

Course : The building's digital twin

Practical course - 2d - 14h00 - Ref. SMG

Price : 1400 CHF E.T.

The use of BIM (Building Information Modeling) in the building industry makes it possible to create digital representations of a facility's physical and functional characteristics. Coupled with business tools, it enables information to be shared throughout a building's lifecycle.

Teaching objectives

At the end of the training, the participant will be able to:

- ✓ Discover the digital twin concept in real estate
- ✓ Understand the benefits of building design, operation and demolition

Intended audience

Building and architecture professionals and public sector representatives.

Prerequisites

No special knowledge required.

Practical details

Group discussion

Group work based on case studies, demonstrations and testimonials from professionals.

Teaching methods

Active teaching.

Course schedule

1 Discover the building's digital twin

- The fundamentals of the digital twin.
- Definition of the digital twin building.
- Distinguish between static and dynamic digital twins.

Group discussion

Discussions between participants and trainer on examples of real-life situations.

PARTICIPANTS

Building and architecture professionals and public sector representatives.

PREREQUISITES

No special knowledge required.

TRAINER QUALIFICATIONS

The experts leading the training are specialists in the covered subjects. They have been approved by our instructional teams for both their professional knowledge and their teaching ability, for each course they teach. They have at least five to ten years of experience in their field and hold (or have held) decision-making positions in companies.

ASSESSMENT TERMS

The trainer evaluates each participant's academic progress throughout the training using multiple choice, scenarios, hands-on work and more. Participants also complete a placement test before and after the course to measure the skills they've developed.

2 BIM concepts for a static digital twin at BIM GEM

- BIM definition for a digital building twin.
- The different dimensions of BIM and the collaborative process.
- OpenBIM.
- BIM GEM: how to facilitate building maintenance during the operating phase.
- Initiate a BIM GEM (management - operation - maintenance) approach.

Hands-on work

Case studies.

3 From GEM BIM to digital twin

- The transition to the digital twin.
- The benefits of the digital twin.
- The different levels of digital twins in the building.

Hands-on work

Case studies in sub-groups

4 Smart building concepts

- Definitions, vocabulary and acronyms.
- Smart building issues, regulatory context and smart building labels.
- The rules of the art and the challenges of deploying digital twins for asset management.
- The Building Information System at the service of the digital twin.
- Building standards: BIS, Building Operating System (BOS).
- Cybersecurity issues.

Case study

Technical analysis.

5 Digital data quality

- Smart building data sources.
- Data acquisition methods.
- Data structuring.
- From big data to smart data.
- Data processing.

Hands-on work

Technical, organizational and budgetary analyses of the project.

TEACHING AIDS AND TECHNICAL RESOURCES

- The main teaching aids and instructional methods used in the training are audiovisual aids, documentation and course material, hands-on application exercises and corrected exercises for practical training courses, case studies and coverage of real cases for training seminars.
- At the end of each course or seminar, ORSYS provides participants with a course evaluation questionnaire that is analysed by our instructional teams.
- A check-in sheet for each half-day of attendance is provided at the end of the training, along with a course completion certificate if the trainee attended the entire session.

TERMS AND DEADLINES

Registration must be completed 24 hours before the start of the training.

ACCESSIBILITY FOR PEOPLE WITH DISABILITIES

Do you need special accessibility accommodations? Contact Mrs. Fosse, Disability Manager, at psh-accueil@orsys.fr to review your request and its feasibility.

6 The stages of a digital project and its future prospects

- The skills you need.
- Methodology, master plan and associated program.
- Specifications.
- Deployment and management of a digital twin strategy.
- Building digital twin performance indicators.
- Foresight: the contribution of the digital twin to the challenge of complete decarbonization by 2050.

Case study

Study of a digital project.

Dates and locations

REMOTE CLASS

2026 : 15 June, 29 Oct.