

Why isn't every plant a lean plant?

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Agenda

- 2003 *Industry Week* Best Plants Five-Year Improvement Metrics
- More evidence
- Lean thinking
- Why aren't all operations lean?

2003 Industry Week Best Plants 5-year Quality Improvements

Percent reduction in scrap/rework
as a percent of sales in last 5 years 50.05%

Percent reduction in customer
reject rate in last 5 years 67.56%

Percent reduction in warranty costs
as a percent of sales in last 5 years 39.83%

2003 Industry Week Best Plants 5-year Time Improvements

Percent reduction in manufacturing
cycle time in the last 5 years 44.33%

Percent reduction in standard
order-to-shipment lead-time in the
last 5 years 46.00%

2003 Industry Week Best Plants 5-year Productivity Improvements

Percent improvement in productivity, as measured by annual value added per employee. 367.7%

Percent improvement in productivity, as measured by annual sales per employee. 386.31%

Percent improvement in productivity, as measured by annual sales per square foot 824.17%

Other Evidence

- Results from a study of lean implementation:
 - Context of plant size, plant age, and unionization
 - Bundles of related practices
 - Performance
- Based on sample of 1700 plants that crosses industrial landscape—industry composition similar to population of No. Amer. mfg.

Context

- Large plants are more likely to implement a broad array of practices. However, smaller plants that do implement tend to perform slightly better than large implementers
- Unionization and plant age have much narrower influence on implementation. Being old or being unionized does not seem to be an excuse for avoiding implementation.

Lean bundles

- Lean programs tend to be implemented in bundles of related practices: JIT/flow; TQM; TPM; and HRM
- Bundles are implemented across all industries. However process industry plants are somewhat more likely to implement TPM and discrete plants are somewhat more likely to implement JIT/flow

Performance

- Operational performance, a composite of cost, timeliness, speed, quality, and productivity was significantly higher in lean implementers.
- Controlling for effects of context, lean implementation explained about 25% of difference in performance.
- Each of the four practice bundles makes a significant contribution to performance.

Lean Thinking

- How does a plant achieve “Best Plant” improvement metrics?
- By applying lean principles. The applications tell the story.

Apply Five Simple Principles:

- Specify value from the standpoint of end customer
- Identify the value stream for each product family
- Make the product flow
- So the customer can pull
- As you manage toward perfection

Why Aren't All Processes Lean?

If the **payoff** is so **BIG** and so **apparent**

And

If the underlying principles are so **intuitive**...

Why Aren't All Processes Lean?

- As many reasons exist as there are non-lean plants, but I would like to start the conversation with three interrelated suggestions:
 - Articulation
 - Management
 - Focus

Articulation

- Operations people often can't seem to tell a convincing story
- As a result, Lean becomes a short-hand for cost down as opposed to “capabilities up”
- “Manufacturing is expected to get costs down, don't bother me with implementation details”
- Marketing doesn't understand “capabilities-up” either and is reluctant to talk to customers about lean because they fear they will be asked for a yet another price reduction.

Management

- *Corporate management* is often unwilling to show the patience to allow lean to work. Looking for silver bullet.
- *Manufacturing management* toward lean is often provided by a charismatic leader. Such people often move onward or upward without leaving a similarly heroic successor.
- *Plant management* can often muster the means to make great progress, even when the effort is isolated from corporate norms. Such efforts are usually hamstrung when addressing value stream issues. Plant leaders are also heroes.

Focus

- Competing programs such as six-sigma or ERP, even when meritorious, dilute attention and resources.
- One-shot or serial Kaizens that are not sustained only build cynicism and add to talk about flavor of the week.
- Lean efforts are often too narrow in that they do not go far enough to cross boundaries and bust organizational chimneys

Implications

- Thinking about why everyone isn't lean provides a cautionary lesson about the kinds of issues that you have to manage around in your own efforts
- We have talked about three areas of leadership:
 - Articulation
 - Management
 - Focus

I know that there are a number of others. I suspect that most of the reasons will boil down to leadership.