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LEAN WITHOUT BORDERS

Investigating how global firms can
deploy lean consistently across cultures

Organisations featured in this edition include:
Chrysler Group, City of Melbourne, Panalpina,
Flinders Medical Centre, Tuscany's hospital trusts,
Coşkunöz, Coopers Brewery, Dassault Systèmes,
SCGM, Vistaprint, GKN

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World class, the world over: How did Chrysler successfully apply Fiat's world class manufacturing principles and techniques across North America? *Mauro Pino*, Head of WCM, speaks with LMJ

Glocalising lean: Logistics specialist Panalpina has developed an effective way to roll out its LogEx lean programme across 500 branches in 80 countries worldwide

Lean down under: For this month's special, LMJ travels to Australia and speaks to some of the country's leanest organisations, from a pioneering hospital to the municipality of Melbourne

Changing the paradigm: Lean could help France and other European countries to repatriate their service industry, says *Sofiane Boucheikh* of the Institut Lean France.

Success down the line: The development of a thriving front-line leadership is the cornerstone of Turkish company Coşkunöz's lean programme. *Nilay Çetiner* explains why.



Our analysis into SCGM's lean journey continues. Ever heard of Overall Manpower Efficiency? *Sandra Cadjenovic* explains why OEE with a twist has been identified as the best approach for the manufacturer's assembly operations.



Manpower made efficient

Last month, we told you of how our lean journey brought us to introducing OEE in the assembly shop. We discussed the current state and data collection. We established a strategy that aims to eliminate the waste we identify and to create smooth one piece flow at the customer pull.

Thorough training sessions have been conducted with the shop floor manager

directly involved in the process, sitting with people and spending the first few hours with them.

There were many questions and comments on the way, some of them more similar to slight complaints. Are we not doing our job right? Are you controlling us? We can't work and fill in the papers at the same time.

In response, the first thing we did was changing the name into OME, overall manpower efficiency, to remove any doubts that people were expected to work as machines.

Once the initial fear and scepticism (many were seeing OME as an additional obligation) were overcome and we started to receive replies such as "This is easy to fill" in or "It's not a big deal", people seemed to accept the new system. They began to fill in the forms diligently and to make mistakes just as diligently – which is normal when a new way of working is introduced. They were trying very hard, pleased to show they were able to complete and sometimes exceed the task they were given.

The manager may have been satisfied with her employees, but she was facing issues with OME herself. It has often happened that the speed given for the assembly of a certain part was exceeded. However, the reason for that was not that the employee was working incredibly fast, but that he/she was missing a piece.

In one instance, out of the three pieces to be assembled simultaneously the operator only had two.



He would connect the parts (which took him less time than it would have had he had all the equipment), package them and wait for the additional material to be provided in order to complete the task. Sometimes the Purchasing Department is late, often the supplier is. Sometimes even the customer. This has “loss” written all over it and prevents our assembly people from completing their job and our OME indicators from being achieved.

The manager went to our consultant with the question she had been obsessing over: how to track the real performance of people and the work accomplished in this situation?

Another example: in an hour, an operator made 200 pieces with the parts he had, a figure bigger than the cycle time predicted (120 pieces/hour). Not to get carried away with the result, we subtracted the time he would need for the assembly with missing parts, and we get the 120 pieces/hour that he would make under the normal circumstances.

Problem: she was missing a part.

Figure 1: SCGM's OME board

The solution proposed by the consultant was to deploy the operation in percentage steps.

100% (200pcs/h) → 30% 15% 20% 15% 20%

100% - 40% = 200 - 80 = 120pcs actually done for that hour

We leave our assembly people here with the wish to see the first (realistic) results soon.

THE TOOL SHOP

The tool shop is out next battlefield.

5S and safety rules have now set roots in the department. People maintain machines better and contribute to our lean effort. This gives the idea that things have been improving considerably. They have, but mostly visually.

In the department we have great physical assets and a skilled workforce that is used to doing things in the

same way for years. Here's the outcomes, as they occur, presented by the operators:

Problem #1: I cannot tell you how much time I will need to build the die - it is new and very complex - this makes it impossible to predict the lead time. A delay in the tool shop means there will be a delay in delivering to the internal customer, injection molding. Not having an idea about the lead time means that we don't have a way to determine how efficient people are, what problems they come across and what we do to improve the situation.

Problem #2: I don't know what happened. The die was checked before being put up on the machine – a common issue occurring in the injection molding department, with the main losses being due to tools that are not built, cleaned or maintained properly.

Problem #3: I told him the die has been done – a worker in the tool shop said to his injection molding colleague who did not know or forgot about it. Information flow between “customer” and the “supplier” is not smooth.

This is the current situation. It sounds like everything is going wrong, but this is actually a perfect opportunity to find better ways of doing things. It will probably be the hardest thing to do for a department with low volume and high complexity processes, but it is possible. Although each tool is unique, the process for making the parts for these tools is not. We can standardise work and reduce waste.

With the aim to achieve high quality production of tools, completed by a well-trained workforce that operates in synchronised teams, and short lead times, we need to roll up our sleeves.

For problem #1: Steps to take are forming a team and defining a standard time for producing the tools. The best thing to do is to take a video at the normal pace and conditions, to clearly capture how much time building one tool die takes and how accurate people are. Together we will analyse the video, see mistakes and adjust the time accordingly. This will also help to put together instructions for work.

For problem #2: Via our monthly OEE injection molding analysis we have made a lot of improvements - more detailed check lists are now filled out more accurately. A person from the tool shop takes part in the OEE meetings and gives his ideas on how to decrease losses due to tools.

For problem #3: Improve communication flow by designating only a few people for passing information between the two departments. Also, they would have regular meetings to solve current issues and prevent others in the future.