



CASE STUDY – CELLULAR MANUFACTURING

Putting in place cellular manufacturing doesn't always deliver the returns that the textbooks promise, as a Leading Electronic Manufacturer discovered. They called in Worldwide Business Solutions to find out why this production panacea wasn't living up to expectations.

Putting some muscle into cellular manufacturing

“Like most electronics companies, this leading Electronic Manufacturer believed that introducing team-based cells into their factory would radically improve their customer service and profitability,” explains managing consultant Peter Abrahamsen. “But it didn’t. Or at least, not on the scale they were expecting. That’s why they came to us for help.”

Not everyone, he asserts, would have had the tenacity of the company’s chief executive, who by inviting Worldwide Business Solutions to give an objective diagnosis of why and where he was losing out, paved the way for some major changes. “He is a dynamic character and very much an entrepreneur,” comments Peter. “If he can see a better way of doing something, he’ll go for it. Bureaucracy never gets in the way.”

An in-depth review of the manufacturing operation revealed inflexible production processes, wastefulness during assembly and packing, and a factory struggling to make products that weren’t designed to be easily manufactured. “The original transformation into a cell-based system seemed to have been too superficial and to lack the infrastructure needed to deliver real benefits,” concluded Peter. “It’s an easy trap to fall into. People change their factory layout a little but don’t look hard at their processes.”

Nine months after Worldwide Business Solutions study, the far-reaching change initiative had swept through the factory and completely transformed it. Costs were cut by over half a million pounds, productivity had risen by 50 per cent, first time pass rates had increased four-fold in some cases, 25 per cent of floor space had been freed up, and customer service had hit new highs with 97 per cent of products produced to schedule. Peter is matter-of-fact about the achievement.



“We delivered the benefits which we said we would in our proposal,” he says simply. “I was always confident we’d get there, and so too was the management of the company.” Underpinning the success was a wealth of expertise gained through other projects, but also the ability to get inside the culture of the company. “Clearly getting the technical answer right is only half the battle: the other half is being able to persuade people to do things in a new way.”

The four-pronged change programme focused on putting in place optimal planning and control processes; changing the factory layout; establishing a culture of continuous improvement; and designing products which were easy to manufacture and assemble. Peter highlights a few of the particularly rewarding changes.

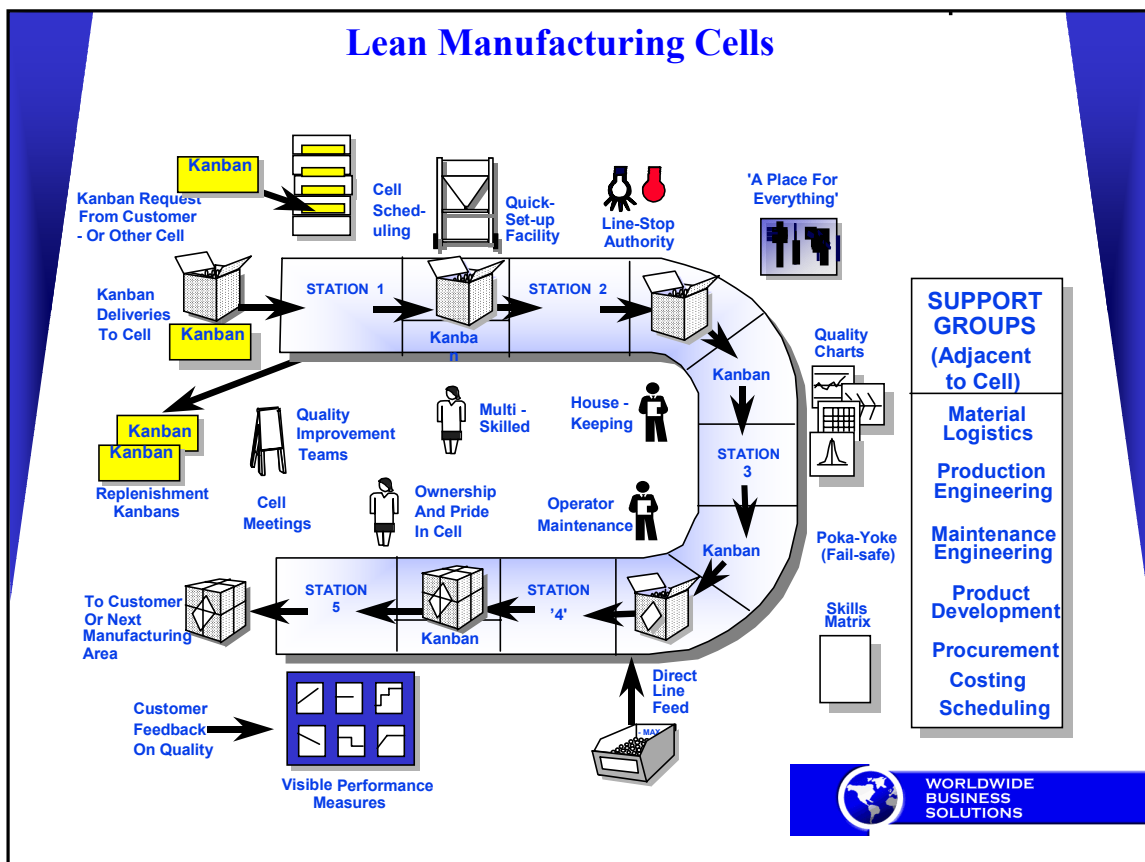
“One major transition was the realignment of teams so that they had true ‘cradle to grave’ responsibility for products; the old structure was still relatively functional in the manufacturing areas.” Underlying this change was the decision to stop holding semi-finished product prior to packing, in favour of making some product to order and supplying short lead-time products from stock - a less costly and more flexible option. “That change in itself eliminated a lot of unnecessary handling, storing and cleaning of semi-finished product.”

A structured approach to continuous improvement and the introduction of performance measures have resulted in dramatic quality improvements and the complete elimination of the mountain of product awaiting repair. Initially greeted with scepticism, a ‘24 hour rule’ - the maximum time now allowed for products failing test to be repaired and back in circulation - has proved invaluable in giving fast feedback on failures. “It’s a simple, visible system which triggers specialist repair help when failures reach a small pre-determined limit,” explains Peter. “And by carefully analysing that failure data, preventative action can be taken.”

The Plant manager says the rise in productivity and responsiveness are especially impressive. “The focus on quality and the fact we no longer have a build-up of failed components has been of great benefit. Redesigning processes to eliminate waste has pushed up productivity, and we can now cope much better with unpredictable demand.”



There's a lot to learn from the project, says Peter. "Most of all, that companies should never be frightened to question, as this leading Electronic Manufacturer did, whether cellular manufacturing is really delivering what the management gurus promise."



Leading Electronic Manufacturer

- Is one of Ireland's success stories of the 90s, firmly establishing its reputation when it appeared in Europe 500 - a list of Europe's 500 fastest growing companies, in 1997.
- The company is a front-runner in the field of electronic muscle stimulation, offering basic muscle toners to the very latest in neuromuscular medical equipment.
- Over 100 employees work at the manufacturing facility in Bunbeg, County Donegal. Subsidiaries can be found in Germany, Japan and the United States.



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