

Lean Office - Pull

Kanban, Just in Time, Standardized Work

Superfactory Excellence Program™
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Outline

- Why Pull?
- The Problem of Inventory
- Just In Time
- Kanban
- One Piece Flow
- Standard Work & Takt Time
- Smoothing & Leveling

Why Pull?

Lean is really about minimizing the need for overhead

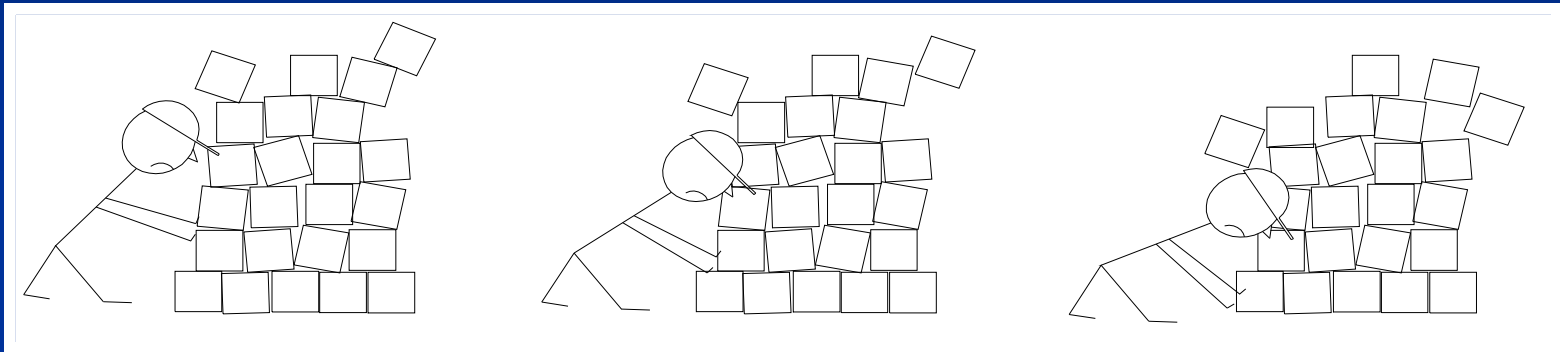
- which is about concentrating precisely on *only* what is necessary
- which is about linking interdependent supply system decisions, and actions
- which needs to be visual, responsive and simple to manage

Push Vs. Pull Scheduling

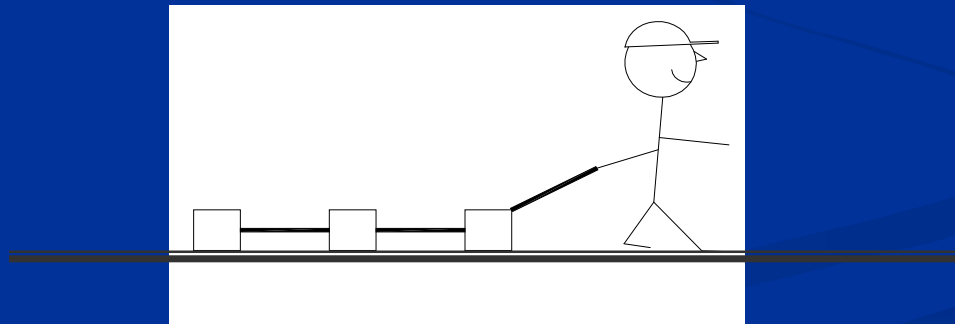
- Push Scheduling
 - traditional approach
 - “move the job on when finished”
 - problems - creates excessive inventory
- Pull scheduling
 - coordinated production
 - driven by demand (pulled through system)
 - extensive use of visual triggers
(production/withdrawal kanbans)

“Pull” Production versus “Push”

Push: Schedule-based



Pull: Consumption-based



Pull Systems - Advantages

- Faster response to the customer
- Easier scheduling, inventory and control
- Reduced effort, space, cost and investment
- But.....

A different way of doing things

Pull Production

- Actual customer demand drives the process
- It creates a system of cascading delivery instructions from downstream demand to upstream processes in which nothing is produced by the upstream supplier until the downstream customer signals a need
- The rate of production for each product is equal to the rate of customer consumption

Pull

- Through lead time compression & correct value specification, let customers get exactly what's wanted exactly when it's wanted:
 - For the short term: Smooth pull loops to reduce inventory
 - For the near term: Make-to-order with rapid response time
 - For the long term: Diagnostics and prognostics in a stable relationship to take out the surprises for consumers and producers

Inventory: Root of all evil

If the meaning of production control is truly understood,
inventory control is unnecessary.

-- Taiichi Ohno