



PwC Automotive Institute Spotlight Q & A

Research & Development in the Automotive Sector

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J's experience spans the entire distribution network from suppliers to vehicle assemblers to retailing. J has over 25 years of global automotive consulting experience and is based in our Detroit office.

In some cases, there is a wide discrepancy between R&D spend and forecasted volume growth for automakers. How can automakers more effectively and efficiently utilize R&D budgets?

Reported R&D does not always serve as an accurate indicator of innovation. It may better display the degree of diffusion between R&D efforts of an automaker and its main strategic suppliers. For example, Japanese and Korean OEM's may in aggregate spend more on R&D than reported in financial filings because much their R&D is embedded in those suppliers eager to work with them.

To what degree do you believe innovation is a key differentiator for a supplier?

Innovation is paramount for suppliers. Product innovation, to be sure, but process innovation also. It's not only product and portfolio innovation, it's delivery innovation and program management innovation. Put bluntly, in this industry you either innovate or you die.

Do you see the global resourcing of R&D to be disruptive or beneficial to the product development process?

Anything that is disruptive to the current model is good because, often times, the current model is broken.

The issue isn't necessarily the resourcing of R&D; it's really about knowledge management within an extended enterprise. Where in your network of people, regardless of geography, can you make that creative spark that becomes an innovative or endearing product feature? Having multiple design centers can either be fragmenting or unifying depending on how well you execute on capturing and sharing customer and product knowledge.

How can PwC assist in managing cost in the R&D phase of the automotive value chain?

(1) Assist with supplier product line strategy, helping to develop a rigorous program for assessing strengths and weaknesses in the competitive market; (2) support the due diligence of suppliers for selling divisions; (3) facilitate mergers that strengthen innovation; (4) help assess and improve performance with respect to program and information technology management.

What factors are leading to increased complexity in the product development process?

First: The strain that shorter product development cycles and the increased number of vehicles and vehicle types in an automaker's stable put on product development team processes.

Second: The increased density of technology in vehicles. The integration of systems, specifically electronic and safety systems, has added a great amount of complexity to the development and production of new vehicles. Vehicle system integration now combines functions that previously acted independently of each other.

This added complexity puts an increasing burden on the already tenuous "squeeze" business model between suppliers and automakers because of aggressive cost reduction pressures shaping automaker behaviors.

How can companies take a more holistic approach to managing costs in the development process?

In the product development process, the longest cost shadows created in design are the most expensive. If you can correct something early on in the advance engineering process with suppliers, it won't show up downstream as a fix on the assembly line or as a warranty claim later or worse, a future lost vehicle sale.

So how do you get deeper into that process? It takes confidence and commitment between supplier and OEM given the majority of development work is increasingly being done electronically. Design and development data must be stable and consistent. In the airline industry we have seen the dangers of decentralized electronic collaboration where different software versions were used within the network.

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