



Exhibitor Interview

What do you see as the primary driver for an automotive manufacturer to invest in any type of modern costing software? What is the benefit over traditional excel-based estimating?

Traditional excel-based estimating is only useful for a very small percentage of the people involved in the product definition and delivery lifecycle. You must be very knowledgeable about manufacturing in order to understand the appropriate inputs to drive the cost model and the overall process is quite slow because manual input is the only option. Manual input systems, whether excel or any other system that requires significant manual input to produce a cost estimate, means that the cost engineering team is limited in how many cost estimates they can generate as new products move through the pipeline. In a typical OEM or big Tier 1 supplier, the cost engineers are outnumbered by design engineers 5-1 or even higher. What this effectively means is that a very large % of new product designs are being released to market with little to no cost optimization. Imagine how much money could be saved (or how much more profit could be realized) if you could cost optimize 80% of your new parts versus only 20%?

Automotive manufacturers design and detail thousands of new components and systems every year, and have enormous pressure to get them to market as soon as possible. In a serial system where designers are not cost optimizing their own components and systems during the design process, and the cost engineering team gets involved well after significant detail has been added to a model, manufacturability or cost issues are discovered far too late. This results in a churn of design ideas to fix the manufacturability/cost issues, assessing the impact of the change, sometimes more design work – and this goes on and on until an acceptable design is discovered. This system has a direct, negative impact on time to market which in today's fast paced world is simply unacceptable. A modern PCM system that enabled manufacturability and cost drivers to be identified and eliminated early in the design process could significantly reduce this late stage churn and help accelerate time to market.

Automotive manufacturers need to adopt a more modern, simulation-driven approach to cost estimating that leverages the 3D CAD model as a primary input. This approach significantly simplifies the manufacturability and cost analysis process. It allows the design, sourcing and supply chain teams to all collaborate on design for manufacturability (DFM) and design to cost (DTC) programs

as early as possible and deliver these products to market on time and under budget. For an example of the massive impact potential of DTC programs in the automotive world, we recommend you review [this blog article and short 2 minute video](#) about Wuzheng Group (Shandong Wuzheng Group, headquartered in China), and how they saved more than \$1M in one of their first cost down projects.

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Creating a collaborative organization and having open dialogue with suppliers and customers is also critical – do you have any advice on what your customers can do in terms of their workflow and process to make the most of modern costing software and reduce costs?

We are starting to see customers invite their suppliers to participate in conversations around design for manufacturability and cost at the earliest stages of product innovation. From a Product Cost Management (PCM) perspective, this is being accomplished via a couple different methodologies. Some big customers are buying PCM licenses for their strategic suppliers, providing them with access to their central costing database and Virtual Production Environments (VPEs) and early CAD designs so they can evaluate these models, and provide input that can potentially minimize or eliminate cost drivers. We are also seeing suppliers that are coming directly to aPriori to buy their own technology solution that allows them to generate quotes for all their customers that are more consistent, and more detailed with much, much faster response times.

The conversation in both of the above scenarios has evolved from the customer expressing “this is too expensive, reduce the cost” to a more fact-based negotiation around the manufacturing simulation data that aPriori produces as a standard part of its costing process. Customers may now dig in and ask questions like “why are using a 3-axis machine and a secondary process?”

Could we do it all on a 5-axis machine and save time and money?”, or “what are you using for a material utilization value, what are you using for labor rates, what are the number of individuals on this workstation, etc.?” This effectively switches the tone of the conversation from an antagonistic debate about a price value to a more collaborative conversation around the most efficient way to design and manufacture a new product design. **Learn more in this [whitepaper](#)** about how you can avoid overpaying for outsourced parts through a more collaborative product costing strategy.

What will aPriori be showing at the conference next month? What’s the latest news that you will be sharing at your booth? Will you have any software for attendees to test out?

On September 19, aPriori announced the release of a new version of software – aPriori 2017R1. This release represents significant advancements in the area of Design for Manufacturability and Design to Cost capabilities. These capabilities are in line with aPriori’s vision to help designers and engineers attack cost at the point of origin. Simulation-driven design has been proven to help companies produce higher quality products on time and under budget. Similar to approaches that have been implemented by FEA companies in the past, aPriori’s goal is to make its cost estimating capabilities easy to use and very fast so they can get answers to cost questions quickly, and not wait for an overworked cost engineering team, sourcing or a supplier to review a new design and return with a projected cost to manufacture. This new version of software will be on display at our booth for visitors to see up close. For private demonstrations, please send an email to our onsite representative Craig McLeod at cmcleod@apriori.com

Manufacturers often struggle to find the latest data such as material, labor and equipment costs. Is this something aPriori can help with, or do you have any advice that you have picked up from working with your clients in the industry?

This is often one of the most challenging aspects for companies that have chosen to implement their own homegrown system. Maintaining up-to-date pricing data requires a long-term, consistent effort. aPriori has both dedicated internal resources and partners that we work with to aggregate material, machine, labor and overhead data from key manufacturing regions around the world. Currently, we provide regional benchmark data for 67 regions in North & South America, Europe and the Asia Pacific region. This data is regularly updated and new versions are released to customers every 6 months. For more detailed information on aPriori’s Regional Data Libraries, **[check out this resource](#)**.

How do you think cost estimating and cost engineering will change in the next 3-5 years? What trends and technologies will we all be talking about which are only just on the radar today?

Our vision here at aPriori is that within the next 3-5 years, the democratization of cost estimation will have taken a significant step forwards. Dedicated cost engineers will be at the hub of this evolution, and their deep expertise will be the cornerstone upon which an enterprise wide technology backbone will be implemented. Organizations will go from a point today where they may be cost optimizing 20% of the total new parts that flow through their organization to 80+% through the use of automated costing technology that makes it easy for cost “novices” to generate their own estimates on-the-fly and keep right on working. This advancement will have a profound impact on overall product profitability and enable companies to continue compressing time to market for innovative new products.

The second major change that we see taking place will be enabled by an increasing willingness of companies to run product development technology in the cloud. CAD, PLM, FEA and many other core product development systems are moving in this direction. So too will Product Cost Management (PCM) solutions. Why is this important? It will have a direct impact on a company’s ability to implement Supplier Innovation programs. Strategic partners will have direct access to a web portal so they can evaluate early design concepts, analyze manufacturability, and provide early feedback that will enable the customer to incorporate valuable inputs into a design in the earliest stages of product innovation. Again, this will help companies to deliver products to market faster, hit target cost, and inevitably deliver greater profitability to shareholders.

We also see the potential to integrate other partners into a cloud based product development ecosystem including customers, machine vendors, raw material providers and many more. All of these partners will work within an integrated environment that can be accessed from anywhere in the world on any web-enabled device. It will literally revolutionize the process of creating mutually acceptable pricing between a customer and supplier. No longer will there be a debate around the unit price, it will be a discussion around the most efficient way to design and manufacture the product which will ultimately yield the best price which enables both the customer and the supplier to build a productive, profitable business.

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