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1 INTRODUCTION

The aim of this study is to identify core activities and services that are important for innovations in the leisure business. A model of the innovation process and related activities and services (KISA) is presented on the basis of a case study of Suunto Ltd. This model is discussed and enriched with other empirical data, especially from companies that aim at working between the consumer market and producers of leisure related products as business-to-business services (KIBS). The role of innovation networks is considered with reference especially to a case study of Exel and the emergence of Nordic walking.

Within the leisure industry cluster, we identify as especially interesting the products and services related to “active, creative leisure”, e.g., activities that offer their users continuous challenges and personal fulfillment in their everyday lives. The focus in this study is on physical products (rather than services) that are linked to leisure time (“manufactured leisure”). These physical products, however, are not “just” physical products; they aim at developing experiences or other added value for the customers. For example Suunto “creates sports instruments that allow the customer to measure, analyze, understand and improve one’s performance – without having to rely on luck.” Products are thus designed to provide services – and experiences (Pine and Gilmore 1999, Schmitt 1999, Jensen 1999).

Defined narrowly, KISAs, knowledge intensive service activities, are services supplied to an organization either by KIBS (knowledge intensive business services firms) or public sector organizations. In our study, the perspective is broader. Based on specific empirical findings in leisure business, we suggest that in addition to KIBS or the public sector, there are other important activities for knowledge creation in innovation processes, that should be analyzed and understood in order to develop organizational practices and innovative business. Although our focus is on these activities, we also consider the role of knowledge intensive service activities as supplied services.

The report is organized as follows. First, the leisure industry cluster is identified and described, with a special focus on active and creative leisure activities and their special characteristics from the perspective of innovation activities (chapter 2). Then, two company cases are presented in chapter 3: Suunto, exemplifying the innovation process and its knowledge resources especially from the product development perspective, Nordic walking, which highlights the role of the external innovation network. Chapter 4 provides an in-depth analysis of the role of crucial knowledge-intensive activities (KISAs) in the innovation process of the leisure business. The role of external knowledge-intensive business services is analysed in chapter 5. Chapter 6 presents a summary and conclusions.

2 THE LEISURE INDUSTRY CLUSTER

Clusters have been one of the central tools of Finnish industrial and technology policy during the past decade. A focus on clusters emphasizes the entire vertical value chain from producers to consumers. Yet consumers have not gained much attention in the research on industrial clusters. Expectations of a transition to an experience economy, however, call for an increased focus on consumers in conceptualizing industrial clusters.

In the discourse on the experience economy, the focus is on products, services and companies that offer something more than the physical product (Pine and Gilmore 1999). It is claimed that customers need to be engaged in a memorable and personal way; often the innovation is the story built around the product (Jensen 1999). Some business writers have gone as far as to suggest that we live in a totally new era and customer markets are rapidly and radically changing. Even though one may question whether “the new era” of stories and experiences in the end touches upon our daily lives radically, experiences have in the recent years been viewed as the driving force of business in the consumer market.

It was said above that innovations in this line of business are often linked to stories that are built around them. These stories are not always manageable, intentionally created stories, but they rather indicate that producers and users “have met” and created a success story together. This approach has been lately evident among the leading consumer product manufacturers (see Kotro and Pantzar 2002): for example Sony addresses its products to “creative users” (Go create advertising campaign for digital camcorder), and products are designed for people who are “active” (wristop computer for outdoor sports enthusiasts) and who actively make their own aesthetic choices in interior design (a changeable color part for a door handle).

The experience economy can be understood more profoundly through the lens of recent consumer research on subjective well-being and post-material lifestyles. By acknowledging the active role of consumers and the intrinsic value of leisure consumption, we can approach a consumer-based definition of the “manufactured leisure cluster”. In the following, we first approach the manufactured leisure cluster by considering recent changes in Finnish consumers’ lifestyles and time-use and consumption patterns. We then define the manufactured leisure cluster, with a special emphasis creative and active leisure-time pursuits. Finally, the nature and driving forces of innovations in manufactured leisure are considered.

2.1 Evolving leisure patterns in the post-material world

Recent consumer and welfare studies have indicated that as societies grow wealthier, materialistic values are replaced by more subjective concepts of well-being (e.g. Inglehart 1997). The increase in the consumption of calories, telephones, refrigerators, cars, etc. levels off or slows down. Economic growth creates a consumer culture in which consumers are progressively freed from the everyday struggle for sustenance to pursue happiness in a variety of ways. Markets for mass products are gradually saturated, and consumers start to search for more meaningful things to consume. The discussion on the “experience” or “dream” economy (Pine and Gilmore 1999; Jensen 1999) suggests products and services such as cafés, amusement parks, university education and nature as the new outlets for meaningful consumption. They also refer to ordinary products that are enhanced with an “experience” or “story-telling” aspect. Yet defining the “experience economy” calls for a more detailed understanding of hedonistic consumption.

A growing body of research on hedonistic well-being (e.g., Scitovsky 1992; Seligman & Csikszentmihalyi 2000; Veenhoven 2003) has identified broadly two different types of experience-based consumption: the pursuit of hedonistic pleasure, and the creative pleasure of an active life (table 1).

Table 1. Characteristics of hedonistic and creative pleasures.

Hedonistic pleasure	Creative pleasure
<p>Pleasures involving strong sensations such as euphoria, ecstasy, inspiration – and little reflection</p> <p>Sensations are momentary, immediate experiences, which do not require cognitive interpretation or sensemaking</p> <p>The treadmill of pleasure: people adapt to pleasures and start to take them for granted</p> <p>Many products and services only bring momentary and passing pleasure</p>	<p>Activities and hobbies in which their practitioners are engrossed</p> <p>Activities provide feelings of liveliness, creativity and achievement</p> <p>Practitioners are creative, think flexibly and are open to new information, creatively combine parts into entities</p> <p>Continual and progressive evolution of skills and activities</p>

Pine and Gilmore (1999) also identify different kinds of experiences: (e.g., “entertainment”, “educational”, “aesthetic” and “escapist”). Yet the examples presented of “experience businesses” are often dominated by entertainment, such as amusement parks and shopping malls. We shall attempt to enrich this idea of the experience economy in a Finnish context by considering recent trends in Finnish consumers’ time-use and spending, with a special focus on creative and active leisure.

2.2 The manufactured leisure cluster – focus on creative and active leisure

Focusing on creative and active leisure is a novel perspective on the experience economy. When adopting this consumer- oriented approach, we can consider, for example, how people choose to spend their growing leisure time. During the past two decades in Finland, the time spent on paid employment has decreased both among men and among women, by approximately half an hour. Table 2 indicates what this increased leisure time is spent on.

Table 2. Changes in leisure time-use patterns of employed men and women in 1979 and 1999–2000 (Niemi et al. 1981; Pääkkönen and Niemi 2002).

Activity	1979, minutes			1999/2000, minutes		
	men			women		
housework	0.33	0.46	+	2.23	1.58	–
home maintenance	0.30	0.30	~	0.10	0.17	~
child care	0.10	0.13	~	0.26	0.22	~
shopping	0.19	0.22	~	0.26	0.30	~
other + trips	0.24	0.29	~	0.22	0.34	+
public participation	0.10	0.06	–	0.06	0.03	~
sports and outdoors	0.33	0.36	~	0.18	0.33	+
reading	0.47	0.36	–	0.41	0.41	~
radio + TV	1.30	2.07	+	1.08	1.44	+
socializing	1.05	0.46	–	1.05	0.54	–
hobbies	0.12	0.18	~	0.26	0.16	–
travel	0.28	0.30	~	0.23	0.29	~
TOTAL, minutes	283	322		238	384	

* symbols indicate:

+ increase of at least 10 minutes/day in the period 1979–1999/2000

~ change less than +/- 10 minutes/day in the period 1979–1999/2000

- decrease of at least 10 minutes/day in the period 1979–1999/2000

Four groups of activities seem to dominate the leisure consumption cluster in terms of increasing time use. Television, radio and reading (books, newspaper and magazines) are the most important type of leisure activity, together taking up 2-3 hours of the average Finn's day. Doing things around the home are second, taking up an hour or two on an average – with men increasing their time on housework. The third group, sports and outdoor activities take up about half an hour – and their role has grown especially in women's lives. Fourthly, about one hour or less is spent

on travel and shopping – the centrepieces of much “experience economy” writing. Their role has also not grown during the past two decades, although a noteworthy development is that less time is spent on “mere” socializing involving no other simultaneous activity.

What kinds of leisure activities do people value most? To address this issue, we had Gallup conduct a survey of the most and least valued aspects of leisure time (Figure 1). About half of the respondents considered the most important aspect of leisure time to be “no need to hurry”, or “time for oneself”, the possibility to “do what one wants to” or to “just do nothing”. These priorities indicate that idle leisureliness and autonomy are important aspects of leisure time. Revitalization and spending time with the family were important aspects, especially for women. Other important aspects the feeling of freedom, forgetting about work and spending time with friends, which was especially important for young people. In terms of activities and surroundings, hobbies were considered important especially by men, and spending time in nature by women.

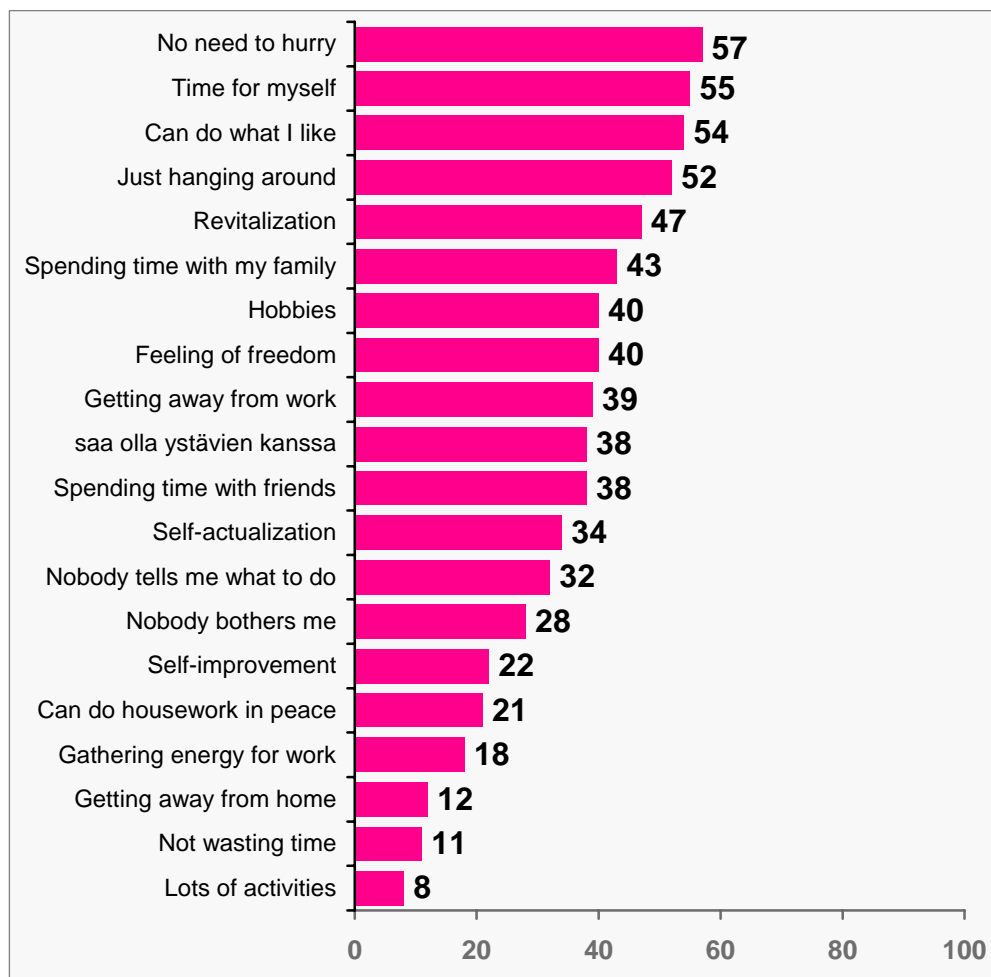


Figure 1. Respondents’ views on the most important aspects of leisure time (% of respondents considering aspect very important), N = 1 586.

Recent changes in consumer expenditure point in the same direction. Table 3 presents Finnish consumers' expenditures in 2002 and their change compared with expenditures in 1985 in real prices. It appears that as incomes have grown, more money is spent especially on housing and telecommunications. Other products and services, transportation, culture and leisure as well as home furnishing are other categories that have grown.

Table 3. Household expenditure, 1985-2002, EUR / year per OECD consumer unit and real growth in fixed prices for 2002 (Source Statistic Finland, Household Budget Surveys).

Consumption category	1985	2001/2002	growth %
	EUR	EUR	
Food and non-alcoholic beverages	1 400	1 987	20,4
Alcohol and tobacco	192	427	16,7
Clothing and footwear	458	515	-18,6
Housing and energy	1 421	4 321	70,7
Home furniture, appliances and equipment	446	743	16,6
Health	210	535	9,9
Traffic	947	2 213	29,3
Telecommunications	103	551	420
Cultural and leisure activities	737	1 487	27,2
Education	8	27	
Hotels, cafés and restaurants	353	685	4,6
Other products and services	744	1 573	34,3
Total	7 020	15 065	

Sports and outdoor activities are not identified as a separate category in these statistics. However, there are a number of regular studies on outdoor activities. For example, a survey by the Forest Research Institute (Sievänen 2001) indicates that outdoor activities play a central role in Finnish life: 97 % of the respondents participate in outdoor activities, and two-thirds enjoy the outdoors for recreation every week. The most popular outdoor activities include walking, swimming in natural waters, spending time at the summer cottage, picking berries, biking, fishing, boating, picking mushrooms and tanning on the beach. A survey on physical activities by the National Institute of Health (Helakorpi et al. 2003) also indicates that one in ten Finnish adults do physical exercise every day, and almost half do some exercise at least twice a week. According to Aalto et al. (2000), the annual value of the sports and exercise business amounts to about 1 500–

1 800 million euros, of which about 2/3 are private consumption and 1/3 public consumption. Sports organizations are significant producers of sports services. There are also still significant differences between men and women in spending on sports and physical activities: women spent an average of about 180–200 euros/year and men, about 220–190 euros/year. Women also spent their money more on exercise services such as fitness, dance and riding classes, camps and clothing, whereas men spent more money on sports equipment, footwear, travel and tickets to sports events.

The extent of the (active, creative) manufactured leisure cluster can also be illustrated using retail sales statistics (table 4). These data, too, indicate the relevance of enjoyable everyday activities – often centred around the home - in leisure consumption. The annual sales of Finnish restaurants and cafés amounted to 4 300 million euros¹, whereas grocery retail sales amounted 11 000 million euros². Do-it-yourself shops sold 2 800 million euros annually, and furniture and decorating shops, 1 200 million euros. The annual sales of gardening shops is estimated as being between 200 and 500 million euros³, whereas the annual sales of sports equipment amounted to about 900 million euros⁴. The business related to media usage can be estimated on the basis of the annual sales of appliances and equipment (1 400 million euros)² and the annual turnover of the printing industry (3 600 million euros)⁵.

On the basis of the previous analysis, we can identify a number of small, interconnected leisure industry clusters in Finland, rather than one single large one. The volumes of the clusters were estimated on the basis of the following information: statistics on the 500 largest Finnish companies compiled by the *Talouselämä* magazine (1989–2003), data from the Association for Finnish Work and from members of the Confederation of Finnish Industry and Employers, as well as corporate annual reports and promotion material.

We have identified two clusters that are relevant for creative and active pleasures and leisure activities: a home-oriented leisure cluster (Figure 2) and a sports and outdoor-oriented leisure cluster (Figure 3). The companies named in the figures are Finnish companies that present themselves as focusing on a consumer-orientation, pleasure and experience. It is worth noting that in addition to the market value of the products and services, voluntary organizations and unpaid household work are significant contributors to the home- and outdoor-oriented leisure clusters.

¹ The Finnish Hotel and Restaurant Association. Statistics for 2002. <http://www.shr.fi>. The figure does not include hotel sales.

² Kaupan tekijät 2002. *Kehittyvä kauppa. K-ryhmän ammattilehti. (Trade journal of the K-wholesale-retail group)* 3/03,

³ Korento, Saila (2003) Value of the landscaping industry. MTT:n selv. 43.

⁴ Includes sales from sports equipment shops, hypermarkets and department stores. The figure also includes an estimate by the *Kehittyvä kauppa* journal on the volume of boat sales (120 million €).

⁵ Hansen, Aino-Maria (2000) Graafinen toimiala tietopakettissa. (*Information package on the printing industry*). Turku: TuKKK.



Figure 2. The home-oriented leisure cluster – examples of Finnish companies.

Enjoyable activities served by the home-oriented leisure cluster are related to food, home decoration and gardening. Examples of companies within this cluster include Suomen Höyhen (exclusive down products), companies connected with the pleasures of the kitchen (Marimekko, Iittala, Oras and Luhta), and companies located at the boundary of the home and nature (gardening products by Kekkilä and Fiskars). The combined annual turnover of companies in the home-oriented leisure cluster amounts to 2 000–3 000 million euros.

Figure 3 presents Finnish companies connected to the sports and outdoor oriented leisure cluster. They provide products for challenging, active leisure activities, such as Rapala fishing equipment, Amer sport equipment, Terhi boats and Halti outdoor wear. Specialized new innovations include Polar heart rate monitors, Exel Nordic walking poles and Suunto wrist-top computers. The combined annual turnover of the companies related to the sports and outdoor cluster amounts to about 2 000– 3 000 million euros.



Figure 3. The sports and outdoor oriented leisure cluster.

2.3 Innovations in manufactured leisure

Innovations in these clusters have very specific characteristics. They are rarely about accomplishing tasks more efficiently, but about providing users with new challenges, enhancing and creating new user cultures, and creating new markets. Innovations in manufactured leisure can be characterized as:

- product innovations
- service innovations linked to a physical product
- market innovations (i.e. radical innovations)
- process innovations.

Product innovations in this area of business are often handy or fashionable (or both) details, which make the product more usable, useful and desirable. The role of technology in these products is often crucial, but subliminal – i.e., the products are built on technological innovations, but they do not become consumer products unless style and usability factors are thought through thoroughly (e.g., designer gardening implements, new sports equipment).

The innovation may also be the **service** built linked to the product. Recently, an interest has been noted among consumers towards building up communities of same interests – a trend that is mostly an effect of Internet communities (Berthon et al. 1999). For example, Suunto wristops complemented with a function that enables analysing sports results with a

PC-interface and communicating with a forum for other enthusiasts in the internet. These kind of innovations – products that combine physical and immaterial elements (services and information) are likely to be more important in the future in the leisure business – as in other lines of business (e.g., Davis and Meyer 1998; Rifkin 2000)

A **market innovation** means recognizing, and even creating, new markets and transforming product concepts and products towards those markets. An example of such innovations is the Rollerblade skate, in which the wheels are arranged in a single line like the blade of an ice skate. It was developed in the Netherlands for racing on land and then adapted for summer hockey training in the United States. Initially the manufacturer sold in-line rollers that could be attached to ice hockey skates in the off season. The company then targeted the general fitness market in 1987 by giving away hundreds of pairs of Rollerblades to beachside skate rental shops in Los Angeles, which led to the burgeoning of a Rollerblade subculture across the United States. The enthusiastic adoption of these skates spawned a new line of equipment such as knee and elbow pads, and special helmets. (Margolin 1995, 135–6.). A similar domestic example is the way in which Exel transformed the conventional ski-poles into Nordic walking poles, creating a new sport and form of physical exercise.

Process innovations are related to how to organize work in the manufactured leisure business in the most meaningful way. What we suggest here, based on empirical findings, is that an important part of the processes of product creation and distribution occurs at the beginning of the process in creating images of the users and markets, and concepts based on that knowledge.

Three central challenges are repeatedly brought forth, both in the literature and in our own studies, pertaining to the specific nature of innovations in the business of consumer products for leisure. The first is the integration of expertise in product development, the second is the integration of style and technology, and the third, the role of the customer/user and the importance of understanding emerging lifestyles.

Integrating expertise in product development has recently gained much attention. In traditional design management models, the beginning of the project is often seen as “product idea” which is followed by commercial evaluation, technical development, testing and commercialization – tasks that are carried out by different departments (Buijs 2003). The problem with this kind of thinking and practice is seeing and managing innovation process in isolation and without contact between the different perspectives of engineers, marketers or designers – sometimes eventually even leading to conflicts between the different functions in the company (e.g. Eriksson 1989).

The communication among engineering, design (product design, concept design, design management) and marketing is thus important. A central aspect is how these different professionals’ knowledge is integrated in order to share understanding of the product development process. Product development teams should be supported to learn from other disciplines. Recent discussions on strategic design open an important perspective on

the issue of integration as a resource for potential innovations (e.g. Järvinen and Koskinen 2001). In the leisure industry, gaining an integrated start for the product development process is especially important. Thus, our empirical analysis of KISAs places a special focus on the communication between technology, business and marketing people and perspectives.

Integration of style and technology is suggested as a key factor in making consumer products useful, usable, and desirable (Cagan and Vogel 2002, 57). Customers feel that the product is able to enhance their lifestyles or direct it towards their goals or dreams (Jensen 1999 uses the phrase “dream society”). Style links a product to emotions and aesthetics. In practice this means that a product can represent a sense of adventure and independence (Harley Davidson; Suunto wristop computer, a mobile phone), security (an expensive diving computer), sensuality (Starbucks, Alessi bathroom), confidence (cosmetics) and status (all the previous products). Together with style related factors, a product should be usable in the ergonomics sense of the word. There are some success stories of non-usable consumer products, such as Philippe Starck’s design for Alessi for a lemon squeezer that does not work, but usability is without a few exceptions a key factor.

Possibilities for a product innovation to occur (the so-called product opportunity gap) can be analysed, for example, by considering the SET-factors: social, economic and technology related factors (Cagan and Vogel 2002). Social factors refers to social, cultural and historical trends and drivers. Economic factors include the state of the economy in general, possible shifts in the structure of consumer expenditure, and the level of disposable income. Most of the success stories of leisure become successes with balanced social, economic and technological factors. For example, Starbucks coffee shops, a concept that is often referred to as an innovation of leisure combining product (core product coffee) and service, meets these factors (viite). There was a tradition of having breakfast on the run, a trend towards enjoying coffee after or between long office hours – demands that were not fulfilled by fusty diners and their bad quality coffee. Starbucks, with designed interiors and furniture, air conditioning, and with better technology for making better coffee take the advantage of people having more money to spend for such an enjoyment as a coffee break. In our own studies, the Suunto wristop computer exemplifies these factors: there was a trend towards valuing outdoor sports as leisure activity arising in North America and Central Europe, there was extra money to spend on sporting goods of high quality and there were technological solutions at hand needed for manufacturing a new product category.

The role of the customer and user can be approached from two main orientations (Berthon et al. 1999; Slater and Narver 1998), one asserting that customers prefer the products that generate the greatest interest and provide the best performance, features, quality, and value for the money (technical or innovation approach) – and the other suggesting that identifying the needs of and wants of a target market is the key to success (market approach). Our perspective combines these two approaches: a product innovation requires that the customers find products useful, usable and desirable. Especially in the leisure business what customers consider

value (even if it is “irrational”) is decisive. Today, it is argued that this requires involving the user in the process right from the beginning of product development, and together with that, understanding the user as part of a specific socio-cultural context of use. Understanding the customer does not only mean meeting today’s consumer needs, but rather, an ability to create products that anticipate consumer needs and become wanted.

The customer and user centered approach involves new methods for product development and concept creation. In building up a scenario of the user it is important to integrate knowledge from different disciplines. Understanding socio-cultural factors is not a question of marketing, of advertising or usability design – alone. The idea is not to collect statistical data of markets but to more deeply understand the abstract and often surprising customs and habits of people within a certain community. Methods for understanding can vary from interviews to field observation or even taking part in what potential users do. Needs, wants and desires are analyzed more often with ethnographic methods following from anthropology (see Beyer and Holtzblatt 1998). The nature of knowledge we refer to here is thus knowledge of lifestyle. It involves knowing about other products, about styles and about the activities people pursue or would like to pursue (Cagan and Vogel 2002, 191, 204).

3 CASE STUDIES OF INNOVATION IN LEISURE INDUSTRY COMPANIES

In order to understand the special features of innovation processes in leisure industry companies, we have conducted a number of company case studies. (These studies are reported in more detail in Pantzar and Shove 2005). Here, we present key findings from two of these studies. The case study of Exel and Nordic walking exemplifies the role of the innovation network in **market innovations**, whereas Suunto and the innovation process of wristop computers provides insights especially into the **process innovations** in product development.

3.1 Exel and the creation of the Nordic Walking innovation network

Nordic Walking – also called fitness walking, Viking hiking, or exerstriding – has spread from Finland, where 20 per cent of the population are now regular Nordic Walkers, to Germany and Austria where there are recognized training programmes and systems of accreditation for thousands of walking instructors. In both these countries and in Scotland, doctors have begun to prescribe Nordic Walking courses for certain patients, and in Germany the health benefits are believed so great that health insurance pays for people to invest in Nordic Walking instruction. Hundreds of thousands of Norwegians have taken up Nordic Walking and the practice is developing fast in Japan, the US and Australia.

Nordic Walking – a form of 'speed' walking with two sticks - has a number of qualities that make it an especially appropriate case with which to examine the nature of innovations in 'active and creative leisure'. The idea of commodifying something people have been doing for 1,6 million years, and of positioning it as a new form of fun, is itself impressive. It is an unusual and interesting innovation precisely because the product is technically simple: skiers' sticks that are shorter than those used in skiing. The only really 'new' feature is the way that established elements – sticks, social and physical skills, and the idea of walking – are linked together by a new innovation network.

The case study is based on interviews with people from organizations that produce and distribute Nordic Walking sticks or that promote the sport, and on an analysis of advertisements and articles in the trade and popular press. We have also benefited from focus group discussions with users conducted in a related project (Oksanen-Sarelä and Timonen, 2005).

A simple invention that transformed walking

Nordic walking has a very short history. The invention was made in May 1997, in the Finnish company Exel. Exel's origin dates back to the 1960s when three engineers established Explosive Electronics in a small town, Mäntyharju. It manufactured mainly equipment related to explosives.

Shooting was the hobby of the first managing director. The first consumer products were ear protectors. Later on the company diversified into business dealing with new materials (e.g. composites) and sports, as the following timeline of new products indicates:

- 1960: Explosive Electronics – shooting as a hobby
- 1962 Hearing Protectors
- 1973 Ski poles
- 1979 High jumping bar
- 1981 Surfing mast
- 1992 Golf club
- 1992 Floorball stick
- 1992 Alpine skiing poles
- 1997 Nordic walking poles
- 1998 Blading poles

Albeit its small size (the turnover of sport division (exelsport) was 26 million euros in 2004), Exel dominates many niches in the global sport business. For instance, in the Lake Placid 1980 Olympic games, over 80 % of all the medals were won with Exel skiing poles. Globally the market share was then over 50%. Also in the emergence of the floorball, Exel was one of the major actors (Pantzar and Shove 2005). In all its activities Exel has actively sought partners from voluntary associations.

'Nordic walking' as the name and brand of stick walking was launched by Exel in 1997 as an overall concept integrating the image of pure nature, the activity of walking and sticks. The same year, the first Nordic Walking Poles were introduced. In less than ten years Nordic walking has become an activity attracting a wide participation in many countries. In Finland, Nordic walking has become the seventh-most popular form of exercise in terms of participant numbers.(Finnish Sports Federation 2002, Helakorpi et al. 2003)

Markets are segmented and differentiated and variety of walking techniques has emerged. Today Exel is selling an all-encompassing ideology of healthy living under the registered trademark of "Nordic Fitness Concept". The first International Nordic Fitness Congress is organized in connection with the ISPO fairs in summer 2004. In these huge fairs, Exel is cooperating in the same "Nordic Fitness Lounge" with companies like Polar (heart rate monitor) and Salomon (shoe manufacturer currently owned by German Adidas) (ISPO 2004).

Activities, actors and services in the innovation process

In the early days of walking sticks, Suomen Latu made thousands of brochures to outline the benefits of fitness walking. These had hardly any influence alone. It was only when Suomen Latu provided Finnish people with an opportunity to try walking with sticks themselves that the first signs of success could be seen. In August 1997, thirty people responded to an advertisement in the main Finnish daily newspaper inviting them to give Nordic Walking a go at a nearby health resort. The following week about a hundred people responded, two hundred joining in the week after. In these

early days, retail outlets were very sceptical. Only one retailer promised to sell sticks, and then only on the basis of a cooperative agreement with Suomen Latu.

First-hand experience proved to be vital for Nordic Walking. For the promoters, the challenge was to persuade potential recruits to take that first step:

"I have noticed that many people are resistant even to try sticks... But after trying they are very often eager to buy sticks of their own... Especially older people who like sticks because of the extra "safety" they provide... Then there are, of course, sporty 'players' who do not recognize the value of the sticks". (coach at Vierumäki Sports Institute)

These problems were well understood in early marketing:

*"In the beginning the **image of walking with sticks** was really problematic. It was very much a psychological problem. In our marketing we try to normalize the activity by referring to groups of people walking together. In time the groups became smaller and finally one could walk alone and (and not feel silly). In addition, normalization required facts about health consequences and a chance to try the product out" (marketing manager at Exel).*

Nordic walking has gained a lot of attention in the **media**, especially in the context of health. First, walkers were jeered at by the press whose critical tone echoed that adopted a decade earlier when commenting on the first users of mobile phones (Pantzar 2003). One such article is, for instance, entitled 'Santa Claus – Please no sticks for me!' (Helsingin Sanomat 26.11.2000). However, a reader's comment a few weeks later 'Santa Claus, Thanks for the sticks!' (Helsingin Sanomat 30.12.2000) shows just how unsettled the situation was. During this early period (2000–2001) articles promoting the technique follow a similar format. Having explained that some people feel silly they go on to describe the benefits of Nordic Walking, making much of widespread endorsement by the medical profession. The message is clear: the proven advantages should be enough to overcome personal vanity and a misplaced concern with appearance. Suomen Latu also actively marketed the new sport in the media. For example, Nordic walking was presented a number of times on a "morning exercise" television programme in autumn 1998. At the same time, the organization provided Nordic walking trainer courses for 200 local association employees, and established regular Nordic walking groups in order to promote the diffusion of the sport. These strategies worked particularly well for people who were already interested in serious sport and in their own physical condition, and who understood the potential of walking with sticks. These people became the leaders of what was to grow into a social movement.

The relationship between the image and the emerging practice is always dynamic. The more people who take up Nordic Walking the less strange it become. This activation has been the consequence of an emerging innovation network involving voluntary organizations, sports institutes and an every-growing number of user groups. Even though these organizations

have had different interests and motives, their co-operation has managed to forge an innovation network, which is currently growing into an international one, with new partners such as fitness centres.

Already in the 1950s, the **Vierumäki Sport Institute** was famous for its organized walking trips for ordinary people. Today the main function of the Vierumäki Institute is to develop, produce and market nationally and internationally competitive training, exercise and educational services in the fields of physical education and leisure. Originally it was established for training sport instructors. In the 1930s also medical studies about the effect of sport activities were integrated into the training programs. It has been from the very beginning that elite athletes have benefited from these services at the institute. Nowadays ordinary people and tourism are increasingly taken into account. A second golf course and a huge hotel are under construction.

Suomen Latu (transl. "Finnish trail") arranges and supports outdoor sports and health activities and pursuits to promote physical fitness, health and recreation and has about 72,000 members. Suomen Latu has traditionally fostered hiking and trekking. It has also organized ski tours to Lapland. The organization is active in introducing new leisure innovations, currently, for instance snow shoeing. Unlike Vierumäki institute Suomen Latu is not propagating serious competitive sport or fitness culture. It rather cooperates with various health organizations promoting the health of lungs and heart, for instance (Suomen Latu, 1987).

Interestingly, both Vierumäki and Suomen Latu have been active in forming alliances with such companies as Exel or heart rate meter manufacturer Polar Electro. There is no doubt that the success of Nordic Walking is in part the outcome of intentional decisions and actions, including the production and publication of books, articles and videos. Yet the mobilization of existing culturally specific concepts of fitness, infirmity, well being, silliness and 'mild' nature has also been important. The ways in which these elements are configured is likely to vary from one country to another.

The Finnish case suggests that the links and connections required to establish Nordic Walking as a practice were pieced together by a distinctively close community of key players (Vierumäki, Exel and Suomen Latu), working with a handful of **key ingredients (existing skills, concept of nature, health, well-being etc.)**. Both organizations represent lead users. (Vierumäki is world famous place for athlete training and fitness. Suomen Latu is an organization for the most devoted and serious outdoor people.) For Nordic Walking to take hold in another context, new links have to be made and old ones broken. This is again something that has to take place case by case. In Finland, the lead users' role was important. Exel has applied the lead user strategy also in other countries. For instance, in the UK, Exel is promoting Nordic Walking with **fitness centers** specialized in Method Putkisto, a Pilates-type deep-stretching exercise method.

3.2 Suunto and the creation of the Vector wrist computer

Suunto Corporation operates in the business of sports instruments. It manufactures diving instruments, field compasses, hand held electronics, marine compasses, precision instruments and wrist computers for cross sports, such as mountaineering, hiking, running, biking, cross-country skiing and golf. Suunto is one of the leading manufacturers of diving instruments and water sport suits and a manufacturer of wrist computers and field compasses. In late 1999 Suunto Corporation was acquired by Amer Group. Amer Group, listed on both the Helsinki and London Stock Exchanges, is a global supplier of sporting goods equipment. The Group's operations are based on global brands such as Wilson, Atomic and Suunto.

The following timeline presents a brief history of the company:

- 1936 Established by outdoorsman Tuomas Vohlonen in Helsinki, Finland for producing compasses with liquid.
- 1952 Sold to chemical engineers: Paavo Kajanne, Aarne Mahnala, and Veli-Jussi Hölsö.
- 1969 Moved to Espoo, personnel about one hundred employees.
- 1986 Personnel about 750 (about 350 in Finland)
- 1997 Launch of "Spyder", world's first wrist dive computer
- 1998 Launch of "Vector" first product of outdoor wrist computer product line.
- 1999 Became part of Amer Corporation (brands Wilson, Atomic).
- 2001 New premises in Vantaa, close to the Helsinki-Vantaa Airport. Personnel about 280.

The data for this case study were conducted through field observations at Suunto Ltd during a four-year period in 2000–2003, including 15 recorded interviews with ten interviewees. Observations were also made among product users, in hobbies such as freediving. After the observation period, informal follow-up meetings were also held with interviewees. The data and methods are presented in more detail in (Kotro 2005).

Innovative products for outdoor enthusiasts

The innovation examined here is a product line of wrist-held computers aimed at outdoor extreme sports enthusiasts (mountaineering, mountain biking, hiking) that became a market success. These watch-size equipment are combinations of functions such as the altimeter, the barometer, the compass, the watch and the heart rate monitor. The latest models of the product line are extended to include an PC-interface for analysing one's sports performance. Today, wrist computers carry great consumption symbolism: they are used as statements of lifestyle. Suunto wrist computers are worn through the day in meeting rooms and bars as statements of a sporty lifestyle.

Put in brief the innovation process that led to a market success started when, in 1996, one of the product engineers in Suunto was appointed to a new project with the aim to combine electronic meters: the altimeter, the barometer and the compass. The idea at that time was to develop a device held on the wrist that works accurately and is easy to use in the difficult conditions of mountain and ice climbing. A designer for mechanic planning was also appointed to the team. The project started on very technical premises (e.g., interface, feature, sensors and outdoor use).

The product development team was soon broadened to include a marketing-oriented product manager. The team of two – product engineer and product manager – studied different products that were already in the markets. There were no similar products (i.e., combination of functions), but they studied wrist- and hand-held meters, bicycle meters and other different devices that had altimeters, barometers, compasses or timing in them. “We did our home work well” describes the product manager, “we were able to learn from other’s mistakes and there were demand for alternatives in the markets”.

In the discussions within the team it was found that the device could be designed for “reasonable everyday use” so that people who use it while climbing could wear it all the time. “Anyway, people consider this [wrist computer] as a watch” explained one of the interviewees from the marketing department... “[they think] that ‘I have it on my wrist and therefore I buy it from a watch retailer”.

The design agency – that had earlier designed Suunto’s watch-size diving instruments – was given a brief for a watch-size device for outdoor use. It was a pilot project for Suunto, since there had not been digital technology and pressure sensors combined for outdoor use before.

The focus was on professional use of the product instead of competing for the youth market, in which the Japanese company Casio and Freestyle from the US were strong brands who also had an altimeter, barometer and compass functions in their devices. The product development team saw that their opportunity compared with other products already on the market was in better technical solutions and better usability. The idea, especially among the product engineers and the designer for mechanical planning, was to stay away from the fashionable youth markets because fashion was nor considered as Suunto’s core competence or interest.

In May 1997 the team had flow charts of the different functions ready and a demonstration of the functions to be presented for test users in USA. Design agency had made first images of the product, which can be described as middle-of-the-road. These sketches looked like sextants or instruments for orienteering. Test users were enthusiastic about the functions and usability; the outward appearance of the product was only briefly discussed and it did not raise strong feelings, for or against, among the test group.

About the same time as Suunto was working on outdoor computer, Nike came up with new product line. ‘Triax’ was launched in the Salt Lake City outdoor retailer fair August 1997. It was a digital watch collection, with an exceptional, diagonal form. It had an efficient marketing campaign and was

given a lot of attention at the fair and also in trend magazines. The same diagonal form was 'in the air': it was fashionable to use backpacks with only one stripe and Sony, a trendsetter itself, had diagonal remote controls for Walkman.

Even though the digital sports watch and the "multifunctional" computer (as the product was called in Suunto) for outdoor use were not considered to be in the same product category, the managers in Suunto noticed that a new market, a market for fashionable small digital gadgets, was emerging – also for Suunto's new product. Influenced by the launch of Nike Triax, the design concept of Suunto outdoor computer was changed. The "Vector" wrist computer was launched in August 1998 on schedule. By December 1999, it was a fashionable gift around the world.

Activities, actors and services in the innovation process

There are many actors and activities that can be recognized in the former description of the innovation process. First of all, there were **technical resources** and know-how in the company gained from previous projects in developing dive computers that enabled the creation of a new technology and thus a new product category (a **technological innovation**). A wide range of other products were studied, and **technical tests** were conducted, and the interface, features, sensors and conditions of outdoor use were studied.

It is worth noting that at the first phase of the project the idea of the market was considerably different from that of the later phases of the project. A **design agency** made sketches for a product that looked like one for professional technical use. The user representation shifted drastically from professional sportsmen to "wanna-be" users for the product (i.e., those who wish to be like professional sportsmen). A **new market** was recognized through 1) **explicit market analysis** and 2) **implicit market analysis** that led to a market innovation. Explicit market analysis contains data from **market research agencies** (such as "Sporting Goods Intelligence" offering news, analysis and information about the global sporting goods market), **test user groups** and studying other products. Implicit market analysis was highly relevant in this case: through **studying the media, visiting trade fairs** and **discussing with colleagues** it was reasoned in the organization that there is a new market rising for a new kind of a product line. Something "in the air" was captured by studying the pages of global magazines and visiting fairs and based on that, brainstorming with colleagues.

Because of a global scale **competitor** launching a new product that gained a lot of visibility in trend and lifestyle magazines and fair, the product concept was rethought. The **design agency** was asked to make new suggestions of the product design. New tests were made among possible consumers to study how the new design sketches communicate. The **advertising agency** built advertisements around the idea of a consumer who wants to be like a professional sportsmen. **Retailers** gave feedback during the process of product development about consumers' opinions and comments on products in the product line. It was noticed within the team

that **customers** consider outdoor wristop computer as a wrist watch because it is held on the wrist. One model of the product line was thus later on designed to look more like a digital expensive watch. Also, it can be noted that users who by wristop computers for outdoor use are likely to use it through the day as their watch – an accessory signaling a culturally valued, sporty lifestyle.

In order to design something for sports, designers need to get, what an interviewee called, a deep understanding, of that specific sport. Recently, a number of new design methods have been taken into the product development processes in Suunto. For example, design probes (developed together with a group of researchers from the University of Art and Design Helsinki) can be used to understand and define the socio-cultural contexts of sports enthusiasts (in this case of slalom skiing). The socio-cultural context includes understanding 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.

Design probes used in Suunto are sets of questions about doing sports that are answered by **enthusiasts**. Probes are developed in order to understand doing sports and the sports communities’ culture. Probes help to recognize sports communities’ specific language, practices and their desired material environment. For example, probes contain indirect questions of what kind of equipment is considered valuable among sports enthusiasts. Probes can serve, according to an interviewee, as “glimpses” into specific sports cultures, but it is also necessary to attend to a deeper understanding of the culture:

When I was at a seminar giving a presentation, I described understanding sports communities as anthropology, no no, ethnography, was the word I used. [...] I move into the snowboard tribe if I need to understand who they are and what they do.

In addition to “knowing a sport”, the knowledge needs to be articulated into the product development process, which is often demanding. The interviewee explains that:

Not everyone, even though one is a sports enthusiast, can articulate his/her knowledge into a product. Many people still think about technical details or features, and do not understand the context of use, even though they are themselves part of it.

Both enthusiasts and methods like probes are needed. Enthusiasts know the right people, with whom it is possible to network in product development, and they understand “the true nature” of the sport, which is very important. But also design methods, such as probes, and those people who are not inside the scene of the sport, are needed because they can see things which are self-evident for enthusiasts, who are not able to articulate everything they know. In developing better design methods, personal relations to the field also run the risk of being a hindrance. This is because one’s own personal knowledge can be falsely used as an argument of knowing everything without questioning that knowledge or taking into account the possible changes in SET-factors discussed above.

4 KNOWLEDGE INTENSIVE SERVICE ACTIVITIES (KISAS) IN THE INNOVATION PROCESS OF LEISURE BUSINESS

This chapter focuses on how companies gain a crucial form of knowledge in leisure innovation, i.e., knowledge on users and consumers, and how they integrate this lifestyle knowledge with their technological competencies. First, an overview of approaches used in different leisure industry companies is presented, with illustrations from company interviews. Then, some central issues are discussed in more detail on the basis of the case studies: techniques for eliciting knowledge about the user, the role of personal experience, innovation networks and different uses of the media in approaching users. Finally, the influence of market maturity on the type of user knowledge need is discussed.

4.1 Different sources of lifestyle knowledge in the leisure industries

In the innovation process of leisure business, there are several activities connected to the fact that consumers are in the key role in deciding if a product becomes a success or not. Knowledge intensive business services offered by outsourced companies (e.g., design agencies and advertising agencies), and in-house marketing departments all aim at defining who the customer is and understanding market trends as a basis for their decisions. In order to capture this diversity, we held informal interviews with managers responsible for marketing in leisure business companies: The interviewees represented a bookstore chain, a major shipping company, a book publishing company, a clothing industry company, a food retail outlet owner and an electronic appliances manufacturer.

What is noted in the interviews is that most of the individual actors within the companies and in-house departments use both explicit and implicit techniques of creating an image of the user. It proved that, indeed, various methods were used to capture the picture of consumers. Four different kind of consumer images emerged (Figure 4): the statistical consumer, the intuition-based consumer, the ultimate consumer and the imagined consumer. Due to the small sample, our findings are illustrations of possible approaches, rather than generalizations of differences between industries in how lifestyles are investigated.

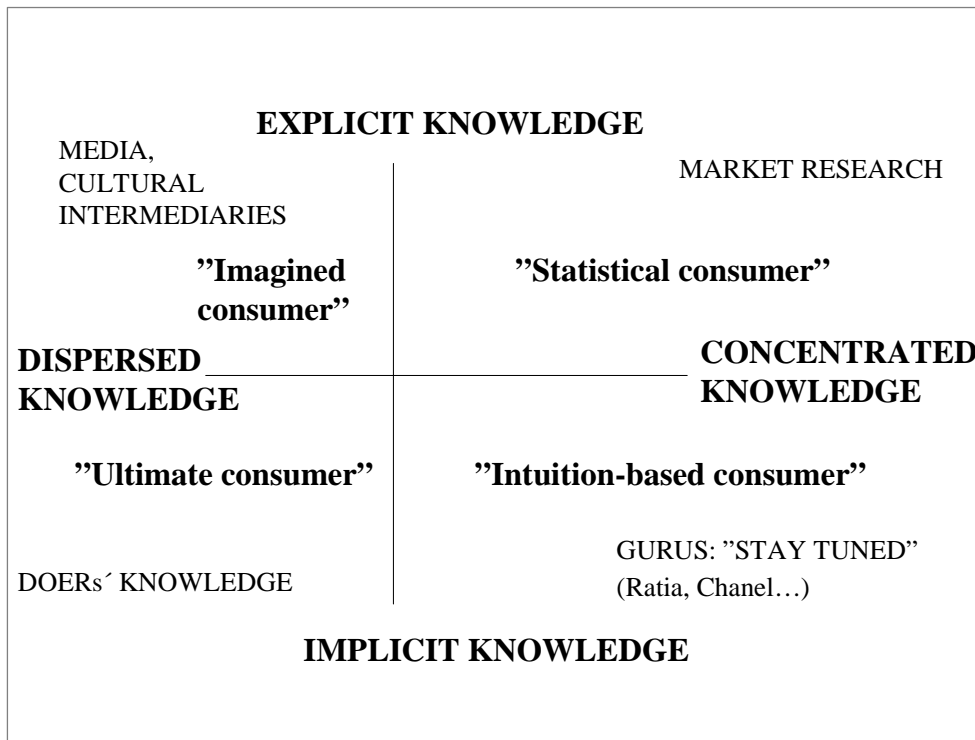


Figure 4: Different sources of lifestyle knowledge.

The statistical consumer: A representative of a major passenger shipping company emphasized the role of systematic and cumulative market research. The consumer need is well articulated and it is unitary throughout the company: Lifestyle knowledge is concentrated in one place and it is very explicit, indeed. The data are saved in one room and specific folders. This marketing manager believed that only through statistical data could he steer his people in the business. Statistical data about consumer trends and satisfaction were needed to convince both the owners of the company and the employees. He acknowledged that the findings from the surveys are hardly ever surprising, but pointed out that they are needed to justify decision. Although the manager emphasized the fact that he himself is continuously spotting new trends, the importance of the statistical consumer was emphasized. The manager does not personally use the services of his company, and thus the consumer remains very abstract.

The ultimate consumer. During the 2000s, Marimekko's head and main owner Kirsti Paakkanen has emphasized that non-articulated and implicit knowledge about consumer needs is dispersed among the staff of designers. A very similar view is taken in Sony, where the designers speak of themselves as ultimate consumers (Kotro & Pantzar 2002). According to Kotro (2005) Suunto has made explicit use of this kind of lifestyle knowledge. Finally, it is possible that lifestyle knowledge could also be very explicit, yet dispersed within a company.

The imagined consumer. In our interviews it was in book publishing, media and retailing that no systematic and cumulative information placed in one site was gathered about the consumer trends and needs. One owner of a major retail outlet said that the best information about needs and trends

could be found by reading Finnish lifestyle magazines. A vice president of a giant publishing company explained that the most important information is gathered through “scouts” around the world. In case of interesting new books, the scouts contact the headquarters of the book publisher on an informal basis. This sort of information about consumer trends is clearly articulated and explicit, but it is not shared widely and publicly as is the case of market research.

According to our findings in the latest interviews, we suggest that there exists also an **intuition-based consumer**. An example of an intuition-based consumer could be taken from the history of clothing companies. In the 1920s Coco Chanel was known about her well-founded intuition about the changing consumer market. Very similar stories are told about Marimekko in the 1960s, when the owner of the company Armi Ratia made decisions on the basis her intuition.

Our preliminary interviews indicate that there is much variation in the sources of lifestyle knowledge (e.g., market surveys, media, social networks), the storage of knowledge (one site or dispersed), the articulatedness (explicitness) of the knowledge, the sharing of the knowledge and the use of knowledge. We would emphasize that in the reflective business typical in the leisure industry, different kinds of information should be balanced. Possibly it is implicit knowledge that has been undervalued in both research and practice. Companies in the leisure business might develop their business by making intuitive knowledge (and biases, too) explicit.

4.2 Techniques for eliciting knowledge about the user

According to Madeleine Akrich (1995), innovators are from the very start constantly interested in “future users”. Often the problem is not to create user representations but to cope with many a diversity of possible representations. There are explicit and implicit techniques for representing users. Explicit techniques are the ones based on special skills or qualifications in the area of defining or interpreting consumer representations; and implicit techniques are those that rely on statements made on behalf of the users. These techniques are central forms of knowledge-creation in the firm.

By **explicit techniques**, Akrich refers to market surveys, consumer testing and feedback on experience. What is important from our perspective is that Akrich is critical towards the nature of market surveys. Market surveys are often used in the beginning to convince the company management about a project and about the need to build up the project, but there is seldom anything documented of these surveys. Our experience is that this strange state of affairs reflects the fact that in many cases these studies are used to persuade the higher decision-making authorities to support the project. For example, in Suunto, market surveys were conducted, as Akrich describes, to some extent in order to reassure

decision makers on the new growing market of users who want to be like professionals in extreme sports without doing the sports - but by using products made for serious sports. This was confirmed, not with the help of thorough studies, but by referring to other products and especially to the success of Nike, a fashion brand presenting new, more designed and more efficient product, to be held on the wrist.

When a product emerges from its design cocoon, its designers often organize tests directed to a sample group deemed to be representative of its future users (Akrich 1995). The idea is to minimize the amount of dissatisfied users. Akrich reminds that although tests may often have the outward appearance of an encounter between humans and machines, we must not forget that they do not cover the full extent of the relationships between the two. User tests were done in Suunto from both marketing and R&D perspectives. Design concepts were tested with a sample group as were the technical functions of the product. Notable compared to Akrich's notions is that in Suunto, only appearances were tested on potential new markets. Test users for functionality and usability did not resemble the new markets of fashion users, but they were serious sports enthusiasts found through personal contacts and through retailers' contacts. In this sense, the tests were close to what Akrich calls "feedback on experience", i.e., retailers' contacts with end-customers and after-sales services. The advantage of feedback on experience is in "real-life" situations of use, but the information is filtered by users who pass on only the remarks they consider relevant, which can sometimes leave important contextual elements unnoticed.

Akrich notes that in addition to "legitimized" explicit strategies, there are **implicit strategies of representing users** in product development as well. "These techniques have in common that they claim to address the "real" users, but rely on spokespersons of three general types: expert consultants, other products and designers' personal experience (Akrich 1995, 173).

Other products serve as a reference for the product under development in the role of benchmarks or opposites. Other products, their weaknesses and their strengths were in the Suunto case familiar both to the designer and also to the product development engineers. When I asked two of engineers about the company's possible competitors in different markets, about ten different products were put on the table – all broken into pieces in order to find out what these "enemies had eaten", as the product development engineer expressed it. All of these other products were different to Suunto's own products by their functions, yet they were seen as an important frame of reference, for their own products and their capacity to differentiate.

Also consultants, "experts", can be enrolled from other similar projects because of their experience of users, according to Akrich's analysis. Akrich also highlights the role of **personal experience**:

"Reliance on personal experience, whereby the designer replaces his professional hat by that of the layman, is a

much more common device than might be thought at first sight. When there is no other available means of bringing in the end-user, or when organized test procedures seem too complicated or too expensive, arguments uttered from the founts of inspiration can carry a certain amount of conviction. In any event, reliance on personal experience was used throughout the design and development phase of the CA unit [reference to a case study conducted by Akrich, TK]. This was no doubt due to some degree of isolation of the design team. It was heavily dominated by engineering specialists, with nobody to represent the marketing side, no true ergonomics expert (even if some engineers thought they could handle this aspect), no media representative, and no operator of a comparable service.” (Akrich 1995, 173.)

Akrich’s notion of personal experience as a replacement for the user is illustrated in the Suunto case, where the designer describes working with a tight schedule to alter the design concept. There was no time in the process to study markets and other products any more, but he had to trust his own inspiration and insight. Yet reliance on personal experience – in a broader sense – can also be a strength, as the following section indicates.

4.3 Understanding users on the basis of personal experience

When analysing different ways of understanding users in the frame of the product development process in Suunto, it was found that the employees’ own background in sports was actually very important for creating a picture of the users and of markets. At first, people’s sports background was “tacit” knowledge (Nonaka 1991; Nonaka and Takeuchi 1995) in the case company. Later on, it became a core item in the company’s corporate identity.

In the interviews it became clear that in order to design something for sports, designers need to get, what was in the interviews called, a deep understanding, of a specific sport that the product is designed for. Snowboarding was taken as one example in our discussions, since it offers an example of a very specific culture of doing sports with its own practices and habits, equipment, fashion and terminology. By doing sports one learns about the social environment of the specific sport and can become part of it:

“For example, when I myself began snowboarding, other boarders did not pay any attention to me. They probably just noted that I am the kind of guy who can’t even stay upright. But when I learned to jump higher, others started to give me way in the hill. I begun to look like one of them, and I could talk to them.” (User interface designer)

The nature of knowledge that is gained by belonging to a sports community is, however, difficult to define. It is like “feeling” or “sensitivity” for things:

“It is a feeling of things. When it comes to snowboarding for example, that feeling gives an idea of what is cool and what is not. It is not about the technical performance but something else. It depends on the sports in question. In mountaineering, the best mountaineers are those who understand nature and who can feel from the snow, how the weather is going to develop. In snowboarding, it is cool to look cool, do the stunts but not to try too much. In running or cycling, on the other hand, it is all about understanding one’s own body in relation to the environment.” (User interface designer)

We suggest, that personal background is one important reference for product creation. Also recently, a number of new design methods have been taken into the product development processes in order to enhance “getting in touch” with user cultures. For example, design probes (using diary or other anthropologic methods) can be used to understand and define “the socio-cultural contexts” of sports enthusiasts. By “socio-cultural context” we refer to understanding social practices, specific terms used, material environment, aesthetic preferences and talent that is recognized in a sports community. What personal experience and probes as a design method thus have in common is that they allow knowing “in situ”. Some designers are themselves part of sports communities, and design probes are designed to get closer to sports communities through these communities’ “advocates”. Both ways of sensemaking, at their best, construct contextual information of users and the culture of use. This helps to understand things that users value, underneath what is in sight at first glance.

Knowing based on experience manifests itself through opinions in product development and through an understanding of the practices and values in the community of sportsmen. It refers to factual details, such as knowing how to talk about specific materials, as well as to a more general pattern of thinking that embodies not only current practices and values, but also a reference for generating new practices that can be adopted in the community, as well as for generating coherent images of the product. How is this knowing present in an organization? First, verbal descriptions and assumptions of markets, of different potential users, of other products and of Suunto’s product in the interviews carry hobbyist knowing. The sports background is translated into an organization when the users are profiled not only on the basis of market surveys and trend forecasts but also, as the designer described it, by “putting one’s persona into the process”. Second, image boards, prototypes, functional specification diagrams, visual images of design concepts used throughout the development process can also be seen as ways of transferring knowing embedded in the practices of sports to Suunto. For example, at the beginning of the product development project, combining pictures into an image board used as a tool by the designer is a way to share his understanding of a hobby.

Knowledge based on personal experience is neither equivalent to ‘designing for oneself’ nor to justifying design and decision making with ‘just knowing’. It is taking part in the situations of the use contexts of a product and making sense through practices embedded in them. Through knowing the practices of user communities, personal experience can be a fruitful

ground for developing methods for user research because a through personal experience one steps over and again into the situations of use.

4.4 Social networks in creating knowledge

Current innovation research emphasizes the role of innovation networks (e.g., Miettinen et al. 1999). Innovations occur within research groups, plants, small companies, laboratories and within research and development teams in large companies. Thus, even though individuals can have a central role in making an innovation, there is usually a community or a team involved in creating it. Networks of different professionals are thus important for innovative organizations.

In the Suunto case, it can be suggested that personal networks within and outside the company were strongly involved in creating the new product line of wrist computers for outdoor use. The idea of a new product line was enhanced in the formal and informal discussions between product managers, the managing director and the former business manager, when they recognized new markets for new kind of products. Employees' contacts to "world outside", to communities of sports enthusiasts in this case, helped the development of a successful product, since they knew the values and appreciations of potential users for the product. A designer for example told that because product development projects are secret, he avoids talking about them with friends. But, interestingly, he told that after spending fifteen years with people who do mountain climbing, the community becomes so tight that he knows what others in the community think. It can be suggested here, that employees belonging to communities of sports enthusiasts transfer important knowledge of those communities into the everyday life of the organization.

This process of transforming knowledge is illustrated in Nonaka's model of knowledge creation. According to Nonaka, new knowledge always begins with an individual and is then transformed into organizational knowledge. This transformation is called the spiral of knowledge, involving the following transformations:

- From tacit to tacit. Creating tacit knowledge from somebody else's tacit knowledge means socialization into practices, when there is no explicit knowledge created as part of the process.
- From tacit to explicit. Moving from an individual's tacit knowledge into explicit organizational knowledge requires articulation of the knowledge so that it is externalized and shared with employees.
- From explicit to tacit. When new explicit knowledge is shared in the organization, employees can internalize it and embed it into their tacit knowledge.
- From explicit to explicit. By recombining different sets of explicit knowledge, new explicit knowledge can be developed.

In Suunto, tacit knowledge in the employees' sports background was turned towards an explicit strategy of creating knowledge during the course

of the field study. In the later interviews in the company, sports background was explicitly presented as an advantage to the firm.

An even more active approach to innovation networks is exemplified in the case of Nordic walking. The rapid diffusion of Nordic walking is clearly based on an innovation network consisting of sports and health organizations and manufacturers. Although tacit knowledge was required to contextualize the sport, making this tacit knowledge explicit has been an important part of creating a market for the sport (i.e., translating a concern for health into statistics on the efficiency of Nordic walking). As Nordic walking becomes routinized, it becomes, once again, tacit knowledge of the people practicing the sport.

In the case of Nordic walking, the innovation network was also central in diffusing the sport and creating a social movement around it. In this case, the networks were not only sources of information on user lifestyles, but also actively participated in shaping those lifestyles, and embedding the product into a variety of user contexts (e.g., sports, personal health, occupational health, recreation). The organizations have also provided “scientific” information on the benefits of the product (e.g., how much more efficient walking with poles is than walking without them). The sports organizations also provided training, and trainer training, thus creating a network of people with competences related to the product.

In manufactured leisure, a variety of KISA and KIBS services are thus central in the innovation networks. They may include new kinds of companies serving as cultural intermediaries, but they may also consist of user communities (in which company representatives participate), or of voluntary organizations and service companies such as the Vierumäki Sports Institute.

4.5 The media: meeting and creating markets and users

When the product character is not primarily function only but also lifestyle, a company’s view of end-users is rarely based on direct and systematic communication with “real” end-users. This is partly because the infrastructure for direct communication between a company and potential user groups is expensive and slow. Current fashion and future trends relate back simultaneously to several directions; it can not be reduced back to a “real” user with “real” needs (see Pantzar 1996).

Media is an interestingly multidimensional “place” for meetings between users and producers. Life style is expressed and created with magazines, consumers and users use media for inspiration, and it serves for communicating products both in advertisements and in journalistic text:

“What would be an interesting feature in this kind of device – ideas come from everywhere. you read magazines, watch the television, visit fairs, talk with other people or you see something and suddenly you think: we [the company] are already doing this, and this could be used also for that and that...” (Product manager).

In the Suunto case, the user was represented through the concept of “outdoor”. Among the persons taking part in the product development process, there lives a shared understanding of the outdoor life style and the differences in Finnish and American outdoor culture – differences that are clearly shown in magazines.

“We have not done any research about this but there is at least a certain outdoor trend... let’s say for example...the first serious Finnish outdoor magazine has recently been established. Its name is “Retki” [“Retki” in Finnish refers to camping rather than hiking or mountaineering, TK]. The name actually describes the difference between Finnish and American outdoor culture. I can show you some American outdoor magazines, their names are “Outdoor” and “Outdoor Retailer”. (...) American magazines are about lifestyle. (...) We aim at following the field strongly” (Marketing manager).

Magazines, magazines for special hobby, television series, music videos and movies are in a central position when certain lifestyle is defined during a product development process. In practice, the media are used during the product development process in order to illustrate the markets. Image and story boards are common methods of communication when a new product or service or advertising campaign is being planned. A designer described this process in the following way:

“I had the knowledge that we are doing something for the watch markets, but I started from a wider perspective. I collected an image board, where I studied different user groups and looked at what kind of watches they could have, it was a kind of familiarization. It would have been difficult to me to go and study everywhere: moorlands in Scotland or and golf fields, so it was easier to get to know this area by visiting watch fair in Basel, to look at the values there, and of course we had negotiations with the client all the time” (Designer).

Magazines and other media are in the role of an intermediary used to represent the user to the company and company’s product to the user. Media, as a passage between journalists, advertisers, readers, company management and designers creates a “mediasphere”, where, in this case of Suunto wrist held computers, the outdoor culture was created. The representations of this culture, as illustrated on the pages of magazines, were central for creating *the closure, the simplified reality*, necessary for the product development project.

Figure 5 illustrates the role of the media, and its interactions with other forms of business knowledge, in directing and shaping the product development process in Suunto. Our interviews in other case companies indicate that the figure can also be applied to other leisure industry innovations.

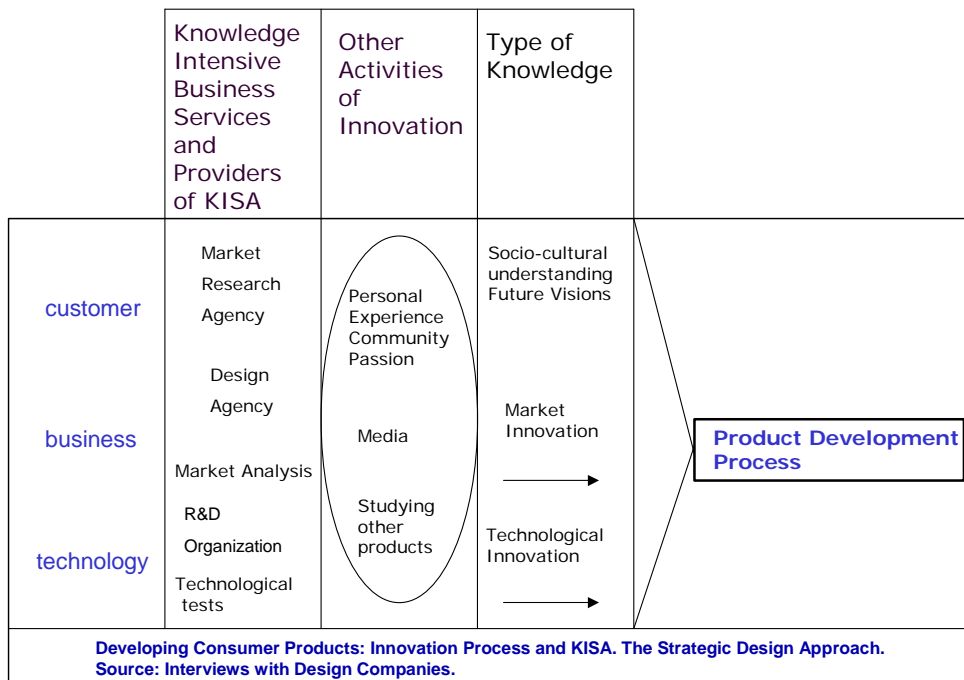


Figure 5. Innovation Process and KISA from the Perspective of a Private Enterprise in the Leisure Business.

The media have also been central for promoting Nordic walking – the product’s linkages to health and well-being have provided for lots of free media coverage. Participants in the Nordic walking innovation network (Exel, the Vierumäki Sports Institute, Suomen Latu) have not only studied images of the user in the media, but they have also systematically participated in creating these images. Here, the role of “external experts” (e.g. sports scientists) in the network is central. The media are pleased to cover new scientific findings, which also promote awareness of the product they are related to. The connection of Nordic walking with public and occupational health has also provided for intensive media coverage.

Exel and Polar, for example, have also made extensive media archives available to the press, and thus the companies’ product images are reproduced in a variety of lifestyle and health related articles and programs. The lifestyle presentation of the product in the media (e.g., morning television, daily newspapers) has allowed users’ and producers’ images of the product to gradually converge. In the case of Nordic walking, the daily paper even allowed for some interaction between users, producers and the “general public”, as evidenced in the excerpts from readers’ letters in chapter 4.2. Thus, the original emphasis on sports training has been tempered down to a softer, more wellness-oriented image more suitable for the mass consumer market. In this case, the media (and importantly, the people making the programs and the newspapers) have provided a forum for iteratively (and publicly) searching for the appropriate use and image for the product.

What we suggest here is that media is often used and “works” as a source for ideas – and even new innovations. As it is noticed, the best innovators systematically use old ideas as the raw materials for one new idea after another (Hargadon and Sutton 2000). We notice in our study that media is an important mediator in moving ideas from one context to another in a creative way.

4.6 From niche markets to mass markets – changing visions of the user

Our leisure industry company case studies have focused on relatively new innovations, which have quite recently entered the stage of transition from niche markets to mass markets. Thus, there have been close links between producers and users. Designers have been able to join user communities or mobilize face-to-face social networks. From the perspective of innovation diffusion, the users of these products can still be largely characterized as “lead users” or “devoted users”.

Parallels can be drawn, for example, with the automobile industry in the 1890s, and in the development of mobile phones in the mid-1980s (Table 4). The breakthroughs of GM and Nokia, “culturally reinventing” their respective product categories, share three common dimensions: segmenting a market at the verge of a breakthrough, well-timed introduction of new technological advances, and design management skills in sensing, interpreting and representing changes in market circumstances and the broader business environment. These companies redefined and redesigned mobility – and thus represent similar market innovations as the leisure industry products that we have studied.

Now that the leisure industry innovations are internationalizing and attempting to reach the mass markets, they encounter new challenges. All the users in different countries cannot be reached through direct social networks – hence, the need for new, more systematic market research, and new kinds of intermediaries (such as, e.g., fitness centers). The next stage of market evolution is a fragmented mass market, which leisure industry products seem to enter relatively quickly. Rather than ever-extending masses, the users consist of fragmented niches. Understanding such users and reaching out to them requires lifestyle segmentation, contextual inquiry and focused marketing communications. Although technologies may be standardized, differentiated products are called for.

An example of this is the international marketing by Exel. In creating different products, for instance one for Nordic Walking and another for Nordic Hillwalking, and in spotting an emerging interest in “fitness walking” in the United States, Exel has contributed to the rapid differentiation of what seemed to be basic form of human movement. New variants of walking are called by different names: power walking, fitness (pole) walking, pole striding and excerstriding. The different international contexts and user groups require the creation of new social networks, differentiated meanings for the product. In an international context, these include, e.g.,

medical doctors and public health administrators, occupational health specialists, sports communities and fitness experts. The diffusion path that the innovation followed in Finland cannot be replicated as such. Designers and marketers need to understand the different practices to which Nordic walking can be connected in a fragmented, international market (Pantzar & Shove 2005).

Table 4. Market Evolution.

Market evolution	Example 1: Car Industry	Example 2: Mobile phones	Example 3: "Wellness technology"	Marketing and Design	Users
1) Special purpose niche products	Daimler 1890 "An Automobile for brave, rich and young men"	Nokia 1985	Suunto2000 Polar 2000 Exel 2000	Direct links to customers, users as innovators	Devoted users Lead users
2) Mass market	Ford 1910 "One Car for Every Family"	Nokia 1993	Exel 2003 Polar 200x	Surveys Standardized technology "Hard" segmentation	Masses of similar consumers
3) Fragmented mass market	General Motors 1920 "A Car for Every Purpose and Purpose"	Nokia 2004	Suunto200x Exel 200x Polar 200x	Differentiated products, Lifestyle segmentation, contextual inquiry and focused marketing Practice based design	Fragmented niches

5 KNOWLEDGE INTENSIVE BUSINESS FIRMS (KIBS) AS CULTURAL INTERMEDIARIES

In leisure innovation, a key question is the diffusion of knowledge. Companies require knowledge from different disciplines to understand the technology, the business perspective, the cultural context and the trends in the consumer market. A number of companies and in-house functions provide services to enhance and direct the product development process. These include market research companies, design agencies and advertising agencies. Yet companies often have difficulties in integrating, appropriating and strategically aligning this information (cf. Pfeffer and Sutton 1999). For example, design teams do not have enough time to apply the existing research.

New types of knowledge-intensive business services (KIBS) are, however, emerging to work in between client firms and consumer markets (see figure). In this study, some of the leading Finnish companies were interviewed in order to analyse how KIBS firms process their knowledge of markets, users and trends and thus enhance their client's business. The companies studied were selected to include the forerunners of their own branch of business, and represent issues important to manufactured leisure business (e.g., images, emotions, meaning-creation processes) . Among these companies, there were leading strategic management companies and design agencies.

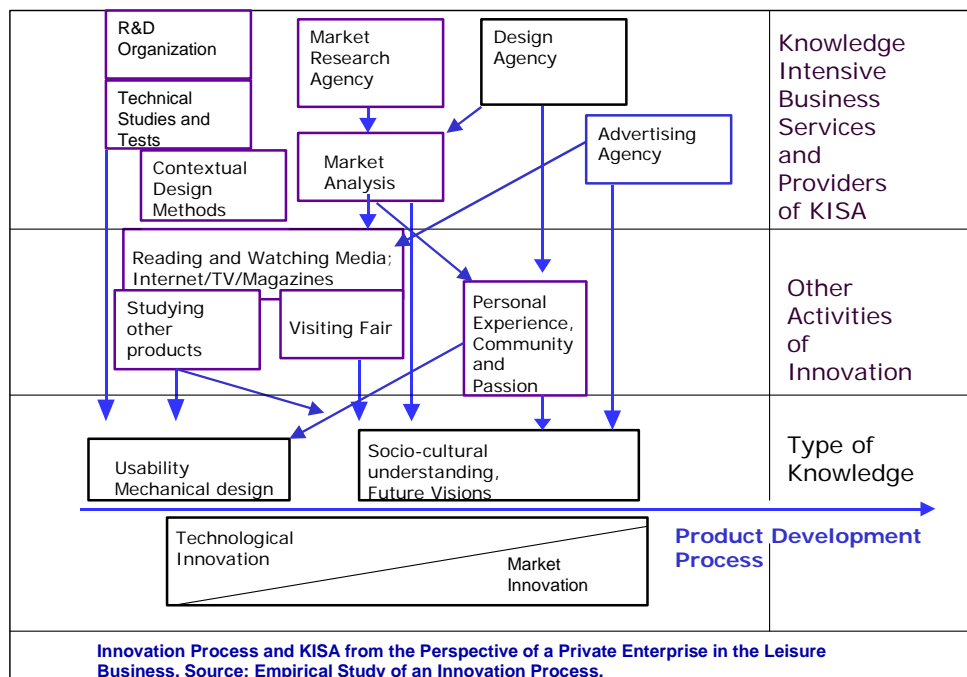


Figure 6. The role of knowledge-intensive business services in leisure industry innovation.

The knowledge intensive business service firms that we studied conduct activities that are best described with the notion of “cultural intermediary”. The concept of cultural intermediaries refers to a notion that originates from Pierre Bourdieu’s (1994) extensive study on work and consumption in which ‘the new petite bourgeoisie’ is given a central role in the production of symbolic goods and services. Cultural intermediaries are typically occupations of marketing, advertising, fashion, public relations and design. These occupations are in a central position, as Negus (2002, 504) puts it, in explaining to “us” consumers the use value of new commodities. The important role of different cultural intermediaries comes from the more general frame of “culturalization”. Culturalization refers to the knowledge-intensity, design-intensity and reflexivity of production in a post-Fordist production mode (Lash and Urry 1994, 121–22). In the following, we illustrate some of the roles that knowledge intensive firms can take when working between users and consumers as producers and mediators of cultural knowledge.

5.1 Facts and images in the consumer market: a case of a brand analysis and development company

“The difficult thing with our business is that it is very difficult to model the process and know-how we have . [--] Each business case and client is unique, and I do not, for example, know how to train somebody else to carry out the tasks that I have learned to do with a client.”(Senior Brand Analyst)

This firm, focused on continuous (i.e., including follow-ups) brand performance management, is a typical KIBS. The background of the employees is in law, psychology and economics. But the business branch is new in Finland. The core business idea is to help large companies in analysing the data they get from sales, markets and trends and to help these companies base their decisions to these analyses. The KIBS firm sees itself that its advantage, compared with advertisement agencies for example, is the depth of analysis. In their view, advertisement agencies offer “brand strategies” for their clients, but do not often invest time or money in statistics, but base their concepts on creative input and subjective visions more than studies.

This KIBS firm builds its own “knowledge base” primarily on the data on sales, markets and changes in markets that is available to the client firm. These are data that are often left unanalyzed and unused, because of the hectic pace in business operations and decision-making. The KIBS firm analyses the use of the data in the client company and interviews people within the company in order to find out possible gaps between decision-making and the available data. In the interviews in the client company, projective research methods are also used to study the opinions of the company employees on the company’s brand, and to find possible difference in these opinions. The KIBS firm also interviews customers about

the brand of the company before presenting first scenarios of “what should be done” to improve the client’s brand.

When the client company has made changes according to these suggestions, there is a follow-up meeting on the results for the brand development, involving interviews with customers. Knowledge is thus created together with the client, as a dialogue of suggestions (from the KIBS firm) and actions taken (by the client company). Not only employees and customers are interviewed, but other business cases and best practices are followed keenly through different publications and seminars.

Our suggestion is that also using personal contacts to colleagues in different countries to discuss interesting cases, former experience in similar tasks, and media, which were all mentioned in the interview with this KIBS, even though not primarily acknowledged as “data”, are important for knowledge creation. This comes partly from the fact that market trends are an important frame for analysis in this case. Often market trends are studied, in addition to facts and figures, using the media: different journals of marketing and psychology, advertisements around the world, life style magazines (e.g., *Wall Paper*) and fashion magazines (e.g., *Vogue*), and television series – and by traveling abroad. This could be called “reading cultural changes” in the visual and material environment, and studying what kind of stories are build up in the media (in television series especially), what is thought to interest people, and what business competitors offer to consumers.

“It can for example happen that in the same business branch that our client company operates in, I find out that there are many companies that have recently renewed their visual image in a similar manner – they have changed their logos and other visual material for example from green to blue. That is factual knowledge I get from trends. But then, what needs to be done, is an interpretation of reasons for these, what can be seen as minor, changes. This might include consumer interviews and an interpretation of changes in consumer values”.(Senior Brand Analyst)

One can course question whether issues of brand management are ever based on “pure” data and facts, since a lot of interpretation is unavoidably involved in the analyses and reasoning. However, outsourced activity of developing the brand could be seen as an advantage when there are large differences between people and departments about the brand or the goals of the firm, or there are passionate personal visions that differ within the company. The KIBS firm’s first task is to get people involved in the brand management process across departments and to decrease the amount of suspicion towards new brand management processes.

5.2 Tangible and intangible knowledge flows? A case of match-making for companies

Another example of the new kinds of business services emerging in the “manufactured leisure” cluster is a firm offering strategic analysis and planning of sponsoring to its clients. Large companies often spend money on sponsoring different kinds of events for example, without a strategic perspective on the benefits gained from sponsoring. This KIBS firm offers strategic marketing specialized in sponsorships. This KIBS firm’s employee has even been hired as a marketing manager for a period of time to the client company.

But what kind of knowledge is sold to the client? In business terms, it is a question of marketing consulting and finding business partners. But what makes this case interesting is the contextual nature of the knowledge that the company offers to its client. This knowledge is described as “cultural knowledge” by the interviewee himself. This means that the KIBS firm is able to offer analyses of the cultural trends that either make sponsoring or marketing campaigns profitable or not.

There are three reasons and resources for the capacity of the KIBS firm to analyse cultural trends. First of all, personnel of the company is simultaneously involved in publishing a lifestyle magazine, which means, in practice, keeping aware of trends and having ideas about creating trends . Secondly the background of people working for the KIBS company is in culture and business: they are people who have often been involved in financing culturally-oriented events and projects. The third resource for cultural knowledge in this case thus comes from large personal networks and contacts, in which trust has been built up during many years of co-operation. The employees of the KIBS firm have experience in working with different cultural contexts and understanding their specific nature. This knowledge is the basis of the offering to the client company.

5.3 Design agencies: from chaos to processes

Especially when interviewing design professionals, it can be noted that the practitioners themselves feel that innovativeness is irrational in nature – and simultaneously innovation should be understood in connection with organizational processes as a manageable activity. Working with leisure products means dealing with knowledge concerning lifestyle, functionality, usability, trends, consumer habits, fashion, rational and irrational consumption – and often too tight time schedules.

Even though modeling activities or defining methods for design activity as a whole is felt to be binding and misleading among the interviewed practitioners, it is easy for the practitioners themselves to describe what kind of skills are required when working in the manufactured leisure business. Aesthetic knowledge and “alertness” are probably the most important resources for innovation in the manufactured leisure business, according to the interviewees. The other important forms of knowledge are

contextual knowledge (i.e., connecting the current project to other products and markets) and communicating with the client, which means often combining different requirements into product visualizations and prototypes.

What is important to notice here is that these activities do not form a chronological, but rather a continuing and reflective process, in which iteration and reflexivity are important part of the practice (Schön 1991). As Buijs (2003, 93) suggests, models of the product innovation process should be logical and not chronological, because in the latter case the different duration times of the different stages and steps will ruin all the insights that the model is built for.

6 SUMMARY AND RECOMMENDATIONS

Our study of leisure industry innovations has focused on 'active and creative leisure', which is one of the small leisure industry clusters that can be identified in the Finnish market. Innovations in active and creative leisure require considerable knowledge of the user context, including knowledge on lifestyles and emerging cultural issues and practices, and this knowledge also needs to be integrated with technical competencies.

Our case studies of Exel and Suunto indicate that relatively small Finnish companies have been successful in creating globally recognized innovations for active and creative leisure. These innovations have become successful due to close contact with the user communities.

Our interviews and case studies identified a variety of approaches to communicating with users and enhancing product innovations through knowledge-intensive activities. Conventional market surveys appear to be less important in this industry. Personal experience and immersion in the user culture are one approach to gaining contact with users in a reflexive economy. Innovation networks are important, and in this industry, informal user groups and voluntary organizations may have a central role in such networks. As the innovations mature and the markets extend beyond the familiar user community, new networks need to be created, and more diverse forms of knowledge-intensive service activities are called for. From the KISA perspective the leisure cluster forms a developing field of services related to this customer orientation and integration of style and technology.

It can be assumed as a result of this study and other recent studies that the role of design agencies and in-house designers is one of the developing areas of KISA in manufactured leisure. It has been noted that in Finland only a few companies today employ in-house designers and only one or two persons in a team are responsible for taking care of strategic design issues (Järvinen and Koskinen 2001). Also market analysis, and especially new methods for market analysis, constitute an important KISA of manufactured leisure. But more to that our results suggest that there are important knowledge intensive activities involved in product development processes that are not yet recognized as knowledge intensive business services.

Knowledge intensive business services can, at their best, be developed into bridges not only between companies and users (as cultural intermediaries) but also between different perspectives on product development. Often problems in organizational processes are not caused by ignorance but not taking knowledge into action. In this study we have thus outlined ways of knowledge creation that occur in organizations and suggested that often there are resources for innovations that have not been recognized, especially personal experience, innovation networks of user communities, and the role of media. Knowledge management systems rarely reflect the fact that essential knowledge, including technical knowledge, is often transferred between people by stories, gossip, and by watching one another work. Through innovation networks, such contacts can also provide knowledge transfer beyond the organization, reaching out

to user communities. The media provide a further resource for moving ideas from one context to another in a creative way, and thus mediating between users and producers.

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