



3DEXPERIENCE®

ENERGY, PROCESS & UTILITIES **EFFICIENT PLANT OPERATION**

Deliver accountable, reliable, and predictable performance



ENHANCE OPERATIONAL FLEXIBILITY WITH SUPERIOR SAFETY AND COMPETENCY

Changing requirements and regulations, rising cost pressures, and workforce turnover are making it increasingly difficult to operate complex production facilities and to reconcile production and maintenance priorities.

Powered by Dassault Systèmes' **3DEXPERIENCE®** platform, the **Efficient Plant Operation** Industry Solution Experience helps operators and service companies enhance production flexibility and improve the safety and competency of their workforce.

KEY SOLUTIONS TO HELP STREAMLINE PRODUCTION AND IMPROVE MAINTENANCE

Requirements-to-operations linking and checking

Whether they are regulations, norms, standards, or contracts, accurately managing frequently changing requirements is an increasingly complex challenge. **Efficient Compliance** helps audits, accelerating compliance demonstrations and minimizing claims and issues. Requirements are broken down into managed objects. These can be linked to the infrastructure engineering configuration or to measurements from plant sensors. Any change in requirements content, infrastructure design, or operational measurement that creates a possible non-conformance will be identified.

Integrated configuration management and modification control

A plant "Digital Twin" helps breaking down engineering siloes and enables fully multidisciplinary integration. By delivering such a unique tool for production and maintenance operations optimization, **Efficient Configuration** provides valuable operational accuracy and business flexibility. Engineers working in civil, fluidic, electrical or equipment disciplines are now able to work with a single source of information along with project management, costing, and planning specialists. Engineering modifications can then be managed throughout the lifecycle of the asset in seamless digital continuity, including collaboration with any third-party tool or organization.

Equipment and systems analysis with multiphysics simulation

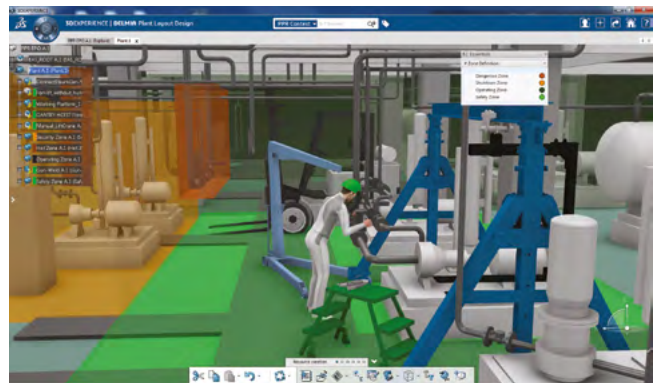
By offering resources to reliability engineers to assess the evolution of equipment or systems throughout their lifecycle, even beyond design-basis events, **Fitness For Service** helps demonstrate safety and efficiency. In this way, financial justifications become more robust and can be delivered faster. By combining finite element analysis and functional or dysfunctional simulation, multiple scenarios can be efficiently explored. This helps ensure that the safest and most efficient option is chosen when a part of the infrastructure must be re-rated, repaired, or replaced.

One-of-a-kind overhaul modeling and multi-dimension optimization

Massively parallel co-activity, combined with many one-of-a-kind procedures that are rarely performed onsite, create unique challenges during shutdowns, turnarounds, and outages. **Efficient Overhaul** helps to improve personnel safety and efficiency, while cutting the accident rate and the amount of rework. It combines multi-dimension simulation and scheduling, merging space, time, budget, human resources or regulatory constraints. Tasks are prepared taking into account ergonomics analysis, and documented with 3D work instructions. Thus, the critical path progresses with improved certainty.

Key benefits:

- Unified requirements, engineering, and measurement structure for extensive control and reliability
- Seamless connection between 3D modeling and time to maximize personnel efficiency and assets availability
- Powerful suite of analytic solutions to optimize system safety and production performance throughout asset lifecycle
- Enterprise-wide collaborative portal to enable multidisciplinary teamwork and shorten business cycles



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.

