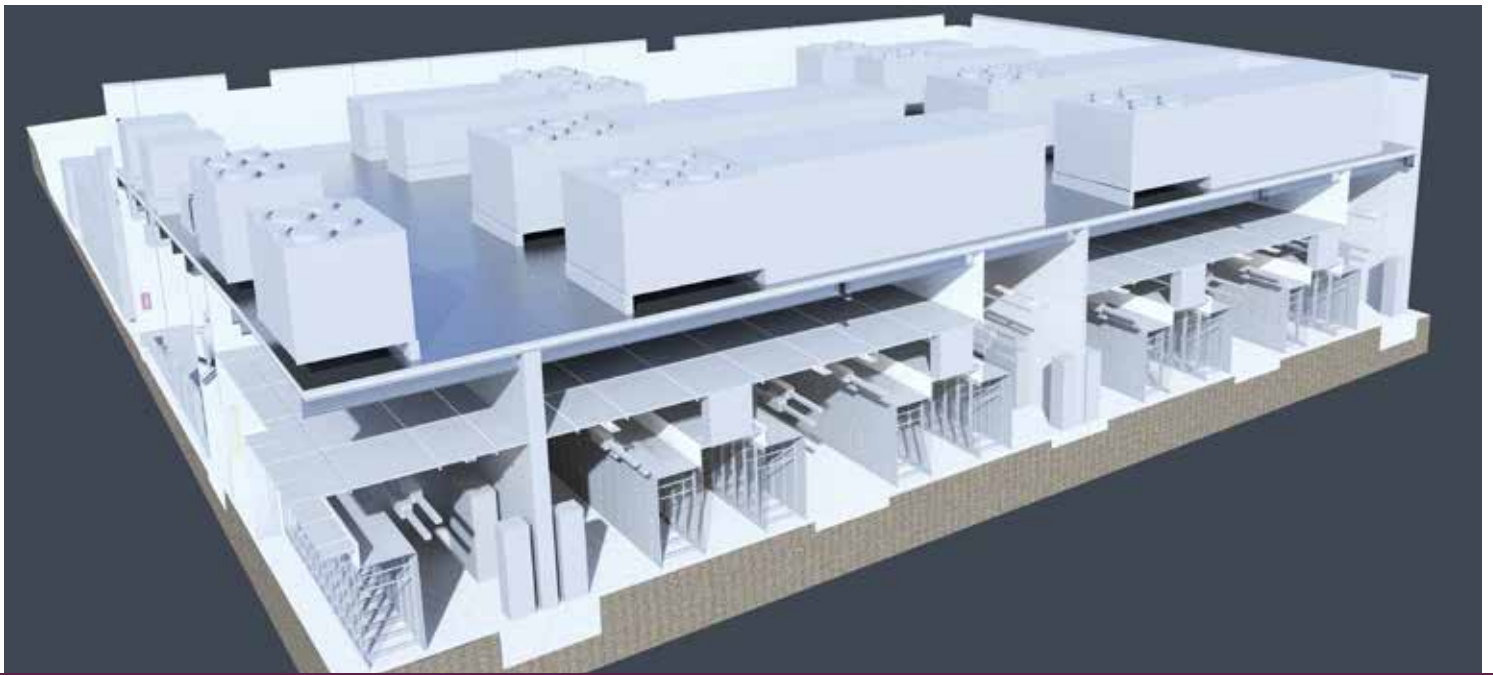




# data center design

ssoe®. making clients successful.



**Our Design Strategy.** Providing cost effective and practical solutions for world-class mission-critical facilities, data centers, and high-performance computing facilities.

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Mission-critical facility design and construction requires flexibility, scalability, and energy efficiency in order to meet ever-changing requirements. SSOE Group understands these requirements and will create the most cost-effective solution for your facility. Our integrated architectural and engineering design services provide collaborative teams with experience in customized solutions including site selection, engineering, design, and construction management. We understand the dynamic nature of the industry and deliver customized, cost-effective and practical design solutions for your facility.

Technological advancements and demands for energy efficiency have a significant impact on mechanical and electrical designs, as well as the architecture of the facility. We recognize that mission-critical facility design for the future requires greater flexibility and scalability in the engineering of building systems to meet dynamic requirements of the industry. Additionally, more and more owners are looking for the benefits of facilities designed to meet sustainable building certification guidelines.

With a thorough understanding of your unique requirements, our collaborative approach engages your stakeholders and allows us to create functional, sustainable solutions. The result is a flexible and reliable facility that meets today's technical requirements, while allowing for future growth as capacity and needs change. We identify the need for equipment redundancies for mission-critical systems, and we strive to design to your budget and schedule. Planning for the future brings significant value to our clients' projects.

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## Reliable, Right-Sized, Cost Effective.

### 3D / BIM Modeling – CFD Thermal Modeling

Using advanced analytical tools such as computational fluid dynamics (CFD) thermal modeling, research, combined with our years of experience, we are able to thoroughly and quickly investigate all alternatives to optimize existing and new cooling system options. Unlike equipment suppliers who provide this service, we are vendor neutral and specify equipment based on what will deliver the best result for you.

### Sustainable

We follow the sustainable design principles set forth by organizations such as LEED®, ASHRAE, and the Green Grid consortium. Our LEED accredited professionals have been responsible for more than a billion dollars worth of LEED facilities—including the largest LEED platinum project in the U.S. This experience brings a broad perspective and creative approach to design to budget using energy efficient and renewable energy options.

### Data / Fire / Security Design

We are an industry leader in selecting and specifying low current devices for fire, closed-circuit television (CCTV), access control, and data communications. Our expertise includes the complete design of telecommunications, fire alarms, local area network (LAN), wide area network (WAN), and metropolitan area network (MAN) security, in addition to CCTV and access control.

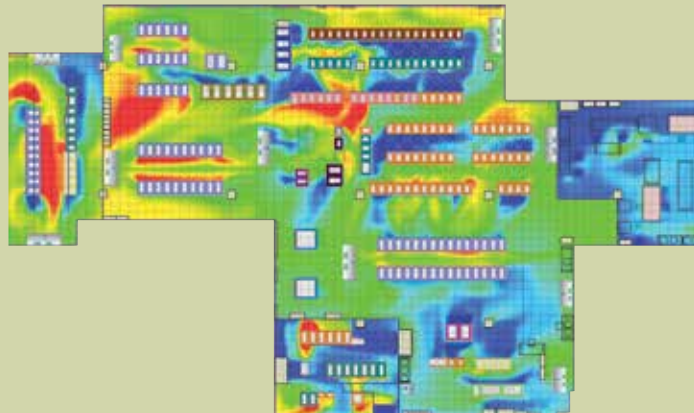


## Technical Specialties

- 3D / BIM modeling
- CFD air flow modeling for heat load analysis
- Data / Fire / Security design
- Design
  - New facilities
  - Expansions
  - Retrofit
- Energy efficient evaluations and upgrades for the expansion of existing facilities
- Information technology systems design
- Program management
- Master planning
- Security and surveillance design

## Energy Efficiency Concepts

- Higher efficiency uninterruptible power supply (UPS) equipment
- Direct current (DC) instead of alternation current (AC) power to reduce transformation loss
- Implementation of equipment operating limits to set operating environment
- Incorporate hot or cold aisle enclosures



*Thermal modeling allows us to optimize cooling systems by exploring and evaluating options that balance cost and performance.*

## Locations

Albany, NY  
Alliance, OH  
Atlanta, GA  
Birmingham, AL  
Chandler, AZ  
Chengdu, China  
Cincinnati, OH  
Columbus, OH  
Hamburg, Germany  
Huntsville, AL  
Kalamazoo, MI  
León, Mexico  
Lima, OH  
Midland, MI  
Monterrey, Mexico  
Mumbai, India  
Nashville, TN  
Omaha, NE  
Penang, Malaysia  
Portland, OR  
Raleigh-Durham, NC  
Riverside, CA  
St. Paul, MN  
Santa Clara, CA  
Shanghai, China  
Shenzhen, China  
Toledo, OH  
Troy, MI  
Washington, DC

## Markets

Energy  
Life Sciences  
Manufacturing / Process  
Telecommunications

## Services

Architecture  
Construction management  
Data / Fire / Security  
Energy consulting  
Engineering  
Master planning  
Procurement  
Project / Program management  
Site selection  
Tool install  
Virtual Design and Construction

## Rankings

*Engineering News-Record (ENR)*

- Top 10 Manufacturing Design Firm for the past 6 years
- Top 100 Green Design Firm for the past 9 years

*Building Design + Construction (BD+C)*

- Top 10 Engineering / Architecture Firm for the past 5 years
- Top 10 Industrial Engineering Firm for the past 5 years
- Top 15 BIM Engineering Firm for the past 6 years

Named "Best AEC Firm to Work For"  
*(Building Design + Construction)*

Named a "Great Workplace"  
*(Great Place to Work®)*

## SSOE Facts

- SSOE was founded in 1948 and currently has more than 20 locations worldwide.
- We are a global project delivery firm for architecture, engineering, and construction management, with projects in 40 countries.
- SSOE offers program management services from design through construction, to commissioning and start-up, for seamless project delivery.
- SSOE's focus is using the appropriate project delivery method for your goals, including Virtual Design and Construction (VDC), which brings our clients better and faster results through more integrated teams and advanced technologies. Even when a more traditional delivery model is used, you'll see significant benefits from the collaboration strategies and technological capabilities our leadership in VDC necessitates.



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



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