



**EPC / EPCM** | for Technically  
Complex Projects

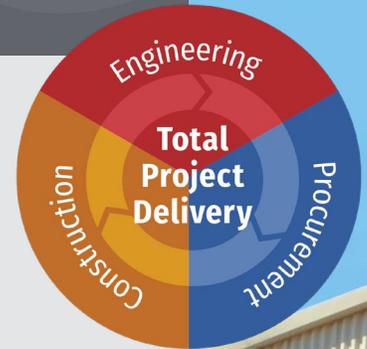
⌘ **ssoe**® making clients successful.

# The SSOE Experience

Our sweet spot: Providing single-source responsibility on technically complex projects

Our design-led approach to EPC / EPCM allows us to provide solutions to the intricate problems that occur on high-stakes projects while maintaining the familiarity and benefits of a design / build approach. **We've determined where we add the most value on construction projects—when your ongoing operations are at stake or a highly technical solution is required, you want our team involved.**

SSOE's Total Project Delivery model ensures our clients have a consistent project leader, construction planning from project start, and no delay in process install due to site construction. While design / build is best applied by an owner who is comfortable with limited technical involvement, EPC / EPCM gives you the ability to be as involved in the design process as desired to make certain you're getting what you want and technically need. Our team's expertise protects you from unanticipated downtime and padded contingency budgets while delivering creative project solutions that meet your needs without compromising your goals. Results you'll see: more predictable and compressed schedules, less waste, and a single point of responsibility.



# Value Promise.

To deliver high-quality projects,  
on schedule, with fewer problems,  
and for lower total cost.

**We promise to save you time, trouble, and money on every project.**

The quest to deliver value drives every decision we make, and we hold ourselves accountable by documenting our savings with more than \$1 billion saved for clients since we started tracking in 2009. It's our commitment, and we're willing to put our fee at risk to reinforce that commitment.

# Great Client Service.

Understand and exceed client  
expectations to deliver unexpected  
benefits.

**It all starts with listening so we understand your expectations up front.**

Delivering the SSOE Experience requires us to determine how to exceed those expectations, put a plan in place to do it, execute the plan every step of the way, and measure the results.

## Value Promise

# 95%

of our fee was returned to  
clients in the form of project  
savings over the last 5 years



## Trusted Relationships

# 150

clients have been  
with us for over  
20 years



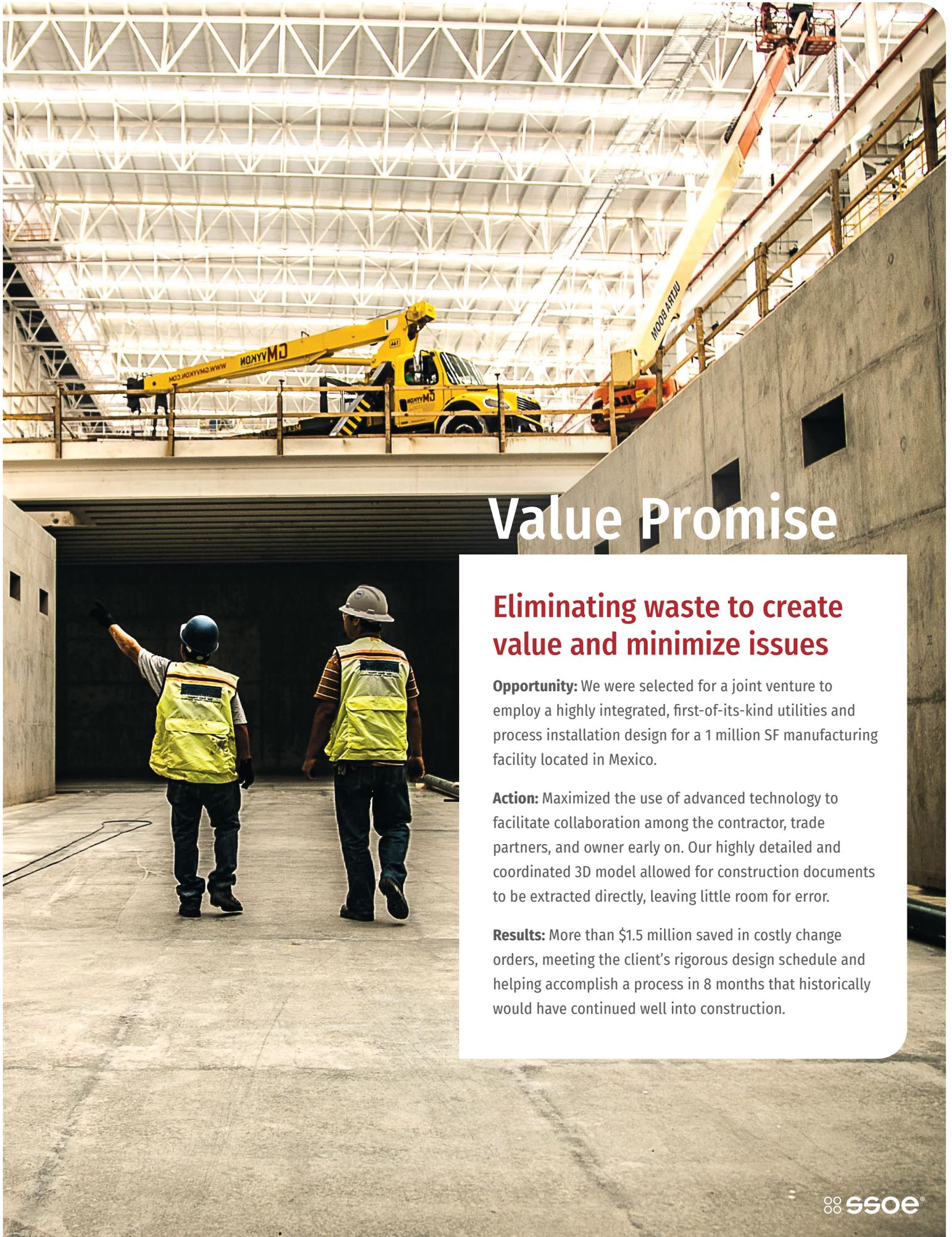


# Safety first. Safety always.

**Protect the SSOE team, protect the client,  
and protect the project—both on and off-site.**

**We focus on safety as it pertains to our internal team, our clients, and our projects by fostering a safety-always culture.**

Safety is one of our core values—and it's our policy to provide employees, visitors, and contractors with a safe and healthy environment.



## Value Promise

### Eliminating waste to create value and minimize issues

**Opportunity:** We were selected for a joint venture to employ a highly integrated, first-of-its-kind utilities and process installation design for a 1 million SF manufacturing facility located in Mexico.

**Action:** Maximized the use of advanced technology to facilitate collaboration among the contractor, trade partners, and owner early on. Our highly detailed and coordinated 3D model allowed for construction documents to be extracted directly, leaving little room for error.

**Results:** More than \$1.5 million saved in costly change orders, meeting the client's rigorous design schedule and helping accomplish a process in 8 months that historically would have continued well into construction.



# What we do.

Our comprehensive services, innovative solutions, and creative methodologies ensure your project's success.



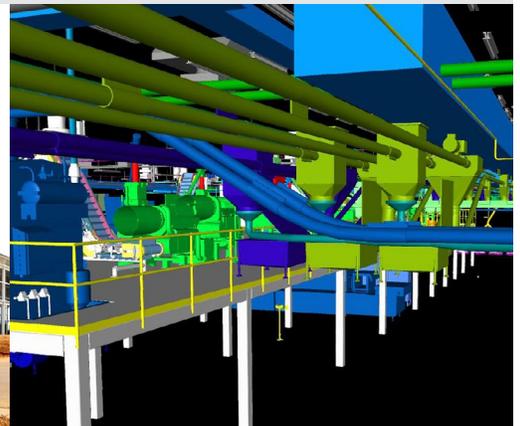
## SERVICES

- Architecture
- Engineering
- Construction Management
- Project Management
- Program Management
- Site Evaluation
- BIM2Fab® Steel
- Master Planning
- Interior Design
- Data / Fire / Security (DFS)
- Procurement



## MARKETS

- Automotive
- Battery Manufacturing
- Chemical
- Commercial
- Consumer Products
- Education
- Energy / Power
- Food & Beverage
- Glass
- Healthcare
- Manufacturing / High Tech
- Pharmaceutical
- Retail
- Semiconductor
- Workforce Development

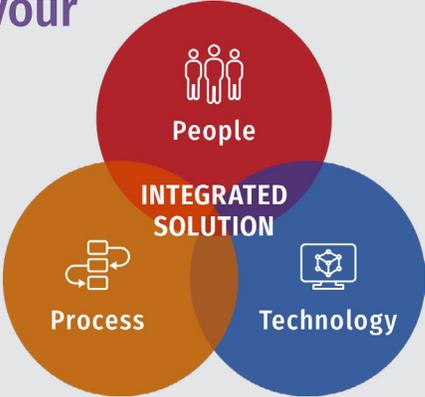


# How we do it.

We'll help you choose the best delivery method for your project based on your specific business drivers—whether that's schedule, cost control, quality assurance, or other identified conditions that will maximize your success.

**Collaborate. Create. Deliver.**

No matter which delivery method is selected, we bring together the people, process, and technology to provide an integrated solution that meets your business objective and gives you the competitive advantage needed in today's marketplace.



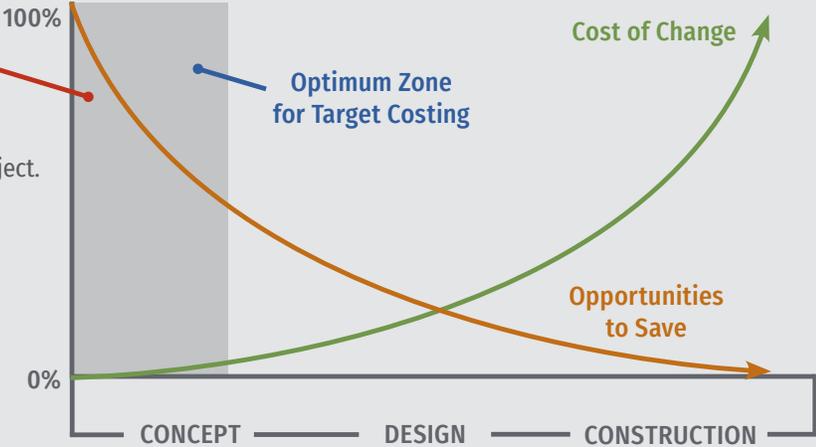
# Best value delivery.

Early project decisions through EPC / EPCM delivery.

### Experts Needed Here

Experts are needed early in the process to make critical decisions to drive the best value for the project.

- Modular construction
- Off-site construction
- Repetitive components
- Sequencing, deliverables
- Technical solutions to construction constraints
- Maximizing workflows
- Lean Project Delivery
  - Model synergy
  - BIM2Fab® Steel detailing and fabrication





## Utilizing Talent: Our People

Design and construction management are selected at the onset of a project—at SSOE, this is one convenient entity. We make sure the design team integrates input from our construction management team's expertise throughout design as opposed to finding issues in construction documents, when it's often too late to easily correct.

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## EPC APPROACH: ENGINEER, PROCURE, CONSTRUCT

Responsibility for successful execution of the project falls to the EPC firm—both from a roles and responsibilities perspective and financial perspective.

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## EPCM APPROACH: ENGINEER, PROCURE, CONSTRUCT, MANAGE

The construction management staff works on the owner's behalf to manage the project, although the owner still holds a contract directly with the general contractor along with the financial risk for the successful completion of the project.

# People.

Our people are our strength. And the way we maximize the impact of their talents sets us apart. Based on Patrick Lencioni's *The Five Dysfunctions of a Team*, our systemic approach to collaboration brings together diverse viewpoints, from our own team, you as our client, and our partners—to achieve something amazing. It's simple, yet challenging—and incredibly powerful.

## The SSOE Difference:



**Diverse expertise ranging from design through construction:** As a design firm with construction professionals on staff, SSOE engages our construction personnel to improve constructability on technically complex projects and avoid errors in the field.



**The Big Room concept:** Our focus on collaboration has led us to place priority on co-location of resources on larger projects—whether physically or virtually—to encourage frequent and real-time collaboration between team members, both inside and outside of the organization.

# Process.

Our focus on a collaborative culture has a tangible impact on every step of our process—it's not just something we say we do.

## The SSOE Difference:



**A less sequential process:** SSOE looks for ways to run processes concurrently. For example, our BIM2Fab® modeling incorporates fabrication-level detail into structural steel or piping models—eliminating the process of recreating a new model for fabrication.



**Design criteria development:** Our standard practice is to hold an Interactive Planning (IAP) session that brings project stakeholders together to identify the most important strategies to success.



**Target Value Delivery:** We frequently employ a process by which the collective team and partners define the formal Conditions of Satisfaction of the project and set a target cost below industry benchmarks. This challenges the team with practical constraints to drive innovation, avoid scope creep, and deliver better results. Our experts also understand the capital funding approval process for complex manufacturing projects. By partnering with our clients early on, we're able to provide directional estimating, board appropriation level estimating, and project scope definition.



**Design reviews:** Our teams make the most of technology by leveraging an interactive model for cross-discipline design and owner reviews.



**Accountability-based scheduling:** When SSOE is involved, production and pull planning techniques are used to drive individual accountability between all design and construction partners while creating detailed, predictable workflows to define the critical path and successfully meet deliverables.



**Construction support:** Our in-house construction capabilities enhance the overall process, including the bidding process. Our specialized expertise on technically complex projects can guide owners through comparison while also optimizing bids.



## Utilizing Collaboration: Our Process

### EPC APPROACH

Hand-offs from one phase to another are eliminated, as are the more formal distinctions between phases, allowing construction to start earlier and design to continue longer (if needed). Having a single source of responsibility for success takes the focus off individual design or construction success and gets the entire team working toward a commonly held goal of project success.

### EPCM APPROACH

Because both teams are already on board from the onset, the process can be easily phased. Construction can start concurrent to concluding design, which enables schedule compression. Even in the earliest stages of the project, the value engineering process is enhanced by involving the construction management team during design.



## Utilizing Innovation: Our Technology

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### EPC APPROACH

With a single source of responsibility, there is an opportunity to plan and execute a BIM strategy, ideally using one model throughout the project's lifecycle. Built and coded properly, the model has the ability to provide important data to the construction team, such as estimating, bills of material, quantity take-offs, 4D simulation, integration with reality capture, and more.

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### EPCM APPROACH

The addition of construction management into the delivery method promotes the use of compatible technologies among the design and construction teams, which maximizes the benefits of carrying the same model from design to fabrication, and ultimately, through construction.

# Technology.

Our collaborative culture consistently drives the ways we innovate and engage technology. Rather than substituting technology for the human touch, we focus on how technology can enable an enhanced, more collaborative process.

## The SSOE Difference:



**Making reality capture accessible to every project:** Reality capture, or laser scanning, can significantly improve the speed and accuracy of collecting as-built conditions when working in existing facilities or develop a topographical map for a new site. SSOE brings an advantage to our clients through our expertise in short-range, long-range, and drone / unmanned aerial vehicle (UAV) scanning techniques. We have our own short-range scanner and drones in house, making reality capture an option for smaller budget projects.



**Multidisciplinary model integration:** We coordinate all design disciplines within one model, fully leveraging the data storage capabilities to automate as much of the process as possible. Higher level detail in the model often eliminates steps down the road for the fabricator and construction personnel, resulting in significant time savings.



**External model integration:** We enable use of the same model for design, fabrication, construction documentation, and occasionally estimating. This eliminates hand-offs, reduces waste and cost, and compresses schedules when compared to the industry standard of recreating models at the various project stages.

# Value Promise

## A synergetic approach to driving production

**Opportunity:** A food manufacturer engaged SSOE's EPCM services to add production capacity to an existing facility through the addition of a second line.

**Action:** A phased construction approach that enhanced coordination and pulled critical path activities forward. In one case, a fabrication-level 3D model allowed the modularization of liquid process elements on skids that could be constructed in a fab shop concurrent to facility construction.

**Results:** A project delivered 3 months ahead of schedule within the original budget—moving production forward, and translating to nearly \$20 million in documented savings for the client.



## Locations

Albany, NY  
Alliance, OH  
Atlanta, GA  
Birmingham, AL  
Cincinnati, OH  
Columbus, OH  
Huntsville, AL  
Kalamazoo, MI  
León, Mexico  
Lima, OH  
Midland, MI  
Mumbai, India  
Nashville, TN  
Omaha, NE  
Portland, OR  
St. Paul, MN  
Santa Clara, CA  
Shanghai, China  
Toledo, OH  
Troy, MI  
Washington, DC

## Rankings

### **BUILDING DESIGN+CONSTRUCTION (BD+C)**

Top 5 Industrial Engineering Firm for the past 3 years  
Top 10 Engineering / Architecture Firm for the past 7 years  
Top 40 Retail Engineering Firm for the past 4 years  
Top 50 Office Engineering Firm for the past 6 years  
Top 60 CM Agent + PM Firm for the past 7 years

### **ENGINEERING NEWS-RECORD (ENR)**

Top 5 Semiconductor Design Firm for the past 8 years  
Top 5 Manufacturing Design Firm for the past 4 years  
Top 10 Chemical Plant Design Firm  
Top 10 Automotive Assembly Plant Design Firm for more than a decade  
Top 10 Food and Beverage Design Firm for more than a decade  
Top 25 Industrial Process Design Firm for more than a decade

### **ENR GLOBAL SOURCEBOOK**

Top 5 International Semiconductor Design Firm for the past 3 years  
Top 25 International Manufacturing Design Firm for the past 5 years

### **MODERN HEALTHCARE**

Top Healthcare Design Firm for the past 9 years



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MEMBER

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