

Automotive Industry: Order-to-Delivery



The Company Dilemma

Our client is a leading European manufacturer of premium passenger vehicles.

The company's key dilemmas were:

- Low ranking, in JD Powers surveys, of customer perceived quality
- Long lead-time, particularly for built-to-order vehicles
- Excessive levels of post-assembly rework
- A high cost of finished vehicle inventory
- Poor adherence to promised delivery dates

Due to excessive and inconsistent vehicle lead-time, the company was unable to make the necessary move from forecast driven to demand driven production planning.

Thomas Group Strategy and Solution

Thomas Group was engaged, in an extensive program, focusing upon the Order-to-Delivery process. Its key objectives were to:

- Radically improve vehicle quality
- Reduce lead-time for all vehicles
- Improve on-time delivery performance
- Create an efficient vehicle delivery process
- Improve overall profitability

The process of change was driven by Thomas Group's Process Value Management (PVM) methodology.

The first step was to train client staff in PVM methodology. A critical program success factor was that company staff became not just participants in, but the leaders of change.

Next came the mapping of the complete Order-to-Delivery process, from the point of receipt of order to delivery of a vehicle to the customer. In order to improve a process one must first be able to measure it. Therefore, critical process measurements, in all of the key sub-processes below, were defined, then baseline (current performance) and entitlement (target performance) set.



A cross-functional team was then formed which, for the first time, brought together staff from manufacturing engineering, purchasing, production logistics, order management, vehicle build, and vehicle distribution.

This team, facilitated by Thomas Group's team of industry experienced consultants, first identified high-leverage process improvement barriers and then drove actions to remove them.

The major barriers were, an excessive freeze period in production planning, inadequate quality and delivery performance from suppliers and a lengthy process time for the transportation of vehicles from end-of-line to the customer.

A number of client task forces known as barrier removal teams were formed to remove root cause barriers. Key sub-processes were measured and improved by using driver measurements of dynamic cycle time, first pass yield (right first time) and on-time delivery. First pass yield was extensively used in *Vehicle Build* sub-processes to enhance quality-in-station performance and to reduce the number of defects passed down the line. The use of on-time and correctness measurements, with both internal and external component suppliers, also delivered significant improvements.

Hierarchical cockpit charts were used throughout the organization, even at shop-floor level, as a clear, graphical representation of process improvements. By using these charts to drive first pass yield within its sub-processes, the overall *first time right* performance of *Vehicle Build* was increased four-fold and rework was substantially reduced.

These charts also demonstrated, to company senior management, how improvements at the process level were linked to financial and performance results for the business.



Critical success factors in the improvement program were:

- Establishing a corporate vision for the Order-to-Delivery process
- Developing and adhering to a strategic program roadmap
- Having a powerful and committed Order-to-Delivery process owner
- Using limited and meaningful measurements to drive improvements
- Frequent, company wide communication of the program initiative and its results

The Bottom-line Results

The company's ranking in a JD Powers survey of customer perceived quality moved from #7 to #1

- 30% more cars were produced in the same plant without overtime
- Order-to-delivery cycle time was reduced by 40% for Europe and by 55% for the US
- Assembly *first time okay* increased by 400%
- Vehicle on-time delivery was increased from 78% to 94%

What the client says

"The program had very impressive results."

"We made a quantum leap in improvement."

"It was a joint project...they worked to push us...both Thomas Group and our company stayed focused and this synergy produced the results."

"Great improvements in customer response and satisfaction while at the same time a significant reduction in costs"