



ABC Hawksbill Engagement

June through September 2017

By The Hawksbill Group

1050 Connecticut Avenue, NW, Suite 500
Washington, DC 20036

AREAS OF OPPORTUNITY

ABC, jointly owned by two private equity firms is a US based manufacturer and distributor of exterior building products.

1. **XXX Plant Project – PVC Decking lines # 16, # 17 & # 18** process improvements with regards to stabilizing machine control parameters, operator standardized work, and equipment / process reliability enhancements. Lines # 5, # 7 & # 8 added to project scope on August 7, due to high scrap rates.

Goal - Reduction of process scrap on target lines from ~20% to < 10%.

2. **YYY Plant Project – Support ABC Maintenance** establishing standardized processes and effective measurement tools.

Goal – Improve the reliability and effectiveness of the Maintenance Organization to better support the production process.

Immediate Goal – To stabilize the maintenance organization to prepare for strategic changes leading to continuous improvement.

3. **ZZZ Plant Project – Determine Olefin baseline** for material and process parameters to stabilize machine parameters, equipment capability and material input enabling process yield improvements.

Goal - Improve Olefin yield from 50% to 70% (minimum)

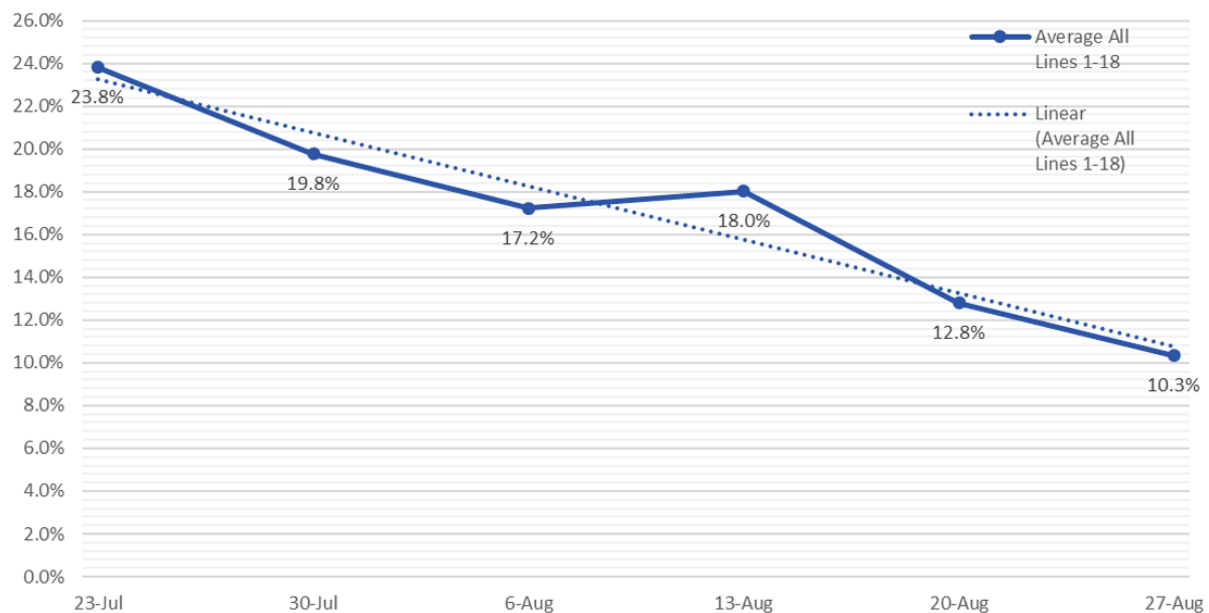
PLAN OF ACTION

The Hawksbill Team identified three resources that would be delegated to the plants, one specifically assigned to each task. The people chosen were seasoned veterans with a cumulative total of over 75 years of experience in Shop Floor improvement projects. The team was fully capable of Lean and Six Sigma thinking and began their assignments by first spending two weeks in the data gathering and planning stage before jumping to any conclusions. ABC assigned support resources to each of the three we had chosen for the engagement. Hawksbill negotiated the original scope of work, the team then to work to put the details into the work plan.

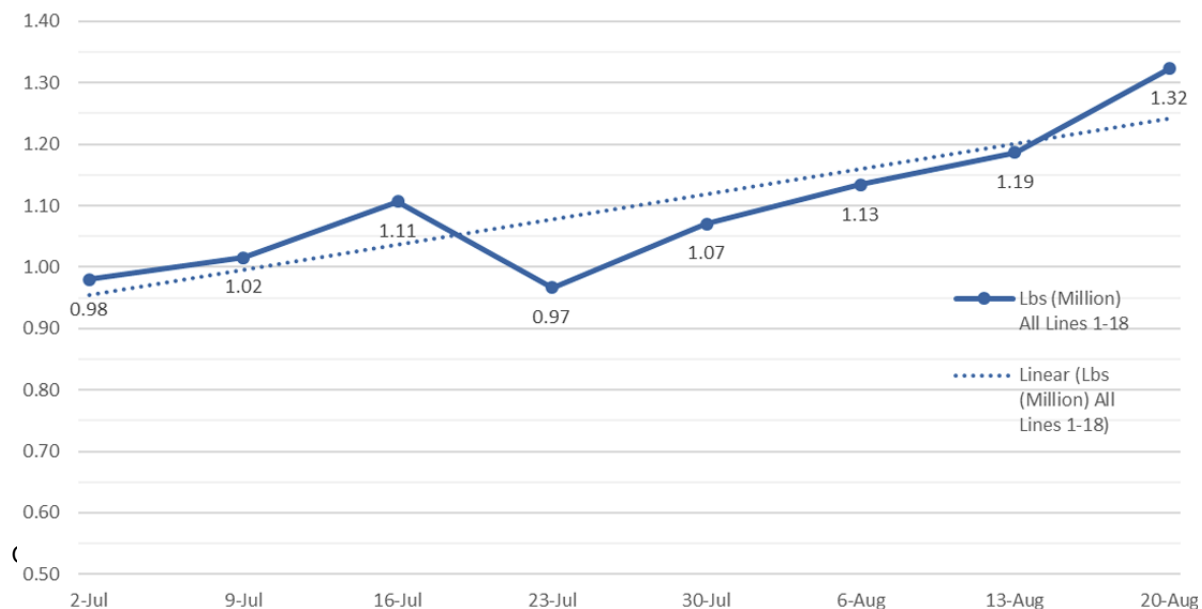
BUSINESS RESULTS

1. The scrap rates on the XXX Plant PVC lines in original scope were reduced by 67%. The balance of the PVC department followed the practices and changes implemented for an overall PVC scrap rate reduction across all 17 lines of 58%. Correspondingly the output of the PVC lines improved dramatically as, well, by 35%. The below charts are indicative of these success rates.

PVC Department All Lines 1-18 Average Total Scrap

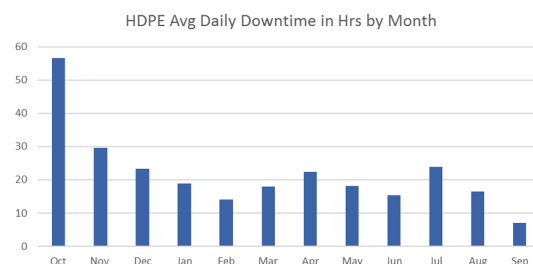
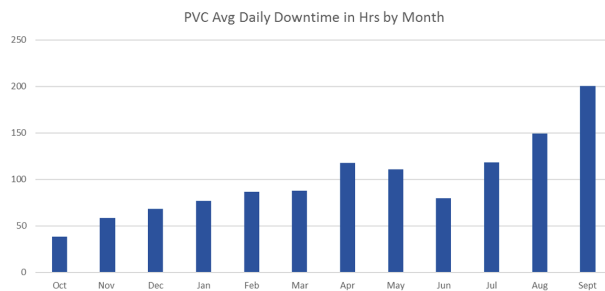
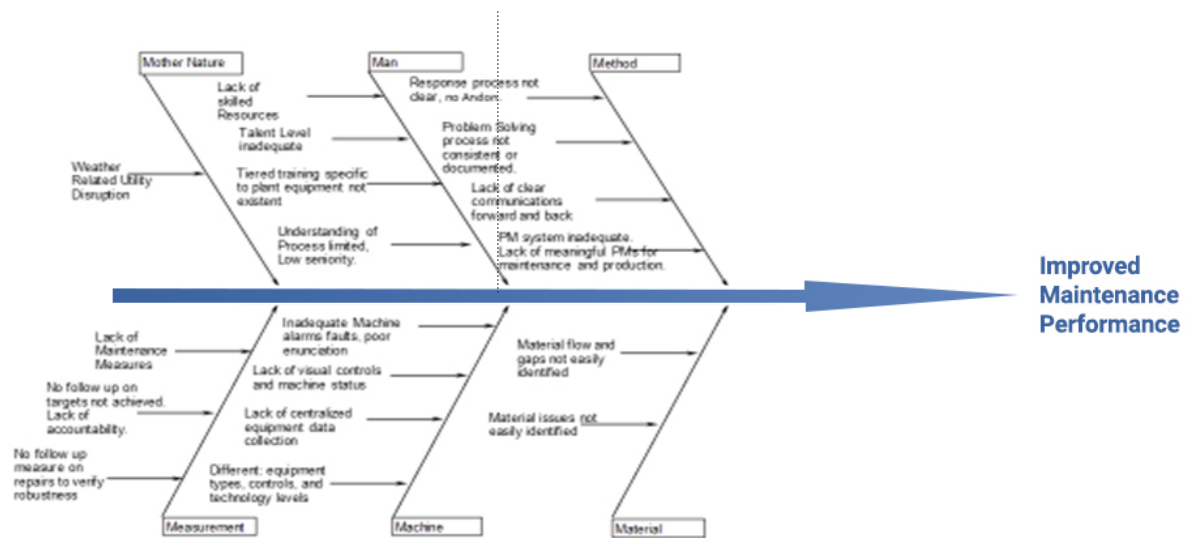


PVC Department All Lines 1-18 Average Total lbs (M)



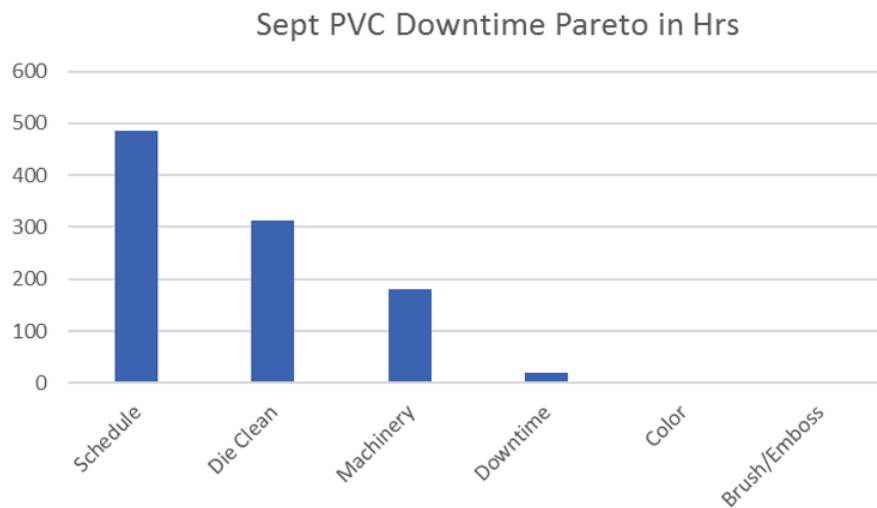
- The project at the YYY Plant dedicated to stabilizing and improving the maintenance function was similarly successful. Floor space was designated and improved to house the maintenance function, work that had been decentralized previously in the shops. Work orders were evaluated, prioritized and closer plans developed. The corresponding improvement in “uptime” has yielded increased capacity and improving OEE rates throughout the facility.

Tracking where we are and how far we need to go:

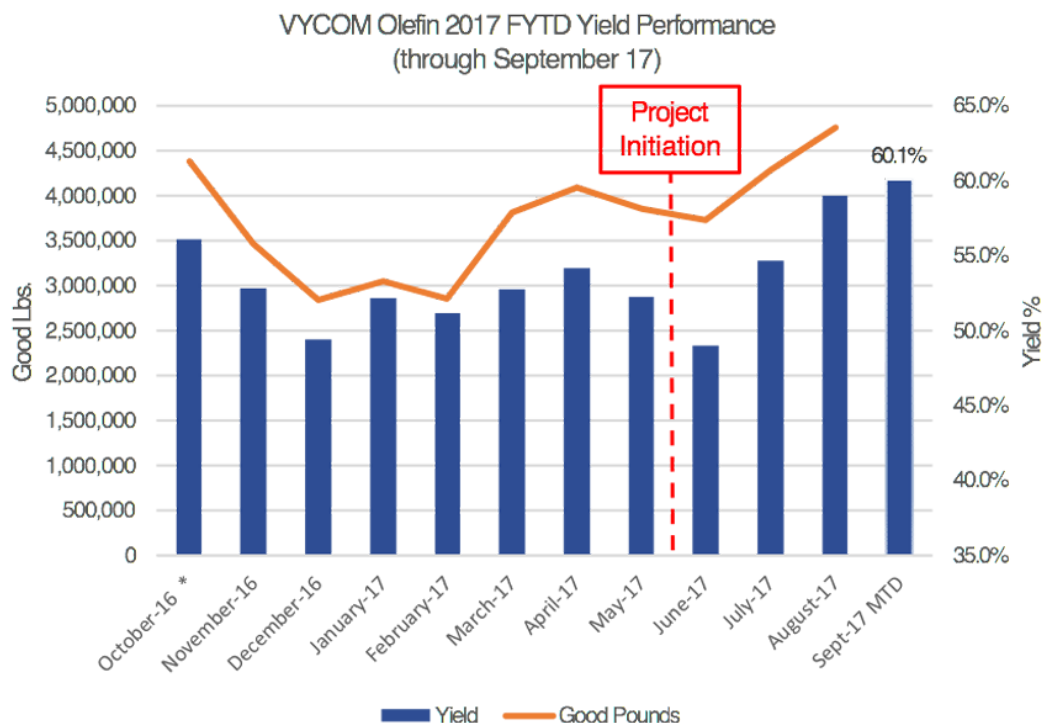


Note that for the PVC Plant, the uptime and throughput improvements allowed a new category of downtime “no schedule” which was added to the pareto chart. This highlighted the opportunity for additional sales, since previously the factory had been constrained. In September total downtime

had been reduced by 50%, and, the “Schedule” element was the highest amount of downtime. Additionally, die cleaning was added to promote FTQ.



3. The Yield improvement project at the ZZZ plant proved to be more difficult. Improvements in yield were gained but less than the improvements originally sought in the Scope of Work. There remains a list of open items that Hawksbill generated which, if implemented by the ZZZ team will yield the results originally envisioned. At the beginning of the project, the actual yield rates were less than 50% resulting in serious regrind requirements. The project moved the yield rates into the low 60% range with more improvement expected.



CONCLUSION

The Hawksbill engagement with our client was successful. The selected KPI's (key performance indicators) all improved. The long term value of the projects will be a repeating annual yield of approximately \$10M while the OpEx incurred to fund the project was less than \$500,000. 20X value in the first twelve months alone.