



Client: HeathTechna
Assignment: Creation of Centre of Excellence for Composite Assembly

Aircraft interiors manufacturer achieves sky-high savings

HeathTecna, part of the Britax Premium Aircraft Interior Group, is a major supplier of passenger aircraft interiors and components worldwide. But, in 2007 the company faced the challenge of improving competitiveness and capacity to maintain growth.

Based in Surry, the business had been experiencing good growth potential for its products but costs and lead times were too high to be competitive. What's more, the current layout of the facility restricted expansion, making it difficult to control production and repairs.

We came in to review and improve current ways of working on HeathTecna's high volume/low complexity product lines. Employing Lean techniques, the task was to increase the productivity of its existing product base and improve its competitiveness when quoting for new products.

Our Approach

The programme fell into two stages: firstly to diagnosis and quantifying the potential benefits of a lean approach; and secondly, to implement the recommendations including a new layout. This involved adopting a classical, phased journey to Lean:

- Commitment to Lean
- Selection of Value Stream
- Understand Fundamental Lean Concepts
- Current State Mapping
- Investigation, Problem-solving and Waste Elimination
- Future State Mapping
- Creation of Improvement Plans
- Implementation of Improvement Plans

Getting Started

To launch the work, we led a Master Classes in Lean and Value Stream Mapping for the key players. We set up the simulation model that would enable us to test alternative production configurations and set up visual communications, so that the workforce would be able to engage with, and contribute to, the improvements.

Managing for success

We agreed a project plan that enabled the work to be completed within a timescale based on the priority rating and lead-times to complete each stage. A joint team of specialist consultants and HeathTechna dedicated personnel was established. This ensured that knowledge was shared and solutions workable in the organisation's context.

At the end of each critical phase, we reviewed progress with the senior team. Initially, this ensured that our findings confirmed their understanding of the current situation, and latterly ensured that the scope, costs and benefits of improvement opportunities related to long term business needs.

Our weekly working reviews with the local management team were critical to raise and resolve issues that may have prevented progress at a later stage, and to confirm the detailed work plan for each proposed improvement.

Improving Process Performance

Diagnosis and quantifying potential benefits

In conjunction with the HeathTechna team, we carried out the current state mapping of the selected high volume products, and gathered both qualitative and quantitative data on process attributes. These included: capacity vs efficiency; value adding and non- value adding time; distance travelled; process bottlenecks; uptime; inventory; cycle and lead times; set up times; material controls; customer requirements; and the number of hand offs. Using MTM timing techniques for the selected products resulted in the establishment of standard process times, after stripping out the waste.

On completion of the current state mapping, future state maps were prepared for the selected products using the appropriate lean tools, for example Kanban pull mechanisms. From these future state maps, potential improvements were determined in areas such as process times, lead-times and throughput. The simulation model was prepared to verify the potential benefits and test 'what if' scenarios. Potential improvements were logged and prioritised, based on the cost of implementation and their impact on performance.

Implementation of the recommendations including a new layout

The second stage of our work involved implementing the future state Lean approach.

This included:

- Specific method enhancements to reduce process time.
- Extending operator verification to reduce inspection time.
- Standardised work instructions.
- Ergonomically enhanced assembly work stations.
- Nesting of 'part sets' in machining to improve material utilisation.

At the same time, a new 'best practice' shop floor layout was prepared for the varying types of products. These ranged from high volume/low variety to the low volume repair products. This layout released valuable floor space that could be used for new products.

A costing model, based on the new standard times and robust data, was developed to allow for quick and accurate quotations in response to sales enquiries.

Value delivered

As a result of our work at HeathTecna, the Company has been able to reduce lead-time by 60% and reduce lost time by 50%. This allows more products to be manufactured through the same resources and HeathTechna to take full advantage of the growth potential in the market.