DELMIA

MAINTENANCE & REFURBISHMENT Solutions for Energy

Plan, Simulate and Validate Outage Schedules in 4D

Even “planned” outages are difficult to execute. DELMIA’s Virtual Maintenance solution revolutionizes the planning of your capital projects, reducing overall project risk while improving the quality of planning and validation processes.

DELMIA’s Virtual Maintenance solution enables 4D planning, simulation and validation of outage schedules for capital projects. The outage could be for maintenance, major refurbishment – or even new construction. Using DELMIA, companies plan scheduled activities in detail and avoid the unforeseen problems that result in rework and delays. In addition, human, mechanical equipment and robotic simulations can be performed to reduce the risk of work-related injuries, ensure the health and safety of workers, and evaluate equipment. Work efficiency is also increased by providing upfront training.

It is essential for companies in the energy industry to minimize expensive delays in projects which can often cost more than $1 million per day. With so much at stake, organizations need a surefire way to execute maintenance and outage projects with greater efficiency, minimal downtime and reduced risk.

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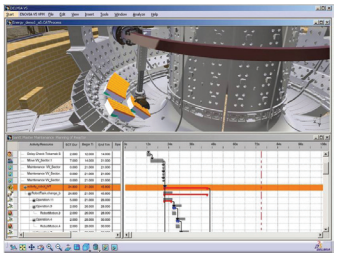
Challenges

- Controlling project costs
- Optimizing the project schedule and workforce requirements
- Minimizing project risk by avoiding unforeseen issues that result in expensive rework and delay
- Ensuring the health, safety and comfort of workers in hazardous environments
- New and inexperienced workers and contractors working together on critical tasks
- Costly build of physical mock-ups

Solution

- **Minimize Project Execution Risk** and enhance communication by ensuring all stakeholders share the same view of the maintenance process. This includes detailed planning and validation of the schedule with assembly, disassembly, mechanical and human simulation.
- **Ensure Health and Safety** for workers in hazardous environments and minimize the risk of work-related injuries during critical refurbishment projects. Simulate human tasks with detailed ergonomic analysis for equipment installation and removal with clash and clearance checks.
- **Retain Knowledge** to reuse for future projects and train new workers by capturing company know-how and best practices for key maintenance operations. Secure your knowledge using process templates. Use 3D environment and simulations for training.

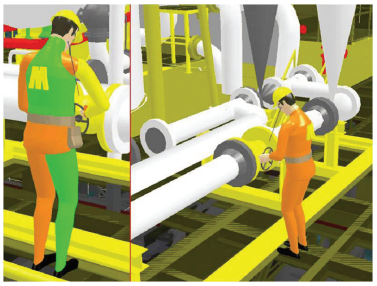


The DELMIA Virtual Maintenance solution links the project schedule to the 3D virtual view of your plant. By simulating critical and complex operations in 3D, you can identify issues and take corrective action, long before the actual outage starts.

Plant outages can cost more than $1 million per day.

Key Features

- Plan scheduled activities in a more detailed 4D environment by linking the 3D models for validation
- Simulate critical human operations with detailed ergonomic analysis to optimize workplace design and ensure worker health, safety and comfort
- Evaluate alternative scenarios virtually in a 3D environment to optimize the project schedule
- Simulate installation and removal paths of equipment and site orientation, including clash and clearance
- Define kinematics and simulate critical operations for cranes and special robots and kinematic devices
- Validate critical tasks in a digital environment without using expensive physical prototypes



DELMIA's Virtual Maintenance solution allows detailed posture and ergonomic simulation for any human task to be performed in the project. Simulating the worker's tasks and procedures ahead of time minimizes health and safety issues and improves regulatory compliance.

For more information visit
http://interactiveshowroom.3ds.com/energy

About Dassault Systèmes:
As a world leader in 3D and Product Lifecycle Management (PLM) solutions, Dassault Systèmes brings value to more than 115,000 customers in 80 countries. A pioneer in the 3D software market since 1981, Dassault Systèmes develops and markets PLM application software and services that support industrial processes and provide a 3D vision of the entire lifecycle of products from conception to maintenance to recycling. The Dassault Systèmes portfolio consists of CATIA for designing the virtual product - SolidWorks for 3D mechanical design - DELMIA for virtual production - SIMULIA for virtual testing - ENOVIA for global collaborative lifecycle management, and 3DVIA for online 3D lifelike experiences. Dassault Systèmes' shares are listed on Euronext Paris (#13065, DSY.PA) and Dassault Systèmes' ADRs may be traded on the US Over-The-Counter (OTC) market (DASTY). For more information, visit http://www.3ds.com.

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