



aPriori Speeds New Product Introduction Through Early Cost Visibility

Costing time reduced from weeks to hours.

New product costs determined months earlier than with previous methods.



The Challenge

The Reznor division of Thomas & Betts is a global provider of commercial and industrial heating and ventilation (HVAC) products with a reputation for quality and innovation.

Over one-third of Reznor's products are engineered to order, creating great variability in costs. Previously, Reznor design engineers were limited in their ability to create an accurate cost roll-up prior to

production release. Thomas & Betts engaged aPriori in late 2005 to help identify ways to improve the speed of generating cost assessments and provide better visibility to costs in the design phase and throughout the new product introduction (NPI) process.

Thomas & Betts

Company. Thomas & Betts Corporation

Vertical. Industrial Equipment

Product Line. Global provider of electrical components, tubular steel structures, and commercial and industrial heating and ventilation equipment.

Headquarters. Memphis, TN

Revenue. US\$1.7 Billion

Employees. Over 9,000

“Some of the most critical decisions made in a product's life are those made during the conceptual stages of product development. Using aPriori helps us obtain the cost impact of design decisions early in the process which, in turn, can have a positive impact on product margins.”

— Timothy Roberts
Vice President of Engineering
HVAC Division at Thomas & Betts

➔ ➔ “A cost roll-up process that previously could take four to five days can now be completed in as quickly as two hours or less.”

The Project

The initial use of aPriori focused on the design of a new family of condensing units used in Reznor's Preeva™ split-system product line.

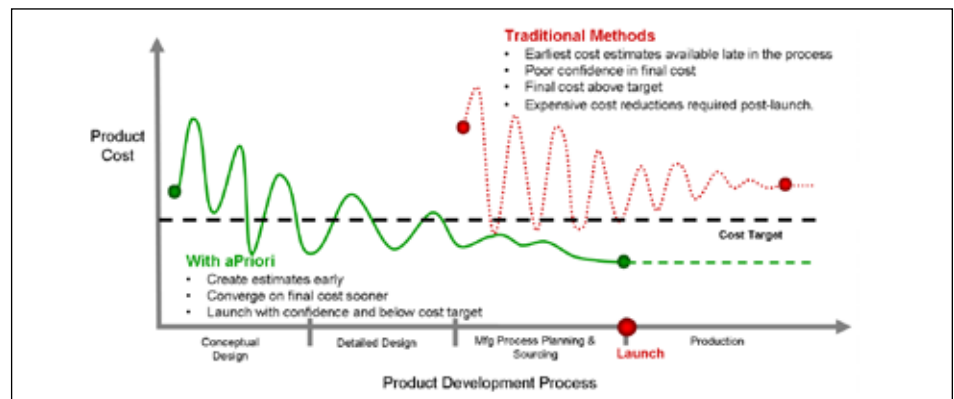
In collaboration with design, purchasing and manufacturing engineers, aPriori modeled three production facilities located in Pennsylvania, Mexico and Belgium. This allowed the designers to explore cost alternatives for the different plants and geographies for the new design. The Virtual Production Environments (VPE) modeled with aPriori captured both the sheet metal manufacturing and welding processes used.

For each VPE, the Thomas & Betts team performed calibration exercises comparing costs predicted by aPriori with actual production costs at each facility.

The Results

Using aPriori, Thomas & Betts was able to successfully create cost estimates for new product introductions more quickly and earlier in the design process.

For the new condensing units, a cost roll-up process that previously could take four to five days was completed in less than two hours. This allowed the designer engineers to create a cost roll-up months earlier than in the past.



The impact of knowing the cost early on is clearly illustrated in this graphic. The earlier a designer can assess the cost, the easier it is to make any necessary design modifications and meet the established cost and profitability targets. With aPriori, a new product introduction can be completed with a more complete understanding of cost.

This early visibility to cost and the ability to do a roll-up analysis against each of their own modeled production facilities, provided Thomas & Betts with a cost confidence that they had not achieved before.

Meeting the cost targets early in the process means confidence in meeting margins and ensuring future profitability.

Future Direction

The initial applications of aPriori within new product introduction were a great success. Results from the exercises provided the users and executives with the confidence to implement the solution at the beginning of 2006 within the new product design process, as well as for product redesign, change order and cost reduction initiatives.