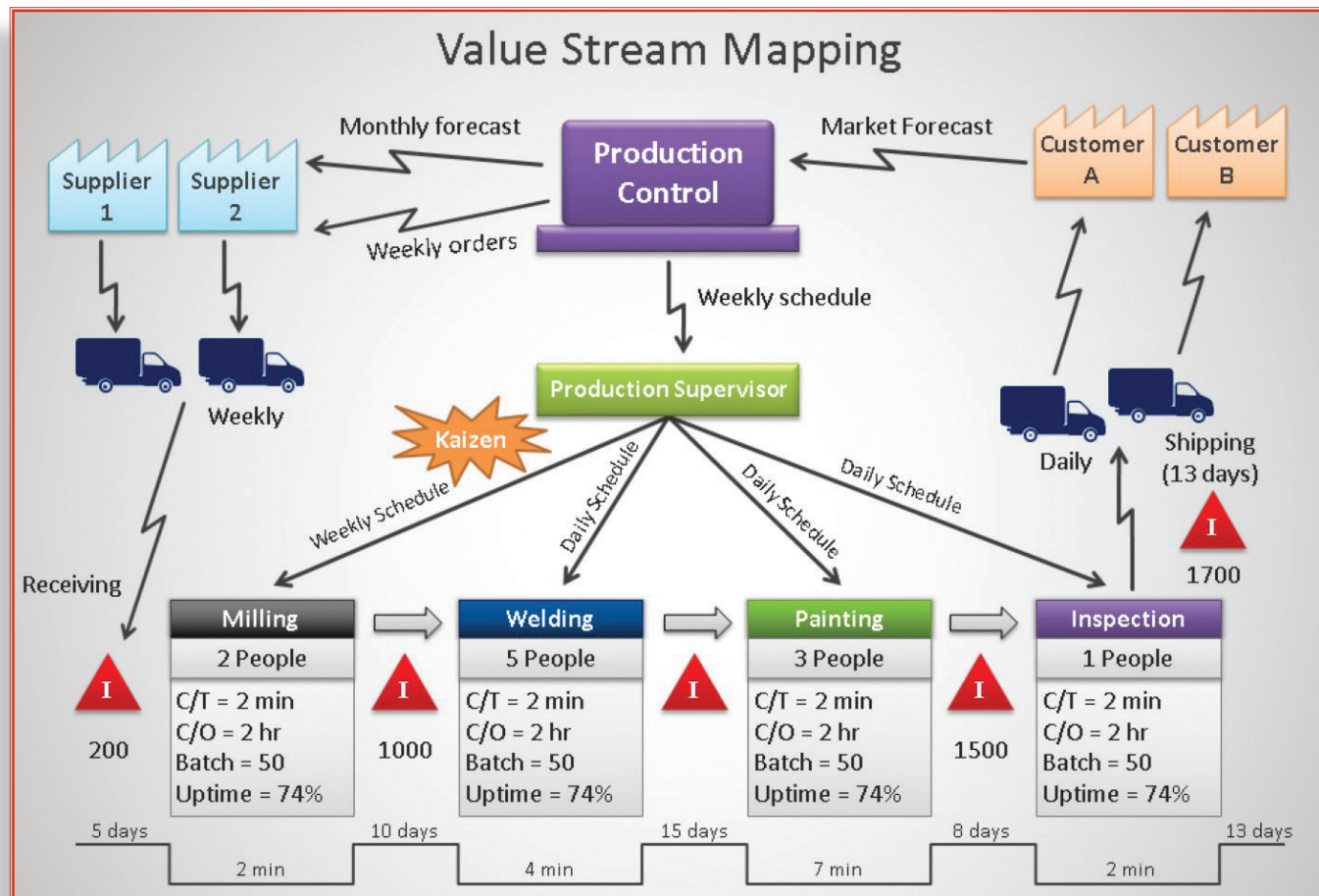




Misconceptions about Value Stream Map

Many lean practitioners see Value Stream Mapping as a central tool to detect waste, cut process cycle times, and implement process improvement. However, Value Stream Map (VSM) is not designed to address problems at a detailed level, where many factories implement it greatly but can't seem to achieve lean. The article analyses some myths related to VSM and how one needs to develop the daily habits and routines of everyone, from the top management to workers, in order to become lean.

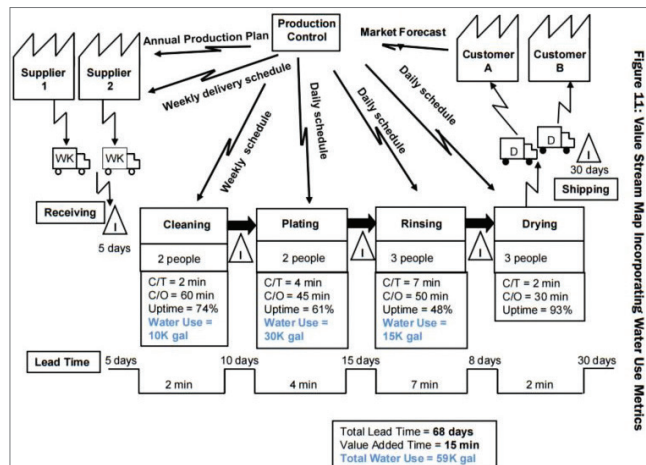


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Leading India's first total lean enterprise transformation back in the early 1990s, we often huddled on the shop floor to discuss layout changes to improve flow and pace production while answering variable demand (pull). We had no Sensei teaching us then, nor were there seminars or tool trainers. Sometimes, I wonder if we were lucky to not have had any content coaches, who were partially equipped and trying to teach us how to become lean, when they themselves had not travelled the journey and so, instead trying to teach us random tool usage to make believe that this is the lean journey. When faced with problems of flow, shortages, inventory pileups, imbalance, etc the workmen, who

were closest to work at a tactical level, drew layouts with a chalk, sitting on the shop floor, portraying how the machines, assembly lines and material flow paths should be organised, so that it would result in the best possible flow without any unwanted happening (inventory pileup, backtracking, repetition, rework, imbalance, unwanted communication etc).

Each and every time we did this, we ended up drawing the new layout that was a solution to the problems we faced; we were drawing what people today call the future state map. Value Stream Map (VSM) only points towards symptoms; and to us the symptoms or current state lay right there in front of us. We



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imagined how the future should be, visualising that ideal state. A current state map would not tell us anything that we did not already know. The real purpose of drawing an Information and Material Flow Diagram or VSM is to envision the future, like setting the goal, and envisioning even better states when needed. At Toyota, they do little of such maps; they work directly on the shop floor. Mike Rother and John Shook coined the VSM phrase in the late 1990s and called it “learning to see”.

Purpose of Value Stream Map

I have been through so many factories, seen value stream maps and Kaizen boards plastered all over like wall decorations. Yet the factories are far from lean. There are a few pertinent points:

- VSM is really not where you begin the lean transformational journey
- VSM will not make your company lean
- It is about how you perceive to use the information and material flow diagram or the VSM

The purpose of VSM is to design a strategic improvement plan that will be executed over a period of time; it's not designed to address problems at a detailed level. Value stream mapping has to be a strategic leadership activity that is part of a macro Plan-Do-Check-Act (PDCA) cycle. Designing and making specific improvements requires a series of micro PDCA cycles with involvement from the front line workers. You want those closest to the work designing tactical-level improvements rather than leaders who are too far from the work to determine exactly what should be done to reach a target condition.

Lean is strategy work

A lean journey begins by understanding “value” (lean’s first principal) and then develop a strategy to deliver that value in the most efficient way. Remember, lean is strategy work—understanding the customer demand in terms of cost, quality,

delivery logistics, lead times, demand rate and fluctuation bandwidth, sale rates, prevalent gaps, customer satisfaction levels, product strategy, generic strategy if used, competitive forces and competitors, SWOT, core competences, portfolios analysis, etc. Most companies work on the push system where variations are internally produced, usually from weak marketing systems that are visible in frequent plan changes or schedule interruptions. So, excess inventory and wastages of various kinds are only to be expected. Therefore, knowing that a company is engaged in the push system is in itself actionable information.

When a company wants to travel the lean journey, it is either guided through programs or takes to drawing the VSM and use Kaizen in order to make improvements by its own understanding. The trap it usually gets into is dealing with a segment of the value stream and not visualising it in entirety. Besides, many make the mistake of thinking that lean is just for the shop floor. The common behaviour is to feel compelled to start improving the value stream at the micro level and focus on reducing process time. But what happens when you maintain a macro or value stream perspective is that the process time reductions become a by-product of addressing the systems and barriers to flow. The key is to direct the team to help them stay focused on the big picture and eliminate the easy-to-see wastes within the value stream. Going into the process-level analysis comes later as you execute the transformation plan and define and document standard work via smaller PDCA cycles.

Having all the elements together

Fujio Cho, President, Toyota Motor Corporation, says, “Many good companies practice Kaizen and other Toyota Production System (TPS) tools. But what is important is having all of the elements together as a system. It must be practiced every day in a very consistent manner – not in spurts but in a concrete way on the shop floor.” A Value Stream Map, coupled with Kaizen, may give localised solutions to individual processes but may not develop into a continuous improvement effort reflecting in the productivity of the value stream or make an impact on the

P&L. Companies in the push system work on schedules and not on responding to variable demand. Push systems are not synchronised, hence it cannot pace production. That's why they are ridden with wastes and poor performance.

Continuous improvement is a mindset

VSM is merely one tool in the TPS JIT basket of over ninety tools and techniques and is not a popping pill to become lean. In order to become lean, one needs to develop the daily habits and routines (Kata) of everyone working from top management to workers, and adapt the habit of using the philosophy, principles, necessary tools and techniques to keep improving continuously. Continuous improvement is a mindset and a culture that is always looking for opportunities to do the job better, even when the organisation is performing at the highest level it ever has. Continuous improvement is not about the thing you do well — that's work. Continuous improvement is about removing the things that get in the way of your work the roadblocks, headaches and things that slow you down. Remember, amateurs work until they get it right. Professionals work until they can't get it wrong. Lean thinking leads one towards that ideal state or attainment of near perfection. VSM may short stop you by being content with localised or segmented process improvement.

Be lean to expect lean

Sometimes not being lean themselves, OEM majors assign consultants the job of teaching VSM and flow to their suppliers in expectation of receiving parts or assemblies on time. Among the reasons why they experience failures in supply is because they typically set up three to four suppliers for each part or assembly and use threat to control them, threatening to stop their supplies because of the options they hold, in case the vendor does not comply to the demands made by the OEM. So, the vendor who is committed to other customers at times has other similar pressures or might just choose to do the better paying job, knowing the OEM also has other suppliers, thereby not complying to demand requirements. Such programs usually focus more on material and rarely on information. It is not surprising to see the OEM send three to four forms of communication to the vendor and giving different quantity requirements at different times on the same day! The last communication could come after half the working day is over. Such is the contrast to the principles and processes of lean purchase and yet, they believe and expect the vendor to become lean by learning VSM and flow, when the OEM themselves are not. So, one must not be under the delusion that VSM will make one's company lean. □

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