

Railcare Glasgow is based in Springburn employing 145 staff on its current 17 acre site. They have a multi-skilled workforce predominantly ex British Rail. The company has embraced "Lean" since re-organisation in 2007 and is now an excellent example of a "Real Lean" organisation.



Lean Team

George Hay – Project Manager

George Birnie – Spray Painter

Brian Buchanan – Vehicle Team Leader

Stuart Quayle – Commercial Department

Lean Project

Railcare specialises in train vehicle refurbishment, overhaul, painting, repairs, component manufacture and engineering support. The company has worked with Accelerate on many lean improvement projects with the latest team presenting the "Spray Booth Utilisation" project in February 2010.

Railcare have embraced a "Real Lean" philosophy that has created an environment where direct workers have the development and confidence to address business improvement locally on an on-going basis.

Problem & Objective statements

Problem statement

Less than ideal utilisation of the Spray Booth

Objective statement

Increase and maximize the capacity of the spray booth to resource future sales.

Utilising the Lean Tools

The team used the following "lean tools" throughout the project

- Group brainstorming
- Waste walks

- Value stream mapping
- Pareto charting
- Ishikawa diagrams
- 5 whys analysis
- Spaghetti charts / process flow

Having mapped out the process the team demonstrated how the lead time from start to finish through the spray booth was 13 days. However the added value element of this represented only 4 days so the scope for improvement became apparent. Obviously there were organizational and resource constraints but the team studied in the detail the effect of these and began to select solutions that were feasible.

Flow & Organisational Analysis

The spray booth layout was charted at various stages to visualize the flow of activity and organization of events that were part of the current state map. The ishikawa diagrams that resulted from this highlighted opportunities under the following areas

- Methods
- Machinery
- Manpower
- Materials
- Money

Some of the key areas of concern were

- Bodyshop not self contained
- Process set up for only 2 car sets
- Restricted painting resource
- Training issues.

Value Add (VA) / Non Value Add (NVA)

The VA and NVA were highlighted through detailed pareto charts once the team had

analysed the actual timings to process vehicles at various stages through the spray booth.

This led to process improvements being selected and low cost activity being identified (approx £7,500) to make the improvements such as training, tooling, extraction and consumables.

Project Outcome

Year 1

- 30 % Lead time reduction for 2 car processing 13 days down to 10 days. This will enable 10 extra vehicles per annum – 5 units

Year 2

- A further unit increase in output equating to an extra 4% on Year 1
- 30% increase in sales

Business Benefits

Increased efficiency of 25% in Year 1 enabling an extra £93,000 of sales revenue.

This will be increased to £120,000 by year 2 as the 30% target is achieved.

Environmental Benefits

Energy usage has been reduced on a pro rata basis as there are now more units going through the Spray Booth

"I didn't believe at the onset that I would be presenting business improvements representing Railcare to an external audience. This has been a very worthwhile project for me"

George Birnie – Spray Painter