



# **Advanced Lean Construction Principles for Project Excellence Training Course**

**Ref: #CON8566**



## **Course Introduction / Overview:**

This training course is designed to equip construction professionals, project managers, and engineers with the strategic and technical skills needed to apply lean construction principles to their projects. The lean philosophy, which focuses on maximizing value while minimizing waste, has been proven to improve efficiency, reduce costs, and enhance collaboration. This program, offered by BIG BEN Training Center, provides a comprehensive framework for understanding the core principles of lean construction, from various waste reduction techniques and process mapping to pull planning and continuous improvement. We will explore key concepts such as the Last Planner System®, Value Stream Mapping (VSM), and the use of Just-in-Time (JIT) methodologies. The curriculum is informed by the academic work of authors like Lauri Koskela, whose research on the "Transformation, Flow, Value" model provides a foundational and detailed understanding of the principles behind effective lean implementation. This course goes beyond a simple overview of concepts to provide a deep understanding of how to implement real-world solutions that ensure operational efficiency, project profitability, and a culture of continuous improvement. We prepare participants to be leaders who can build more efficient and innovative construction initiatives.

## **Target Audience / This training course is suitable for:**



- Project managers.
- Site supervisors.
- Lean facilitators.
- Civil engineers.
- Contracts managers.
- Business process analysts.
- Strategic planners.
- Government agencies and equivalents.

### **Target Sectors and Industries:**

- Construction.
- Heavy Civil.
- Oil and Gas.
- Infrastructure.
- Manufacturing.
- Utilities.
- Architecture and Engineering.
- Government and public administration agencies.

### **Target Organizations Departments:**

- Project Management Office (PMO).
- Operations.
- Strategic Planning.
- Engineering.
- Quality Assurance.
- Business Process Improvement.
- Procurement.
- Finance.



## Course Offerings:

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

- Apply core lean construction principles.
- Implement the Last Planner System®.
- Conduct effective Value Stream Mapping (VSM).
- Identify and eliminate waste in construction.
- Improve project workflows and processes.
- Foster a culture of continuous improvement.
- Integrate lean with traditional management methods.
- Measure the impact of lean on project performance.

## Course Methodology:

This training course uses a highly practical and case-study driven methodology. The program is built on real-world examples of successful lean construction implementations. Participants will work in teams to apply Value Stream Mapping (VSM) to a hypothetical project, identifying areas of waste and proposing lean solutions. We will use interactive workshops to practice skills like pull planning and process mapping. The curriculum is designed to be a collaborative experience where participants can share their unique challenges and innovative solutions. Our trainers, with extensive experience in the field, will provide direct feedback and guidance throughout the course. BIG BEN Training Center is committed to providing a dynamic and practical learning environment, ensuring that participants leave with the skills and confidence to effectively implement lean principles.



## **Course Agenda (Course Units):**

### **Unit One: Foundations of Lean Construction**

- The core philosophy of lean construction.
- The Five Principles of Lean.
- Understanding and identifying the Seven Wastes.
- Value and non-value-added activities.
- The Transformation-Flow-Value model.
- Case studies in lean success.
- Why lean is essential for modern construction.

### **Unit Two: Planning for Lean Projects**

- The role of pull planning.
- Implementing the Last Planner System®.
- Creating reliable plans.
- Short-interval scheduling.
- Make-Ready Planning.
- Lookahead planning.
- Phase planning.

### **Unit Three: Value Stream Mapping and Process Improvement**

- Introduction to Value Stream Mapping (VSM).
- Mapping the current state.
- Identifying waste and bottlenecks.
- Designing the future state map.
- Process mapping workshops.
- Implementing Just-in-Time (JIT).
- Creating a continuous flow.



## **Unit Four: Lean Tools and Techniques**

- 5S methodology for cleaning sites.
- Visual management tools.
- Kaizen events for improvement.
- Poka-Yoke (mistake-proofing).
- Standardized work.
- Leaning supply chain management.
- The role of technology in learning.

## **Unit Five: Implementation and Cultural Change**

- Building a lean culture.
- Managing change within an organization.
- The role of leadership.
- Training and engaging in the workforce.
- Measuring success with lean metrics.
- Integrating lean with other systems.
- The future of lean construction.

## **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 a deeper understanding of lean construction principles and a proactive approach to waste reduction empower professionals to move beyond traditional methods and become strategic leaders in creating projects that are not only profitable but also more efficient and valuable to all stakeholders?

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

This training course is unique because it provides a dedicated, strategic focus on lean construction principles. While other programs may cover general project management, our curriculum is designed to empower professionals with the specific skills needed to implement lean in a construction environment, from mastering the Last Planner System® to conducting a Value Stream Mapping (VSM) workshop. The program is a hands-on experience, with exercises that directly simulate the challenges and decisions involved in real-world lean implementation. We go beyond theoretical concepts to provide a clear, actionable roadmap for balancing the demands of a complex project with the imperative of delivering a successful project with superior efficiency and quality. This course is for professionals who want to lead their organizations toward a more efficient, profitable, and innovative future.