



Reality Capture Benefits for BIM

smarter and better connected

GOLD SPONSORS

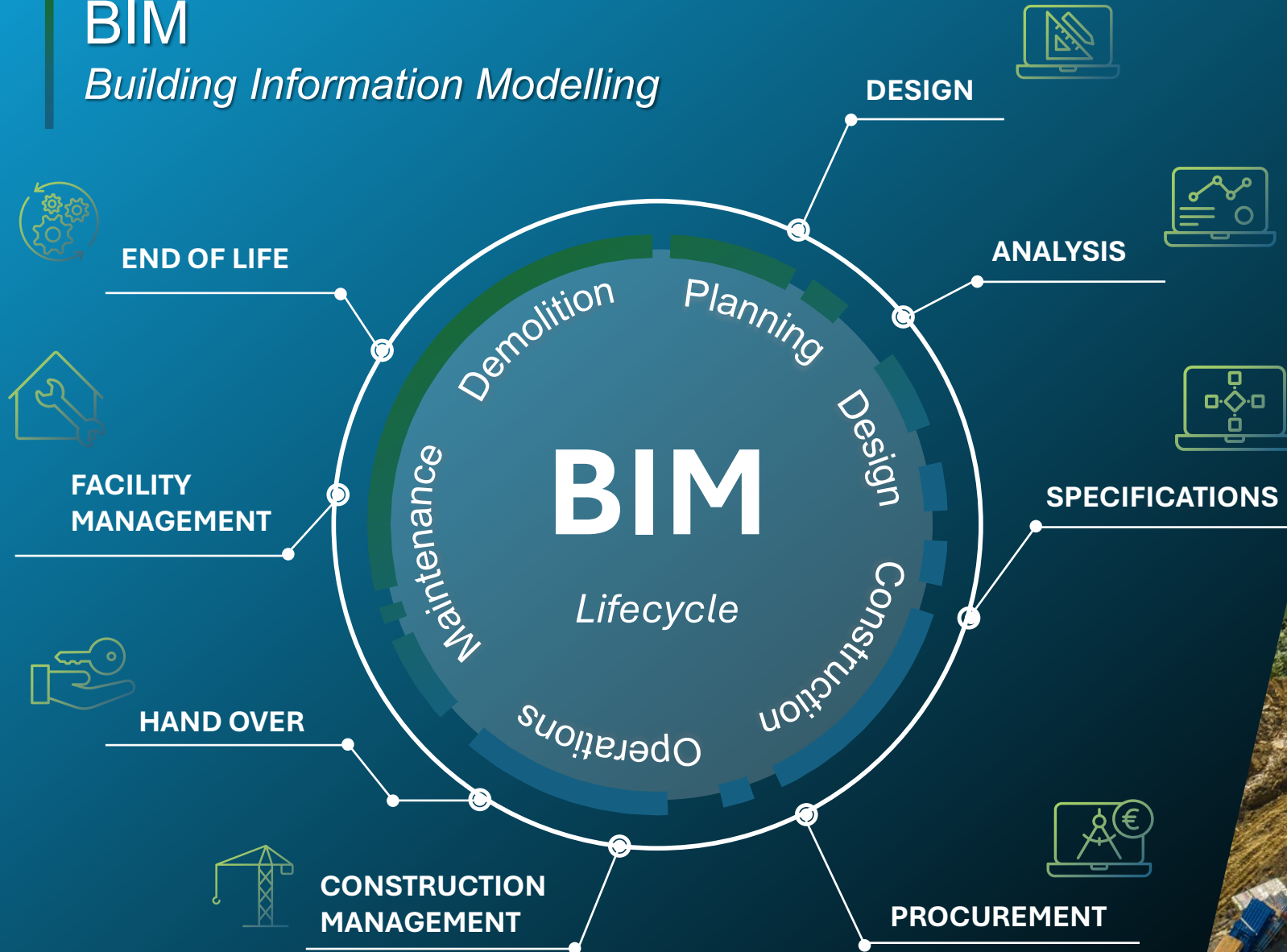


BRONZE SPONSORS



BIM

Building Information Modelling



BIM

Building Information Modelling

3D

Visualization
n

Represent in 3D

4D

Time
Facilitate
programming

5D

Cost
Control and
adjust budget

6D

Operation
Facility
Management

7D

Sustainability
Provide
environmental
and
energy-
efficiency
solution

8D

Safety
Embed
emergency
plans and
prevent
security issues



Buildings

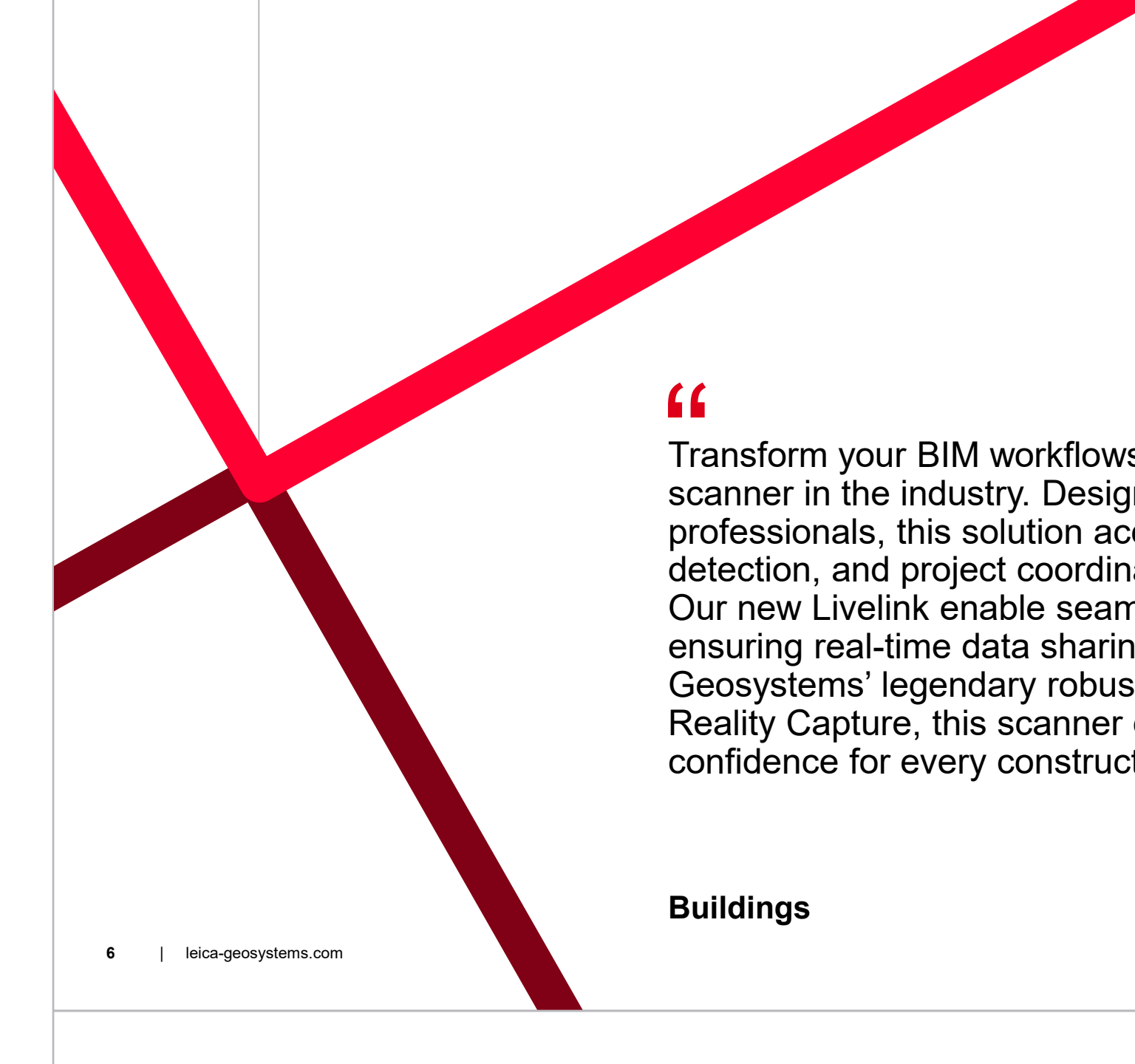
The pain

- Cost pressures
- Interoperability and integration
- Rapid tech evolution
- Skills gaps and training needs
- In-field deliverables

The gain

- We bring to the market **the fastest and most productive scanner ever**
- We bring **new comprehensive workflows**, increasing **productivity** and **efficiency**
- **New workflows** for project coordination, ensuring **fast deliverables and in-field deliverables**

“Construction teams face tight budgets, complex integrations, and varied skill levels; a scanner that simplifies workflows and boost productivity, delivering immediate and usable data sets a new standard for the industry”



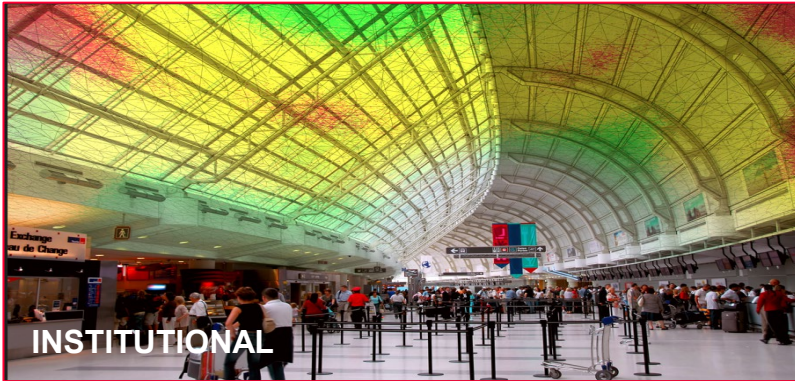
“

Transform your BIM workflows with the fastest and most accurate laser scanner in the industry. Designed for the demanding needs of AEC professionals, this solution accelerates as-built documentation, clash detection, and project coordination—reducing costly delays and rework. Our new Livelink enable seamless integration with BIM platforms, ensuring real-time data sharing and team alignment. Built with Leica Geosystems’ legendary robustness and backed by the global leader in Reality Capture, this scanner delivers precision, efficiency, and confidence for every construction phase

Buildings

Buildings

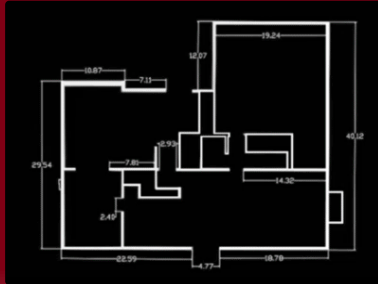
Where do we use the technology?



Buildings

What are the different phases?

DESIGN



Scan to CAD

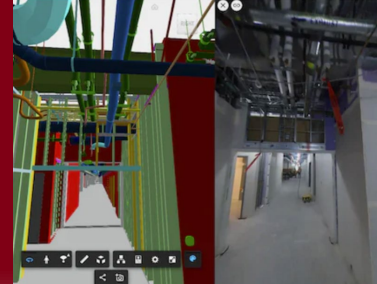
Scan to BIM

2D and 3D Layouts

3D Intelligent Models

Scan to Design
(Scan to Model)

CONSTRUCTION



Scan vs CAD/BIM

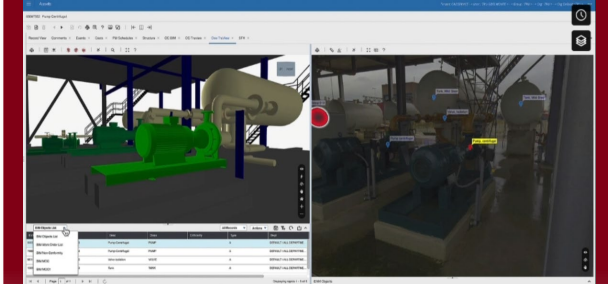
Scan vs CAD/BIM

Infield Verifications

Office Verifications

Scan to Verify
(Scan to Verify)

OPERATIONS



Scan to Manage

Asset Visualization

Scan to Manage
(Scan to Collaborate)

Buildings

Workflow



Capture



HxGN GeoCloud



Cyclone REGISTER
360 PLUS

Manage



Deliver

Benefits

Buildings

- **Speed & Accuracy** → Critical for tight construction schedules
- **Livelink** → Integration with BIM and team coordination
- **Cost & Risk Reduction** → Avoid delays and rework
- **Brand Trust & Durability** → Leica Geosystems as the premium choice





-Capture "As-Is" Environment

1 Capture Reality from the Air

Create realistic representations of buildings or sites from the air, using UAV, aerial imagery and LIDAR technology.

2 Capture Reality from the Ground

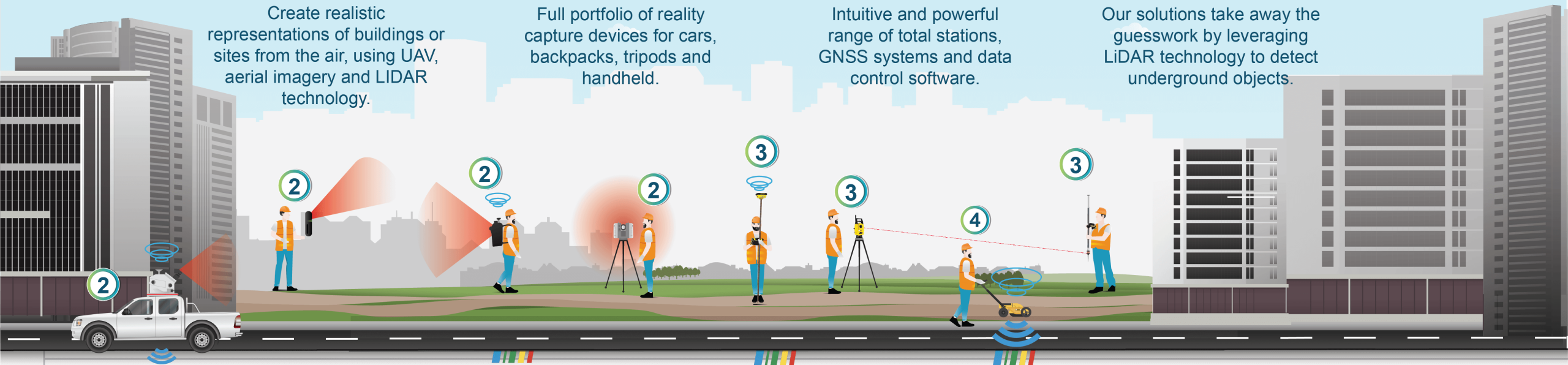
Full portfolio of reality capture devices for cars, backpacks, tripods and handheld.

3 Capture Reality Point by Point

Intuitive and powerful range of total stations, GNSS systems and data control software.

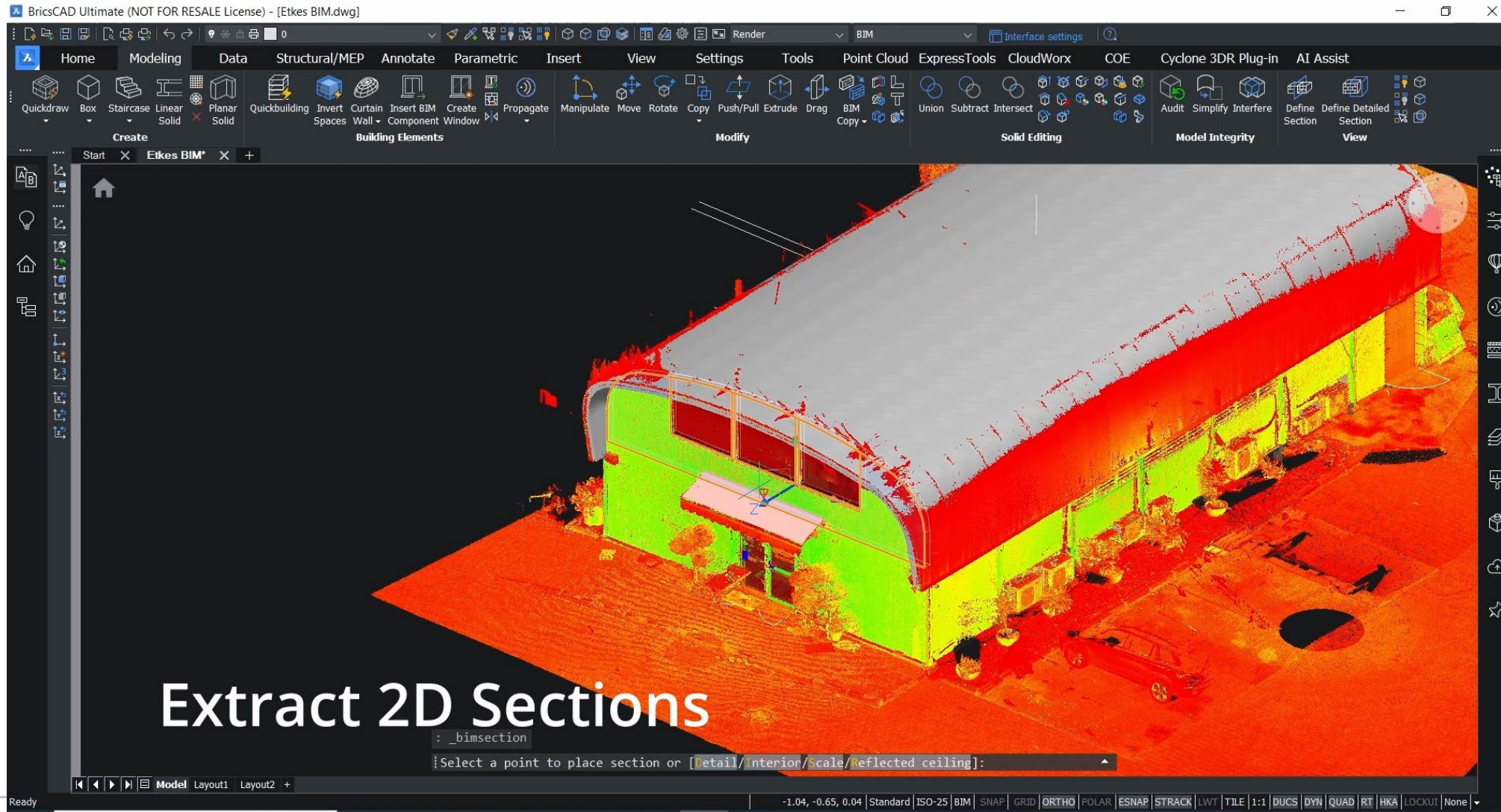
4 Capture Underground

Our solutions take away the guesswork by leveraging LiDAR technology to detect underground objects.



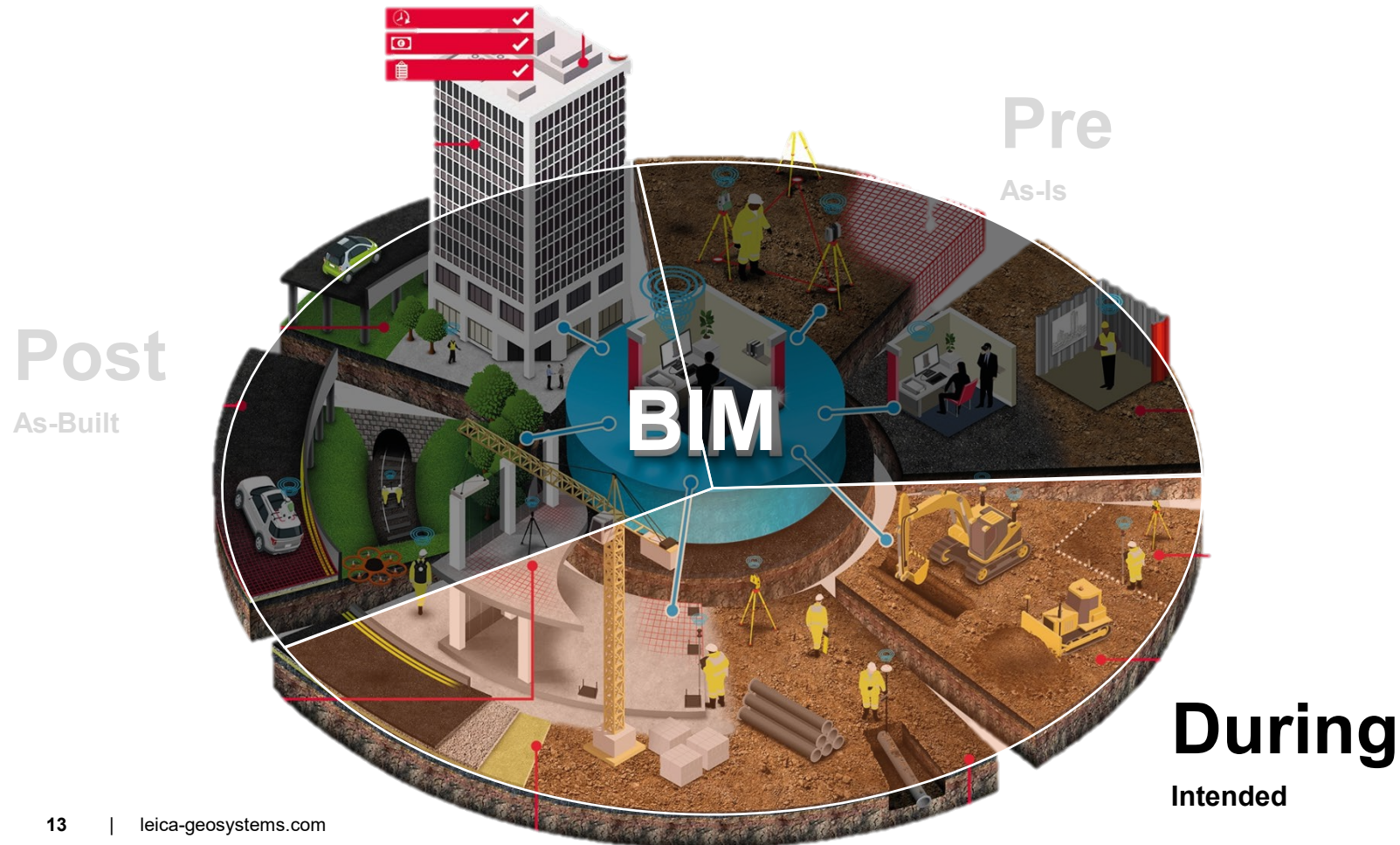
Preparation Stage

- Slicing and Sectioning / 2D drawings extraction



Digital Construction

– Building Life Cycle – Construction Stage



- Construction Management
- Quality Control
- Project Supervision
- Problem Solving
- Safety Oversight
- Progress Reporting
- Coordination with Subcontractors
- Budget Monitoring
- Documentation
- Client Communication
- ...

Construction Stage

– New Image Experience

The screenshot displays the Leica Geosystems software interface, specifically the Clash analysis tool. The top menu bar includes File, Home, View, CloudWorx, Coord Sys, Clean, Extract, Surface Modeling, Analysis, Texturing, Tank, Reverse Eng, Script, Report, and ?. The toolbar below the menu bar contains various tools categorized into Measure, Value Extraction, Compare Inspect, Unroll, Surface Analysis, Sections, BIM, and Reporting.

The main workspace is divided into two views: Detail View and Clash View. The Detail View shows a 3D model of a construction site with a red pipe and a cyan mesh. The Clash View shows a 3D model of the same construction site with a red pipe and a cyan mesh, highlighting the clash between the pipe and the mesh.

The Clash panel on the left contains the following settings and results:

Clash settings

- Tolerance: 0.01 m
- Cluster distance: 0.1 m
- ☒ Analyze per sub-element

Results

Name	Status	Points	Comment
Containec	Unknown	40430	
Clash 1	Unknown	40430	
Containec	Unknown	9747	
Clash 1	Unknown	4376	
Clash 2	Unknown	1896	
Clash 3	Unknown	1128	
Clash 4	Unknown	1044	
Clash 5	Unknown	690	
Clash 6	Unknown	186	
Clash 7	Unknown	185	
Clash 8	Unknown	114	

Current clash

☐ Filter clashes 1 points

Detail View

Contained
Clash status: Unknown

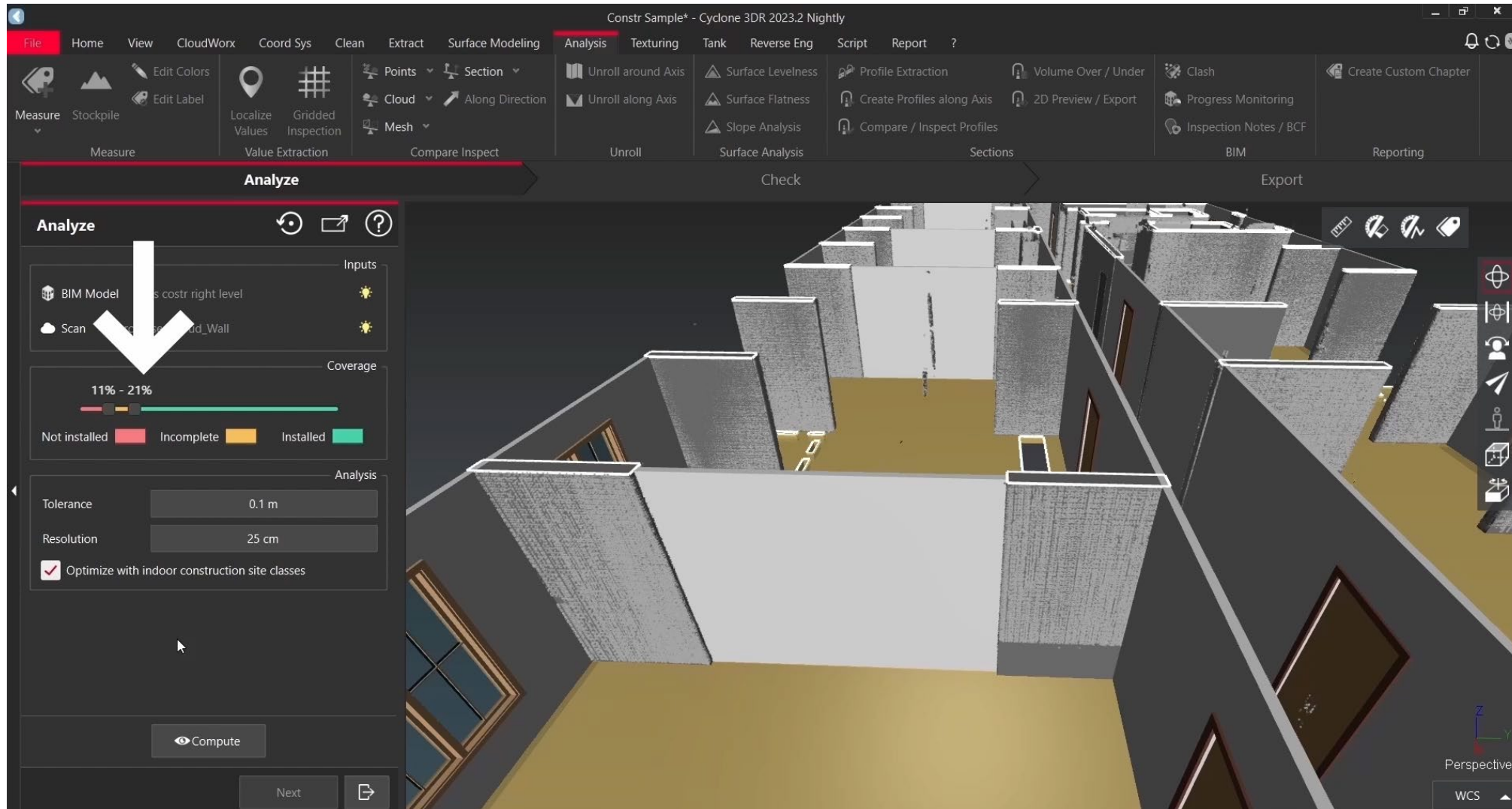
Clash View

Perspective
WCS

Up: Select previous clash
Down: Select next clash
Space: Change current clash status <<

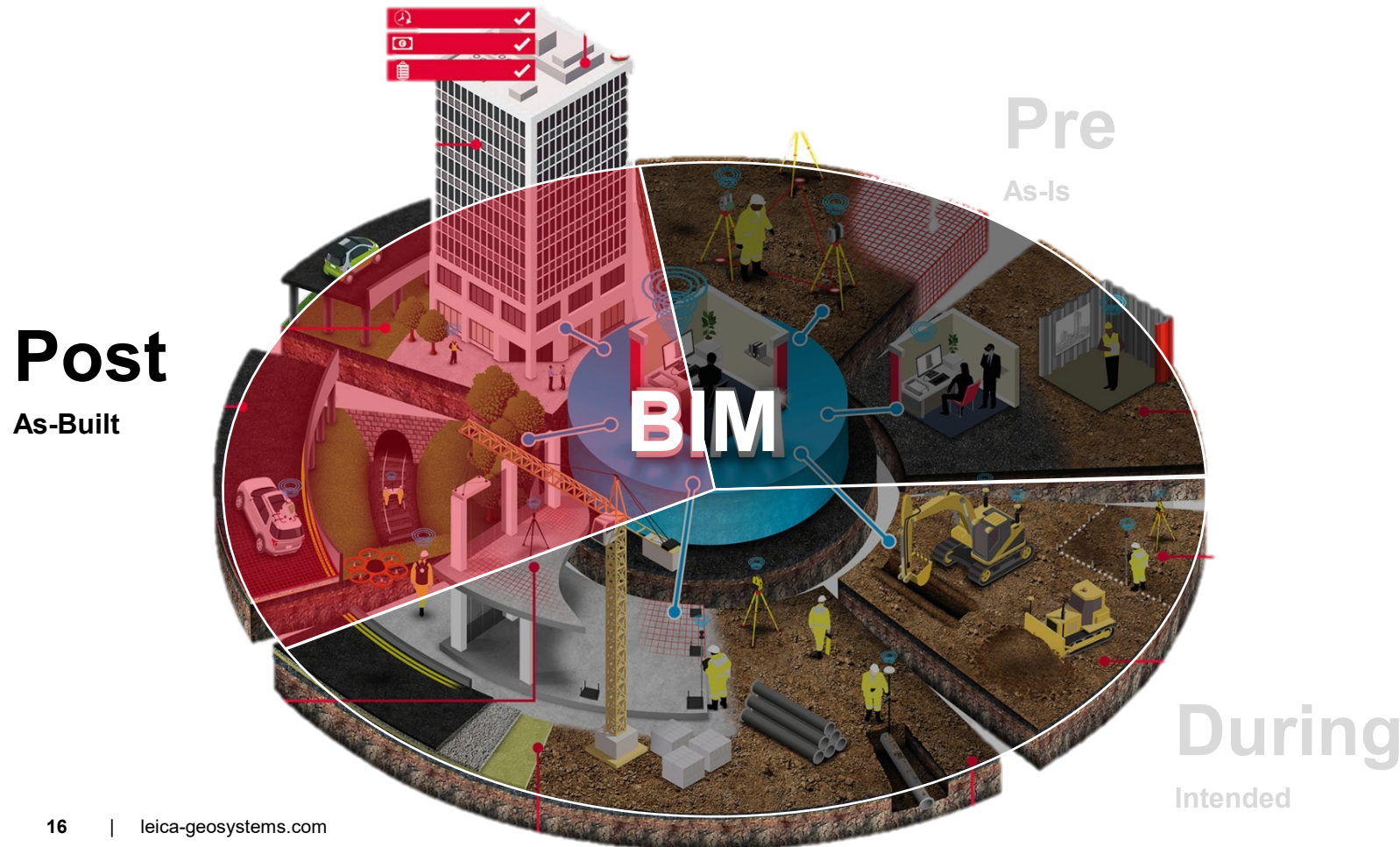
Construction Stage

– Progress monitoring



Digital Construction

– Building Life Cycle – Maintain Stage



- Condition Assessment
- Energy Efficiency Upgrades
- Asset Management
- Budgeting and Financial Planning
- Contract Management
- Vendor Selection and Coordination
- Virtual Simulators and Trainings
- Technology Implementation
- ...

Maintenance Stage

– Leica TruView and GeoTags



A GeoTag is a defined location in Cartesian coordinate space that has asset(s) associated with it.

GeoTags can be useful for identifying objects of interest in a registration. Assets such as websites, pictures and other file types can be attached to provide more information about the object.

