WORLDWIDE BUSINESS SOLUTIONS

CASE STUDY

Becoming a Lean Planner

Our Consultants were engaged by a major Graphics supplier to review a number of site alternatives to the planned growth. However, when assessing the current operations, it was discovered that there was significant scope to operate with less stock and increase output from the bottleneck equipment. Rather than handle the volume growth through increased investment in fixed assets, the division realised the existing site was sufficient in the short term if they could increase operational efficiency; and so began the journey towards Lean performance. In parallel with the lean manufacturing improvements on the shop floor, an essential ingredient of the overall programme of change was the introduction of world-class planning techniques. The goals of this element of the project were to increase customer service, reduce stock and help to drive the operational improvements.

The company is located in Hazerswoude just outside Leiden, a historically rich city a few minutes south of Amsterdam in the Netherlands. The division manufactures a range of pressure-sensitive self-adhesive films and papers used in the sign writing and publishing industries. The processes involved include casting the high-specification films, coating and bonding the backs and fronts and finishing the product into sheets and rolls.

The plant is located alongside the Rhine and is very constrained for space. The storage spaces for both unfinished 'master rolls' and finished product were full, the loading docks were fully utilised at peak loading times and output was close to capacity in the core processes.

Gert Veenhoven, now the Logistics Manager for Papers at Hazerswoude, takes up the story. The recommendations asked us to re-think fundamentally the way we plan and control our production. Our starting point was a 'traditional' planning environment which monitors stock levels, forecasts and orders and raises works orders at each stage to tell the shop floor what to make and the sequence. Despite all our best efforts, finished goods and master roll stocks were often out of the demand profile. In other words, we had lots of product that was not selling and not enough of the products the customers wanted. Service levels suffered."

"A significant part of the planner's role was engaged in day-to-day fire fighting and re-scheduling of individual orders. Of course, it was all too easy to blame the planner. Often production issues and inflexibilities were the root cause of problem. These, however, were not visible. Our approach was one of trying to steer around the problems rather than addressing them."

"In January, we went 'live' with Kanban on the Hazerswoude Paper Line. Working with kanbans has been well documented. In our case it can be summarised as a change in approach in planning to a highly visible, shop-floor managed process, designed to facilitate and drive continuous improvement in the manufacturing processes."

"The first part in developing the new process is improving the process itself. Clearly the role of the planner is also subject to a lot of change. Since implementation, we have moved to fully order less production and continually strive to reduced the work content in all aspects."

"Having used parameters such as volume and variability of demand for the setting of the Kanban sizes and quantities, we now measure these parameters continuously. We can pick out, by exception, those products which may need a change of Kanban settings, either from historical or predicted demand."

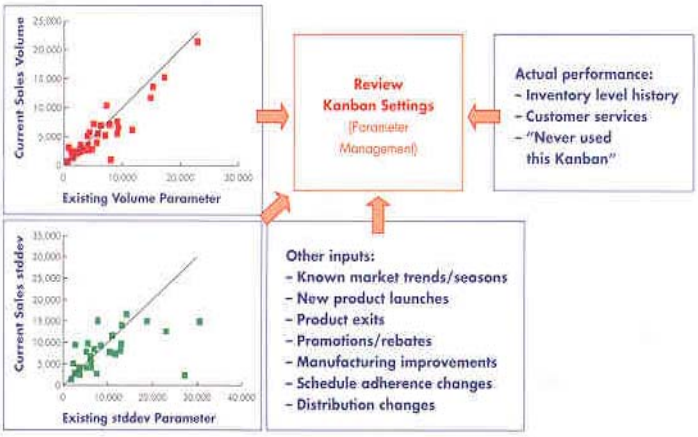

Fig. 1 - Continuous Parameter Management

"Planning can also provide input into flexibility improvement by identifying key leverage points. For example, fig. 1 shows reduction of inventory levels of master rolls by reduction of batch sizes in the coating process. "

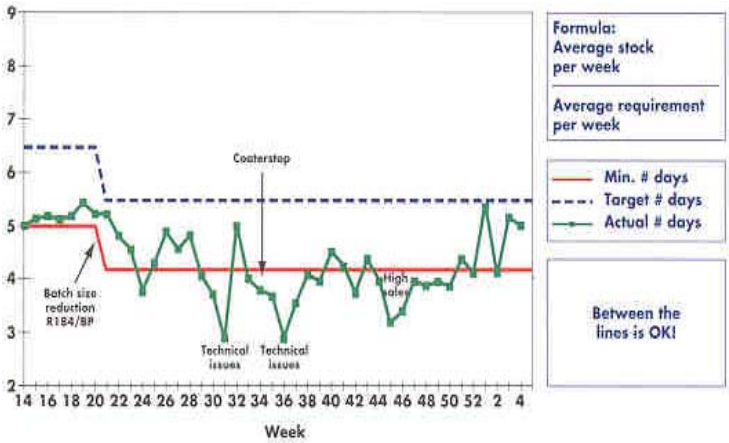

Fig. 2 - Inventory days of Master rolls showing batch size reduction and visibility of manufacturing issues

"The measure in Figure 2 makes the manufacturing problems visible as inventory levels outside the Kanban tolerances. Day-to-day, the Kanban boards themselves showed these problems immediately to production management, so the time to correct and react has been reduced. "

Fig. 3 - Inventory days of Finished Products showing very well controlled stock build and reduction to cover summer shutdown

"The planner also manages other events (e.g. shut downs) using simple add on or subtraction of Kanbans (fig.3) and is involved in capacity analysis, including promising of large orders and enquiries."

"Unless we hit a sustained supply problem or demand surge, the planner needs very much less involvement in the day-to-day fire-fighting. Kanbans give clear priorities and STOP signals to the shop floor so the production teams are much better placed to deal with any supply issues. We now treat exceptions as exceptions instead of everything as an exception!"

"As we develop the role further and further, we are moving into the areas of life cycle management - how we introduce and exit products and fill the supply chain."

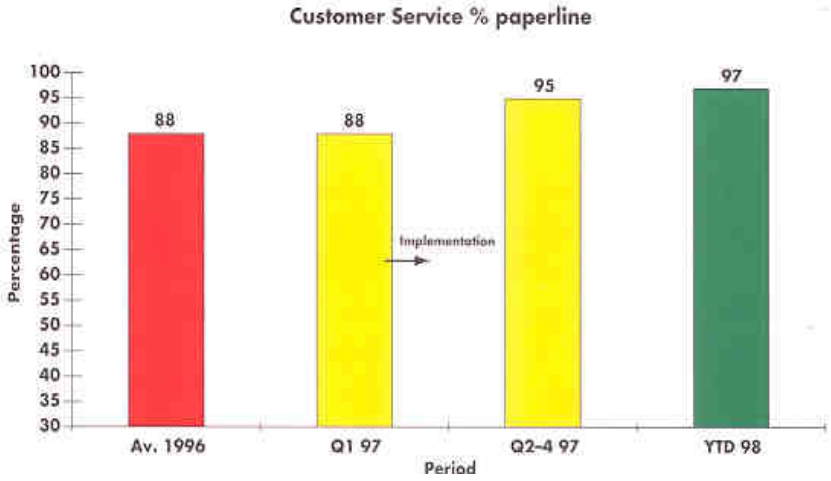

Fig. 4 - End-Customer service showing the remaining problems in the pipeline

"The overall business impact of the Lean manufacturing improvements to date has been an improvement of service levels from 88% to over 95% (fig.4). Stock turns over the same period have increased from 10.6 to 14.2. Even more importantly, the planning process is fully under control and future supply chain improvements can be tailored to meet business objectives... all via the role of the Lean planner."

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