FIRA CONSULTANCY

CASE STUDY

arden

LAYOUT MODIFICATIONS TO IMPROVE WORKFLOW

After undertaking the renowned FIRA Productivity Workshop, **Arden Windows** have achieved substantial gains in revenue. By analysing the flow and layout of the four manufacturing product lines, the team achieved an output increase of £192,000 per year.

Engineer feedback - *"By allowing the shop floor team to take a step back from there usual roles and concentrate on improving flow in the mill using a structured approach they have achieved significant impact in productivity and efficiency ".*
Bruce Lovell, Engineer, FIRA

Background

Arden Windows Ltd produces and installs a range of wooden windows and doors for domestic dwellings at its Coventry site. It employs 40 people onsite and would like to improve its business performance through the involvement of its employees. The need for this work has arisen from the company's desire to maintain profitability in a competitive market. It is supported by the recent appointment of a new Managing Director with significant experience of business improvement through the adoption of Lean Manufacturing techniques.

Objectives

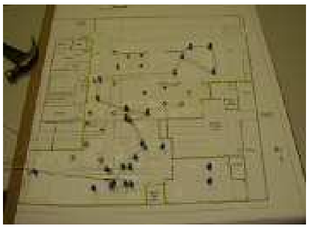
- increase productivity and efficiency
- reduce part travel distance
- reduce W.I.P between processes
- identify and eradicate 'bottlenecks'
- increase ownership of improvement activities at supervisor level

The action

Working alongside the supervisor and key skill workers from across the business at Arden Windows, the FIRA engineer put together an improvement team to tackle these objectives.

Using proven tools and techniques the following improvement activities took place:

- Process Mapping the manufacturing process using captured data for all machinery including, cycle times, batch sizes, downtime and inventory between processes.
- Identification and resolution of a 'Bottleneck' at the sash and frame area.
- A cross functional team determined the current part travel distance of four product lines.
- By using a 'string diagram' the team then calculated the optimum position of the machines to achieve the minimum 'part travel' distance. A reduction of 46%.



Results - Part Travel Distance

Product	Before	After	%
Doors	272m	175m	-36
MK2 Window	413m	217m	-48
FC Window	600m	235m	-61
VS Window	263m	160m	-39

- The Improvement Team utilised CAD to check and finalise the layout. They had a structured relocation programme to minimise the disruption during the move.