

Deming's PDCA and Value Stream Mapping

Many organizations subscribe to Value Stream Mapping as an opportunity to "Learn to See" waste within their processes ... but it seems that the use of the tool is an initiative rather than a solid management practice conducted at minimum annually.

Also many organizations use the Demming cycle in either a formal or informal manner, that being Plan, Do, Check, Act or more affectingly known as PDCA. Both are great management techniques and if we just change the order of the Demming cycle and impose it upon your Value Stream Mapping your organization will reap significant benefits.

So what I propose is that you change the Demming cycle to Check, Act, Plan, Do (CAPD) .

CHECK ... this happens as you draw your "Current" state map. Reminder, as you draw your Current State Map you must walk the value stream and if you cannot see, feel touch, taste or smell the evidence ... then what you are being told is just a story. Our folks always are usually afraid to be honest about the gremlins that have invaded the value stream. So as you map the current state you want to constantly "check" the current state against your control plans and/or the original quoted process plan for manufacturing that particular product or service.

In one organization we used the check phase to monitor specific metrics annually to see if our initiatives were actually delivering the desired results. For example, we decided to abandon the daily monitoring and recording of scrap generation and decided to rely on the annual Value Stream Mapping exercise as our review point. We had come to the conclusion that through other techniques our team members would quickly tell us if a deviation in process began to generate scrap above the norm. When we had calculated the amount of time being spent on monitoring and inputting daily scrap data we found that we could divert the equivalent of 14 people to work dedicated on scrap reduction and yield improvement. Yes a true paradigm shift!

ACT ... I know that in many cases we advise folks not to jump to solution during the mapping process and this advice still stands. But as you conclude your current state map and you have a list of deviations based on your control plan it is now time to act! If customer requirement have crept into your value stream as changes ... review the cost impact and ask the customer if they are willing to pay for the changes requested in the value stream and do the changes truly add value in the eyes of the customer. In other cases there have been intermittent change in the process which may have allowed for non value add activities to creep into your value stream so act to get them removed now! This is a good time to compare your Current State Map to your costing model to insure they are in sync.

One of the normal situations that occur within many organizations is that as change in process is made to lean out a process the appropriate manpower is not immediately removed. Normally the front line foot soldier will argue that he wants to test the new process before relinquishing the head-count ... wrong!! Remove the resource immediately and assign them to do other activities that will advance your organization such as 5S or set-up reduction. In this manner if your process change does not work you can quickly parachute the resource back into the process without impacting customer needs.

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

Ronald. E. Osborn

Where Lean Thoughts can become Reality

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Remember it is all about generating cash ... and our internal resources are focused on meeting their numbers and will do anything including subliminal activities to build an insurance policy that will help them meet their daily metrics.

PLAN ... This is the part of Value Stream Mapping exercise that most organizations enjoy the most. There are actually 2 phases involved in the planning state, creating the future state and dreaming about the ultimate state.

Traditionally creating your Future State Map is what you and your organization are able to complete and implement within the next 12 months with existing resources or justifiable acquired resources. To inspire the mapping team we introduce them to the 50% rule of thought starters ... reduce inventory by 50% within the Value Stream, reduce the distance traveled by both the goods, services and team members by 50% and improve your through-put yield by 50%.

Designing the ultimate state map is where you and your team can articulate your dreams and visions for some date in the future. Creating the ultimate state map can take some considerable time to create and should involve other factions within the organization since in this case you may need to look at product or service design. In this case your thought starter could be how to reduce your process steps by 50% or your part count by 50% without impacting value to the customer. Creating the ultimate state will require significant involvement from engineering in product design and potentially the introduction of increased automation within the value stream. Also, in designing your ultimate state you want to spend time focusing on standardization across various product lines that will allow you to run a higher volume of mix model combinations in the value stream.

Creating the ultimate state map ... money and resources truly should be of no concern ... let the creative minds wander ... you could very easily end up with a design that could become the game changer for your organization.

DO ... Time and resources are always a challenge to harness in an organization to apply to making improvements in our value stream. This is where the leaders of the organization need to reinforce discipline and accountability against a strong project management infrastructure. If you have planned your projects in a balanced approach each month your bottom line should improve with additional cash as projects are completed.

Part of the Do phase make sure you include a visit to the Gemba so that you and your team can feel, touch, taste and smell the improvements being made ... it is a Check!

CONCLUSION ...

1. a Current State Map without a Future State Map is a waste of time ... since you are accepting what is currently happening without a desire to improve.
2. A Future State Map without a Ultimate State Map is accepting mediocrity ... since you are willing to optimize existing resources with minor tweaks and potentially missing the opportunity to identify a potential game changer. This is not a bad thing since you will be able to identify many opportunities of significant incremental continuous improvements.
3. A Budget or Annual Operating plan not supported with Value Stream Maps is just a wish ... if you cannot support justifiable gains it will just increase the stress level on your organization to meet the plan instead of creating a unified structured approach of improvement with incremental milestones.

I have decided that the Check, Act, Plan, Do sequence of the Demming cycle can be more productive and rewarding in existing value streams. Try it and let me know how it works for you.

Lean Thoughts