

vocatus: ■ ■



The role of costumers in product development

In theory, the desires of the customer should play a part in product development. In practice, this is rarely the case. We show how companies can successfully involve the customer in development. The result: more attractive products at lower cost.

‘Knowing what customers are thinking’: optimising product development

Development departments usually work intensively on new products and their features, yet they often lack contact with the customer. In contrast, sales has direct contact with customers and knows about their desires and needs. If one can manage to unite the knowledge of both departments and channel this into the development process, the result will be products of high value for the customer.



When deciding to make a purchase, all customers ask themselves either consciously or unconsciously: 'How will it benefit me and how much do I have to pay for it?' Thus, the success of a new product depends on the balance between its benefit for the customer and its price. Astoundingly, however, in many companies customer opinion is not a systematic part of the development of new products. Instead, product developers orient themselves according to the offerings of competitors and then calculate the intended selling price on the basis of costs and the desired margin. The benefit for the customer or even the price the customer is willing to

Sales and development often cannot communicate on a common level.

pay plays too minor a role in the development process. As a result, sales and profits are often lower than what they might have been.

Fundamental and unedited customer desires find their way to the research and development department in only a tiny minority of companies. The fault lies neither with marketing nor sales nor product development; often, there is simply no basis for communication between departments. This, however, leads to considerable losses in terms of interface.

This is why the interface between marketing/sales and development is generally one of the most difficult. Sales and development managers often talk at cross purposes because they do not know enough about each other's processes and requirements. Customer information is often not recorded systematically or is formulated too abstractly. This makes it difficult to translate the findings of marketers into concrete requirements for developers.

Many developers, for their part, feel they have a better understanding of customers because they deal with the product very intensively. At the same time, they are, however, also dependent on the experience of their sales colleagues for a 'correct' volume and price analysis in order to make the business case successful. This leads to emotional and angry discussions that go round in circles, where the same decisions

have to be made again and again with constantly different outcomes.

Even when the two departments talk to each other, sales generally cannot answer the specific questions of developers in detail. For example, a developer working on a new air conditioning system wants to know whether an additional price of 28 euros is justified to cover the manufacturing costs of a new timer feature. This relates to a new model that will be released on the international market in three years. How should sales or marketing answer such a question appropriately?

The key question is as follows: how can the value of product features to customers be quantified during product development and systematically included in the development process? Only by doing this can manufacturers develop the exact products that customers both desire and are prepared to buy at a certain price.

The solution can be found in the concept of value-based product design, which is based on consistent 'customer value'. With customer value, the things that customers desire and perceive to be beneficial can be integrated into the hard figures that are required in the development process (cost, weight, etc.). This gives product developers a valid and directly accessible system for measuring customer value.

Subjective customer value must be integrated into the hard figures of development.

This allows companies to make significantly faster, more

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transparent and more sustainable decisions about their products. The methodology presented here by Vocatus thus contributes substantially to the integration of customer opinion in product development. The following two articles illustrate this method through the example of vehicle development in the automotive industry.

Value-based product design in the automotive industry

In the automotive industry, vehicle concepts generally have to be developed in one country which must be suitable for customers all over the world. Platform and modular construction systems significantly limit the possibilities for product differentiation. It is therefore all the more important to know what customers are thinking with regard to the criteria that can still be freely decided.

Today, vehicles are no longer developed for a particular and clearly defined type of customer. Instead, customers from completely different cultures and market environments

in some countries safety is a definite priority, in other countries fuel consumption is one of the most important criteria when making a purchase.

What is really important to customers – and what are they willing to buy for what price?

must be served with more and more new vehicle concepts. In this regard, there is to some extent a distinct difference between the preferences of different regions. For example, a new vehicle with a petrol engine without a diesel option is sufficient for most American markets. In Europe, however, half of the market would not be served with this strategy. Other criteria also give rise to profound differences. While

Developers often lack information on which product characteristics are relevant in other markets and cultures. Abstract market studies, which are frequently consulted, are of little help. For example, what does the requirement that ‘demographic change must be considered in product development’ mean for the developer with regard to the specific design of the boot of a new compact car model?

In order to cope with the variety of models and at the same time shorten the development cycle in the automotive industry, all manufacturers today rely on platform and modular construction systems.

However, these systems limit the manufacturer's freedom to differentiate products. It is therefore all the more important to know what customers are thinking with regard to the criteria that can still be freely determined.

When information about target segments is used in the early phases of product strategy, this data often comes from departments that are cut off from development such as marketing and media planning. While these milieu-based segments are very suitable for supporting the marketing of a product that has already been defined, they do not usually allow any concrete conclusions about how the finished product should look.

Only when customer value is used from the beginning to segment and identify target customers can valid statements be made about the degree to which it corresponds to, for example, the 'Modern Performer' in terms of design, driving characteristics, interior variability and value for money, i.e. the specific car concepts that the target segments are truly enthusiastic about.

If the car concepts for the target segments to be served are only roughly described, product development needs an approach with which it can quickly and conveniently assess how the customer reacts to different product features and content. Hundreds of such questions are asked particularly when the product specifications are defined during product development.

Firstly, it is important for customer value to be part of a system that speaks the language of the developer. The work of developers is determined by quantitative indicators. Focus is placed on detailed specifications such as cost targets (manufacturing costs, investments, the cost of tools, etc.) or quality values that can easily be calculated (warranty costs, breakdown rate, etc.). These values are integrated into a very stringently structured development process with clearly defined milestones. The problem: because customer value is usually only expressed in terms of qualitative (often 'vague') product requirements, it is often not highly prioritised as a general rule.





Figure 1:

In surveys, customers make a large number of decisions that they would also have to make in a real-life purchasing process.

Most attractive		Least attractive	
<input type="radio"/>		Separable seats, flat boot floor	<input type="radio"/>
Most attractive		Least attractive	
<input type="radio"/>	A	CD player/radio with navigation system and 6 additional speakers	<input type="radio"/>
<input type="radio"/>	B	Xenon light, LED daytime and cornering lights	<input type="radio"/>
<input type="radio"/>	C	Leather seats with heating	<input type="radio"/>
<input type="radio"/>	D	Automatic air conditioning with zone regulation	<input checked="" type="radio"/>
<input checked="" type="radio"/>	E	6-litre engine	<input type="radio"/>

Source: Vocatus 2015

The aim must therefore be to set up a 'hard' measuring system that can express customer value in terms of values that can be used to make decisions. In this way, common trade-off decisions can be made taking customer value into account (for example, customer value v. manufacturing costs), because developers need quick and reliable answers to questions such as: how important is the design of the boot in comparison to acceleration, the design of the controls or the driver assistance system? In clear and simple terms: for this vehicle design, would the customer prefer 20 litres more boot space or an engine with 20 hp more power?

If this information is available, the fixed target costs of the budget can be adjusted in such a way that maximum customer value is achieved.

The basis of the customer-value measuring system is to deliver an empirical study. An intelligent solution, this involves the same study or a compatible rationale that is used as the basis for identifying the target segments of the product strategy. In this way, the whole vehicle is 'broken

down' into features that are translated by engineers into the language of the customer because product features must be presented to the customer for assessment in the same

Developers need quick statements about what is relevant from the customer's point of view.

way that customers experience them when making a real purchase. Only then can they make a valid assessment. The most relevant measurement of customer value is the one that realistically represents the actual decisions of customers. This means customer decisions have to be simulated prior to manufacture, and the findings from this simulation must play a direct role in development.

An evaluation of excessively abstract or strictly defined benefits ('Is driving performance more important than price?') is, in contrast, not very targeted. One customer may interpret driving performance to mean acceleration, while another may associate it with range or even driving comfort.

With Maximum Difference Scaling (MaxDiff), which is a conjoint variant, market researchers have a tested and easy-to-use tool which customers use to make a wide range of decisions of this kind. The concrete evaluation of optional features is also simulated in the same way that the customer would use an on-line configuration tool or behave on-site in a dealership. When completing the survey, the customer thus makes a decision that is as close as possible to the

A market research project for every development issue is too time-consuming and expensive.

decision that he or she would make when really buying a vehicle (see Figure 1).

This approach expresses the customer value for each tested vehicle feature and for each variant model in the form of a reproducible and transparent value that is incorporated into the development process on an equal footing with

other indicators. For reasons of time and cost, a separate market research study cannot be commissioned for every decision that influences the vehicle design.

However, actions affecting the product that are not covered by the empirical study regarding customer value can still be evaluated on the basis of the study according to their own appropriate heuristics. This happens directly (for example, 'Folding back seats reduce the comfort of the fifth passenger and increase the flexibility of the interior. The net customer value is thus the difference between the gain in flexibility and the loss of comfort of the passenger') or through an analogy (for example, 'A Blind Spot Assist is of comparable benefit to the customer as a clear rear view').

On this basis, it is easy for developers to weigh up many different elements and so develop a cheaper vehicle with higher customer value. A concrete example of such product optimisation can be found in the next article.



More attractive products at lower costs

By quantifying customer opinion, production costs can be lowered and customer value raised simultaneously. In addition, parallel developments and expensive changes later on in the development process are avoided.

How exactly do changes to the product affect the customer's purchase decision? Valid information is the key to making customer opinion a permanent and fixed part of the development process. Vocatus' value-based product design delivers concrete benefit values on a single scale for all tested product development measures. It makes it clear for developers and product managers how certain measures will influence the inherent value of the vehicle and, therefore, customer value. They can then concretely determine what added value will be generated if an additional characteristic is included in the product concept. They can also determine what loss of sale value will result if a feature is removed from the concept. As a result, every step of the product development process is taken on the basis of an empirically proven concept to raise customer value.

In this way, a comprehensive library of customer knowledge about vehicle segments and characteristics is formed and systematically applied. What must also be carefully noted when making changes to a product is how strongly the

customer actually values a particular feature. It is equally important to assess whether standards are being met, i.e. does the customer expect this feature in the segment concerned? Or is there a unique selling point in this segment that is of high interest to the customer and that can thus make the car attractive to him?

The measuring system delivers reliable and precise information about the probable decision-making behaviour of customers. It is then possible to reduce the cost of a car in a targeted

Parallel developments and expensive changes are avoided.

way by leaving out elements that are expensive but of little benefit. At the same time, customer value can be increased by incorporating many beneficial and inexpensive features,

Figure 2 illustrates the development of a new car. At first, the car costs 13,300 euros and has a certain customer value.

Then, elements are systematically removed that reduce customer value only slightly but save a large amount of cost in manufacture. In this example, the loading capacity is reduced, the sun roof is made smaller and the permitted towing capacity is lowered. Then, elements are added that significantly raise customer value but at a relatively low cost, in this case, a colour head-up display or an electric parking brake. The result is a car that costs 300 euros less than the initial model and yet increases customer value significantly.

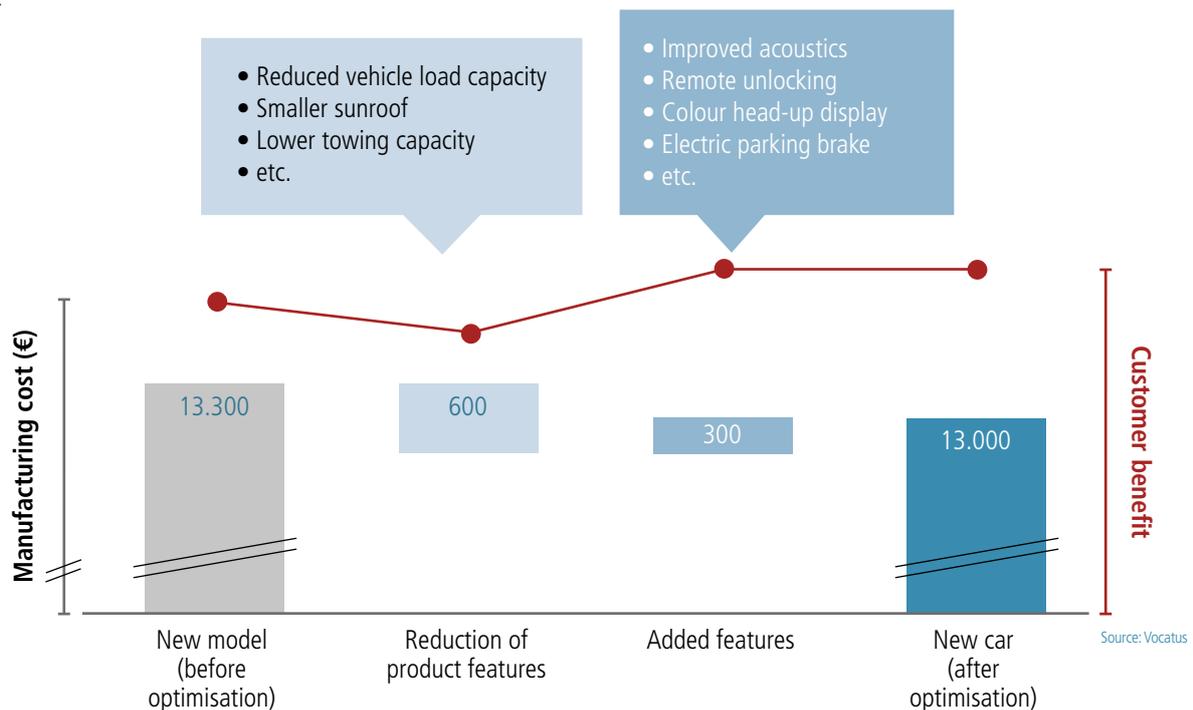
In this way, the customer value of the measures is integrated into the system of financial targets and the development

process, and is directly contrasted with the corresponding manufacturing costs. Through early identification of the best solution from the customer's point of view, development costs can be reduced because parallel developments and

The result: lower product costs and a more attractive product.

costly changes later on in the development process can be avoided. The result: lower manufacturing costs and a more attractive product.

Figure 2:
Manufacturing costs reduced by €300 with simultaneous increase in customer value



'The Uncomfortable' by Katerina Kamprani

With her art and design project 'The Uncomfortable', Katerina Kamprani, an architect from Athens, has given everyday products a new but unusable design.

Through a new interpretation of the invisible design language of our domestic reality, 'The Uncomfortable' changes the characteristics of simple everyday objects in a way that challenges our expectations of functionality. Established conceptual models are broken and through faulty design, we learn to appreciate the conventional. The semiotics of the original object are retained but when observers try to imagine using

the object, they are disappointed, their expectations remain unfulfilled and the ordinary objects take on a unique, absurd and often surreal quality.

Katerina Kamprani has presented her work at a number of Greek design conferences and has participated in group exhibitions in Milan, Berlin and Brussels.

Her project has also been publicised by many media outlets, including CNN, Huffington Post Arts & Culture, 9GAG, BuzzFeed, WIRED and GIZMODO.

Pictures of her work have also appeared in print media such as the magazine BRAND in Hong Kong and DAS MAGAZIN in Berlin

broom | Katerina Kamprani



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Vocatus is an international market research and consulting company specialising in decision analysis, price optimisation, customer satisfaction, and employee commitment. In all its projects, the company gives priority to solving real-life problems, making concrete recommendations and delivering results that provide a basis for efficient implementation.

Vocatus has been honored several times, receiving international awards for its innovative studies and highly practical concepts.

Vocatus is an active member in the German Association of Market and Social Researchers (BVM) and the European Society for Opinion and Marketing Research (ESOMAR).

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