The Origins of Lean & Lessons for Today

Keynote Presentation

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Lean Production

Triumph of the Lean Production System

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THE RESEARCH FINDINGS REPORTED in this article will help to overturn a common myth about the auto industry: that productivity and quality levels are determined by an assembly plant’s location. In reality there exists a wide range of performance levels among Japanese, North American, and European plants. Corporate parentage and culture do appear to be correlated with plant performance; the level of technology does not. Plants operating with a “lean” production policy are able to manufacture a wide range of models, yet maintain high levels of quality and productivity. Ed.

ON ONE SIDE OF THE WORLD there is an automotive assembly plant that is truly remarkable. Assembly line workers perform not only production line tasks, but also quality firm’s negative impressions. Unlike the first plant, this plant utilizes numerous robotic applications for actual assembly tasks such as installing seats, bumpers, and lights. Apparently all the laps.
The Toyota Production System

Taiichi Ohno (1912-1990)

Kiichiro Toyoda (1894-1952)
Origins and Influences

Supermarket by SuperArticleGuy, Junkers by Bundesarchiv, both licensed under the CC-BY-SA License
Ford – Assembly Line
Ford – Waste Walks
Ford – Andon Line
Piggly Wiggly – Supermarket

Started 1915
Training within Industry

**How to Handle a Problem**

**Determine Objectives**

**Step 1—Get the Facts**
- Review the record.
- What policies, rules, regulations apply?
- Talk with individuals concerned and get opinions and feelings.

**Be sure you have the whole story.**

**Step 2—Weigh and Decide**
- Fit the facts together and consider their bearing on each other.
- What possible actions are there?
- Check each action against objectives weighing effect on individual, group, and production.
- Select the best actions.

**Don’t jump to conclusions.**

**Step 3—Take Action**
- Should I handle this myself?
- Who can help in handling?
- Should I refer this to my supervisor?
- Consider proper time and place.
- Explain and get acceptance.

**Don’t pass the buck.**

**Step 4—Check Results**
- How soon and how often will I check?
- Watch for changes in output, attitudes, and relationships.
- Did my action help production?

**Were Objectives Accomplished?**

**Foundations for Good Relations**

1. **Let Each Employee Know How He Is Getting Along**
   - Figure out and tell him what you expect.
   - Point out ways to improve.

2. **Give Credit When Due**
   - Recognize extra or unusual performance.
   - Tell him while it’s fresh.

3. **Tell an Employee in Advance About Changes That Will Affect Him**
   - Tell him WHY if possible.
   - Get him to accept the change.

4. **Make Best Use of Each Person’s Ability**
   - Look for ability not now being used.
   - Never stand in an employee’s way.

**People Must Be Treated as Individuals**

**Job Relations Training**

U.S. Civil Service Commission

*Prof. Dr. Christoph Roser*
Statistical Process Control – Quality

Edwards Deming
1900-1993

Joseph M. Juran
1904-2008
Danley – SMED
Junkers Germany – Takt Time

• Thanks to Michel Baudin for researching the details 😊
Japanese Craftsmanship – Kaizen
Dai-Nippon Spinning – Inventory
Toyoda Loom – Poka Yoke, Jidoka
WW II – Inventory
Lessons from Toyota

Never stop to learn!

Take Inspiration wherever you find it!

Continue Improving what you do!

Keep on reinventing your Company!
Further reading ...

- “Faster, Better, Cheaper” in the History of Manufacturing: From the Stone Age to Lean Manufacturing and Beyond