



CASE STUDY – ANALYSIS INTO ACTION

For many companies embarking upon any major change program is a daunting task, not only because of the internal turmoil such programs involve but also because it is not always clear where to start or what principles to apply during the change. Clear and concise analysis at the outset can greatly reduce the risk and smooth the introduction of major programs.

One of Hungary's largest automotive suppliers invited Worldwide Business Solutions to carry out an analysis to determine the priorities for a change program. One of the company's core product groups is the windscreen wiper. The workshop producing the product has one customer for its products and only two suppliers, of which one is significant. There were 120 products manufactured in one product group. The workshop in question generated 30% of the company's revenue on 8% of the site space.

During the last year, the workshop had experienced major problems with delays in delivery, quality and inventory level. Considering these facts, the major customer decreased the number of orders, restricted the quality control and sent one of its own supervisors to the plant to assist in controlling quality and delivery. Despite management efforts, the backlog in delivery increased in the first quarter.

The company had previously been involved in the production of military goods, the site layout was very scattered, and the buildings were dispersed within it. This dispersal was even more apparent when the support facilities were examined.

Following a change in ownership, the new management needed a clear picture of the windscreen wiper workshop and the possibilities for improvement. The analysis conducted by Worldwide Business Solutions detected dysfunction in production planning, production itself and in the organisation structure.

The software used by the company was found to contain almost all of the elements required for robust production planning. However, the missing elements were WIP administration and production tracking. This planning system was appropriate for scheduling high volume production but it could not control and track individual call offs.



Due to financial concerns, production would only be able to be scheduled with an explicit order. Raw material was not therefore ordered until the day production was scheduled and therefore, as a consequence, not available when lead-time for delivery was factored into the equation.

In the industry and especially in the automotive industry, Kanban production control, which is a pull system, is widespread. Based on the customer's orders it was evident the customer used this system and the call off for windscreen wipers from the manufacturer was made in accordance with the consumption of Kanbans.

Bakony Muvek used a different scheduling method and therefore raw material orders could not keep up with Kanban controlled orders. In many cases, the raw material arrived when the delivery was already overdue or the production of a call off could not start because one of the parts was not available in the stock.

The workshop's layout was determined by the war industrial history and the high volume of semi-finished inventory stored in the workshop made the situation more difficult. In the existing area the one direction flow of raw material and cellular manufacturing (assembly) could not be set up.

The technological steps were mixed and the route of raw materials and parts crossed each other several times. Interim storing space was required. The total travelled distance of the wipers was 1,100 metres.

Quality control of finished products was carried out by independent controllers. With this method, only the occurred errors could be detected and due to the slow feedback, the errors could not be prevented.

The efforts made to overcome these quality problems consumed more resources than could be gained back with the results. This also led to increased costs and lead-time. After many defected deliveries, ITT prescribed the check of 'wipe-picture' of each finished piece. According to these efforts, the quality of deliveries significantly increased but the increase of lead-times led to delays and increased the costs.

During the analysis, Worldwide Business Solutions pointed out these insufficiencies and prepared a proposal plan to change the current system. The suggestions can be categorised into three main groups

- 1) Reorganisation
- 2) Material requirement planning and control



3) Cellular manufacturing and quality processes

The windscreen wiper workshop has to be set up as a separate SBU. As the result of this modification, the workshop does not have to bear Bakony Muvek's high overhead cost. The individual functions (e.g. purchasing) would not be disturbed by other priorities of the company and the transfer of each function to one area would shorten the communication route and make the information flow from event source possible.

By the re-engineering of the key business processes (BPR), the company changed its order-focused management to customer focused. Complete, on time delivery was reached through the implementation of JIT control of raw material supply, internal process re-engineering and the implementation of TQM and the restructuring of quality feedback with employee involvement. The employees' quality awareness was also improved. Quality control of purchased items was implemented.

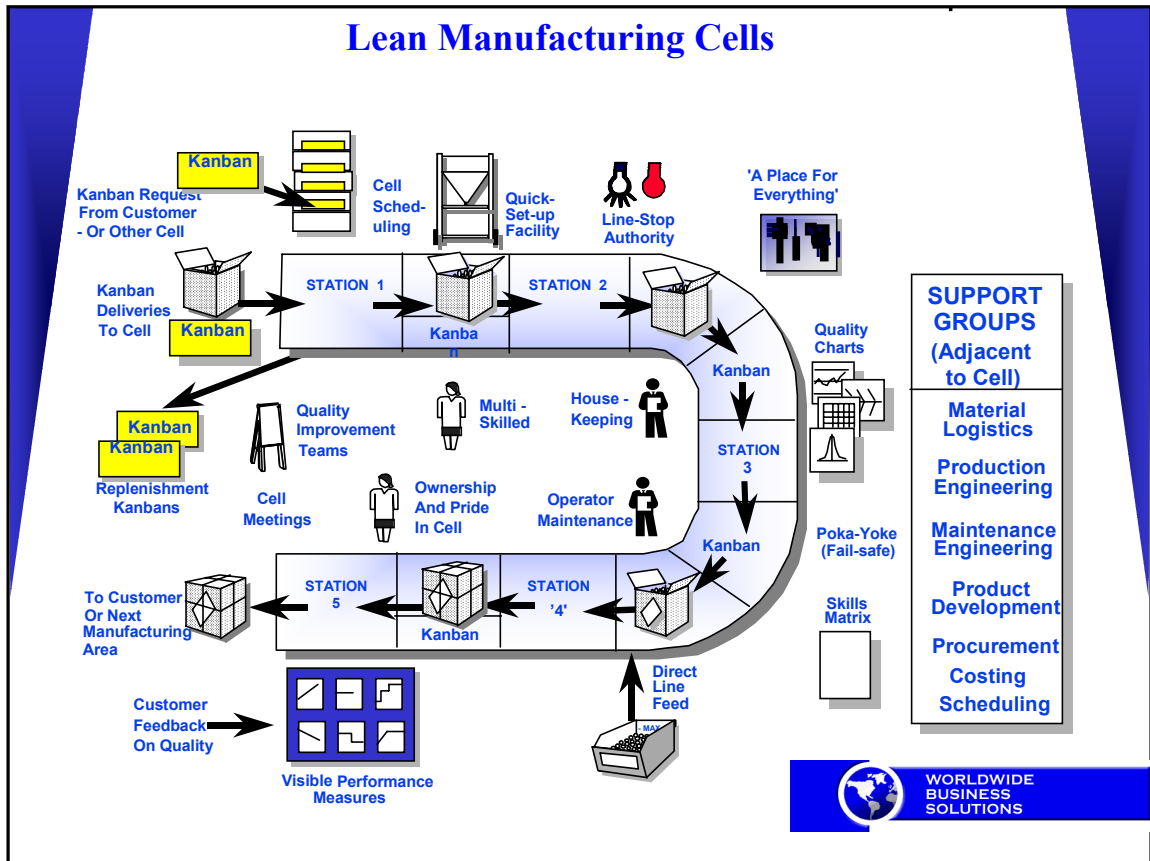
World Class techniques could not be implemented in the present area, which is why Worldwide Business Solutions is, suggested the transfer of production into another workshop. The production was organised based on the logical flow of technological processes. With the help of these, the lead-time was reduced by 75%.

Cellular manufacturing and supporting functions linked the cells and made production more visible and immediate reaction possible.

The implementation of our suggestion resulted in a 200m HUF cost saving per year and an increase of 4 million pieces production from 4.6 million to just over 8 million per year. First measurement made in June 1999.



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For More Information Please Contact: Joseph Turnbull

Worldwide Business Solutions: www.wwbgroup.com

The London Office

31, Candover Close

Harmondsworth

Middlesex, UB7 0BD

Tel: +44 (0) 208 7599631

Fax: +44 (0) 208 7599632

turnbull.j@wwbgroup.com