Sustainable Building Retrofit and Renovation Management Training Course



14 - 18 Dec 2026

Boston

7500 € (Per Person)

Ref: #CON9095_87090

Course Introduction / Overview:

The global shift towards sustainability has placed existing buildings at the forefront of environmental and economic strategy. This course provides a comprehensive framework for managing the complex process of retrofitting and renovating buildings to meet modern standards of energy efficiency, functionality, and sustainability. It moves beyond basic construction management to address the unique challenges of working with existing structures, from initial assessment to post-occupancy evaluation. As Stewart Brand articulated in his influential book, "How Buildings Learn: What Happens After They're Built," buildings are dynamic entities that evolve over time. This course embraces that philosophy, equipping professionals with the skills to guide that evolution effectively. Participants will explore the principles of adaptive reuse, circular economy in construction, and the integration of smart technologies. BIG BEN Training Center has designed this program to blend theoretical knowledge with practical application, ensuring that attendees can lead projects that not only preserve architectural value but also deliver significant performance improvements and long-term return on investment. This training is essential for anyone aiming to master the art and science of transforming the built environment for a sustainable future.

Target Audience / This training course is suitable for:

- Project Managers and Project Engineers.
- Architects and Design Professionals.
- Construction Managers and Site Supervisors.
- Facility and Property Managers.
- Real Estate Developers and Investors.
- Sustainability Consultants and Energy Auditors.
- Structural and MEP Engineers.
- Building Surveyors and Cost Estimators.
- Municipal Planners and Building Code Officials.

Target Sectors and Industries:

- Construction and Engineering.
- Real Estate Development and Management.
- Architecture and Urban Planning.
- Hospitality and Tourism.
- Healthcare Facilities Management.
- Educational Institutions.
- Retail and Commercial Property Management.
- Governmental and Public Sector Agencies.
- Heritage and Conservation Organizations.

Target Organizations Departments:

- Project Management Office (PMO).
- Capital Projects and Development.
- Facilities Management and Operations.
- Engineering and Technical Services.
- Sustainability and Corporate Social Responsibility (CSR).
- Asset Management.
- Procurement and Contract Management.
- Design and Architecture Departments.
- Compliance and Risk Management.

Course Offerings:

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

- Develop comprehensive project plans tailored to the unique challenges of retrofitting and renovation.
- Conduct thorough building assessments to identify opportunities for energy efficiency and structural upgrades.
- Apply sustainable design principles and material selection criteria to renovation projects.
- Master cost estimation, budgeting, and financial control techniques for retrofits.
- Implement effective risk management strategies to mitigate unforeseen issues in existing structures.
- Manage stakeholders, including clients, contractors, and regulatory bodies, throughout the project lifecycle.
- Integrate modern technologies like BIM and laser scanning for improved project accuracy and execution.
- Ensure compliance with building codes, accessibility standards, and environmental regulations.
- Oversee the project closeout, commissioning, and handover process for renovated buildings.
- Analyze the life cycle assessment (LCA) of renovation projects to maximize long-term value.

Course Methodology:

This training course at BIG BEN Training Center employs a dynamic and interactive learning methodology designed to foster deep understanding and practical skill acquisition. The approach is centered on participant engagement, moving beyond traditional lectures to create a collaborative environment. Sessions will feature a blend of expert-led presentations, in-depth case studies of real-world retrofitting and renovation projects, and interactive group discussions. Participants will work in teams on practical exercises, such as developing a risk mitigation plan for a historic building renovation or conducting a cost-benefit analysis for an energy-efficient MEP system upgrade. These hands-on workshops are designed to simulate the complexities and decision-making pressures of actual projects. The methodology emphasizes problem-based learning, where attendees tackle challenges and develop viable solutions under the guidance of the instructor. Continuous feedback is a core component, with regular Q&A sessions and peer-to-peer reviews to reinforce learning and address specific queries. This immersive and practical approach ensures that participants leave not just with theoretical knowledge, but with the confidence and competence to manage building renovation projects successfully.

Course Agenda (Course Units):

Unit One Foundations of Building Retrofitting and Renovation

- Introduction to retrofitting, renovation, and adaptive reuse.
- The business case for retrofitting: sustainability, energy savings, and asset value.
- The renovation project management lifecycle.
- Key stakeholders and their roles in renovation projects.
- Understanding building typologies and historical contexts.
- Regulatory frameworks, building codes, and permit requirements.
- Principles of the circular economy in the built environment.

Unit Two Project Initiation and Feasibility Analysis

- Conducting a comprehensive building condition assessment.
- Structural, facade, and MEP systems diagnostics.
- Feasibility studies and return on investment (ROI) analysis.
- Initial cost estimation and budget development.
- Risk identification and preliminary risk assessment.
- Introduction to laser scanning and reality capture for as-built documentation.
- Defining project scope, objectives, and success criteria.

Unit Three Design, Planning, and Procurement

- Sustainable design strategies for renovation projects.
- Integrating energy-efficient building envelope and MEP system upgrades.
- Utilizing Building Information Modeling (BIM) for renovation planning.
- Developing a detailed project execution plan and schedule.
- Procurement strategies and contract selection for renovation work.
- Value engineering to optimize project cost and performance.
- Managing the design process with architects and engineers.

Unit Four On-Site Execution and Project Control

- Managing demolition, deconstruction, and waste streams.
- Site logistics and safety management for occupied buildings.
- Project monitoring, quality control, and assurance.
- Change order management and scope creep prevention.
- Effective communication and coordination with contractors and subcontractors.
- Progress tracking, reporting, and performance metrics.
- Resolving conflicts and managing unforeseen site conditions.

Unit Five Project Closeout, Commissioning, and Operation

- Building commissioning and systems testing procedures.
- Managing the project handover and closeout documentation.
- Post-occupancy evaluation and performance monitoring.
- Developing a long-term facility maintenance and operations plan.
- Final project financial reconciliation and reporting.
- Lessons learned and continuous improvement for future projects.
- Introduction to smart building technology integration for ongoing optimization.

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 can project managers balance the preservation of a building's historical character with the imperative for modern energy efficiency and functionality?

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

This course distinguishes itself by offering a holistic and forward-thinking perspective on building renovation, moving beyond conventional project management to integrate the critical pillars of sustainability, technology, and financial viability. Unlike programs that focus narrowly on either construction techniques or management theory, this curriculum synthesizes both. It provides a deep dive into the practical application of cutting-edge concepts such as the circular economy, life cycle assessment (LCA), and adaptive reuse, equipping participants with the knowledge to create buildings that are not only efficient but also resilient and valuable for decades to come. A key differentiator is the emphasis on data-driven decision-making, from utilizing BIM and reality capture for precise planning to conducting post-occupancy evaluations for performance verification. The course structure is built around real-world case studies that explore both successes and failures, offering invaluable lessons in risk management and problem-solving specific to the complexities of existing structures. By focusing on the strategic intersection of heritage preservation, technological innovation, and sustainable development, this training provides a uniquely comprehensive skill set essential for leadership in the modern built environment.