

HOW AN AVIATION OEM IMPROVED THE LINE CAPACITY UTILIZATION USING BODHEE PRODUCTION SCHEDULER



BACKGROUND

The client is one of the largest aviation companies in the world. Their assembly process is takt and the aircraft moves to the next station irrespective of the completion of the previous work. Due to the multiple lines of assembly and the evolution of the plants over time, there are scenarios where the same work is being done in different stations, with different generations of technologies. Planning is a challenging process, as the planner needs to consider such complexities, as well as external factors such as priorities, cancellations, etc. The process is manual, and multiple planners' times are lost in it. The client has an order backlog of multiple years, and hence improved delivery rate is critical.

BUSINESS PROBLEM

The macro plan is created on a yearly and quarterly basis, and then broken down into a detailed plan every month. But since the process was manual, it was a challenge to accommodate dynamic events such as missing critical component delays from the supplier, delays in the work completion at various buffers, hidden buffers being created due to unsynchronized assembly processes, etc. This led to scenarios of empty workstations. Often the team had to add additional shifts to compensate for the delays, and hence the planning process was excruciating. The client was looking for an automated plan generation mechanism, and the ability for the planners to override the suggestions. They wanted an improved delivery rate through efficient planning, as well as a decrease in hidden buffers and W.I.P.

HOW DID WE SOLVE IT?

All the BOM related information, along with the work orders to be executed at each station for each variety of aircraft, was enriched in production work related data like quality, work completed on time, etc. Also, all the constrains were identified and configured along with the goals. The multi-objective optimization was configured with the scheduling algorithm to generate an automated takt plan. The planning team then used it to enhance, based on additional inputs which were not part of the system. This was significant in reducing manual effort, and in avoiding the buffers that were getting created in the line.



Manual effort reduced by 25%



Capacity utilization improved by 5 %

THE BODHEE PRODUCTION SCHEDULER CREATED AUTOMATED PRODUCTION PLANS, WITH THE ABILITY TO ENHANCE THEM FOR ADDITIONAL INPUTS, THUS IMPROVING CAPACITY UTILIZATION



WHAT DID WE DO?



Automated Optimized Production Plans



Provided the ability to enhance or override planned suggestions

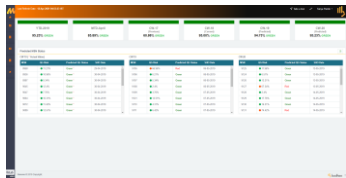


Enabled planning summaries with constraint violations



Provided buffer view to see hidden buffers

Predicted MSN stations



Stage Wise Tracker



Process Summary



Stage Wise Report

