

Accelerating the Realization of Lean Benefits Automotive Plant's Success Helps Earn Pelion Recognition as a 2007 PACE Award Finalist



Situation:

- All automakers struggle with the paradox of trying to become Lean in an environment of constantly changing requirements. The belief held by many is that software can only deliver limited value and often times makes things more confusing.
- The final assembly production line for this Tier 1 automotive supplier was meeting the Build to Volume requirements but failed to build to the required schedule and proper product mix, which resulted in increased premium freight, overtime and work-in-process inventory levels.
- The supplier needed to integrate all of the complex components of demand, production, people, suppliers, and process into an understandable model reflecting reality and then translate that reality into simplified schedules within production.

Solution:

- Process Optimizer, Factory Manager, Demand Manager and Performance Manager modules from the Pelion Lean Manufacturing Operating System were deployed across nine product value streams within this 3 million square foot facility. Pelion provided complete project services including software installation, ERP integration, training, and application consulting services.
- Within production, Kanban (Heijunka) boards were designed and placed at the assembly lines to ensure proper product build sequences, better changeover and control of inventory. Line design, board and kanban card design and sizing was provided through Pelion's Process Optimizer and Factory Manager modules.
 - Kanban or Heijunka boards are a type of scheduling system that is used at the plant floor level to help control the build schedule with a visual card system. This card system allows the operator to execute proper changeover. It will inform in advance of component part issues and will dictate production part completion by hour, shift, and day.
- The Pelion Factory Manager module was used to properly size the marketplaces between the assembly lines and the dependent (feeder departments) lines to ensure the assembly line will always have the proper mix of product to build to customer demand, while enabling pull throughout the operation.
 - Pelion Factory Manager uses patented Lean algorithms to determine Fabrication Kanban sizing and required marketplace levels based on cycle times, scrap percentages, set-up times, effective hours and demand requirements.
 - Kanban boards were also added to the dependent (feeder department) production lines to drive proper changeovers to ensure the right marketplace mix and size is maintained and controlled.
- Reporting functions through Pelion's Performance Manager module allow management to visualize, sustain, and control the right product mix and sizing for the various individual marketplaces. One key report used within this facility in the inventory cost report. This report provides management with the ability to control inventory on a cost basis, while considering the requirements of their customers and production performance.



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Results:

- The Pelion Lean Manufacturing solution enabled the automotive supplier to have the visibility needed to make better proactive decisions by which to run the facility, controlling all the variables that impact cost in the process. While increasing customer fulfillment levels, the following results were achieved within a 12-month timeframe:
 - \$10 million, or 85% reduction in Premium Freight
 - \$20 million, or 75% reduction in Overtime and other Premium Labor Costs
 - \$50 million, or 40% reduction in Inventory
- With key production metrics and reporting, the measured gap between Build to Volume and Build to Mix was drastically reduced, indicating that the manufacturer is building the right mix of products at the right volume and time, while increasing overall production and plant performance levels. Additionally, having better visibility to the cost components of production has enabled better decisions to drive improved overall business performance.
- The plant manager has stated that collectively Pelion's services and technology helped drive more Lean culture change and benefits within the first six months of the initiative than the plant had been able to generate in the previous six years of its "Lean Journey" combined.
- Thanks in part to this customer's success, Pelion's Lean Manufacturing Operating System has been named a finalist in the 2007 PACE Awards Information Technology and Services category, which honors game-changing innovations in the design and implementation of information systems solutions that enable companies to improve operational performance.

About Pelion:

Pelion Systems is a market leader in Lean Manufacturing solutions that drive flexibility to help manufacturers solve the customer service vs. profitability challenge. Working with Pelion's education teams, expert consultants and individual applications that fuel the Lean Manufacturing Operating System, companies with complex processes and production environments are able to achieve rapid transformations and continuous improvements in areas such as labor, inventory and shipping costs while simultaneously improving cycle time and delivery capabilities. Pelion's technology integrates easily with and extends the value of existing ERP, SCM and plant-floor systems. Solutions are able to scale from a single facility to an extended enterprise implementation, applying Lean principles to synchronize production, supply and distribution and form a true demand-driven network. Pelion is headquartered in Boulder, Colorado, with sales offices in Boston, Chicago and Detroit.

