

Manufacturing Operations Improvements At Specialty Printing Company: Rolling Out Waste Reductions And Productivity Best Practices

The Challenge: Over a 2-year period, BigPrint had acquired 3 printing operations as part of an industry rollup strategy. Management focus had now turned to capturing the targeted \$10MM in post-acquisition opportunities. The largest of BigPrint's manufacturing operations, FacilityOne, was to become a best-in-class facility to be used as a model for system-wide rollout of best manufacturing practices. We were called in to help establish these best practices by conducting a manufacturing improvement study at FacilityOne.

The Partnership:

Analysis: Primary manufacturing processes at FacilityOne included 20 presses and 8 binding lines of various types. As no accurate historical measures existed for waste and productivity, our preliminary analyses focused on establishing current performance levels and variability across lines and shifts. In addition, we documented the current procedures for operation of the printing and bindery. Finally, we created process and product flow maps to understand current capacity, bottlenecks, and WIP storage points.

Strategy: As described below, 3 pilot teams (each including line-level personnel, supervisors, and our professionals) were formed to capture latent operations value and develop benchmark operations procedures:

<u>Printing Team</u>	<u>Bindery Waste Team</u>	<u>Bindery Productivity Team</u>
<p>Objectives:</p> <ul style="list-style-type: none"> • Reduce make-ready and changeover waste • Ensure quality, fill, and on-time delivery of product to bindery 	<ul style="list-style-type: none"> • Capture and sustain waste reduction opportunities by: <ul style="list-style-type: none"> - Isolating waste creation issues - Developing solutions for waste sources using a root-cause approach - Creating and implementing uniform process procedures • Implement measurement and feedback systems to monitor waste and productivity levels and raise awareness of problems • Develop a system for responding and acting on shop-floor ideas 	<ul style="list-style-type: none"> • Improve productivity by leveraging the collective knowledge of the team, targeting: <ul style="list-style-type: none"> - Setup time - Downtime occurrences - Response time to downtime events - Line speed

Execution: Our professionals helped facilitate pilot teams through weekly meetings and informal daily conversations on the manufacturing line. Once performance tracking and measurement was established, results were posted on the lines to increase awareness and to be used as a feedback loop for improvement initiatives. Successful team improvements were documented and rewarded. Finally, the developed pilot team practices were rolled out plant-wide and became the basis for training sessions throughout all of BigPrint's manufacturing facilities.

The Results: Over a 4-month period, cost savings initiatives were rolled out in FacilityOne to capture \$6.8MM in annualized EBITDA improvement. An additional \$3.7MM in longer term waste and productivity cost savings and \$1MM in purchasing savings at FacilityOne were identified through the process. The marked improvement in plant throughput also enabled BigPrint to avoid capital expenditure on additional binding lines.