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Analysis

Faurecia goes back to university

By William Diem
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Could students solve the supplier industry's problems? William Diem reports

"Impossible is not French," said Napoleon Bonaparte. Young men are equally sure that they can do anything. So mixing students from two leading French universities and asking them to solve a problem that plagues the automotive supplier industry might turn up some interesting solutions.

A student competition called "Creation of Innovative Products," sponsored by supplier Faurecia and Capgemini Consulting, tackled 11 different subjects last winter, and Faurecia sponsored one team to explore the question, "is there a profitable market for weight-reduced components?"

Three engineering students from the Ecole Centrale Paris and three marketing students from the ESSEC business school spent about four months on the project, charged with designing a lighter car seat and developing a business plan to support it. After the 11 teams presented their results in Paris on 4 April 2006, the Faurecia project was one of four honored with a prize.

"From our point of view, we did it," said ESSEC student Nicolas Renaud. Their "featherweight seat" frame weighs 21% less than a standard seat frame for a C-segment car like the Volkswagen Golf, and the students came up with a marketing approach that they believe would reward the required investment.

The engineers' design uses high strength steel and replaces five modules with a single construction. "We didn't start from the seat as it exists today and think about substituting a material, we invented a new structure that can resist the required forces," said Matthias Kaesser. "We would build our structure with today's equipment (in the factory), so you don't have to change the production. Production costs are not increased."

When components are lighter in weight, they are more valuable to the vehicle manufacturer, but Faurecia explained to the team that the vehicle producers tend to appropriate that value for themselves rather than sharing it with the supplier. With this project, said Renaud, Faurecia "wanted to take another look, with younger people who are maybe more aggressive."

The marketing innovation was to calculate the value of saving a kilogram of weight for the end user, in terms of fuel saved over a lifetime of use. That value helps the vehicle manufacturer sell the car, which should help Faurecia sell the weight savings to the client while keeping a good margin to repay its investment.

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"In their purchasing process, the OEMs have defined systems to correlate the price and weight," said ESSEC student Pierre Manternach. "They don't want to change their approach. But the big issue is for basic market approval. We try to change their minds with a specific communication strategy to raise a debate around this. We try to enhance the whole value. The OEMs have the weight of the car to manage. Our approach tries to match the needs of the OEM and the end user."

By showing there is a value to consumers, said Kaesser, "we are on solid ground to tell the OEMs, 'You will be able to pass the value on to the consumer.'"

And if the OEM wants to appropriate all the value for itself, the aggressiveness of youth weighs in and the light seat project would come to a halt. "The supplier has to invest money to create a lighter seat, and he won't commit if he can't gain something out of it," said Renaud. "If there is no weight reduction, there is no value."

Claude Wozniak, the Faurecia manager who worked with the students, said that even though Faurecia knows just about everything regarding light weight seats and business plans, it is a good idea to look at those questions again with a fresh eye.

"You'll always have people who say, 'We already tried that and it didn't work,'" said Wozniak. "But maybe things have changed with today's material or a new process. It's important to re-evaluate ideas."

Designing a seat and a business plan is a complicated affair, he said, and he regrets the fact that it took most of the first month of the project just to explain the legal and physical requirements for a seat.

If the students have a complaint, however, it is that they didn't have enough information. "We had problems getting the right input. We asked for information to calculate forces, or how they are handled today," said Kaesser. "They had concerns about our confidentiality status."

Mixing business school and engineering students mimics the trend in industry to form project teams that cross traditional boundaries




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From the student point of view, the "featherweight seat" project was real. "We could have used more support from Faurecia, more resources, more consulting from their engineers," said Manternach. "We did all the work ourselves. We had little feedback from the company."

Engineers have met with them since the project was completed, said Kaesser, "and they were skeptical, they had concerns about some points. We didn't have time to put in some features like airbags. But they agreed that it is possible to realise our design."

There has been less feedback on the marketing strategy, said Manternach. "We presented it in ten minutes," he said. "We are still trying to find a day to meet with them."

Still, both students and their Faurecia teacher are happy this spring. Mixing business school and engineering students mimics the trend in industry to form project teams that cross traditional boundaries. "It was a great experience to be mixed with engineers," said Renaud. "We had different nationalities, and different points of view."

Kaesser, the engineering student from Germany on the team, defended the programme's weaknesses, "It was the first time. It can be fixed."

Wozniak, who follows the future trends that guide Faurecia company research, hopes the company will repeat its investment in innovative thinking next year. He is also a member of a European Commission project to identify the needs of highway transport in 2020, so there is no shortage of future trends to examine, or old ideas to re-examine.

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