

Greenfield Facility - Throughput Validation and Improvement



Client's Challenge

- 14 Product types with different foundry flow and product dependent cycle time made it difficult to calculate system's throughput
- Equipment Utilization was highly dependent on Product Mix
- Batch size of a product family - Different across the process flow
- With all the above variations, predicting the required buffer capacities

PMI's Approach

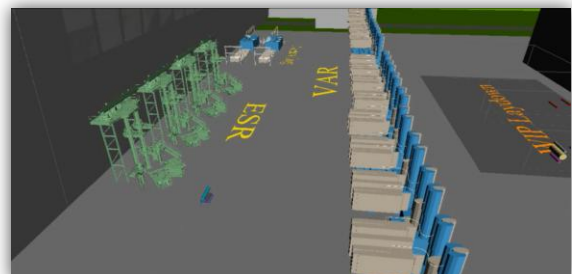
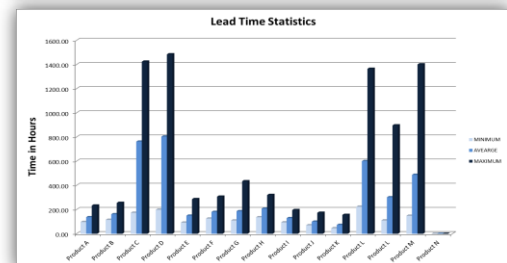
- Data analysis, 3D model building, verification & validation
- Throughput improvement carried out by analysis of product mix
- Sensitivity Analysis carried out on buffer capacity
- Throughput Improvement Roadmap was built to meet expected demand
- Sensitivity Analysis also carried out on buffer capacity for expected demand

Findings & Recommendations

- Facility was unable to meet target throughput
- Throughput showed strong dependence on Product Mix
- With the current setup, max. system throughput was validated to be 18% less than expected
- Number of resources required to satisfy expected demand was calculated
- Required buffer capacities around the facility were suggested
- Average lead time was indicated

Key Points

- Batch type production - 14 Product Types
- Impact of Product Mix on system throughput
- Buffer sensitivity analysis



*Data shown here has been modified to protect client confidentiality