Statement of Qualifications

Metropolitan Museum of Art, New York City, NY
About Us

ZELUS is the nation’s trusted virtual construction consulting firm.

We advise owners, developers, architects, contractors, and engineers on the integration of virtual design and construction into everyday practice. We work to make construction projects smarter, safer, and more sustainable over an asset’s lifetime.

Whether on-site or remote, we help integrate technology into project planning and design processes, the construction phase, and ongoing sustainability initiatives with the built structure.

Consulting experience with technical expertise

Our team consists of construction managers, BIM managers, VDC consultants, lead coordinators, and other experts. The trade-specific knowledge in mechanical, plumbing, electrical, structural, and other areas help provide innovative client solutions.

Key Facts

<table>
<thead>
<tr>
<th>Year</th>
<th>Description</th>
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<tbody>
<tr>
<td>2008</td>
<td>Year company was founded; is still managed by our founder</td>
</tr>
<tr>
<td>150</td>
<td>Qualified, diverse staff with higher education degrees and specialized AECO experience. Voted top employer in Arizona.</td>
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<tr>
<td>50</td>
<td>Number of states in which our team has completed projects</td>
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<tr>
<td>20+</td>
<td>Number of Fortune 500 companies we call our clients</td>
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<tr>
<td>100M sq ft</td>
<td>Distribution space for which we have created virtual solutions</td>
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At the intersection of Sustainability and Technology

Embedded in ZELUS’s every day is a belief that virtual technology creates a better, more sustainable built world. Digital twins provide a visual perspective for intelligent business decisions while enhancing long-term asset value.

As the industry leader, ZELUS is committed to advancing construction technology as well as talent diversity and education to enable the early adoption of VDC in every project.

Our mission is to ensure that every building project benefits from virtual design and construction.
Virtual Design and Construction Services

Reality Capture
Laser scanning, 360° High definition photography, Site surveys

Accurately capturing existing site conditions and creating a BIM provides architects, contractors, and owners with a better understanding of the true dimensions. This knowledge facilitates the management of material costs, labor expenses, early clash detection, and schedule planning.

3d Modeling
Point clouds, Topographic reports, 2d/3d As-Builts, LOD specific models, Digital fabrication, Clash detection

Design models of mechanical systems, electrical, structural, or architectural elements enable teams to consider numerous options for a new or existing structure. This pre-planning can be shared with all project stakeholders, including the owner, to enhance collaboration.

Virtual Construction
Digital twins, 4d visualization, Immersive tech (walk-throughs and tours), Construction augmented reality (AR)

Employing a digital twin allows for the creation of optimized prefabrication workflows, clash detection, material changes, and a QA/QC process. This approach delivers maximum value to owners, contractors, and architects, with a 1% investment often resulting in an 11% cost reduction.
Markets

ZELUS operates in various sectors and markets throughout the United States, and our clients have taken us along on their global projects.

Distribution
We work on new-builds and renovations of existing structures to help with space planning, advanced clash detection, and robotics configuration.

Manufacturing
ZELUS has expertise in virtual design and construction for manufacturing facilities where downtime is not an option.

Data Centers
Our experience with global data center leaders makes us ideal partners for new and repurposed virtual design and construction while maintaining critical data security.

Semiconductor
The ZELUS team has more experience in the semiconductor industry than any other service provider in North America, with millions of square feet scanned and modeled.

Historical Preservation
When original documents are not available, ZELUS can assist with establishing a baseline retrospectively and help protect vital structural integrity and historic details during modifications.

Retail
National retailers look to ZELUS to provide customized remote visualization across multiple sites (200-1,000 stores), minimizing the need to conduct site visits to refresh customer experiences.

Entertainment
ZELUS provides the ability to virtually plancustomer experience, occupancy rates, and space utilization with accurate as-builds for interior spaces, exterior elevations, as well as landscape and parking lot topography.

Sports Venues
The utilization of a digital twin in stadiums, arenas, or other similar event centers can improve event planning, educate staff, assist in security planning, and provide the ability to plan future operations and uses in a digital form.

Transportation
Airports, rail stations, shipyards and the like all rely heavily on meeting the expectations of the general public. Security planning, renovation/improvement, employee training, and space management are all significantly improved with the integration of 3D models.

Public Sector Infrastructure
We partner with government, architects, civil engineering firms and other stakeholders to assist with virtual collaboration, remote data sharing, and site logistics planning with our topographic analyses, roadway scans, digital terrain models, contour maps, and mesh surfaces.

Mixed Use
Healthcare facilities are complex environments that are incredibly expensive to build, operate, and maintain. Utilizing computer modeling from the inception of the building to the ongoing daily operations of the facility can significantly improve the ROI of the asset.

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We’ve earned the trust of top global brands
ZELUS approaches clients as strategic partners with services designed to support their goals from project level to overall corporate success.

ZELUS has earned the trust and respect of clients in a variety of industries because we deliver to the customized needs of the project. We also look beyond this and support clients continually improve their businesses.

Benefits at a project level:
- Optimized coordination
- Better communication
- Improved safety
- Schedule compression

Benefits at a company level:
- Higher quality projects
- Operational efficiencies
- Smarter decisions for sustainability
- Increased return on investment.

The ZELUS Difference

At ZELUS, we’ve developed our way of understanding and solving clients’ challenges. We do not define ourselves by a single attribute. Our difference lies in right-fitting a combination of our team’s expertise and technology, as well as tailoring our process to fit our client’s desired outcomes.

Our technology consulting process

- **DEFINE**
  - Identify client goals
  - Establish scope
  - Specify shareholders
  - Outline timelines
  - Understand security and safety protocols

- **CUSTOMIZE**
  - Prepare proposal and plan
  - Understand existing process and VDC integration
  - Tailor ZELUS expertise and tech with client goals

- **INITIATE**
  - Client acceptance
  - Kick-off call with shareholders
  - Review goals and timelines
  - Assign a Project Manager
  - Create milestones

- **EXECUTE**
  - Work guided by ZELUS process
  - Analyze and make recommendations
  - Periodic updates
  - Ongoing QA/QC
  - Partial delivery options

- **DELIVER**
  - Formal turnover of the project via [Z]VAULT™
  - Written project summary document
  - Satisfaction survey
Application in the Building Lifecycle

Integrating virtual design and construction technology improves performance indicators throughout an asset’s lifecycle, from construction to completion and throughout the life of the asset.

New Construction

ZELUS utilizes virtual technology to create a single source of truth for all stakeholders before and throughout the construction process, resulting in optimized coordination, communication, safety, and efficiency.

This leads to a higher quality deliverable, process, and financial return on a project.

Renovations and Adaptive Reuse

ZELUS assists stakeholders to understand actual site conditions, and virtually plan accurate desired changes before construction.

This approach results in precise planning and leads to reduced costs and time spent in the field compared to traditional practices.

Building Maintenance and Management

ZELUS prepares digital twins for new and existing structures so teams can visualize and adapt how assets look and function.

A deeper understanding of the asset can help reduce maintenance costs and identify potential opportunities for sustainable improvements over its life.

When to integrate virtual design and construction in your process with ZELUS™

1. DESIGN: Create possibilities, add sustainable choices, check feasibility, and share with stakeholders.
2. PRECON: Virtually verify plans and coordinate to minimize costly errors and enhance safety.
3. CONSTRUCT: Make real-time adjustments so teams always have accurate information from a single source of truth.
4. TURNOVER: Hand over complete structural and systems files to ramp up operational readiness and training.
5. MAINTAIN: Reduce operational costs and enhance environmental sustainability choices with virtual building models for site visits, training, and safety planning.
6. REPURPOSE: Have readily available building asset information for future upgrades, adaptive reuse plans, renovations, and potential sale of assets.
Featured Projects

1 Modeling for a semiconductor manufacturer.

When a semiconductor plant underwent a major retooling under tight timelines, the client looked to ZELUS to plan the off-site prefabrication of MEP systems while minimizing plant downtime.

2 Helping San Francisco Airport improve passenger and baggage traffic efficiency.

Our digital twin helped one of the world’s busiest airports reconfigure baggage systems, ticket counters, and retail spaces.

3 Transforming over 100 million sq ft of distribution space for a leading online retailer.

ZELUS’ virtual design solutions aided the conversion of over 40 regional distribution centers to automated high-speed robotics and intelligent software to organize and optimize inventory.

4 Capturing historic details to convert an iconic church into a children’s museum.

With a highly accurate digital twin from ZELUS, a church was successfully repurposed to be a modern experience for children while preserving historic details.
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REALITY CAPTURE
3D MODELING
VIRTUAL CONSTRUCTION

See how we unlock possibilities for the AECO industry at teamzelus.com.

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