

From the Experience Economy to the Generative Economy

Dassault Systèmes 2024 Analyst Day

Key Takeaways

Dassault Systèmes shared its vision driving the next 20 years. In this vision, the combination of Multiple Virtual Twins with Generative Knowledge and Know-How, constrained by sustainability requirements and deployed on the cloud, will drive what the company defined as the Generative Economy.

With 2024, the company enters its new five-year strategic plan with solid growth expectations. Dassault Systèmes expects to drive a 10% CAGR from 2023 to 2028, moving revenues from €6bn in 2023 to €9.5bn in 2028 (+58%). Dassault Systèmes believes there is significant room to grow as it estimates the potential of its addressable markets to grow from \$100bn today to \$1tn in 2040.

Dassault Systèmes plans to drive this growth by acting as a game changer in three strategic segments: Manufacturing Industries, Life Sciences & Healthcare, and Infrastructure & Cities.

CIMdata attended Dassault Systèmes' 2024 Global Industry Analyst Days on May 29th and 30th. This two-day event was held at Dassault Systèmes' headquarters located in Velizy, France, during which Dassault Systèmes' management and key technical leaders shared their long-term vision about the future of the industries it serves to a number of leading PLM industry consultants and analysts.¹

The Generative Economy

Mr. Pascal Daloz, Dassault Systèmes' new CEO, kicked off the event by describing the company's vision for what it calls the Generative Economy. In this economy, scientific models and reality converge on intelligent cloud platforms into objects that provide a holistic means to drive innovation. Furthermore, the Generative Economy is an economy in which companies leverage connected virtual twins, real world data and learning from reality, generative technologies, and cloud-based operations to reinvent what they do and how they do it. Following Mr. Daloz, Ms. Elisa Prisner, Executive Vice President in charge of Corporate Strategy further detailed the concept.

¹ Research for this commentary was partially supported by Dassault Systèmes.

As described by Dassault Systèmes, the Generative Economy is the result of the convergence of four distinct forces:

- *The connection of multiple science-based virtual twins.* These connected Virtual Twins enable product innovation, production and maintenance modeling, and end-of-life management. They are expected to enable companies to explore a wide range of possibilities for their product offerings and activities.
- *The connection of these virtual twins with the real world.* Nurturing Virtual Twins with learning from the real world (i.e., know-how) and with real data collected from a vast variety of sources (i.e., knowledge), which will create what Dassault Systèmes calls “universes” in which knowledge and know-how are added to science-based models to provide a more holistic and sustainable approach to product innovation.
- *Sustainability constraints.* Climate change constraints, energy costs, natural resources scarcity, and biodiversity are circular economy requirements that are new limitations that companies must consider in their innovation cycle to cope with market expectations.
- *The growing adoption of cloud technologies and Software-as-a-Service.* These are expected to facilitate the distribution and the adoption of universes by Dassault Systèmes clients.

Dassault Systèmes illustrated this vision with the example of mobility services, which require the connection of several virtual twins (e.g., car, city, infrastructure, and drivers), nurtured with real-time information from the real-world environment and constrained by sustainability requirements. For example, virtual twins and real-time information could be used to optimize the ride, considering the driver’s agenda, real-time traffic conditions in the city and outside the city, if relevant, and real-time gasoline needs as reported by the car, and gas station availability along the way.

To ensure a holistic approach, Dassault Systèmes is extending the scope of its solutions in these universes to include end users, consumers, patients, or citizens of its customers to integrate appropriate and relevant usages in the framework.

Mr. Daloz insisted strongly on the sovereignty constraints that have recently emerged as critical components of sustainable operations. According to Dassault Systèmes, data must be protected by cyber security inside a certain territory to be safe and valid. In this perspective, Dassault Systèmes claims that it can provide sovereign data services anywhere and everywhere, no matter where its customers are located. Dassault Systèmes has also heavily invested in core technologies in support of their vision (including AI and platform enablement), to minimize the dependency of core technologies on external and geopolitical factors. Dassault Systèmes considers these investments as critical as they enable the company to serve different industries in different places of the world without the constraints of geopolitics. With this strategy, Dassault Systèmes seeks to remain independent from key or critical technologies that could be impacted by political decisions and will therefore not depend on external factors outside of their control.

This vision is reshaping the entire foundation of what Dassault Systèmes does, which is no longer focusing on their Product Innovation Platform, but rather on the connection of several virtual twins nurtured with real world data and learnings, called Universes. Mr. Daloz noted that Dassault Systèmes has moved from focusing on things to focusing on life and how to enrich it. Of course, all of this requires their **3DEXPERIENCE** platform for enablement. Dassault Systèmes believes that making this holistic approach a reality will allow societies to generate the innovations that will address the challenges of the future, and it has defined this approach as its strategic framework for the next 20 years.

In total, Dassault Systèmes enters its new five-year strategic plan (2024-2029) by initiating a move from being an enabler of the Experience Economy, introduced in 2012, to being an enabler of a new “Generative Economy.”

Acting as a Game Changer in Key Industries

Dassault Systèmes reported that in 2023 they added 30,000 new customers and have 350,000 customers in total.

Ms. Florence Verzelen, Dassault Systèmes Executive Vice President in charge of Industries, Marketing and Sustainable Development, explained that for their new five-year plan Dassault Systèmes defined manufacturing industries, life sciences and healthcare, and infrastructure and cities as the key industries in which it wants to act as a game changer. Globally, the company is combining more than 800 Industry Process Experiences in 132 solutions called Industry Solution Experiences.

Over the past two years, Dassault Systèmes has evolved its portfolio to cope with the world's changes, characterized by supply chains disruptions due to COVID or geopolitical crises, the increased importance of sustainable products for consumers and investors, the impact of increased energy prices, and the disruptions brought by Artificial Intelligence. In particular, Dassault Systèmes has addressed its customer needs to be net zero CO₂ by helping them in their sustainable transformation journey with the creation of a sustainable portfolio. This is particularly important because companies are more sensitive to Environmental, Social, and Governance (ESG) criteria, while customers pay increased attention to the environmental aspects of the economy, and investors want to ensure that the companies in which they invest are ready to cope with environmental political constraints.

Manufacturing Industries

In the manufacturing sector, Dassault Systèmes claims significant win-backs in 2023 and highlights its dominance. For example, 85% of the existing electric vehicles on Earth were designed and/or manufactured using its solutions. The company will focus its efforts on the aerospace and defense, transportation and mobility, and high-tech industries, with a specific emphasis on the software defined vehicle experiences segment and semiconductor industry where it sees important and sizable opportunities..

Dassault Systèmes invited on stage the ASICS Institute of Sport Science, which is partnering with Dassault Systèmes to design, test, and manufacture personalized athletic shoes, combining biometrics, simulation, and 3D printing solutions. Dassault Systèmes' solutions enable ASICS to design shoes that are personalized to the athlete's foot and sporting needs, where the digital twin of the shoe matches the digital twin of the foot. The virtual product is then simulated in various contexts and the product is improved until the simulation provides satisfactory results. The virtual product is then 3D-printed and shipped. With Dassault Systèmes' solutions, ASICS can provide athletes with personalized shoes that match their individual biometrics particularities.

Life Sciences and Healthcare

In Life Sciences and Healthcare, Dassault Systèmes already supports creating and/or manufacturing of 70% of new drugs approved by the U.S. Food and Drug Administration (FDA). In this industry, Dassault Systèmes describes universes as the combination of Patient, Product, Processes, and Factory Virtual Twins. Dassault Systèmes highlighted innovative offerings based on testing medical solutions on a virtual population gathering digital twins of real patients, simulating new molecules and support for personalized medicine, and manufacturing process simulation and its impact on manufacturing lines. The Sanofi use case was presented where modular manufacturing has been enabled by Dassault Systèmes solutions. This implementation is improving the flexibility and the agility of Sanofi's manufacturing process.

Infrastructure and Cities

In the Infrastructure and Cities segment, Dassault Systèmes recognizes that it is not a current leader. It nevertheless declared this industry as one of the three key industries in which it believes it can act as a game changer. The company will focus on Wind Energy, Solar Energy, and Nuclear Energy. They are placing a particular focus on nuclear Small and Medium Reactors (SMRs) where a partnership with Assystem will help accelerate the development of Advanced Modular Reactors. In this case, one of the goals is to accelerate the go-to-market of SMRs by executing all the compliance tests on the **3DEXPERIENCE** platform.

In each of these three key industries, Dassault Systèmes wants to bring disruptive solutions to accelerate the innovation cycle of its customers—increasing customers speed to market and improving overall capabilities to deliver the right product at the right moment.

Virtual Twin as a Service

According to Dassault Systèmes, customers understand that the Universe concept is a foundational element of their transformation. However, not all of them are able to afford the necessary upfront investments. This has led Dassault Systèmes to introduce a new Virtual-Twin-as-a-Service offering. In this model, Dassault Systèmes builds and maintains the universes needed by its customer, which the customer can use and exploit by paying a subscription fee, hence avoiding the capital expenditures normally required. With Virtual-Twins-as-a-Service, customers can access and benefit from Virtual Twin technologies without having to hire and maintain specialized technology teams and without making large capital investments.

Go To Market

Mr. Daloz explained that it is not selling only software, on-premises or as-a-service. Dassault Systèmes explains that it is also incorporating into its offering all its accumulated knowledge in its Industry Solution Experiences and its Industry Process Experiences. This, along with the growing adoption of cloud solutions, has serious implications on Dassault Systèmes' Go-To-Market, since it doesn't only sell the ownership of products, but subscriptions to Industry Solutions. This requires a new way to address the markets it serves.

In addition, driving such a vision and strategy on 10- to 12-geographies, with 10- to 12-brands across 10- to 12-industries with direct sales forces and more than 17,000 partners worldwide remains a significant challenge. This is made even more complex due to their 63 industry sub-segments and their total of 132 Industry Solution Experiences and 827 Industry Process Experiences that need to be pushed. The Dassault Systèmes sales organization considers multiple dimensions (geographies, brands, and industries) with standard direct and indirect routes to market. It is also emphasizing the deployment of a solution selling approach, delivered either on-premises or as a service. This is clearly a very complex Go-To-Market model.

Dassault Systèmes is also engaging in consultative selling, leveraging an internal strategy consulting organization (named Value Engagement). These consultants, who engage with clients, seek to understand a client's strategic needs, and position the appropriate Dassault Systèmes' solutions. Value Engagement consultants assess the business value provided by the relevant Dassault Systèmes solutions and also seek to measure realizing the promises made all along the lifecycle of a transformation program. The Value Engagement teams use the **3DEXPERIENCE** platform as a single source of truth to define, plan, measure, and report for each transformation program a set of Key Value Indicators (KVIs) and Key Performance Indicators (KPIs), which provide customers with a real-time assessment of the value realized by the transformation programs they have embarked on. This provides customers with a modern way to manage

and govern their transformation programs, in which data, reports, results, and necessary escalations can be accessed in real-time to improve governance and decision-making processes.

Dassault Systèmes understands its indirect channel will need to transform to adapt to its new vision and cope with the changes that cloud offerings demand. The ubiquity of cloud solutions reduces the geographical advantage that resellers leveraged in the past and requires them to specialize by industry and/or domain, which in turn serves Dassault Systèmes strategy to deliver transformative solutions for industries instead of products. This process is taking time as partners need to transform their business model and skills. Finally, Dassault Systèmes is supporting its partners in their transformation by granting them access to a system of learning experiences (Industry Learning Experiences and Brand Learning Experiences), and by customizing its Value Engagement Process for them. This helps partners adopt a more strategic approach in their sales efforts, in which value selling methodologies help position the business value of Dassault Systèmes solutions rather than their technology features.

Mr. Daloz further explained to the audience that 65% of its large engagements leverage business consultants and system integrators and its target is to move this to 90% in the future. Consultants and system integrators will be critical to provide the capacity to upgrade their large customer base to their new offerings but, given the nature of their offering (accumulated industry knowledge in the solutions and SaaS delivery), the relationship between Dassault Systèmes and its consultants and system integrators ecosystem will have to evolve. First, Dassault Systèmes will need to transfer knowledge to its customers not only through its solutions, but also through its services. According to Dassault Systèmes, the vast majority of presales activities on large deals have already evolved from showcases and demonstrations to industry consulting services, where process redesign, roles and skills adjustments, and change management programs are framed. Second, cloud solutions require less traditional system integration and custom development, and their share of total sales is expected to grow significantly. As a result, in the future Dassault Systèmes expects its relationship with consultants and system integrators to focus more on consulting activities (e.g., process, organization, change management, and program and project management) rather than on traditional system integration activities. This will help customers adopt industry best practices and reap the economic value locked-in by Dassault Systèmes solutions rather than on low value specific requirements, leveraging out-of-the-box (OOTB) solutions for faster and cheaper deployments, industry best practices benefits, and simpler maintenance and upgrades.

Financials

Mr. Rouven Bergmann, Dassault Systèmes' CFO, reported that Dassault Systèmes has demonstrated solid growth (+10.7% CAGR 2010-2023) over the last few years. It increased its operating margin to 32.4% in 2023, while expanding from M&A, increasing its headcount from 9,000 employees in 2010 to 25,600 in 2023, and transitioning to a cloud model. This last point is worth noting as the vast majority of software providers suffer when moving from a traditional perpetual license model to a subscription model.

Dassault Systèmes enters its new five-year strategic plan (2024-2029) with solid growth expectations as it plans to drive a 10% CAGR from 2023 to 2028, from €6bn in 2023 to €9.5bn in 2028 (+58%). Over this period, its Earning Per Share is expected to double, replicating the performance observed from 2018 to 2023. Dassault Systèmes believes that there is significant room to grow as it estimates the potential of its addressed markets to grow from \$100bn today to \$1tn in 2040.

Conclusion

This CIMdata Commentary covers but a sample of the topics, industries, and solutions presented in the 30+ sessions held during the two-day event. Dassault Systèmes is a PLM market leader but sees its

historical PLM business as just one part of their enterprise going forward. Manufacturing industries, life sciences and infrastructure/smart cities will provide engines of future growth, some of which are greenfield opportunities, particularly in comparison to discrete PLM.

The company has defined a new vision, emphasizing its contribution to a Generative Economy, that will drive its strategy and operations for the next 20 years.

Based on the sessions at their Analyst Days, Dassault Systèmes' vision necessitated substantial investments in AI and cloud solutions, and the organization continues to build out its Industry Solution Experiences (ISEs) in their industry segments and, as stated at the meeting, have brought data science to bear across their portfolio. Since 2012, their strategy has diverged from their two main competitors, Siemens Digital Industries Software and PTC. Over the last decade each company made investments that made this divergence more pronounced. Dassault Systèmes has made some wise large investments, like those in Centric Software and Medidata, that have given them leadership positions in their target markets. The move to Virtual Twins as a Service is another major change, one without precedent in the PLM market space. The company has work to do to build out these experiences and learn how to best monetize them for the benefit of their customers and Dassault Systèmes. CIMdata looks forward to the next Analyst Days for an update.

About CIMdata

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