Projacs
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بروجاكس للتدريب والتطوير
Projacs Training and Development

Managing Construction Projects - Applying State-of-the-Art Lean Construction Paradigm

إدارة مشاريع البناء - التطبيقات الحديثة في التخلص من الأخطاء ونمذجة البناء

17 – 21 October 2021

Dubai / UAE

PROJACS ACADEMY

ProjacsAcademy.com

Introduction

Where traditional practice tries to optimize the piece, lean aims to optimize at the project level. This requires a different approach to managing work. Our environmental problems arise from similar practices, locally optimizing at the expense of larger systems. Lean won't save the planet but it does help us understand how to manage larger, more complex systems far more effectively than is possible with practices aimed at local optimization.

This course connects emerging lean construction theory and practices with its roots in industrial engineering. It saves the baby of lean construction and the bath water of more traditional industrial engineering and productivity improvement practices. The course also connects lean construction with the LEED movement. This makes great sense as lean construction rests on a conceptual foundation and understanding of waste that

Objectives

Upon completion of this workshop, participants are expected to:

- Master the foundations of lean management
- Capture the lean management processes
- Handle the tools and techniques of lean measurements
- Understand lean project delivery method
- Differentiate and integrate lean construction and sustainability

Who Should Attend?

This course will benefit field administrators-in-training; field representatives of engineers, contractors, owners, architects, and government agencies; construction inspectors; construction managers and project managers; design and construction professionals, and others responsible for effective field administration in building construction.

Course Outline

- **Overview of the Construction Industry**
  - ✓ Reasons for Low Productivity
  - ✓ Causes of Poor Construction Industry Performance
  - ✓ Categories of Construction
  - ✓ Project Delivery Methods
  - ✓ Forms of Contract
  - ✓ Advantages and Disadvantages of Different Forms of Contracts
  - ✓ Strategies for Improving Construction Performance

- **Productivity and Performance Measurement in Construction**
  - ✓ Importance of Productivity
  - ✓ Lean Construction: Impact on Productivity
  - ✓ Potential for Productivity Improvement
  - ✓ Factors Affecting Construction Productivity
  - ✓ Productivity Ratios
  - ✓ Construction Progress Measurement
  - ✓ Earned Value Management (EVM) Application
  - ✓ Productivity Estimation Based on Worth

- **Foundations of Lean Construction**
  - ✓ Defining Lean Construction
  - ✓ Lean Theory
  - ✓ Accomplishing a Lean State
  - ✓ Origins of Lean Construction
  - ✓ Adoption of Relational Contracting
  - ✓ Lean Design and Construction
  - ✓ Deficiencies in Traditional Construction Methods
  - ✓ Barriers to Applying Manufacturing Methods to Construction
  - ✓ Characteristics of Lean Construction
  - ✓ Lean Construction Fundamentals

- **Lean Process Management**
  - ✓ Structure of the Lean Project Delivery System
  - ✓ Lean Design Management
  - ✓ Designing for Lean Operations
  - ✓ Last Planner System
  - ✓ Creating a Support System for Managing the Lean Process
  - ✓ Master Schedule
  - ✓ Activity Definition Model

- **Lean Process Measurement and Lean Tools/Techniques**
  - ✓ Measuring Lean Construction Performance
  - ✓ Use of Statistical Process Control
  - ✓ Learning: Reasons Analysis and Action
  - ✓ Lean Performance Measures
  - ✓ Lean Tools and Techniques
  - ✓ Future-State Map
  - ✓ Kaizen Methodology
  - ✓ Five-Step Plan (5S)
  - ✓ Kanban and Lean Construction
  - ✓ Supply Chain Management and Lean Construction

- **Lean-Based Project Delivery Methods**
  - ✓ Disadvantages of Traditional Contracting Contracts
  - ✓ Relationship Building among Team Members
  - ✓ Integrated Project Delivery
  - ✓ Lean Project Delivery (LPD) with an Integrated Agreement
  - ✓ Roles and Responsibilities
  - ✓ Brief Overview of the Whiting Project

- **Quality Management in Construction: A Complement to Lean Construction**
  - ✓ Total Quality Management
  - ✓ Quality Management Systems
  - ✓ Benefits of TQM
  - ✓ Characteristics of the Construction Industry
  - ✓ TQM Principles
  - ✓ Crosby's Zero Defects
  - ✓ Customer Focus
  - ✓ Process Improvement
  - ✓ Continuous Improvement
  - ✓ Quality Improvement Techniques
  - ✓ Customer Focus and Quality Gaps
  - ✓ Barriers to the Implementation of TQM
  - ✓ TQM Implementation

- **Sustainable Construction: Sustainability and Commissioning**
  - ✓ Sustainability
  - ✓ Importance of Sustainable Construction
  - ✓ Lean Construction and Green Buildings
  - ✓ LEED (Leadership in Energy and Environmental Design
  - ✓ Benefits of Sustainable Construction

- ✓ Commissioning
- ✓ Categories of Commissioning
- ✓ Importance of Commissioning
- ✓ Commissioning and Lean Construction
- ✓ Commissioning versus Testing, Adjusting, and Balancing
- ✓ Commissioning Cost/Benefit Analysis
- ✓ Commissioning Requirements in Construction Documents

➢ **Performance Improvement Tools and Techniques**

- ✓ Performance Improvement in Construction
- ✓ Work Sampling
- ✓ Confidence Interval
- ✓ Number of Samples Required
- ✓ Work Sampling Procedure
- ✓ Randomization
- ✓ Allowances
- ✓ Methods Time Measurement
- ✓ Learning Curve
- ✓ Cycle Time Analysis
- ✓ Simulation
- ✓ Quality Function Deployment

Training Method

- Pre-assessment
- Live group instruction
- Use of real-world examples, case studies and exercises
- Interactive participation and discussion
- Power point presentation, LCD and flip chart
- Group activities and tests
- Each participant receives a binder containing a copy of the presentation
- slides and handouts
- Post-assessment

Program Support

This program is supported by interactive discussions, role-play, case studies and highlight the techniques available to the participants.

Schedule

The course agenda will be as follows:

- Technical Session 08.30-10.00 am
- Coffee Break 10.00-10.15 am
- Technical Session 10.15-12.15 noon
- Coffee Break 12.15-12.45 pm
- Technical Session 12.45-02.30 pm
- Course Ends 02.30 pm

Course Fees*

- **2,950USD**
  **VAT is Excluded If Applicable*

مقدمة

تعمل الممارسات التقليدية على تحسين مستوى المشروع. حيث يتطلب اتباع نهج مختلف لإدارة العمل. و قد تنشأ بعض المشاكل لدينا من ممارسات مماثلة.

ومن خلال هذه الدورة التدريبية سيتم الربط بين نظريات وممارسات البناء مع جذورها في الهندسة الصناعية. والذي سيفسر لنا لماذا تصبح المشروعات التى تدار على الاسس التقليدية في كثير من الأحيان يصعب السيطرة عليها.

الاهداف

بعد الانتهاء من هذه الدورة سيتمكن المشتركين من التعرف على:

- التعرف على أسس الإدارة
- التعرف على عمليات الإدارة
- التعامل مع أدوات وتقنيات القياسات
- فهم طريق تنفيذ المشاريع

الحضور

المقاولين، والمقاولين من الباطن، والمهندسين المعماريين والمهندسين وأصحاب الأعمال والمطورين، ومديري العقود، والاستشاريين، وموظفي القطاع العام والمؤسسات العامة، والممولين، والمصرفيين، والمستشارين القانونيين والمحكمين ووكلاء التأمين، مسؤولون من الوكالات الحكومية المسؤولة، ومديرى البناء الجمعيات، ومديرى شركات إدارة المشاريع، ومديري المشاريع والمهندسين المعماريين والمهندسين ومدراء البناء والتصميم والبناء للمهنيين، المعماريين والمهندسين والمقاولين، وأصحاب وكالات حكومية، مفتشي البناء والتشييد المديرين، ومديري المشاريع، وغيرهم من المسؤولين عن إدارة فعالة في مجال تشييد المباني، الممولين والمحامين والمستشارين القانونيين، مديري المشاريع، التصميم، استشارات تسوية الخسائر، سجل المحكمين والخبراء الاستشاريون للتأمين، الإدارة العليا، وإدارة المشاريع والإنشاءات مدراء الموقع المهندسين، والمالية، والعقود الهندسية والتخطيط ومراقبة التكاليف للمهندسين.