BETTER BUSINESS ANALYTICS

GLOBAL AUTOMOBILE SEAT MANUFACTURER

Background

A large, ***global automobile seat cushion manufacturer*** utilizes a moving, ***circular production line*** to produce a variety of more than one-hundred different foam-based seats each month. To meet ***customer demand,*** their ***process requires scheduling*** the correct mold to be placed on a carrier in the production line so that, at each turn of the line, the corresponding foam part will be poured, cured, demolded, and taken off the line for ***quality control*** and packaging. The scheduling had thus far been accomplished via a ***manual process,*** utilizing a combination of staff know-how and excel spreadsheets.

The production facility had the following baseline requirements:

- ***Multiple molds*** (to create different seats) mounted on the line at any given time
- Up to ***40 different sequencing*** and seat compatibility constraints
- Lines must be stopped to change a mold ***(stops production)***
- A mold change requires ***significant time***

The Challenge

- Must satisfy customer orders by their specified ***due dates/times***
- There were too many ***costly mold changes***
- There were ***uneven levels of safety*** stock of each part (inventory constraints)
- Schedulers took ***3 days to produce*** a weekly schedule
- There were too many ***overtime shifts and costs***

OptPro Solution

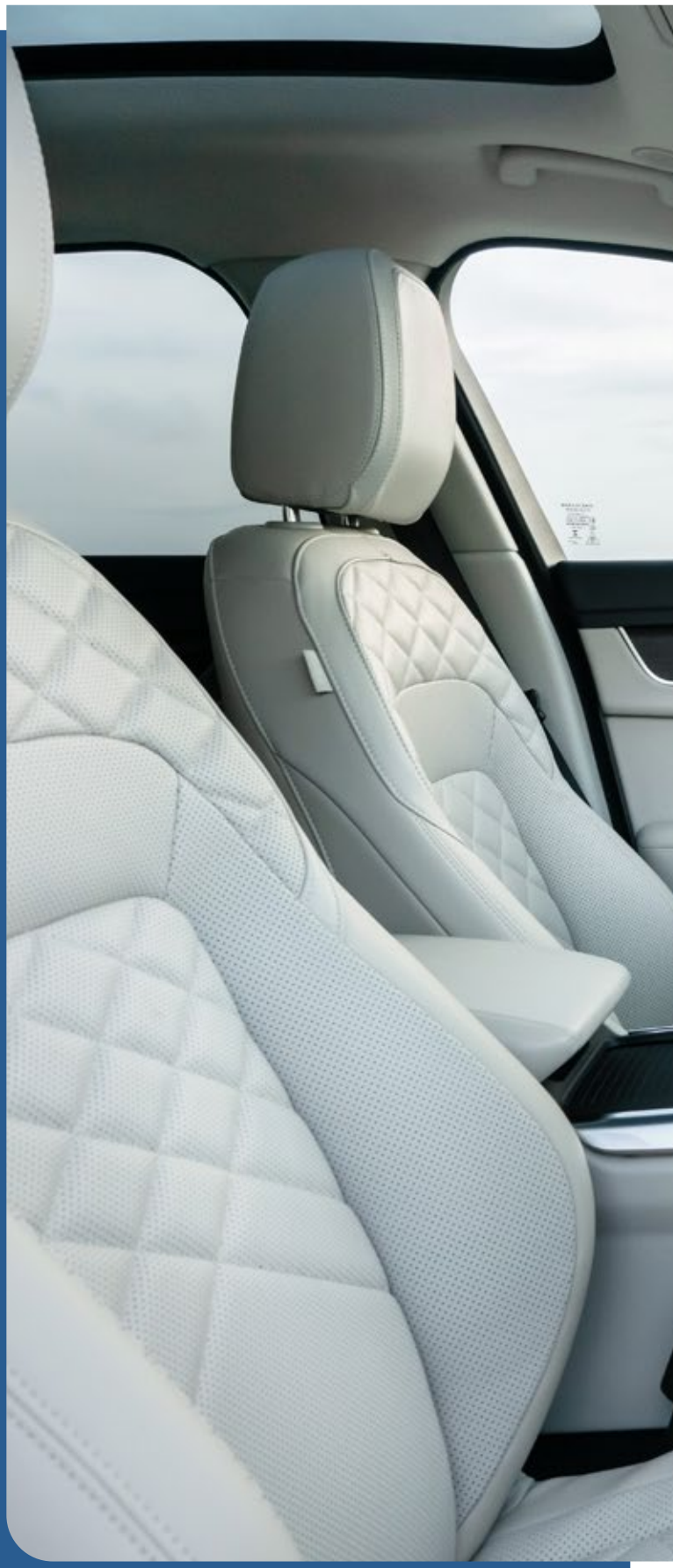
Working closely with the plant team, **OptTek** developed a ***solution*** that couples ***mathematical optimization*** with a ***digital twin*** representation of the operation, which leverages our **OptPro** core infrastructure software that:

- ***Reduced monthly mold changes*** by 62%
- Maintained ***desired levels of safety stock*** for each seat
- Freed schedulers' time to focus on ***better long-term capacity planning***
- Reduced required overtime by an average of 4 shifts per month with ***commensurate decrease in costs***

Future

Given the ***success with this initial plant,*** **OptTek** is now working with this same client to port the ***solution*** to several other plants with ***like-production requirements,*** enabling ***similar savings*** at those plants, and providing a ***great economy*** of scale of the solution investment overall.

Future anticipated enhancements to the solution will permit the company to plan for ***volatile demand from certain customers,*** and therefore make ***better scheduling choices*** and more ***cost-effective decisions.***



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