

# ACCELERATE BATTERY INNOVATION THROUGH VIRTUAL TWINS

Empower battery R&D, engineering and manufacturing by modeling your product, process and business.

## OVERVIEW

Leading innovation teams across many industries are leveraging modeling and simulation for their products, processes and resources.

Virtual twin experiences enable battery innovators to leverage real-time data for modeling, simulating, planning and executing efficient and scalable operations.



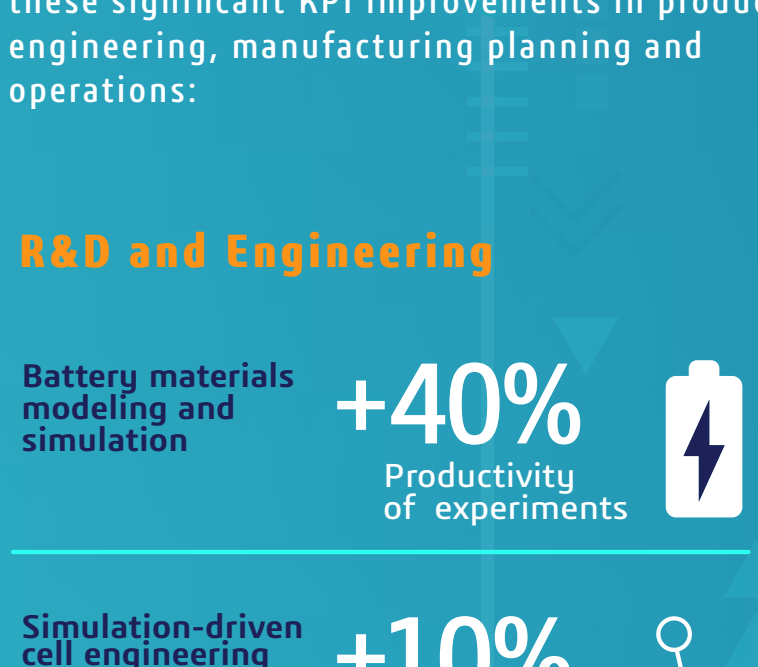
By integrating the entire value network, you will be able to accelerate and de-risk innovation: From molecule design to planning and running giga factories.



The 3DEXPERIENCE® platform delivers a collaborative, secure and scalable environment with world-class applications available on premise and on the cloud.

## BUSINESS IMPACT

By working on a common platform for modeling and simulation, you can successfully:



Reduce project complexities and risks

Increase visibility and traceability

Improve efficiencies to deliver on time, cost and quality targets

Dassault Systèmes' customers have realized these significant KPI improvements in product engineering, manufacturing planning and operations:

## R&D and Engineering

Battery materials modeling and simulation **+40%** Productivity of experiments

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Simulation-driven cell engineering **+10%** Speed of New Product Introduction (NPI)

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Integrated project governance **-10%** R&D costs

## Quality and Compliance

End-to-end traceability **-5%** Compliance and reliability defects

Integrated requirements verification **+20%** Issue resolution efficiency

## Engineering-to-Manufacturing Collaboration

Model-based collaboration **-30%** Physical prototypes

Early manufacturing involvement **-5%** Cost of quality

Virtual twin modeling for shop-floor planning **-20%** Time wastage

## Asset and Workforce Productivity

Predictive maintenance **-30%** Manufacturing cycle time

Real-time analytics **+10%** Efficiency and operation rates

## Giga Factory

Virtual factory and workforce planning **-2 Months** Ramp up time

Supplier modeling and one collaboration platform **+20%** Decision-making speed in operations

Modularization strategies **+5%** Overall equipment effectiveness

Discover how virtual twin experiences can empower your battery innovation [here](#).