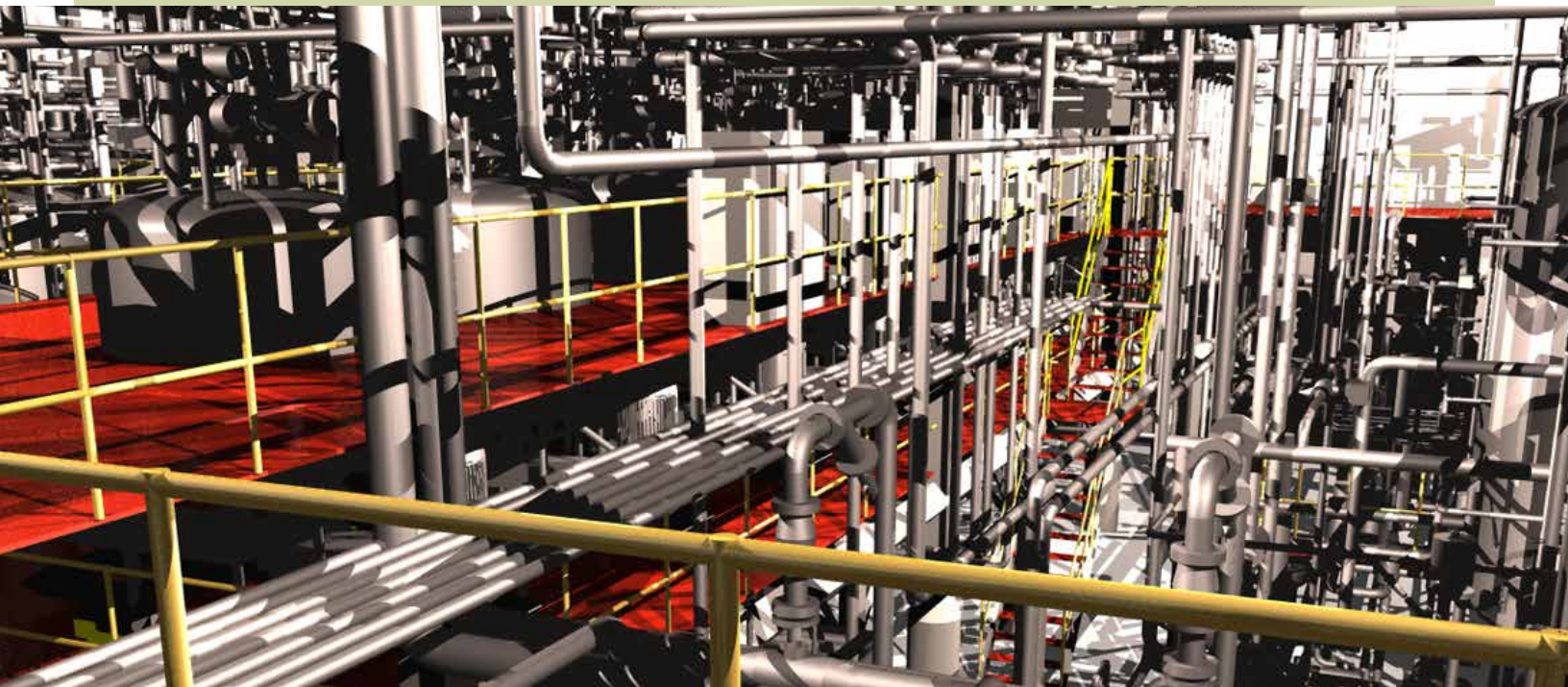


# virtual design & construction



By establishing a collaborative virtual environment, Virtual Design & Construction (VDC) transforms the sequential and separate work processes of designing, constructing, and operating a facility into a concurrent and fluid process. Rework and waste that stems from the hand-off of 2D drawings from one party to another is significantly reduced. Giving construction partners real-time access to the design model shifts critical path activities forward, which can significantly shorten the schedule. Features including enhanced detail and digital model delivery enable proven cost and schedule saving techniques such as pre-fabrication and modularization.

In the field, precise VDC models reduce errors caused by construction documents that are open to interpretation, and the final deliverable is a model that can be used to manage operations on an ongoing basis. VDC can be performed in varying degrees under any kind of delivery model (EPCM, design-build, and design-bid-build). However, because design is the single biggest factor impacting the construction cost, functionality, and usability of a facility or process, VDC delivers the most value when there is early collaboration between parties through a highly integrated delivery method. SSOE has built our VDC platform to accommodate this collaboration so that it can be used universally by all parties throughout the project. In addition to its many other benefits, utilizing a single platform across all parties results in a simpler process for clients.

## What is VDC?

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A revolutionary method of delivering a construction project that allows the designer, constructor, and owner to collaborate within the same integrated model. VDC enables early decision making, better building trade coordination, and enhanced project execution, saving you time, trouble, and money.

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[www.ssoe.com/vdc](http://www.ssoe.com/vdc)

# Saving time, trouble, and money with Virtual Design & Construction

## TIME: Integrated workflows move construction completion dates up by weeks

- Giving constructors real-time access to data and models moves critical path items forward.
- Eliminating the buffers, contingencies, and other hidden costs and wastes embedded in each hand-off compresses the schedule and optimizes the entire process from design through construction and operation.
- Reducing physical hand-offs and increasing direct communication between parties significantly lessens design and approval process times.
- Utilizing an integrated model for detailing makes responses to changes more efficient and avoids the potential cost and delays of rework late in the design process.

## TROUBLE: New solutions to persistent problems

- When all parties work within one collaborative model, higher quality results than when those separate models have to be recreated or merged. VDC streamlines and eliminates hand-offs, rework, and backtracking by coordinating the separate software used for designing, detailing, and construction with one virtual environment resulting in construction-ready models.
- Field errors are greatly reduced by utilizing advanced and detailed clash detection and coordination practices from the start of the design phase through the entire construction process.
- VDC enables a more firm schedule and budget within a tighter range, allowing you to feel more confident in the capital appropriations and production start dates.
- Contracts, planning, and reporting can be tailored to you and your project's needs.
- VDC shifts interaction with supply chains forward to ensure feedback and requirements are incorporated in the original design.

## MONEY: Complete projects significantly below market norm

- Eliminating the waste, rework, and inefficiencies of hand-offs reduces overall project costs.
- Revealing and avoiding failures in design removes common and costly waste in the field.
- Utilizing modularization and pre-fabrication reduces cost per unit while improving quality.

This schedule from a recent capacity increase project demonstrates how utilizing VDC can significantly compress a project timeline by moving from sequential to concurrent work processes.

