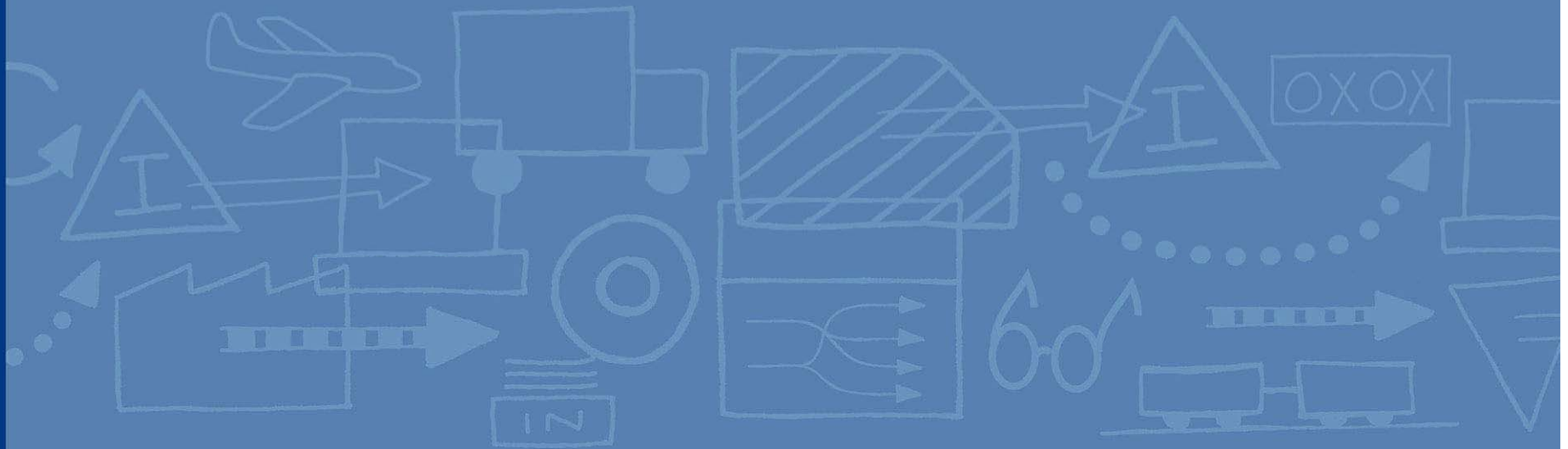


November 15, 2005

Welcome to the Lean Solutions Webinar



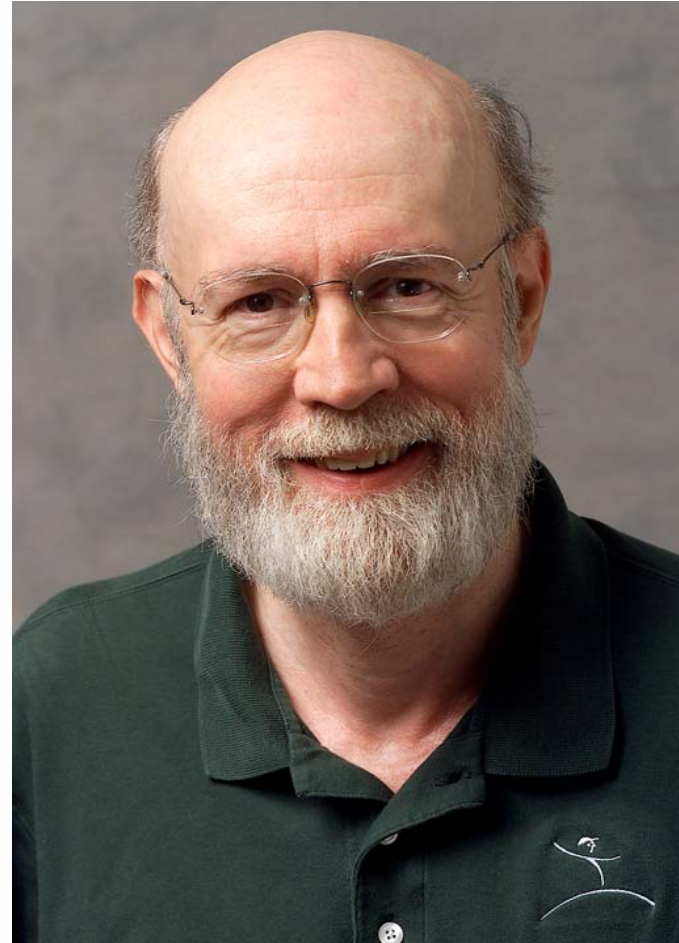
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Today's presenter

Jim Womack, Ph.D.
President and Founder
Lean Enterprise Institute
www.lean.org



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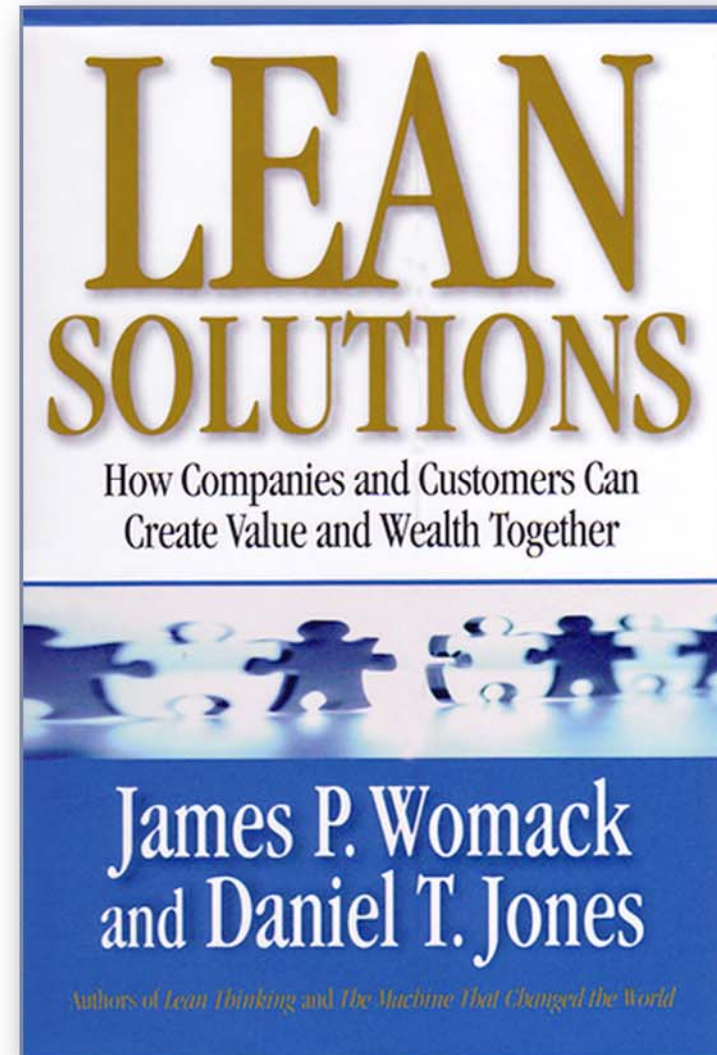
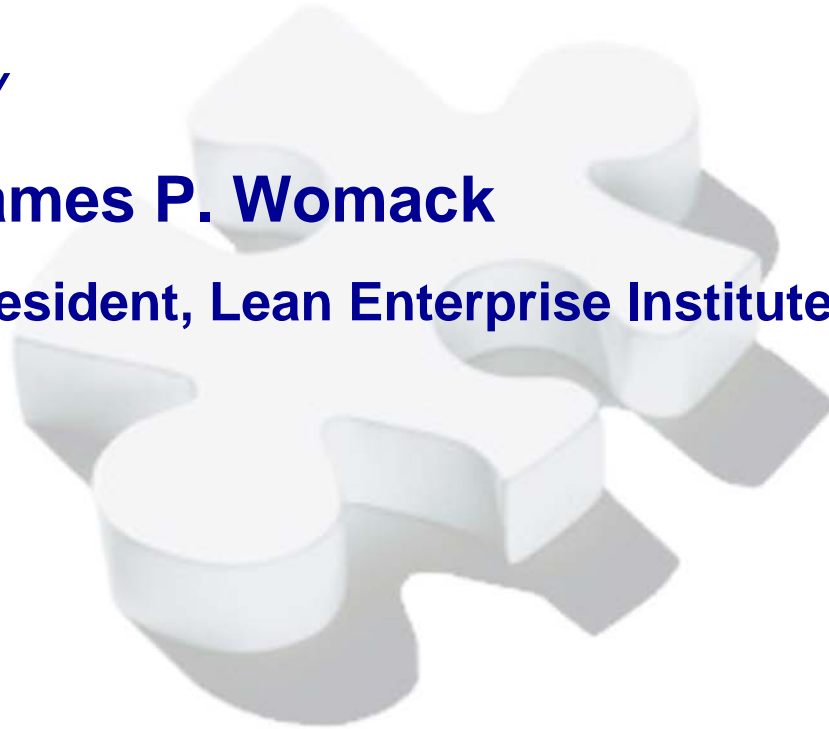
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Lean Solutions Webinar

by

James P. Womack

President, Lean Enterprise Institute



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The Origins of Lean

The factory is where lean thinking originated.

The Machine That Changed the World and *Lean Thinking* were therefore about manufacturing.

And we've had great success in improving manufacturing:

- ✓ Fewer defects.
- ✓ More variety.
- ✓ Lower cost.

We've made a lot of progress pursuing the perfect process for production.



Where Do We Go Now?

- Manufacturing is less than 20% of economic activity in the advanced economies.
- How do we apply lean, process thinking to all activities to maximize its impact on society?
- Let's return to value as defined by the consumer.



Consumption is Problem Solving

- Most consumers aren't really interested in products. *They only want to use products to solve their consumption problems.*
 - ✓ Mobility
 - ✓ Information management, communication & entertainment
 - ✓ Shelter
 - ✓ Health
 - ✓ Financial management
 - ✓ Personal logistics



Solving Problems

- Requires brilliant, matching consumption and provision processes:

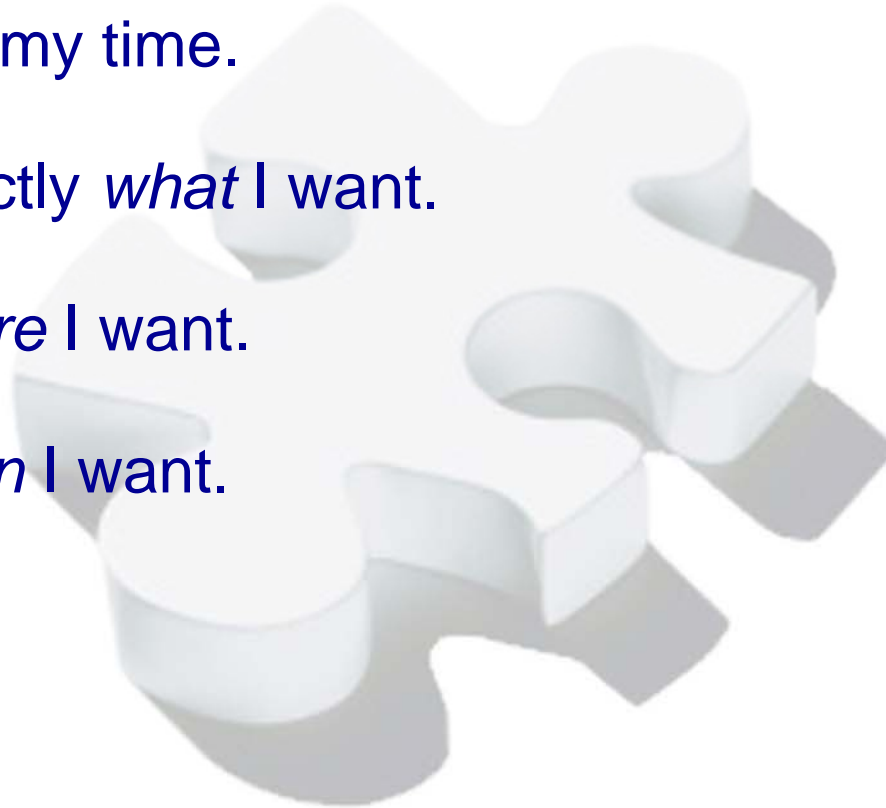
- ✓ Searching for all the products needed
- ✓ Buying and receiving
- ✓ Installing
- ✓ Integrating
- ✓ Maintaining & repairing
- ✓ Upgrading
- ✓ Recycling & replacing

Closing the gap between factory and consumer



Principles of Lean Consumption

- Solve my problem completely.
- Don't waste my time.
- Provide exactly *what* I want.
- Exactly *where* I want.
- Exactly *when* I want.



Lean Consumption Principle #1: Solve Consumer Problems Completely

- Products need to work for customers in their environment, usually connected with many other goods & services.
- Frequently the products are individually o.k., but don't work in their operating context.
- Most firms tackle this problem with help lines.
- Help lines “solve” customer problems at lowest cost per customer, out-sourcing & off-shoring to reduce cost per call.
- Customers are frustrated; direct contact is lost.



Lean Solution #1: Implement Intelligent Feedback

- Every customer contact is a kaizen opportunity!
- Deploy highly trained employees to explore root causes with customers.
- Work quickly to eliminate root causes so customers stop calling.
- Exceed customer expectations by passing on additional information and asking about customer needs for new goods and services.
- Expect total provider costs of completely solving problems to fall substantially even as customer consumption costs fall!



Example of Intelligent Feedback

Fujitsu Services:

- Assigns more knowledgeable people to help lines.
- Locates these people close to the source of the problems (i.e., to engineers at firms designing & making the products failing to solve problems.)
- Steadily reduces the number of problems reported.
- Gets paid by the potential number of callers rather than the number of calls fielded.
- Reduces total costs to the manufacturer, help-line turnover & customer time and frustration.



Lean Consumption Principle # 2

Don't Waste Consumer Time

Most companies:

- Treat consumer time as if it is free.
- Create queues (human inventories) of many sorts.
- Prominent examples are:
 - ✓ Healthcare
 - ✓ Travel
 - ✓ Repairs and service



Lean Solution #2: Eliminate Queues and Wait Time

- Analyze the consumption stream and the provision stream, looking for wasted time (for consumer and providers.)
- Hint: Draw consumption and provision maps!
- Rethink these streams by:
 - ✓ Making customers partners, to level demand and pre-diagnose problems.
 - ✓ Making assets flexible, to deal with unavoidable variations in demand.
 - ✓ Standardizing work and materials supply.



Example of Time (And Cost) Savings

GFS's Lean Car Repair Service

By pre-diagnosing work, pre-ordering parts, separating jobs into value streams, and using standardized work and material supply:

- Increases first-time, on-time the same day from 60 to 80%.
- Reduces consumer and provider time expenditure by 65%.
- Reduces the cost of a typical service by 30%.
- Increases demand (at constant prices) by building repeat business and capturing life-of-the-vehicle repair revenue.



Lean Consumption Principles #3: Get Consumers Exactly *What* They Want

- Shoppers want to find the exact products they desire (the what) every time they shop.
- But...currently they rarely do.
 - ✓ In shoe retailing there is only an 80% chance that you will find the right style in the right size, even as the manufacturers sell 40% of the shoes made at deep discounts.
 - ✓ In grocery, there is only a 4% chance of finding all 40 items in a typical weekly shop, even though retailers and manufacturers have months of finished units in the pipeline.



Lean Solution #3: Implement Lean Logistics

- Let the consumer be the single order-entry point in the logistics stream.
- Replenish every item very frequently in the exact amount just sold, at every step up the provision stream.
- Compress the provision stream by means of right-sized technologies and right-located facilities to increase responsiveness further.

Permits drastic reductions in inventory & costs for manufacturers with a higher level-of-service for customers. (The proverbial win-win.)



Example of Lean Logistics

Tesco (with the cola stream as an example):

Before lean solution (1996):

- ✓ Five storage locations between bottler and customer.
- ✓ Six order-entry points.
- ✓ 20 day throughput time.
- ✓ 98.5% level of service (compared with 92.0 in grocery industry.)
- ✓ Demand amplification 4:1.



Example of Lean Logistics at Tesco

After lean solution (2005):

- ✓ Two storage locations.
- ✓ One order-entry point.
- ✓ 5 day throughput time (= 75% reduction in total inventory.)
- ✓ 99.5% level-of-service (best in the world.)
- ✓ Demand amplification 2:1.



Lean Consumption Principle #4: Provide Value *Where Consumers Want*

Where's the best place to get a wide selection at the lowest possible cost/price?

The “big box” retailer!

Logical end point of mass consumption/production.

But what about the consumer's total cost, including time, travel, and hassle?

And don't our preferences change with our circumstances?:

Sometimes we think time is more valuable than money, at other times it's the reverse.

Why would one shopping format always be best?



Lean Solution #4: Offer a Range of Low Cost Formats

With lean logistics, retailers and manufacturers can offer lower and comparable costs in a wide range of formats.

For fast-moving consumer goods:

- Big box.
- Standard-sized store.
- Convenience store.
- Web-based home shopping.

Consumers can change formats with changing circumstances (e.g., need for speed & variety.)

Is the age of the big box drawing to a close?



Example of Lean Format Strategy

Tesco again:

Now offers comparable pricing & wider variety in:

- Tesco Extra (big box)
- Tesco (standard-sized stores)
- Tesco Metro (size of Trader Joe's/Whole Foods)
- Tesco Express (7-Eleven)
- tesco.com (web based home shopping.)

Because most customers now do all their shopping at Tesco formats, customers aren't strangers.
(Comprehensive loyalty card data.)

The lean answer to Wal-Mart!



Lean Consumption Principle #5: Provide Value *When Consumers Want*

Do you make sudden decisions about major consumption items (e.g., cars, computers, homes)?

Or...

Do you plan ahead?

But why is there no retailer or manufacturer to talk to about your plans?

Why can't consumers, providers, and manufacturers create win-win-win situations by sharing knowledge about timing and specs?



Lean Solution #5: Turn Customers into Partners

Turn customers into planning partners.

Distinguish between those who truly need a good or service right now and those who would be happy to wait, in return for a better price and better ability to specify their product.

Run slot-based production systems with a few slots held open for “got to have it now” customers (at high cost/price).

Level remaining demand by planning ahead with customers at lower cost/price.



Planning Ahead Together Versus Current-day Guessing

The Problem with Dell and with Toyota outside Japan:

- The overnight computer and the 3-day car are impossible without vast inventories.
- Vast inventories of finished units and parts still can't provide a high level-of-service at acceptable costs. (So providers steer customers.)
- But plan-ahead customers – as most of us are most of the time – can be rewarded for sharing their plans, even as companies save money.

What companies will make the breakthrough?!



Manufacturing Success = Lean Solutions

- A combination of lean consumption, lean provision, and lean production to:
 - ✓ Solve our (consumer, provider *and* manufacturer) problems completely.
 - ✓ Stop wasting our time.
 - ✓ Provide exactly what we want.
 - ✓ Exactly where we want.
 - ✓ Exactly when we want.

All we need is a pioneer in each industry.

How about you?!



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