

VIRTUAL TWIN  
AS A SERVICE

# FACTORY VTaaS: ACCELERATE TIME TO VALUE IN MANUFACTURING

Discover how Factory VTaaS redefines manufacturing excellence in this exclusive conversation with Michel Tellier, Vice President of Virtual Twin Experiences at Dassault Systèmes.

# UNLOCKING INSTANT VALUE WITH VIRTUAL TWIN EXPERIENCES

How do we navigate manufacturing in today's fast-paced world? With increasingly complex processes, evolving demands and fierce competition, companies need more than just innovation — they need **reliable solutions that deliver immediate results.**

In this exclusive interview, Michel Tellier, Vice President of Virtual Twin Experiences at Dassault Systèmes, shares about Factory Virtual Twin as a Service (VTaaS) — a revolutionary approach pioneered by Dassault Systèmes — and how it is changing the game across manufacturing industries such as automotive, aerospace, consumer goods, pharmaceuticals and more by:

- Transforming production systems and offering smarter ways to optimize operations
- Accelerating time to value through services instead of licenses
- Solving specific challenges and optimizing production with tailored digital assets

As Tellier shares real-world examples in this candid Q&A, learn how Factory VTaaS consistently exceeds expectations, saving companies time and resources, and leading the way in the future of manufacturing.



## FEATURED EXPERT



**Michel Tellier**  
Vice President,  
Virtual Twin Experiences  
Dassault Systèmes

Michel Tellier leads Dassault Systèmes' Experience as a Service business worldwide, focusing on accelerating digital transformations through highly specialized cloud-based solutions. His exceptional leadership skills include serving as the Vice President of Boeing's 2nd Century Digital Transformation program and leading the aerospace and defense sector at Dassault Systèmes. A trained mechanical engineer, Tellier's expertise in the experience economy stemmed from previous roles as the CEO of ENOVIA and President of the company's services and consulting business worldwide.



Q1

What transformations are you seeing in market conditions and customer demands?

**Michel Tellier:** We're witnessing a strong surge in demand across industries in digitalization, particularly at the C-suite level. From a corporate strategy perspective, companies seek to understand what a digital strategy means for their business and how it impacts their products, operations and customer support. The C-suite now understands that digitalization is different from computerization. Far from implementing sales and financial software such as CRM, ERP or CAD, digitalization is about defining the right digital assets and strategy.

At the same time, we see a lot of companies stepping into this space promoting impressive solutions but with limited functionality. Some claim to be able to create a virtual factory, but these virtual renditions cannot be used to optimize, improve or run your factory better. That's why it's crucial for us to communicate and demonstrate the value our digital technology brings: **Shortcut to value and time to value.**

Today, our customers fall into two broad categories:

**1. Customers with an appetite for a digital strategy**

These companies seek to de-risk and see benefits from initiating a digital strategy. The faster you can demonstrate success and operational gains, the better. Three quarters of our customers are engaging us through VTaaS to achieve this. In other words, it's not the end state they're after but rather an initial or quick win along the way.

**2. Customers with some level of digital maturity**

These companies consistently examine their core competencies against their strategic targets and decide to either outsource or execute plans on their own. For example, one of our customers thought it could manage on its own. However, with 15 other things to do, it would be unable to hit its strategic targets if it spent all the time executing all the groundwork. In the end, the customer outsourced it to us. Here, the customer was highly strategic, knowing precisely what it was doing: What to keep inhouse and what to outsource.

For the last 43 years, our entire business has been focused on equipping our customers with the tools to do it themselves. Now, we're offering an alternative. If you want to achieve value faster, you don't have to buy the tools, figure out how to use them and get it all done yourself. **We've got a quicker way for you to get that done.**





Q2

What is Dassault Systèmes' history as an industry technology enabler? What are the immediate opportunities you see with today's technology?

**Michel Tellier:** Our partnership with Toyota is an excellent example of our capability to support industries.

For decades, we've enabled Toyota to continuously improve, change and evolve its factories. Its philosophy, called The Toyota Way, also known as the Toyota Production System or Kaizen, had to be aligned throughout the company. We invented this technology way back then to enable this alignment.

This technology, which we call the virtual twin, extended beyond Toyota to its peers, suppliers and competitors, and reaching out to other industries such as aerospace and industrial equipment. But this is just the tip of the iceberg in terms of democratization. The crucial question is, "How can every business with a plant, big or small, take advantage of it?" This is the main value proposition of our Virtual Twin as a Service.

Today, we're offering even more powerful technologies and new capabilities with steeper learning curves, such as AI-enabled molecular modelers embedded with system modelers, data perspectives, micro-to-macro simulation and more.

**Factory VTaaS is a great alternative to deliver this value, especially in terms of risk to value.**

Comparatively, the other side of the equation is a technology that's been around for a while but only reserved for an elite few based on the cost and effort required to use, integrate and gain value out of it. VTaaS is changing that economic equation.

**We're democratizing all the virtual twin technology so that it becomes much more available to a much broader audience.**

# Q3

## What is a Virtual Twin as a Service (VTaaS) compared to a virtual twin?


**Michel Tellier:** VTaaS is a value delivery model that answers many of Dassault Systèmes' customers' challenges. The traditional value delivery model operated by Dassault Systèmes is to provide end-user software licenses, either discreetly on-premise or as a service on the cloud, allowing our customers to build and operate the virtual twins of their factories, products or systems.

What we're doing with VTaaS is we're delivering **digital solutions as a service. We shift our focus to business-centric instead of end-user software solutions.**

Take, for example, Software as a Service (SaaS). Here, there needs to be an individual sitting in front of an online application to create value. With VTaaS, we deliver the value as a service that provides a function to, for example, a plant manager, who monitors each production line station with the virtual twin to understand the performance and optimize production lines with added product variants.

This new augmented type of value spans across all our functional domains — digital manufacturing and management, digital design and life sciences — and is tailored to the 12 industries we serve.





## Q4 What is Factory VTaaS and what is the implementation process?

**Michel Tellier:** Here's a step-by-step guide to a typical customer engagement and implementation process:

- **Define acceptance criteria**

Identify specific goals or problem statements. For example, a customer with a production line that produces one product but now wants to add nine new product variants to the existing production line.

- **Collect data efficiently**

Gather the critical data. For example, start with the point cloud scan of its factory or a 2D layout. From there, we can automatically extract its line and identify all its stations to build the virtual twin of the factory along with the machines.

- **Build the virtual twin**

Build a complete virtual twin of the factory. By uploading product data such as gearboxes, diesel engines and washing machines, we generate everything quickly and automatically – within a couple of weeks – including all the programming in the production line.

- **Commission right**

Ensure the factory virtual twin behaves exactly like the physical factory in the real world.

- **Optimize the production line**

Bring in the product variants and perform hundreds of different iterations to find the right balance to optimize processes while taking into account performance data per station, wait times, lag times, productivity levels and more.

- **Enhance transparency**

All the performance data and different alternatives generated on the virtual twin are available to the customer on regular reviews. In many cases, we create dedicated dashboards for the plant managers for tailored monitoring.

Without Factory VTaaS, it will typically take a team of five many months to build and simulate the different variants. Even so, results are not guaranteed as they may lack the necessary skills.

Factory VTaaS achieves results quickly. **As we build more possibilities into the digital asset, customers that come to us with one problem want us to do more after seeing the value and comprehensive benefits we deliver.**



Q5

How does the customer relationship start? Do customers approach you with specific needs? Or are they already Dassault Systèmes' customers looking to level up their game?

**Michel Tellier:** Typically, the customer approaches us saying, "I don't have a department," "I haven't bought the software," or "I'm at the beginning of the journey." Instead of letting the customers spend 18 months trying to figure this out by themselves, we help **jumpstart their progress, allowing them to recover the assets and skills quickly while enabling them to learn over time.**

One example is a pharmaceutical company where we helped streamline 13 production lines. We performed flow simulation, line optimization and ensured regulatory compliance. Instead of commissioning this line traditionally — where you build a line, set it up, run your tests and everything else over 12 to 14 months — we do it in four months through virtual commissioning. That means saving 8 to 10 months out of your time to production, which is a huge advantage.

Hence, companies must ask themselves: Do we have to build an entire department to do this or outsource this to Dassault Systèmes? I encourage you to consider our expertise and skills in building, configuring and virtual commissioning your assets so you can achieve value faster.



Q6

Any final thoughts or memorable moments from customer projects?

**Michel Tellier:** One of our best compliments was from customers who testified that we've **exceeded expectations and saved them from potential disaster.**

For instance, one customer was in a bind. Its engineering department was launching a whole new product line and manufacturing teams had to evaluate their equipment for the new production. They realized they needed digital capabilities to validate this but ran out of time.

By partnering with us, the customer discovered all the crucial factors it hadn't anticipated and saw challenges that could have delayed market entry. Without our help, all these would have been discovered only a year later at the production stage. This will cause a much slower ramp-up and significant market delays.

When a customer comes back to you and tells you your help was invaluable and that you exceeded its expectations – that's an incredibly gratifying feeling!



# ACHIEVE NEW LEVELS OF EFFICIENCY

VTaaS isn't just a new value delivery model of advanced technology created to address challenges with speed and agility. More than that, VTaaS is a strategic advantage to realizing significant time and cost savings, reducing risks and accelerating time to value.

As VTaaS consistently exceeds expectations, it is clear that those who adopt it will be at the forefront of the industry's evolution.

[Learn more](#)



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

Dassault Systèmes is a catalyst for human progress. We provide business and people with collaborative virtual environments to imagine sustainable innovations. By creating virtual twin experiences of the real world with our 3DEXPERIENCE platform and applications, our customers can redefine the creation, production and life-cycle-management processes of their offer and thus have a meaningful impact to make the world more sustainable. The beauty of the Experience Economy is that it is a human-centered economy for the benefit of all – consumers, patients and citizens.

Dassault Systèmes brings value to more than 300,000 customers of all sizes, in all industries, in more than 150 countries. For more information, visit [www.3ds.com](http://www.3ds.com).



**3DEXPERIENCE®**



**Europe/Middle East/Africa**  
Dassault Systèmes  
10, rue Marcel Dassault  
CS 40501  
78946 Vélizy-Villacoublay Cedex  
France

**Asia-Pacific**  
Dassault Systèmes  
17F, Foxconn Building,  
No. 1366, Lujiazui Ring Road  
Pilot Free Trade Zone, Shanghai 200120  
China

**Americas**  
Dassault Systèmes  
175 Wyman Street  
Waltham, Massachusetts  
02451-1223  
USA