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USER ORIENTATION THROUGH EXPERIENCE: A STUDY OF HOBBYIST KNOWING IN PRODUCT DEVELOPMENT

Tanja Kotro
National Consumer Research Centre
Helsinki, Finland

Abstract: *Those who are involved in hobbyist communities and share the values and practices of these communities often also innovate new products. Users are important actors in innovations. Recently, a lot of attention has been paid to users in relation to product development processes and especially user innovations. This article points out that product development team members are often simultaneously users themselves and they can be important translators of "hobbyist knowing" into organizational practices. Hobbyist knowing refers to the practice of making sense of situations through concrete activities and participation in particular social and physical circumstances and practices. This article studies Suunto, the Finnish designer and manufacturer company of sports and precision instruments, and the product development team of wrist computers.*

Keywords: *hobbyist knowing, product development, sports instruments, knowledge management, user involvement, user innovation.*

INTRODUCTION

User orientation and user involvement are widely discussed themes in recent product development and design literature and practice. This paper discusses users and their knowledge *in* organizations and therefore also addresses the question of organizational knowledge. User-centered design, participatory design, ethnography, and contextual design are often-used terms connected to user orientation (Kujala, 2003), all aiming at developing usable products by taking both explicit and implicit users' needs into account. Participatory design also refers to the worker participation that is considered central to the value and success of projects within organizations (Kensing & Blomberg, 1998). In *participatory design*, according to Kensing and Blomberg (1998), workers take part, for example, in the analysis of

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needs and possibilities, the evaluation and selection of technology components, the design and prototyping of new technologies, and also in the organizational implementation. User-centered design, also referred to as *user-oriented design* (UOD) plays an important role in different phases of the new product development process: by enhancing collaborative product development, improving idea generation, producing superior products and services, and facilitating product adoption (Veryzer & Borja de Mozota, 2005). As von Hippel (2001, p. 247) puts it, "new products and services must be accurately responsive to user needs if they are to succeed." Moreover, studies show that many users engage in developing or modifying products, and innovations overall (von Hippel, 2005). Contemporary theorists and practitioners agree that user needs should be present in new product development.

This article considers how user needs are present in new product development when the product developers are users themselves. I study this through empirical fieldwork in the product development of the Suunto Corporation.

The concept of *hobbyism* in this particular study refers to the employees' passion for sports and the employees' relationships with sports communities as an important reference for understanding users in the product development process, when hobbyists are working for the company in different positions of product development. Through their involvement in these communities of sports enthusiasts, product developers are familiar with users' needs, including both the technical requirements and cultural values and practices of the sports communities of, for instance, climbing, mountaineering, diving, adventure sports, and hiking.

Hobbyist knowing is the term I use to describe the practice of making sense of situations through concrete activities and participation in particular social and physical circumstances of, for example, sports such as slalom skiing. Such hobbyist knowing allows for, I suggest, translating and bringing not only individual insights but also the values and ideals of communities—in this case of sports—into one's work and into the product development process. The concept of translation here emphasizes that insights, values, and ideals are not transferred as such without any changes but they are constantly negotiated and dynamic. In this study, by the term *hobbyist*, I refer to people working on the product development team in various positions, such as user interface designer or designing engineer, who are personally deeply involved in sports participation within the communities outside the company.

In this article I suggest that users are represented in product development through hobbyist knowing. Hobbyist knowing could also be developed to serve as a shared ground for overcoming negative conflicts between subunits and in finding balance between customer needs, design and usability issues, business needs, and sales goals. Having a common sphere in hobbyist knowing could be developed into a positive resource for product development, but not necessarily into a design method in the same vain as the lead user method. Therefore, I discuss in this paper the relation of hobbyist knowing to user-centered design methods and the lead user method. It should be noted that hobbyist knowing also can involve drawbacks, if, for example, it is merely used to legitimate decisions made for other reasons. This article draws on a study (Kotro, 2005) that was conducted within the frame of Suunto Corporation's product development process of the wrist computers for outdoor use.

THE CASE STUDY: DATA AND METHOD

Suunto is a designer and manufacturer of electronic sports instruments for skiing, hiking, diving, sailing, and golf, among others. Suunto's strategy is to focus on sports activities where measurement technology, data processing, and specific algorithms can create benefits for active participants.

The focus of the study was on the product line of wrist computers for outdoor use. Since the launch of the Suunto Vector in 1998, the wrist computer category has steadily grown and has been one of the most successful product categories of Suunto. Suunto's wrist computers are made for demanding outdoor sports but, as a watch-size and watch-like instrument, they are also used as accessories representing the sporty and exciting lifestyle of their owner.

Suunto was established in 1936 in Helsinki, Finland. What had started off as a garage start-up became a listed company on the Helsinki Stock Exchange in 1995, with three main business areas: outdoors, such as hiking; diving and water sports; and electronics. In 1999, Suunto Corporation was acquired by the Amer Group. Listed on both the Helsinki and London Stock Exchanges, the Amer Group is a global supplier of sporting equipment. The Group's operations are based on global brands: Wilson, Atomic, and now Suunto and Precor.

I started an in-depth study of the product development process in Suunto in 1999. The research procedure consisted of analyzing interviews conducted with the product development team, collecting and analyzing corporate documents and advertising material, and observing practices in the organization and the hobbies important to employees. I first interviewed the marketing manager who described the product development process of wrist computers and those who were involved with the project. That was the guide for selecting other interviewees. I interviewed 10 persons in a total of 16 interviews, which lasted around two hours each. A designer, marketing manager, and two product engineers were interviewed twice and one product engineer three times, because these individuals knew the most about the process and had been deeply involved with it. The interviews took place between January 2000 and March 2003 at Suunto. Interviews were conducted in Finnish with native-speaking Finns, and are translated for this article by the author.

Getting to know people in the organization was the most important way to understand what kind of knowledge existed within the organization and how the understanding of the users was created within the product development team. Hallway conversations and becoming adept at reading cues in verbal and nonverbal communication were crucial for this research. The 16 interviews were the more traditional part of gathering the data. The interview discussions were quite open and unstructured, because I found it fruitful to let the interviewee lead the discussion after my question. Therefore I used semistructured interviews as the method for gathering the primary data. The questions in the interviews varied from facts about the company to ideas about the brand of the company; later in the process, questions also were raised regarding outside knowledge of sports as part of the formal data gathering.

Right from the beginning of the empirical study, I received all kinds of material from the company. In the first meeting I was given a wrist computer, the Advizor, for my own use. It was important to wear the product to note the kind of attention it provoked at a time when wrist computers were new products. I also collected company newsletters aimed at interest groups, packaging in which the wrist computers are sold (both old and redesigned packaging), product manuals and different kinds of brochures and leaflets, and clippings from

magazines from all over the world presenting Suunto products or showing them in pictures. During the process, I regularly visited the Suunto Web site and read annual reports, brochures and company newsletters and followed the media coverage about the company. Whenever I visited the company, if it was not considered too intrusive, I also browsed through the magazines and books people had on their desks and in the coffee room. Sometimes I borrowed some of those magazines. This was an important way of getting to know the company's culture as expressed through its individual workers. In line with this aim, I also frequently followed writings on extreme sports and experience orientation among young people, through popular discussion themes in the media, books, and articles, as well as the academic discussion.

It is difficult to describe the exact quantity of the data in this research. What I suggest is that, in this kind of a study—aiming at developing an interpretation of an organization and its ways of meaning-making—what could be called a "dive" into the world of the organization is needed. And, in this case, the employees' life outside work also should be understood.

WHEN THE PRODUCT DEVELOPER TEAM CONSISTS OF HOBBYISTS

According to my analysis, the sports background of employees was traditionally not recognized as an important resource for Suunto. In the early interviews, employees put their professional knowledge clearly before any references to their personal background in sports: There was no discussion about the interviewees' interest in sport or other hobbies at this point.

When a designer mentioned casually that he is a climber himself, he at the same time emphasized that he tries to keep the role of a climber in the background so that it does not mix with his role as a designer in the process. When I asked the designer about his own strengths in the project, he said that he had gained his experience primarily by working as a designer with watch-size equipment for 10 years. Presenting one's sports background as a minor motive at work can be interpreted as an outcome of people wishing to present themselves primarily as professionals, that they hold a position because of their education and professional experience.

Interestingly, in subsequent interviews with the above-mentioned designer and the product design engineers, we talked frequently about their sports experiences. Discussions seemed to turn in that direction quite naturally after the interview was complete or between questions: Talking about sports was a kind of complement to other, more formal discussions. For example, I asked if the designer talked about products with his friends who climb. He explained that because product development projects must be kept secret, he avoids talking about them with friends. But, he added, after spending 15 years with people who climb, the community becomes so tight that one knows what others think.

When interviewing the engineers, their personal passion for sports came up later as well, as we became acquainted. At that stage, professional work experience was no longer emphasized as the most important or even the only resource for product development work.

> TK: *Where did you come from? And why did you come to work in Suunto?*
> Product Engineer 1: *I came straight from design school. I have this personal problem that I have a background in a sport that is close to Suunto, orienteering.*

> *I have done it since 1978. And I have made gadgets for my own use. And I thought that in Suunto I could make interesting products. At that time Suunto was looking for a mechanics designer, and luckily I had experience in modeling.*

After noticing in the interviews that the employees had a sports backgrounds, I started studying the issue more systematically by asking interviewees to talk about their personal sports history and interests. Frequent, personal conversations among the employees about sports were one aspect of how sports were present in the company routines. The other one was that people actually participated in sports every day. For example, the concept designer cycled to and from work each day, a 50-kilometer round trip and, if he did not, he did his free-diving breathing exercise. Moreover, when I spent three working days in the organization, I was asked to join the product development team in gym at Suunto early in the morning, as part of the routine they seemed to value.

Thus, the undervaluing of one's own sports enthusiasm as a reference for work can be interpreted as a question of professionalism towards one's education. In fact, when speaking of usability aspects at conferences or with my students who study industrial design, the designers emphasized repeatedly that they do not design for *themselves* but to make better products and environments for *other* people.

HAVING USERS *INSIDE* THE COMPANY: "HOBBYISM" AS AN EXPLICIT STRATEGY

During the research process, Suunto began to recognize at a more explicit level the sports background of the employees as a resource for the organization. In April 2001, Suunto announced job openings in the newspaper employment section for an interface designer, a software developer and a component engineer, and provided factual descriptions of each job.

The interesting thing was the layout of the advertisement, as well as its appealing title. In the left column, there was a picture of a sailboat with its crew on deck sailing in stormy water. The picture took up almost half of the advertisement, with the words *sailing*, *diving*, *climbing*, *tennis*, *golf* added to the picture. The title was "Do You Want to Become a Professional?" The association, because of the layout, addressed the question in this form: "Do you want to become a professional in sailing, diving, climbing, tennis or golf?" Also, the embeddedness of sports in this organization was articulated on an even more explicit level: The advertisement stated that "a background in sports helps you to dive into our challenging world," if you wish to become a user interface designer in Suunto.

Being a sportsman and working in Suunto were also linked together with the new Web pages in the year 2002, when a story of the company was provided there. Previously, on-line communications had focused on future developments rather than the history of the firm. The history of the company was built around the founding father of the company, who was—according to the story—a keen orienteering enthusiast, and invented the liquid filled compass in 1936.

The launching of a 'Net community in spring 2002 acknowledged the employees' sports background more explicitly by publishing the sporting records that the employees have broken. In an article (Salminen, 2002) in a Finnish business newspaper in June 2002, the

sports background of employees became an explicit marketing strategy for the firm. In the article, Suunto's managing director emphasized that it is important for the brand that both sportsmen within the company and sports professionals outside the company participate in the product development. Hobbyism remained an important element of the company's communications themes in subsequent years. Finally, in a February 2004 newspaper interview about the cooperation between Suunto and Microsoft, the managing editor referred to his own use of wrist computers to keep a diary of his training and workouts (Pirilä-Mänttäri, 2004).

More recently, Suunto has widened its scope from exclusive sports (e.g., world class slalom skiing) towards more accessible ones (e.g., jogging), by participating as an official sponsor and providing the official timing devices for marathon events. The current product range also covers fitness training products. These expanded product lines and marketing strategies have widened the company's exposure to new audiences.

My findings about the importance of sports to employees, and especially the labeling of the phenomenon as "hobbyism," were noticed within the company; in fact, some of the employees started to use the term themselves. During the course of my study, but also supported by my study, the sports backgrounds of the staff, particularly the product development team, was recognized as an explicit resource for working in the organization. This raises the question of what kind of knowing a sports background brings to the organization.

USERS' KNOWLEDGE INSIDE THE ORGANIZATION

Much discussion recently has focused on user innovations and users as innovators (Jeppesen & Molin, 2003; Lüthje & Herstatt, 2004; Shah, 2005; von Hippel, 2005). The point is that not only do individual innovators and manufacturers innovate, but users have been the source of many innovations across a wide range of products. Innovations have also arisen from users' practices of using products in an unpredictable way. Such users often form their own communities, and their innovative activities are sometimes supported by firms (Jeppesen & Frederiksen, 2006). But there have not been studies about users working inside organizations. Therefore I draw on a variety of theoretical resources to conceptualize the role of users within the product development team and the nature of their knowledge.

Nonaka's (1991, Nonaka & Takeuchi, 1995; Nonaka, Umemoto, & Sasaki, 1998) approach helps to understand different aspects of knowledge embedded in the product development process, and the dynamics between tacit and explicit knowledge in an organization. Tacit knowledge is highly personal, hard to formalize, and therefore difficult to communicate to others. It is rooted in action and in an individual's commitment to a specific context. Tacit knowledge involves technical and cognitive skills. In comparison to explicit formal and systematic knowledge, tacit knowledge covers the skills of a master craftsman as well as the mental models and beliefs that are taken for granted.

In Suunto, the employees are serious about sports: They have competed in them or are still competing. Most of them, in fact, are more than "Sunday soldiers"—occasional athletes—even though they present themselves more humbly. This level of personal involvement is significant for the kind of knowledge their hobbyist knowing they possess. For example, if members of a work team play tennis together occasionally, they probably do not have very specific hobbyist knowing that builds up the knowledge base for their work.

Playing tennis together may offer an important informal ground for discussions about subjects meaningful at work and for projects, but that does not constitute hobbyist knowing. Rather, hobbyist knowing is based on taking part in the sports that the company's products are made for but, more importantly, on a passionate and shared attitude toward the sports, a specific type of talking about sports that allows participants to understand the tacit features within the sports communities. Hobbyists in organizations tell stories of their sports performances and demonstrate their knowing of sport practices in everyday actions in organization with other hobbyists, and this is an important way of bringing hobbyist knowing from communities of practices within the sporting world into the business world. The product development staff members also do sports together and the most advanced players in a certain sport teach those who want to learn new skills.

The main outcome of my study is the concept of hobbyist knowing. *Knowing* refers to a practice-oriented perspective toward knowledge in organization studies. According to Orlikowski (2002), there are two distinct approaches to organizational knowledge. On the one hand, "many writers propose that organizations have different types of knowledge, and that identifying and examining these will lead to more effective means for generating, sharing, and managing knowledge in organizations" and, on the other hand, other approaches see "tacit and explicit knowledge as mutually constituted and essentially inseparable in organizations" (Orlikowski, 2002, p. 250). What Orlikowski brings into this discussion—based on a study of product development activities in a large, globally dispersed high-tech organization—is the suggestion that knowledge should not be seen as a "thing" or "disposition," but rather that it should be studied as "knowledgeability" (2002, p. 249).

From Orlikowski's point of view, it "does not make sense to talk about either knowledge or practice without the other," thus "knowledge (a noun connoting things, elements, facts, processes and dispositions) is replaced with knowing (a verb connoting action, doing, practice)" (2002, p. 251). Orlikowski notes that tacit knowledge is a form of knowing, and thus is inseparable from action because it is constituted through such actions (see also Schön, 1991).

I suggest that what is important for people in their private lives also follows them to their work. My finding was that, in Suunto, the product development team members' sports backgrounds follow them to work. The sports background of employees is consistently present at work: as a discussed and significant theme in the daily routines, as a reference for product development (e.g., technical and design solutions) and, eventually, as a fascinating marketing element for creating the company brand.

Brown and Duguid (2000a, 2000b), referring to a study of the Xerox Corporation (formerly the Rank Xerox Corp.) sales representatives by Julian Orr (1996), bring forth that the constant storytelling by employees inside companies—over breakfast, lunch, and coffee—can be worth hours of training. Storytelling is powerful way to understand what happens and why in organizations, and to discover something new. Brown and Duguid note that economists tell stories in their models, scientists tell stories in their experiments, and executives tell stories in their business plans. I found out that hobbyists in the Suunto organization tell stories of their sports performances and share their ideas and opinions through stories.

Other important forms of sharing and building up knowing, according to my findings, are concept designing, product designing, and decision making throughout the product development process. Hobbyist knowing becomes explicit in the organizational context when

visualizations, prototypes, and decisions are made based on this tacit knowledge inherent in communities of practices of sports.

HOBBYISM AS SHARED KNOWING

The outcome of my analysis is to suggest that business organizations need to recognize what tacit knowledge about users currently exists within their company, and how this knowledge works within the company. Companies should ask how their designers meet and interpret the culture of use. And, more importantly, how do designers meet the different needs of users if there is hobbyism within the company? Is hobbyist knowing tied to one specific sport or can it be used as a source for understanding users across different sports? In an example from a different field, Nokia's product development of the portable Internet tablet (Nokia 770) has involved hackers who have made changes to the product and hence influenced the product development process. Most of these hackers do not work for the company but some of them are also part of the official product development process because they work for Nokia on a permanent basis (Mäkinen, 2006). Hobbyism can thus be recognized as a resource for product development in other areas and products than the sport industry.

As I define hobbyism, the sports communities serve as an important reference for the product development team members in understanding peer users when designing sports instruments. Turning hobbyism into a method in product development simply means acknowledging those resources and experiences that the product team members bring into the design processes other than their professional backgrounds only.

The question of turning hobbyist knowing into a design method is complex and challenging because hobbyist knowing is partly tacit by nature. Based on the Suunto study, I defined hobbyist knowing as active knowing, in that knowing and practice are intertwined (Blackler, Crump, & McDonald, 1998; Cook & Brown, 1999; Orlikowski, 2002). It is an alertness and sensitivity within a social and material context (Schön, 1991), a knowing and doing together (Lave & Wenger, 1991; Wenger, 1998; Wenger, McDermott, & Snyder, 2002), and a stepping over and over again into the situations of use of a product (Schön, 1991; Suchman, 1987). Hobbyist knowing is difficult to communicate because it is embodied and embedded in action (Blackler et al., 1998; Carlile, 2002; Schön, 1991) but, at its best, it is interwoven into the product development process (Nonaka & Takeuchi, 1995; Nonaka et al., 1998) as a generative and creative resource of sensemaking (Weick, 1995) within an organization. Hobbyist knowing is thus defined as a type of knowledge—or rather a type of knowing—that emphasizes its active and long-term nature.

Based on the case of Suunto, I argue that hobbyist knowing is an alertness among product development people who are passionate sports enthusiasts to acknowledge the differences in practices and in physical environments among different sports, that is, an alertness in recognizing what these tacit and intangible differences are. It can, at its best, help in understanding the implicit user needs and requirements. Hobbyist knowing is not, however, a method among other user-centered methods for product development, or similar to the lead user method (Lüthje & Herstatt, 2004). Hobbyists are people who are voluntarily involved in the practices of users of a certain industry through their own long-term hobby activities and are working for the companies for years rather than for a few projects.

Researchers interested in users as innovators suggest that involving lead users in product development can be a successful method. Lead users are defined as individuals who have "sticky," use-related information, are ahead of the market with respect to needs-related trends, and are capable of conceiving substantial new products for future markets. The lead user method refers to the identification and involvement of lead users "in a multi stage [*sic*] approach aiming to generate innovative new product concepts and to enhance the effectiveness of cross-functional innovation teams" (Lüthje & Herstatt, 2004, p. 554). In practice, the lead user method means observing lead users or arranging workshops with these end-users when conducting concept designing in firms.

Hobbyists, therefore, are actually lead users who work within organizations. Both hobbyists and external lead users are at the leading edge of markets. The lead user method has been developed to bring to companies without hobbyists the tacit knowledge that hobbyists bring to their daily work. The main difference between hobbyists knowing in organizations and the lead user method and is that, through hobbyism (having hobbyists employed), hobbyist knowing is present on a long-term basis. This is important since, in relation to user-centered design methods, hobbyist knowing can lead to specified and concrete methods of user-centered design and to the lead user method being introduced into the product development process on a regular basis, and not only now and then. When there are changes in the target sports market, knowing well and being a hobbyist of one sport does not help in knowing intimately another sport, but it can help in appreciating methods for recognizing what is specific to other circumstances.

Hobbyism can be recognized as a phenomenon in other industries also—for example, in product development in mobile technology (Mäkinen, 2006). Although hobbyist knowing is not suggested as a substitute for design methods, it is possible that hobbyist knowing can serve—because of it is social nature—to overcome factors that hinder the use of user-centered design methods. Such difficulties include recognizing and gaining access to user communities and the knowledge embedded and embodied within them (Kujala, 2003).

Since my study, new design methods have been adopted in product development processes at Suunto. For example, Suunto design management, together with a group of researchers from the University of Art and Design Helsinki, developed and introduced a method called probes (see Mattelmäki, 2006). According to designers at Suunto, *probes* can be used to understand and define the sociocultural contexts of sports enthusiasts. For example, probes contain indirect questions of what kind of equipment is considered valuable among sports enthusiasts, such as by suggesting different brands. Probes view the socio-cultural context as including an understanding of the social practices, the specific terms used, the material environment, and the talent that is recognized in a sports community. It varies from wearing the "right" t-shirts to doing the "right" stunts and having a certain attitude, as illustrated by the following comment: *"Those guys who do snowboarding say that they do not practice. They do not consider themselves as sportsmen. However, they go skiing every day"* [Suunto Designer].

According to Schön (1991), practitioners work in conversation with the situation, which requires stepping into the situation. User-centered design methods developed to improve the usability of products are implemented to help analyze human-machine interaction, and they have thus been product-centered. It has been suggested that emotional and experiential properties should be taken into account alongside the rational product properties (Jordan,

1999). Recent studies also suggest that another important dimension of usability research is analyzing the situations in which the product is in use (Hasu et al., 2004; Keinonen, 1998, 2000; Koskinen, Battarbee, & Mattelmäki, 2003).

The crucial question to me is how local interactions within a given situation can be understood, for example, within the sport context. I suggest that hobbyist knowing involves a different understanding of local practices and communities than design methods. Attempts within design practice and studies to overcome the gap between designing products and understanding the contexts of their use can be helpful, but they are also different from hobbyist knowing, since they are mostly methods used for a short time only. The ideal of many user-centered design methods is to focus on users and tasks early in the product development process, do empirical measurements, and then work with iterative methods. What has been suggested as a practice for meeting these ideals is to allow potential users to use simulations and prototypes, so that their actions and performance can be analyzed. User involvement is considered to provide valuable knowledge about the context of use, the user's tasks, and how the users will probably work with the emerging product (Säde, 2001, p. 29), as well as help in analyzing the user experience. Among design method studies, there is also an interest towards not only user experience, but also users' co-experience (Battarbee, 2003a; 2003b). This means seeing the user not as one entity but as a member of group of people who share and create experiences together, and interpersonally and interactively with the products.

What remains to be discussed is the nature of knowledge produced by design methods. Does hobbyist knowing involve also knowledge that escapes the design and lead user methods? Brown and Duguid (2001) note that joining a community of practice gives access to that community's identity and, through that, its collective knowledge. They also point out that learning does not just involve acquisition of facts about the world; it also involves acquiring the ability to act in the world in socially acceptable ways. From their perspective, knowing is always linked to practice. Therefore hobbyists probably know more than can be fully understood by using design methods, although these methods acknowledge practice. Being simultaneously a user and a producer, that is, having users who work on the product development team, is different from studying users with design or lead user methods, most particularly because of the stickiness (von Hippel, 1995) of hobbyist knowing. This does not inevitably mean that having users on the design team is a *better* way to understand the use context of a product than using design methods or involving lead users into the design process, because hobbyist knowing can sometimes be too one-sided to fully understand the diversity of the context of use. The stickiness of hobbyist knowing means that hobbyist knowing is difficult to transfer (von Hippel 1995) and it is more than its current externalization—the transformation from tacit to explicit (Nonaka, 1991; Nonaka & Takeuchi, 1995; Nonaka et al., 1998). I would argue that hobbyist knowing covers areas that escape current user research methods and documentation and remain at the margins of consciousness although would be shared by hobbyists within their work practices.

CONCLUSIONS

The point in user innovation literature is that not only do individual innovators and manufacturers innovate but users are the source of many innovations across a wide range of

products. These users form their own communities, and are sometimes also supported by firms. This paper focuses on the subset of users who form their own communities but also work within companies designing and manufacturing products for those communities, sport instruments, in this case.

This paper details how user needs are present in the new product development process when the product developers are users themselves. Therefore the process of product design touches, on the one hand, user innovations and, on the other, the body of organizational knowledge. The concept of organizational knowledge is replaced with that of "knowing," thereby emphasizing activity. Orlikowski (2002) points out that tacit knowledge is a form of knowing that is inseparable from action because it is constituted through such actions.

Through hobbyist knowing in my case study of the Suunto sports equipment company, product developers are intimately familiar with users' needs, including the technical requirements and cultural values and practices of sports communities, because of their long-term participation in the communities of practices of sports enthusiasts. This paper discusses hobbyism in relation to design methods. Hobbyism is a long-term relation to the intended contexts of use of the product, while user-oriented design methods often form a short-term relationship in order to study users.

It was brought forth here that acknowledging hobbyism within the company can be a resource for successful product development. This means appreciating employees' personal knowledge as well as their professional knowledge. Stories about personal experiences told within the organization—and throughout the stages of concept designing, designing and decision making in the product development process—can bring forth ideas that originate in hobbyism. This means that hobbyist knowing becomes explicit in the organizational context when decisions are made based on this tacit knowledge inherent in the communities of practices of sports enthusiasts.

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Author's Note

The author is grateful to all those who contributed to the study of Suunto Corporation.

All correspondence should be addressed to:
Tanja Kotro
National Consumer Research Centre
Kaikukatu 3 (P. O. Box 5)
00530 Helsinki
Finland
Tel. +358 9 7726 7703
Fax. +358 9 7726 7715
E-mail tanja.kotro@ncrc.fi

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