Lean Management

simplilearn

Introduction

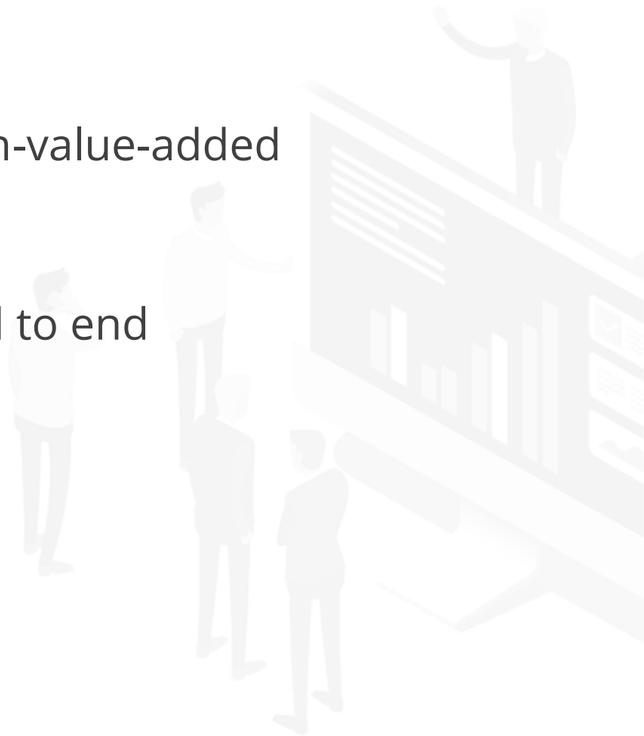
Agenda

- Introduction
- What is Lean
- Its Roots
- Success and Benefits
- Challenges

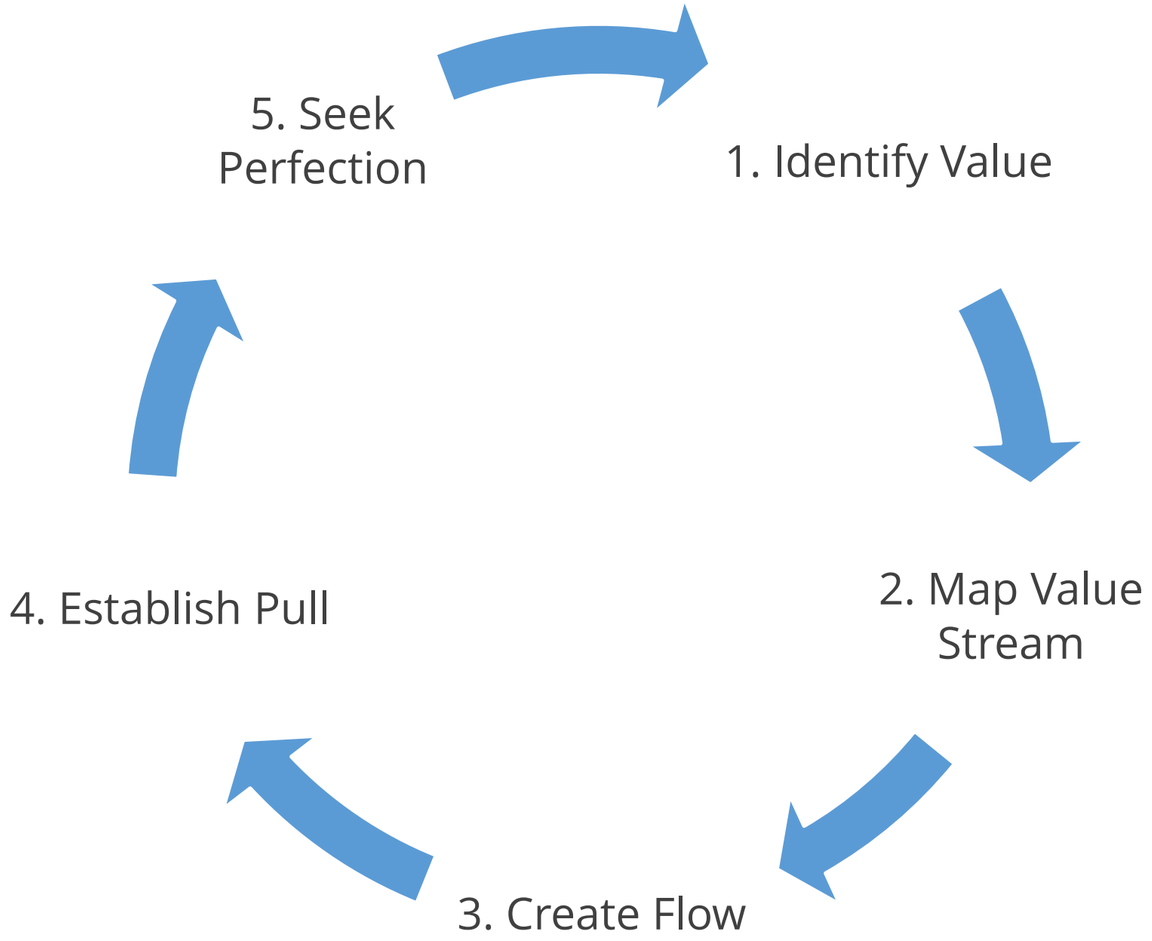
What Is Lean?

Overview of Lean

- Creating **more value** for customer with **fewer resources**
- **Philosophy**: To provide perfect value to the customer through a perfect value creation process that has zero waste
- **Lean** reduces cost, improves quality, and speeds delivery by eliminating non-value-added activity in a process by identifying and **eliminating waste**
- Lean is not a tactic or a cost reduction program, but a way of optimizing end to end processes

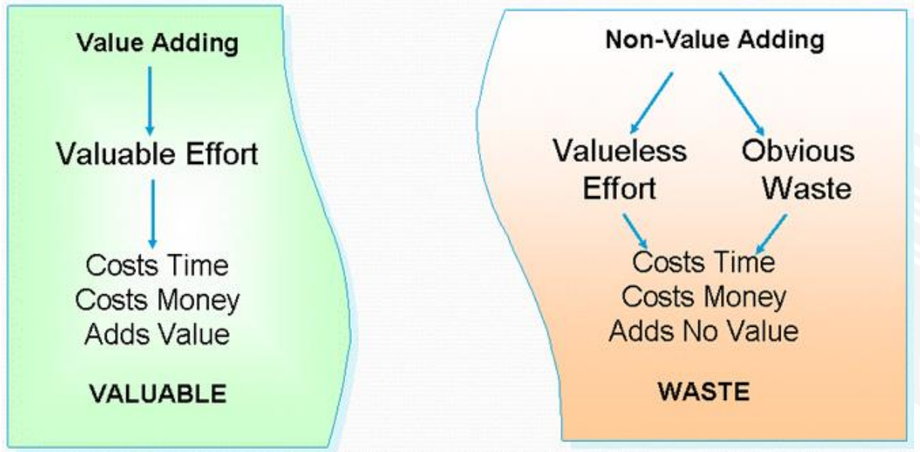


Principles of Lean



Types of Waste

- What is waste?
- Non-value-add activity
- Some types of waste with examples
  - Anything that could have been avoided
  - Customer is not willing to pay for it
  - Defects/rework
- The 7 types of waste
- *Muda* (Japanese word for waste)
- Uncommon common sense



Lean Journey

- Lean journey is on the principle “I will believe it when I see it”
- Lowering the tide and uncovering more reefs that can sink the boat
- Three stages of Lean journey
    - Lean operations
    - Lean enterprise
    - Lean network

DIGITAL OPERATIONS

Roots of Lean

Lean at Ford

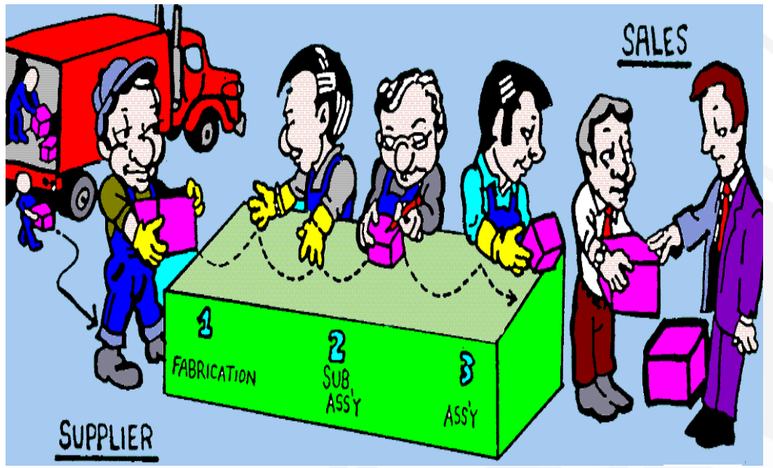
- Henry Ford (at Highland Park, MI USA) in 1913
- Car “Model T”
- Integration of entire production process
- Flow production
  - Interchangeable parts
  - Moving conveyance
  - Automated assembly line
  - Fabrication steps
  - Go/No-Go gauge
- Model T (one color, one specification)
- Need for variety

Toyota Production System (TPS)

- Based on Ford's original thinking
- Rebuilding Japanese economy after World War II (1930)
- Kiichiro Toyoda, Taiichi Ohno, and others at Toyota
- Series of simple innovations to improve process flow and provide variety in product offerings
- Focus on improving end to end processes rather than optimizing individual machines
- Result: Low cost, high variety, high quality, and very rapid throughput times to meet customer desires

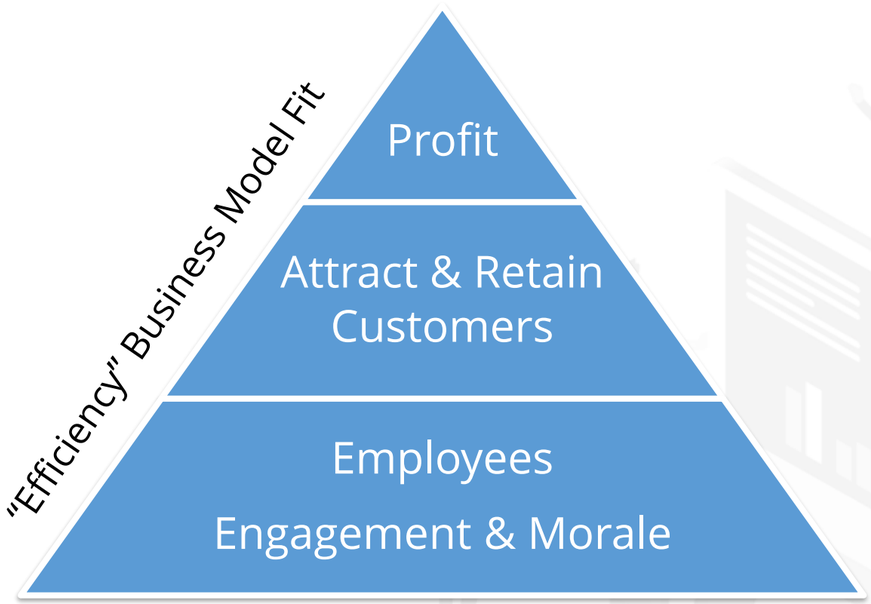
Just-In-Time (JIT)

- Introduced by Ford
- Supply-chain/ production/inventory strategy
- Demand-pull system
- Get the right thing at the right time at the right place
- Relies on signals between processes to keep things moving
- Requires producers to accurately forecast demand and use integrated production management tools
- Saves warehouse space, inventory cost and prevents obsolete inventory, resulting in higher ROI



Lean Successes and Benefits

- “Efficiency” Business Model Fit
- Cash Flow Improvement
- Increased Capacity for Revenue



“Efficiency” Business Model

- Business Model
  - Employees
  - Customers
  - Profits
- Higher Efficiency
  - Do More with less
  - “Just Enough” in everything
  - No more band aid solutions that become future problems
- From managing numbers to managing process

Cash Flow Improvement

- Reduced inventory
- No waiting
- Space reduction
- Cycle time reduction
- Reduced waste
- Reduced defect

Increased Capacity for Revenue

- Attract and retain customer
- More with less
- Fewer support calls
- Lean increases capacity
  - Your process can produce more with the same number of people
  - Your process can produce the same amount with fewer people

Challenges

Process Changes Cause a Rethinking of Process Flow

- Process
  - Input
  - Processing
  - Output
- Process changes
- Process flow
- In-process metrics
- Training

Disruptions, Downtime, Design Failures

- Process change
- Disruptions
- Downtime
- Design failures

Low Volume/High Mix

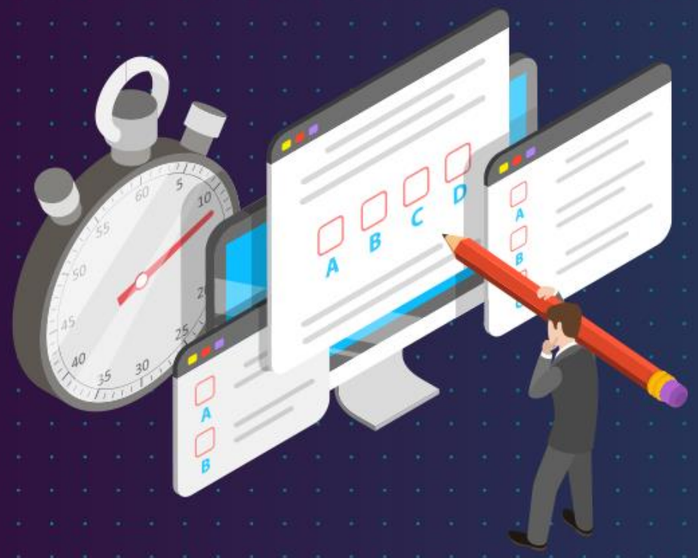
- Toyota production system
- High volume/low mix manufacturing
- Low volume/high Mix Needs
- Example

High Variable: Customization, Demand

- Customer demands
- Customization
- Made-to-order
- Variability
- Support and maintenance

Summary

- Lean overview
- Types of waste
- History
- Successes and challenges



Knowledge Check

Knowledge Check

1

Lean manufacturing is a:

A. Method for reducing labor cost

B. Means to improve responsiveness to the customer

C. Efficiency improvement technique

D. Set of tools designed to improve productivity

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The correct answer is **C**

Lean manufacturing is efficiency improvement technique, once this is achieved, it will help in improving productivity, becoming more responsive to customers and reduce cost.

Knowledge Check

2

The main objective of Lean manufacturing is to:

A. Produce goods using less resources

B. Keep labor costs as low as possible by using more of other resources

C. Produce products with fewer options to simplify consumer choices

D. Outsource much of manufacturing in order to focus on final assembly

Knowledge Check

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The correct answer is **A**

The main objective of Lean manufacturing is to produce goods using less resources.