



**3DEXPERIENCE**

## INDUSTRIAL EQUIPMENT **SMART & SYNCHRONIZED**

A systematic approach to mechatronics with all engineering disciplines in a single environment



### **COMPLEXITY MADE SIMPLE TO BOOST PERFORMANCE AND RELIABILITY**

Manufacturers expect increased function and power from machines in order to be more responsive to customer demands. While embedding software and electrical components into equipment creates a smarter and more flexible machine, these systems can become highly complex and coordinating multiple disciplines can be difficult.

Dassault Systèmes' Smart and Synchronized powered by the **3DEXPERIENCE**® platform synchronizes all of your engineering disciplines in a single collaborative business environment that ensures full traceability, testing and validation from needs identification to product validation.

## SMART AND SYNCHRONIZED

### Reduce errors with multidisciplinary design

Manufacturers are challenged to manage the complexity of multidiscipline systems and to streamline cooperation between departments that often work in silos. Validating the broad outline of a multidisciplinary design early avoids late-stage errors and ensures on-time and on-budget delivery.

With **Smart and Synchronized**, you transform requirements into a machine's architecture early in the development cycle. Requirements are traceable throughout the development process to ensure completeness of design and that equipment is properly sized.

### A unique model foundation for all designs

Machines are equipped with mechanical, electrical and fluidic systems that must be designed together for efficient interference checking and change management.

**Smart and Synchronized** provides designers with a consistent and unique model that is the foundation for mechanical, electrical and fluidic design.

### Early Simulation to guarantee performance

Simulating a machine's performance early in the development process helps improve designs before manufacture.

With **Smart and Synchronized**, you test the behavior of a machine in a realistic virtual environment to validate design concepts. Through virtual simulation, you optimize the behavior and improve the quality, performance and reliability of your products.



### Validate machine control programs before production

Very often equipment control programs are designed independently of the machine development and risk being poorly integrated once finished or not updated when changes are made to the design.

With **Smart and Synchronized**, control programs are an integral part of a machine's development, and validated before actual production so that reduce the commissioning phase and maintenance cost.

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

Dassault Systèmes, the 3DEXPERIENCE® Company, provides business and people with virtual universes to imagine sustainable innovations. Its world-leading solutions transform the way products are designed, produced, and supported. Dassault Systèmes' collaborative solutions foster social innovation, expanding possibilities for the virtual world to improve the real world. The group brings value to over 190,000 customers of all sizes in all industries in more than 140 countries. For more information, visit [www.3ds.com](http://www.3ds.com).

## Verify machine performance levels

Designing machines that manufacture metal products so that they function at peak capacity is a valuable sales argument for manufacturers and a considerable money-saver for customers.

With our solutions, OEMs verify, before proceeding with production, that a machine can correctly handle certain types of components with a performance level that is in line with customer expectations.

## Simulate your production unit

Companies need to define and optimize their production unit as a whole if they want to improve efficiency.

With **Smart and Synchronized**, you have a precise view of how all machines in your production unit will function together, allowing you to optimize your manufacturing processes before actual production.

### KEY BENEFITS

- Simulate machine behavior early
- Ensure end-to-end traceability
- Master system complexity
- Coordinate multidiscipline design teams
- Reduce the number of physical prototypes
- Improve communication between stakeholders

**Smart and Synchronized** is available **On Premise and On Cloud**, both providing the ease of use and power of the 3DEXPERIENCE platform.

### On Cloud Advantages:

#### Secure Collaborative Environment

- Real-time access for knowledge sharing

#### Lower Cost of Ownership

- Minimized hardware, facilities and other operations expenses

#### Rapid Deployment

- Accelerated access to new solutions and updates

#### Improved User Experience

- Agility for profit-driven projects

#### Scalability

- Flexibility for growing or fluctuating bandwidth demands

