

IX[®] Case Study
Operations & Supply Chain Optimization
in Aviation MRO



IMPLEMENTATION
ENGINEERS[®]
BEYOND CONSULTING

IX® in Action



Our client, an aviation maintenance company, serviced maintenance and refurbishment on aviation landing gear. The client’s operations were unique in that equipment would arrive to the facility, and until physical receipt, the exact repairs, refurbishment and required new parts were unknown from equipment to equipment, creating a very dynamic environment in which agility in operations and supply chain were important. Implementation Engineers was engaged to ensure the company was deploying capital efficiently by holding an appropriate level of replacement parts inventory, and operations and maintenance processes were effective and efficient.

Supply Chain & Procurement Optimization

Supply Chain and procurement improvements were implemented to reduce working capital and ensure critical spare parts were on-hand to support the required equipment refurbishments that were received. The impact to our client was a material cost reduction, reduced delays for materials and reduced Purchase Price Variance (PPV). Activities during IX® included:

- Implemented Inventory Management practices to improve inventory accuracy, receiving, put-away and pick efficiency
- Implemented Master Scheduling and S&OP to create visibility to upcoming workloads and smooth the workloads released to the shop
- Developed and implemented the tools and methods to plan production, stock, and control inventory based on forecasts, work content and material usage rates
- Reduced spot buys and premium purchases through implementation of Value Based Sourcing which created strategic partnerships, defined value and leveraged spend
- Improved POU / VMI process by by setting up dynamic replenishment strategies with vendors to reduce costs and inventory risks
- Formalized new purchasing procedures

Production Control

IE implemented a Production Control workstream to enable more consistent, more predictable flow through the repair phases to the stockroom. The improvements reduced the need for SWAPS, improved control and reduced cycle time related to SWAPS. Activities during IX® included:

- Installed a production schedule that calculates capacity and actual demand through the work centers
- Refined Forecast Meeting to have a proactive system as the vehicle for the recurring review that identifies potential risks to meet assembly start dates
- Installed a kitting process ensuring material availability at the Point-of-Use (PoU)
- Created a control process for Swapping parts with the proper approvals and triggers for replaced parts traceability and handling

Material Flow

Our client was plagued by operational bottlenecks and delays due to replacement parts. During IX[®], a Material Flow workstream was implemented to reduce stoppages, queues and waits in order to meet the On Time Delivery plan. The following activities were included during IX[®]:

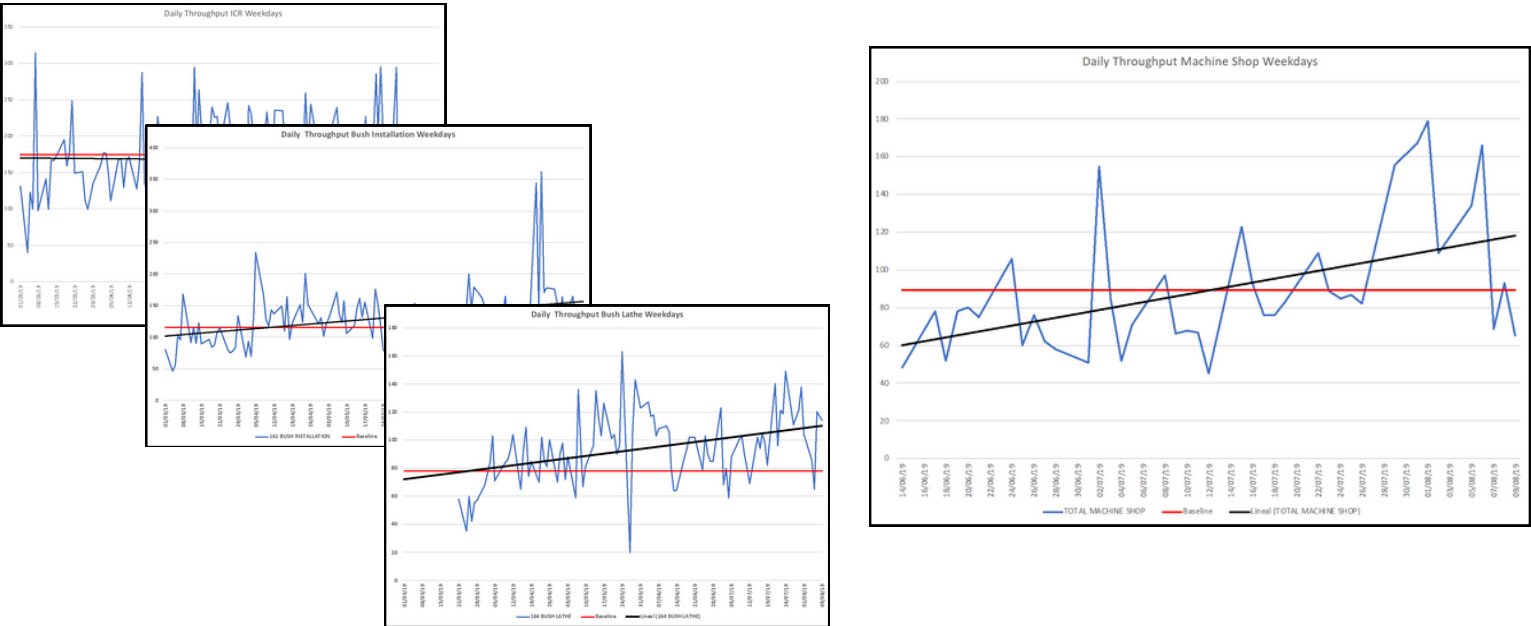
- Established visual controls for handling WIP to aid in priority changes and compliance to the production plan
- Implemented Work Center Resolution which enabled more detailed capacity planning and analyses
- Reduced delay frequency and duration due to bushing replacements
- Implemented held up Clocking & Disposition Visibility where TAT calculations were corrected, clocking discipline was reinforced and prioritized work list for support departments was generated

Lean Manufacturing

IE partnered with our client to implement Lean Manufacturing practices within the facility refurbishment processes to eliminating waste, reduce turnaround time and improve labor productivity. Through our collaborative efforts, we worked closely with our client to identify areas of improvement, implement Lean tools and techniques and foster a culture of continuous improvement. Activities during IX[®] included:

- Implemented a Management Operating System (MOS) to utilize KPI monitoring to identify issues, assign actions leading to root cause corrected action and promote a culture of continuous improvement
- Established and documented Best Practices for select processes converting them to Standard Operations while maximizing floor space utilization and installing 5S organization
- Conducted six Kaizens including Final Assembly, Machine Shop, Stock Room and other work centers
- Conducted Point Improvements to correct issues identified by area personnel or observed by IE personnel during Implementation Design
- Implemented root cause identification and solutioning for prevalent chronic issues observed in select work centers

Kaizens Drive Throughput Improvements



IE conducted six Kaizens at our client's facility in several key areas including the Machine shop where throughput increased 30%. Some of the lean improvements implemented in the Machine shop included:

- Maintenance technician training matrix
- Repair and overhaul capacity model
- Refurb station set-up work instructions
- Machine operating instructions
- 2 more racks for WIP
- Set- up cards designed
- New work centers
- New design for V-carts

Sustainable Results

The sustainable solutions implemented by Implementation Engineers have not only enhanced on-time delivery, optimized material flow, and reduced material spend for our client but have also set a foundation for continued success in their manufacturing and supply chain operations.

Next Steps

- > Schedule a meeting with our team to discuss how Implementation Execution (IX®) can help your organization achieve its goals. Submit an IX® request on our website at www.implementation.com
- > Visit www.implementation.com to read more about IX® and how we have helped our clients create sustainable results
- > Follow us on LinkedIn to stay up to date with the latest industry insights and updates. Join our network to access exclusive content and stay connected with our team of experts

Learn More: www.implementation.com



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