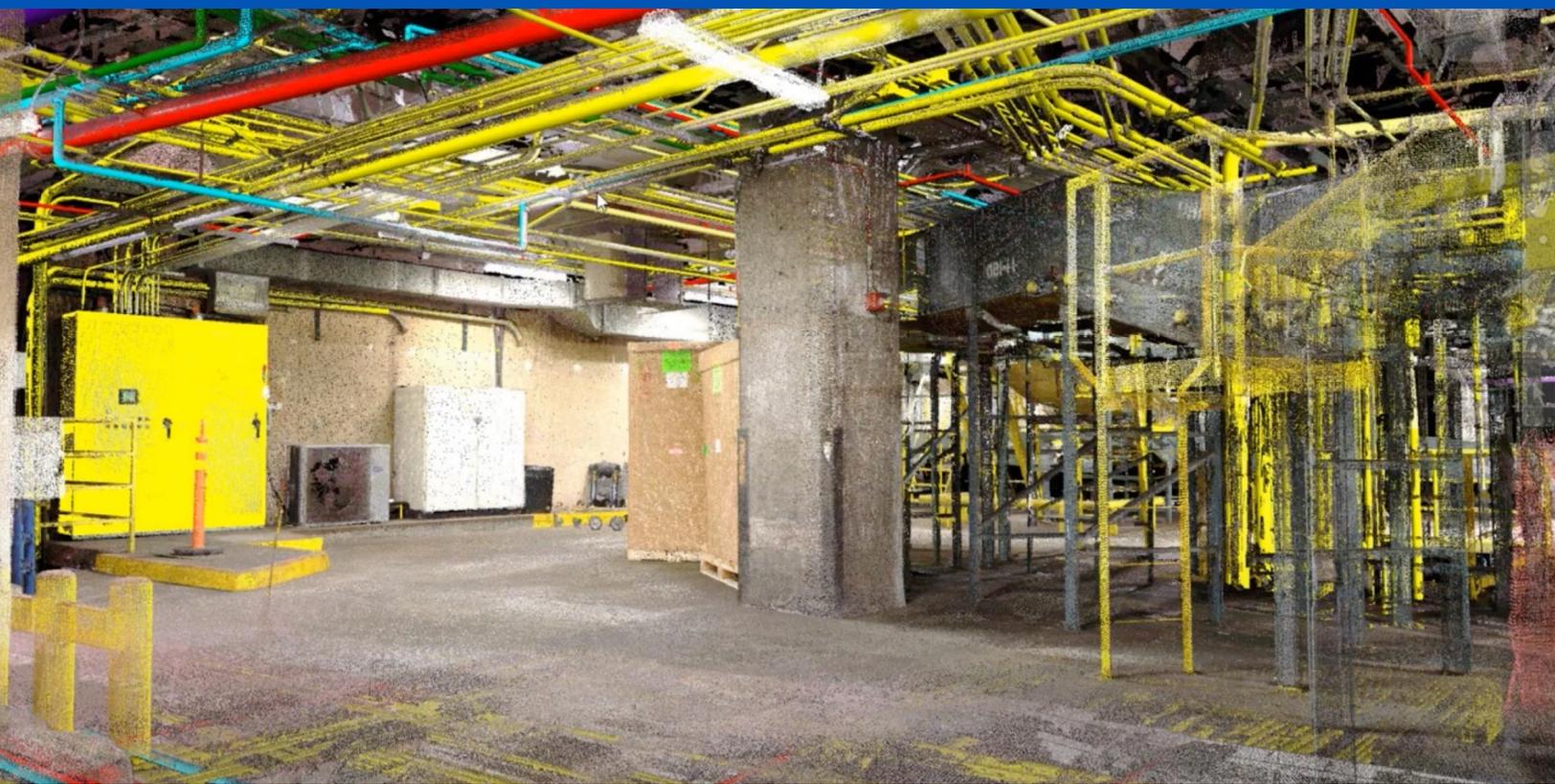


— Customized Workflow Optimization & Product Training



How ClearEdge3D Can Help

Learn Repeatable Best Practices

The ClearEdge3D Industry Strategy Team has more than 30 years of experience and hundreds of projects under our belt. Our goal is to help you optimize your workflow and establish repeatable best practices that eliminate needless rework, reduce SCAN-TO-BIM time frames, and improve the quality of design and construction deliverables.

Better Workflows — Guaranteed!

Our workflow experts have spent countless hours on jobsites around the world. We've developed a series of expert tactics, best practices and pro tips to ensure your workflow is spot on. Your engagement with our team is fully guaranteed with the ClearEdge promise — if you don't feel we've improved your workflow, you don't pay!

Let Us Optimize Your Investment in Technology

Investing in new technology is often the easy part — actually implementing new technology into your workflow can be a huge challenge. Bring the ClearEdge team on-site to optimize your workflows and reduce the risk in your technology investment.



Meet Our Workflow Optimization Team



Zoltán Ferenczy Construction QA/QC Specialist

Zoltán has a wide range of technical skills, including over 20 years of professional experience in CAD drafting and design software for Architecture, Engineering, Construction, and Manufacturing disciplines. He has over eight years of experience teaching Revit and other applications at Autodesk Authorized Training Centers and five years of experience with 3D Laser Scanning and integration of 3D laser scanned point cloud data into Autodesk software.

Kelly Cone VP Industry Strategy

Kelly is passionate about process and technology innovation, and how it can change industries and people's lives. His education is in architecture, but his experience within the AEC space is far more varied. His career includes time in design, preconstruction, project management, and leading a billion-dollar integrated design+build firm's Virtual Design and Construction department. Kelly is an acknowledged thought leader on construction technology as well as a frequent speaker, blogger, podcast host, and workflow visionary.



Trevor McGough QA/QC and Floor Flatness Specialist

Trevor joined ClearEdge3D in 2014 and has worked with a wide range of clients supporting them throughout their projects. From new companies just starting out with BIM, to experienced companies looking to enhance their as-built modelling workflows, Trevor has become a staple at ClearEdge3D for clients who want to discover and implement best practice workflows.

James Norris VP Industry Strategy

James loves Design and Construction. Why? Because he thinks buildings are meaningful and signify how our society has evolved at any given moment! James has been working in the Design and Construction industry since 2006 and prior to coming to ClearEdge3D, he held roles at a large billion-dollar Design-Build firm as both the Director of Virtual Building and Director of Centralized Planning and Scheduling.



Justin Dommer Scan to BIM Specialist

Justin Dommer started with ClearEdge3D in 2014 and has traveled the world training our clients on workflow optimization techniques and practices. He is an expert in scan to BIM workflows with a particular specialty in EdgeWise to Revit integration.

Course #1: Best Practices in Scan to BIM — The Scan to EdgeWise to Revit Workflow

This is a sample course syllabus. **All ClearEdge engagements are customized** to your specific needs in an approximate 8 hour course.

Module 1: Laser Scanning Field Best Practices for Scan to BIM

- Essential scan planning
- Optimal scanning tips & tactics
- Scanning on control and why it is important
- Scanning environmental factors
- Calibration and Maintenance

Module 2: Scan Processing, Registration and QA/QC

- Importing scans
- Hybrid registration pro tips
- Checking the accuracy of your registration
- The truth about registration software

Module 3: Exporting Scan Data (Structured vs Unstructured)

- Structured vs Unstructured point cloud files
- Exporting with the right coordinate system
- Optimal file types for down-stream use
- Optimizing files for performance

Module 4: Optimal Use of EdgeWise for Your Practice

- Fundamentals of EdgeWise
- Splitting up processing to improve efficiency
- Using ClearView to speed up manual extraction
- Saving files at various stages of the process for multiple deliverables
- Piping, Structure, Building, Ducting & Cable Trays
- Implementing advanced tools and tips

Module 5: Working with Coordinate Systems in Revit

- How coordinate systems in Revit work
- Manipulating existing coordinate systems in Revit
- Working with large coordinate systems in Revit
- Working with links and where you might use them

Module 6: Bringing EdgeWise and Point Clouds into Revit

- Loading RCPs into Revit
- EdgeWise import settings and options

Module 7: Working with EdgeWise Content in Revit

- Understanding Categories, Families, Types, and Instances
- Understanding type vs instance parameters
- Loading content into Revit
- Standard EW content
- How to switch out EW families for your own standard content

Module 8: Finish Your Scan-to-BIM Modeling in Revit

- Optimizing your modeling workflow
- Loading in Smartpoints and Remainder Clouds
- Adding data to EdgeWise generated content
- Pro tips for modeling in Revit
- QA/QC of manual modeling
- Optimizing deliverables

Course #2: Optimizing Construction QA/QC Workflows

This is a sample course syllabus. **All ClearEdge engagements are customized** to your specific needs in an approximate 8 hour course.

Module 1: Laser Scanning Best Practices for Construction QA/QC

- Essential scan planning
- Optimal scanning tips & tactics
- Scanning on control and why it is important
- Scanning environmental factors
- Calibration and maintenance

Module 2: Scan Processing, Registration and QA/QC

- Importing scans
- Hybrid registration pro tips
- Checking the accuracy of your registration
- The truth about registration software

Module 3: Data Import and Management in Navisworks

- Navisworks file types (NWC, NWF, and NWD)
- Appending source files and where to save your project files
- Navisworks options and settings for QA/QC
- Visualization options
- Selection Tree and selection levels
- Search sets and selection sets
- Working with saved viewpoints

Module 4: Working with Coordinate Systems to Ensure Proper Alignment

- Export options for proper alignment
- Troubleshooting poor alignment
 - File units and transforms
 - Manual transforms
 - Measuring distances and angles

Module 5: Using Verity to Optimize QA

- Segmenting your analyses to optimize efficiency
- Getting the most out of the automated analysis
- Optimizing what gets analyzed
- Optimize your item review
- Using custom fields
- Reporting tools and features
- Working with your publishing integration

Module 6: Bringing Verity Results into Downstream Applications

- Exporting Verity data into authoring applications
- Adding information and assigning responsibility in publishing integrations
- Adding screenshots or field images in publishing integrations

Course #3: Best Practices for Concrete QA/QC Workflows

This is a sample course syllabus. All ClearEdge engagements are customized to your specific needs in an approximate 8 hour course.

Module 1: Laser Scanning Field Practices for Floor Flatness

- Essential scan planning
- Optimal scanning tips & tactics
- Ensuring you get leveled scan data
- Scanning on control and why it is important
- Scanning environmental factors
- Calibration and Maintenance

Module 2: Scan Processing, Registration and QA/QC

- Importing scans
- Hybrid registration pro tips
- Checking the accuracy of your registration
- The truth about registration software

Module 3: Data Import and Management in Navisworks

- Navisworks file types (NWC, NWF, and NWD)
- Appending source files and where to save your project files
- Navisworks options and settings for construction QA/QC
- Visualization options
- Selection Tree and selection levels
- Search Sets and Selection Sets
- Working with saved viewpoints

Module 4: Rithm Product Training

- Optimizing for performance
- Using multiple debris filters
- Using blockouts
- Multiple areas of interest
- Monitoring changes
- FF/FL requirements
- Getting the most out of the Rithm Reports

Module 5: Bringing Rithm Results into Downstream Applications

- Exporting heatmaps to point clouds
- Exporting contour maps and grids of points to DXF
- Exporting points to CSV for use with total stations
- Dealing with units and coordinate systems on import
- Utilizing Rithm data in your deliverables

Optional Module 6: Differences Between Rithm for Scene and Rithm for Navisworks

- Working with Analyses
- View and Visibility Options
 - Match View Frame
 - Point Size and Color
- Effectively use Debris Filter
- Clean and Blockout
- Volume Calculations

Pricing and Logistics

On-Site or Virtual Training

While on-site training has proven to be the most effective way to optimize your workflows, we recognize that in these unique times, face-to-face training just may not be possible. So, we offer live virtual training with our workflow specialists.



On-Site Training Pricing

- \$2,100 per day plus travel expenses



Live Virtual Training Pricing

- \$1,800 per day

Project Consulting

Some clients require an even more customized consulting engagement to ensure project success. The ClearEdge team is available for extended, detailed and customized consulting focusing on the unique needs of your specific project.

Contact James Norris at james.norris@clearedge3d.com to discuss your custom consulting needs in greater detail.

Risk-Free Workflow Promise

Your workflow optimization training is fully guaranteed by ClearEdge. If after your workflow training, you feel that we have not delivered on our promise to increase your workflow efficiency, let us know and we'll either retrain your team at no charge or not bill you for the engagement.

FAQs

Why Do I Need to Pay for Training?

This is not just product training, it is a full, customized workflow optimization session. Laser scanners and design platforms like Revit are complicated tools. While EdgeWise, Verity and Rithm are fairly easy to use, making these many tools work together in an optimal way takes experience. That's what we bring to your customized session.

I Already Know How to Scan and Model in Revit. What's the Added Benefit?

That's great. We can tailor your training to expert level, focusing on pro tips and expert hacks that our team has learned on countless projects. And remember, our workflow optimization is guaranteed—if you don't feel we have improved your workflow, we won't charge you. So you risk nothing.

How Will You Tailor the Training to My Needs?

A few days before your training, you will have an info session with one of our workflow experts and together you will compose the content of the training day based on the challenges you've identified in your workflow. Whether you struggle with data collection, registration, processing, Revit or some other issue, our team is here to guide you to project success.

Can You Tell Me About Your Workflow Optimization Guarantee?

It's pretty simple. If after your workflow optimization training, you feel that we have not delivered on our promise to increase your workflow efficiency, let us know and we'll either schedule a second engagement with your team at no charge or not bill you for the training. We call it our Risk-Free Workflow Promise.

