



Order amendments: Build to order

Key Takeaways:

- The Order Amendment Solution significantly reduces the need for automobile inventory.
- The Optessa Order Amendment Solution is a key technical enabler that allows buyers to build a car exactly as they want, price it out, and plan for delivery.
- Reduce order to delivery times.

Problem:

A major automotive manufacturer who has already deployed Optessa planning and sequencing solutions is moving to allowing individual customers to customize orders online. How can the manufacturer best determine what date can be provided to the user for when the custom vehicle will roll off the assembly line?

The manufacturer wants to give customers a firm, committed date that they will receive their cars. Some existing solutions from other vendors use statistical analysis to predict delivery date based on past history resulting in unreliable delivery dates for the customer that are subject to multiple changes. It is known that customers can to a degree live with the waiting time but are far less accommodating towards frequently adjusted delivery dates. Optessa believed that a new solution could provide an accurate delivery date that would be far less likely to change. This new solution would allow dealers to amend their scheduled orders within buildability and material stability restrictions.

Solution:

Optessa's Ability to Promise solution was used to allow end customers and dealers to modify orders. The modified orders are then planned in near real-time to generate a 'promise' date. This helps to reduce order to delivery cycle times.

The expectation is that this will allow customers to request specific features at the dealership and receive the exact vehicle they requested within a much shorter time than is currently feasible. In the current state, if the dealer did not have something exactly matching the customer's request in inventory, that dealer would need to request those features during the next dressing period. This means the customer might have to wait several weeks or even months to get the vehicle they want.

The goal of the Order Amendment solution is that a customer who goes to a dealership looking for a car with specific features will be able get exactly what they want within a



few weeks of making the request. The problem with allowing dealers to make changes within one to four weeks from production is that the material forecasts for production have already been shared with the suppliers. Therefore, any major deviations from these forecasts have the potential to cause major disruptions in the supply chain.

Some key goals achieved by the Order Amendment solution:

- ✓ Accept as many amendment requests as possible, subject to constraints
- ✓ Only allow the Original or the Amendment version of an order be planned
- ✓ Do not allow the amendment process to change the assigned build week of a scheduled order.
- ✓ Do not violate Stability Control constraints in order to accept an amendment request, i.e., maximize dealer flexibility subject to supplier stability to ensure production targets do not jeopardize supplier stability

Result:

The Optessa Order Amendment solution is an enabling technology that gives customers and dealers the flexibility needed to order custom vehicles while ensuring that the supplier stability is not impacted. It also allows dealers to provide customers a firm build date for the vehicle. This solution was originally deployed at only a couple of plants, but the manufacturer was so pleased with the outcome that they decided to deploy at all other locations.

About Optessa

Optessa provides top global manufacturers with the only planning, sequencing, and scheduling software that mathematically guarantees results using patented algorithms that adapt to all challenges without custom code. The software works equally well in a broad range of manufacturing industries, as well as in shipping and logistics. Headquartered in Alberta, Canada, with branches in Hazlet, New Jersey, USA, and Goa, India, Optessa's leadership team leverages its deep expertise in software, mathematics, manufacturing, and optimization technologies to deliver unmatched customer satisfaction.

To learn more about Optessa please visit www.optessa.com.