Strategic BIM for Construction and Asset Management Training Course



14 - 18 Dec 2026

Cape town

4600 € (Per Person)

Ref: #CAD8912_271644

Course Introduction / Overview:

This course provides a comprehensive framework for the strategic implementation of Building Information Modeling (BIM) across the entire lifecycle of a built asset, from initial design and construction to long-term operations and asset management. Moving beyond the basics of 3D modeling, this program focuses on the managerial and strategic imperatives required to leverage BIM for enhanced efficiency, cost savings, and improved facility performance. As highlighted by pioneering academic Dr. Chuck Eastman in his seminal work, the "BIM Handbook: A Guide to Building Information Modeling for Owners, Managers, Designers, Engineers and Contractors", the true value of BIM is unlocked through its integration into core business processes. This BIG BEN Training Center course is meticulously designed to bridge the critical gap between the construction phase and the operational phase, ensuring a seamless transition of data and the creation of a valuable digital twin. Participants will explore the principles of ISO 19650, learn to develop robust BIM Execution Plans (BEPs), and understand how to manage information for effective asset lifecycle management. The curriculum is structured to empower professionals to lead digital transformation within their organizations, turning information into a strategic asset that drives decision-making and maximizes return on investment for the built environment.

Target Audience / This training course is suitable for:

- Project Managers and Directors.
- Construction Managers and Superintendents.
- Architects and Design Managers.
- Civil, Structural, and MEP Engineers.
- Facility and Asset Managers.
- BIM Managers and Coordinators.
- Real Estate Developers and Owners.
- Quantity Surveyors and Cost Estimators.

Target Sectors and Industries:

- Architecture, Engineering, and Construction (AEC).
- Real Estate Development and Management.
- Infrastructure and Transportation.
- Government Agencies and Public Works Departments.
- Oil and Gas and Energy Sectors.
- Healthcare and Educational Facilities Management.
- Manufacturing and Industrial Plant Management.

Target Organizations Departments:

- Project Management Office (PMO).
- Engineering and Design Departments.
- Construction and Site Operations.
- Asset and Facility Management.
- Capital Projects and Development.
- Procurement and Contracts Departments.
- Information Technology (IT) and Digital Transformation Units.

Course Offerings:

By the end of this course, the participants will have able to:

- Develop a strategic BIM implementation plan aligned with organizational goals.
- Author a comprehensive BIM Execution Plan (BEP) based on ISO 19650 standards.
- Manage a Common Data Environment (CDE) for effective project collaboration.
- Integrate 4D scheduling and 5D cost estimation into project controls.
- Oversee the digital handover process from construction to operations.
- Implement COBie data standards for structured asset information.
- Transition a Project Information Model (PIM) into a functional Asset Information Model (AIM).
- Evaluate the ROI of BIM implementation for both capital and operational expenditures.
- Leverage BIM data to support long-term strategic asset management decisions.

Course Methodology:

The training methodology at BIG BEN Training Center is designed to be highly interactive, practical, and collaborative, ensuring that participants can immediately apply the learned concepts in their professional roles. This course moves beyond theoretical lectures to immerse attendees in a dynamic learning environment. The program is built upon a foundation of real-world case studies, showcasing both successful and challenging BIM implementations across various industries. Participants will engage in hands-on workshops, including the collaborative development of a mock BIM Execution Plan (BEP) and data management strategies. Interactive group discussions and problem-solving sessions will encourage the sharing of experiences and foster a deeper understanding of the complexities of strategic BIM adoption. Our expert instructors facilitate a learning journey that emphasizes critical thinking and strategic planning over simple software proficiency. The course structure includes practical exercises in managing information flow from construction to operations, ensuring a holistic view of the asset lifecycle. Continuous feedback and Q&A sessions are integrated throughout the program to address specific challenges and tailor insights to the participants' unique contexts.

Course Agenda (Course Units):

Unit One: Foundations of Strategic BIM and Information Management

- Introduction to Building Information Modeling beyond 3D.
- The strategic value of BIM across the asset lifecycle.
- Understanding BIM maturity levels and organizational readiness.
- Deep dive into ISO 19650 standards for information management.
- Key concepts: Project Information Model (PIM) vs. Asset Information Model (AIM).
- Defining Employer's Information Requirements (EIR) and Asset Information Requirements (AIR).
- The role of the Common Data Environment (CDE).

Unit Two: Planning for BIM Implementation

- Developing a strategic BIM implementation roadmap.
- Creating a robust BIM Execution Plan (BEP).
- Defining BIM uses and objectives for a project.
- Establishing roles, responsibilities, and competencies.
- Legal and contractual considerations for BIM projects.
- Software and technology stack evaluation and selection.
- Managing change and fostering a collaborative BIM culture.

Unit Three: BIM in Design and Construction Phases

- BIM for collaborative design coordination and review.
- Advanced clash detection and resolution strategies.
- Implementing 4D for construction sequencing and scheduling.
- Applying 5D for accurate cost estimation and budget control.
- BIM for prefabrication and modular construction.
- On-site BIM utilization with mobile technologies.
- Health and safety management through BIM (4D H&S).

Unit Four: BIM for Handover and Asset Management

- The critical importance of a structured digital handover.
- Understanding and implementing COBie (Construction Operations Building information exchange).
- The process of transitioning from PIM to AIM.
- Creating and managing a Digital Twin for operations.
- Integrating BIM with Computerized Maintenance Management Systems (CMMS).
- Using the Asset Information Model for space management and analysis.
- Leveraging BIM for energy performance and sustainability analysis (6D BIM).

Unit Five: Advanced Strategies and the Future of BIM

- Measuring the Return on Investment (ROI) of BIM.
- Data analytics and business intelligence from BIM data.
- Introduction to Lean Construction principles with BIM.
- The integration of IoT, sensors, and AI with Digital Twins.
- Generative design and its impact on the AEC industry.
- Future trends and the evolution of digital construction.
- Developing a continuous improvement plan for organizational BIM capabilities.

FAQ:

Qualifications required for registering to this course?

There are no requirements.

How long is each daily session, and what is the total number of training hours for the course?

This training course spans five days, with daily sessions ranging between 4 to 5 hours, including breaks and interactive activities, bringing the total duration to 20 - 25 training hours.

Something to think about:

How might the integration of AI and IoT with BIM-driven digital twins fundamentally reshape predictive maintenance and long-term asset value?

What unique qualities does this course offer compared to other courses?

This course distinguishes itself by focusing squarely on the strategic and managerial dimensions of BIM, rather than on proficiency in specific software tools. While many courses teach how to use modeling software, this program teaches why and how to implement BIM as a core business strategy to drive value across the entire asset lifecycle. Its primary unique quality is the dedicated emphasis on bridging the gap between the construction phase and the long-term operational and asset management phase—a common point of failure in many BIM initiatives. We delve deeply into the practical application of global standards like ISO 19650 and data exchange protocols like COBie, ensuring participants are equipped for seamless information handover. The curriculum is built around real-world case studies and strategic frameworks, such as developing a robust BIM Execution Plan and calculating ROI, providing actionable knowledge. Unlike purely technical training, this course empowers leaders to champion digital transformation, manage change within their organizations, and make informed decisions that link construction data directly to long-term asset performance and profitability. It is designed for the strategist, the manager, and the future leader in the built environment.