

ENERGY, PROCESS & UTILITIES OPTIMIZED ENGINEERING

Part of Optimized Plant Construction



CREATE DOCUMENT VISIBILITY FOR ALL STAKEHOLDERS WITH A SINGLE SOURCE OF TRUTH

With duplication of engineering documents to many people from procurement to contractor workers, the risk of using inaccurate versions is real once delivered to the project manager, iterated back to engineering during validation, or later again because of constructability issues on site. Optimized Engineering is part of the Dassault Systèmes Optimized Plant Construction Industry Solution Experience powered by the **3DEXPERIENCE®** platform, focused on delivering a project on time and on budget. All stakeholders have access to the same single source of information, enabling visibility across key project members with access control depending on a user's role and organization. It consistently handles all aspects of the engineering documentation lifecycle, linking planning milestones of engineering document deliveries; the engineering documents themselves in digital format (drawing PDF, spreadsheet tables, etc.); and the validation workflow. Deviations from project planning that could handicap further project execution are monitored, enabling timely correction; and access to the correct document version is always available.

Monitoring engineering deliveries into comprehensive data storage

From the start of a project, a plan defines a delivery calendar of engineering document baselines, often called "construction work-packages". Delivery dates are defined according to downstream requirements. In this way, civil engineering documents will be ready before detailed electric cabling design. Mastering such long delivery plans is a difficult job. In order to ease monitoring while facilitating timely delivery, **Optimized Engineering** associates structured storage of document deliveries with project planning to help improve quality, safety, and productivity. "On demand" status dashboards give full visibility to project managers about delivery status, while alerts are automatically generated when engineering delivers as planned.

Monitoring validation with integrated assurance quality

Work package documents follow multiple levels of approval and sign-off. In general, parties in the approval process can include engineering managers, the project manager, the customer's representative, and the assurance quality person responsible; but it can also include downstream users, such as procurement or construction engineers, and possibly external certification organizations. The multiplicity of individual delays in the audit and validation cycle too often execution. impacts further project Optimized Engineering encourages accountability of individuals and drives quality assurance with a standardized process that highlights deviations. It does so by implementing the concept of a "single version of the truth". Stakeholders have access to the last version of a single, unified document. Electronic validation workflows also enable controlled change management and give the project manager full visibility of the validation progress within the enterprise and external partners.

Ready to use project database for all downstream processes

Large capital projects are often global, and the supplier or final customer may be in another country. Intellectual property often has to be protected or may have to be submitted to export control for review. The information structure created natively with Optimized Engineering also enables access control according to the user's role. Optimized Engineering delivers information security, as well as work productivity gains, to procurement, the construction schedule designer, field surveyors, suppliers, and contractors. They get notification once a work package is validated, and can access the searchable and navigable database to easily find the most up-to-date and approved documents. Optimized Project and Optimized **Procurement** are additional components of the Optimized Plant Construction Industry Solution Experience that benefit from having the proper, ready-to-use information provided by **Optimized Engineering** from the start of a project.





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