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CONSTRUCTION MANAGEMENT | CM-048

Digital Construction: Drones, Laser Scanning and Site Technology

Contact

+31 85 7444446
info@aractech.com
https://aractech.com

Address

Waarderweg 50, 2031 BP Haarlem - Netherlands.

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Course content

Why Attend

Construction sites are being transformed by digital technologies. Drones capture progress and survey data in minutes, laser scanners create accurate point clouds of existing structures, mobile apps replace paper forms and sensors monitor equipment, materials and conditions in real time. Used well, these tools improve productivity, quality, safety and decision making.

This Digital Construction training course provides a practical overview of the main site technologies and how to deploy them successfully. Participants learn about drone surveys and inspections, laser scanning and reality capture, integration with building information models, site management and inspection apps, sensors and connected equipment, and data management and security.

Course Methodology

• The course combines technology demonstrations, sample data sets and case studies with practical planning exercises. Participants review drone and point cloud outputs, compare as-built data with design models, evaluate site apps and develop a technology adoption plan for their own organisation.

Course Objectives

• Explain how digital technologies are changing construction sites

• Describe drone applications for survey, progress and inspection

• Understand laser scanning and reality capture workflows

• Integrate reality capture with building information models

• Use mobile site management, quality and safety applications

• Apply sensors and connected equipment for site monitoring

Target Audience

• Construction and project managers

• Site engineers and surveyors

• Digital construction and BIM managers

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- Quality and safety managers

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Course outline

Detailed course outline

Day-by-day outline for Digital Construction: Drones, Laser Scanning and Site Technology.

Day 1 - The Digital Construction Site

- 09:00-09:30 | Drivers for digital transformation in construction
- 09:30-10:00 | Overview of key site technologies and their uses
- 10:00-10:30 | Productivity, quality and safety benefits
- 10:30-11:00 | Barriers to adoption and common failures
- 11:00-11:30 | Coffee break
- 11:30-12:30 | Case studies of successful technology deployments
- 12:30-13:00 | Assessing your organisation's digital maturity
- 13:00-14:00 | Exercise: identifying site problems technology could solve

Day 2 - Drones in Construction

- 09:00-09:34 | Drone types, sensors and capabilities
- 09:34-10:08 | Topographic surveys and earthworks volume calculation
- 10:08-10:42 | Progress monitoring and visual records
- 10:42-11:00 | Inspection of roofs, facades and structures
- 11:00-11:30 | Coffee break
- 11:30-11:46 | Inspection of roofs, facades and structures (continued)
- 11:46-12:20 | Aviation regulations and safe drone operations
- 12:20-12:53 | Processing drone data into usable outputs
- 12:53-14:00 | Workshop: planning a drone survey programme

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Day 3 - Laser Scanning and Reality Capture

- 09:00-09:27 | Terrestrial, mobile and handheld laser scanners
- 09:27-09:54 | Photogrammetry and its comparison with scanning
- 09:54-10:21 | Point clouds and their processing workflows
- 10:21-11:00 | Scanning existing buildings for refurbishment design
- 11:00-11:30 | Coffee break
- 11:30-11:45 | Scanning existing buildings for refurbishment design (continued)
- 11:45-12:39 | Comparing as-built scans with design models
- 12:39-13:06 | Accuracy, control and quality of captured data
- 13:06-14:00 | Exercise: reviewing a point cloud against a model

Day 4 - Site Apps, Sensors and Connected Equipment

- 09:00-09:34 | Mobile apps for inspections, snagging and permits
- 09:34-10:08 | Digital site diaries and progress reporting
- 10:08-10:42 | Sensors for concrete curing, environment and structure
- 10:42-11:00 | Equipment telematics and plant utilisation
- 11:00-11:30 | Coffee break
- 11:30-11:46 | Equipment telematics and plant utilisation (continued)
- 11:46-12:20 | Wearables and technology for site safety
- 12:20-12:53 | Integrating site data with project controls
- 12:53-14:00 | Workshop: evaluating site management applications

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Day 5 - Data, Security and Implementation

- 09:00-09:34 | Common data environments and information flows
- 09:34-10:08 | Interoperability and open data standards
- 10:08-10:42 | Cyber security and data protection on site
- 10:42-11:00 | Building a business case for technology investment
- 11:00-11:30 | Coffee break
- 11:30-12:19 | Building a business case for technology investment (continued)
- 12:19-12:53 | Piloting, scaling and training site teams
- 12:53-13:27 | Measuring benefits and continuous improvement
- 13:27-14:00 | Personal action plan for digital construction

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Seminar dates

Available seminar dates

Live dates and pricing for Digital Construction: Drones, Laser Scanning and Site Technology generated from the course details page.

Date	Location	Format	Fee
7 - 11 December 2026	London	Classroom	**€2,915**
14 - 18 December 2026	Barcelona	Classroom	**€2,275**
21 - 25 December 2026	Frankfurt	Classroom	**€2,175**
11 - 15 January 2027	London	Classroom	**€2,915**
18 - 22 January 2027	Barcelona	Classroom	**€2,275**
25 - 29 January 2027	Frankfurt	Classroom	**€2,175**
4 - 8 January 2027	Amsterdam	Classroom	**€3,215**
15 - 19 February 2027	London	Classroom	**€2,915**
22 - 26 February 2027	Barcelona	Classroom	**€2,275**
1 - 5 February 2027	Frankfurt	Classroom	**€2,175**

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Seminar dates

Available seminar dates

Live dates and pricing for Digital Construction: Drones, Laser Scanning and Site Technology generated from the course details page.

Date	Location	Format	Fee
8 - 12 February 2027	Cape Town	Classroom	**€1,825**
22 - 26 March 2027	London	Classroom	**€2,915**
1 - 5 March 2027	Barcelona	Classroom	**€2,275**
8 - 12 March 2027	Frankfurt	Classroom	**€2,175**
15 - 19 March 2027	Dubai	Classroom	**€2,845**
5 - 9 April 2027	London	Classroom	**€2,915**
12 - 16 April 2027	Barcelona	Classroom	**€2,275**
19 - 23 April 2027	Frankfurt	Classroom	**€2,175**
26 - 30 April 2027	Geneva	Classroom	**€3,315**
10 - 14 May 2027	London	Classroom	**€2,915**

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Seminar dates

Available seminar dates

Live dates and pricing for Digital Construction: Drones, Laser Scanning and Site Technology generated from the course details page.

Date	Location	Format	Fee
17 - 21 May 2027	Barcelona	Classroom	**€2,275**
24 - 28 May 2027	Frankfurt	Classroom	**€2,175**
3 - 7 May 2027	Istanbul	Classroom	**€2,825**
7 - 11 June 2027	London	Classroom	**€2,915**
14 - 18 June 2027	Barcelona	Classroom	**€2,275**
21 - 25 June 2027	Frankfurt	Classroom	**€2,175**
26 - 30 July 2027	London	Classroom	**€2,915**
5 - 9 July 2027	Barcelona	Classroom	**€2,275**
12 - 16 July 2027	Frankfurt	Classroom	**€2,175**
19 - 23 July 2027	Madrid	Classroom	**€3,400**

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Date	Location	Format	Fee
2 - 6 August 2027	London	Classroom	**€2,915**
9 - 13 August 2027	Barcelona	Classroom	**€2,275**
16 - 20 August 2027	Frankfurt	Classroom	**€2,175**
23 - 27 August 2027	Munich	Classroom	**€2,425**
6 - 10 September 2027	London	Classroom	**€2,915**
13 - 17 September 2027	Barcelona	Classroom	**€2,275**
20 - 24 September 2027	Frankfurt	Classroom	**€2,175**
18 - 22 October 2027	London	Classroom	**€2,915**
25 - 29 October 2027	Barcelona	Classroom	**€2,275**
4 - 8 October 2027	Frankfurt	Classroom	**€2,175**

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Seminar dates

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Date	Location	Format	Fee
11 - 15 October 2027	Rome	Classroom	**€2,830**
22 - 26 November 2027	London	Classroom	**€2,915**
1 - 5 November 2027	Barcelona	Classroom	**€2,275**
8 - 12 November 2027	Frankfurt	Classroom	**€2,175**
15 - 19 November 2027	Vienna	Classroom	**€3,425**
6 - 10 December 2027	London	Classroom	**€2,915**
13 - 17 December 2027	Barcelona	Classroom	**€2,275**
20 - 24 December 2027	Frankfurt	Classroom	**€2,175**
27 - 31 December 2027	Amsterdam	Classroom	**€3,215**
7 - 11 December 2026	Online / Live	Online / Live	**€1,625**

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Date	Location	Format	Fee
14 - 18 December 2026	Online / Live	Online / Live	**€1,625**
21 - 25 December 2026	Online / Live	Online / Live	**€1,625**
11 - 15 January 2027	Online / Live	Online / Live	**€1,625**
18 - 22 January 2027	Online / Live	Online / Live	**€1,625**
25 - 29 January 2027	Online / Live	Online / Live	**€1,625**
4 - 8 January 2027	Online / Live	Online / Live	**€1,625**
15 - 19 February 2027	Online / Live	Online / Live	**€1,625**
22 - 26 February 2027	Online / Live	Online / Live	**€1,625**
1 - 5 February 2027	Online / Live	Online / Live	**€1,625**
8 - 12 February 2027	Online / Live	Online / Live	**€1,625**

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Date	Location	Format	Fee
22 - 26 March 2027	Online / Live	Online / Live	**€1,625**
1 - 5 March 2027	Online / Live	Online / Live	**€1,625**
8 - 12 March 2027	Online / Live	Online / Live	**€1,625**
15 - 19 March 2027	Online / Live	Online / Live	**€1,625**
5 - 9 April 2027	Online / Live	Online / Live	**€1,625**
12 - 16 April 2027	Online / Live	Online / Live	**€1,625**
19 - 23 April 2027	Online / Live	Online / Live	**€1,625**
26 - 30 April 2027	Online / Live	Online / Live	**€1,625**
10 - 14 May 2027	Online / Live	Online / Live	**€1,625**
17 - 21 May 2027	Online / Live	Online / Live	**€1,625**

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Date	Location	Format	Fee
24 - 28 May 2027	Online / Live	Online / Live	**€1,625**
3 - 7 May 2027	Online / Live	Online / Live	**€1,625**
7 - 11 June 2027	Online / Live	Online / Live	**€1,625**
14 - 18 June 2027	Online / Live	Online / Live	**€1,625**
21 - 25 June 2027	Online / Live	Online / Live	**€1,625**
26 - 30 July 2027	Online / Live	Online / Live	**€1,625**
5 - 9 July 2027	Online / Live	Online / Live	**€1,625**
12 - 16 July 2027	Online / Live	Online / Live	**€1,625**
19 - 23 July 2027	Online / Live	Online / Live	**€1,625**
2 - 6 August 2027	Online / Live	Online / Live	**€1,625**

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9 - 13 August 2027	Online / Live	Online / Live	**€1,625**
16 - 20 August 2027	Online / Live	Online / Live	**€1,625**
23 - 27 August 2027	Online / Live	Online / Live	**€1,625**
6 - 10 September 2027	Online / Live	Online / Live	**€1,625**
13 - 17 September 2027	Online / Live	Online / Live	**€1,625**
20 - 24 September 2027	Online / Live	Online / Live	**€1,625**
18 - 22 October 2027	Online / Live	Online / Live	**€1,625**
25 - 29 October 2027	Online / Live	Online / Live	**€1,625**
4 - 8 October 2027	Online / Live	Online / Live	**€1,625**
11 - 15 October 2027	Online / Live	Online / Live	**€1,625**

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Date	Location	Format	Fee
22 - 26 November 2027	Online / Live	Online / Live	**€1,625**
1 - 5 November 2027	Online / Live	Online / Live	**€1,625**
8 - 12 November 2027	Online / Live	Online / Live	**€1,625**
15 - 19 November 2027	Online / Live	Online / Live	**€1,625**
6 - 10 December 2027	Online / Live	Online / Live	**€1,625**
13 - 17 December 2027	Online / Live	Online / Live	**€1,625**
20 - 24 December 2027	Online / Live	Online / Live	**€1,625**
27 - 31 December 2027	Online / Live	Online / Live	**€1,625**