



3DEXPERIENCE®

NATURAL RESOURCES LEAN MINE CONSTRUCTION INDUSTRY SOLUTION EXPERIENCE



DELIVERING ON TIME AND ON BUDGET

At the heart of a new mine construction or expansion project is the efficient use of capital, an effective plant design and the optimal layout of supporting infrastructure to enable the operation to meet its economic expectations. This can be challenging to achieve given the effort, time, and costs required to commission a site and because of all of the participants, requirements, design and construction processes involved.

Dassault Systèmes' **Lean Mine Construction** Industry Solution Experience includes the world's first, and only, 3DEXPERIENCE® platform, which connects every project participant and every project detail together. With a 3D virtual world and advanced project management, engineering design and simulation tools, everyone is aligned to ensuring the mine is delivered on time and on budget.



Personalized dashboards provide real-time project status.

Collaborate to Enable Cost-efficiency

With **Lean Mine Construction**, organizations leverage the **3DEXPERIENCE** platform, an open system which manages and centralizes data from virtually any application, to share and collaborate about every aspect of the project. This allows participants to work in unison, and toward the greatest cost-efficiency, as they design and construct plants and mine site infrastructure.

Test for Design Safety, Environmental and Construction Risks

Lean Mine Construction's virtual 3D world gives project participants the ability to explore plant designs, mine layouts and site infrastructure as they will exist in the real world. This assists them in avoiding cost overruns and delays by facilitating the detection of project design defects. The virtual 3D world also offers a powerful way for its users to visually identify potential safety issues, operational inefficiencies, and environmental impacts prior to construction.

Act Proactively, Not Reactively to Keep Projects on Track

With **Lean Mine Construction** centralizing project information, decision-makers react proactively to real-time data instead of acting too late to outdated, manually compiled reports. Anywhere, anytime accessibility to vital information is provided in a dynamic way that flags risks such as schedule slippages, which could lead to serious delays and put upward pressure on costs. Real-time data access allows schedule adjustments to be identified and made earlier and faster.

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.

Provide New Supporting Tools for Controlling Costs and Improving Project Cash Flow

To assist in improving project cash flow and in cost control, **Lean Mine Construction** helps improve procurement decision-making through the integration of procurement processes with engineering progress to support just-in-time requisitioning. This gives procurers greater ability to avoid the costs of fast-track engineering and parts that arrive to site before they are needed, or arrive too late.

Employ Simulation to Find the Best Plant Designs and Mine Site Configurations

Lean Mine Construction's 4D simulation capabilities enable different plant designs and site layouts and infrastructure scenarios to be tested. Decision-makers have robust tools to assist them in identifying the best options before ground is struck in the real world. With the ability to test fabrication, modularization and assembly prior to manufacturing and construction, cost overruns caused by rework and on-the-fly fixes can be reduced. Simulation can be taken a step further to ensure the plant and mine site designs take into consideration processing requirements. This sets the site on path to productivity from the day it is commissioned.

Leverage Data Today and Tomorrow

Since mining operations are often in production for 20 years or more, **Lean Mine Construction** keeps track of critical project and engineering data. With historical data readily accessible, this information can be used to assist in site infrastructure reconfigurations, plant moves or expansions, and to inform decisions about other capital projects.

INDUSTRY PROCESS EXPERIENCES

The following processes are part of Dassault Systèmes **Lean Mine Construction** Industry Solution Experience:

- Mine Development Work Package
- Mine Project Planning and Execution
- Mine Infrastructure Design
- Mine Facilities Design
- Mine Operation Simulation
- Mining Procurement
- Virtual Mine Construction Simulation
- Mine Construction and Commissioning



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