

# Vertical Construction

## Scanning Solutions



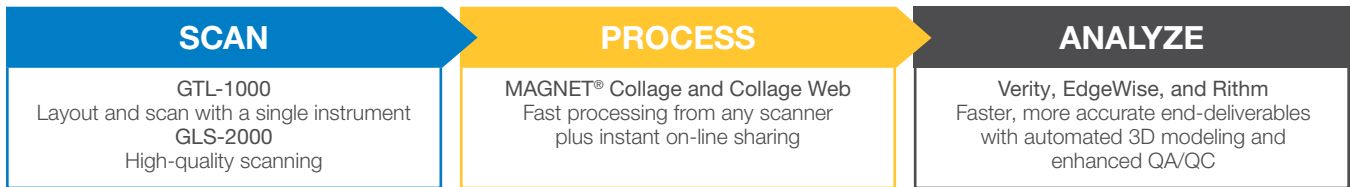
 Seamlessly integrated construction scanning workflows

# Efficiently build 100% to plan

Topcon scanning solutions enable construction trades to work more productively, more efficiently, and enable your team to stay better informed. Together with ClearEdge3D, the seamlessly integrated workflows cover a range of applications including documenting a job site in its as-built conditions and performing construction verification to ensure that your project's accuracy is built 100% to plan.



**CLEAREDGE<sup>3D</sup>**



## Quickly process and share data with your construction team

The innovative GTL-1000 and GLS-2000 have a ruggedized design that provides users with an impressive solution even in the most extreme work environments. Combined with MAGNET Collage, data processing is easier and faster for any level of user.



### GTL-1000 Scanning Total Station

- Quick layout and scanning with a single instrument
- Instantaneous on-hardware point registration
- Tailored scan density to minimize processing time



### GLS-2000 Scanner

- Fast, precise scanning
- Reduced noise, high-quality point clouds
- Full-dome field-of-view (fov)



### MAGNET<sup>®</sup> Collage and Collage Web

- Process, combine, and analyze 3D point clouds from diverse sensors
- Share and collaborate with 3D point clouds and meshes
- Third-party hardware processing

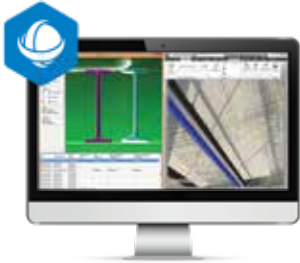
## Be productive. Our universal scanning workflows go fast.

Efficient workflows mean processed data and intelligent deliverables without waiting hours. The optimized integration between hardware, software and process automation cuts down time from reality capture to final deliverables.



### Build better and model faster with ClearEdge3D software

After capturing a point cloud and rapidly processing with MAGNET Collage, ClearEdge3D's automated modeling and object recognition software completes the process by creating as-built documentation and enabling construction verification.



ClearEdge3D Verity

#### Construction Verification Software

Verify construction quality in a fraction of the time by comparing as-built point clouds against design and fabrication models.

- Reduce risks to budgets and schedules
- Clear indication of construction quality with as-built tolerances
- Increase project profitability by avoiding rework
- Fully integrated with Autodesk® Navisworks®
- Quickly update your coordination model to as-built conditions



ClearEdge3D Rithm for Navisworks®

#### Real-time Floor Flatness and Levelness (FF/FL) QA Software

Conveniently perform FF/FL analysis directly from scan data loaded into Autodesk Navisworks, an AEC industry standard platform.

- Reduce costly rework by finding flooring issues while concrete is still workable
- Reduces ASTM E1155 reporting from days to minutes
- Perform QA/QC workflows in house
- Easily visualize floor deviations with heat maps, contours, and grid points
- Quick and reliable communication of quality issues to all stakeholders



ClearEdge3D Edgewise

#### Automated 3D Modeling Software

Reduce your as-built modeling time by up to 75% with automated feature extraction and pattern recognition technologies.

- Automated extraction completes > 50% of the model with zero man hours
- QA tools to verify accuracy and fit for every object
- MEP, plant, structural, and architectural modeling capabilities
- Model 3D as-built pipes, structural elements, ducts, walls, tees, and conduits
- Full interoperability with Autodesk Revit, Plant3D, PDMS, CadWorx, and INOVx



# Increase Productivity and Reduce Costs

Current construction industry estimates show rework and delays bring about 20% higher costs versus budget. Traditional spot checking of completed work leaves verification gaps that result in significant cost overruns and lost profits.

## The Topcon real-time construction verification workflow:

Topcon construction verification workflows provide critical and timely insights and enable analysis performed from within Autodesk Navisworks, an AEC industry standard platform.

- Reduce costly rework by detecting quality issues before they get expensive
- Reduce ASTM E111455 reporting time for floor analysis from days to minutes
- Perform QA/QC workflows in house

## Applications include:



Mechanical / Plumbing



Structural Steel



Structural Concrete



Plant / Equipment Installation



Layout



Prefabricated / Modular



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