

## DEVELOPING A LEAN CHANGEOVER PROGRAM

Let us face it, the economy was running on turbo-charge. Now as companies struggle to adjust capacity to match customer demand, for certain in many cases we will not see the volumes businesses recently enjoyed. In most cases we will see more frequent orders and orders requiring smaller batches. There will be the need to place a direct focus on set-up reduction and the ability to conduct quick changeovers. Although the following article from John Henry's recent newsletter has a primary focus in operations ... there are significant opportunities to reduce set-ups and changeovers within office and administration processes. Every time you answer a telephone call you are in essence going through a change-over and what is that costing you, and your organization in productivity and is it creating a "Disturbance to Flow" within your operations?

Enjoy John's article ... it is a great refresher ....

You know that you need to reduce changeover downtime. The problem is how to tackle it. Changeover is such a massive issue, affected by and affecting virtually everyone in the company, that it terrifies many people. This fear leads to indecision about how to start, indecision leads to nothing at all being done and the high costs of changeover continue year after year into the future. To start, you need a formal program. Here is a step by step process for getting the program going:

### 1. Calculate the cost of changeover

This must be the first step and must be done by the finance department. Anything else is unofficial and will have credibility issues. Improving changeover will cost money. Generally not major capital expenses, though there can be some, but a lot of relatively small expenses as well as time. If the cost of changeover is not known, it is impossible to evaluate whether improvements make sense

### 2. Decide that a program will be implemented and set a timetable

Talking about improving changeover is not a program. Putting it off doesn't make it get any better. Just do it. The timetable, initially, is for getting the program going, not necessarily accomplishing reductions. It takes an effort and if there is no deadline it will get pushed back into never-never-land.

### 3. Develop metrics to measure changeover times

As the saying goes, if you don't measure it, you won't control it. Decide what you will measure as well as how you will define it and how you will measure it. Absent good metrics there is no way to know if changeover is getting better or worse.

### 4. Decide which areas you will focus on

Changeover can be divided into two broad categories. "**Mechanical**" is the modification of machinery and equipment to ease changeover. "**Operational**" are all other functions including material handling, documentation, quality inspections/line clearance, package/product design, job assignments, scheduling. Some of these are interactive but for the most part they can be viewed as separate paths. In some plants the big bottleneck will be operational issues. In others it will be mechanical. Both need to be addressed but, depending on the resources available, it may be best to focus on one or the other at least initially.

Where Lean  
Thoughts  
can become  
Reality

*"Unless you try to do something beyond what you have already mastered, you will never grow."*

Ronald. E. Osborn

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### 5. Decide who will be on the team

Especially at the beginning, a primary attribute of the team members must be enthusiasm. The selection of team members will depend to some degree on which path, mechanical or operational, you will initially concentrate on. *One key is that the team have a leader, what I call a "Champion" who can preside in an effective manner.* This Champion can be a manager, supervisor, engineer, mechanic or operator. The most important qualification, in my view, is a strong belief in the benefits of reducing changeover and a desire to succeed. Needless to say, whoever is selected to be Champion, they must have strong support from management.

### 6. Provide training

***The first thing they need is training.*** It is not reasonable to simply expect a team to come together and intuitively figure out how to reduce changeover times. This training must include the basics such as definitions and must provide a methodology for looking at changeover and identifying improvement opportunities. Finally it must provide techniques to implement those opportunities. Finally, the training must provide facilitated opportunities to practice the methodologies and techniques.

### 7. Provide resources

***The most important resource to be provided is time. The team must have time to meet.*** Meetings should be regular and should have an agenda. Other resource includes books, magazines, contacts and even visits with other similar and dissimilar plants. It goes without saying that resources must also include support and funding to implement improvements.

### 8. Set goals

If it is not specific, with a completion deadline, it is not a goal, it is merely a good intention and we know what road is paved with those, don't we? A generic goal I often recommend is a 50% reduction in 6 months. Milestones along the way are also a good idea. The problem with continuous or perpetual programs is that people lose enthusiasm and that without time pressure of a deadline, some of the sense of urgency is lost. This does not mean that at the end of the project you should stop improving. Simply start another project when the first is finished. It may have some different people and/or a different focus. I favour a series of consecutive, specific, projects rather than the amorphous perpetual project.

### 9. Implement the program

As the team develops improvements, they should be implemented as soon as possible. One of the things I recommend is that some very simple, quick (less than 2 weeks) to implement improvements be implemented right off the bat. This will instill an initial sense of success and confidence and can be built on with more complex improvements.

### 10. Expect failures

Babe Ruth, who long held the baseball homerun record still holds the strike out record. There will be failures. Do not let them slow the program. Build on them and learn from mistakes.

### 11. Recognize the participants

At the end of the program, take stock of what has been accomplished. Was the goal met? Why or why not? How much benefit has the program been to the company in dollars? Congratulate the participant's for a job well done (or at least a valiant effort if the goal was not met.)

### 12. Go back to step 1 and start all over again

***Your competition is continually getting better.*** You can't stop now.