

Lean Construction

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Lean Operations and
Collaborative Planning in Construction

(DMAIC) DEFINE, MEASURE, ANALYZE, IMPROVE, CONTROL

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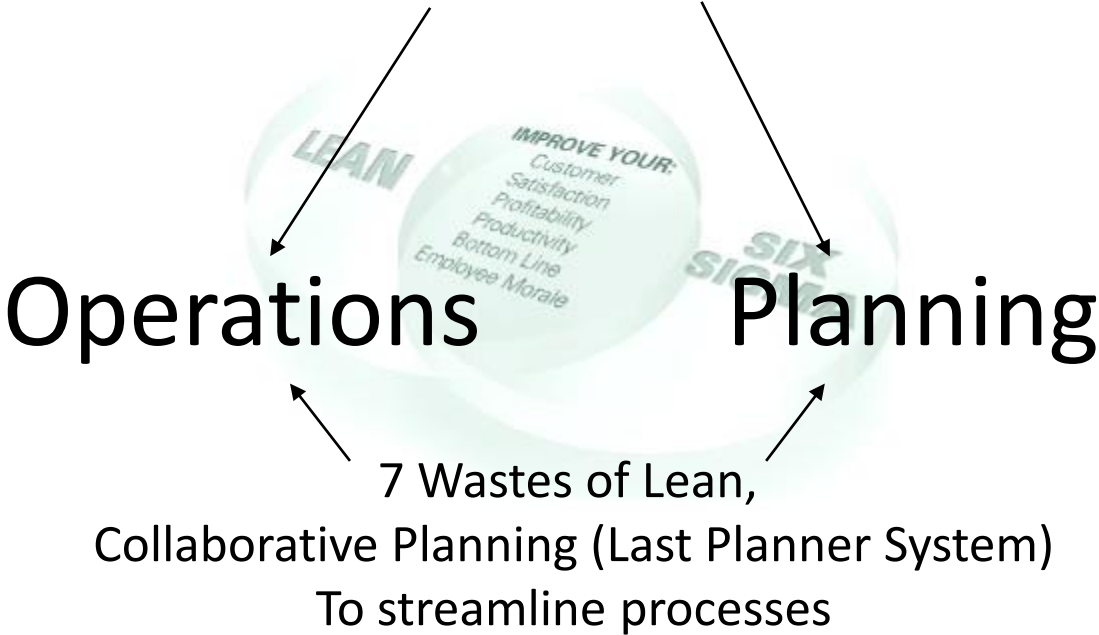
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Slide # 01-1

What will we Cover? ...

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How well do you See? “Lean Alertness Test” Video

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<http://www.youtube.com/watch?v=Ahg6qcg0ay4>

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60

Slide # 01-3

What is LEAN?

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Lean thinking considers the life cycle of materials, products, transactions and information

The goal is to minimize work and all non-value adding activities to increase value and reduce opportunities for defects and errors

“We cannot solve our problems with the same thinking we used when we created them”
--- Albert Einstein



“Waste is the Enemy!!”

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The 7 Wastes of LEAN in Construction?

Overproduction: ← This happens when we predict an event

- Fabricating material too early
- Stockpile material in the warehouse or at the job site

Transportation:

- Moving materials around the shop multiple times
- Loading material onto a truck or trailer, hauling it to the job site and Unloading it
- Moving material from the lay-down or staging area to the installation point

Waiting ← In Construction, this is where you spend up to 95% of time

- When a crew waits for instructions or materials at the job site
- When a fabrication machine waits for material to be loaded

Over-processing:

- Over-engineering of the Project
- Requiring additional signatures on a requisition
- Multiple handling of timesheets

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The 7 Wastes of LEAN in Construction?

Motion:

- These “treasure hunts” happen when material is stored away from the job or when workers look for tools, material, or information.
- This waste also occurs in the office or job site trailer, when looking for files, reports, reference books, drawings, contracts, or vendor catalogues.

Inventory:

- Includes uncut materials, work in process, and finished fabrications.
- spare parts, unused tools, consumables, forms and copies, employee stashes, and personal stockpiles.

Defects:

- Wrong installation,
- Defects in fabrication
- Errors in punch lists
- Not meeting the required code

All of these are a
WASTE of time!

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LEAN Collaborative Planning Using the “Last Planner” System?



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www.youtube.com/watch?v=BANBuNPiZRo

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Q&A

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Go Online to:

www.sixsigmadsi.com/intro-to-lean-construction.pdf

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