



## Process This!

Let me illustrate Process Analysis via a real life story through one of the flagship plants of Myers Container/CMS. All of the participants in this story are real and not figments of my imagination.

Let's begin at the Marx Street Plant in Portland, Oregon. This plant is in the IBC (Intermediate Bulk Container) reconditioning service business. Think of an IBC as a giant plastic jug in a giant metal cage. When we recondition an IBC, we recycle it by cleaning and repairing broken parts. This is a labor intensive business and thus this plant had trouble maintaining a constant flow in between product cycles (which would later filter on down the line). Omar Fernandez is one of our brightest plant managers who had struggled in the past with balancing this line. Omar became involved with the Process Analysis Special Interest Group (a group of like-minded individuals who want to practice the Process Analysis technique) and everyone agreed to practice at the Marx Street Facility.

In comes Mike Rother. Mike is a world expert on lean and line balancing and is intimate with the inner workings of Toyota. He was intrigued with working with the Process Analysis SIG and agreed to help the group at the Marx Street Plant. Process Analysis comes directly from him.

For those of you unfamiliar with Process Analysis, this is a lean practice that was born from the notion of "understand the process as deeply as you can." A VSM is a great tool to get a broad look at your value stream but true continuous improvement comes from an intimate day-to-day relationship with your processes. It requires you to look deeply at processes based on what's called a **target condition**. The target condition **describes the expected outcome of your process that you continually measure against**. It keeps you focused on doing the right things one at a time step by step rather than creating a long list of things that you may or may not be able to get to. **You do not** have a target condition unless it **describes the process**. Also the best target conditions have only two possible responses, "Yes I succeeded or no I failed."

Now you have a plant struggling to maintain constant flow and you have a world-expert at maintaining flow. Something great is brewing here.

First off the SIG team identified our target condition was to have consistent flow throughout the line. As our team went out to the line armed with stopwatches we looked for inconsistencies between processes. We discovered at the front of the line, we had our most inconsistent process. The team member on the line had no way to identify when an IBC was done. To compensate for his waiting time, he would wander around doing other things and would forget to check on the process. In order to solve this dilemma, we installed a simple strobe light so that it would be painfully clear when the process was complete. The result was like angioplasty on a clogged artery. The flow picked up immediately breathing fresh life into the line. Everything was moving until...





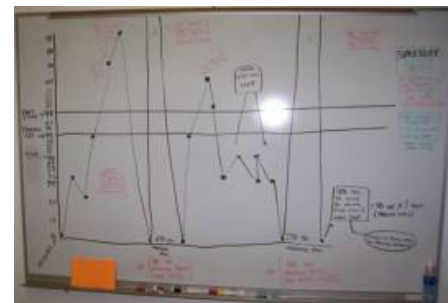
Ack! The line stalled again. Again we looked for the bottleneck and went into a deep dive of the process. We discovered that for some reason the line kept stalling when the forklift driver had to go load a truck. This time when we went back to the line we discovered that the problem was in the back of the line. What was happening was the line turned 90 degrees when it exited the door. Thus the line needed a kicker to turn the IBC and there was almost always a problem with it getting jammed or otherwise failing. The solution ended up being making the line go straight (as seen in the picture) and extending it to give the forklift driver up to 40 minutes before the line gets full (see picture to the right). Although it is not “100% lean” (we had to build up WIP), it was a step towards lean because it helped balance the line.



Yet again, we went back to the line and looked where the bottlenecks were. This time we had a jam in the next process down from our first process. We had two types of products following into one line. One product took longer than the other causing difficulties in trying to balance a single line. We were thinking about adding a whole new line so that they would be separated until some wise souls suggested we talk to Mike. We came back to Mike with our dilemma and he fuddled his brow and asked us, “What would it take to get those two lines to have the same cycle time?” The solution was to remove certain extraneous processes. Sweet success the line flowed again.



Myers/CMS also has a plant in Hayward, California that has embraced Process Analysis and is using it as a tool to analyze investment needs. The investment was whether or not we wanted to buy a brand new piece of machinery for a particular product line to run side by side with the current one. What we discovered was the current process was completely unstable (as shown on the picture to the right) and that we needed to fix the current process before we even thought about a substantial investment.



Process Analysis is a continual deep dive into a specific process. It forces you to examine key processes one at a time to ensure that you are not overexerting your resources and losing control of your changes. The examples I illustrated above were done one at a time so that we could see individual problems as they came and solve them systemically. The key to process analysis is to let your target condition guide you on your mission for continuous improvement. Even after the improvements listed above, Marx Street is still working on consistent flow. That’s okay because that same target condition has increased our units per man hour by 50%. We’re laughing all the way to the bank my friends.

Please go to [www.nwhpec.org](http://www.nwhpec.org) for more information on the Process Analysis SIG