Automated Production Scheduling [APS]

# Overview

Building off the proven track record of Automated Release Scheduling [ARS], APS will aim to streamline the scheduling process in Troy. In principle, APS will work much the same way as ARS and will provide an “exceptions” based system, wherein most orders flow through the system in an automated fashion, allowing schedulers to focus on the important decisions that will not be automated. Sales Orders demand will be netted against existing inventory (and projected through the BOM where appropriate, i.e. Alabama). New rules will be implemented to meet the scheduling requirements of the manufacturing process in Honduras. The process will generate exception reports for specific conditions that require additional oversight by schedulers.

For a period of 4-6 weeks, APS will be run along-side the current manual scheduling process. The data generated by APS during this period of time will allow for a detailed comparison and analysis of the schedule produced by the manual process. From this analysis we will better understand the conditions that can be implemented in APS, those conditions that APS will not handle, and the exception reports and manual processes that will result from these exceptions.

# Game Plan

1. Derive an APS from ARS
   1. Modify existing ARS to calculate requirements and write them out to a separate data structure (the Planning Snapshots, described in Troy Order Planning System).
   2. Implement logic for line capacity, week over week +/-25% increase/decrease.
2. Capture Rev 0 PO schedule generated by Troy Planning team (plan created on Wednesday, captured on Thursday).
3. Compare and analyze PO schedules generated by Troy Planning team vs. APS.
   1. Identify and implement minor changes to APS if appropriate.
   2. Identify conditions for exception.
   3. Measure customer release fluctuations and measure and contrast manufacturing fluctuations between Troy Planning team and APS.
4. Continue development of Scheduling Grid (crosstab).
   1. Implement remaining color coding features and logic for capacity, standard pack, and holiday schedule.
   2. Build a close-out report
   3. Build a release-fluctuation report
   4. Build a BOM lead time report
      1. Build a material authorization letter

# Costs (total $13,500)

1. 3 days to modify ARS in order to create an APS process ($3K)
2. ½ day to build a scheduled task that captures the PO’s generated by the Troy Planning team every Thursday, as well as a snapshot of sales orders and finished goods inventory ($.5K)
3. 2 days for data analysis, and an additional 1 days for adjustments to APS. ($3K)
4. 2.5 days for design and data for reports, 4.5 days for front-end development. ($7K)