

## Case study Glassware Manufacturer

|                          | TARGET                    | ACTUAL         |
|--------------------------|---------------------------|----------------|
| External Warehouse Costs | Reduce by €115k pa        | €155k pa       |
| Changeover Times         | Reduce by 50% to 1.25 hrs | 35 mins        |
| Scrap Levels             | Reduce by €250k pa        | €410k pa       |
| WIP Levels               | Reduce WIP by 50%         | Reduce by 63%  |
| Product Lead Times       | Reduce by 30%             | Reduced by 43% |

### The scenario

This client is one of the world's best-known glassware producers. In the past five years it has strengthened its global position still further, with a significant expansion of its product portfolio.

With competition intensifying in a number of markets, the client called in WBS to help protect and strengthen its competitive advantage. The project focused on three key areas:

- Streamlining supply chain costs
- Reducing the unit cost of products
- Reducing the capital tied up within the supply chain

### The review

The project began with a WBS Company Assessment, analysing global demand fulfilment, new product introduction, and materials procurement processes. It also incorporated a review of the ways the business performance was measured. The Assessment revealed that the company's manufacturing methods were in need of updating and upgrading. They were geared towards longer runs of fewer products, whereas demand was for smaller batches of a wider variety of items. Key issues highlighted included:

- Excessive levels of Work In Progress
- Inconsistent product quality
- Lead times were unpredictable
- High inventory levels of some finished products

### The recommendations

WBS recommended a series of action points to address the problems:

- **High customer responsiveness**  
Bringing the operation a step closer to the actual needs of customers, improving service levels, improving product quality and streamlining the supply chain.
- **Flexible and cost effective manufacturing**  
Reducing lead times, increasing the flexibility of manufacturing operations, reducing Work In Progress and implementing appropriate demand fulfilment models, including:
  - Balancing upstream and downstream processes
  - Reducing stock-outs of packaging materials
  - Implementing a Quality Improvement Programme, incorporating root cause analysis of defects and the reduction of rework and scrap
- **Implementation of the appropriate KPIs**  
This included developing a measurement system for the entire end-to-end process, to replace the departmental measures that previously operated. The concept of Conformance to Schedule was also introduced as a specific measure.



## The mechanism

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Making changes that lead to sustainable improvements requires a consultative approach, involving everyone affected by the process, in every area of the organisation. To achieve this deep level of effective change, WBS creates an implementation team made up of WBS consultants, and representatives from the client's own people. In this instance, the client created a project team organised into three main groups:

- The Quality Improvement Team was targeted with improving product quality throughout the process, including the introduction of new, more appropriate quality measuring and reporting
- The Product Supply Team was tasked with the design and implementation of varying demand fulfilment models, calculating effective batch and Kanban sizes, and designing machining cells to fulfil demand
- The Changeover Reduction Team was targeted with the overall reduction of changeovers, categorising changeover types, and introducing a manufacturing sequence of products to minimise the complexity of changeovers between products

## The benefits

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For WBS, the success of a project must be measured in specific, tangible benefits delivered to the client company. In this instance, the project met and exceeded the targets set for it. External warehouse costs were reduced by €155,000 per annum, against a target of €115,000, and changeover times were lowered from two and a half hours to 35 minutes. Scrap levels were reduced by €410,000 per annum, Work In Progress was reduced by 63%, and product lead times were cut by 43%. All of these savings were greater than the targets set for the programme.

