

# **INFLUENCE OF THE END CUSTOMER ON THE CAR DEVELOPMENT**

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## **ABSTRACT**

This paper describes the result of the research done by me and my project group during the Integrated Product Development (IPD) minor program in the Fontys University of Applied Sciences. Four interviews were held with the production managers from different companies who are involved in the automobile industry. The special literature dedicated to the topic of customer involvement also had been used in the research. The research showed that term 'customer' is interpreted in different meaning for different companies. The customer could be a designer, an ordinary driver or just a car expert. The involvement of the customer in all four companies is carried out only in the phase of 'identifying customer needs', most of the times done by marketing department. Further on customer involvement is not needed as companies try to avoid interruption of 'unnecessary eyes' due to the tough competition on the market. To find out what influence the end customer has on the new car model development I conducted further research. I found some interesting articles that proved me that such brand automobile companies as Audi and BMW are starting to involve the end customer in the development process and the integration is not going to stop only on the online website communication.

## **1 INTRODUCTION**

I have been involved in the Integrated Product Development (IPD) minor this year and one of the courses in my minor program was Integrated Research Module (IRM). In that research module the project group had to conduct a research about the customer involvement in the product development. I and my group members chose to explore that topic in the car industry as we thought it is one of the rapidly developing industries and had a high demand and attention from the customer side. In the research we wanted to find out why the customer involvement is important in the car development process. During the project research I found a lot of ideas of what should be discussed and described in our end report. But as we had a short time period we were not able to write about all facts that we found. In my own research I have broadened group's research question to bring more information about the end customer involvement in the car industry.

## **2 PURPOSE OF THE INVESTIGATION**

The purpose of my investigation was to find out what degree of influence has the end customer on the new car model development. I wanted to know how Toyota or Audi could predict, feel and more importantly know for sure that this model of car is exactly of what their end customers needed. It is not a secret how it is difficult to satisfy customer's needs when he doesn't really know what he wants. However, that doesn't mean that the end customer cannot add value for the development of a new car model for passengers like he is.

### **3 APPROACH OF THE INVESTIGATION**

In order to find out what degree of influence has the end customer on the new car model development, there were four automobile companies-suppliers interviewed by my project group and special literature, including books and articles in the magazines dedicated to the automobile industry, used. Four interviews were held with the production managers from different companies who are involved in the automobile industry such as:

- Brabant Alucast, an internationally oriented company produces high-grade die cast aluminium and magnesium products for different brand cars
- TNO, a specialist service provider to the international automotive industry
- DAF Trucks N.V., which is focused on the development, production, marketing and sale of medium and heavy-duty commercial vehicles
- SPG-Arrk, a key member of ARRK Global Network, is a full service company for injection moulded pre-series and prototype parts for the automotive industry throughout Europe

In our interview questionnaire we had four topics to discuss with the companies, which were:

1. Concept development
2. Customer involvement
3. Impact of customer involvement
4. Experience with the customer involvement (evaluation)

These interviews helped us to see and hear by our own eyes and ears what is really going on in the automobile industry and what attitude they do have towards customer involvement. It also gave us more insight of how the product development process is done in different brand automobile companies, who is bringing innovation and who is benchmarking.

Reading and analysing different articles gave the opportunity to feel and understand what the experts and end customers are thinking about those companies who involve customers in the development process.

### **4 RESULTS OF THE INVESTIGATION**

#### **4.1 Outcome from the interviews with the companies**

The purpose of the group's research was to investigate why the customer involvement is important in the car development process. It was found that customer involvement is an important part for the car development. The adding value of customers in the automobile industry is customer's ideas and complaints which are analysed by marketers and send to engineers for further improvement. Of course, type of customer is also playing role: a car expert's ideas and thoughts are bringing more value than an ordinary outsider in the case of light cars where customer's emotions choose the product. Regarding DAF trucks and big vehicles, an ordinary driver is adding more value as he is driving the truck which construction is more complicated than a light car. In this case brains and technology are influencing the customer decision.

The stage where the company usually involves customer is at the earlier stage (market research only). For example: in exhibition or road shows car companies expose their concept cars to the end users and then they seek feedback from it. In this way we can see active interactions between customer and the company. Of course, in such adds value to both the customers and the producers. The added value is that, the customer helps to make the product better, useful, suitable with the market and even sometimes to help the technology of the auto. And the added value to the company itself are the

insights from the customer interaction and participation, constant feedback, customer satisfaction and the most important, the customer's loyalty to the car brand.

Most of the world-known international automobile companies are operating around the world and their customers are from different countries where different views and lifestyles. What Americans see as the perfect car would be not appropriate from Europeans. In other words without customer involvement international operating automobile companies would not know what are trends in the or what could be improved or added into the car that other competitors didn't see from the customer complaints.

As for the car companies, when they act as the customer of a supplier company, the added value for the customers, they got a good product because they work together, "two brains is better than one" the quality is better, the cost price and maybe the lead time of the development and production process are reduced. As it comes to supplier, they discover the dependence of customer from them and get new ideas regarding particular parts. The car companies bring in their ideas and work together with suppliers which comes out in the creativeness. And when the customers are satisfied with the supplier's work, they promote its name to other companies, which helps to broaden supplier's member channel.

This shows that the relationship of the customer and producer is not passive but active interaction between them. And by following this active interaction, it adds value every time in the product development process.

## 4.2 Findings on the end customer involvement in the new car model development

### 4.2.1 TOYOTA shows how to do it best

In the car industry the revolution started in Japan. In 2003 when Toyota's chairman, Hiroshi Okuna, uttered the words "I can't offer any relevant input. This is a vehicle design and concept that is clearly not for anyone in this room." With those words, Okuna admitted that it was time to consider a new

Forget Porsches, Mercedes and Cadillacs. Hollywood celebs are ditching high-end bling mobiles for the eco-chic Toyota Prius, \$37,400.

So what's the fuss? Well, for starters, the Prius is a hybrid – has a normal engine plus an electric one and automatically switches between the two to save petrol.

It is the #1 eco-friendly car in Australia at the moment and only releases 106g of carbon dioxide per kilometre (e.g. the average car releases around 200g); plus a mere 4.4 litres of petrol will get you about 100km (about the same as a scooter!) So a full tank could get you up to 1000km! We love it as much as the celebs do!

Celebs spotted in a Prius:

- \* Cameron "I love my Prius" Diaz
- \* Leonardo DiCaprio
- \* Jessica Alba



Cameron Diaz with her Prius

model of car design (and a new brand) if Toyota hoped to appeal to a new, younger and more demanding demographic.

Toyota would have to give up partial ownership of the brand to the customer. Acting as a leader and visionary, Okuna gave the idea a seal of approval. Over the next few months, developers brought Okuna a revolutionary concept - a car that could be mass customized to customer specs prior to delivery. It would be a production- and distribution-system that would come with a new brand: Scion. Since its launch, Scion has been huge success, and many other car manufacturers are following Toyota's lead.

Today people over the world started to worry about the ecology and consequences of global warming. Moreover, people are searching for the solutions to stop that deadly consequences and be green in everything as much as possible. Toyota didn't sleep and developed a hybrid car which is now so popular not only among ordinary population but also among stars of show business.

That is the example of how it is important to listen to the end customers all over the world. It is an example of a big control and influence of customer needs on the companies.

In the 21st century, car development starts roughly five years prior to anticipated launch date. At the beginning is a team of marketers and designers whose task is to figure out what real people will pay for that snazzy new ride that will roll down the line sixty months hence. A project manager's responsibility is to be the voice of the future customer, and make sure that all the trade-offs that go into any vehicle are justified. You can imagine what great competencies should that product manager and his team has to predict and most importantly to feel what the customer would like to see in his future car and buy it. People who work in Toyota could be named geniuses if they construct such cars.

#### **4.2.2 Customer integration**

According to the Massachusetts Institute of Technology (MIT) research, 75% of new products are likely to fail within five years. There were a lot of failures with the new generation cars which had everything what customer wanted thought such company as Samsung that wanted to produce its own brand cars. However, innovative South Korean company failed with its product that cost about one million dollar investments.

Sometimes companies create some models of cars which have useless parts or technologies too complicated to the customer. What could be a best thing to do is just to ask the customer for his ideas. And that outside source of inspiration brings much more ideas and information to the companies nowadays comparing with the brainstorm of one product development team. Ruth Mortimer examined this growing trend and found that brands such as BMW and Audi are realizing that their users are often best placed to offer new ideas, technologies, solutions and designs to businesses. In his article about inspirational consumers one of the interviews, Jeff Weedman, vice-president of external business development at P&G, said: "This isn't a revolutionary idea. It's just smart business. Why should we care where the good ideas come from? We should just make sure that they get to us."

In the past Audi didn't have a lot of experience of involving its customers in the product development process but now everything changes. In the article Ruth Mortimer comments: "Audi has also chosen to involve consumers in its innovation and new product development process. It encouraged customers to visit its website last year and offer opinions on new entertainment and information elements of its cars. Users could choose different functions or suggest new designs and ideas.

Hans Berger, head of brand strategy at Audi, explains: "People are always deeply involved in cars. If you give them a chance to take part, they want to do so. They always want to give input."

Audi claims that 6,500 consumers from across the world took part in the website study last year and the company has since put many of the suggestions into development. Berger will not reveal which elements of car design came directly from consumers, but claims Audi will repeat the exercise in future."

The customer involvement mostly used on the first stages of product development when companies searching for the new ideas and thoughts to create something new in the already completed product. To bring new wave into research work many brands run the programme from their marketing department or other divisions to get innovative customers and inventors.

Mike Collins, chief executive of Big Idea Group, explains: "It's a very simple concept; if you can get 5,000 different people thinking about an idea, that's going to be very powerful". "This process sends an important message to the consumer that the brand is working hard to give you the best products it can. If you're not innovating today, you're in trouble."

Communicating with customer only through the website or other tools is not enough. Sometimes it is useful to meet customer face-to-face to hear and see by your own eyes what he is thinking about your product, what reactions and emotions are showing on his face while he is talking about the product. In

this way companies really can feel what the customer wants and that will bring them a lot of food to think about.

In the part marketing vs. innovation of the article author Ruth Mortimer advises businesses turn to consumers to find out how they measure the effectiveness and value of their products. “Audi's Berger claims that he would only ever consider running its online customer innovation programme alongside wider research. It is difficult to assess emotion through the website proposals and important to meet customers in person.

The task for brands such as P&G, 3M, Audi, BMW and others now is to integrate the customer innovation process effectively into their businesses. But 3M's Koerschner is convinced that within five years, customer involvement will be part of the standard innovation method”.

#### **4.2.3 FIAT 500 miracle**

Everybody knows about the quality and efficiency of Fiat cars. For me Fiat was never a car that can change my or somebody's life. As for me, I come from Kazakhstan where only ‘Made in Germany’ cars can survive and satisfy the customer in all his needs. The climate is a key why it is difficult for other Europeans cars to survive. We have plus 40 degree in summer and minus 40 degree in winter, plus 80% of our roads are unpaved. Compare to the conditions of what Europeans have it is understandable why their cars are so soft for Kazakh people.

However, Fiat 500 surprised me. I remember we were searching with my group mates for information about experience of automobile companies with customer involvement. And we found an article on the web about the ranking of different brand cars on the exhibition in the contest of customer choice. To our surprise Fiat 500 was one of the best.



*Figure 2: Fiat 500 evolution*

Fiat 500 became one of the most mass-customized and co-created car. After a 30-year pause Fiat presented this year a small, sporty and cheap miracle on wheels. John Todor, contributor to the Customer Think blog, recently wrote up a summary of Fiat's efforts to both engage and respond to customer demands:

“Fiat has engineered a way to get customers engaged on- and offline. I believe they are on their way to nurturing mutually meaningful relationships.”

Fiat came up with the unique idea to have a widespread involvement in the development of the model and of the marketing plan, with the participation of over 3,000,000 enthusiasts who have submitted their ideas to the project, through the [www.500wantsyou.com](http://www.500wantsyou.com) website. One of the journalists of world car fans website commented about that new way of involving customers as “a new cultural approach to relations between manufacturer and client, making Fiat one of the most open organizations, close to the expectations of the public. ‘The 500, the car of the people, by the people’: this slogan sums up the

philosophy behind the development of a project which, in the best Fiat tradition, ‘democratizes’ access to contents and technologies that have never been offered in this segment before”.

As it was said before by the creators of the 500 model ‘it is an inclusive not an exclusive concept and Fiat felt that this was the best way to meet the tastes of all its potential customers, without distinction, from the most minimalist to the most eccentric.’ With the help of technologies for manufactures it is becomes easier to adapt to the needs of every customer. Fiat 500 comes up with plenty of accessories and useful things inside the car such as portable navigator specially for this model, battery charge, etc. Moreover, Fiat offers much more than a car, it also gives a customized services and forms of payment.

In the John Todor’s summary he states: “Customer involvement helped sell 57,000 cars (!) in the first month (July ‘07). I predicted the way Fiat is continuing to involve customers in the ownership experience will lead to a growing customer base. Perhaps more importantly, they are nurturing highly engaged and committed customers who are very likely to be passionate evangelists”.

From this example it could be seen that Fiat Company played on the emotions of its customers, especially on loyalty and nostalgia. It brought more innovative car from the past with huge benefits for the customer such as a low price and opportunity to customize the car as the customer wishes to. In that case, customer was involved from the beginning of a car model development (design) till the end (marketing/promotion). That fact showed and proved that the end customer adds value in the development process.

## **CONCLUSIONS**

From the interviews with the companies the group found out different answers but common at one point that the customer involvement is important in the car development process.

*TNO Automotive*: “The best way is to learn to work with the customer, this means that you learn what they need, what is important for them and what do they think”

*DAF*: “Because it is very important to have their opinion, without them there will be no reasons for our existence”

*SPG-Arrk*: “How do you want to sell your new car model? How would you know if your concepts are good enough for the market? Only from the customer”

In any business no matter on which market the last word would belong to the customer. I read the IBM strategy report on the topic ‘Automotive industry: On the road to on demand’ where specialists were giving their advices to CEOs on how to overcome the challenges in the industry and one of them was: “Increased responsiveness to intuitively sense and respond to changes in the market environment, as well as the needs of customers and all participants in the value net”.

The influence of the end customer on the companies becomes great. Whatever the company does to succeed on its market, the key always will be the end customer; at the end of the day he will be the one who will decide whether your product is good enough to buy or not.

The involvement of customers in new product development is a successful strategy and tactic to improve new product success. In the Meyer Group article about ‘New markets via customers’ it was concluded that “customer involvement can pay off in eliminating price resistance and making your product the one that everyone wants. After all, who would not choose the option created just for you?”

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