

SMED In The Office

For readers engaged in Lean Manufacturing, SMED is an acronym for *Single Minute Exchange of Dies*. It is a target that we strive to achieve in order to reduce the downtime of going from the manufacturing of one product to another. This allows for the reduction of lot sizes and improves the flow of material through the production facility. Several types of observations are made when considering a SMED initiative in operations such as the position and availability of the die to be put in and the availability of space for the extracted die. We also look at whether the addition of other resources (human or technological) or changing the types of tools being used would add net value to that stage of the process or the production process overall.



In this article, we would like to revisit this acronym and methodology and apply it to business processes.

Lean Enterprise Management: Reduce Time & Human Effort



When we consider the root causes of wasted time and effort it's most likely to be the movement of data from one stage of a process to the next that will be the origin of waste. This waste adds to overhead costs and the introduction of risk potential in the front office (customer-facing) and back office (planning, supply, engineering, management and administration) processes.

Consider the processes around you right now. How much paper do you see that needs to go from one person to another? How many documents are passed by email from one work station to another so that the next person in line can do their job? In either situation, how fast does the person receiving the information prioritize it?

Consider your work area. How often are you reaching for paper, a stapler, staple remover, writing equipment or other tools to create or process data? Are they always in the place you expect them to be?

SMED – Single Minute Exchange of Data

In the office environment, we primarily manufacture, collect and process information from which we make decisions, plan the business, meet our regulatory requirements, etc. If we want to reduce elapsed business cycle time and the cost of executing business processes, the first target should be to reduce the time it takes to process information between the stages of every business process. By doing so, organizations will reduce overall business cycle times, human movement (saving time, cost and risk of injury) and ensure that all information within the organization is utilized quickly and properly.

Much like Lean Manufacturing, we first need to determine which processes have the greatest amount of waste that, if reduced, would provide the best return-on-investment. The most common methodology for this exercise is Value Stream Mapping (VSM). Using process modeling software, we can quantify metrics such as time, human effort (movement studies) and overhead cost and identify risk factors down to the task level of a process stage. Then determine the value add, essential non-value add and waste factors at the task, stage and process levels. Given a prioritized group of targets, now the work begins to reduce or remove waste and put proper controls in place for the highest risk factors. The next step is to now model the business process to minimize the waste and create your future ‘to be’ process. You now have your new target metrics by which to measure the progress in improvement of those processes.

Another area that is observed is the actual workspace of the person executing the process stages. Much like the manufacturing work cell, the placement of the office tools (e.g. writing equipment, staplers, printer, etc.) is important to removing time and human effort from every process. To ensure that this waste is eliminated, we can also borrow another methodology from the shop floor to make sure our office tools are where they should be and in good working order: 5S.

What we haven’t tackled yet is the issue of getting data (information) from one stage of a process to the next in less than a minute. Unless the organization is going to arrange their office desks in a work cell or production line sequence, this is going to require some technology...and that technology is known as automated business process management (BPM). Essentially, automated BPM uses the models that you have created as your ‘to be’ business process and maps them to your enterprise systems (e.g. ERP, CAD, QMS, AWM and those accessed via the internet such as credit reporting agencies and customer / supplier portals). When the business process and your other information systems are mapped, the people involved in each stage of the process are automatically notified that they have a new ‘to do’ on their daily task list...within a second of the previous stage finishing. The exchange and forwarding of information is paperless so there’s no misplacing of information.

Summary

We have only touched the surface of this topic. If organizations truly want to increase the value of their business to all stakeholders, then investing in the time and effort to promote Lean methodologies in the office will pay dividends for years and years. The cost of technology and availability of solutions such as Emercomm’s LeanControl RTO application are creating positive returns in less than six months.

The logo for LeanControl RTO, with 'LEANCONTROL' in a blue, sans-serif font and 'RTO' in a larger, blue, serif font.

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