The Problem

During a training session that I was running in *Cert IV in Competitive Manufacturing* for a small manufacturing business, I was challenged to prove that what I was teaching about the benefits of *Lean* could apply in their case, and not just for big businesses.

Start with a walk

Lean is one of those methodologies that really isn't about the desktop analytics. You have to go to the process. *Go to the Gemba*, as they say in Lean circles.

The first, and most obvious thing about walking the production floor was that we couldn't. There was so much work in progress (WIP) that moving around took careful manoeuvring and some assistance. Wood dust everywhere and half made cabinets all over. The cost of that material alone was worth more than $1Million!

Everyone was frantically working as fast as they could at each work station. Controlled chaos is how the foreman described it to me. He took great pains to explain how this was the only way to catch up on customer orders that were now getting to weeks and months late, not just days.

I stood and watched without comment. As I watched the process it became clearer where the effort was being applied, where the WIP was being created, and why the process would never recover if it kept going that way.

So how do you have that conversation with a team who are genuinely working as hard as they could to make the customer happy?

You look at the process as a series of *Production Cells*.

Map out your walk

By having the team map out the process on a Value Stream Map (VSM) and writing down how long each stage as taking the conversation became easier.

The work at the first and second cells of the process took less than half as long to complete than the middle cells. The final step of production took the longest; twice as long as any other cell!

Using post-it notes to represent the process cells, and recreating the process (using minutes rather than hours) we were able to show how a big pile of yellow paper was building in the middle of the room. This was the same problem as in the factory, with WIP building up so that nobody could move!

The team quickly saw the problem and now were open to how to fix things.

By operating the first two production cells on Monday and Tuesday only the staff from those cells were able to assist with the final cell for three days a week.

The team had the production floor cleared of WIP in two weeks and managed to catch up on all customer back orders in the next 4 weeks. The extra space was now able to be used for new speciality products and the operational budget now no longer required the extra $1Million of *working capital*.

Our Conclusion

Pushing product through a process can often seem like a good idea when customers are calling for their orders. The effort to make those customers happy is something that is commendable. The difficulty is that customers are not all that interested in your effort, only your outcomes. In trying to produce those outcomes the business was creating more delays and more tied up cost.

Lean provided an excellent way to rethink the problem. By going to the floor and watching it became easier to understand both the problem itself and the way to a solution. The team had seen the WIP as signs of progress. As we discussed though, as far as a customer is concerned, even 100 cabinets half done is none ready for use. Production cell planning by determining how much time makes sense at each cell for the whole process can be an easy and effective way to speed up completion of customer orders and make sure that you are applying just the right amount of resources to get there.

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