Lean Management

simplilearn

Other Methodologies That Complement Lean

Agenda

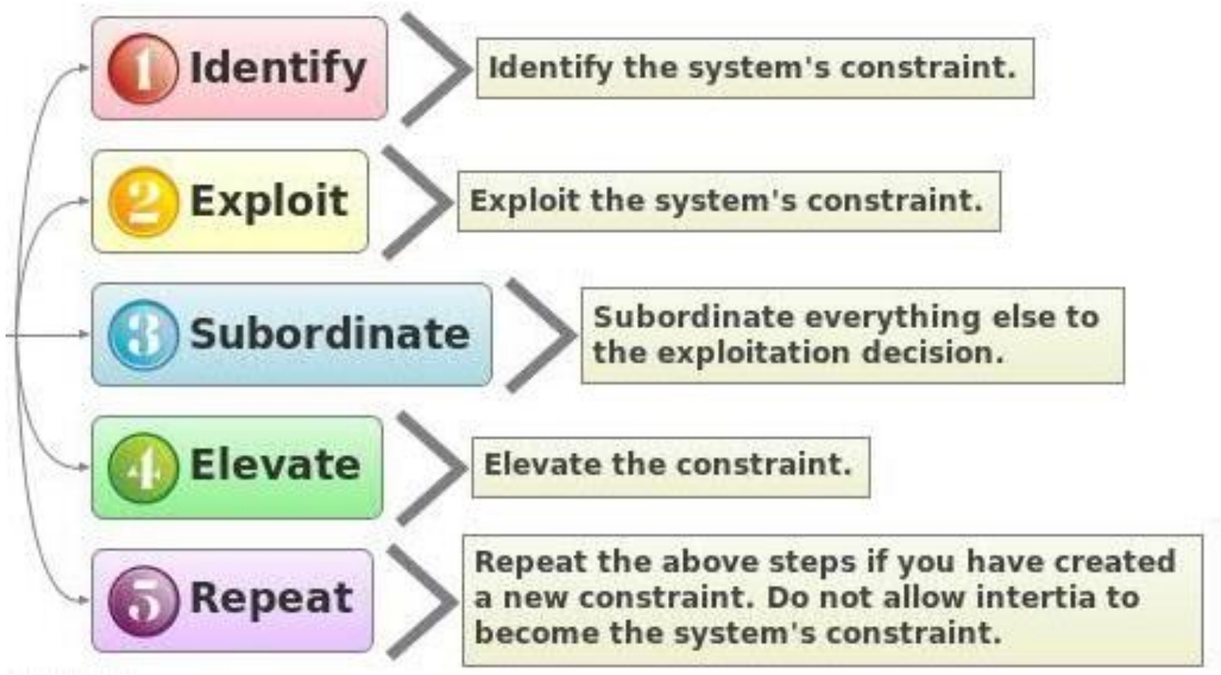
- Theory of Constraints
- Quick Response Manufacturing
- Factory Physics
- Six Sigma

Theory of Constraints

- Overview
- Definition
- Weakest link in the process
- Constraints
    - Equipment
    - People
    - Policy

Theory of Constraints

The five focusing steps for continuous improvements



The thinking process of change

- What to change
- What to change to
- How to cause the change

Quick Response Manufacturing

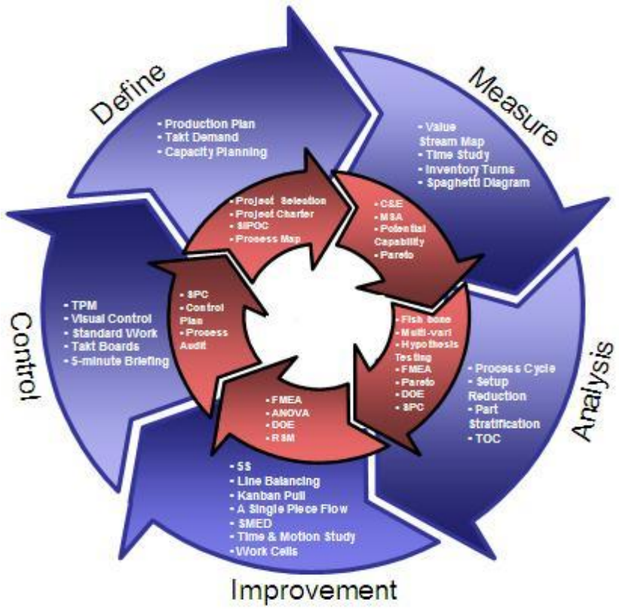
- ✓ Overview
- ✓ History
- ✓ Time-based competition
- ✓ Lead time reduction
- ✓ Implementing quick response manufacturing

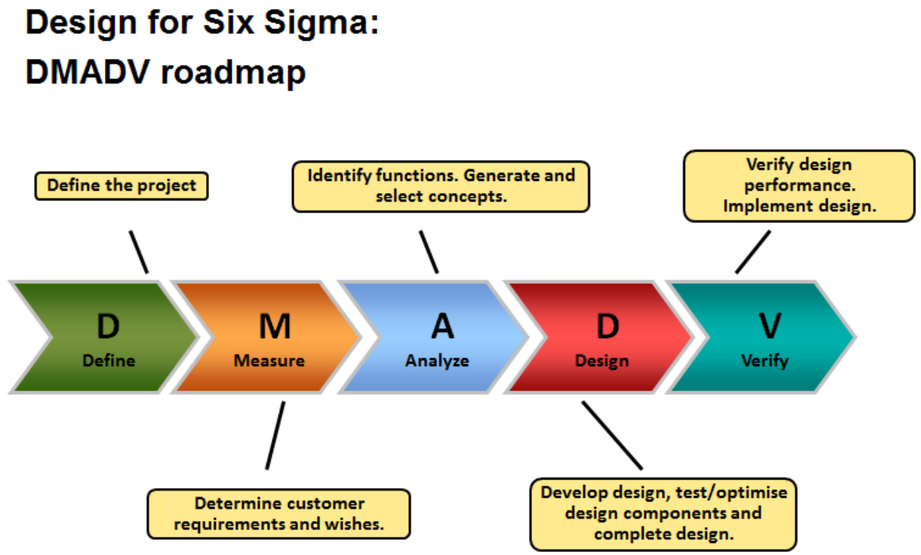
Factory Physics

- ✓ Overview
- ✓ Book by Wallace Hopp and Mark Spearman
- ✓ Manufacturing transformation and management
  - Identify opportunities
  - Design effective new systems
  - Make tradeoffs

Six Sigma

- ✓ Background
- ✓ Statistical Significance of Six Sigma
- ✓ Methods
  - DMAIC (Define, Measure, Analyze, Improve & Control)
  - DMADV (Define, Measure, Analyze, Design & Verify) or DFSS (Design For Six Sigma)



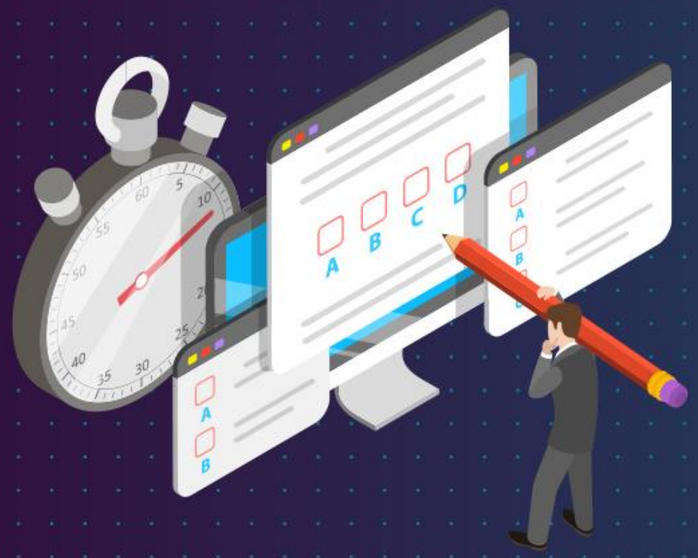


Six Sigma Implementation Roles

- ✓ Executive leadership
- ✓ Champions
- ✓ Master black belts
- ✓ Black belts
- ✓ Green belts
- ✓ Yellow belts
- ✓ White belts

Key Takeaways

- Remove constraints
- Reduce lead time
- Trade-offs for manufacturing management
- Reduce variability and defects



Knowledge Check

Knowledge Check

1

The theory of constraints states that: every system must have:

A. Constraints are to be handled when you hit them

B. At least one constraint limiting its output

C. It is the ratio of constraints vs. non-constraints processes

D. It is the ratio of pull vs. push

Knowledge Check

1

The theory of constraints states that: every system must have:

A. Constraints are to be handled when you hit them

B. At least one constraint limiting its output

C. It is the ratio of constraints vs. non-constraints processes

D. It is the ratio of pull vs. push

The correct answer is **B**

The theory of constraints states that every system must have at least one constraint limiting its output.

Knowledge Check

2

What does the term DMAIC stands for?

A. Define, measure, analyze, improve, and control

B. Do, measure, approve, inspect, and control

C. Define, metrics, approve, inspect, and control

D. Derived methodology for analyzing incidents in corporates

Knowledge Check

2

What does the term DMAIC stands for?

A. Define, measure, analyze, improve, and control

B. Do, measure, approve, inspect, and control

C. Define, metrics, approve, inspect, and control

D. Derived methodology for analyzing incidents in corporates

The correct answer is **A**

Six sigma's DMAIC is problem solving methodology which stands for define, measure, analyze, improve, and control.