

The background of the slide features a light blue gradient with a faint, semi-transparent image of classical architectural columns on the left side. The columns are white and have ornate capitals. The entire slide is framed by a thin brown border.

Lean Management

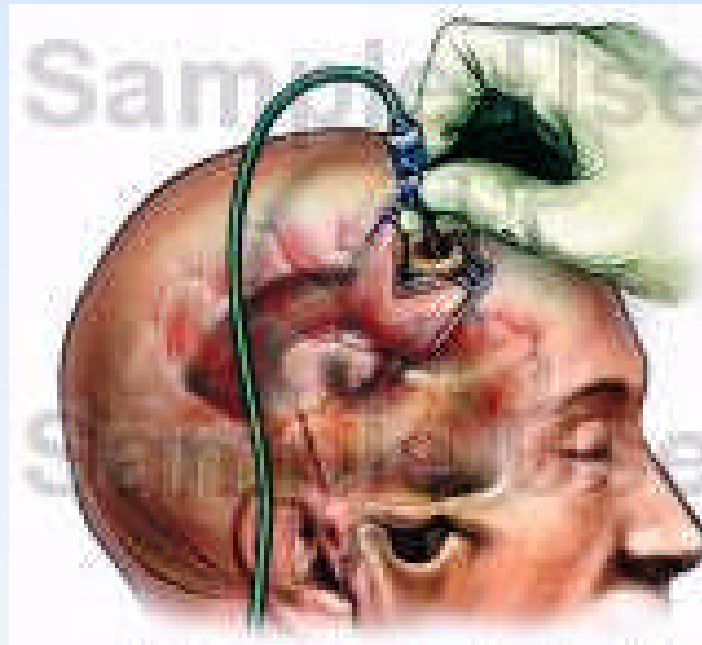
Going Beyond Lean Manufacturing to Lean Thinking

Lean Six Sigma

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Lean Management

This is NOT Brain Surgery



Leadership Commitment

**Leadership must commit to
Strategic Thinking**

**Create Plans and Allocate Resources
to Achieve Objectives and related
Goals**

Is the reduction of Waste a Goal

Leadership Commitment

Is the reduction of Waste a Goal

Or your Goal is to

**“Show Me the Money” today
and I do not care about the
future because I won't be here.**

Leadership Commitment

Others would say it is immoral and unethical to waste the earth's resources and resources of the people in the creation of a product or service

Lean and Six Sigma knowledge ensures the best efficiency with current knowledge.

Strategic Thinking Precedes Strategic Planning

“ We cannot solve the problems that we have created with the same thinking that created them.” (Albert Einstein)



Where Do You Want to Go?

Alice asked the Cat, “Which road should I take?”

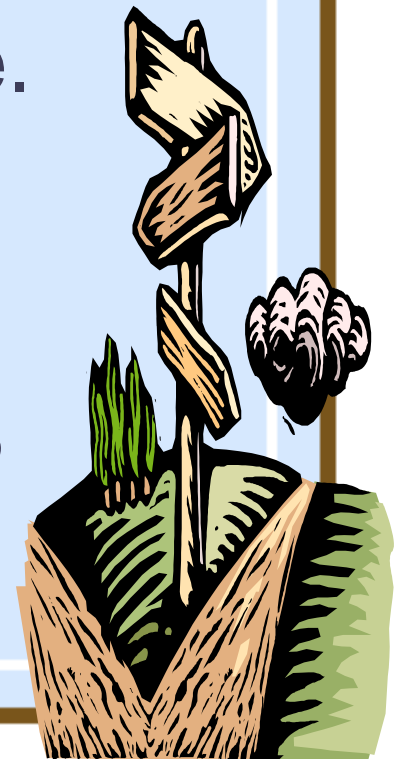
The Cat replied, “Well, that depends on where you want to go.”

“I really don’t care”, responded Alice.

“Then, it really doesn’t matter which road you take, does it?” answered the Cat.

-- *Alice In*

Wonderland



Approach – How We Act

- VALUES are principles and beliefs
- Do you believe in Waste of Time, Effort, Resources?
- Do we VALUE people (workers and customer) and the world of the future????
- Values drive behavior
- Behavior influence is the foundation of organizational culture
- **Behavior affects systems and processes produce results**

Deployment and Improvement

P-D-S-A Cycle in Strategic Planning ensures Lean Deployment:

- Plans are developed systematically
- Plan performance is carefully monitored
- Agility - changes to plans are made where necessary
- Breakthrough objectives are attained
- The planning process itself is standardized
- The planning process is continuously improved

Who Started the Concept of Lean

It was in about 1914
It was called “FLOW “

?

Who Started the Concept of Lean

Henry Ford <http://www.hfmgv.org/exhibits/hf/>



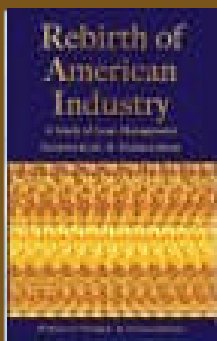
Who Started the Concept of Lean

Henry Ford

Henry Ford hitting
a 1941 Ford car
made from
soybean plastic.
Photo: P.188.28273

<http://www.hfmgv.org/exhibits/hf/facts.asp>





Rebirth of American Industry

by Bill Waddell & Norman Bodek

- The authors answer the question “why have so few American companies successfully transformed themselves into lean organizations”. They take us back to the origins of lean at Ford Motor Company and Toyota, and contrast them with the modern American manufacturer.
 - The authors show that the management methods and accounting systems developed by Alfred Sloan and Pierre Dupont at General Motors are fundamentally in opposition to lean thinking, yet these methods are ubiquitous and are even written into some of our laws and many of our accounting standards.

Lean History – Juran and Health Care

Joseph Juran linked manufacturing and health-care even more directly. In his forward to *Curing Health Care*, Juran wrote: “As the health industry undertakes ... change, it is well advised to take into account the experience of other industries in order to understand what has worked and what has not. Of course, in the minds of many, the health industry is different. This is certainly true as to its history, technology and culture. However, the decisive factors in what works and what does not are the managerial processes, which are alike for all industries.”

1 Donald Berwick, M.D., A. Blanton Godfrey and Jane Roessner, *Curing Health Care*, John Wiley & Sons, 1990.

IMPLEMENTING LEAN MANAGEMENT (LM)

Continuing Success of Lean Management will come from a break in tradition, putting a premium on:

- Leadership
- Empowerment
- Partnering
- Assessment

Leadership

All efforts are doomed to failure without Leadership

- Providing Vision & Values
- Establishing Goals
- Aligning Organization, Policies
- Championing Culture Change
- Creating Business Action Plans
- Communicating
- Re-enforcing Accountability
- Walking the Talk

Empowerment

Empowerment for LM means greater use of self-directed MANAGERS & Teams which must be:

- Educated & trained
- Consulted & Coached
- Cross functional
- Engaged in continuous improvement with focus on goals
- Recognized & rewarded

Partnering

- Customers - internal & external
- Suppliers - internal & external
- Distributors/Dealers
- Transporters
- Community
- Unions
- Government

LM Assessment

Measurements which will drive LM continuous improvement include:

- Customer Satisfaction
- Productivity
- Cost of Quality
- Benchmarking
- Employee Opinions
- Supplier Performance

LEAN TOOLS

5S workplace organization refers to five words or phrases—**S**ort, **S**et in order, **S**hine, **S**tandardize, **S**ustain—used for workplace organization and standardization. The five words or phrases are derived from Japanese words.

Pull systems and *kanban* refer to items being replenished at the request or pull of the customer or user. *Kanban* (Japanese for sign or signboard) is an information system that informs us when to make (production), move (withdrawal) or get materials from the external supplier

LEAN TOOLS

Poka-yoke (pronounced poka yokay) is a Japanese term for error proofing a process to eliminate a chance for a mistake. (not idiot proof)

Kaizen is Continuous Improvement which is needed because we never reach our goal of perfection. The Japanese word *kaizen* is loosely translated as continuous improvement.

LEAN TOOLS & Cross-Cultural Communication

The Japanese word *kaizen* is loosely translated as continuous improvement.

In Japanese this is pronounced 'Kaizen'.

改 ('Kai') means 'change' and
善 ('zen') means 'good'.

In Chinese this is pronounced 'Gai Shan':

LEAN TOOLS & Cross-Cultural Communication

In Chinese 'Gai Shan':

改 ('Gai') means 'the action to correct'.

善 ('Shan') Change or action that 'benefits' the society (i.e. multilateral improvement) but not one particular individual. **One can not benefit at another's expense**. The quality of benefit that is involved here should be sustained forever, in other words the 'shan' is an act that truly benefits others.

Lean in Office vs Factory

- What we process:
 - In the **Factory** we process materials
 - In the **Office** we process information
- How we process:
 - In the **Factory** we can easily see material flow and change form
 - In the **Office** we usually can't *see* the information being processed

Therefore, it's harder to see and identify waste in the Office

WHAT IS WASTE?

ANY OPERATION OR ACTIVITY
THAT ADDS COST \$\$\$

TO OUR PRODUCT OR

SERVICE WITHOUT ADDING VALUE -

*IN THE EYES OF OUR ULTIMATE
CUSTOMER*

Examples of Factory Waste

- 9-Loss Categories:
 - Unplanned Down Time
 - Planned Down Time
 - Time lost to Minor Stops
 - Scrap & Rework
 - Idle Time on Constraints
 - Set-Up Time
 - Quality Checking Time
 - Engineering Qualification Test Time
 - Speed Loss
- Non-Value Adding activities in the Manufacturing Flow Process

Examples of Office Waste

- Moving & Sorting Paperwork
- Filing Paperwork
- Duplication of Effort
- Rework due to Errors
- Waiting
- Batch Processing
- Unnecessary Checking of Work
- Inefficient Work Flow
- Inadequate Software

Benefits of Waste Elimination

- Process cycle time reductions
- Faster response to customers
- Elimination of wasted activities - hassles
- Simplified, logical work processes
- Reduced processing errors & rework
- Continuous process improvement
- Reduced Costs
- Increased Return on Assets
- High morale, high performance teams

How to Start to Eliminate Waste?

Look at each of your Core Business Processes and evaluate how well they are performing relative to your expectations for (Six Sigma Tools):

- **Quality Measures**
- **Speed/Time Measures**
- **Cost Measures**

How to Start to Eliminate Waste?

- ▶ For each core process, choose one Measure for a focused Lean improvement effort
e.g. **“Increase On-Time Shipments”**
- ▶ Establish a Goal & Timetable for improvement
e.g. **“95% On-Time by end 3rd Quarter”**
- ▶ Assign goal to responsible person or Charter a Team to improve process

Where to Start

Start small to learn the logic

- Perform a gap analysis.
- **Conduct Lean Six Sigma training.**
- Develop value stream map
- Practice change management.
- Start with one of the basic building blocks of lean.

Example: Organizing a storeroom or break room is a 5S example that is probably applicable to all organizations



Waste in Healthcare

- **Overproduction.** This is making more of something earlier or faster than the next process needs it. This waste shows up most commonly in batching work—such as tests, paperwork or
- **Inventory.** A major cost to healthcare is for carrying inventory or supplies
- **Motion.** The easiest way to think about motion waste is walking (or body movements). A lot of walking waste can arise from poor design of an area



Waste in Healthcare

- **Defects.** Defects, corrections, adjustments or inaccurate or incomplete information cause many problems. For example, a label on a blood tube that is misapplied, illegible or improperly aligned can cause errors or delays in processing.
- **Waiting.** In any form, waiting is a waste. Examples include patients waiting in an emergency room for an inpatient bed to become available or staff waiting for an instrument to complete its run cycle, for a doctor or nurse to appear or for an operating room, test results, information or approvals to become available.

Process Knowledge

Define, DMAIC

Performance
Standards

Procedures

Material &
Information

Business
Process

Outputs

Customers'
Requirements

Facilities

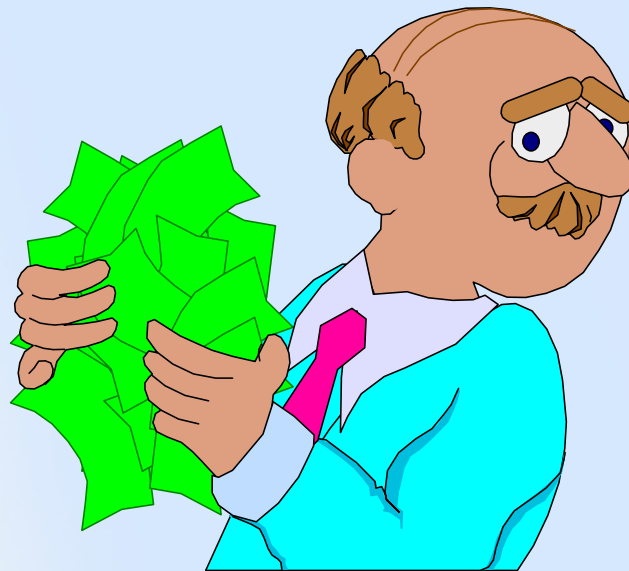
Training &
Knowledge

INPUTS

Lean Six Sigma

Most Important Rule:

COMMON SENSE!





Recognize the team's efforts !!

:

Set up time for formal presentation to:

1. Communicate Outcomes
2. Celebrate
3. Reward

