INSIGHT GUIDE

OPERATIONAL RESILIENCE: A THREE-STEP STRATEGY

How financial institutions can virtually optimize their business operations in a single secure platform

DASSAULT SYSTEMES

WHY OPERATIONAL RESILIENCE MATTERS

Global regulators are requiring financial firms to increase their operational resilience in the face of disruptions. Affecting customers, the global financial system and entire economies, these disruptions come in various forms, chief among which are:

Coronavirus pandemic

Work from home mandates are challenging retail financial service employees' ability to meet customer needs.

Systemic changes

Application-based and systemic changes account for 91% of disruptions.

Cybersecurity attacks

According to Akamai, financial services firms had to face over 750 million attacks in 2021 alone.

Natural disasters

Floods, fires and earthquakes are examples of localized events that can severely affect business services' office buildings, branches and data centers.

To meet regulatory requirements and overcome the impact of these disruptions on their ecosystems, institutions must first increase their operational resilience. It should start with the right digital transformation strategy.

The reality of progress

Most institutions are ready to transform for operational resilience. A survey by ITRS Group shows that 99% of firms have started their digital transformation. Furthermore, at 70%, digital transformation is the largest single source of change in the global IT environment.

However, digital transformation readiness and initiations alone are not enough to be resilient. Here's why:

53%

Approximately 53% of global financial service organizations still suffer unplanned downtime worth more than one business day per year. (Source: IRTS Group)

22%

Only 22% believe they can adapt to major disruptions. (Source: Forrester)

To achieve true operational resilience, institutions must therefore accelerate their digital transformation strategy. This is where the virtual twin-backed modeling capability on the **3DEXPERIENCE®** platform can provide support.

Increase resilience virtually

On the platform, financial institutions can use solutions based on model-based systems engineering (MBSE) principles to create a robust, live data-backed virtual twin that accurately models their entire operational ecosystem.

The platform leverages existing practices from the aerospace and defense (A&D) and manufacturing industries that enable accurate monitoring and prediction of parts and process failures. Institutions can rely on the same concepts via the virtual twin's predictive analysis capability to anticipate and prevent process and application failures – and ultimately strengthen their operational resilience from there.

The live model, which is at the core of the virtual twin experience on the platform, can help institutions bring their business services closer to their operations and technologies in three steps:

STEP 1:

MAPPING AND MODELING

Financial services thrive on large and complex operational ecosystems that grow bigger over time with each merger, acquisition or new business. To map out their entire systems and processes can be challenging – but it does not have to be with advanced Dassault Systèmes solutions coupled with the virtual twin capability on the integrated **3D**EXPERIENCE platform.

a. Identify top-priority items

Regulators agree that to be operationally resilient, institutions must first identify important business services within a visibly established deadline. To do this, they need to not only map but also model entire systems and processes correctly for transparent change assessment.

> "Modeling their important business services' ecosystem with the virtual twin experience on the **3D**EXPERIENCE platform allows institutions to understand holistically all processes, technologies and dependencies that drive their business."
>
> **Taherah Kuhl**,
> Vice President, Business Services Industry,
> Dassault Systèmes

Meanwhile, the continuous stream of live data insights provided by the virtual twin can help institutions assess real-time and potential changes with more clarity. Overviewing the insights within the single live model itself further supports the understanding of all the changes that affect the entire enterprise – and what to do about them.

Go beyond flow charts

Understanding a process holistically requires visibility across all dependencies and sequences.

With CATIA's standards-based modeling solutions, institutions can leverage the system-of-systems approach to design, simulate and analyze a comprehensive enterprise model that captures five key pillars impacting the business:

- Technology
- Third parties
- People
- Processes
- Dependencies

b. Boost effective collaboration

Integrating relevant business expertise into the mapping and modeling process requires excellent collaboration between all assigned parties across the enterprise.

With CATIA Cameo solutions, institutions can use plain English glossaries and a drag-and-drop interface to make the entire modeling experience more accessible and usable across all stakeholders. This way, institutions can easily foster a standards-based means of communication that all parties can understand when describing problems and agreeing on solutions.

Meanwhile, accessing live data insights in the virtual twin enables all stakeholders to observe real-time changes more accurately and make more precise decisions together.

c. Manage data privacy seamlessly

The combination of usability and virtual twin-backed modeling capability on the **3D**EXPERIENCE platform enables institutions to analyze and manage private customer data safely – all in a single secure environment.

"The platform's secure environment effectively enables institutions to bring business owners into the process. Those who are closest to the process and its requirements can be the ones informing the model accurately," Kuhl said.

In turn, the secure integration of business owners can drive accuracy, which helps create a richer model incorporating people, processes and third parties. "Creating such a model with our Teamwork Cloud solution is key to operational resilience," Kuhl said.

Key benefits of Teamwork Cloud

Institutions can use the solution's single, easy-to-use interface for:

- Simple user accounts management
- Secure access control
- Seamless Lightweight Directory Access Protocol integration
- Secured connection and project configuration

STEP 2:

SIMULATION AND STRESS TESTING

Today, institutions are often upgrading to new technology -based processes or adding new services to their portfolio. As such, they should be able to assess enterprise-wide changes across their ecosystem easily in order to identify potential overlaps or conflicts. Accurate simulation reduces costs and potential downtime while enhancing operational resilience.

With simulation capability on the **3D**EXPERIENCE platform, comprehensive assessments can take place before the changes occur.

Thrive with the power of simulation

> "When a bank incorporates a digital payment application (or app) into its online banking portal, there will be other systems naturally impacted within the scenario."
>
> **Taherah Kuhl**,
> Vice President, Business Services Industry,
> Dassault Systèmes

"The peer-to-peer (P2P) transfer is a great example, as it involves data that point to where the transferred money comes from and where it is going. These data must be validated against a database so it reaches the right bank and does not end up in limbo," Kuhl said.

A payment app must be able to ensure that there is sufficient balance in the sender's account while overseeing its latest transactions. However, some systems governing these transactions may only update overnight, which is why only a portion of recent deposits may be available for withdrawal. Meanwhile, linking the P2P option to a credit line kicks off another process involving credit agencies – all of which must happen instantaneously.

By simulating a complete model of their operational ecosystem on a single secure platform, institutions can quickly identify and answer the following questions:

- Where do the data come from and when?
- Which provider did the data come through?
- Which service-level agreement (SLA) did the data come with?
- What time did the transaction occur?
- To which part of the ecosystem will the data go?
- Which products and customers will the data affect?

Institutions can further leverage the platform's virtual twin capability to test and simulate different real-life scenarios. This way, they can easily see how these scenarios play out across the ecosystem – all the way to the customer.

Stress test the optimal way

With all data points across the ecosystem consistently connected in a single model on the **3DEXPERIENCE** platform, institutions can effectively address any stress in the four key areas shown below.

Key stress area	Solutions
a. The role of third parties	• Leverage the **failure mode and effects analysis (FMEA) logic** used in A&D and manufacturing industries on the platform. • **Maintain all information** around third parties, including SLAs, system-based issues and historical downtime durations and processes.
b. Disaster recovery and business continuity	• Create **a real-time view of critical assets** across the enterprise to inform disaster recovery and business continuity strategies.
c. Regulatory changes	• Accurately see where additional **checks and reports** must be generated, as regulations change and evolve. • Rely on easy-to-use customized dashboards to achieve seamless **auditing compliance**.
d. Integration of new services and technologies	• Eliminate guesswork-based practices from all integration processes with **end-to-end visibility**. • **Test and validate** new technologies and services in the information model itself. • Conduct **impact analysis** to identify all relevant system-based functions and information, and parties responsible for interdependencies.

STEP 3:

COMPLETE VISUALIZATION

A comprehensive virtual twin of the whole enterprise provides institutions with end-to-end visibility, enabling them to achieve high-level goals across their entire value network.

Explore the ways that the **3DEXPERIENCE** platform's virtual twin capability can help all stakeholders in the enterprise achieve these goals effectively.

Goal	How to achieve
Accessibility	• Stakeholders can securely access crucial information in a **single-source live data** model for transparency. • They can simulate to validate the information model in various real-life scenarios before making any decisions.
Integrated collaboration	• Stakeholders can improve the way they observe, test and manage live data together by creating and sharing **customized dashboards**. • They can track and update real-time information as they occur via **communication**, **collaboration and project management tools** on the platform.
Project management	• **Full visibility** of the value network inspires all stakeholders to think more about specific data feeds and their associated processes and systems. This ultimately helps them make better decisions and improve their project management.
Risk management	• **Live data insights** accessible in the virtual twin model can explain the health of critical assets at any point of the network, at any time. • Stakeholders can perform **predictive analysis** to measure the impacts of present or future decisions and disruptions on their ecosystem – and optimize steps toward operational resilience across all services from there.

There are four ways that full visualization can benefit the industry in the long run:

- Streamline system upgrades and new technology implementations. Change can take place ahead of time in the virtual twin, thus minimizing unnecessary issues.
- Decrease downtime ad increase operational resilience through accurate stress tests and simulations.
- Identify conflicts through visualization when adding or merging businesses and processes.
- Improve the client experience through accurate visualization of the customer experience and real-time, data-driven decisions..

"In a few short years, every large organization should be able to fully visualize its operational ecosystem. The virtual twins of entire enterprises will be the powerful differentiators that can drive tremendous operational efficiency and meet regulatory obligations more quickly and holistically," Kuhl said.

READY TO BE MORE RESILIENT?

A virtual twin of your entire enterprise creates a shared understanding of your financial services and how to keep them running, no matter the disruption you face.

For more information on operational resilience for business services, explore our resources.

Ready to plan your operational resilience strategy on the **3D**EXPERIENCE platform? Connect with us today.

CONTRIBUTING EXPERT

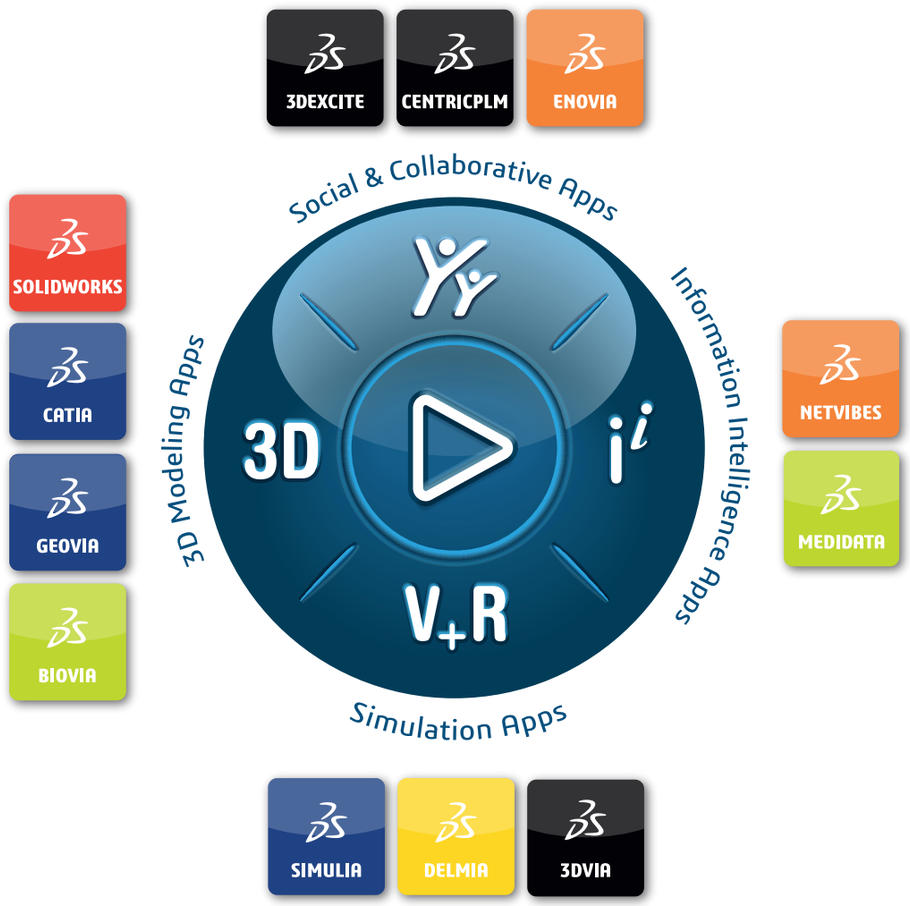
Taherah Kuhl,
Vice President, Business Services Industry, Dassault Systèmes

With more than 25 years of expertise in sales, strategy and operational business development, Kuhl has been the driving force in meeting various multi-million dollar revenue targets. She helps Dassault Systèmes identify and overcome business challenges by leveraging her experiences in growth and turnaround organizations over the years.

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

Dassault Systèmes, the **3D**EXPERIENCE 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 **3D**EXPERIENCE 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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