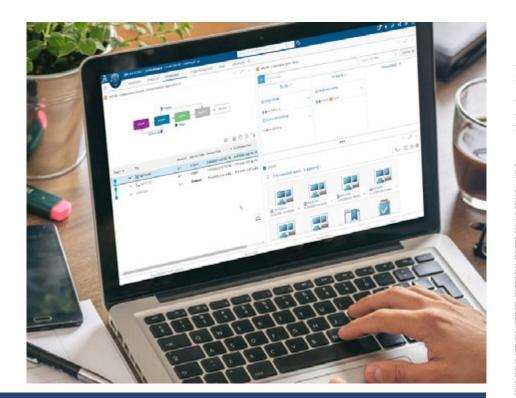
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3DEXPERIENCE Works provides the agility and resilience to imagine a bigger future and continue to stay ahead of the competition.

Speak with a SOLIDWORKS expert to learn how your organization can match the pace of innovation and experience sustainable growth with 3DEXPERIENCE Works.



To learn more about **3D**EXPERIENCE Works, visit www.3dexperienceworks.com or contact your local SOLIDWORKS reseller.

Our **3D**EXPERIENCE® platform powers our brand applications, serving 11 industries, and provides a rich portfolio of industry solution experiences.

Dassault Systèmes, the **3DEXPERIENCE** Company, is a catalyst for human progress. We provide business and people with collaborative virtual environments to imagine sustainable innovations. By creating 'virtual experience twins' of the real world with our 3DEXPERIENCE platform and applications, our customers push the boundaries of innovation, learning and production.

Dassault Systèmes' 20,000 employees are bringing value to more than 270,000 customers of all sizes, in all industries, in more than 140 countries. For more information, visit www.3ds.com.



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