

Operations Consulting Service

Applying Lean Enterprise Solutions to Break the Bottleneck

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Company Profile:

Lake Country Woodworkers (LCW), located in Naples, New York is the manufacturer of fine executive office furniture. The company's capabilities include design, fabrication, assembly and finishing of fine office furniture for such companies as Hickory Business Systems and Bernhardt. **Operations Consulting Service (OCS)** a lean enterprise consulting company partnered for the project.

Situation:

Lake Country Woodworkers design and manufacturing facility was running out of space, work-in-process inventory levels were high and flow through the plant was poor. Customer's experienced long lead-times for deliveries. LCW teamed with Don Albright of **Operations Consulting Services (OCS)** to assess the company's situation. OCS, utilizing the New York State Industrial Effectiveness Program Funding, implemented lean enterprise methods to improve the value flow at the company and significantly improve customer service. LCW and OCS utilized a continuous improvement process of first securing senior management support; then utilizing a six step implementation process to value-stream map the entire LCW order to shipment process. They then focused improvements on LCW's major bottleneck, the panel and veneer operation.

The first step of this process was training LCW's lean enterprise team on lean manufacturing tools. These tools include: value-stream mapping, roof-off analysis, pull manufacturing and waste identification and elimination.

Case Study – Lake Country Woodworkers

The training also includes an introduction to KANBAN, cellular methods, Point of Use Storage, 5S program, visual management/controls, grouped technologies, lean organizations and focused factories. Step two was utilizing the selected lean team, benchmark the company's current troublesome processes, utilizing value-stream mapping. In step three, the lean enterprise team brainstorms the optimum solution for the project. During step four, the team develops a solution that can be implemented TODAY. Step five is a presentation of the solution to senior management for approval. Step six was IMPLEMENT NOW.

With this project, Lake Country Woodworkers made a significant leap towards becoming a world-class lean enterprise.



Lake Country Woodworkers lean manufacturing team. Team discusses the value-stream with an operator

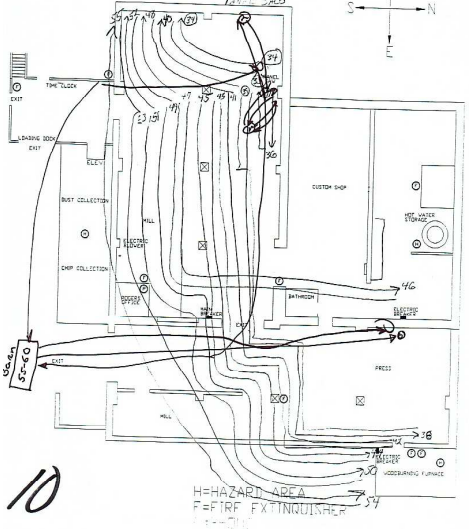
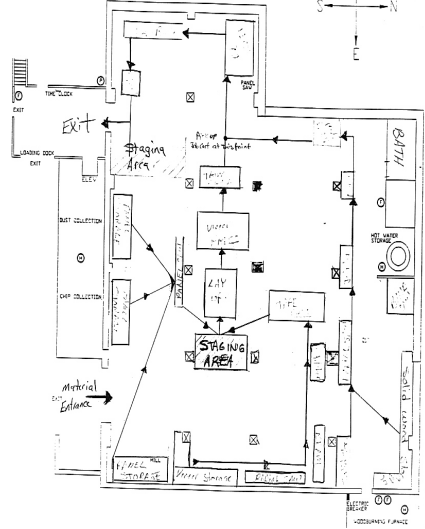
Results:

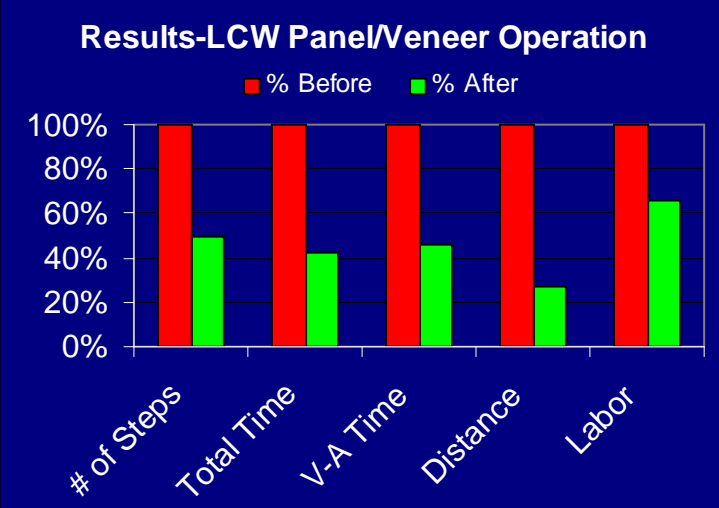
The results of this project documented below, were significant. Not only was the value stream shortened but labor was freed up with the new layout so 33% of the workforce could be transferred to other production operations. The company instituted a pull manufacturing system reducing the number of inventory days from ten to two days. Approximately 30% of the floor space was freed up during this project.

Lake Country Woodworkers continues on their improvement quest every day with over 60% of the workforce training in the lean tools and continuous improvement projects part of the daily job.

Case Study – Lake Country Woodworkers

Results:

Benchmark Data	Implemented Solution Data
<p>Number Steps: 130 Total Time: 12.5 hours Value-Added Time: 6 hours Distance: 4200 feet</p> 	<p>Number Steps: 65 Total Time: 5.2 hours Value-Added Time: 2.8 hours Distance: 1120 feet</p> 

	Results																		
<p>Number Steps Reduced 50%</p> <p>Total Time Reduced 58%</p> <p>Value-Added Time Reduced 53%</p> <p>Distance Reduced 73%</p> <p>Labor Reduced 33%</p>	<p>Results-LCW Panel/Veneer Operation</p>  <table border="1"> <caption>Data for Results-LCW Panel/Veneer Operation</caption> <thead> <tr> <th>Metric</th> <th>% Before</th> <th>% After</th> </tr> </thead> <tbody> <tr> <td># of Steps</td> <td>100%</td> <td>50%</td> </tr> <tr> <td>Total Time</td> <td>100%</td> <td>42%</td> </tr> <tr> <td>V-A Time</td> <td>100%</td> <td>47%</td> </tr> <tr> <td>Distance</td> <td>100%</td> <td>27%</td> </tr> <tr> <td>Labor</td> <td>100%</td> <td>67%</td> </tr> </tbody> </table>	Metric	% Before	% After	# of Steps	100%	50%	Total Time	100%	42%	V-A Time	100%	47%	Distance	100%	27%	Labor	100%	67%
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For more information, please call Don Albright, Operations Consulting Service (585-737-9566) or Karen Wood, Lake Country Woodworkers (585-374-6353)