

# Bringing EXPERIENCE to the Masses

3DEXPERIENCE World 2022

## CIMdata Commentary

Key takeaways:

- *Dassault Systèmes is a global market leader in product lifecycle management (PLM) and leads the global computer-aided design (CAD) market in combined revenues from its CATIA and SOLIDWORKS offerings.*
- *The company has been working hard to bring their considerable technical and business assets to bear to support SOLIDWORKS' existing customers and a broad range of newer market targets, like makers, entrepreneurs, and long-time users of 2D CAD.*
- *Organizational and product announcements made at their 2022 3DEXPERIENCE World event illustrate their progress to date and their heady plans for growth.*

After 20 years as SOLIDWORKS World, in 2020 Dassault Systèmes morphed the event into 3DEXPERIENCE World, held in Nashville, TN in February 2020 just before the COVID-19 pandemic gripped the world.<sup>1</sup> The 2022 event convened virtually on February 6-9, 2022, its second year as a virtual event.<sup>2</sup>

Mr. Gian Paolo Bassi, SOLIDWORKS CEO, kicked off the February 7 General Session, entitled "From Things to Sustainable Life | Strategy and Direction," with a major announcement. Mr. Manish Kumar, head of R&D would take over as CEO. Mr. Bassi's new role focuses on the 3DEXPERIENCE Works portfolio, which debuted at the 2020 event. In his remarks, Mr. Bassi claimed that 3DEXPERIENCE Works is a natural extension of the SOLIDWORKS portfolio that "defines the future of product design." 3DEXPERIENCE Works includes functionality in five domains: Design; Simulate; Manufacture; Marketing; and Governance. Of course, Design builds upon the long-time market and technological success of SOLIDWORKS. Simulate is powered by Dassault Systèmes SIMULIA portfolio, a simulation and analysis (S&A) leader in CIMdata's market research on the S&A segment. Manufacture leverages the DELMIA portfolio, also a market leader in digital manufacturing, another segment of CIMdata's PLM market definition, whose vision was dramatically expanded with the 2018 acquisition of IQMS, an independent enterprise resource planning and manufacturing execution system provider rebranded as DELMIAWorks. Marketing support comes from elements of the ENOVIA, 3DVIA, and 3DEXCITE portfolios, including their Marketplace offering. Finally, Governance is enabled using the 3DEXPERIENCE platform, with dashboard/mashup capabilities ably provided by NETVIBES.

Mr. Bassi admitted the company wanted to expand their audience, using 3D as a universal language to imagine what is possible, all powered by the 3DEXPERIENCE platform. Like some of its PLM competitors, Dassault Systèmes is refactoring capabilities from their on-premise applications and using them as building blocks to support new use cases. This is important for customers of all sizes but particularly for the mainstream market segment such as the SOLIDWORKS community. CIMdata believes that PLM is not just for big companies. It is not the size of the company that makes PLM important, it is the complexity of the products and

<sup>1</sup> <https://www.3ds.com/newsroom/press-releases/dassault-systemes-3dexperience-world-2020-bringing-innovators-together-shape-world-design>

<sup>2</sup> Research for this commentary was partially supported by Dassault Systèmes.

value chains used to create them. And in our smart, connected future just about everyone (and everything) will be on someone's digital thread. Product data management (PDM) systems are not really up to the product development, manufacturing, and support challenges of complex product lifecycles, including acting as a nexus for the digital thread.

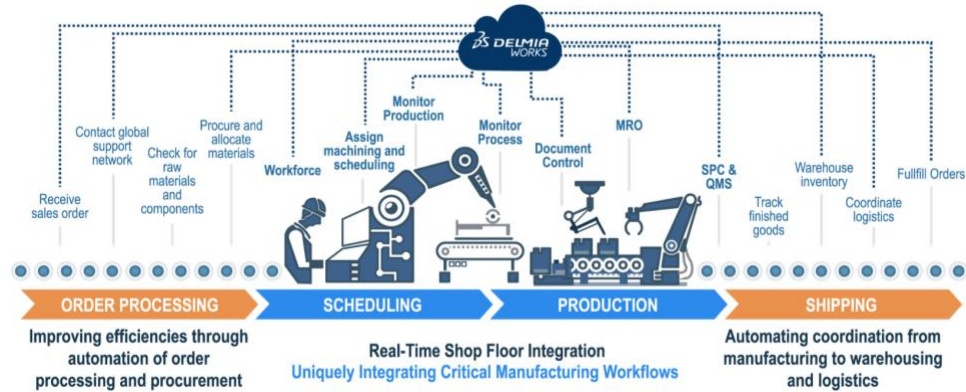
Mr. Bassi also announced a new offering, SOLIDWORKS Cloud, which he claimed was the "new generation of cloud-based CAD." It includes multiple existing SOLIDWORKS-branded (browser-based) offerings: 3D Creator, 3D Sculptor, 3D Sheet Metal Creator, 3D Structure Creator, Manufacturing Definition Creator, and 3D Render. All of these offerings are built on the CGM geometric kernel. Making SaaS offerings easier to consume is important to meeting market expectations, driven in part by things like the consumerization of IT. Easy to consume does not necessarily mean easy to use, however, so CIMdata hopes that typical user workflows between tools are readily and capably supported.

Dassault Systèmes' CEO and Vice Chairman, Mr. Bernard Charlès, joined Mr. Bassi on the virtual stage to share the strategic direction for the company. We are all in the Experience Economy stated Mr. Charlès, which triggers new expectations. Virtual twins are becoming more commonplace, and Dassault Systèmes wants to make them accessible to all, eventually making those virtual worlds mainstream. In reality, Dassault Systèmes and its main competitors have been enabling virtual worlds before the "metaverse" became a topic of conversation.

The DraftSight Keynote brought the conversation back to something more concrete. For all of the talk about 3D CAD and models, much of the world still relies on 2D CAD to support their businesses. Dassault Systèmes introduced DraftSight in 2010, a Windows application that allowed users to create, edit, and view DWG files, the standard format used by AutoCAD, the long-time 2D CAD market leader from Autodesk. (Dassault Systèmes now also offers versions for the Apple Macintosh and Linux machines.) Dassault Systèmes has continued to enhance the product since then and claims millions of users. In this session, they promoted how DraftSight, SOLIDWORKS, CATIA, and the **3DEXPERIENCE** platform could be used in combination to help organizations imagine, design, and build new products. They clearly see DraftSight users as possible customers who need to be convinced of the utility and value of their platform. While those companies might benefit from using a platform to power their business, CIMdata believes it will be a harder sell to this group, and one requiring extreme simplicity in packaging, purchasing, and ease-of-use to entice them to the table. That said, this session included several DraftSight customers that described how their PLM journeys led to DraftSight and interest in the **3DEXPERIENCE** platform.

Later that day in a Q&A session with Mr. Bassi and Mr. Kumar, the duo took questions from an audience of industry analysts and the trade press. Mr. Bassi claimed that SOLIDWORKS has about 25% of 3D CAD seats globally and strong growth is continuing. While Dassault Systèmes no longer publishes SOLIDWORKS sales number by seat, Mr. Bassi also claimed over 1 million commercial seats, with over 92% on maintenance. (In a later session, Mr. Suchit Jain suggested SOLIDWORKS might have 6 million users in total including students and academic institutes.) They also made an important point in this session. The desktop architecture as a technology stack has reached its limits. A lot of applications that users need require computing power that cannot be easily delivered to the desktop, like simulation and new capabilities like generative design. Leveraging the cloud as part of the user workflow helps companies of all sizes bring those capabilities to more users. Data centers may be, in effect, today's "computers" but both men expressed their commitment to continue to enhance the SOLIDWORKS portfolio on-premises and continue to look for high-value opportunities to leverage the cloud.

On February 8, the DELMIAWorks Keynote session provided a deep dive into DELMIAWorks, Dassault Systèmes’ rebranding of IQMS. This acquisition brought a strong product powered by a global team of over 300 professionals, including professional services and managed services offerings. Ms. Cheri Williams, their CEO, led off the session. She described DELMIAWorks as a proven, single database solution refined to meet customer needs over their 30-year history. Figure 1 illustrates how the company positions their end-to-end solutions for mid-market manufacturers. Ms. Williams described 2021 as a year of transitions for the company and their customers. It was a beginning of a return to normal, with many customers having pivoted during the pandemic to meet the emerging needs of the pandemic, like PPE and COVID-19 testing products, and supply chain refactoring. DELMIAWorks helped enable these rapid changes.



**Figure 1--The DELMIAWorks End-To-End Solution for Mid-Market Manufacturers**  
(Courtesy of Dassault Systèmes)

As for DELMIAWorks, 2021 brought improved business and technical integration with Dassault Systèmes and its broader portfolio. Ms. Williams claimed the business integration is complete and there has been substantial progress in solution integration. She claimed that their Professional Services arm helped 95 sites in 56 companies go live with DELMIAWorks in 2021. They also claim they enabled 45 channel partners globally in 22 countries in 2021, and are continuing that expansion to more partners and countries in 2022. The company is responding by increasing product translation and localization, including to country-specific accounting standards. Mr. Bassi followed Ms. Williams, providing insights into 3DEXPERIENCE Works and how it fits into the overall strategy and metrics for Dassault Systèmes.<sup>3</sup> In 2025, the company plans to have 3DEXPERIENCE account for two-thirds of their software revenue. In that same year, they expect one-third of their software revenues to come from cloud-based solutions.<sup>4</sup>

Dassault Systèmes has also increased their emphasis on makers and entrepreneurs across the company and it makes sense that SOLIDWORKS is leading the charge. A February 8 session entitled “Makers, Makers, Makers” emphasized that many of their users bring their passion for innovation to their own projects but design software was too expensive for casual users. SOLIDWORKS for Makers is focused on filling this gap, an offering for personal or hobby use that can result in a maximum of \$2,000/year in revenue from using it (think Etsy). It includes what the company described as “next-generation cloud-based design tools powered by artificial intelligence” that is all “wrapped up in a fun to learn UI.” Dassault Systèmes believes that there are 60 million makers out there, if you count arts and crafts, and they believe that their Maker

<sup>3</sup> The core offerings of 3DEXPERIENCE Works include SOLIDWORKS Cloud, 3DEXPERIENCE SOLIDWORKS, and SOLIDWORKS Connector.

<sup>4</sup> Their acquisition of Medidata will help them achieve the bulk of that cloud objective.

offer (\$99/year or \$9.99/month) offers the right mix of functionality at a reasonable price to be a hit in this market. It brings technology from across the Dassault Systèmes portfolio, including DELMIA Machining, a market leading CAM product as illustrated in CIMdata's market research on the CAM market segment.

## Conclusion

The 2022 **3DEXPERIENCE** World highlighted the challenges and opportunities for SOLIDWORKS and Dassault Systèmes to reach their expanding addressable market in manufacturing. They have made great strides in building new capabilities and leveraging the considerable assets of the company. Across the three-day event, a picture of how Dassault Systèmes is evolving the SOLIDWORKS solution became apparent. In the day three keynote, Mr. Suchit Jain, Vice President of Strategy and Business Development, spoke of the three classes of solution that SOLIDWORKS delivers: cloud-native, desktop-based, and cloud-extended, a hybrid class of a desktop app running in the cloud and interfaced through a browser. While the historic version of SOLIDWORKS will continue to be desktop-driven, Dassault Systèmes has expanded its portfolio with **3DEXPERIENCE** Works, a collection of cloud-based apps for design, drafting, and validation built atop Dassault Systèmes' CGM geometric kernel. With these new apps developed on the **3DEXPERIENCE** platform, the company has opened many new paths for product improvement.

To bring new capabilities to their different audiences, Dassault Systèmes is refactoring capabilities from their on-premises market leading brands, using them as building blocks to support new use cases. But in listening to the sessions the branding is confusing. For example, their users do not want or need to know the specific capability or user role as it was originally developed by a specific Dassault Systèmes brand. They just want to use it as easily as possible as part of their workflow. Perhaps the company could say "SIMULIA Inside" or emphasize that Dassault Systèmes is bringing technology used by global market leaders, right-sized for those smaller companies that need it. The other challenge to overcome for these small prospects is licensing. In general, PLM licensing is known for its complexity. But this is just the opposite of customer expectations for business software today, particularly cloud-based SaaS offerings, which are most often easy to buy and to rapidly begin using productively. This will be an on-going challenge but an important one, as CIMdata agrees that it will be increasingly difficult to support user needs only on the desktop. CIMdata plans to learn more about the packaging and pricing of these offerings to better understand if they are indeed meeting the markets' cloud-based SaaS expectations.

## About CIMdata

CIMdata, an independent worldwide firm, provides strategic management consulting to maximize an enterprise's ability to design, deliver, and support innovative products and services by identifying and implementing appropriate digital initiatives. For nearly forty years, CIMdata has provided industrial organizations and providers of technologies and services with world-class knowledge, expertise, and best-practice methods on a broad set of product lifecycle management (PLM) solutions and the digital transformation they enable. CIMdata also offers research, subscription services, publications, and education through certificate programs and international conferences. To learn more, visit [www.CIMdata.com](http://www.CIMdata.com) or email [info@CIMdata.com](mailto:info@CIMdata.com).