

The Second P in LPPD

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Designing the Future Summit 2019

lppd  Lean Product &
Process Development

“Lean Production”

- A term introduced in 1987.
- Popularized in *The Machine That Changed the World* in 1990.
- What most people heard was:
 - ✓ Factories making products with fewer defects, shorter through-put times, and lower costs by application of lean manufacturing methods.

What We Meant Was

- An interlocking set of ideas and methods for:
 - ✓ Lean product development
 - ✓ Lean supplier development and management
 - ✓ Lean customer support
 - ✓ Lean fulfillment, from order to delivery
 - ✓ Lean management (to supplant Modern Management)
- To be applied to every value creating activity in every organization in every industry in every country.

“Lean Product and Process Development”

What people heard, when this phrase was introduced in 2008 in Al Ward’s book, was “lean product development”.

- ✓ The ideas and methods needed for lean product design.

What we (or at least I) meant was “lean product and process development.”

- ✓ The ideas and methods needed to create a lean product design delivered to the customer through a lean fulfillment process (from order to delivery and sometimes with continuing support through the use cycle.)

A Strange Situation

The LPPD community has worked hard to popularize a great set of ideas but has largely restricted its efforts to half of the total development challenge:

- ✓ Most lean development teams would surely not think of developing a new product exactly like the previous product.
- ✓ But most seemingly do not think it odd to launch a new “lean” product into the same, not-at-all-lean fulfillment process their organizations have used for previous products.

The Consequence

- ✓ A loss of feedback about new product designs, based on alternative, lean designs for the fulfillment process (with less capex, less human effort, fewer defects and less rework, shorter lead times, etc.)
- ✓ A splendid business opportunity for lean process consultants to start doing “kaizen” (= “rework” = “touzen”) on faulty fulfillment processes soon after the launch of “lean” products!

The Consequence More Generally

The great bulk of the work of the Lean Community in fulfillment has been laboriously redesigning production processes that should never have been launched into production to begin with.

What Can We Do?

- Insist in the LPPD community that all new products be developed with a lean fulfillment process.
- Insist that we do product and process development simultaneously (and concurrently), with the manufacturing, industrial, and logistics engineers and sales in the obeya room.
- Facilitate this by reaching agreement on the methods, principles, and fundamental beliefs of lean process design, through dialogue across the enterprise.
- Repurpose Toyota's "model line" concept to be proactive!

What Do We Need to Consider?

- ✓ Fundamental work flows – lines, cells, locations.
- ✓ Management of orders from sales – make to order not the quarter, heijunka.
- ✓ Management systems – team leaders, daily management with real time countermeasuring, andon, jidoka, obeya, hoshin.
- ✓ Technology – level of automation, karakuri.
- ✓ Role of suppliers – partners rather than order takers, small amounts frequently (not just parts, but feedback.)
- ✓ Post launch kaizen via suggestion system.

A Special Problem

Products are individual – we expect them to be different, perhaps even designed with different philosophies and methods.

Fulfillment processes are often “corporate standard” for use with every product.

Demands from a development team to change the fulfillment process for one product seem onerous and threatening to everyone from sales to PC&L to purchasing to finance.

Senior support is therefore needed – maybe a hoshin project (one of the few priorities) with an A3 to gain alignment?

Principles of Lean Process Design

Similar to those of lean product design:

- ✓ Chief engineer for the fulfillment process.
- ✓ System concept paper to gain agreement on the problems with traditional fulfillment and to identify opportunities for lean fulfillment.
- ✓ Concurrent experiments with alternative design solutions.
- ✓ Trade-off analysis to create a knowledge base on design choices.
- ✓ Fulfillment obeya, as part of big obeya for total projects.

(With thanks to Matt Zayko & Eric Ethington for these points.)

My Hope for Next Year

- The presentations will include examples of lean product and process development.
- Reported by someone(s) in this room today.
- For the benefit of everyone in the LPPD community.