



INSTITUTE FOR LEAN CONSTRUCTION EXCELLENCE (ILCE)

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ILCE Workshop “Lean Construction and the Last Planner System”

Prof. Carlos Formoso at Chennai, Delhi and Mumbai on 21st , 23rd and 25th January 2013.

Synopsis with further Clarification

A) Lean Construction

HISTORY

Definition of Lean is to remove wastage (Non value adding activities) in Processes in any industry.

The first of appearance of “**Lean**” was in Manufacturing industry, which in turn drew its inspiration from **The Toyota Production System(TPS)**

Lean Construction in turn borrowed the concepts of Lean Production in the manufacturing of automobiles.

Lean Production differs from the Conventional Mass Production (Fordism) in that it incorporated:

- More flexibility in meeting customers’ requirements
- Collaborative approach instead of instructions from top (Command and Control)
- Empowerment of the labor force by involving them in all aspects of Manufacturing
- Reduction in wastage by adapting just-in-time approach.

Concept of Lean now has become a new Radical approach for improvement of Performance in any industry

“Lean Thinking” is now the new mantra

Lean Thinking as crystallized by Womack (Banish Waste and Create wealth)

- **VALUE** (Lean focuses on value to the Ultimate Customer) Example-House wife in flat construction
- **MAPPING VALUE STREAM** (Full detailed look in all processes to remove non value adding activities)
- **FLOW** (Ensure no breaks in processes from Design to Rollout)
- **PULL** (Continuous Pull Production to meet Customer’s demand and requirement.
- **PERFECTION** (All out efforts to create a perfect Product with utmost value and all non value adding activities removed)

Another View of LEAN (Prof Koskhela)

Transformation of resources (men, materials, machinery) into a product induces wastes.

This process of this waste removal can be termed as Lean Thinking.

The transformation can be termed as Production Process.

Lean Thinking focuses:

1. Consider Production Process as a flow
2. Improve process improvement by
 - a) Increase efficiency of all tasks
 - b) Eliminating all non value adding activities

Reducing Non value adding activities is aided by

1. Reducing work in Progress (work in smaller Batches)
2. Reduce Variability
3. Adopt Kan Ban (avoiding excess inventory and also no waiting time)
4. Adopt standardizing and customization
5. Adopt Kits in materials for required work
6. Increase Process Transparency (Reduces propensity to make mistakes, errors, improves motivation for improvement)
 - Making the process directly observable through appropriate signage and charts
 - Rendering invisible attributes visible through measurements
 - Displaying all process information in the work areas
 - Establishing visual and other control systems to enable any person to recognize standards and deviation



(Prof. Carlos Formoso workshop at Chennai on 21st January 2013)

(To Be Continued in next two newsletters).....