DASSAULT SYSTEMES

CONTINUOUS PRODUCT DEVELOPMENT IN THE CLOUD

Transforms productivity from the bottom up on a cloud-based collaborative platform.

INTRODUCTION

Getting a complex product to market can be like going on a road trip. You have your destination set, an itinerary to follow, and supplies to last you the journey. You head off with high expectations, except it's never that simple. Invariably, unexpected things happen, pre-existing plans get thrown out of the window, and adjustments must be made on the fly.

Similarly, when it comes to successful product development, things can often go off-track – around **70% of projects fail**, typically by running over-time or over-budget. And the potential for unexpected problems is even more pronounced in the current global pandemic – where uncertainty is the only thing that is certain.

In these challenging times, and with products becoming ever more sophisticated, personalized and modular, the traditional siloed product development and data management approaches are proving to be unwieldy and complex, and unable to effectively extend collaboration to all stakeholders.

How do you maintain visibility and control over all the ongoing changes to a project, across multiple teams? How do you bring together the various siloed systems that you need to successfully take a project to fruition? How do you not only manage but utilize all that data for effective decision making.

TODAY'S MANUFACTURERS' CHALLENGES

Today's complex product development process requires more than just design data management. Manufacturers face a number of key challenges they must overcome:

- Inefficient time spent by designers, rather than actually designing

- Difficulties in establishing governance, responsibility and priority within multi-discipline product development

- Version control and the impact of siloed changes throughout the entire product lifecycle

- Supporting remote working – more important than ever in the current climate

- Disconnected project management and governance that leads to delays and cost overruns

Clearly, a different, more inclusive and collaborative approach is needed. A modern, cloud-based and collaborative platform could be the answer – one that can not only overcome these existing challenges but meet the demands of a rapidly changing world by delivering rich, real-time data and cross-functional continuous product development.

SUCCESS FROM THE BOTTOM UP

The Dassault Systèmes **3D**EXPERIENCE® platform offers a range of apps to help manufacturers realize a cloud-oriented and collaborative platform approach to product development. The **3D**EXPERIENCE platform, along with specialized, process-based solutions for product lifecycle management (PLM) and design collaboration, can help completely reimagine how products are developed and projects managed.

By digitalizing and democratizing product and data management, the cloud-based platform enables organizations to:
- cut costs,
- reduce their time-to-market,
- support remote workforces,
- approach projects in a far more agile, collaborative and innovative way.

But what does a collaborative, cloud-based, platform approach look like in practice?

ESTABLISH A COMMON DATA MODEL

At the heart of effective, collaborative product development is the establishment of **a single, common data model**, that pulls together critical product and project information, from CAD data to project timetables. This gives managers the visibility and control they need to effectively set project goals, and ensure the entire extended team is fully aligned and equipped to deliver on those goals in a timely and effective manner.

For example, the **3DEXPERIENCE** platform can help establish an easy-to-use, standards-based collaborative data architecture for bringing together 3D CAD data, technical specifications and other project assets into a common product definition for product development.

CREATE A FOUNDATION FOR FLEXIBLE GOVERNANCE

Building on this data model, functional managers are then provided a bedrock for establishing project governance practices. Designing effective governance structures means revealing the data across an enterprise, so all stakeholders can participate, track and share in key work processes.

The 3DDashboard view on the **3DEXPERIENCE** platform enables this visibility, allowing managers to assign responsibilities and prioritize work between project teams.

SIMPLIFY DATA ACCESS

Product data like CAD files is central to product development, but it can be hard to control who has access to what and when. The **3DEXPERIENCE** platform gives managers an instantly adjustable permissions system. It also makes it easier for non-CAD stakeholders to access design information, in real-time, on-line with no need to download files that become unsecure or outdated.

This translates into more efficient processes. For example, auto manufacturer NIO used the **3DEXPERIENCE** platform to help multiple stakeholders access a range of development data online, allowing them to significantly speed up their time to market. Thanks to the platform they were able to launch their first model in just three years – two years less than the process would typically take.
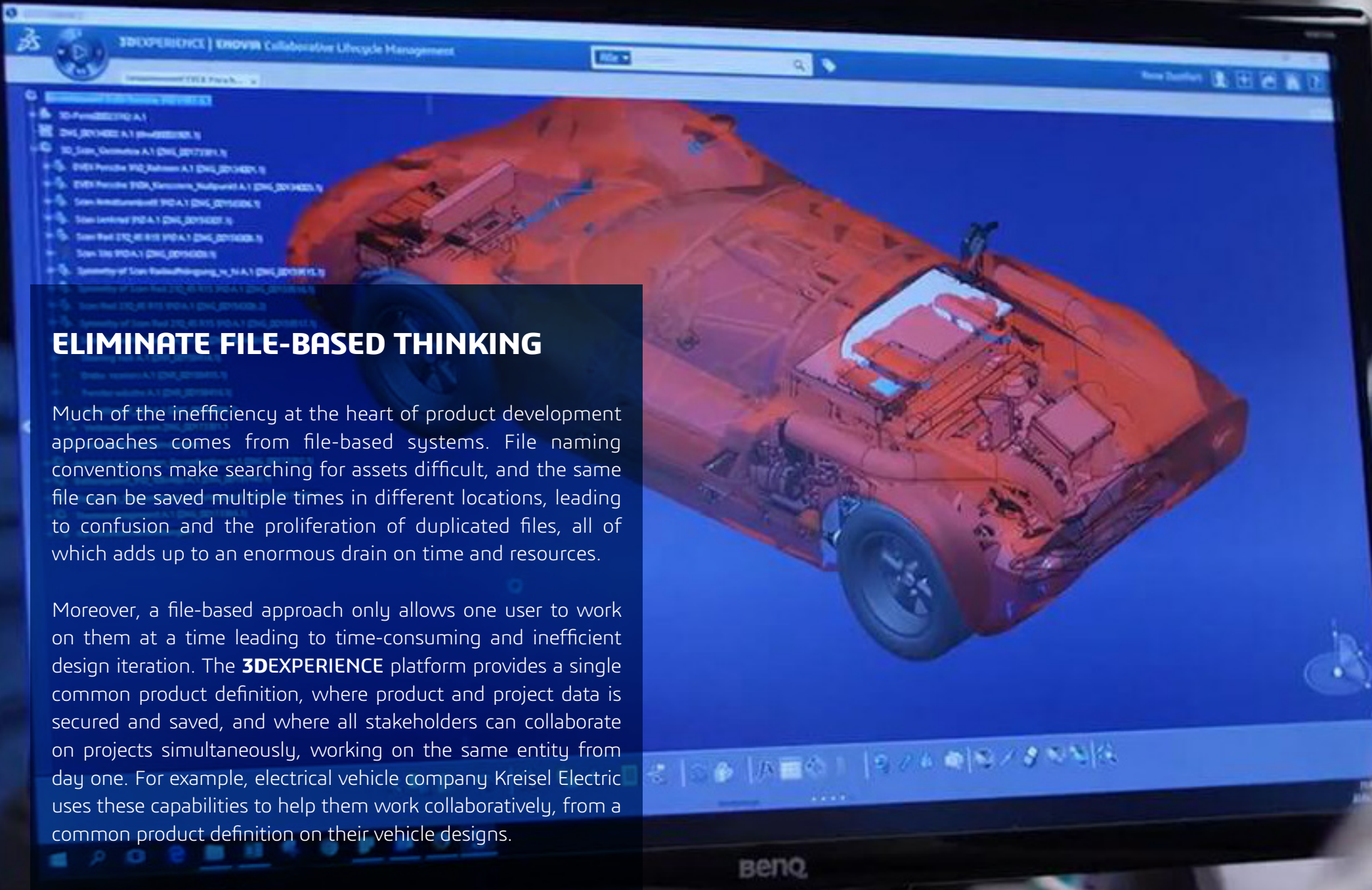
ELIMINATE FILE-BASED THINKING

Much of the inefficiency at the heart of product development approaches comes from file-based systems. File naming conventions make searching for assets difficult, and the same file can be saved multiple times in different locations, leading to confusion and the proliferation of duplicated files, all of which adds up to an enormous drain on time and resources.

Moreover, a file-based approach only allows one user to work on them at a time leading to time-consuming and inefficient design iteration. The **3D**EXPERIENCE platform provides a single common product definition, where product and project data is secured and saved, and where all stakeholders can collaborate on projects simultaneously, working on the same entity from day one. For example, electrical vehicle company Kreisel Electric uses these capabilities to help them work collaboratively, from a common product definition on their vehicle designs.

TRACK WORK PROGRESS

The 3DDashbord allows managers and team members clear visibility of to-do, in-progress, and completed tasks, in the same view as project relevant documents and assets. These tasks and deliverables are connected, allowing project leaders to gain a clearer view of project statuses, resources and timelines, so they can see information in real-time and allocate resources more effectively.

Creating a **digital audit trail** can also help projects easily identify errors in production and move to address them in a timely manner. Being able to have all project and product data connected in the same platform allows the buildup of successful practices, allowing knowledge and know-how to grow and be re-used in the future.

REDUCE SECURITY RISKS

Product development systems are often distributed over multiple nodes and networks, including personal computers, and governed by different security regimes. The Dassault Systèmes cloud offering is protected by a range of security protocols. By consolidating all critical product-related data into this single, secure location, the **3D**EXPERIENCE platform establishes an effective cybersecurity regime.

DEVELOP ANALYTICS CAPABILITIES

Another advantage to working on the cloud is that all product and project data is readily available for analysis. The **3DEXPERIENCE** platform captures and analyzes any PLM data, helping cut through the noise and preserve only the most critical business information. This can then be used to accelerate and enhance business decision-making, helping move strategic project analytics off spreadsheets and onto a shared platform that is deeply integrated with ongoing project data.
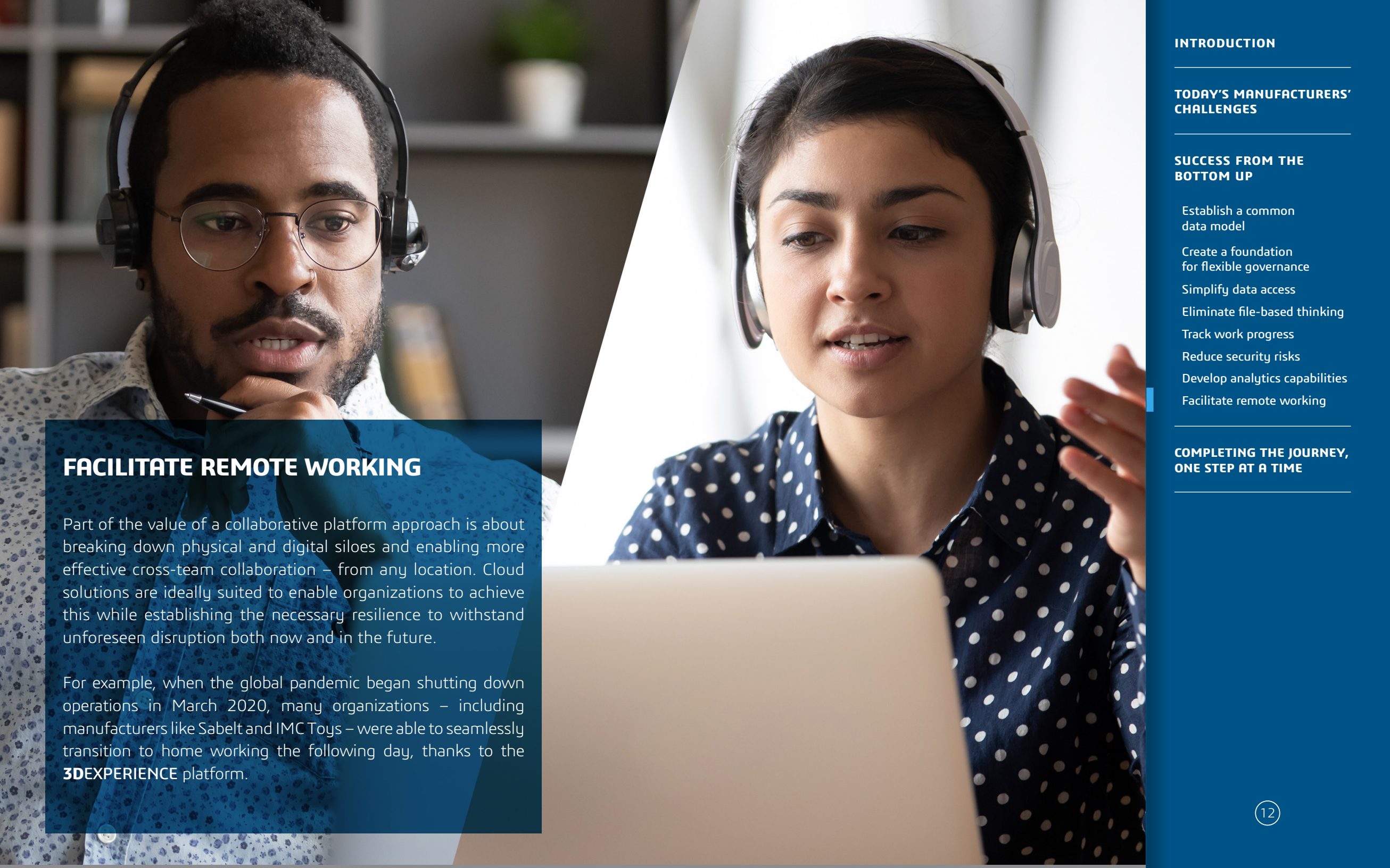
FACILITATE REMOTE WORKING

Part of the value of a collaborative platform approach is about breaking down physical and digital siloes and enabling more effective cross-team collaboration – from any location. Cloud solutions are ideally suited to enable organizations to achieve this while establishing the necessary resilience to withstand unforeseen disruption both now and in the future.

For example, when the global pandemic began shutting down operations in March 2020, many organizations – including manufacturers like Sabelt and IMC Toys – were able to seamlessly transition to home working the following day, thanks to the **3D**EXPERIENCE platform.

COMPLETING THE JOURNEY,
ONE STEP AT A TIME

Ultimately, collaborative product development isn't about single fixes – it's about transforming the organization into a data-driven organization.

Remember our road trip? Instead of embarking on it with a paper map covered in pencil notes, product development within the data-driven organization is like going on a journey with state-of-the-art GPS, updated with real-time traffic information and feedback of other users.

Similarly, instead of relying on the assumption that timelines will unfold as planned, the **3D**EXPERIENCE platform provides a real-time environment, where plans are given space to change as-and-when events on the ground do, and where everyone can work together to most effectively navigate these challenges.

And at the heart, this translates to radically more effective teams. For instance, project managers often spend much of their time (and expertise), simply collecting data, coordinating across various systems, and performing basic governance.

The **3DEXPERIENCE** platform can reduce this non-value-added time spent by up to 25-30%, allowing manpower to be refocused on more practical value-added tasks.

And its remote working capabilities grant a greater degree of flexibility and resilience – particularly in the face of the effects of the global pandemic.

Yet many companies are still reluctant to change their processes. Operational inertia prevails, and legacy infrastructure can be a significant practical and cultural obstacle to implementing the solutions that can allow for truly agile product development. But among the main virtues of the **3DEXPERIENCE** platform is in its ability to flexibly and cost-effectively scale solutions, allowing companies to transform at their own pace.

All that remains is the courage to take the first step – once they do that, companies can begin to truly thrive in unprecedented times.

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LEARN MORE

To learn more about the **3DEXPERIENCE** platform, please visit our **website**.

INTRODUCTION

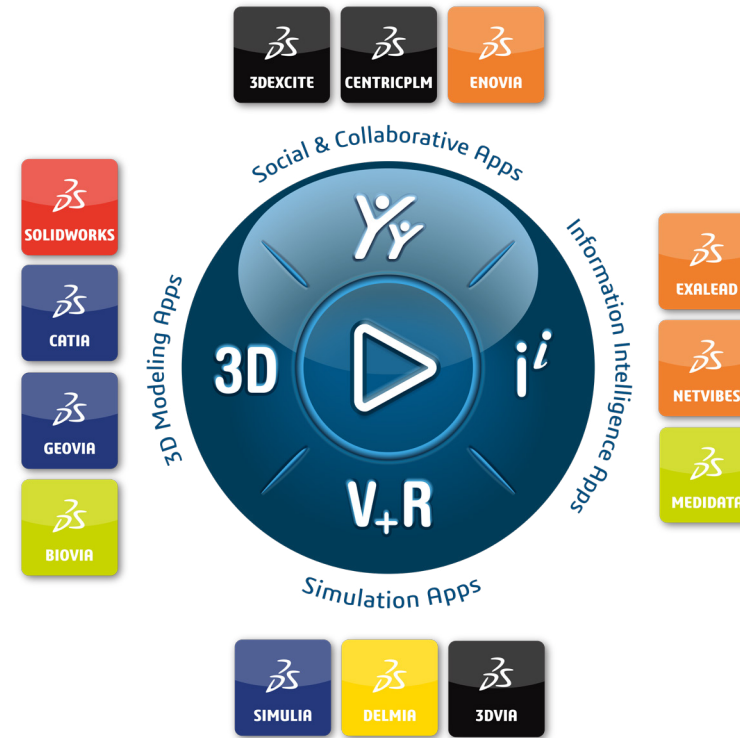**TODAY'S MANUFACTURERS' CHALLENGES**

SUCCESS FROM THE BOTTOM UP

Establish a common data model

Create a foundation for flexible governance

Simplify data access

Eliminate file-based thinking

Track work progress

Reduce security risks

Develop analytics capabilities

Facilitate remote working

COMPLETING THE JOURNEY, ONE STEP AT A TIME

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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