

Creating Flow Through Shared Resources



“Learn how to create flow in the complex environments of shared resources.”

Overview

Just about every operation that implements lean to create Operational Excellence must deal with shared resources. Supermarkets are used to signal these resources using a pull system. However, Supermarkets are still inventory, and they prevent the Pacemaker (schedule point) from being established upstream.

In this technical class, delve into the newest techniques to implement lean in the most difficult and complex environment: shared resources. This workshop provides methods for moving the schedule point further and further upstream by flowing parts through shared resources. Learn the importance of dedicating parts to shared resources and looking upstream to determine what the product families could be. Set intervals (EPEI) for shared resources and calculate branch Takt times. Determine how to use multiple FIFO lanes to create continuous flow through shared resources. And discover how to handle batch processes such as heat treat ovens and variable rework flows along with value stream management of shared resources.

What Participants Say

“Finally, a real course on handling monument equipment!”

“This is the class I have been waiting for, and it delivered!”

“Our instructor was very knowledgeable. I hope he writes a book on this subject!”

Learning Objectives

The concepts covered in this workshop include:

- Determining product families when looking at upstream processes
- Dedicating parts to shared resources
- Setting intervals (EPEI) for shared resources
- Calculating branch Takt time and average weighted cycle time
- Using multiple FIFO lane systems to flow through shared resources
- Dealing with rework
- Creating flight schedules to handle batch processes
- Scheduling and sequencing upstream resources
- Managing the flow through shared resources

Class Duration:

3 days

Recommended Class Size:

15-20

Languages:

English, Spanish, French, German, Dutch



Prerequisites:

To take this advanced course, participants must have completed a course in *Value Stream Mapping*. It is also helpful to have taken the *Creating Mixed Model Value Streams* course. Creating value stream maps will not be covered in this class.

Class Location:

Can be done off-site

Who Should Attend:

A good cross-functional group of management and support personnel will provide the most benefit to the company. This includes:

- Team Leaders
- Continuous Improvement Leaders
- Production Control
- Manufacturing Engineering
- Industrial Engineering
- Inventory Control
- Quality Control
- Finance
- Support Groups

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Program Agenda

Day One

Classroom - Morning

- Introduction
- Determining upstream product families

Exercise 1 - Sort part numbers into families. Using the data sheets provided in the workbook, determine the product families using the given upstream processes.

- Dedicating parts to shared resources
- Machine loading for shared resources

Exercise 2 - Complete machine load calculations and load chart for a sample shared resource

Factory Floor Activities - Afternoon

Apply what was learned in the classroom and apply it on the shop floor. Activities include determining upstream product families based on the company's products and processes, determining the ability to dedicate parts to shared resources and calculating machine loading.

Day Two

Classroom - Morning

- EPEI analysis

Exercise 3 - Complete an interval analysis and EPEI chart for a sample shared resource

- Branch Takt time
- Average weighted cycle times

Exercise 4 - Calculate the branch Takt and the average weighted cycle time for a sample shared resource

- Creating flow through shared resources
- Multiple FIFO lane systems

Exercise 5 - Design a multiple FIFO lane system for a sample shared resource

Factory Floor Activities - Afternoon

Apply what was learned in the classroom and apply it on the shop floor. Activities include interval analysis, calculating branch Takt time and designing and handling multiple FIFO lane systems for a designated shared resource on the shop floor.

Day Three

Classroom - Morning

- Handling rework
 - Handling batch processes
- Exercise 6** - Create a flight schedule for a heat treat shared resource
- Using the one-point schedule
 - Sequencing with boxes and offsets
 - Managing flow through shared resources
 - Implementing pitch

Factory Floor Activities - Afternoon

Apply what was learned in the classroom on the shop floor. Activities include creating flight schedules and managing flow through shared resources for a designated shared resource on the shop floor.

Materials Provided by Duggan:

Student Guides (containing all instructor's slides)

Materials Provided by Client:

LCD projector, flipcharts, large whiteboard, dry erase markers, flipchart markers, pencils, one calculator per team, and refreshments (coffee, lunches, etc.)

Recommended Support Classes Include:

- SMED
- Total Productive Maintenance
- FIFO Sizing

