

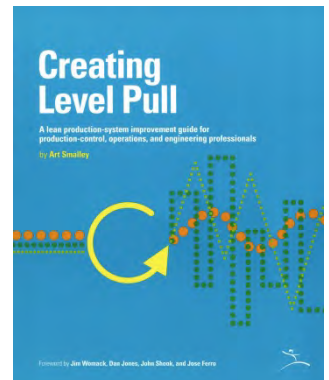
Creating Level Pull

📅 To be confirmed

📍 Lean Enterprise Academy, Ross on Wye, UK or at Your Workplace

Introduction

Creating Level Pull moves beyond making improvements in the value stream of an individual product family. The workshop addresses how to tie together the flow of all product families through a facility by implementing a lean production control system. Creating pull and a level schedule are critical objectives for any serious practitioner of lean principles. Toyota started establishing basic replenishment methods between processes and between plants as early as 1953 in Japan. By trial and error, it learned that until you level the schedule and establish pull you cannot really build to a takt time. In fact, leveling demand and creating pull establishes the basic conditions for flow production and superior performance by assembly lines or cells. Regardless of whether you are starting out on a lean journey or have already implemented some basic cellular production, this workshop will help your company improve to the next level.



Objectives

Few companies in the world beyond Toyota have truly achieved end-to-end level demand and pull systems for production and it is one of the key factors in its success. This workshop will equip you with all the basic tools it uses to accomplish this in almost any kind of facility. You'll learn how to:

- Determine true demand and what parts to hold in finished goods.
- Establish where to schedule value streams.
- Design material and information flow from the pacemaker process to upstream processes.
- Expand the pull system plant wide.

Workshop Benefits

The benefits to achieving a level pull system of production across a facility may include:

- Dramatic reduction of manufacturing lead time of 20-90 percent.
- Improvement in on-time delivery up to 100 percent.
- Improvement in inventory turns.
- Reduced overtime and expediting of material.
- Improved labour productivity for direct and indirect labour as much as 30 percent.

This workshop will explain how to implement and sustain true flow, pull, and levelled production in a facility from the customer demand point of view backwards through the entire facility.

This workshop will not address the implementation of flow in a cell or from a purchased parts market to an assembly cell. These issues are addressed in LEA's Creating Continuous Flow and Making Materials Flow workshops, respectively. Many of the methods identified in those two workshops could be implemented while traditional push scheduling systems are still operating. Furthermore, this workshop is not about traditional scheduling matters such as capacity planning, forecasting, master production scheduling, or material requirements planning.

Topics that will be examined include:

You will learn how to level demand from the customer in terms of mix and quantity as well as implement pull production methods through the entire facility from finished goods back to raw materials. At the conclusion of Creating Level Pull, you will be able to identify the number of production control loops in a facility and how to organize and control each of them in the most efficient manner possible. Specifically you will learn:

- When to build to stock versus build to order.
- How to use finish goods inventory to buffer demand.
- How to select the pacemaker process for the facility.
- How to level the schedule at the pacemaker process.
- How to deliver instructions to the pacemaker process.
- When to flow material in the plant one-by-one versus producing in small batches.
- How to employ replenishment schedule principles versus sequential pull.
- How to use production instruction kanban and parts withdrawal kanban.
- How to size supermarkets for internal components.
- How to set lot sizes for batch processes.
- How to set a "pitch" interval for production instruction.
- How to use signal kanban for batch processes.
- How to link material handling to material movement.
- How to deliver material from upstream process to the pacemaker most efficiently.
- How to spread level and pull production across the entire facility.

To get the most out of this workshop, read the Creating Level Pull workbook. Both the workbook and this workshop assume you have knowledge about value-stream mapping. If you haven't had instruction in mapping, we strongly recommend that you take the Value-Stream Mapping workshop or read the Learning to See workbook. Many of the issues in this workshop require an understanding of mapping and having a value-stream focus, which is a critical basis of a lean implementation plan.

Agenda

- Introduction & Getting Started.
- Customer Demand & Creating Pull.
- Levelling the pacemaker.
- Scheduling upstream with pull.
- Expanding the system.
- Sustaining & improving.
- Conclusion.

Related Books

- [Creating Level Pull](#)
- [Making Materials Flow](#)
- [Creating Continuous Flow](#)
- [Learning to See](#)

Notes

- **Attendance** - 1 Day Course
- **Class size** - Maximum 12 people per day

- **Timings** - Each day will run from 09:00 - 17:00
- **Cost** - £395.00 (Consultant Rate £450)* per delegate per day with a 15% discount when 2 or more people from the same organisation attend
- **Materials** - A PDF copy of the materials will be available via the Lean Enterprise Academy website. Participants will also receive a copy of Creating Level Pull by Art Smalley
- **Facilities**** - Refreshments and lunches will be provided by LEA

** Please note prices exclude VAT at the standard rate of 20%*

*** We are situated in a listed building which unfortunately does not have disabled access. On occasions where disabled access is required we will move the workshops to a local hotel in Ross on Wye.*

We can also run these workshops in-house at your convenience, if you would like to explore this option please contact us at events@leanuk.org or call +44 (0)1600 890590

Follow up (optional):

LEA provides an ongoing coaching and mentoring service for organisations involved in making Lean transformations. A3s developed by the organisation can be reviewed at 30/60/90 day intervals. This provides the organisation with help and direction in sustaining the learning from the workshop process and helps highlight further learning opportunities that can be pulled, as and when required, by the organisation.

Book online at www.leanuk.org

The lessons learnt during this workshop fit within the Process Improvement element of the Lean Transformation Framework