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# Customer involvement in product development: Experiences from Scandinavian outdoor companies

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## Abstract

In this paper the outdoor gear and clothing companies' experiences of customer involvement in product development are investigated and discussed. The purpose is to examine how customers are involved in product development and whether the companies believe there is a need for greater involvement. The study focuses on three customer groups: users, retailers and professional users. Surveys were sent out to 33 Swedish and Norwegian companies within the Scandinavian Outdoor Group. The results of the study indicate that the companies think there is a need to involve the users more than today in the early phases of the product development process. Smaller companies seem to have a need for greater user involvement. Most of the participants also explained that they would increase their customer involvement if they had more time and greater financial resources.

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## 1. Introduction

One important part of product development is to identify users' needs and expectations and translate these into design parameters. However, fully understanding users' needs is often a costly and inexact process [1]. The future costs of a product, during manufacture as well as use, are to a large extent determined at the development stage [2]. Consequently, it is important to identify the users' requirements as early as possible. One approach to identifying needs and expectations is to involve the customers in the product development process. Their experiences, ideas and opinions could be of great value to help the development team to identify problems and to find design solutions. Von Hippel [3] points out that users

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are the first to develop many and perhaps most new industrial and consumer products. However, customers may also have needs that they are unable to identify. Although the use of customer information has been recognized as a key success factor for new product development, the differences in the use of customer information in different market contexts are mostly unknown [4].

This paper aims to investigate and discuss customer involvement in the product development process from the outdoor gear and clothing companies' perspective. In the rest of the paper, these are referred to as outdoor companies. The purpose of the study is to examine how and to what extent customers are involved in new product development in this industry today. Customers are defined here as anyone who is affected by the product or by the process used to produce the product. The customer groups that are included in this study are users, retailers and professional users. Professional users are in this case people who in some way are sponsored to use the product. Outdoor products are often used under special weather and environmental conditions, with specific user requirements. Therefore, involving professional users may be a good way to identify user requirements and needs. Retailers may also be good to involve since they are a link between the user and the company.

Another question to be answered is whether the outdoor companies believe there is a need to involve the customers more than they do today. If this is the case, what customer group do they want to involve more and where in the process do they want to involve them? The study is limited to Swedish and Norwegian outdoor companies.

## 2. The Product Development Process

Product development can be seen as an iterative process that starts with some kind of idea generation and results in a new product available for purchase. There are many circumstances that affect this process. New product development usually differs from further development of an existing product. Product development for consumer products is often different from the development of industrial goods [5]. The development strategy and product complexity also have an impact on the process. The product development processes that are presented in previous research papers and literature are very different to each other [6-8]. In this study a process that describes the main standard activities is used. This is based on previous research studies and literature, created with outdoor products in mind. The phases are described in Figure 1:

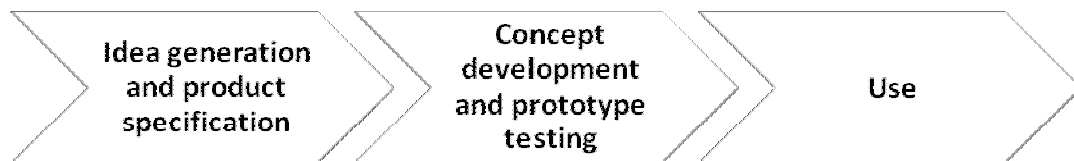


Fig. 1. Phases of the product development process

*Idea generation and product specification* represents the first phase of the process, where ideas are created. The second phase is named *concept development and prototype testing*. In this phase some of the ideas are further developed to product concepts and prototypes are tested. The last phase, *use*, represents the phase where the final product is finally available for purchase and used.

Customers can be involved in different phases of a product development process and also in different ways. Kaulio [6] presents a framework of methods that could be used to involve the customers in the different phases. This framework includes three degrees of involvement; *designed for*, *designed with*, and *designed by* (*ibid.*). Lagrosen [9], who has studied industrial manufacturing companies, points out that the

use of formal methods for customer involvement are relatively limited. Instead cross-functional teams are found to be more common in new product development (*ibid.*).

### 3. Survey Design

A survey was created and sent out to 33 managers of Swedish and Norwegian outdoor companies. These were all members of the Scandinavian Outdoor Group (SOG). SOG was founded in 2000 as an industry initiative to promote export sales of outdoor gear manufacturers from Norway, Sweden, Finland, Denmark and Iceland [10].

Part one of the survey included general questions about the company. Part two included questions about customer involvement in each of the phases in the product development process. In this part, the participants had to estimate how important they thought it was to involve users, retailers and professional users in their product development processes. They also had to estimate to what extent they actually involved each of the customer groups. A scale from 1 (low) to 7 (high) was used as response alternatives of these questions. The answers were combined in a diagram shown in Figure 2:

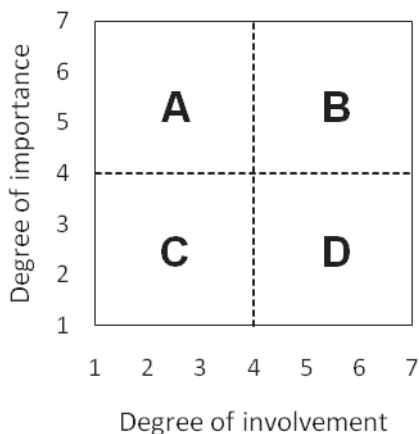


Fig. 2. Result presentation of survey questions

Figure 2 is divided into four fields (A, B, C and D) that represent different experiences of customer involvement. Points that are close to the upper left corner of field A in Figure 2 represent companies that would like to involve their customers much more than they do today. Points that are close to a diagonal from (1, 1) to (7, 7) in Figure 2 represent companies that think they have a quite balanced customer involvement. The third part of the survey included various questions about customer involvement.

### 4. Results

In the first round of the survey dispatch, 11 answers were received. A reminder was sent out, and seven more answers were received. In sum, 18 of 33 surveys were returned giving a response rate of 54 percent.

The most common answer to the question “*What are your most important sources of information when developing ideas?*” was *users* (46%), followed by *Professional users* (17%) and *Retailers* (14%). The most common answer on the question “*What are your most important sources of information when developing and testing product concepts/prototypes?*” was also *users* (44%), followed by *Professional users* (23%) and *Retailers* (9%). The companies’ own employees were also important sources in this

phase. Thirteen of the companies said that they collected feedback from their customers in the use phase. Fifteen of the companies said that they would increase their customer involvement if they had more time in the idea-to-finished product process. Eleven of the companies said that they would increase their customer involvement if they had more financial resources. Further results from questions about each of the phases are presented in Sections 4.1 to 4.3.

4.1. Idea generation and product specification

Results from the *idea generation and product specification* phase are presented in Figure 3 and Figure 4:

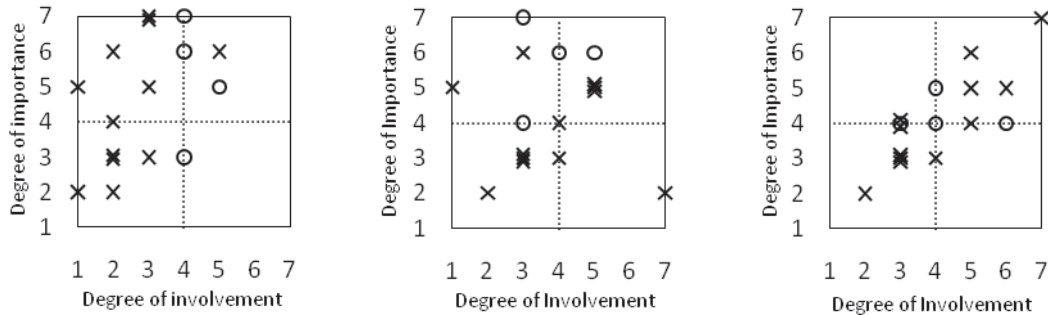


Fig. 3. Involvement in the idea generation and product specification phase broken down by company size. Crosses represent companies with 1-50 employees. Circles represent companies with more than 50 employees. a) Users; b) Retailers; c) Professional Users

Figure 3(a) shows that companies with less than 50 employees need to involve users more in the idea generation and product specification phase. The importance of professional user and retailer involvement seems to be very much in line with their actual involvement in this phase.

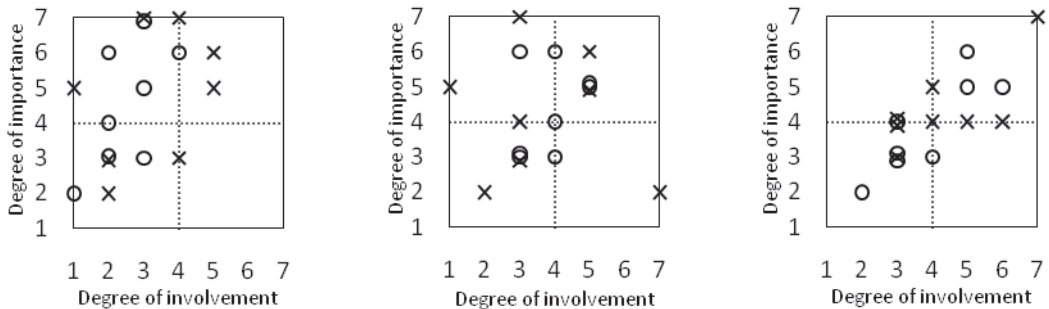


Fig. 4. Involvement in the idea generation and product specification phase broken down by product category. Crosses represent apparel and circles represent other outdoor products. a) Users; b) Retailers; c) Professional Users

Figure 4(a) shows that some of the outdoor clothing companies and most of the others want to involve users more. No great need of more involvement of retailers and professional users could be found. Summarizing Figure 3 and Figure 4, small companies seem to have the greatest need to involve the users of their products more in this phase. This need was found to be most obvious for companies that make products other than apparel.

4.2. Concept development and prototype testing

Results from the *concept development and prototype testing* phase are presented in Figure 5 and Figure 6:

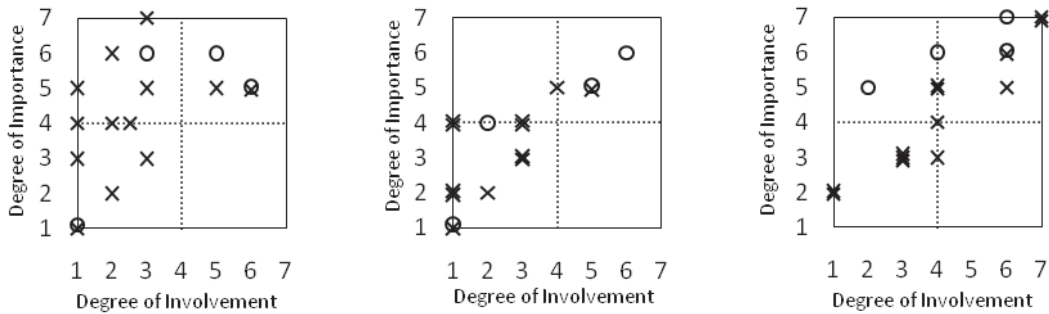


Fig. 5. Involvement in the concept development and prototype testing phase broken down by company size. Crosses represent companies with 1-50 employees. Circles represent companies with more than 50 employees. a) Users; b) Retailers; c) Professional Users

Most of the companies had a low degree of user involvement in this phase. Figure 5(a) shows that companies with less than 50 employees need to involve the users more in this phase. However, no great need for more involvement of retailers and professional users could be found.

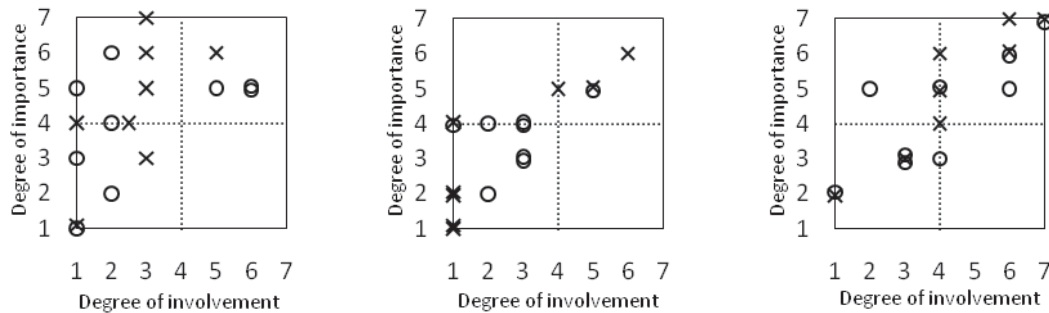


Fig. 6. Involvement in the concept development and prototype testing phase broken down by product category. Crosses represent apparel and circles represent other products. a) Users; b) Retailers; c) Professional Users

No major differences between the product categories could be found in this phase. Summarizing Figure 5 and Figure 6, companies with less than 50 employees have the greatest need to involve the users of their products more in this phase, independent of product category.

4.3. Use

All of the companies said that they think it is important to get feedback from the users. However some of the small companies told that they don't get any feedback at all.

## 5. Discussion and Conclusion

The overall conclusion of this study is that users are not so much involved in the early phases of product development, though most of the companies think that it is important. Obviously, most companies wish to engage the users in the product development process more than they really do. Especially small companies had this view. This is not surprising since customer involvement could be both a costly and inexact process. Another reason for why the degree of customer involvement in many cases is limited could be that the companies do not want to reveal information about the product before its release. Interviews and product testing were found to be the most common methods of involving the users.

The survey responses showed that it can sometimes be hard to distinguish between the categories of customers in the outdoor industry. The employees are often very engaged users of their products and are sometimes also professional users. The response rate of the study was acceptable. However the number of responses was quite small and had an impact on the conclusions that could be drawn. The form of distribution chain of the product may also have an impact on the answers given. However, almost all of the companies used retailers to distribute their products to the user. Although the process is generalized it includes steps that are recognized by most product developers.

This paper has contributed to an increased understanding of outdoor companies' view of customer involvement in product development.

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