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Design Management as a Strategic Instrument

Tiivistelmä

Design management strategisena työkaluna

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ABSTRACT

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The generation of the design management concept on the factors of product, environment and communication has been studied in this study and it also has been explained how the contents of these factors are understood in firms. The functionality and usability of the tripartition into product, environment and communication as elements of design management concept has also been verified. The contents of the variables of these three factors have been defined and a special new aspect for the theory basis, a division into technical and symbolic functions, has been found here as a mutual feature of every factor. A bipartition into the basic factors of product and communication that affects behind the tripartition of the elements of design management has been found in the study and the fuzziness of the environmental factor caused by the new, value based images has also been recognized. Furthermore, the dynamic nature of design management as a strategic instrument has been visualized through several factor analyses.

The nature, meaning, contents and utility of the dimensions of design management - product, environment and communication - were analyzed in the work as possible competitive parameters of firms located in the Vaasa and Kuopio provinces. A design management model was also created to help firms coordinate their design management functions. The strategic reasoning patterns of firms located in the Vaasa and Kuopio provinces were also analyzed; especially in relation to the adaptation of the positive and negative energies included in the competitive forces that was created in this study.

The empirical material was collected in four stages and the collected data was analyzed through frequencies, cross tables, t-tests and factor analyses. During the first stage the preliminary understanding of the subject itself was gained through minor letter questionnaires and some interviews. The second stage consisted of posting a questionnaire to 1015 small or medium sized enterprises that were in industrial, merchandise or service sectors and that were located in the provinces that were studied here. The firms to be interviewed during the next, third stage of this research were selected on grounds of the results of analyzes of the data collected during the second stage. During the third stage managers of a total of 43 firms were interviewed in purpose to collect a more detailed data by interviews and by taking a closer view of the functions and premises of these firms. A more detailed letter questionnaire material was also collected from these selected firms during this stage. During the fourth stage the design management functions of the firms selected for this stage of research were researched even deeper; these firms answered in stages the letter and interview questionnaires enclosed. They also participated some educational and report meetings during the research period.

No significant differences were found in the attitudes toward the elements of design management when firms in industrial, trade and service sectors in the Vaasa and Kuopio provinces were studied. The analyses show that the three elements of design management are closely related with each other. This makes it possible to reason that design management is a function that coordinates the different sectors of the functions of a firm and its elements are not to be separated.

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KEYWORDS (Search INFORM): *corporate identity, corporate image, design, designers, enterprises, leadership, management, marketing management, marketing, product design, small business, strategic management, symbols*

TIIVISTELMÄ

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Tässä työssä on tutkittu design management -käsitteen rakentumista tuote-, ympäristö- ja viestintäfaktoreista ja selvitetty sitä, miten näiden faktoreiden sisällöt yrityksissä mielletään. Työssä on myös todennettu kolmijaon tuotteeseen, ympäristöön ja viestintään toimivuus ja käyttökelpoisuus design management -käsitteen rakennusosina. Työssä on tarkennettu näiden kolmen faktorin muuttujasisällöt ja jokaiselle faktorille yhteisenä, aiempaan teoriapohjaan nähden uutena piirteenä on löydetty niiden jakautuminen teknisiin ja symbolisiin funktioihin. Työssä on myös löydetty design managementin elementtien kolmijaon taustalla vaikuttava kaksijako tuote- ja viestintäperusfaktoreihin sekä löydetty ympäristöfaktoriin liittyvien uusien arvoperustaisten mielikuvien aiheuttama ympäristöfaktorin epämääräistyminen. Lisäksi useiden faktorianalyysien avulla on havainnollistettu työssä todennettua design management -käsitteen dynaamista luonnetta strategisena työkaluna.

Työssä selvitettiin design managementin osa-alueiden - tuotteen, ympäristön ja viestinnän - merkitystä, sisältöä, luonnetta ja käyttömahdollisuuksia kilpailuparametreina Vaasan ja Kuopion lääneissä sijaitsevissa yrityksissä sekä luotiin design management -malli koordinoimaan yritysten design management -toimintoja. Työssä tutkittiin myös vaasan- ja kuopionläänilläisten yritysten strategisia ajattelumalleja etenkin suhteessa tutkimuksessa luotuun sovellukseen kilpailuvoimien sisältämästä positiivisesta ja negatiivisesta energiasta.

Tutkimusaineisto koottiin neljässä vaiheessa ja tutkimusaineistoa analysoitiin mm. frekvenssien, ristiintaulukoiden, merkitsevyystestien ja faktorianalyysien avulla. Ensimmäisessä vaiheessa hankittiin esiymmärrys suppean kirjekyselyn ja haastattelukierroksen kautta. Toisessa vaiheessa postitettiin koekyselyn kokemusten perusteella tiivistetty lomake kaikkiaan 1015:lle kohdelääneissä sijaitsevalle yritykselle, jotka toimivat pk-teollisuuden tai kaupan ja palveluiden parissa. Toisen vaiheen kirjekyselyyn saatujen vastausten analysoinnin perusteella valittiin yritykset seuraavan vaiheen haastateltaviksi ja kolmannessa vaiheessa kerättiin aikaisempaa yksityiskohtaisempi aineisto neljästäkymmenestäkolmesta yrityksestä yritysjohtajia haastattelemalla, näiden yritysten toimintaan ja toimitiloihin tutustumalla sekä laajan kirjekyselyn avulla. Neljännessä vaiheessa tarkasteltiin vielä syvällisemmin tähän tutkimusvaiheeseen valittujen yritysten design management -toimintoja; nämä yritykset vastasivat tutkimusperiodin kuluessa vaiheittain tämän työn liitteinä olevien kirjekysely- ja haastattelulomakkeiden kysymyksiin ja osallistuivat myös koulutus- ja raportointitilaisuuksiin tutkimusperiodin aikana.

Tutkimuksessa ei havaittu merkitseviä eroja teollisuus- sekä kaupan ja palvelun parissa toimivien yritysten suhtautumisessa design managementin elementteihin. Myös vaasan- ja kuopionläänilläisten yritysten design management -toiminnot ja käsitykset sen elementtien merkityksestä olivat hyvin samankaltaisia. Design managementin elementit tarkentuivat faktorianalyysien kautta läheisesti toisiinsa liittyviksi. Tutkimustulosten analysointi tukee käsitystä design managementista yrityksen toiminnan eri osa-alueita koordinoivana toimintona, jonka elementtejä ei ole mielekästä eriyttää toisistaan.

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AVAINSANAT (Yleinen suomalainen asiasanasto): *design, identiteetti, johtajuus, johtaminen, markkinointi, menestyminen, muotoilijat, muotoilu, pienet ja keskisuuret yritykset, strategia, symboliikka, teollinen muotoilu, yritykset, yrityskuva, yritysstrategiat*


Compatibility
as a Target
Succeeding
as a Goal

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Vaasa, December 13th 2001

Johanna Ahopelto

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1 INTRODUCTION

There has been more and more attention paid to design management in business world in the past few years. Management as well as economy has been as target for constant changes, so in order to succeed in business firms have to adapt to the new basis for competition situation. The effects of the European integration include tighter competition in the integrated markets. Many products are nearly homogenous while even technology gets standardized, so the importance and significance of quality and aesthetically pleasant appearance increases further. Products must also have even more outstanding character than before, which emphasizes the importance of marketing and thereby design and the controlled management of it.

In this context there rises up the possibility to apply, by the means of design management, a systematically and well-considerably planned design in products and business environment as well as in business communication. Thus the creating of a controlled business image is enabled through such a systematic plan in which all parts support each other thus forming a harmonic whole; a reliable business image of a good quality.

The design management argumentation has, during the past few years, turned itself into slightly misleading direction while emphasizing, maybe even too much, the position of design management in the competition parameter field of a firm. The most eager spokesmen for design management have been marketing the concept like it was a miraculous means of rescue that all alone could be able to rescue the functions of a firm struggling in its unhealthy basis. Also it has partly been created a picture by which many businessmen still believe that it would be enough for the whole design management process only to visually reorganize the external aspects of a firm.

The design management discussion needs a critical touch in purpose to raise the merits of the concept into the value they earn and thus make them benefit the everyday business life as well. Meanwhile the unnecessary flourish and exaggerating promises that make the

concept confusing should be stripped out. Design management is a valuable competition parameter beside others, if used in coordinated and well-considered cooperation, but certainly not over the others.

There are plenty of articles related to design management, but there is little literature that is truly critical about the subject. This can be seen in the nature of the references of this study; many of them are syntheses of ideas collected from various sources. Often different sources present conflicting points of view that can be used as comparison of each other.

To succeed in the design management process of a firm a healthy business climate is needed, where both financing and marketing as well as communication, production and delivery are well organized. To be able to carry out a full design management process the highest management must take responsibility for the design management functions of the firm. They also have to motivate the personnel and believe in what is to be done. The greatest value of design management lies in its ability to create a reliable and believable picture of a firm, an image of quality. To remain, the picture also has to be a true one.

1.1 Design management as a concept

Design management is not unambiguous as a concept. Trying in a short time to achieve a recognized position both in organizations as well as in academic world the pioneers of the branch simply connected together two words - *design* and *management*. The expression generated thus got many meanings varying by interpretation[1].

Design management is often presented as a new concept[2] even though there were articles written about it in the 1960's[3]. The subject of a design congress held in London year 1956,

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1 Gorb 1988b: 8; cf. e.g. Powell 1998: 9-10; Design Management Journal 3/1998: 14-19; Chung 1998: 66

2 see e.g. Pellinen 1994: 11, 14; cf. Gorb 1990b: 15; Tienhaara 1990: 18

for example, was *The Management of Design*[4] and the British Society of Arts made its first Design Management awards in 1966[5], so design management cannot be considered as an especially new subject. Anyhow, the term itself found its way into the Finnish business management culture as late as in the end of 1980's[6].

Through the decades, however, there have been firms that have followed the basic principles of design management - only without knowing such a fine name for their actions. Many observations made during the interviews made for this study support this understanding: the subject is familiar, the name however not. Most important, anyhow, is to act by the principles of design management, not to know a stylish name for that action.

When design management is studied as a concept by the etymology of the term it is to be noticed that for example the English-Finnish General Dictionary[7] gives as many as over thirty different meanings for the world "design", of which a great part is related to the Finnish word "*muotoilu*"[8]. The term "management", however, can be translated into Finnish at least in twelve different ways, mostly by terms related to management and leadership, "*johtaminen*". And in English there are even more different ways of describing the terms design and management[9].

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3 see e.g. Farr 1966

4 Design Congress 1956, London

5 Julier 1993: 69; cf. Chung 1998: 66

6 Sotamaa 1990: 7; 1992: 2; Johnsson, Leppänen and Ruuska 1991: 6

7 Hurme, Pesonen and Syväoja 1990: 307, 705

8 *"muotoilu" in Finnish has as a term a little more narrow meaning as "design" even though it often is used instead of "design" in Finnish;* cf. e.g. Karihalme 1996: 9-10, 107-108

9 see e.g. Webster's Encyclopedic Unabridged Dictionary of the English Language 1989: 391, 870; New Webster's Dictionary and Thesaurus of the English Language 1992: 259, 605; but also e.g. Oakley 1990: 8-9; Gorb 1990b:16-17; Peters 1995: 29-33; Cooper and Press 1997: 7, 9

The most common translation for design management in Finnish has been "*muotoilu-johtaminen*"[10], which as a term, however, is partly misleading. No suitable translation has been found yet[11], and so the original, established term design management is used even in Finnish, nevertheless its ambiguous nature. However, Julier[12] describes design management to be concerned with the organizational place of design in a corporation. Thus the concept itself is closely related within business strategies.

Other concepts closely related to design management are *image* and *identity*. While describing these two terms can for example dictionaries[13] be used. Thus *image* can be described in economics and standard language as for example a picture or representation created by a personality, or by a firm, while *identity* in its psychological meaning means the general impression generated to a person of himself as an acting individual and a target of the observations of other individuals as well as his own ones. As observed by the business life image thus means primarily the picture of a firm or of a product, or a combination of them, that a firm wishes to express.

To be built in a robust basis enough, an image has to be grounded on the identity of the firm[14]; it has to be compatible with the identity as well as it has to be truthful. According to Olins, "identity is corporate strategy made visible". Identity also means those unique facilities of a firm by which it is able to produce surplus value; by which it can be identified as itself.[15] The corporate identity is born by that reality, those values and respects that people working in the firm feel to be important; the deepest nature of the

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10 see e.g. Puustinen and Perheentupa 1990: 91; Poikolainen 1994: 21-22; cf. Karihalme 1996: 108-110; cf. Koskinen, Mäkelä and Ala-Maunus 1998: 56-57

11 cf. Karttunen 1987: 12; Pellinen 1994: 11; Poikolainen 1994: 22; Karihalme 1996: 109

12 Julier 1993: 69; cf. Gorb 1990a: 10; Walton 1998: 6

13 Eskola, Kaurinkoski and Turtia 1988: 291, 295; cf. Julier 1993: 59, 69; Webster's... 1989: 707, 711

14 see e.g. Bernstein 1995: 18

15 Ackerman 1988: 29; cf. Olins 1990a: 7; 1991: 7; Pilditch 1990: 34; Bernstein 1995: 17; Walton 1995: 9; Balmer 1995: 39; Phillips 1995: 50-51; Upshaw 1997: 9; Peters 2000: 11

organization, its strengths, but its weaknesses as well. The image of the firm reflects this reality.

According to Bernstein[16], it is, actually, relatively easy to affect on the product image: a product is, after all, artificial; it can be made such that it transmits exactly that impression the firm wishes it to create. Business image, on the other hand, is determined by the operation of the firm; according to Bernsen[17] the business image consists of three different things: the image a firm really has; the one it imagines itself to have; and the one it tries to attain to. However, it is fairly improbable that a negative business image would not worsen the product image, too, unless one has been able to hide the firm for example behind a strong trademark. On the other hand, a very positive business image can strengthen the product image of the products manufactured by the firm, as well.

Bernstein states that image itself is reality, because it is the result of the operations of the firm[18], although, according to him, reality often is presented as the opposite of a picture, because reality and that, what is perceived of a firm, often are different subjects[19]. Design management is one, important means in standardizing these two subjects: when the impulses sent by a firm are consistent, the picture, image, will correspond to reality, too. Empty promises gnaw profitability while customers are disappointed.

People from the region of Southern Ostrobothnia in Finland say that a promise is a promise, even if it killed you (*"lupaus on lupaus, vaikka henki menis"*). Perhaps that proverb could be taken as an operations model for business life as well: if the basis is that everything a firm promises to do, every characteristics that are promised to exist in a product has to be carried out, it might make people consider more carefully, what to

16 Bernstein 1986: 22-23

17 Bernsen 1990: 94; cf. Ind 1992: 21-22

18 Bernstein 1986: 323; see also Forbes 1978: 18-19

19 Bernstein 1986: 23; cf. Chajet 1989: 18

promise - and then do it, too. Thus reality and image can come closer to each other and finally become the same. Reality does not have to be "the opposite of image".

Olins[20] states that everything a firm does must strengthen its identity; should the case then be products, buildings, communication material or behavior of the members of the organization. In other words, it comes to design management, which very close relative *identity management*[21] is after all. An efficient design management process consists of the compatibility of the corporate identity and corporate image. Tools in achieving this compatibility are *product, environment* and *communication*[22] within their own fields (see figure 1).

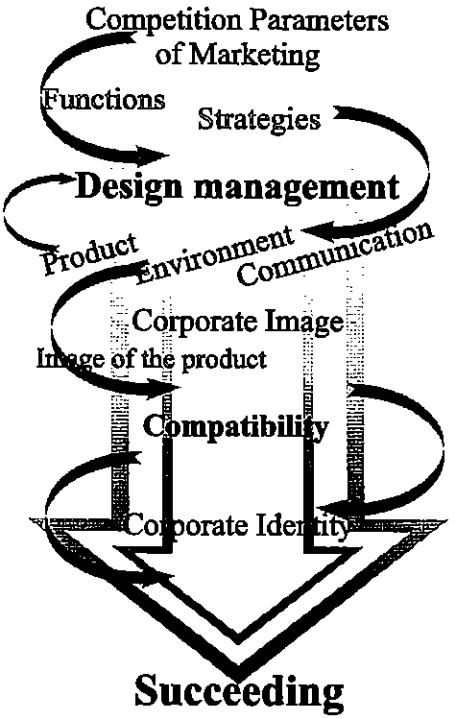

Figure 1. The elements of design management process.

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20 Olins 1990a: 7-9; 1991: 7-9; cf. e.g. Forbes 1978a: 18; Miettinen and Aartomaa 1988: 3, 8-11, 31; Gorb 1988a: 3; Bernsen 1988: 81; 1990: 86, 95; Olins 1988a: 71; Palshøj 1990: 37, 39; Borja de Mozota 1990: 73, 80; Topalian 1990: 120-121; Viti and Vidari 1990: 34; Balmer 1995: 40; Ind 1992: 19

21 cf. Markkanen 1999: 28-29, 32-34, 38-39, 225

1.2 Purpose and objectives of the study

The purpose of the study is to explain the meaning, content, nature and usability of design management as a strategic instrument. *The first objective* while aiming at this goal is to study strategic thinking models in firms in Vaasa and Kuopio provinces[23], especially in relation to the application (presented later in this study) of Porter's competition force model[24] in which the competition between present firms, substitute products and the threat of the possible newcomers of the branch as well as the bargaining power of suppliers and buyers affect the competitive situation of a firm.

As *the second objective* of the study it is to explain the meaning, content, nature and usability of the elements of design management - product, environment and communication - as competition parameters in the industrial enterprises and trade & service enterprises. *The third objective* is to create a design management model for coordination of the design management functions of firms in order to increase the usability of design management as a strategic instrument.

The established opinion presented in the research tradition and literature of the branch that explains design management to be divided into the fields of product, environment and communication is not actually questioned in this study, but the usability of this tripartition is analyzed here. As a research hypothesis[25] it can thus be presented that the null hypothesis H_0 = there is a useable tripartition of design management into product, environment and communication and the alternative hypothesis H_1= there is no usable tripartition of design management into product, environment and communication.

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22 cf. e.g. Markkanen 1999: 32-33

23 *Since September 1997 Vaasa province has been a part of the Province of Western Finland and Kuopio province has been a part of the Province of Eastern Finland (see e.g. http://www.intermin.fi/eng/prov/index.html August 13th 1999)*

24 see e.g. Porter 1984: 23-56; 1985b: 16-21; 1991a: 59-60; Porter 1991b: 12-20

1.3 Frame of reference for the study

Strategic planning and management is the basic idea on the capacity of which design management and other activities of a firm are based[26]. So which is the strategic thinking model that helps a firm to clarify its plans ever until they will brighten up as crystal clear strategies?

For strategic reasoning to be meaningful one has first to define what "strategy" is as a concept. It can generally be stated that a strategy consists of four parts that are the line of business; superior knowledge and resources; competitive advantages; and synergy. The adjustment of the corporate skills, talents and resources, the ultimate core competences a firm has, to competitively answer the challenges and possibilities offered by the business environment can be named as the function of strategy. The substance of strategy, however, is that strategic business area in which the corporation acts. [27]

Näsi[28] proposes the most important schools of strategic management to be the *ansoffian* school of organization that serves the environment; *higginsian* planning systematics; *mitzbergian* basic strategy types; *normannian* business idea thinking; *petersian* success profile and culture thinking; *porterian* competition analytic strategy formulation; and the *portfolio model* of Boston Consulting Group. These schools are internationally well-known and popular, and even though they have many similarities, even overlaps, each one of them defends its place with a message that clearly differs from the others.

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25 Nummenmaa, Konttinen, Kuusinen and Leskinen (1997: 42) state that *the null hypothesis that is to be tested can be for example like "there is no differences between the groups" or "the model proposed fits the materials"*; cf. also Eisenhardt 1989: 541-544

26 cf. Julier 1993: 69

27 Here see e.g. Yavitz and Newman 1984; Porter 1980, 1985a, 1992; Quinn 1988, 1991, 1992; Ansoff 1988, 1990: 101, 105-110; Normann 1976; Mintzberg 1979: 25-26, 1980: 95; cf. Bogner and Thomas 1994: 112-116; Korvenmaa 1998: 61, 64; Ulrich 1998: 23; Gagnon 1999: 125-135; Markkanen 1999: 98-99; Warren 1999: 3-7

28 Näsi 1988: 40-71; cf. Hamel and Prahalad 1994: xiii-xiv

As early as in the 1960's Ansoff proposed his own systematic and phased planning model that aims into the growth of the corporation and into its diversification in its own product/market matrix. The ansoffian strategic management is based on the planning of strategic position and onto the improvement of the facilities of the organization. It is also built onto the management of the challenges of the environment by identifying the weak and strong signals there; and by controlling the change resistance of system origin. According to the school of Ansoff, knowledge has to be obtained and analyzed continuously.[29]

In an ansoffian point of view, the progress and guidelines of a firm are directly linked with its ability of understanding environmental turbulence. This can be stabile, reactive, anticipating, new seeking, or creative by nature. Each one of these types requires a different operations model for both the management as well as for the marketing; the manager has to be able to identify signals, environments, and talents of different levels. [30]

The planning systematic approach of the school of Higgins includes two methods describing the thinking pattern or understanding of a man: hierarchising and sequencing. Hierarchising can be started from a problem that is very common and abstract by nature and then move on, stage by stage, towards more concrete indicators. Sequencing, on the other hand, is suitable for clarifying events and processes, for "arranging" them. They can be used, for example, for planning the future of a corporation, or like Näsi expresses it: for the analysis and synthesis of fuzzy and complicated, at the beginning even unrecognized entities.[31] The making of long, short and medium term plans still is an important tool in strategic action of corporations.

The most common basic strategy types presented by Mintzberg are probably the *entrepreneurial mode*, in which it is trusted in the ability of the manager to guide the

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29 Ansoff 1965, 1981, 1988, 1990; Deutsch 1994: 4-5

30 See e.g. Näsi 1988: 45

31 See Higgins 1983

organization toward the "vision shining in the end of the tunnel"; the *adapting mode* where the organization continuously adjusts itself to the demands of the environment; and the *planning mode*, where the organization develops one clearly defined line of strategic action and follows it until the plans are realized. There are but few enterprises that have it possible, nor sensible, to realize in its actions any of these extreme types precisely; the strategy the organization realizes in its action is usually found somewhere in the between of these; at the combination of them.[32]

Mintzberg emphasizes the role of learning in strategy formulation; the ability to adapt oneself to those situations, when the strategy intended does not realize as planned. In situations like that the meaning of the flexibility of organization and management is more important than an obstinate intention to realize the strategy in accordance with the original plan, despite the current circumstances. For the organizational efficiency it is important to know, when it pays to follow the change favourableness in order to adapt oneself into the external circumstances, and when it pays to accept the existence of change resistance in order to improve internal efficiency.[33]

Mintzberg toys with an idea of "the five P's for strategy" *(plan, ploy, pattern, position, perspective)* as a kind of equivalent to the marketing mix concept of marketing theories that includes "four P's" *(product, price, place, promotion*[34]*)*. As a plan, strategy defines the guidelines for the organization. As a ploy, strategy helps the corporation to cope with the competition while it can be changed when needed. As a pattern, strategy guides organizational behavior. As a tool for positioning strategy helps the corporation to place itself into the competition field present. And finally, as "a perspective", strategy helps to

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32 See e.g. Mintzberg 1980: 77-91; Lorsch, Baughman, Reece and Mintzberg 1978: 246-252

33 See Mintzberg and McHugh 1985: 160-197; Mintzberg 1988: 13-20, 1991: 12-19, 1992: 12-19, 1995: 13-21; cf. Lester, Piore and Malek 1998: 87; Warren 1999: 1

34 Kotler 1990: 69, 1997: 92-94; cf. Laakso 1999: 34

perceive that complex process through which the special details of the organizational culture will be developed into shared values and norms.[35]

The concept of business idea in the school of Normann is much more practically oriented than the strategies above and it is easily adapted even for a small firm for developing its actions. Describing its market segment, products and services, the line of action, and the business image desired, will help the firm to clarify the guidelines and basic principles of its actions. When the firm answers to the questions of which products and services belong together, and which finally is the organization's shared understanding of the matter which are the basic components of success, it keeps getting closer to the answer of why it exists - what is that *area of superior knowledge* that makes the firm competitive.[36]

Hence, the previous schools of management got us closer to the two basic ideas of design management which are creating compatibility and harmony between the product and markets, and on the other hand, between the product and organizational structure; and the aspirations for, through design management, to find that area of superior knowledge in which the corporation should invest to be successful in the current competitive situation. This was studied in the business interviews, too, through the business idea concept (appendix 3).

Peters is one of the innovators in the modern management thinking. According to him, the stumbling blocks for many American corporations have been the "swelling" of hierarchies and getting stuck in one place. Action seeking, customer orientation, knowledge and involvement, paradoxes of business life and a chaotic business environment are included in the typical petersian terminology. "Petersianism" itself is not typical strategy thinking according to the traditional patterns, nor is it purely a part of competition theories, either.

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35 Mintzberg 1988, 1991, 1992; cf. e.g. Kotler 1988: 72; Schein 1987: 23-24, 31-38, 48; Morgan 1993: 112; see also Hurme et al. 1990, Webster's... 1989; New Webster's... 1992; Gagnon 1999: 134

36 Normann 1976: 39-58; see also Jahnukainen, Junnelius and Sonkin 1988: 14-23; cf. Hamel and Prahalad 1994: 224-225

One basic principle of the school of Peters is the perception that the management and organizations have to be able to make constant and flexible changes and to take immediate actions in order to be successful in the business environment that is under continuous changes.[37]

Without a management view based on the understanding of wholes a corporation cannot be successful, the petersians say, while recommending us to keep in mind, how the product actually is generated and to remember to give the innovations enough space[38]. Without a product there would not be a firm either, whether the product was physical merchandise or pure service, or something in between. If the management was not aware of the basis of its firm, the product, how could it be able to create a functioning strategy, either?

Flexible changing and the ability to identify the wholes is one of the mental structures of this study: with design management a controlled, strictly defined and planned corporate image can be created. But if the chosen strategy appears to be wrong in the constantly changing world, in those conditions present right then, there is no need to stick to it; one has to be able to take response of the changes, too, when they are not only needed but necessary, as well.

One of the best-known recent cornerstones of elaboration of a product strategy is Porter's theory of competition analytical strategy formulation.[39] Porter's competitive theories were popular in Finland especially in the late eighties and early nineties when the first guidelines for the theoretical part of this manuscript were written, and an application of Porter's competition model theory is presented here in subchapter 2.2.

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37 Peters 1990b: 242-243; 1991: 191-198; cf. Warren 1999: 1

38 see Peters and Austin 1985: 51-70, 171-179

39 See Porter 1980, 1985a, 1992

The school of Porter includes several basic parts that support each other. The progress of strategy thinking, the basic elements of school of Ansoff and portfolios merge in "porterianism" into a wide and, in its logical sense, attractive competition strategy model.

The competition strategy model[40] that studies those forces that affect the competitive situation of a firm, and the alternative basic competition strategies[41] create an essential part of the basis of the design management model of this study as well. Even though the design management functions can flexibly be used in both the service, retail and manufacturing oriented firms, the concept itself is generally used to be connected with especially the manufacturing oriented, or, above all, so called design oriented lines of business. The three generic strategies presented by Porter - differing, cost leadership and focusing - can still easily be applied into, for example, service lines, too.

Porters[42] diamond model is a so-called cluster model that consists of firm strategy, structure and rivalry; factor and demand conditions; and also of related and supporting industries. The model is influenced by not the chance, coincidences and possibilities alone, but also by the government with its policy. The five basic competitive forces[43] introduced by Porter, as well as the diamond model within its different fields, are a part of the everyday life of any firm. These five basic competitive forces will be discussed later on this study through the design management functions of a firm.

One of the most popular styles to present the product portfolio model introduced by Boston Consulting Group might be the BCG growth-share matrix with its question marks (problem children), stars, cash cows and dogs. In the beginning the BCG-matrix was in a rather biased way focused on the meaning of cash flow. Portfolio analysis has, therefore, been

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40 see Porter 1984: 23-56; 1985b: 16-21; 1991a: 59-60; Porter 1991b: 12-20

41 see Porter 1984: 57-71; 1985a: 11-26; 1985b: 24-43; 1991a: 63-65; cf. e.g. Wilson, Gilligan and Pearson 1994: 240-245

42 see Porter 1991a; 1992: 127

43 see e.g. Porter 1995: 64-73

criticized mainly because of its simplifying form that can easily lead to lack of criticalness, but, in the other hand, the model has been as a basis for several considerations. Portfolio analysis offers, nevertheless, a strong basis for the tasks of the business units of a firm and it can be used as a helping method when it is needed to decide, whether to increase or decrease the business portfolio.[44]

To combine the portfolio model with life cycle theories can also be done rather painlessly; there can, after all, be seen all of the phases of a life cycle of a product. When one presumes that the product life cycle will follow the traditional S-formed curve[45], one can name the products that are on their launching or emergence stage as question marks, those products that are on their growth stage as stars, those on their maturity stage as cash cows and finally the products that have turned onto the decline situation in their life cycle, those that are reaching the end, as dogs.

The reasoning models characteristic for the school of portfolio thinking, strategic business area (SBA) and strategic business unit (SBU)[46], suit very well also into the design management thinking: which is that strategic business area or unit into which it should be profitable to focus our resources on, in exactly this development situation.

The network thinking[47] gives its own share into the strategic reasoning of this study. No company is alone in its business area, but many different interest groups will affect its functions and strategic decisions. The competitors, cooperation partners and subcontractors, customers, financiers, different kinds of action groups as well as the own personnel of the company together shape the social reality in which the corporation fights

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44 See e.g. Abell and Hammond 1988: 597-602; Näsi 1988: 49, 52; Yavitz and Newman 1984: 61, 70; 1988: 593-597; Henderson 1991: 678-680; 1992: 312-314; 1995: 645-647; Seeger 1988: 602-603;1991: 680-682; 1992: 314-317

45 see e.g. Kotler 1990: 348-350

46 see e.g. Yavitz and Newman 1984

47 see e.g. Raatikainen and Ahopelto 1998: 73-74; cf. Jevnaker 2000: 41-42

its everyday struggle for its place in the field of the markets, actually, a continuing struggle for its existence.

Because it is not possible for any corporation to be successful by focusing only to a pure fight for the place in the sun, similarly forgetting to invest in its critical success factors, a corporation has to be able to cooperate with many different quarters. By trying to find the kind of cooperation partners among its customer and supplier contacts as well as among the personnel resources that smoothly fit in its corporate image, a firm can effectively follow the guideline of design management: to walk through systematicness and compatibility towards a controlled corporate image.

The network model presented by Håkansson and Johanson[48] consists of nets of actors, activities and resources, all entangled together. A network is made up of nets of different types, the ones in different levels as well as the overlapping and with each other intersecting ones, the knots they build up, and relationships. A net itself, on the other hand, is made up of different contacts, cooperations and connections.[49] According to the network approach presented by the researchers from the University of Uppsala, the point of view in strategic management is focused on how to set up, build up and maintain stable relations and positions in networks. This can be made possible by developing both the manufacturing processes and those market advantages that are suitable for the needs of the network.[50] A controlled design management policy might be the means to help to find the market advantages.

Even a good network relationship might not necessarily be an everlasting one, neither is it meant to be such a one. The world keeps on changing, so do people, corporations and the

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48 Håkansson and Johanson 1992: 29

49 See e.g. Paasche, Pettersen and Solem 1993-1994: 71-74, 77; Raatikainen and Muurinen 1994: 54; Peltomäki and Kamppinen 1994: 126-127; Ahopelto and Raatikainen 1994: 178-179, 181-182; Kamppinen 1994: 41; Raatikainen and Ahopelto 1998: 81-85; cf. Lipnack and Stamps 1994: 42-43

50 Paasche, Pettersen and Solem 1993-1994: 76; cf. Anderson, Håkanson and Johanson 1994: 1

needs of them. According to the opinion of Jarillo, a network structure will often be changing, too.[51] Networking is a dynamic process, there are corporations moving around the heart of the net that are either going to join the net or are to move apart from it already. The nets join together with each other in purpose to grow up as networks - and they ravel out as well, after having become unnecessary for the member firms.[52]

Some of the links between firms and the net are strong, some are weak. The strength of the link, the commitment of the firm, is determined by the fact how important the net is for the firm and how committed the firm finally is to the net it belongs to; how important the firm feels the net and the belonging to the net for itself to be.[53] Thorelli, however, considers the use of power in networks as their central feature and he finds the nature of the networks to be more competitive and less cooperation focused as the other network theoretics point out. The network opinion of Benson, presented as early as year 1975, supports the view of Thorelli.[54]

The ability of the firm to tie contacts with potential cooperation partners affects the successfulness of design management as well. It does not make sense for even a large company to always do everything by itself, because hardly any firm can be an expert in every branch. A well-considered subcontracting policy together with confidential cooperation relationships might help the corporation to avoid the pitfalls of competition: by finding suitable cooperation partners a corporation can concentrate on what it is best in.

There are as many strategies as well as the combinations of them as there are firms. Even the smallest firms have to be aware of the strategic possibilities of the competitive environment of theirs; the level of strategic consciousness and knowledge might vary a lot

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51 Jarillo 1988: 31-41; Paasche, Pettersen and Solem 1993-1994: 77-78

52 See e.g. Ahopelto 1994: 376-382; Raatikainen and Ahopelto 1998: 81-85; Ahopelto and Raatikainen 1998: 60

53 See e.g. Ahopelto and Raatikainen 1994: 172

54 Paasche, Pettersen and Solem 1993-1994: 78-79

between firms and their life cycles, but strategic choices also mold the future of firms; almost every large corporation has once started as a small or medium sized enterprise.

However, strategic planning is such a subject that has to be done in order to optimally control the critical success factors of a firm. According to Drucker[55] a corporation is an open system that works in a continuos interaction with its environment. While stating creativity to be one of the central parts in corporate life, Drucker enters a claim as well: corporations have to be able to do something new and different instead of something better and more. Drucker has crystallized the success factor based on strategic planning in a pithy way by stating that you can not be the best in everything - you only can be the worst in it. That sums up why a firm has to be able to choose the strategy that helps it to be the best one in that strategic field it has chosen.

1.4 Research methodology

A four-partite research methodology typology presented by Neilimo and Näsi[56] has been in common use in Finnish business research at the time of this writing. Neilimo and Näsi divide the research methodologies of business sciences into four main categories: *concept analytic, decision making methodological, activity analytic, and nomothetic.*

It is central in the concept analytic research method to trace and analyze the concepts while the subject of the research may be either the content of the concept or the whole concept system. Being logical-empiristical by nature, the nomothetic method is based on tripartition *theories - models -hypotheses.* In the decision making methodological research the objective is to find the best possible solution to a particular problem by searching for a method to support the decision making process. In the activity analytic research the

55 see e.g. Deutsch 1994: 4

56 Neilimo and Näsi 1987; see also Näsi 1980: 34-36

research problem is viewed from the actor himself, and the committed observation by the researcher is important.[57] In the following figure there has been presented the relations of these four "basic research methodologies" of business sciences to each other in the theoretic - empiristic - and descriptive - normative four-dimension field.

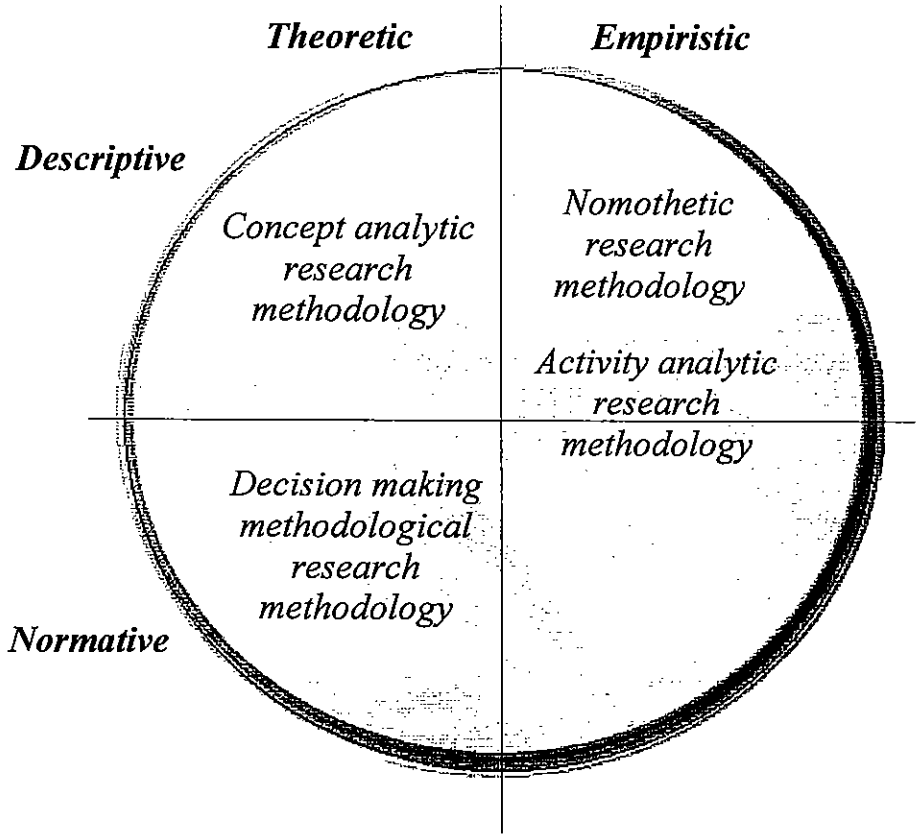

Figure 2. Business scientific research methodologies[58].

It is central in the concept analytic research method to trace and analyze the concepts while the subject of the research may be either the content of the concept or the whole concept

57 Neilimo and Näsi 1987: 66-67; Näsi 1981: 37-40; Laaksonen 1990; see also Näsi 1980: 36

58 cf. Kasanen, Lukka and Siitonen 1991: 316; see also Näsi 1981: 37; Neilimo and Näsi 1987: 31, 67

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Kasanen, Lukka and Siitonen[60] express the *constructive research methodology* in addition to the four-piece classification above. They see the constructive research to bring a necessary new point of view to the business science research that traditionally has been discussing of the rightness of positivistic and hermeneutic approach in research[61]. Statistical interpretation and critical testing does not necessarily always get to the heart of the business knowledge where many people place managerial skill and problem solving ability to.

While placing the constructive research methodology into the four-dimension field described above, it takes, according to Kasanen et al.[62], its place nearby the decision making methodological research methodology (see figure 3). However, creative, innovative and heuristic methods are emphasized in the constructive research. There are features from the activity analytic research method in constructive research as well. Both of these research methods include an important role of the immediate and practical empirical connection.

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59 Neilimo and Näsi 1987: 66-67; Näsi 1981: 37-40; Laaksonen 1990; see also Näsi 1980: 36

60 Kasanen, Lukka and Siitonen 1991: 305, 308; cf. Eisenhardt 1989: 532-550; see also Lukka and Tuomela 1998: 24

61 see e.g. Näsi 1980: 31, 33-34, 36; Kasanen and Lukka 1993: 356-357, 364-365

62 see Kasanen, Lukka and Siitonen 1991: 317-318

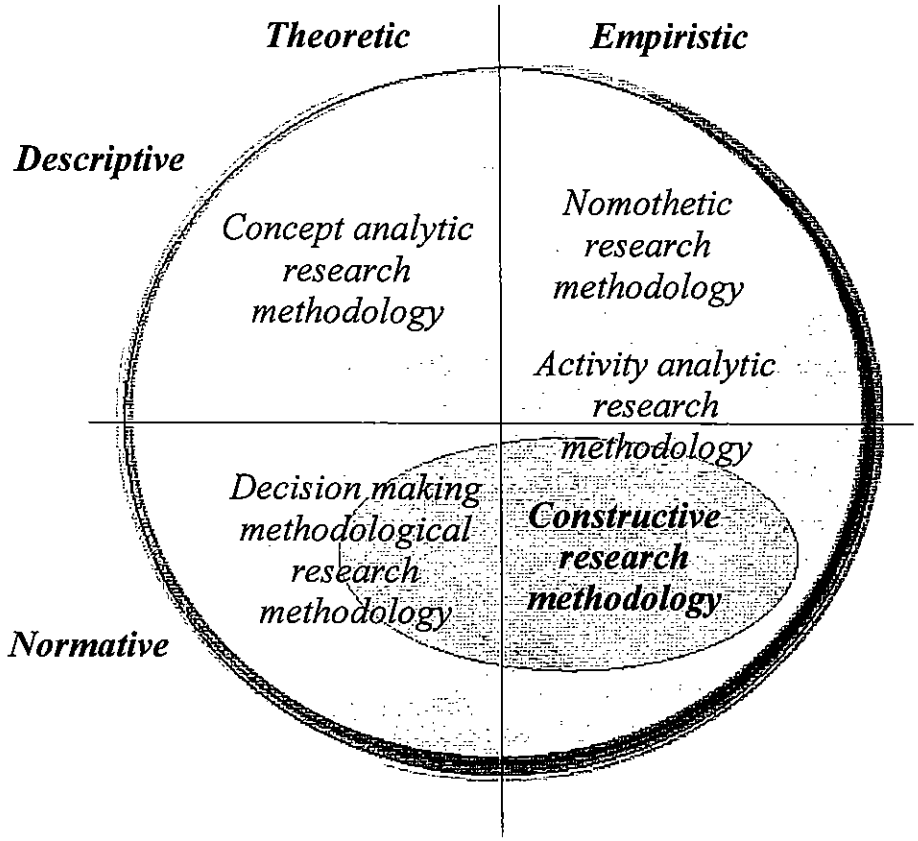

Figure 3. Constructive research method in business sciences[63].

Constructive research can be seen as a form of *applied research.* It is typical for the applied research to produce such new information that aims at some specific application or goal. Therefore it differs from *basic research* that does not have any specific normative goals and from *technical science* that purely tries to develop skills and means. However, defining the boundaries between scientific problem solving activities and consulting can be a little bit more difficult. The forthcoming basic questions while defining scientific characters are the speculations of the relevance and simplicity of the results as well as the

63 cf. Kasanen, Lukka and Siitonen 1991: 317; cf. Takala and Helo 2001: 1

speculations of how easy it is to use them.[64] Figure 4 visualizes the characteristics of constructive research as a uniting research method.

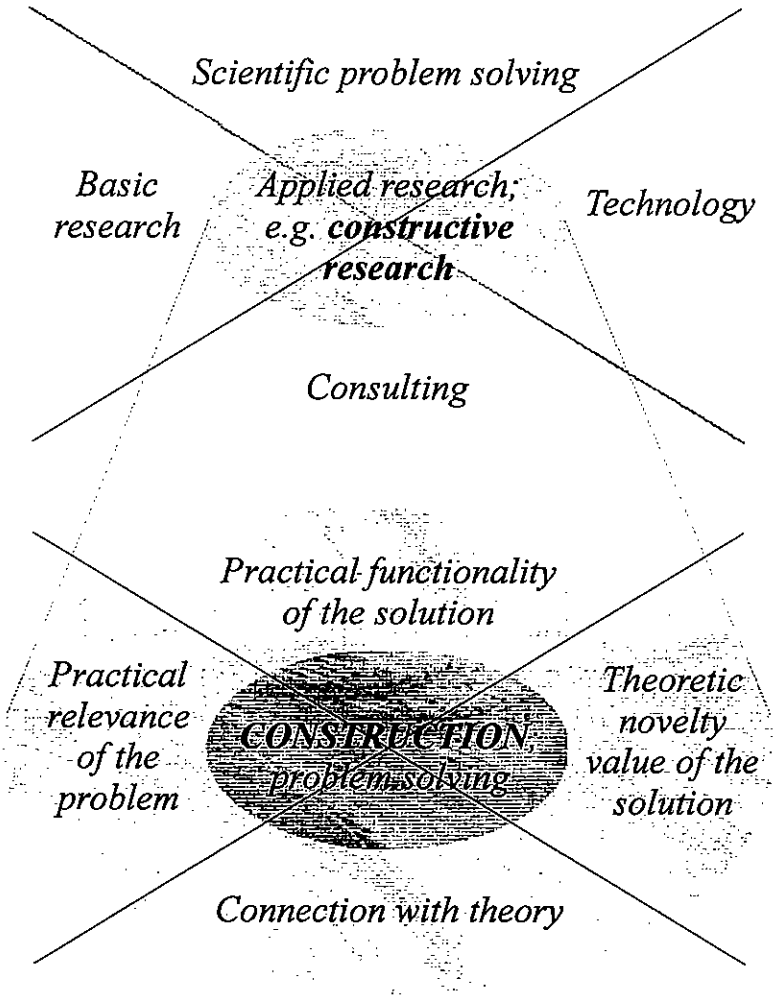

Figure 4. Positioning and parts of constructive research[65].

64 See Kasanen, Lukka and Siitonen 1991: 302-304; Niiniluoto 1985: 174; Lukka and Tuomela 1998: 24-25; Takala 2000: 2

According to Kasanen[66] et al., constructive research can be defined as a method of problem solving that uses the help of designing a model, a picture, a plan, an organization, a machine etc. According to them, constructive research can be visualized, too, by dividing the work into stages: (1) searching for a relevant and interesting research problem, (2) acquiring preliminary understanding of the object, (3) innovation stage, constructing a problem solving model, (4) testing the functionality of the solution, proving the validity of the construction, (5) showing the theory connections used in the solution and indicating the scientific novelty value of the solution and (6) critical examination of the width of the application area of the solution[67].

In this study design management is researched as a strategic instrument. By considering the study against the background of the constructive research the following six stages can be found: (1) The question if there is a useable tripartition of design management into product, environment and communication can here be defined as the research problem. (2) Preliminary understanding is gained from the literature of marketing, management, strategy and design branches and through a preliminary research. (3) The innovation stage includes the constructing of a design management model and (4) the proving of the validity of the construction; i.e. the constructed model will be tested by making questionnaires and interviews in the firms, and by the means of analyzing the empirical data, both quantitative and qualitative[68]. (5) Showing the theory connections used in the solution and indicating the scientific novelty value of the solution will be done by explaining, what new it is that this study with its results brings into the design management discussion compared to previous strategy, management, marketing and design literature. (6) Finally, it is studied how design management even more generally and concretely can be utilized as one of the competition parameters of a firm, and therefore as a strategic instrument.

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65 cf. Kasanen, Lukka and Siitonen 1991: 303, 306

66 Kasanen, Lukka and Siitonen 1991: 305-306; Kasanen and Lukka 1993: 365; cf. Takala 2000: 2; Takala and Helo 2001: 2

67 for generalization see also Kasanen and Lukka 1993; cf. Eisenhardt 1989: 533

68 see e.g. Eisenhardt 1989: 534-535

This study is constructive by nature. However, the researcher would not like to completely ignore the nomothetic and even concept analytic sides of the study. So the study could be defined as constructive by nature in the way that the constructive research method is examined from a nomothetic direction similarly extending the view to partly even the concept analytic, partly the decision making methodological characteristics that quite closely are linked with the basic nature of the research method. The researcher's view of the wider nature than constructive research method of this study in the four-dimension field of the business scientific research methods is described in figure 5.

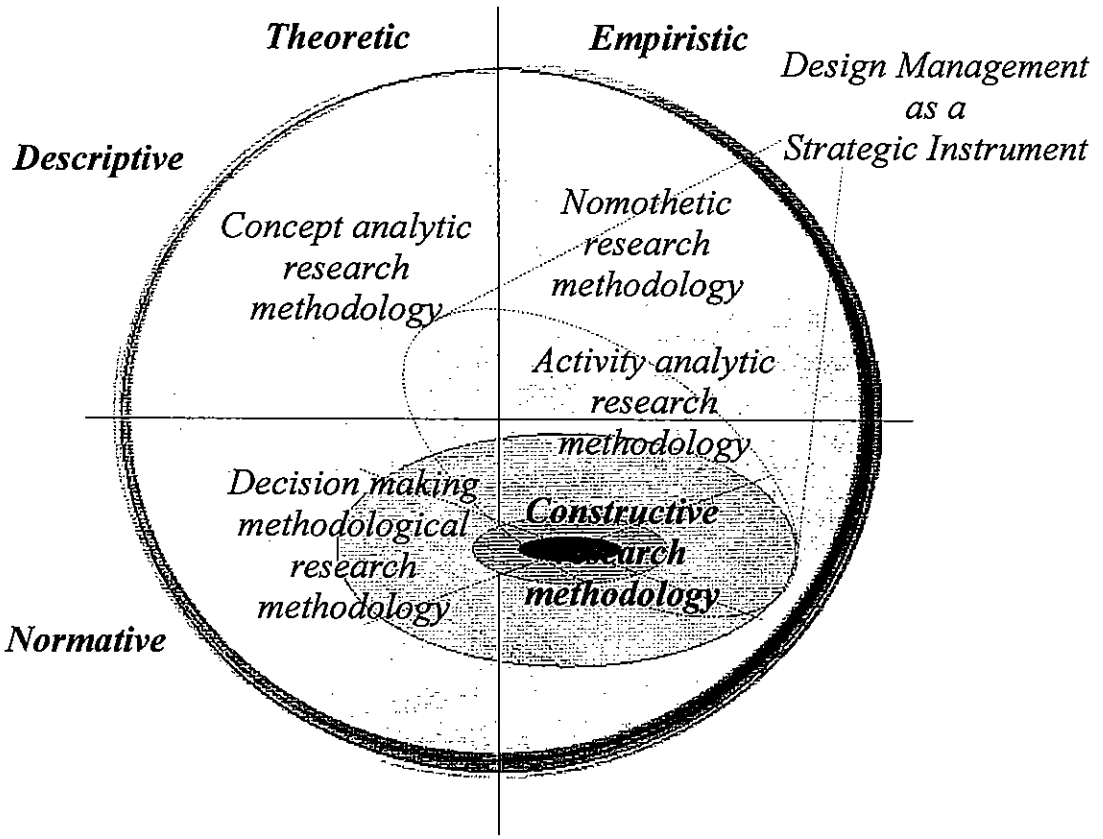

Figure 5. Research method.

Visualizing is an essential part of the constructive research method and in this study special attention has been paid to it. Visualizing is an essential part of design management as well. Therefore a clear, illustrative appearance is an important characteristic especially in a constructive study about design management. In this study the subjects have been visualized in drawings where possible. This has been done in order to help to describe the scope of the study and the results acquired. The tendency of the researcher to both problematize and perceive things by drawing has also contributed to the decision.

1.5 Research data; collecting and analyzing it

In the theoretic part of this study design management is analyzed as a concept. In the literature about design management there is an almost general agreement that there is a tripartition into product, environment and communication when the divisions and functions of design management are discussed[69]. The frame and substance of this study consist of these three divisions and of the importance of compatibility between them.

There in the second chapter the functions and nature of design management as a part of the competition parameter field of a firm and the basic strategies of competition are deliberated. A new theoretic model of the positive and negative energies of a firm, based on the model of competitive forces by Porter, is also presented there. In the second chapter design management is also treated as a part of the functions of a firm and the positioning of it in the organizational structure is treated there, too. The factorial structure of design management as well as its technical and image related factors are explained in the third chapter. In the following three chapters the tripartitional nature of design management will

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69 see e.g. Gorb 1978: 6-9; 1988a: 3-4; 1990a: 10-11; Eich 1988: 44-55: Lawrence 1988: 70-71; Conran 1988: 137; Ughanwa and Baker 1989: 297; Davies 1989: 79-80; Nyström 1990: 20; Schneider 1990a: 42-44; 1990b: 51; Olins 1988a: 55-58; 1988b: 95-96, 99; 1991: 7; Borja de Mozota 1990: 80-81

be discussed more deeply in both theoretic and empirical basis. A main chapter will be dedicated to each of these three divisions.

In the chapter seven the framed design management model will be presented and the usability of it will be tested through an analyzed empirical data. One important goal for empirical testing is also to find out, whether it is possible to gain the kind of advantage through design management that will be sufficient for compensating the resources allocated to those functions or not. The empirical data in this study consists of interviews made in Vaasa and Kuopio provinces as well as of three different questionnaire and interview materials collected from Finnish firms.

Corporate interviews for this study have been made through the years 1993 to 1997, though so, that majority of the interviews were made in the summer and early autumn 1994. The questionnaires were also posted to the firms during spring 1994. Complementary interview and observational material has been collected until quite recently, while the research work of years 1997 to year 2000 has been emphazised in an activity analytic direction, since the researcher of this study has worked as an expert to develop the design management functions of an organisation.

Firms located in the Vaasa and Kuopio provinces were selected as the first target group. There were several reasons for choosing the Vaasa and Kuopio provinces as target groups. They both were familiar as corporate regions for the researcher who comes from Vaasa region and has lived in Kuopio, and also had studied in the Universities of Vaasa and Kuopio. So the sampling[70] of the target firms was more reliable, when there already was a preliminary understanding of the nature of these firms, and thus also of the possible interest they may have to design management functions.

Also the interviews that took place on the firms were thus practical to accomplish, when the researcher did not so-called come from outside but was "one of us". Especially in the

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70 see also Eisenhardt 1989: 536-537

Vaasa province it was very common among the firms interviewed, that the small talk before the interview sessions included attempts to find out, if there were any common relatives, however distant, or at least acquaintances. These two provinces also are often presented as different from each other by corporate culture, by their entrepreneurial spirits and most of all by the characters of their inhabitants[71], so a partial purpose in the study was to explain, whether there is a meaningful difference between the attitudes of firms located in these two provinces towards design management or not.

Though not included in this material here, a total of 61 corporate interview cases were also done as student work during the design management lectures given by the researcher in the University of Kuopio during winters 1993 and 1994. In these interviews the students that were doing their advanced studies there used a standardized list of questions (year 1993) or a complete questionnaire (year 1994), both made by the researcher. The students made also a written exercise of the results of their interviews. The interviewed firms were located mainly in the Kuopio province, but some were located also in the home regions of the students in different corners of Finland. Knowledge and experience were gained from the results of these cases of the year 1993 in order to make the actual questionnaires and interview forms; the student works made in the year 1994 therefore gave some extra support for interpretation of the research results of this study, and for allocation of these interpretations.

A questionnaire that included three basic indicators and an inquiry about the willingness to cooperation was sent to 24 firms in the Vaasa province and 23 firms in the Kuopio province at the turn of the years 1993-1994 in cooperation with the Mikkeli regional office of Kera Ltd.[72]. These firms were chosen together with the development manager of Kera

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71 cf. e.g. Niemelä 1991; Niemelä, Hirvenkari, Kainulainen, Kotakari, Pääkkönen, Rusanen, Vidgren, Vornanen, Väisänen and Ylinen 1994

72 *Kera Ltd. was a Finnish special credit institution owned by the State of Finland, and it specialized itself into the risk financing and development of small and medium sized enterprises in Finland (source: http://www.kera.fi July 7th 1997). Now, Finnvera is a specialized financing company that promotes Finnish exports by offering export credit guarantees; it also supports domestic operations of small and medium sized companies by offering risk*

who was their specialist in the design management development. Originally the firms were sifted out from those ones that had acquired the Design management files[73] published by Kera, and had acquired it before the year 1993, when that information had been moved to be kept with the ledger files and consequently the information had become secret. The criteria for the sifting were the location of the firms (Vaasa and Kuopio provinces) and the size of them (in this sampling: firms with at least five employees); private persons also were left away from the sampling.

Ten firms expressed their interest for cooperation by returning a short questionnaire page by fax, four of the firms were located in the Vaasa province and six ones in the Kuopio province. A twenty-three paged questionnaire was mailed to these firms and four of them returned it. Some telephone conversations about the subject took also place with the representatives of two of these firms.

On the basis of the experiences gained from the test questionnaire the form was reduced and the next questionnaire was mailed at the end of May 1994. A seven-paged questionnaire (appendix 2) was sent to a total of 1015 firms located in the target provinces, excluding agriculture, forestry and mining industries. The purpose of this research also was to study the usability of the concept of design management, irrespective of the design orientation[74] of the firm.

A half of the questionnaires was sent to the Vaasa province, the other half to the Kuopio province. The addresses of the firms were acquired from the Business development departments (*elinkeinotoimisto*) from Kuopio and from the towns of Vaasa province, and from the address register of the Regional Council of Savo (*Savon liitto*). The lines of business of the firms that answered the questionnaire are presented in the appendix 1.

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financing and guarantees. Owned entirely by the State of Finland, Finnvera was formed by merging the activities of Kera Ltd. and the Finnish Guarantee Board on January 1st 1999. Source: http://www.kera.fi/en/finnvera/index.html August 13th 1999.

73 see Johnsson, Leppänen and Ruuska 1991

74 cf. e.g. Ainamo 1996: 201

It was set as a goal to get answers from at least one hundred firms to enable a factor analysis wide enough[75]. This goal was reached well; the total amount of answers was 159. The answering percent however was a little bit over seventeen, which obviously was a result of the fact that the subject *design management* was not well known by the recipients of the mailed questionnaire. No reminders though were sent, because the purpose of the sending of these questionnaires of this second stage of the research process had not been to get as wide an amount of answers as possible from any kind of firms, but instead, to find firms that genuinely were interested in design management to be interviewed more thoroughly during the next stages of the research process.

In the Kuopio province 49% of the firms that answered the questionnaire were located in communes with more than 60 000 but less than 90 000 inhabitants, in the Vaasa province 53% of the firms that gave answer were located in communes that were sized between 30 000 and 60 000 inhabitants. So more than one half of the firms that answered the questionnaire in both of the provinces operated in the commune centers of their provinces, one half in small localities by the number of inhabitants and in the country communes. Majority of the people that answered the questionnaire, 71% of those who gave their contact addresses and 60% of all that gave answers, worked as managing directors or in a similar leading position as that, depending from the business form.

The lines of business of the firms that answered the questionnaire could, on the basis of the answers received, be sorted as *industry* (a total of eighty firms) and *trade and service* (a total of seventy-nine firms). Forty-eight firms (55%) of those that answered the questionnaire in Kuopio province belonged to industry and forty ones (45%) to trade and services, the comparable figures in Vaasa province were thirty-two (45%) and thirty-nine (55%).

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75 see e.g. Reese and Lochmüller 1994 *(source: http://www.chem.duke.edu/~reese/ tutor1/factu-cmp.html July 7th 1997);* Nummenmaa et al. 1997: 243, who say that *"the maximum amount of variables should be 30-50 ones and the amount of data collected should be at least 100".*

According to Statistics Finland[76] (*Tilastokeskus*)[77], 26% of the business places in lines of business similar as in the questionnaire and located in Kuopio province were classified as industrial firms and 74% as firms acting in trade and services. In Vaasa province the classification in accordance to the one sorted out from the questionnaire were, in the year 1992, that 32% of the firms there belonged to industry and 68% were included into trade and services. Thereby industry was rather emphasized among the firms that answered this questionnaire when compared to the total amount of the business places. More specific figures are shown in tables 1 and 2.

Table 1. Number of firms that answered the letter questionnaire in Vaasa and Kuopio provinces by lines of business.

	Vaasa province	Kuopio province	*Total*
Industry	32 (45%)	48 (55%)	*80* (50%)
Trade and service	39 (55%)	40 (45%)	*79* (50%)
Total	*71* (100%)	*88* (100%)	***159*** (100%)

Table 2. Total numbers of business places divided into industry and trade and service in Vaasa and Kuopio provinces and in the whole country year 1992 according to Statistics Finland[78].

	Vaasa province	Kuopio province	Whole country
Industry	4 593 (32%)	1 696 (26%)	40 961 (28%)
Trade and service	9 675 (68%)	4 808 (74%)	107 155 (72%)
Total	*14 268 (100%)*	*6 504 (100%)*	*148 116 (100%)*

76 *Statistics Finland is the main center for statistical information in Finland*

77 Tilastokeskus 1994: 1-2, 12-17

78 Tilastokeskus 1994: 1-2, 12-17

In the questionnaire it was also asked if the firms were interested in further cooperation; an interview, a more specific questionnaire or in some other form of cooperation. Several firms were interested in cooperation and so a new, wider questionnaire form was sent during the summer to fifty-four enterprises in all to be familiarized in advance. Times for interviews based on the questionnaire sent were also arranged for the summer of 1994.

Thirty-six business leaders or other people in charge from thirty-one firms in all were interviewed during June-September 1994. Twelve enterprises answered this questionnaire by mail and some of these twelve ones were also interviewed by telephone. Eighteen firms of these forty-three enterprises in all were located in the Vaasa province and twenty-five ones were located in the Kuopio province (table 3).

During the fourth phase of this research an amount of eleven Finnish companies from different provinces and from different lines of business were chosen to be studied more closely. These firms had earlier expressed their own interest in improving their design management activities and they also participated two design management lecture sessions held by the researcher. This process took eight months in all; at first, after the first lecture session, the firms were advised to answer the letter questionnaire presented in appendix 2. After the feed back session of the results of that first questionnaire the representatives of the firms (an amount of approximately forty managers from these eleven firms) were advised to answer the questions of the questionnaire of appendix 3.

Table 3. The numbers of firms that were interviewed and that answered the wider questionnaire, by provinces.

	Kuopio province	Vaasa province	*Total*
Interviews	19	12	*31*
Questionnaires	6	6	*12*
Total	*25*	*18*	***43***

The feed back of the results of the second questionnaire (appendix 3) were then processed during the second lecture session and the questionnaire presented in the appendix 5 was given to the respondents to be familiarized with. The respondents then returned copies of the questionnaire they had filled in, and the questionnaire forms were processed during the face-to-face interviews after the researcher had got acquainted with the preliminary answers given to these questions. These interviews also, like the earlier ones, too, were conducted in the premises (offices and factories) of the case companies and the results of them were then used while completing the design management model presented in the chapter 7.

To ensure the reliability of the research results the interviews were conducted by two researchers. The point of view of the researcher herself that included economic sciences emphasized by marketing and design management could thereby be linked together with the point of view of the other researcher, who is a doctor of technology, which included technical-scientific network thinking. Both of the interviewers made their own notes that were compared together after each of the interviews.

The interest in the subject in hand naturally affected the selection of the firms that gave their answers. One has to presume that mostly the business leaders that were interested in design management returned their answered questionnaires. That, by its part, might falsify the results into a direction more favorable to design management. However, a selection of the lines of business as wide as possible that was set as a goal was achieved in both of the basic groups, that is, among both the ones that answered the mailed questionnaire and those ones that answered the wider interview inquiry.

The conclusions made from the data, however, concern this group of answered ones only (see appendix 1), and they can by no means widely be generalized for the trade and commercial field of the whole Finland[79], neither was that a goal for the research. The possibility for generalization though was increased by collecting the data from different

79 see also Ahopelto 1995

regions of Finland, and from several different lines of business; and there were no significant differences to be found in the answers that could be interpreted to be caused by the geographical position of the firms.

The pragmatic target of this study was to analyze the usefulness of the construction made here and so the target was to verify the usefulness of the construction as a means of the development activities of the firms interested in design management. The statistical analysis of the research data was done with a software called SPSS/PC+. The data itself was analyzed, among others, by frequencies, by cross tables, by significance tests (Levene's and t-test) and by factor analyzes[80] (varimax i.e. orthogonal rotation).

The independent t-test can be used in purpose to compare two groups of a given categorical variable on the basis of their distributions on a continuous variable. Levene's test is used to test the assumption that each group has the same variance; that will tell which t-test statistic to refer to, equal or unequal.[81] Thus the homogeneity of variance was tested with the Levene's test by calculating for each of the cases the difference between the value of the variable and the class average and then making it a one-way analysis of variance, ANOVA[82].

Factor analysis is used to build valid measurement scales, to look at the relationship between the items. By looking at the results, it is possible to tell, which items seem to measure the same thing so they can be grouped into scales for further analysis.[83] In explorative factor analysis the suitableness of the variables perceived often has to be evaluated by measuring the factors[84]. The purpose of rotationing used in factor analysis is

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80 for factor analysis see e.g. Reese and Lochmüller 1994 *(source: http://www.chem.duke.edu/~reese/tutor1/factucmp.htm July 7th 1997)*; Nummenmaa et al. 1997: 241-248; Holton and Burnett 1997: 76

81 See e.g. Cooper 1995: 9-10; Nummenmaa et al. 1997: 83-88, 90-91

82 see e.g. Kytömäki and Piipari 1994: 37; Holton and Burnett 1997: 80

83 See e.g. Holton and Burnett 1997: 76

84 see Nummenmaa et al. 1997: 243

to simplify the explanation picture by creating clearly large and small loadings; in an orthogonal rotation the factors are practically independent of each other[85].

The results of the first analyses made were reported in 1995 in the licentiate's dissertation[86] written in Finnish. After that time, i.e. from 1995 to 1999, analyzing of the materials collected was continued, and interpretation and conclusions were deepened further. During 1995-2000 some extra material was also collected and the design management model introduced in the licentiate's dissertation was tested; and analyses made of the materials collected there were reported to the target corporations of these two projects; these reports made were agreed to remain confidential, but some valuable experience was also gained while carrying out the projects. The writing and final revision of this manuscript for an academic dissertation was done during 1997-2001.

85 Sänkiaho 1974: 18; Nummenmaa et al. 1997: 245

86 Ahopelto 1995

2 DESIGN MANAGEMENT AS A PART OF STRATEGIC THINKING

To make it possible to completely understand the meaning of design and through this design management itself as a part of the competition parameter field of a firm, it is advisable first to define, what are design and its important part product design (*muotoilu*). Design is a wider definition than *muotoilu* even in Finnish, because it consists of not only pure product design alone but also of those other aspects that are valuable for a firm, too: communication and corporate environment. Thus it covers all the impulses a firm directs from itself towards its external interest groups and towards its own personnel.

Design is not only just a trait of product but a well-considered entity, a design process that is composed of several components that support each other. According to Blaich, the design manager of Philips, design is actually the structure of the whole product, when it means advantageous price without forgetting the aesthetic aspects in the final phenotype of the product, either.[87]

For one reason, design is an important function for a firm, because one can say that it both controls and creates the identity of a firm. With the words of Pick[88]: it is values made visible. Another reason that makes design management such a critically important subject for a firm is its character of being the process that creates connection between the firm and the customer. Nowadays, pure technology often is no longer the most important thing, because it is presumed to be functioning anyway, but that, how the product and its technical characters can be molded to answer the buyer's needs. Therefore, the real success

87 See Blaich 1988: 12; cf. Takala and Valtanen 1990: 14, 16; see also Lehtonen and Leppänen 1986: 16, 41-42; Chung 1998: 67

88 quoted by Lawrence 1988: 71; see also Julier 1993: 156

originates from combining technology with design - the connection with the customer is the one that determines the winners.[89]

Design management is an important function for a firm also because it reacts efficiently to the changes that are happening at the moment in the management practice and in the structure of business life. From a firm's point of view, the main role of design management is the purpose to make the firm's competitiveness better in the markets. This can be made through the physical product as well as through compatible communication and environmental design that is in accordance with the corporate policy.

The line of business of a firm primarily determines in which functions design management is linked with and what is its relative importance as a competition parameter. A construction of a wide model based on how a firm aims to compete, which goals it sets for itself and what procedures are needed to accomplish these targets is essentially included into the development of a competitive strategy[90].

2.1 The competition parameter field of a firm and the generic strategies of competition

Cost leadership, product differentiation and focusing are traditionally counted as the three basic strategies of competition[91]. The relation between these three generic competitive strategies, according to Porter, is illustrated in figure 6. A firm that emphasizes design functions as a competition parameter in its competitive strategy can be positioned in a most plausible way in the upper left corner of the picture as a differentiator, even though the

89 Cf. Anttila 1979: 18-25; Lawrence 1988: 71-72; Kivistö 1991: 1, 10-11

90 see also Porter 1980: xvi; cf. e.g. Olson, Slater and Cooper 2000: 10

91 Porter 1980: 35; cf. Laakso 1999: 29-33

other competitive strategies do not exclude the possibility to use design as a competition parameter, either[92].

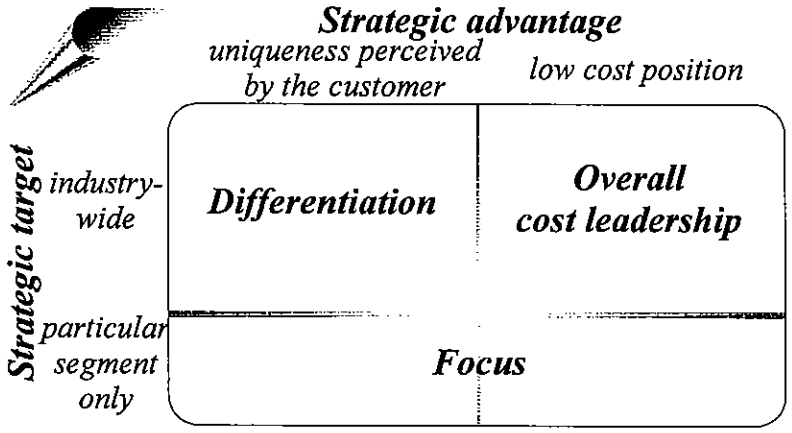

Figure 6. The three generic strategies of competition[93].

Differentiation - for example through design - can provide a firm insulation against competitive rivalry[94] by forcing the new entrants to high investments in purpose to win the buying loyalty of the customers. One does not very often connect the principle of cost leadership with design oriented firms, even though it is possible to gain even remarkable cost savings through well considered and functional design; that regarding the usage of materials, for example.

Therefore, if a machine, for instance, is simple to be manufactured, it is possible to give it a price more favorable than the similar ones manufactured by the rivals have, thanks to the surplus gained in manufacturing costs. It is possible to reach a situation where production

92 cf. e.g. Borja de Mozota 1990: 78-82

93 Porter 1980: 39

94 cf. e.g. Kalwani and Narayandas 1995: 3

and manufacturing costs are small enough to give the kind of competitive advantage to a firm that would be worth mentioning only through a successful product design and a sensible design included in it; through a design that minimizes the loss of materials and manufacturing time. According to Röyttä[95], 70-80% of the final manufacturing costs of a product are determined by product design while successful design and planning will lower the direct costs as much as 15%.[96]

Differentiating, as a concept, includes an idea of creating something industrywide superior, unique and pursued by customers. The less technical the product, the more attention has to be paid to its form.[97] As adapted from Bernsen[98], design means exactly the creating of a distinct and at the same time unique product identity. Product identity therefore is a part of corporate identity, which is a sum of products, communication and environmental design, and at the same time the basis for the logic of the actions of the whole firm and for the decisions made as well as for the credibility of the solutions made.

There are several means for differentiating. The firm can specialize in for example product design and/or brand image[99], technology, possible product specialties, quality, functional customer service or wide retail network that best suits in the product and corporate image.

Progressive product innovations can further differentiation, too. In an ideal case a firm is able to differentiate itself in several different means and thus it can even through its differentiation strategy gain a defense position against the "five competitive powers"

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95 Röyttä 1988: 62

96 See e.g. SITRA 1972: 31-32; Porter 1980: 7-8, 39-41; Lehtonen and Leppänen 1986: 22; Unger 1986: 66

97 See Porter 1980: 37; Jaakkola and Tunkelo 1987: 206; Schultz 1986: 72

98 see Bernsen 1988: 81; 1990: 86-87

99 cf. Robbins and McCuen 1997: 16; Keller 1999: 102-103; cf. Spaeth 2000: 21

presented in figure 8 - with differentiation a firm can kind of isolate itself from competition while counting on customer loyalty.[100]

Porter presents focusing on a specific strategic area as the third generic strategy. Focusing requires a trade-off between profitability and sales volume. The focus strategy in principle is built up from a kind of combination of achieving for a cost leadership and differentiation - one tries to be the best one in a specific segment. This can be made true either through a low cost level, a high differentiation level or possibly through them both.[101]

A firm that is stuck on the intersection of the strategic circles (figure 7) is in a most dangerous situation: a firm of this kind lacks completely the ability to stand out favorably. It has not created anything extremely unique - nor has the segmentation turned out well enough. Why would a customer, then, buy a product offered by that firm?

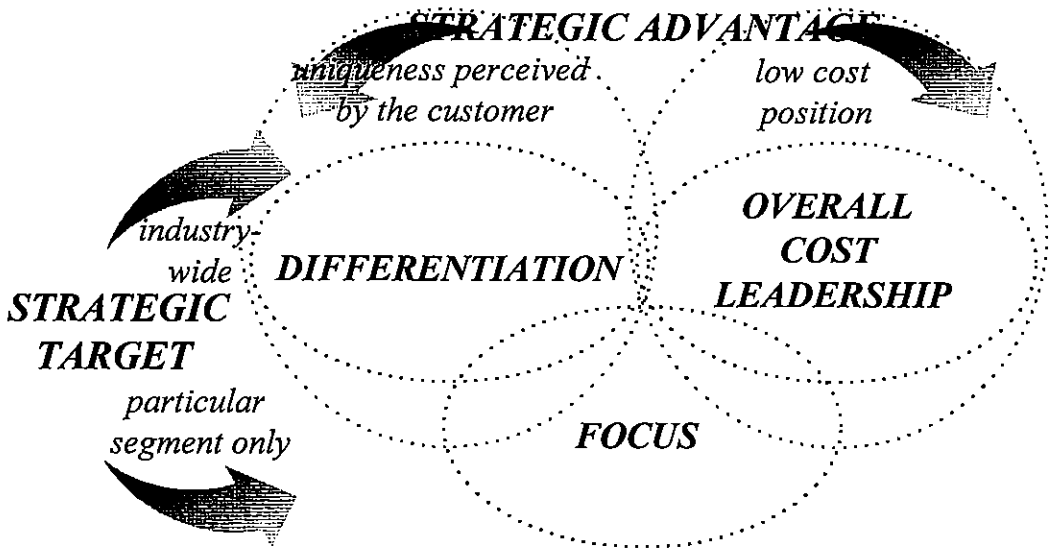

Figure 7. The porterian competitive strategy theory.

100 See also SITRA 1972: 30-31; Porter 1980: 37-38, 177; Aaker 1988: 216; cf. Bloemer and de Ruyter 1999: 316-317

101 Cf. Porter 1980: 38-41

Even though it is possible to gain competitive advantage through design, it is only one of the competitive parameters a firm has on its use, and it is not well-justified in all branches to use design as the primarily competitive parameter, either. In the design oriented businesses design can, as a competitive parameter, be a part of the business idea of the firm, but also a firm with mass-produced articles might find design a useful parameter for differing from its competitors. However, the meaning of other competitive parameters beside design will be emphasized, too, the nearer the products and manufacturing procedures of a firm are to mass-production.[102]

The meaning of product in the competition parameter field of a firm will become emphasized; the products manufactured by the firm will determine the pricing and availability decisions very far. These basic competition parameters are finally supported by the other competition parameters of marketing in the firm: communication, personnel and corporate image. A functional design will essentially be included in the usage of product as a competition parameter together with marketing and technological solutions - not as a separate function but as supporting the other decisions and, by its side as a guiding competition parameter[103]. Design does not function alone but a flexible use of competition parameters, a combination of them, is needed to gain the best results. Cooperation is often a keyword for success.

Unless the firm has been able to acquire a perfect monopoly position for itself, it has, several times during the different stages of its life cycle, to examine the competition situation of its line of business. Porter[104] sums the factors that influence the rivalry inside an industry up with the help of the model shown in the figure 8 into not only the rivalry among existing firms alone but also into the threat created by substitute products and services, and the possible new entrants, and into the changes in the competition situation caused by the bargaining power of suppliers and buyers.

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102 See Ahopelto 1992: 14

103 cf. Stenros 2000: B5

104 Porter 1980: 3-33, 1995: 64-73

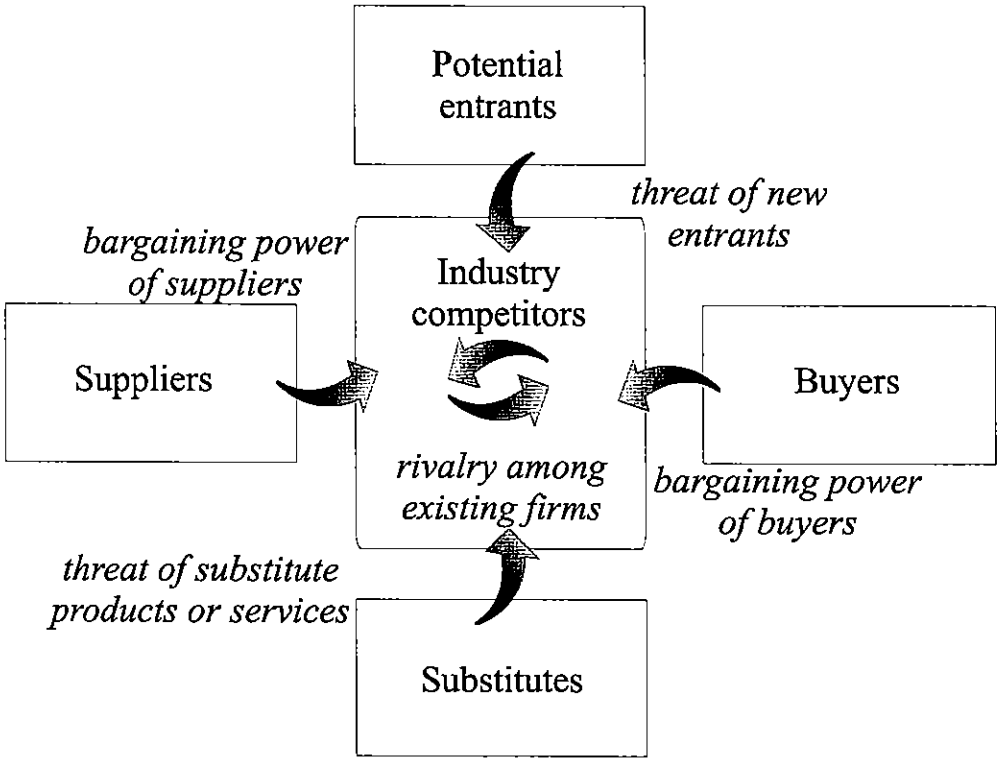

Figure 8. Factors influencing the competition of an industry[105].

The five basic competitive forces described do affect in different ways into different strategic groups[106]. It depends on the competitive strategy chosen by the firm, which factor will be emphasized beside the others. While speculating the influence of these factors into the activities of a firm that, for example, has chosen design orientation as its competitive strategy, one can notice, in this case, too, that there might arise some problems regarding any of these basic competitive forces.

The buyers and sellers may shun the design solutions made by the firm and thus fail to buy the product. There may occur problem situations with subcontractors and suppliers, and

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105 Porter 1980: 4, 1995: 65

106 Porter 1980: 132, 1995: 65; cf. Oakley 1984: 20-22; De Leo 1994: 37

with the time of delivery, because the constructions demanded may be distinctive or the components ordered rare. There may possibly be a new, innovative enterprise trying to enter the area that will eat its share of the market share with its design products. Maybe the greatest threat for especially a design oriented firm may be the kind of products that compete with its own products for the same market shares; products that substitute the previous, as such comparable products of the firm with their color, design or new design, material and technological solutions in the eyes of the consumers[107].

2.2 An application of Porter's competition model theory

2.2.1 The negative and positive energies of the competitive forces

When focusing itself purely on the problematic and threatening situations the competitive forces bring with themselves, a firm can be lead into a negative circle, where the problems with different competitive forces will be repeated with each other (figure 9). A negative circle like this works in a different way than a generator: instead of charging the batteries of the firm, i.e. approving its resources, it works in a battery discharging way and thus gnaws at the resources.

When a firm has to focus itself into the avoidance of the negative impulses and purely into a diminishing of them, a firm has to sacrifice its resources into the slowing down the speed of rotation of the negative circle instead of generating new actions or products[108]. Since there is only a limited amount of resources and the amount of them available should be focused into changing the direction of rotation into a positive one that benefits the firm, and increases the operations capacity of the resources.

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107 cf. e.g. McGahan 1999: 96

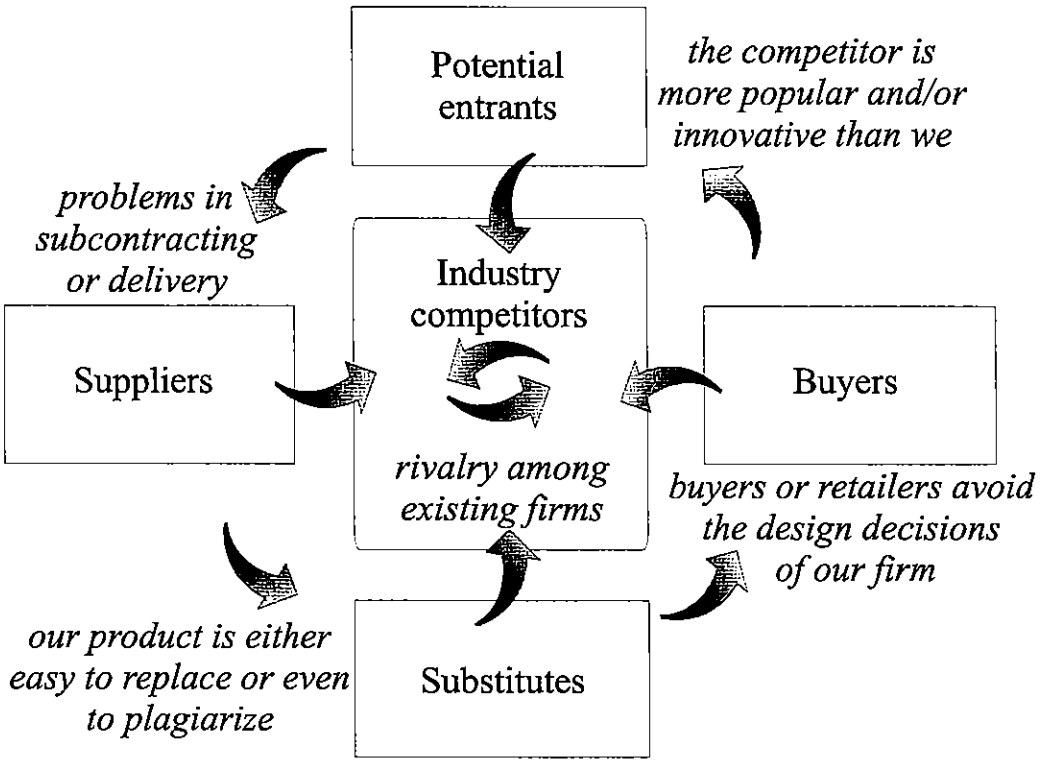

Figure 9. The negative energy of the competition powers[109].

When a firm changes the direction of rotation of its circle of the competitive forces into a positive one (figure 10), it starts with care building credibility and compatibility to support its image and actions. The buyers will dare to buy products manufactured by a firm that acts in a convincing and credible way. Credible and long-lasting design solutions will in time yield stronger bonds with the activity net surrounding the firm than short-lived design experiments that will change with the fashion trends.

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108 cf. Harari 1994: 53-55

109 idea for the figure from the competition model theory of Porter, see Porter 1980: 4, 1995: 65

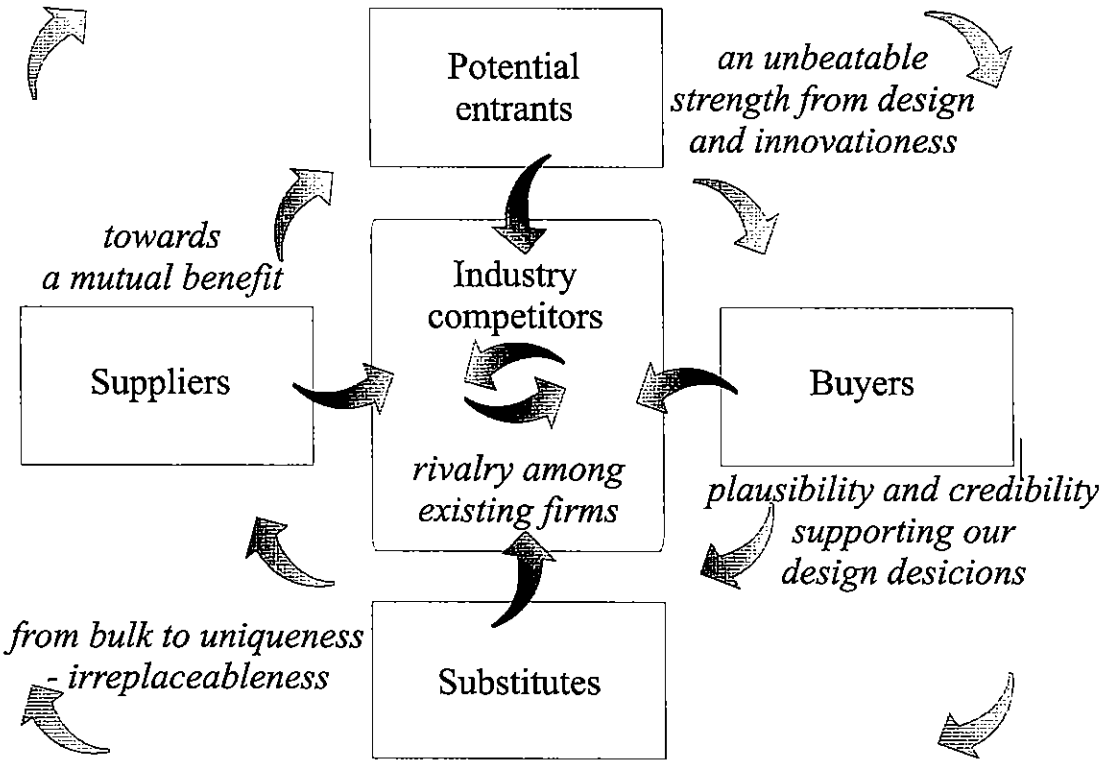

Figure 10. The positive energy of the competitive forces[110].

When a firm creates a design "looking out like its own", it directs itself from easily substitutable bulk production towards uniqueness. This holds true for enterprises that are aimed at mass production as well: even if the product itself was bulkware, the firm can find the exact competition trump to repel the threat of substitutes from, for example, the productions method or from the communications reflecting the firm's identity.

A well-considered creation of the subcontractor network helps in the mutual commitment[111]. When a mutual benefit is pursued, the bargaining power of sub-contractors and suppliers can be worked up from a negative gathering up of obstacles to production into cooperation in the name of mutual interest. Commitment into the main

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110 idea for the figure from the competition model theory of Porter, see Porter 1980: 4, 1995: 65

111 see Ahopelto and Raatikainen 1998: 61

goals made together helps to keep the times of deliveries agreed and it also helps to keep the components of good quality. One can manage it alone, too, but cooperation gives strength as well.

The possible new entrants of the industry can also be seen as strength instead of threat: a firm cannot stay resting on one's laurels, but it has to continuously keep the level of its competitive ability. A firm can find a means to make itself an unbeatable strength from its innovativity and design by successful cultural knowledge.

Instead of raising barricades to cover its skills in the fear of the threat of possible competition it should be worth a firm seeking strength factors from the rivalry that already exists on the markets. It is easy to learn from mistakes, but it would come cheaper, if they were made by the neighbor: therefore it pays not only to keep up with the times and one's own achievements but to keep an eye on the competitors' doings as well. In order to learn from the failures - either the ones of the firm itself or some of its most important competitors - and, also, to learn from the successes, too[112]. Because sometimes success might be greater than one even dared to wish, and in that case it is good to know, what furthered it. Not in order to copy the others or the firm's own success, but to be able to refine it into a new, new creating form. Plagiarism rarely leads into success in Finland, where the general cost level is too high[113] for that kind of production, like in most of the western countries, but sensible gathering of existing information is often the clearest way to success[114].

The secret of success of a firm can often be found in its ability to change the negative competitive forces into the sources of positive energy; to find strengths in there, where at first were seen to be found nothing but trouble. The positive circle of the competitive forces represents this process: even though the influence of the competitive forces still

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112 cf. e.g. Karlöf and Östblom 1993: 70-73; Hamel 1994:14-15

113 cf. Johnston 1990: 372

114 cf. Roy 1990: 57

works as a "discharging force", in a counterclockwise direction of rotation, a firm can find from its strategy so much positive energy that it can turn the direction of rotation as a whole into a clockwise one.

It can be stated that a firm needs rivalry to keep itself alert, and, also, in order to avoid the sin of becoming torpid into status quo - i.e. in order to avoid the lazy self-satisfaction that by time leads into the withering of innovations. Therefore the positive energy works like a generator; to charge up over and over again to be able to revolve and thus function, a firm also demands a counterforce strong enough, the familiar five porterian basic forces that keep the competition ability of a firm alive and thus help it to maintain its competition position and its regeneration ability. There are very rare firms that will be able to rise from the ashes like the bird Phoenix[115], regenerated to be better than ever, if dashed to pieces by an uneven rivalry, but a suitable amount of even rivalry would maintain the firms sensitivity to follow the development of the markets. It is a way for a firm to maintain its market position and competition ability, to regenerate, by following the time and reacting well-timed on the changes.

2.2.2 The negative and positive energies in the research made

In the research the attitude of firms towards the positive and negative competitive forces in their own functions was also sorted out (appendix 2, questions I01-I14). The answers received were analyzed with Levene's and t-tests in relation of the division into the line of business chosen (industry / trade and service) as well as in relation of the target provinces (Vaasa and Kuopio). No significant differences were found in this material, not on grounds of the lines of business, neither on grounds of the location provinces.

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115 see e.g. Henrikson 1993: 698, 915; Cotterell 1995: 151, 198

The industrial entrepreneurs perceived rivalry as a threat a little bit more often than the ones acting with trade and services did, but the difference was not statistically meaningful (P-value 0,044 and the difference of mean values 0,1688).[116] Likewise, the industrial entrepreneurs also felt that their most important competitor was somewhat greater threat to them than the ones dealing with trade and service did (P-value 0,075 and the difference of mean values 0,2597). The industrial entrepreneurs also found the design decisions of their competitors a little more convincing and credible than their own ones (P-value 0,008 but the difference of mean values only 0,0621) and they also felt that the products manufactured by their competitors were to some extent cheaper than their own ones (P-value 0,030 and the difference of mean values 0,1053).

On the other hand, the industrial enterprises felt a little more often than the ones acting in trade and services that the retailers favored their design decisions (P-value 0,006 and the difference of mean values 0,3872). They also felt that the competitor's product was easier to copy than their own designs (P-value 0,062 but the difference of mean values only 0,0165).

It must have affected in this too, how the ones that answered had understood the concept of product, that is, did all the ones that answered the questionnaire feel that the service they offered was "a product". In the wider letter questionnaire and interview the concept was clarified (appendix 3, questions E01-E13).

An interesting curiosity can be found from the answers of the variable "we are more popular than our competitor": the means of the answers of both industry and trade and service are equal to four decimals. Standard deviations, thus, are so large (1,353 and 1,263) that the result can not be considered statistically meaningful. Results of the t-test by lines of business are to be found in table 4. In order to get a controlling possibility the

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116 According to Holton and Burnett (1997: 86, cf. Yli-Luoma 1997: 61; Nummenmaa et al. 1997: 42-43, 83, 87-88), references to P-values are the standard way to examine results. A P-value of 0,05 means that there is a *95 percent of confidence that whatever was found is real and not just a chance of occurrence*. They also state that *by convention, "p ≤ 0,05" is the level at which a finding is considered significant.*

variables I07 (our competitor's product is easier to copy / our product is easier to copy) and I12 (there are more problems in our competitor's subcontracting contacts / there are more problems in our subcontracting contacts) were expressed in the questionnaire in a different order than the others. The values of them have been changed in the tables 4 and 5 to equal the style of the other variables.

Table 4. The competitive energies by lines of business, analyzed through t-test, scale -3 ... +3 (presented here in ascending order).

	industry	trade & service	P-value	mean differ.
I01 Competition's more opportunity than threat	1,2597	1,4286	**0,044**	0,1689
I13 Our quality is better than our competitor's	1,2338	1,0400	0,140	0,1938
I02 We are more popular than our competitor	1,1039	1,1039	0,282	0,0000
I04 We are greater threat to our competitor ...	0,8442	1,1039	0,075	0,2597
I03 We are more innovative than our competitor	0,8312	1,0390	0,760	0,2078
I09 Our products are more unique than compet.	0,9351	0,9474	0,808	0,0123
I06 Our design decisions're convincing, credible	0,8816	0,8194	**0,008**	0,0622
I05 Our retailers favor our design decisions	0,7534	0,3662	**0,006**	**0,3872**
I14 Our cooperation relationships are better	0,5325	0,7333	0,320	0,2008
I11 Our subcontracting is more successful than	0,2987	0,4658	0,964	0,1671
I07 Our product is not so easy to copy	0,2597	0,2432	**0,062**	0,0165
I08 Our products are cheaper than competitors	-0,2500	-0,1447	**0,030**	0,1053
I12 Less problems in our subcontract. contacts	-0,2078	-0,1622	0,210	0,0456
I10 We are more cost effective than competitor	-0,4675	-0,7867	0,756	0,3192

A rather significant difference can be found when the answers of the firms located in the Vaasa and Kuopio provinces are examined with the t-test when it comes to the attitudes they have towards the porterian competitive energies presented in this study. This difference was in the matter how the firms perceived their own innovativity (P-value 0,070 and the difference of mean values 0,4337) and the competitive threat they offered (P-value 0,059 and the difference of mean values 0,3359) in comparison with their competitors (see table 5).

Table 5. The competitive energies by provinces, analyzed through t-test, scale -3 ... +3 (presented here in ascending order).

	Kuopio (mean)	Vaasa (mean)	P-value	mean differ.
I01 Competition's more opportunity than threat	1,3412	1,3478	0,545	0,0066
I04 We are greater threat to our competitor	0,8235	1,1594	**0,059**	**0,3359**
I02 We are more popular than our competitor	1,1529	1,0435	0,456	0,1094
I03 We are more innovative than competitor	1,1294	0,6957	**0,070**	**0,4337**
I13 Our quality is better than our competitor's	1,2619	0,9853	0,532	0,2766
I09 Our products are more unique than compet.	1,1190	0,7246	0,216	0,3944
I06 Our design decisions're convincing, credible	1,0000	0,6716	0,945	0,3284
I05 Our retailers favor our design decisions	0,6494	0,4627	0,354	0,1867
I14 Our cooperation relationships are better	0,6429	0,6176	0,657	0,0253
I11 Our subcontracting is more successful than	0,2927	0,4853	0,242	0,1926
I07 Our product is not so easy to copy	0,2683	0,2319	0,905	0,0364
I12 Less problems in our subcontracting contacts	-0,0723	-0,3235	0,173	0,2512
I08 Our products are cheaper than competitors	-0,2892	-0,0870	0,162	0,2022
I10 We are more cost effective than competitor	-0,5412	-0,7313	0,452	0,1901

According to the answers it can thus be stated that the firms located in the Vaasa province, examined here in this material, take their own innovativity a little more hesitantly than the ones located in the Kuopio province. On the other hand, then, the firms located in the Vaasa province felt themselves to be slightly more distinctly a greater threat to their competitors than the ones located in the Kuopio province did. The differences were very small, though, and the direction was similar in both the provinces, a positive one. The results of t-test by provinces are presented more accurate in the table 5.

The figure 11 illustrates how similarly, after all, the industrial firms and the ones dealing with trade and services, located in the Vaasa and Kuopio provinces, described their firms' situation towards the competitive energies. The firms had a mainly positive attitude towards competition and their attitudes were very similar regardless of the line of business or province of location. Only the variables I08, I10 and I12 got negative values, that is, the

competitor's products were felt to be cheaper than own ones and likewise it was believed that the competitor is more cost effective. Also in the own subcontracting contacts there was believed to be slightly more problems than the competitor had. The contents of the variables are presented in the tables 4 and 5 and perfectly in appendix 2 (questions I01-I14).

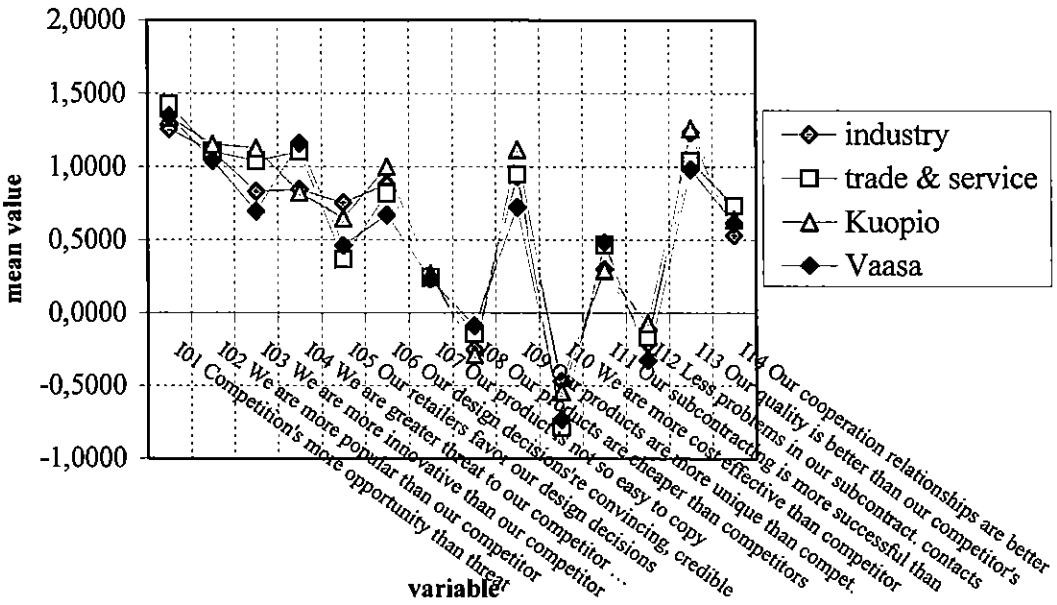

Figure 11. The attitudes of the industrial firms and the ones acting in trade and services, located in the Vaasa and Kuopio provinces, towards the elements of the competitive energy models in their activities; scale -3 ... +3 (cf. tables 4 and 5).

According to this material, it can not be said that there would have been found any significant differences between these two lines of business, neither between these two provinces, either, in it which kind of an attitude they have and how they are located in their activities towards those models of competitive energies presented here. More than the line of business, or the place the firm is located in, the own philosophy of life of the entrepreneur's and the personnel's, the general way of taking on the opportunities and threats, it has a potential influence as itself. As a general valuation it can, though, be stated that the firms

presented in this material follow in their activities a careful model of positive energy: the firms do in their activities pay attention to the starting points of the negative energy as well, but they function on the basis of the forces of positive energy.

2.3 Design as a competitive parameter

With the help of strategic planning it is aimed to position a firm into its competitive environment so that the possible changes would be able to be controlled and the right means to success to be selected. When it is started to create a product development strategy, the management also has to decide, which attitude it will have towards the design and product policy and the opportunities it affords[117]. A firm also has to take care of the compatibility between the new product and the firm's image and identity. When design management functions as a coordinating factor of the firm's activities, it raises up as one of the competitive parameters in these circumstances.

It pays a firm to take a well-considered attitude to the changes it makes in its product policy, because it might happen, that the launch of a new product fails, if the product differs too much from the firm's previous ones. The possible changes should be done in a well-considered way and without expectations of too quick positive results, because the images about the firm and its products that the consumers have should be given time to change. Product design as a part of design management therefore is as a competition parameter nearby the long- and medium-term strategic planning.[118]

A logical design management planning creates an opportunity to find competitive advantage even in those lines and among those strategies that shaping and design normally is not necessarily connected with. The benefits and opportunities given by a purposeful

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117 see e.g. Johnsson 1986: 10, 11-16

118 See also SITRA 1972: 32; Johnsson 1986: 10-18

utilization of design are valuable also in these lines outside the traditional design idea - with the help of saving materials and working hours a firm is able to improve its structure of profitability relatively easily, compared to the benefits. Thus design is essentially connected with both the manufacturing and marketing qualities of a product[119].

It also affects to the relative importance of the design activities which kind of a firm we are talking about - enterprises and their principles are different. Anyhow, for most of the enterprises the usage of design as a competitive parameter is a relevant alternative. Thus a considered and systematic management of design activities with the help of the theories of design management will help the firm to strengthen its position in the existing strategic competitive situation.

The emphasizing of design as a competitive parameter varies naturally by firms even in the same product segment. Partly the reason can be the conscious or even unconscious strategy choices, partly the managerial preferences; how important design is perceived to be in the competitive parameter field of the firm.

Poth and Poth[120] emphasize the commitment between the corporate identity and the corporate design that is to be seen in the design a firm uses and in its communication policy as well. They also place design in a central place in the marketing mix of a firm (figure 12), because the design policy of a firm affects highly in the firm itself as well as in the markets and marketing functions in which it operates.

The Poths name the relationship between the design and the product policy as the first marketing priority of a firm (also see figures 12-14). The matter how well the design policy and the activities of the product policy of a firm correspond to each other makes the basis

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119 Viitala 1988a: 21

120 Poth and Poth 1986: 34; cf. e.g. Keefe 1995: 46

for the functionality of this first priority. As its part, thus, the product policy of a firm constitutes a basis for the design policy used by the firm, too.[121]

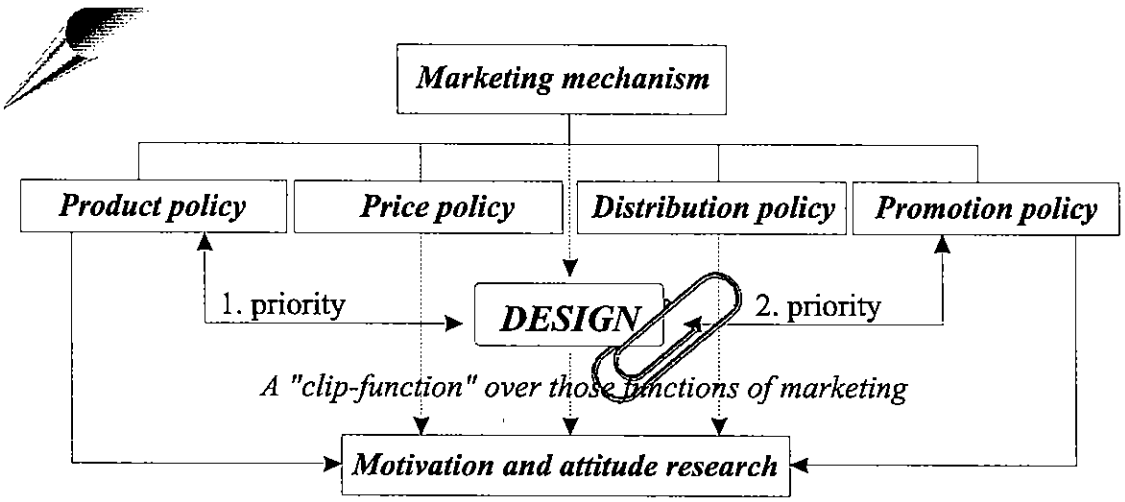

Figure 12. The position of design in a marketing mix[122].

As the second priority the Poths[123] name the relationship between design and the communication policy of the firm. This indicates to a wider utilization of the doctrines of design management - in professor Pellinen's[124] words the question is about how to make a firm identifiable, personal and convincing. It is not insignificant how a firm appears and makes itself known. The products also have to support the firm's image, because it is possible to communicate the corporate image to the consumers with the product design. It

121 Poth and Poth 1986: 34-37

122 Poth and Poth 1986: 34

123 Poth and Poth 1986: 34; cf. Borja de Mozota 1990: 81-82

124 Pellinen 1989

is of vital importance to be able to produce products that the consumers really want, and that they are also willing to pay for. [125]

When the relation of design management to the marketing mix of a firm is discussed further, it can be stated that design management functions as a kind of a covering concept that leads the marketing functions of the firm, as the figure 13 illustrates. The design management policy followed by a firm will control its design activities that by their side also affect those competitive parameters of marketing that it has chosen to support its success. The design management guidelines of a firm will define the relative importance of the different competitive parameters in the competition strategy field while design management functions as a guiding and coordinating function between the decisions, supervising the implementation of them.

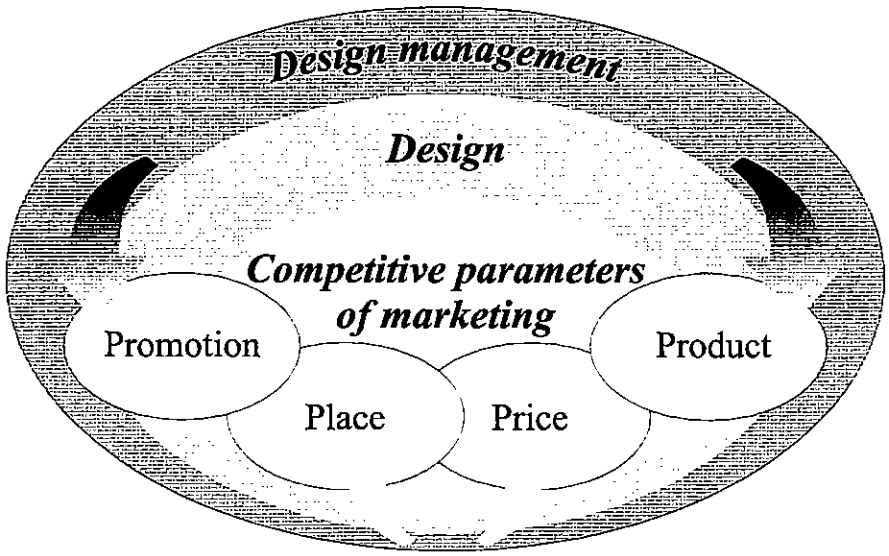

Figure 13. Design management as an element that coordinates the competitive parameters of marketing.

125 See also MARK 9 1987: 6; Peura 1991: 15

The Poths[126] also present the concept *innovation design* with which they mean a new, from the others deviatory design, a kind of a "design invention". The Poths' idea of how the (innovation) design is linked into the product policy of a firm is illustrated in figure 14.

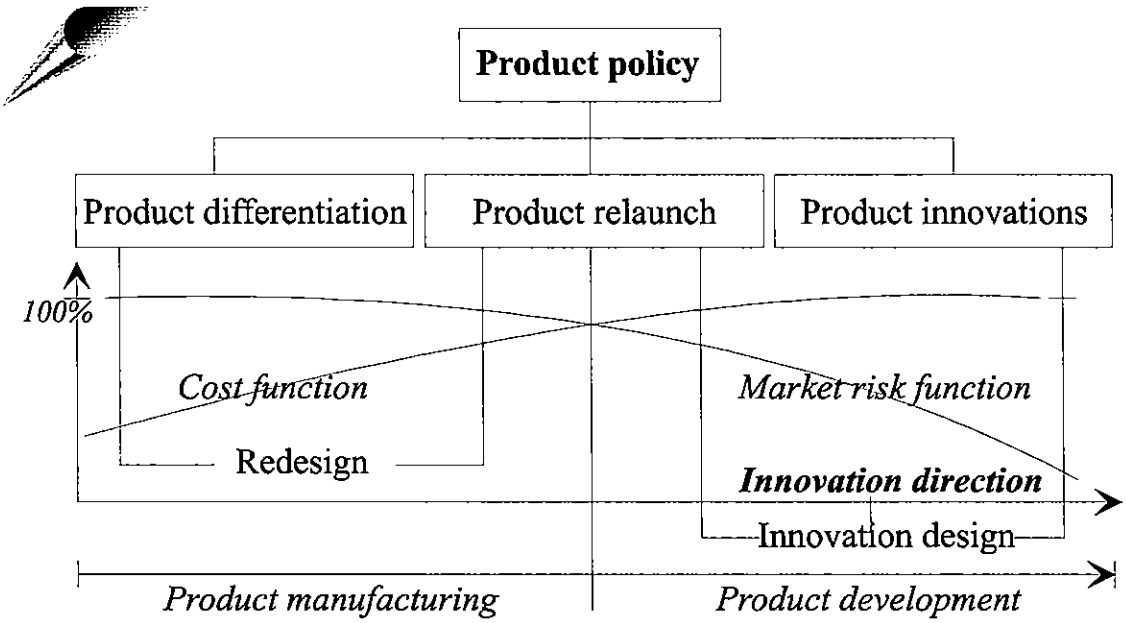

Figure 14. Design and product policy[127].

The product policy of a firm is made up of product differentiation, product relaunch, and product innovations. Innovation design is based on product relaunch and product innovations; redesign therefore includes, beside product relaunch (here rather in the meaning of product "make up"), product differentiation and often improved technological decisions, too. Thus the chosen design can by its part help the firm in its new market entry efforts. Even though design is not a shortcut into the genesis of product innovations, it is a

126 Poth and Poth 1986: 37

127 Poth and Poth 1986: 38

mechanism that encourages the development of them as a result of the inside and outside influences of the firm.[128]

When a division between innovation design and redesign is to be done, it can be said that redesign mostly concentrates itself into the revising of present products, while innovation design is aimed at new product development. The innovation design activities have, especially at the level of speeches, been considered as worth of pursuing, but in fear of high costs the firms, however, often are content in their product design activities with mere product-make-up -design that underestimates the consumer. Partly it is possible that this is caused by the fact that the possibilities of making benefit through design are not known well enough in the firms. Thus product design, for example, can there be regarded as pure fashionable, but in itself unnecessary, modifying of the appearance of the product.[129]

Design might often be judged as nothing but an extra cost item that will not achieve benefits valuable enough to cover the costs caused by it. Thus it is important to improve the knowledge that the business life has of design while designers also should be educated to cooperate with the business world. To get a successful result, the management, the engineers and other planners as well as the designer should agree with the basic lines of the work that is to be done. Especially the importance of the cooperation between the marketing personnel, designers and production is significant in the ever faster changing markets.[130]

Thus we will get from the hierarchic model, presented by the Poths, into the symbiotic circular model introduced in figure 15, where redesign and innovation design are placed into as equal parts of product policy in where they function as parts of the product relaunch

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128 Poth and Poth 1986: 37; cf. Leino 1984: 24; O'Kane and Butcher 1986: 72; Gorb 1986: 71; Borja de Mozota 1990: 82

129 Poth and Poth 1986: 37-38; cf. Lehtonen and Leppänen 1986: 18-19

130 Cf. Oakley 1984: 3; Gorb 1988b: 9-10; Lehtonen and Leppänen 1986: 51, 64; Järvikangas 1989: 46-49; Takala and Valtanen 1990; Heinonen 1990: 9; Keskinen 1990a: 15; Ruekert 1995: 51, 54; Helsingin Sanomat 11.12.2000: B8

activity. Thus the life cycle theories can be used as well: the firm is, during its own life cycle, often in situations where some of its products are in the beginning, some in the end of their life cycles.

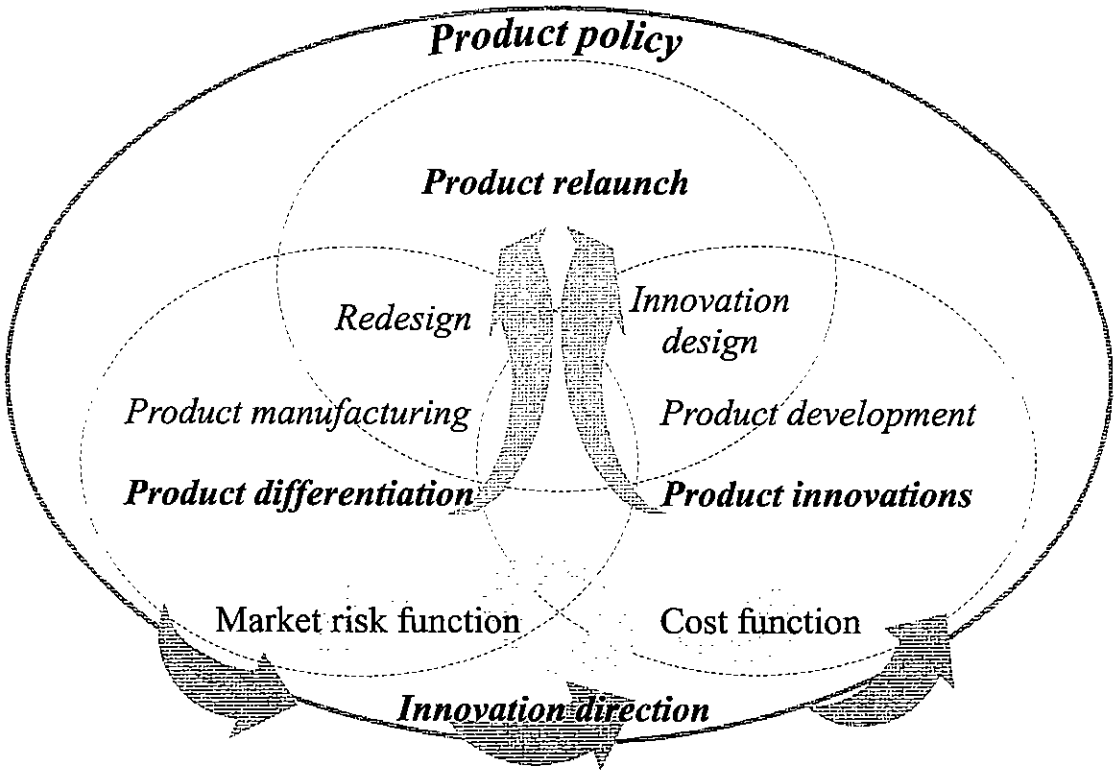

Figure 15. The connection between product differentiation and product innovations when the strategic relaunch decisions of products are made as strategic solutions of product policy.

It is possible to lengthen the life cycle of some products with the help of pure redesign, when there is no essential need to make fundamental changes in the functional structure of the product. Some other products, however, because of their characteristics alone, need a more complete contribution to the actual new product development. Thus the earlier, already existing product functions purely as a basic solution for the new innovations, and the end product may remind even by its functions very little the original product that was the start point for the product development process.

The two relaunch strategies presented here do not exclude each other as solutions for product policy, but the firm will have to consider, product by product, which will be the most profitable strategy each time. Even though an innovative pioneer activity in product development might sound more rewarding than pure modifying of an old product to better fit the new markets, it does not work as a strategic basic solution for all products or as a strategy for all companies, either. As long as one does not fall into a cheap product-make-up that the Poths[131], too, warned about in the context of their model, a simple redesign also is a noteworthy alternative: sometimes a little change in the product may help it into a new rise when a weakness perceived to be in the product has clearly proved to be a threshold question for the sales of the product.

2.3.1 Organizing design activities

When a firm organizes its design functions, it has to take a stand on several questions about the practical arrangements. It has to be decided, whether to use its own designers or outside contractors, or possibly a so-called mixed structure[132]. The firm also has to agree upon the compensation for the designer when it has found a designer that suits the identity of the firm.

The decisions have to be done between the proposals for products, communication and environment that either are to be realized or remain undone. After that it also has to be decided, in which stage the designer will join the actual product development work - will the designer take part in the work from the very beginning or shall he/she give just the final, stylistic polish[133].

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131 see Poth and Poth 1986: 37

132 cf. Oksanen and Pulkkinen 1998: 34-35

133 cf. Norman 1990:156

There are, in principle, three different basic alternatives for a firm to organize its design functions: it can hire an own designer, it can buy outside design services, or it can use these two alternatives side by side. If the technical and functional characteristics are central in the products produced by the firm, it can be worth hiring experts who can plan and design the product together with the industrial designer so that its functional and design related elements will be in functional harmony with each other. Especially if there is a long series of similar tasks to be anticipated, in which a uniform identity is demanded for the product, an own designer or an otherwise same designer of long standing will be a noteworthy alternative for the firm.[134]

When a firm produces consumer durables that have outward appearance as a primary marketing argument, an outside designer can be the most efficient solution. In that case the firm will be able to get new, functional ideas and innovations, maybe even the kind of information that it does not already have.[135] If there is no need for the products of the firm to have an uniform identity but the firm is rather trying in its product solutions to follow the fashion and thus tends to change the style of its products, a new designer will bring fresh ideas within. Oras Oy, for instance, a Finnish firm that produces for example water taps, has successfully used outside designers in its product design[136].

Working at the same time with both own designers and outside ones offers both opportunities and difficulties. The own designers of a firm may even by principle oppose the outside designs that come into their valuation and thus they will make it more difficult to get qualified designers and good outside design. Several experts do, therefore, recommend choosing either the sole use of own designers or the outside ones instead of the mixed structure. [137] However, purely even for the cost and loading reasons it still is

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134 Relster 1988: 17; cf. Lehtonen and Leppänen 1986: 88; Jaakkola and Tunkelo 1987: 208

135 See Relster 1988: 17-18; cf. Oakley 1990: 5; Palshøj 1990: 40

136 see Keskinen 1990b: 21; Valtanen 1988: 92-93

137 Relster 1988: 18

profitable for small firms to use an outside designer, because there will probably not be tasks enough for an own, full-time designer in a small firm[138].

On the other hand, even in smaller enterprises there might be tasks enough for a professional expert who masters the design of product, environment and communication. This is even more possible nowadays, when there is more suitable equipment available to handle all these subjects. This, however, requires the designer to have adequate skills and facilities for technology and marketing besides knowledge of aesthetic values. For example the Internet opens new doors for global visibility for even smaller and smaller firms; these possibilities can be valuable if not wasted with careless, artificial design.

Nineteen enterprises (44%) of the forty-three ones that were interviewed or that answered the larger letter questionnaire had arranged design purely with the inside resources of the firm. The help of an outside designer had been used by two firms (5%). Twelve enterprises (28%) had found the mixed structure to be the best alternative for them. There was not to be found any clear answer in this question from nine (21%) of the firms. The firms that remained unclear were mostly service enterprises that did not fully perceive the application possibilities of design and profiling.

Especially when compared to the fact that only 56% of the 43 enterprises that were interviewed answered to the question E12 (see appendix 3) that they had consciously been familiarized with design management, and not more than 60% of these 43 firms had a design management or graphic manual (question E5), it is possible that in most of the cases an inside design resource meant that personnel without proper design education did the design activities in addition to their regular jobs; for example engineers were responsible to the product design, marketing manager to the communication design and managing director - or in some of the cases the janitor - to the environmental design. However, more than a half of the firms interviewed with the larger questionnaire had paid attention to design

138 cf. Oakley 1984: 121

management and they also had made effort to organize their design activities with a most suitable way for them.

When it has been decided in the firm whether to hire an own designer or to use outside design services as help, it has to be agreed upon the compensation for the designer. It is essential to agree upon the amount and the method of the payment even before the work has been started.

There are several different ways in payment arrangements. For instance, the firm can use, instead of an one-time compensation, a so-called royalty system, when the compensation is paid as a percent share (e.g. 1-5%) of the sales price. The compensation can also be agreed to be paid as a certain percent share of the production costs; then it has to be carefully agreed, how the production costs will be calculated. It is also possible to make the compensation on an hourly basis or on a commission basis. If the firm uses outside designers, the rights for the design will, however, belong to the designer according to the copyright law.[139]

It can be mentioned, as an example of the compensation systems for designers in the firms that were interviewed, the firm in which the designer planned and designed the prototypes on her own risk. An one-time compensation that was agreed beforehand was paid for the models that were accepted into production, and also a commission for the sold products was paid.

However, the compensation system has, by its side, affects on the matter, how good designers the firm will get on its disposal, too. In a pointed way: the better the firm pays, the more likely it will get the best designers on its disposal. And the better designers the firm has on its disposal, the better products it sells and the more balanced identity it has. And thus the firm will become even more attractive for the good designers. The visual profile of the firm also has influence on it, what kind of labor it will get to its service: a

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139 Relster 1988: 20-21; Takala and Valtanen 1990: 76; cf. Oakley 1984: 83-84

firm with a clear, individual and easily recognized visual profile will be perceived as interesting, successful and therefore as a good employer that makes it worth entering the employment of it[140].

Relster[141] calls this progress of the positive powers a "design spiral", Normann[142], however, talks about the "good circles" and "vicious circles" of a firm. The researcher's interpretation of what the term "design spiral" used by Relster could mean in practice is presented in figure 16; progress towards an even better profitability through an even better image and through the productivity of an even more qualified personnel.

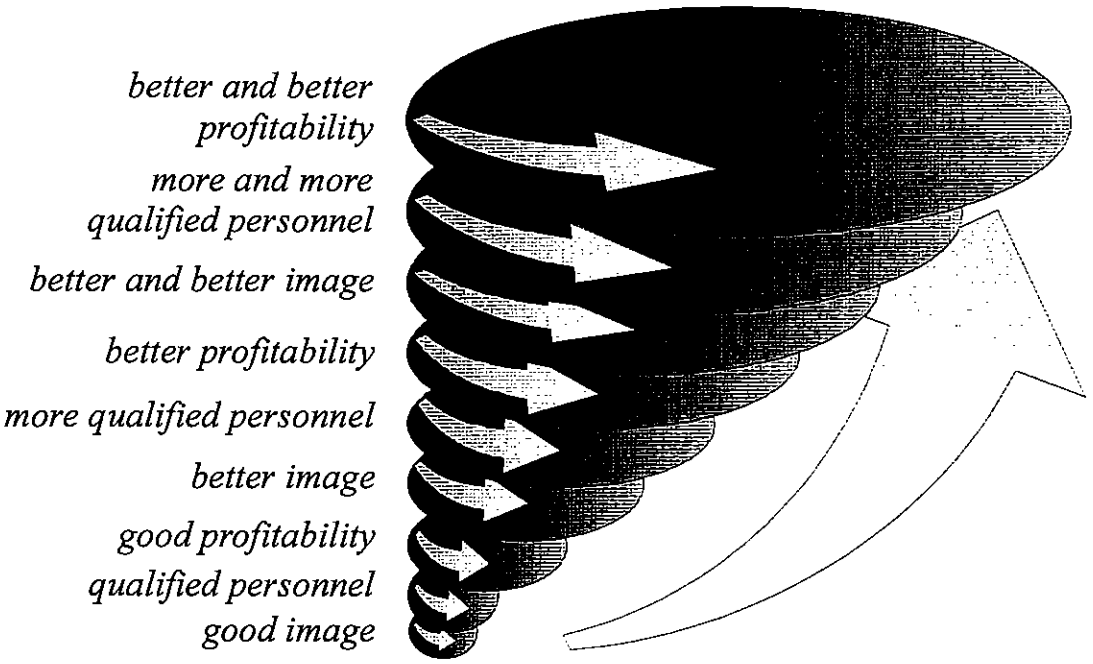

Figure 16. An example of a design spiral.

140 Pellinen 1989: 2; Roy 1990: 61

141 Relster 1988: 21; cf. Maunula 1990: B5

142 see Normann 1985: 157-169

The theory of good circles is close to the idea of the design spiral: a personnel that is satisfied with its work and the quality of it will create positive impulses to the markets and to the customers; through the satisfied customers the profitability of the firm will increase, the personnel will be even more satisfied - the good circles will feed themselves, like the positive accumulations of the design spiral will increase circle by circle. The vicious circle, therefore, is an opposite phenomenon: acceptance of a small negligence here and there, on some excuse or other, will finally lead into a vicious circle, the respect the employees have to their work will decrease and it will not be easy nor efficient to sell the customers the kind of a product that you would not like to buy or even take yourself, either. According to an old truth the chain is exactly as strong as its weakest loop.

2.3.2 Choosing designs

There will some day be a situation for every firm in which it has to make a choice whether to accept or reject a given new product proposal. The difficulty and criteria of the decision making will, naturally, vary according to what kind of a product the question is about. The purpose of evaluation of product ideas is to identify and reject bad product ideas in as early a stage as possible, because the later the product idea is recognized to be unfeasible, the more expensive the production process already has become[143].

If the firm is producing technical products of high quality, the decision making in front of a new product will not be very difficult. There is plenty of technical data available, and it will be relatively easy to compare the new product with the ones that already are on the markets: will it be more durable, cheaper, faster, more efficient than its competitors. A firm that produces design-oriented products has to ask the same questions as above, but it also has to notice that the so-called psychological content of the product will have a remarkable influence on the decisions of the potential buyers. Product design will have an

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143 Kotler 1980: 320-322; cf. Leino 1984: 12-14

influence on the sales potential of the product, but a covering estimation on the influences of design is in practice impossible.[144]

Nobody can foretell which product will be a certain sales success and which one will not. However, a product that the management of the firm believes in itself has better chances to success, than a product in which chances nobody trusts. The kind of product that even the management itself believes to buy, too, when it will be completed, has good chances of success.

While evaluating new product proposals it is worth examining how well the product harmonizes with the existing resources the firm already has. Unless there is a logical space for the new product in the product strategy of the firm[145], or unless the distribution channels of the other products of the firm will suit on the distribution of the new product, one has to consider properly, whether the new product is worth to take on the production. The other investments the production will need may also be so remarkably high, too, that the manufacturing of the new product will not be profitable even by time; no matter how tempting the product idea itself might seem.

It is not always worth of manufacturing the product oneself; sometimes it will be better to have either the whole product or a part of it made by an outside firm. When the firm makes the choices of its subcontractors, it has to take care of it that the quality standards and the image of the potential subcontractor will be suitable for the own principles of the firm: compatibility between the cooperation firms is an important part of design management policy. The final quality of a product is a sum of its components and the firm will answer by its name also for the quality of the work delivered by its subcontractors, when it is marketing the final product[146].

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144 Cf. Relster 1988: 21; Kotler 1980: 320-322

145 cf. e.g. Viswanathan and Childers 1999: 75-76

146 cf. Raatikainen 1992: 81-89, 188-189

There are a number of basic questions that absolutely need to be answered by the firm before it makes decisions for production. After the firm has solved whether there are any potential markets for the product or not, it will also be worth of debating about whether the product will suit the total strategy of the firm or not, and would it be possible to sell it through the present distribution channels; will it be possible to manufacture it in the existing production plants of the firm; will it need investments or would it be better to let the production to be done by a subcontractor[147]. It also has to be evaluated, how the product will be able to compete with the other similar ones; what kind of profits can be expected to be gained from the product and what will be the influences the product will have on people and environment; and also the legitimacy, material choices and product liability, for instance.[148]

A design project will start from the perceiving of a need and from collecting information. The conclusions that are made on the basis of the data gained will cause either the rejection of a product idea or lead into a closer ideation of the product concept and through this into product development and finally into production (see figure 17). A careful data collection and analysis will save time and money, and most likely lead into a successful result[149].

The starting point of the design and shaping of every successful product is the customer, the understanding of the needs and preferences of the customer and finally the satisfaction of these needs. Every product has a physical aspect as well as a psychological one, because when a customer evaluates a product the question is not only about what the product in reality is like, but also about what the consumer will perceive it to be like. When the design of the product is decided this image level has to be remembered, because the consumers buy mostly on the basis of the images they have, not only pure technological

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147 see e.g. Blair 1965: 34-39; Fredrikson and Lindmark 1976: 49-51; Laitinen 1979: 6-15; Hukkanen 1982: 32-55; Williamson 1975 and 1985; Sakki 1985: 37; Heikkinen 1987; Peters 1990a: 59; Lehtinen 1992: 13; Komonen 1993: 138-157

148 Cf. Relster 1988: 22; Leino 1984: 8-20, 63; Häti-Korkeila and Kähönen 1985: 65; Oakley 1984: 18-19, 39, 82; Borja de Mozota 1990: 77

149 cf. Jaakkola and Tunkelo 1987: 153-157; Raatikainen 1992: 90-92

solutions. According to Engel, Blackwell and Miniard: the consumers buy products for function, form and purpose.[150]

Figure 17. Progress of a design project[151].

150 Cf. Urban and Hauser 1980: 164-165; 1993: 172-175; Oakley 1990: 5; Engel, Blackwell and Miniard 1993: 66-67

151 adapted from a figure by Kortelainen / Creadesign Ky 1991: 15; cf. Poth and Poth 1986: 57-59; Hatch 1980: 66; see also Oakley 1984: 27

2.4 Design management process

Design management can be visualized, for instance, by picturing it as an onion. All the elements exist simultaneously, but instead of treating the process as a temporal project; i.e. by skinning the design management onion open, proceeding level by level, the process should be observed by splitting the onion in one go: by drilling a hole through the onion like with an apple corer it can be get through the levels towards the heart, in other words, towards succeeding. Figure 18 illustrates this interwoven nature of the elements of design management.

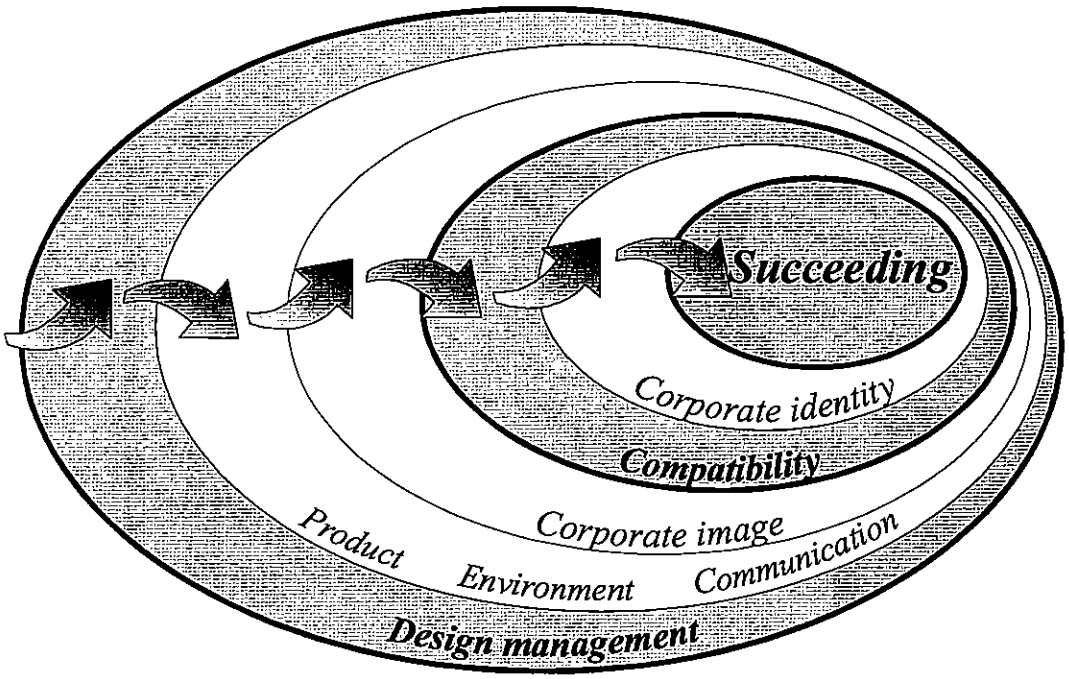

Figure 18. The design management onion.

Factors that are closely linked with the design management policy of a firm and that essentially affect the editing of it are e.g. the line of business the firm is dealing with and the competitive situation of it; internal corporate culture[152] together with business policy

152 cf. Palshøj 1990: 40; Wirtén and Wirtén 1989: 7-8

and strategic basic solutions; the corporate image the firm communicates from itself as well as its image, the ideas and associations the firm provokes about itself and its products; the business idea and mission of the firm, as well as the general development situation of business activity and the financial resources. To be able to succeed in the design management activities based on these ones, the management has to wholeheartedly be involved in the process, to commit[153] oneself with the methods used, and to believe in them.

Design management is a way to act and make choices, to "design" communication and working environment besides the products, while the design the firm uses functions essentially as a part of its corporate image. Design management is systematic, intracorporational work which influences will be felt by time as strengthening of the image.[154] It is easy to believe that a consumer supposes that a firm, about which she/he has heard (positive matters), makes better products than a firm, which she/he never has heard a word about[155].

All the factors previously described affect that image a consumer forms her/himself of the firm and its products. It has a great influence on the success of the firm, how well the firm can redeem the promises given from it outwards. Therefore the design management policy of the firm should support the external image of the firm in the consumers' eyes, while reflecting the internal marketing of the firm. The compatibility between the firm's internal and external marketing that follows the product policy of the firm creates the preconditions for functional design management. The goals set for product design are much easier to reach when the management can motivate the whole personnel to be sincerely interested in

153 cf. Palshøj 1990: 42; Walker 1990: 43; cf. Korvenmaa 1998: 7, 60-61

154 Cf. MARK 9 1987: 6; Luotonen 1988: 76; Perheentupa 1989: 24; Pulkkinen 1990: 24; Leppihalme 1991: 12

155 Pilditch 1990: 34-37; cf. Küthe and Koppelmann 1986: 133

what the firm manufactures and sells; the products should be felt to be important for the firm.[156]

Design management has an influence on what kind of impulses the firm sends from itself to its interest groups. Likewise, the corporate environment has an influence on the matter, what the design management policy of a firm can become like. For design management to be a profitable activity, that concerning both the meaningfulness of the activities and the financial resources of the firm, the activities of the firm and the products or services it manufactures or provides has to fit the corporate culture and environment in which the firm acts. This mutual influencing possibility of the activities of a firm in design management policy is illustrated in figure 19.

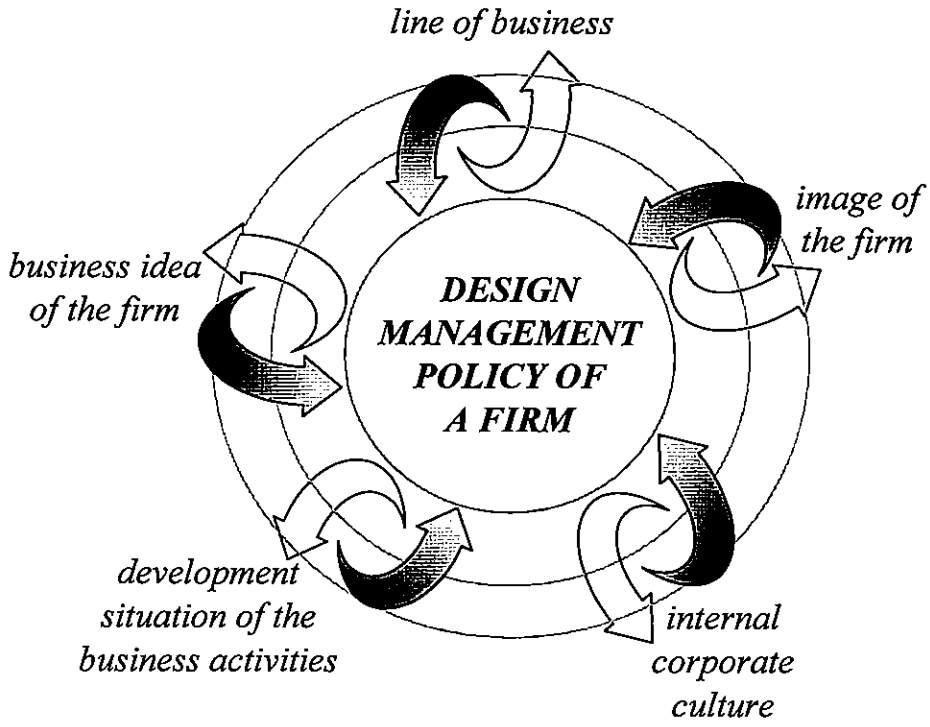

Figure 19. Factors influencing in the design management policy of a firm[157].

156 See e.g. MARK 9 1987: 6

157 cf. e.g. Palshøj 1990: 40; Wirtén and Wirtén 1989: 7-8

Design management is a process that helps to make possible to form an image of a good quality of the firm and its products by working up the profile factors of the firm according to the strategic plan. Design belongs inseparably to the product but the influences of it can be seen in other parts of the corporate environment as well. Most obviously design can be seen and it affects in the corporate environment in the following parts: *products* and production, e.g. ergonomics, appearance, functionality, modulability and packages; *environment*, as the functional environment with its buildings, offices, factories, canteens, vehicles and flower arrangements; and *communication* and marketing, e.g. brochures, advertisements and announcements, bids, service instructions, manuals and audiovisual presentations.[158]

The basic purpose of all the factors above is to improve the competitive ability of the firm, either by increasing the market share, by improving the cost effectiveness or by focusing the corporate strategy.[159] The best opportunities for this will present themselves traditionally in product development and production, but the present design management thinking emphasizes the meaning of the corporate environment as well as the communication and marketing materials that fit the unity, too, as an important factor for a successful total input of the firm.

The writers of the articles about design management are used to consider the Japanese firms (e.g. Sony) as the best applicators of the design management methods, from the European ones therefore German firms (BMW, Braun) and the Danish ones (Fritz Hansen, NOVO)[160]. In Finland the investing in a design policy that would cover all the aspects of the corporate activities has still been resting on the shoulders of a few firms commonly known for their design. However, some of the firms in the 1990's that have been rewarded

158 See Takala and Valtanen 1990: 28-29

159 Takala and Valtanen 1990: 28-29; Kolehmainen 1990, 1992

160 see e.g. Valtanen 1988: 6

for their design management are Oras Oy (Design management award 1990) and Oy Partek Ab (Design management award 1992)[161].

According to many of the researchers of the subject, design management is formed of the principle to use design as a managerial tool. Thus there can be seen a clear difference between *design* that can be described as the shape giving activities of a firm and *design management* that includes the design and planning of the design activities and the management and coordinating of them. This difference can be seen in it, already, that it is possible for design to be done either "inside the house" as well as with the help of external consults, too, but design management is always an internal activity of the firm.[162]

Design management is linked with many of the corporate activities and it is, therefore, almost impossible to separate it from the other functions of the firm as an own, strictly defined, separate entity. Design management is divided up to several contributory factors in which can be included at least the management of the creative resources of the firm; training designers and graphic designers to understand management and strategy, and the management to understand design; and, based on these, design in the project management and design in the management organization.[163]

The management of the creative resources of the firm[164] forms an important part of the design management process. Design and the design management that directs it are activities based on creativity and on the abilities to gain advantage from creativity. In the design management process the creative resources that are to be found in the firm are endeavored to be optimized, and thus to be harnessed to help the competitive strategy of the firm. Pure creativity and the acknowledging of the meaning of the competitive parameters

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161 see Pellinen 1992: 3

162 Nielsen 1988: 30; Bernsen 1988: 80; 1990: 85

163 Gorb 1988b: 12; Gorb 1990b: 18-19; Takala and Valtanen 1990: 14; Heikkonen 1991: 9; Davis 1992: 31-32; cf. also Hauptman 1992: 58; Blackburn 1992: 29, 30; Korvenmaa 1998: 94-95; Jevnaker 2000: 41; Olson, Slater and Cooper 2000: 10

164 cf. e.g. Miettinen 1993: 52-53

enabled by it will still not be enough, unless they are not managed goal oriented. The firm should give the designer creative freedom at the same time as strict limits inside which the results of his/her work can be realized. Thus it is possible to eliminate even beforehand conflicting interests as well as useless work and possible frustrations, too.

The managerial education given to the designers helps in the succeeding of the design management process. Unless the designer is aware of the demands made upon the management and what is the meaning of his/hers own share in those, there might arise even bad conflict situations[165] between the management and the designer, situations in which both parties speak a different language about same subjects. When the designer understands his/her own share in a unit that has responsibility for results, it is easier for him/her to understand the realistic possibilities of realizing his/her work, too, considering the resources of the firm.

However, it is not enough to guarantee a successful result if only the designers are educated into management, but the management also has to be trained to understand the nature and purpose of design as a competitive parameter[166]. The management also has to understand the possibilities given by the well-planned use of design and the nature of the whole process, in order to keep the schedules as well as the expectations reasonable. When the management and the designer understand the realistic needs of each other, they will have a change of a smooth cooperation and thus make the best end result for the competitive strategy.

Design in project management naturally is different from the design in the management organization, even by the time span. Project management can, due to its short-term nature, allow freer form and design experiments than would be possible in a strictly defined management organization. In the project management, however, design management also is engaged in more concrete objects than in management organization; especially the de-

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165 cf. Cooper and Press 1997: 155

166 cf. Saarela 1999: 16-18

sign of visual objects as well as the design planning is more closely linked with it. In the management organization design management deals with more abstract objects; there can, for example, come into question the adaptation of corporate atmosphere to the corporate image.

Design management is logical harmonizing of the images generated by the messages that are directed outwards from the firm - i.e. products, brochures, letters, even buildings. It means developing the whole public image of the firm. Principally, design is a subject that concerns the whole organization and the highest management takes the responsibility of it. If a firm decides to hire a design manager to be in charge for the design activities of the firm, he/she shall also be responsible for the visual line of the firm. He/she also interprets the information provided by the markets and he/she filters it into the product proposals, keeps in touch with the so-called cultural knowledge and also maintains this knowledge in the firm. Thus the firm can stay on the pulse of the times even without an artificial outdating of the products.[167]

2.5 Two levels of design management

Design management includes two different levels: The first one, *functional design management*, covers the management of design projects, design teams and design departments. Its task is to make sure that the design functions of the firm are in good shape. These design functions may be provided by either an outside design contractor or an internal design team, but the responsibility for them and the relationship of them with the succeeding of the corporate competitive strategy is held by the person who has responsibility for the functional design management.[168]

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167 Cf. Viitala 1988b: 21; Wirtén and Wirtén 1989: 9; Kääpä 1991: 29; Roy 1990: 56-57, 59; Lynn and Harris 1997: 605; Cooper and Press 1997: 155-156

168 See Lawrence 1988: 70-71; cf. Chung 1998: 68-69

As the name implies, the functional design management is concerned with the functional side of the design and shape giving processes of the firm. It also is responsible for the fact that the firm has the design resources needed at its disposal. And it also attends to that the practical realization of the short-term design functions will go smoothly together with the product and product line design[169].

The other, more important level of design management is called *strategic design management*. It is a mechanism that ensures that the firm will use design efficiently; it is, actually, a mechanism which task is to combine the design resources of a firm with its strategy and goals.[170] When the tasks of design management are discussed in a theoretical level, exactly the strategic side of it is discussed there. It supervises the suitableness of design and shape giving used for the strategic targets and goals, and the image of the firm.

When it takes care of the maintenance of the compatibility between the firm and its products, strategic design management supervises the image that will be seen from the outside of the firm. The knowledge the consumers will have of the firm is based on exactly these impulses the firm works up and releases[171]. When the firm decides which products will be suitable for the production plan, it also creates the knowledge and images the consumers will have of the firm and its products, and thus it will affect their attitudes and thus affect their purchasing behavior as well.

Strategic design management also takes care of the matter that the design resources of the firm will be used optimally[172]. It supervises the design functions and the functionality of them. Its task, also, is to prevent overlapping activities and thus unnecessary costs that can be prevented with an optimum use of design even in an early stage of production.

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169 cf. Kotler 1980: 244-245

170 See Lawrence 1988: 71; cf. Markkanen 1999: 34, 36-37

171 cf. Oakley 1990: 5

172 cf. Markkanen 1999: 34

2.6 Design management as a part of the organizational structure of a firm

When analyzed how the design management functions take place in the organization of a firm, there are almost as many choices and each other excluding recommendations there as there are writers. However, the understanding of the matter that design management is not able to function optimally, unless the responsibility for these actions is in the immediate connection of the highest management, is becoming general. The progress to this has, nevertheless, been slow and winding.

In an ideal situation the integrating of the design functions and production will lead into direct cost savings and competitive advantage, for instance due to rational differentiation, more rapid product development and better quality level. An unanimous statement of the design management theorists is nowadays that design management cannot function optimally, unless the responsibility for these functions, too, is in the closest vicinity to the highest management.[173]

Different theorists present from each other greatly dissident models for possible placement of design management, and sometimes even the pure design, into the organizational chart of a firm. An ideal, in all circumstances viable model does not exist, because the different firms have different needs. Therefore, when the model is chosen it is important also to discuss what kind of content it is wanted to be to be bound into the function.

According to Poth and Poth, design can be connected with the organizational structure in five different stages in all, depending on the needs, possibilities and preferences of the firm. In their model design can function for example as a management tool, or as a marketing instrument. An own, independent department can be established for the design function, or a project team created for a named project can come in question. Another task

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173 See and cf. e.g. Ughanwa and Baker 1989: 311; Poth and Poth 1986: 62-65; Susman, Dean and Rusinko 1992: 71-72; Roy 1994: 9-17

for design, or maybe rather for design management, can be the guiding of the other strategic functions of the firm.[174]

Oakley[175] states that design can function *as a part of production, as an independent function* or possibly *under the guidance of a* separate *executive group.* As a part of production the design proposals might be subject to limitations that may hamper the creativity. This has two kinds of possible influences: on the other hand, the design activities will stay in realistic dimensions, on the other hand, then, a too exacting control may kill even the necessary creativity. When operating as an independent function design will get "a free hand" concerning product design, but on the other hand, this might encourage an excessive feeling of independence that can easily lead into a stylistic design policy.

If design function operates in a "different world" compared to the rest of the firm, a position as an independent function may also cause prejudices and thus conflict situations between the department responsible for design and the other functions of the firm.[176] If there is a separate executive group that has been chosen to lead the design functions, the limitations of liability as well as the resources allocated are in a key role regarding to the succeeding of design. A quarrelsome executive group can make even a good product and design idea to fail.

In his article of the position of design education in business schools Blackburn[177] quotes Walton's[178] three models of the position of design in business activities and adapts them to the university world. According to these models, design can act as an outside observer of the mainstream, it can also participate in the decision making as an equal partner, or it can

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174 Poth and Poth 1986: 59-62

175 Oakley 1984: 57-60

176 Cf. Oakley 1984: 58

177 Blackburn 1992: 29

178 Walton 1989: 3-7, quoted by Blackburn 1992: 29

even act as a catalyst in an effective decision making process. The closer design is connected to the decision making process itself, the more effective results will be gained, according to them.

3 FACTORIAL STRUCTURE OF DESIGN MANAGEMENT

In order to determine the content of the concept *design management* some variables were formulated for analysis to measure the elements of product, environment and communication. These questions are presented in the appendix 2. Each of the elements was explained with the questions related to the present and the future, in order to study the directions and focus of the progress of the elements of design management.

The variables defined by the researcher were grouped already in the questionnaire to be connected with product development, corporate environment and communication policy, which could have contributed to the formation of the factors. But then again, in the firms that answered the questionnaire some of the variables had been interpreted to belong into a clearly different group and thus in a different factor than the researcher had beforehand considered.

The variables were analyzed with the factor analysis method[179] by using varimax rotation. The realization of the traditional tripartition of the elements of design management in this material was examined with the use of factor analysis, and the descriptiveness, functionality and suitability of the variables created were also evaluated. Those variables that had a factor loading at least 0,5 (marked with bold text in the tables 6-11) and communality at least 0,3, according to the research tradition of the field, were considered to be clearly included into each factor[180].

Cross tables and significance tests were done regarding the location of the firms (Vaasa province / Kuopio province) and the lines of business (industry / trade and service) in purpose to explain, whether the location and line of business of a firm has any influence in

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179 *Factor analysis, Statistics; the use of one of several methods for reducing a set of variables to a lesser number of new variables each of which is a function of one or more of the original variables. Websters's Encyclopedic Unabridged Dictionary of the English Language 1989: 509-510; also see Holton and Burnett 1997: 76*

180 see e.g. Yli-Luoma 1997: 80, 83; cf. Nummenmaa et al. 1997: 252-253

its attitude towards design management. Thus it was possible to evaluate the suitability of the design management model created in this thesis for the development processes of the design management of different firms.

3.1 Contents of the concept of design management through factor analysis

3.1.1 Product, environment and communication

The model of three factors (table 6) that describes the present design management situation of the firms that answered the questionnaire sorted the variables clearly into product, environment and communication that explained 37,6% of the variance included into all of the variables in all. The factor named environment included only those variables that had been proposed to be elements of the corporate environment in the questionnaire. Seven of the ten variables that measured corporate environment got a factor loading over 0,5.

The factor that described the product element was measured with fifteen variables of which six got a factor loading over 0,5 in the factor product, and one of the variables (pursued product image) moved to the factor that described communication. This is understandable, because the product image is one of the strongest messages a firm can send.

The communication policy was measured with nineteen variables of which the factor in question got a loading over 0,5 in sixteen ones. Thus the three-factor model that describes the present time supports well the established tripartition of design management into product, environment and communication.

In the three-factor model that describes future, 42,5% of the variance contained by all the variables in all was explained. In this model the factors describing product and communication clearly maintained the variable structure of theirs. Eight of the fifteen variables that measured product development got a loading over 0,5 (table 7).

Table 6. The three-factor model that describes the present time.

	Variable	product	environ	commu	*comm.*
C04	operation qualities of the product	**0,654**	-0,169	0,006	*0,457*
C06	product safety factors	**0,580**	0,158	-0,019	*0,362*
C05	technical functionality of the product	**0,577**	-0,050	-0,139	*0,355*
C09	suitableness in environment where used	**0,561**	0,001	0,186	*0,349*
C08	ease of service	**0,533**	0,187	-0,228	*0,370*
C02	ergonomics	**0,529**	0,163	-0,168	*0,335*
C03	modulability	0,464	-0,027	0,126	*0,232*
C07	aesthetics appearance	0,455	0,068	0,169	*0,240*
C12	demands for the product set by the markets	0,445	-0,019	0,247	*0,259*
C14	reaching for the future, innovativity	0,402	0,041	0,331	*0,273*
C10	economic manufacturing	0,363	-0,152	0,196	*0,193*
C11	recyclability	0,339	0,175	0,191	*0,182*
E09	machines and devices	0,317	0,176	0,079	*0,138*
E10	cars and haulage equipment	0,225	0,151	0,090	*0,081*
E06	colors used	0,010	**0,778**	0,191	*0,642*
E05	architecture	0,020	**0,757**	0,144	*0,594*
E02	furniture and equipment	-0,077	**0,748**	0,154	*0,589*
E01	buildings	0,128	**0,718**	0,101	*0,542*
E08	flower arrangements	-0,001	**0,672**	0,135	*0,470*
E04	materials	0, 125	**0,658**	0,051	*0,451*
E07	concrete corporate environment	0,094	**0,590**	0,173	*0,387*
E03	office machines: suitable in environment ...	0,189	0,469	0,227	*0,307*
G09	typography of the communication material	0,163	0,094	**0,755**	*0,605*
G10	systematic. + uniformity of text types & fonts	0,076	0,189	**0,748**	*0,601*
G12	systematic. + unif. of style of communication	-0,001	0,251	**0,727**	*0,592*
G11	systematicness + uniformity of use of colors	-0,044	0,268	**0,712**	*0,581*
G13	systematicness and uniformity of advertising	-0,095	0,126	**0,706**	*0,523*
G03	instructions for use & writing of firm's name	0,073	0,234	**0,631**	*0,459*
G05	possible other symbols	-0,063	0,079	**0,628**	*0,405*
G08	systematicness and uniformity of bulletins	0,276	0,143	**0,620**	*0,482*
G18	systematic. and uniformity of the brochures	0,156	0,002	**0,587**	*0,369*
G19	importance of annual report as advertisement	0,111	0,207	**0,572**	*0,382*
G16	systematic.+unif. of business cards, in image	0,141	0,068	**0,565**	*0,344*
G14	systematic. & uniformity of media selection	0,025	0,216	**0,553**	*0,353*
G17	systematic. + uniformity of printed material	-0,001	0,100	**0,550**	*0,312*
G01	logotype	-0,016	0,036	**0,542**	*0,295*
G02	trademarks	0,067	-0,064	**0,525**	*0,284*
G06	systematic. + uniformity of signs and guides	-0,050	0,427	**0,514**	*0,445*
C01	pursued product image	0,234	0,220	**0,508**	*0,361*
G15	systematic. + uniformity of customer service	0,159	0,178	0,499	*0,306*
G07	systematic. + uniformity of package selection	0,304	0,043	0,495	*0,339*
G04	product codes etc.	0,252	0,060	0,460	*0,279*
C13	customer feedback used in product design	0,333	0,118	0,433	*0,312*
C15	product quality	0,191	-0,051	0,234	*0,094*

Table 7. The three-factor model that describes the future.

	Variable	product	environ	commu	*comm.*
D04	operation qualities of the product	**0,756**	0,186	0,050	*0,609*
D13	customer feedback used in product design	**0,717**	-0,047	0,187	*0,551*
D15	product quality	**0,698**	-0,026	0,241	*0,546*
D12	demands for the product set by the markets	**0,681**	0,049	0,283	*0,547*
D09	suitableness in environment where used	**0,553**	0,269	0,191	*0,415*
D01	pursued product image	**0,552**	0,006	0,267	*0,377*
D10	economic manufacturing	**0,538**	0,193	0,105	*0,338*
D14	reaching for the future, innovativity	**0,514**	0,127	0,407	*0,446*
D05	technical functionality of the product	0,494	0,376	-0,239	*0,442*
F09	machines and devices	0,486	0,077	0,130	*0,259*
H02	trademarks	0,346	0,068	0,318	*0,225*
F08	flower arrangements	-0,078	**0,690**	0,121	*0,498*
F05	architecture	-0,045	**0,633**	0,391	*0,555*
D08	ease in service	0,089	**0,630**	-0,057	*0,408*
D02	ergonomics	-0,009	**0,600**	-0,043	*0,362*
H04	product codes etc.	0,195	**0,524**	0,173	*0,342*
D06	product safety factors	0,404	**0,515**	-0,157	*0,454*
F06	colors used	-0,043	**0,509**	0,452	*0,465*
F01	buildings	0,064	0,464	0,323	*0,324*
D03	modulability	0,246	0,427	-0,141	*0,262*
D11	recyclability	0,106	0,417	-0,030	*0,186*
H07	systematic. + uniformity of package selection	0,086	0,399	0,330	*0,275*
D07	aesthetic appearance	0,316	0,397	0,306	*0,351*
F04	materials	0,054	0,347	0,325	*0,229*
H06	systematic. + uniformity of signs and guides	0,027	0,330	0,140	*0,519*
F10	cars and haulage equipment	0,140	0,315	0,126	*0,135*
H11	systematicness + uniformity of use of colors	0,137	0,076	**0,808**	*0,677*
H10	systematic. + uniformity of text types & fonts	0,092	0,119	**0,801**	*0,664*
H12	systematic. + unif. of style of communication	0,226	0,056	**0,776**	*0,656*
H09	typography of the communication material	0,234	0,071	**0,769**	*0,651*
H13	systematicness and uniformity of advertising	0,180	-0,072	**0,722**	*0,558*
H08	systematicness and uniformity of bulletins	0,231	0,128	**0,679**	*0,531*
H16	systematic.+unif. of business cards, in image	0,276	0,108	**0,673**	*0,540*
H14	systematic. & uniformity of media selection	0,114	-0,009	**0,672**	*0,464*
H17	systematic. + uniformity of printed material	0,075	-0,002	**0,669**	*0,453*
H18	systematic. and uniformity of the brochures	0,256	0,034	**0,660**	*0,502*
H03	instructions for use & writing of firm's name	0,204	0,220	**0,594**	*0,443*
H19	importance of annual report as advertisement	0,177	0,099	**0,587**	*0,386*
H15	systematic. + uniformity of customer service	0,332	-0,007	**0,565**	*0,429*
F02	furniture and equipment	-0,017	0,305	**0,521**	*0,365*
H05	possible other symbols	-0,009	0,381	0,485	*0,381*
H01	logotype	0,338	-0,000	0,475	*0,340*
F03	office machines: suitable in environment ...	0,371	0,113	0,377	*0,292*
F07	concrete corporate environment	0,260	0,263	0,305	*0,230*

Thirteen of the nineteen variables that described communication got a loading over 0,5. The factor that described communication got a loading 0,521 in one of the variables that measured environment (furniture and equipment) and was thus logically understood also as an element of communication, too.

The third factor, however, got a loading over 0,5 in seven variables. Three of these were variables that were used to measure environment, three ones measured product and one was used to measure communication. This factor can be described as the greenish environmental and "soft values" factor.

The factor analysis that examined the future spread a little the traditional tripartition by linking with it the current greeny, environmental values, too. However, the results of this factor model, too, support the partition of the elements of design management into three main groups which basic elements consist of the product, environment and communication within the fields of them. The three-factor model that describes the future is presented in the table 7.

Both the three-factor model that describes the present time and the one that describes the future clearly confirm the traditional tripartition of design management into product, environment and communication. The high loadings that most of the variables got in their own factors also show that the variables produced for this research are good and suitable for this use. To verify which variables best describe each of these factors also is an important result that deepens the design management concept further. The three-factor model thus gives new information to the meaning and contents of design management but similarly there still rises up an open question of the dynamics of the known factors and the variables produced to describe them; a question of the real nature and usability of design management. To analyze deeper this aspect one also has to analyze other factor structures, too. Thus there will next be presented both four- and five-factor models in purpose to go deeper in analyzing the meaning, contents, nature and usability of design management.

3.1.2 Technical and image related elements in environment and communication

The fields of design management were next analyzed with the help of a four-factor model. In the four-factor model that described the present time the factor named as product got its highest loading in ten variables that measured product development. Six loadings of these were over 0,5. (See factor "prod" i.e. product in table 8.)

The environment was measured with ten variables, and the corresponding factor got the highest loading with eight of those. The factor loading of seven variables was over 0,5 and the factor loading of the eighth one, too, was 0,476. Thus the environmental factor was clearly made up of the variables that measured the environment. (Factor "envir" in table 8.)

The nineteen variables that measured communication were divided into two factors that were named as passive (passc) and active (activc) communication. The passive communication consisted of variables especially related to symbolism. The active communication, therefore, consisted of the concrete fields of communication, of the systematicness and uniformity of them. Five variables of nineteen were placed in the passive communication while the factor loading was over 0,5 and in nine variables the factor of active communication got a loading over 0,5.

Also the model of four factors supports the understanding of product, environment and communication as the basic elements of design management; the cumulative percent of variances of the four factors was 43,0. The model specifies the content of communication by dividing it into two clearly from each other differing parts, the passive and active communication, i.e. the result and the making of it. The four-factor model that describes the present time is presented in table 8.

Table 8. The four-factor model that describes the present time.

	Variable	prod	envir	passc	activc	*comm.*
C04	operation qualities of the product	**0,648**	-0,155	0,246	-0,123	*0,520*
C05	technical functionality of the product	**0,588**	-0,054	-0,172	0,011	*0,379*
C06	product safety factors	**0,580**	0,155	-0,039	0,065	*0,367*
C08	ease of service	**0,548**	0,191	-0,125	-0,135	*0,371*
C09	suitableness in environment where used	**0,546**	-0,003	0,031	0,186	*0,350*
C02	ergonomics	**0,538**	0,175	0,039	-0,187	*0,356*
C03	modulability	0,454	-0,031	0,072	0,146	*0,234*
C07	aesthetic appearance	0,437	0,079	0,322	0,010	*0,301*
C12	demands for the product set by markets	0,426	-0,026	0,140	0,245	*0,261*
C10	economic manufacturing	0,349	-0,159	0,088	0,208	*0,198*
E09	machines and devices	0,314	0,159	-0,161	0,257	*0,216*
E10	cars and haulage equipment	0,220	0,140	-0,066	0,189	*0,108*
E06	colors used	-0,005	**0,769**	0,037	0,232	*0,647*
E02	furniture and equipment	-0,094	**0,757**	0,267	0,001	*0,653*
E05	architecture	0,008	**0,748**	0,004	0,199	*0,600*
E01	buildings	0,118	**0,719**	0,103	0,078	*0,547*
E08	flower arrangements	-0,014	**0,676**	0,177	0,051	*0,491*
E04	materials	0,120	**0,656**	0,022	0,076	*0,451*
E07	concrete corporate environment	0,084	**0,569**	-0,158	0,362	*0,487*
E03	office machines: suitable in environment	0,167	0,476	0,307	0,080	*0,355*
G02	trademarks	0,020	-0,049	**0,704**	0,125	*0,514*
G03	instruction for use&writing of firm's name	0,019	0,241	**0,676**	0,288	*0,599*
G04	product codes etc.	0,210	0,077	**0,668**	0,092	*0,504*
G05	possible other symbols	-0,116	0,086	**0,661**	0,278	*0,536*
G01	logotype	-0,063	0,047	**0,660**	0,175	*0,472*
C11	recyclability	0,317	0,192	0,436	-0,057	*0,330*
G16	systematic.+unif. of business cards, image	0,097	0,062	0,422	0,402	*0,353*
G07	systemat.+uniformit. of package selection	0,264	0,041	0,417	0,332	*0,355*
G13	systematicness+uniformity of advertising	-0,142	0,092	0,140	**0,774**	*0,647*
G09	typography of communication material	0,109	0,067	0,285	**0,747**	*0,656*
G18	systematic. and uniformity of brochures	0,118	-0,031	0,047	**0,716**	*0,530*
G10	systemat.+uniformity of text types&fonts	0,022	0,166	0,336	**0,694**	*0,623*
G12	systematic.+unif. of communication style	-0,054	0,230	0,345	**0,655**	*0,604*
G15	systemat.+uniformity of customer service	0,127	0,148	0,010	**0,639**	*0,446*
G14	systematic.+uniformity of media selection	-0,012	0,187	0,084	**0,637**	*0,449*
G08	systematicness and uniformity of bulletins	0,232	0,120	0,236	**0,628**	*0,518*
G11	systematicness+uniform. of use of colors	-0,100	0,259	0,510	**0,507**	*0,594*
C13	customer feedback used in product design	0,302	0,099	0,122	0,485	*0,351*
G06	systematic.+uniformity of signs & guides	-0,089	0,413	0,248	0,461	*0,452*
G19	importance of annual report advertisement	0,066	0,198	0,394	0,432	*0,385*
C14	reaching for the future, innovativity	0,380	0,022	0,029	0,432	*0,333*
G17	systematic.+uniformity of printed material	-0,043	0,090	0,356	0,420	*0,314*
C01	pursued product image	0,194	0,213	0,355	0,393	*0,364*
C15	product quality	0,173	-0,056	0,141	0,202	*0,094*

In the four-factor model about the future (table 9) the factor that described the product got a loading over 0,5 in six of the fifteen variables that measured product development (see table 9: prod). Additionally this factor got a loading of 0,550 in one of the variables that measured communication (trademarks) that has in Finnish a name that is closely connected in product: *tuotemerkit* i.e. "product marks" in Finnish.

Like in the three-factor model, the variables that measured environment were rather widely spread when the future time was studied. In the other factor - technical functions - the factor loading of four variables was over 0,5. This factor was composed of variables that measured product development (table 9: techn). Any factor that could have been named purely as environment was not generated at all, even though the third of the factors can be called as soft functions and environment (soft). This factor got a loading over 0,5 in four variables. In the third factor there were placed three variables that measured product development, four ones that measured the environment and three ones that measured communication.

The factor of communication formed a coherent whole like in the both three-factor models; in the four-factor model that described the future fourteen of the communication variables out of nineteen had a factor loading that went over 0,5. The factors of the four-factor model that described the future explained 46,8% of the total variance that the variables consisted in all, and it did not follow the traditional tripartition of design management as clearly as the factor models above. It looks like the people that answered the questionnaire interpreted the concept of environment in several different ways. This appeared during the interviews, too.

Table 9. The four-factor model that describes the future.

	Variable	prod	techn	soft	commu	*comm.*
D15	product quality	**0,703**	0,140	-0,036	0,221	*0,563*
D04	operation qualities of the product	**0,690**	0,355	0,089	0,051	*0,612*
D01	pursued product image	**0,682**	-0,107	0,123	0,186	*0,526*
D13	customer feedback in product design	**0,678**	0,217	-0,102	0,190	*0,553*
D12	demands for the product set by markets	**0,660**	0,204	0,012	0,273	*0,552*
H02	trademarks	**0,550**	-0,270	0,264	0,199	*0,485*
D10	economic manufacturing	**0,533**	0,195	0,164	0,081	*0,355*
D14	reaching for the future, innovativity	0,440	0,276	0,047	0,429	*0,456*
H01	logotype	0,430	-0,101	0,095	0,422	*0,382*
F03	office machines: suitable in environment	0,382	0,088	0,121	0,358	*0,297*
D05	technical functionality of the product	0,235	**0,704**	0,083	-0,142	*0,578*
D06	product safety factors	0,185	**0,653**	0,262	-0,085	*0,537*
F09	machines and devices	0,240	**0,568**	-0,177	0,242	*0,470*
F10	cars and haulage equipment	-0,076	**0,509**	0,092	0,221	*0,323*
D08	ease of service	-0,051	0,470	0,465	-0,021	*0,441*
D09	suitableness in environment where used	0,423	0,437	0,121	0,230	*0,437*
D03	modulability	0,130	0,404	0,284	-0,113	*0,274*
F08	flower arrangements	-0,060	0,164	**0,690**	0,079	*0,512*
F05	architecture	-0,045	0,174	**0,626**	0,363	*0,556*
H04	product codes etc.	0,308	0,007	**0,614**	0,080	*0,478*
D02	ergonomics	-0,023	0,214	**0,563**	-0,069	*0,368*
H07	systemat.+uniform. of package selection	0,193	-0,056	0,498	0,254	*0,352*
F06	colors used	-0,055	0,153	0,497	0,439	*0,466*
D11	recyclability	0,190	0,012	0,478	-0,101	*0,275*
D07	aesthetic appearance	0,391	0,055	0,456	0,238	*0,420*
H05	possible other symbols	0,052	-0,009	0,445	0,440	*0,394*
F01	buildings	0,020	0,227	0,414	0,324	*0,328*
H10	systemat.+uniformit. of text types&fonts	0,059	0,083	0,110	**0,821**	*0,696*
H11	systematicness+uniform. of use of colors	0,149	0,001	0,111	**0,805**	*0,683*
H09	typography of communication material	0,183	0,135	0,040	**0,796**	*0,687*
H12	systemat.+unif. of communication style	0,208	0,070	0,058	**0,786**	*0,670*
H13	systematicness+uniformit. of advertising	0,156	0,030	-0,071	**0,743**	*0,583*
H14	systemat.+uniformity of media selection	0,093	0,033	-0,008	**0,690**	*0,485*
H08	systematicness+uniformity of bulletins	0,222	0,083	0,132	**0,679**	*0,535*
H18	systematic. and uniformity of brochures	0,247	0,058	0,041	**0,664**	*0,507*
H17	systemat.+uniformity of printed material	0,114	-0,080	0,059	**0,656**	*0,454*
H16	systemat.+unif. of business cards, image	0,301	0,026	0,144	**0,655**	*0,541*
H06	systematic.+uniformity of signs & guides	0,033	0,075	0,346	**0,628**	*0,521*
H19	importance of annual report as advertis.	0,169	0,062	0,104	**0,589**	*0,390*
H15	systemat.+uniformit. of customer service	0,361	0,001	0,032	**0,548**	*0,431*
H03	instruct. for use&writing of firm's name	0,290	-0,058	0,311	**0,539**	*0,474*
F02	furniture and equipment	0,074	-0,090	0,403	0,464	*0,392*
F07	concrete corporate environment	0,137	0,348	0,137	0,351	*0,282*
F04	materials	-0,020	0,238	0,273	0,348	*0,253*

The four-factor models gave new information of the dynamics of design management concept. The group of variables that described the product factor remained coherent like it did in the three-factor models, too; whereas the environment factor and the communication one both split into two in an interesting and, after analyses, logical way. The by nature concrete and abstract, technical and symbolic (image-related) variables formed themselves into their own groups in the environment and communication factors. This gave valuable new information of the nature of design management concept, and it also encouraged one to expect new opportunities for the development of design management's usability as a strategic instrument.

3.1.3 Technical and image related elements in product and communication

In the five-factor model that described the present time (table 10) the variables that measured the product were divided into two factors: the image-related characteristics of a product (pima) and the technical characteristics of a product (ptech). The factor got a loading over 0,5 in four variables in the image factors and in five variables in the technical characteristics of a product.

Eight variables of the ten ones that measured environment created the factor that was named as corporate environment (envir). The lowest loading in it was 0,498. Communication was divided into two factors, the first one of them described the systematicness and uniformity of communication (s&u) and the second one presented the symbolical functions of it (symb). The factor that described the systematicness and uniformity of communication included only variables that measured the communication policy. Eleven variables got a factor loading over 0,5 there. In the factor that described the symbolical functions the factor loading was over 0,5 in five of the variables.

The five-factor model of the present time supports and specifies the tripartition of the elements of design management. When it divides the product into the "soft", image like

factors and also into the "hard", technical characteristics, the five-factor model reflects the dual role of product development as a competitive parameter of a firm: the functional characteristics of the product have to be in a good state, it has to function in its use and simultaneously the image values of it have to wake up the customer's desire for buying, it has to lead him/her into the making of a buying decision.

The division of communication into systematicness and uniformity - how the things will be done - and then again into the factor that contains the symbolical functions - on what basis the customer forms his/her images of the firm and its products - reflects the nature of product development and communication that is closely connected with each other in the competitive parameter field of marketing and especially in the one of design management.

The alignment of the variables of environment, as a factor clearly of their own, functions in the model as an essential part of the triunity of the competitive parameter categories of design management. The five factors of the model explained 47,2% of the variance all the variables contained in all.

In the five-factor model that described the future the variables that measured the product divided into two, three in principal, factors. The factor that described the soft values of the product (psoft) got a loading over 0,5 in six of the fifteen variables that measured product. Besides, this factor had a loading of the value of 0,552 in a variable that measured communication policy but was closely connected with the product, "trademarks". In the factor that described the technical characteristics (techc) four variables had a factor loading over 0,5 (see table 11).

Like in the five-factor model that described the present time, the factor "corporate environment" (envir) was formed of eight variables, of which seven had a factor loading over 0,5. The factor that described the systematicness and uniformity of communication (s&u) consisted of fourteen variables that measured communication policy, and all of them got a very high factor loading.

Table 10. The five-factor model that describes the present time.

	Variable	pima	ptech	envir	s&u	symb	*comm*
C14	reaching for the future, innovativity	**0,628**	0,156	0,052	0,261	0,000	0,490
C12	demands for product set by markets	**0,625**	0,190	0,006	0,076	0,126	0,449
C15	product quality	**0,534**	-0,049	-0,016	0,043	0,125	0,305
C13	customer feedback in product design	**0,519**	0,126	0,120	0,357	0,088	0,435
C01	pursued product image	0,443	0,035	0,234	0,299	0,326	0,448
E09	machines and devices	0,403	0,183	0,176	0,137	-0,175	0,277
C08	ease of service	-0,141	**0,667**	0,143	-0,056	-0,098	0,498
C06	product safety factors	0,005	**0,647**	0,114	0,112	-0,028	0,446
C05	technical functionality of the product	0,086	**0,611**	-0,085	0,014	-0,158	0,413
C02	ergonomics	0,046	**0,560**	0,149	-0,167	0,067	0,371
C04	operation qualities of the product	0,367	**0,523**	-0,157	-0,191	0,267	0,541
C09	suitable. in environment where used	0,277	0,483	-0,017	0,152	0,128	0,350
C03	modulability	0,208	0,412	-0,044	0,122	0,071	0,235
C07	aesthetic appearance	0,204	0,382	0,069	-0,001	0,330	0,302
C10	economic manufacturing	0,251	0,277	-0,163	0,165	0,078	0,199
E10	cars and haulage equipment	0,032	0,247	0,123	0,202	-0,074	0,123
E02	furniture and equipment	0,126	-0,148	**0,779**	-0,031	0,265	0,716
E06	colors used	0,073	-0,003	**0,772**	0,222	0,022	0,652
E05	architecture	-0,032	0,159	**0,740**	0,225	-0,007	0,602
E01	buildings	-0,103	0,201	**0,698**	0,139	0,104	0,569
E04	materials	0,147	0,085	**0,664**	0,039	0,020	0,472
E08	flower arrangements	-0,179	0,087	**0,656**	0,134	0,177	0,519
E07	concrete corporate environment	0,198	0,045	**0,576**	0,305	-0,182	0,499
E03	office machines: suitable in environm.	0,334	0,040	0,498	0,002	0,303	0,453
G13	systematicn.+uniform. of advertising	0,194	-0,188	0,097	**0,747**	0,075	0,647
G18	systematic. + uniformity of brochures	0,104	0,135	-0,052	**0,734**	-0,006	0,570
G09	typography of communicat. materials	0,280	0,044	0,064	**0,721**	0,228	0,656
G10	system.+uniform. of text types&fonts	0,213	-0,024	0,164	**0,686**	0,281	0,623
G08	systematicness + uniform. of bulletins	0,075	0,268	0,090	**0,677**	0,193	0,581
G12	systemat.+unif. of communicat. style	0,185	-0,096	0,231	**0,650**	0,292	0,604
G14	systemat.+uniform. of media selection	0,161	-0,036	0,185	**0,622**	0,035	0,449
G15	systemat.+unif. of customer service	0,213	0,093	0,142	**0,609**	-0,037	0,447
G11	systematicness+unif. of use of colors	0,033	-0,088	0,250	**0,559**	0,468	0,602
G17	systemat.+uniform. of printed material	-0,205	0,078	0,054	**0,546**	0,324	0,455
G06	systemat.+uniformity of signs&guides	-0,044	-0,034	0,398	**0,518**	0,212	0,475
G19	importance of ann. report as advertis.	0,055	0,079	0,183	**0,476**	0,361	0,400
G16	system.+unif. of business cards,image	0,021	0,123	0,041	0,461	0,392	0,384
G07	systemat.+unifor. of package selection	0,017	0,302	0,010	0,402	0,397	0,411
G02	trademarks	0,178	-0,066	-0,039	0,127	**0,691**	0,531
G04	product codes etc.	0,025	0,216	0,058	0,161	**0,664**	0,518
G03	instruct. for use/writing of firm's name	0,190	-0,052	0,248	0,293	**0,652**	0,611
G01	logotype	0,215	-0,168	0,066	0,155	**0,641**	0,514
G05	possible other symbols	-0,086	-0,075	0,071	0,372	**0,636**	0,561
C11	recyclability	-0,063	0,372	0,163	0,026	0,448	0,370

Table 11. The five-factor model that describes the future.

	Variable	psoft	techc	envir	s&u	pcom	*comm*
D15	product quality	**0,734**	0,111	0,099	0,188	-0,076	0,602
D01	pursued product image	**0,687**	-0,111	0,078	0,170	0,134	0,538
D04	operation qualities of the product	**0,687**	0,358	0,053	0,054	0,093	0,615
D13	customer feedback in product design	**0,663**	0,230	-0,105	0,223	-0,015	0,554
D12	demands for product set by markets	**0,638**	0,220	-0,038	0,303	0,084	0,556
H02	trademarks	**0,552**	-0,272	0,152	0,172	0,253	0,495
D10	economic manufacturing	**0,524**	0,202	0,082	0,081	0,165	0,356
F03	office machines: suitable in environm.	0,462	0,006	0,422	0,242	-0,114	0,463
H01	logotype	0,445	-0,124	0,160	0,389	0,052	0,393
D14	reaching for the future, innovativity	0,435	0,268	0,099	0,429	0,032	0,456
D05	technical functionality of the product	0,209	**0,726**	0,003	-0,108	0,086	0,590
D06	product safety factors	0,161	**0,670**	0,135	-0,072	0,215	0,545
F09	machines and devices	0,263	**0,539**	0,056	0,233	-0,239	0,474
F10	cars and haulage equipment	-0,110	**0,526**	0,048	0,253	0,086	0,363
D08	ease of service	-0,090	0,495	0,227	-0,014	0,398	0,464
D09	suitable. in environment where used	0,394	0,455	0,041	0,259	0,146	0,452
D03	modulability	0,148	0,385	0,271	-0,158	0,144	0,289
F02	furniture and equipment	0,179	-0,203	**0,720**	0,283	0,019	0,672
F05	architecture	0,004	0,108	**0,690**	0,234	0,299	0,631
F06	colors used	-0,006	0,088	**0,615**	0,321	0,200	0,528
F04	materials	0,073	0,138	**0,610**	0,199	-0,079	0,442
F08	flower arrangements	-0,045	0,137	**0,558**	-0,010	0,449	0,533
F01	buildings	0,072	0,163	**0,551**	0,213	0,136	0,399
F07	concrete corporate environment	0,201	0,275	0,421	0,253	-0,107	0,369
H11	systematic.+uniform. of use of colors	0,128	-0,005	0,145	**0,808**	0,101	0,700
H10	systemat.+unif. of text types&fonts	0,053	0,062	0,216	**0,804**	0,046	0,702
H09	typography of communicat. material	0,173	0,120	0,146	**0,794**	0,011	0,696
H12	system.+unif. of communication style	0,215	0,040	0,211	**0,760**	-0,012	0,670
H13	systematic.+uniform. of advertising	0,167	-0,001	0,127	**0,725**	-0,115	0,583
H08	systematic.+uniformity of bulletins	0,178	0,102	0,056	**0,713**	0,182	0,587
H17	systemat.+uniform. of printed material	0,082	-0,070	0,037	**0,680**	0,103	0,485
H18	systematic. + uniformity of brochures	0,235	0,050	0,102	**0,667**	0,037	0,514
H16	system.+unif. of business cards, image	0,282	0,024	0,137	**0,656**	0,140	0,549
H14	systemat.+uniform. of media selection	0,112	-0,005	0,193	**0,655**	-0,090	0,487
H06	systemat.+uniformity of signs&guides	0,005	0,076	0,262	**0,619**	0,287	0,539
H19	importance of annual report as advert.	0,143	0,067	0,086	**0,604**	0,118	0,410
H15	systemat.+unif. of customer service	0,359	-0,011	0,197	**0,540**	0,025	0,431
H03	instruct.: use&writing of firm's name	0,306	-0,089	0,343	0,481	0,189	0,486
H07	system.+uniform. of package selection	0,091	0,026	0,000	0,331	**0,638**	0,525
D11	recyclability	0,095	0,097	-0,047	-0,024	**0,618**	0,404
H04	product codes etc.	0,265	0,039	0,255	0,076	**0,587**	0,487
H05	possible other symbols	-0,031	0,048	0,082	0,494	**0,524**	0,529
D07	aesthetic appearance	0,325	0,106	0,097	0,277	**0,521**	0,475
D02	ergonomics	-0,054	0,235	0,280	-0,082	0,481	0,375

The fifth factor was formed of three variables that measured product development and of three variables that measured communication policy, and it was named as "communication included in the product" (pcom). Loadings of the factor in all of the six variables were high. Because the loadings were highest in the variables that measured communication, the factor describes communication more than the product.

The five-factor model of the future divides the product into more specific fields than before, but still keeps the traditional tripartition (table 11). In this model the five factors explained 50,9% of the variance all the variables contained in all.

3.2 Technical and image factors of design management

In the models of the present and future times the factors got about the same contents in the models of three, four and five factors. In a two-factor model the product and the communication created the basic factors in which the environment was not included. This supported the understanding that there would be to be found at least one basic factor more that included the variables that measured environment, too. In the two-factor models that described the present and future times the environmental variables all got loadings under 0,5 in both of the factors but in the three-factor models environment rose up clearly to be one among the basic factors. In a six-factor model many of the factors got only a little of each other differing loadings in several variables and thus it did not bring anything new into the interpretation.

The factor analysis supports the traditional understanding of design management that is based on three elements that are product, environment and communication. Furthermore, it emphasizes the nature of these elements entangled together when it spreads the variables that measured them into different factors. The factor model supports the understanding of design management as a function that coordinates the different fields of the activities of a

firm; as a function in which it would not be meaningful to separate the elements from each other.

The factor analysis also explains further the contents of these three basic factors when it divides each of them into two factors. The "original" product factor was spread into the technical and image-related functions of the product. Thus it reflects well the general nature of products. Especially a physical product has those important technical functions in it that make the product worth of the purpose it has been made for, and every product also has a kind of image that can and most often will be influenced by the firm that either manufactures the product or otherwise has responsibilities for its existence.

Though it is not recommendable to treat these two functions of product separately, it will be sensible to have a full awareness of their existence when a product is to be designed. There always will be customers, buyers or other cooperation partners that will emphasize the technical characteristics of the product in their decision making. Also there always will be those image-related functions in the product that will affect the decision making process of the buyer or other cooperation partner either so that he/she is aware of the influences of the image factors or so that he/she either is not aware of them or will for some reason or another try to deny the influence of them in his/her decision making process.

The technical characteristics of a product are vital for its functioning, but there is no reason to underestimate the image factors either. At last, we all buy our images and expectations when it comes to decision making. The products and more or less even the services are quite standardized, so there has to be also some other reasons besides the technical data to make the product offered attempting enough to be bought. The factor analysis of this material supports the understanding of the importance of the image factors besides the technical ones when it comes to product design.

The original environmental factor divided in this material into two factors that, like the product factors, too, consisted of the technical and image-related factors. However, environment was formed into its own factors not until in the multifactorial structures. In

the model of two factors the environmental variables were split into the product and communication factors, but there was not to be recognized any real logic in it how the environmental variables were divided into these two factors. Nevertheless, the models of three, four and five factors all showed clearly enough that environment earned to have its own factor that also was divided into these two factors of technical (physical) and image-related (soft) characteristics in the models of four and five factors.

Communication was measured with nineteen different variables that also were in the models of four and five factors divided into two factors that could be called as technical and image-related ones. The concepts of systematicness and uniformity dominated clearly one factor of these two communication factors while the other one was mostly formed of the variables that described symbolic and thus clearly image-related characteristics of communication and the communicative characteristics of product.

Systematicness and uniformity in communication can also be seen as technical functions of a firm's communication; the variables that formed up the factors that included the ones that measured systematicness and uniformity all dealt with those activities of a firm that had something concrete as result - i.e., for example, the colors used, business cards, and brochures.

Thus technicality in communication can be described to be something that is designed to follow systematically the plans made in order to gain the expected results, whereas in environment technicality could be described as to be something that could be called as the created environment. That is, the environmental factors that the firm sensibly enough can affect within its own activities. There are also functions in corporate environment that cannot be fast and easily modified when the needs change; this can include for example the buildings.

There are plenty of image-related factors in corporate communication. Everything a firm does has some kind of an influence in the images the public will have of it. However, there are also some characteristics that have a direct influence in the images created. These

image-related characteristics were called as symbolic ones in this material because they mostly consisted of the variables that had quite clear symbolic values in themselves; for example the symbols used. However, communication was also divided into the same technical and image-related factors as the product and environment also did.

The factor analysis therefore supports the understanding of design management as a strategic competitive parameter of a firm that can and one dare say should be used in a coordinated cooperation with the other managerial functions of a firm, as a strategic instrument. The factors of design management all have a two-sided nature where the technical factors include the characteristics of the firm's activities that can and will be directly affected by the firm and its decisions and the image factors that will either directly or by time affect the images and expectations made upon the firm.

The contents and nature of design management through its factorial structure that was explained in this chapter is presented in the figure 20. The structure of design management is illustrated there through a figure of a ball that consists of three equal sectors that are product, environment and communication. These sectors will form the design management process and similarly they are tied within each other with the design management functions of the firm.

One side of the ball and thus also of the functions included in the product, environment and communication of the firm consists of the image factors, whereas the other side consists of the technical ones. There are no borders between these two factors that are included in the design management process but they are overlapping within each other. There are also no borders between the three basic elements of design management, either, but they all are controlled and developed through design management.

However, there is an understanding of the matter that image factors more often will be related to the functions close to communication whereas the technical factors often are linked within the product. Thus the image factors are in the figure 20 slightly emphasized towards the surface of the ball that includes communication while the technical factors are

positioned a little closer to the elements of a product. Generally environment has a position in between the two of these in a way where the product related characteristics of environment have a more technical nature whereas the communication related elements of environment have a little more image-related nature of their own.

Figure 20. Factorial structure of design management.

4 PRODUCT AS AN ELEMENT OF DESIGN MANAGEMENT

The first basic element of design management, product, is studied in this chapter. The purpose of this chapter is to define the meaning of product and the contents and nature of it as a field of design management, and the possibilities to use it as a competitive parameter, especially when design management is treated as a strategic instrument.

One of the most visible forms of design management is the concrete product design; shaping the products. Product design is nowadays perceived to be a more and more established part of the business activity and competitiveness of a firm[181]; therefore the question about how to direct and manage design thus that it will accomplish and support the targets that are connected with the profitability of the firm has become central.

The best results from design will be gained when it is used systematically and in an equal position along the other competitive parameters. With the help of a succeeded design it is possible, besides the aesthetic values, to increase the use value of the product and even to curtail the manufacturing costs. Design can not be defined to be something that touches only some specific design articles but design is also a competitive parameter for any industry. However, for a successful result pure design alone will not be enough; also a coordinated cooperation between all the competitive parameters that the firm has at its disposal is needed. Design in itself is useless, unless it will be connected with a healthy corporate climate [182].

The problem in managing design is the making the consumer needs and the aspirations of the firm compatible, to optimize them and to reach the correspondence between the own production system and the consumption system of the surroundings. A functional design is necessary for credible functioning of the products and for competitive quality. The question is finally about how to strategically use design when the targets of the firm are

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181 see e.g. Kotler 1997: 287

182 cf. Väkevä 1991: 12-13; Valtanen 1991: 23

defined and the activities of it are focused. The products and services the firm offers, as well as the communication, personnel and premises of it have to create an unique, uniform and credible unity that will be able to inspire the chosen target group with confidence[183].

Design management can be seen as management of designing and planning, and also as standardizing the language of management and design. It connects the product development and business idea with the corporate image and with the identity of the firm. Design management also functions as its part in order to connect the strategic planning of the firm with design so that the product design, communication and environmental planning can be realized supporting the corporate identity.[184] When the firm creates the image of the product with design, it also forms simultaneously its corporate image itself.

The products create the basis for the identity of a firm. If the identity of the firm is examined as a pyramid that has the products as its bottom (see figure 21), the next level will be made of those concrete environments where the consumers will meet the organization - i.e. the architectonic environment of the firm and its distribution channels. The wide area above the products and corporate environments includes communication.

The products that are offered to specific segments form the narrow upper part of the pyramid, and the top of the pyramid consists of the logotype and trademark of the firm.[185] The design management functions of a firm have to be build on the basis of the products and the development of them in purpose to keep the identity of the firm together. The image created by the products will by time generate the identity that will be in the minds of all those consumers that have seen the products in shops, homes or in advertisements[186].

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183 see Väkevä 1991: 13; cf. Perheentupa 1989: 23-24; Farr 1973: 3

184 Karttunen 1987: 14; Takala and Valtanen 1990: 14

185 Lawrence 1988: 75

186 Lawrence 1988: 76

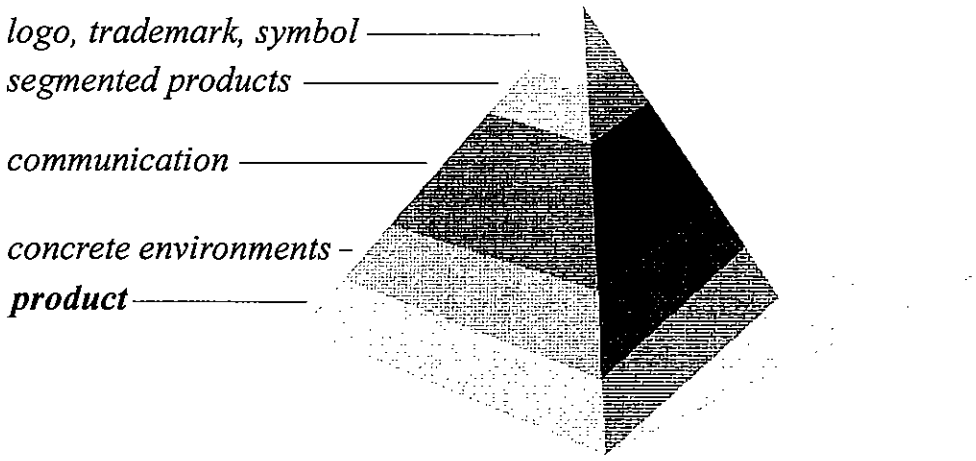

Figure 21. Identity pyramid of a firm[187].

Visually the identity pyramid is effective. It often happens in the firms that they awake to realize that the market share has decreased and then there will be done some minor visual changes in the corporate image. Often this will be culminated in framing a new logotype, as if a new symbol would bring new means for success alongside it. Hence it will be mistaken to start to build the identity pyramid from the top to the bottom: it will not be able to keep its balance.

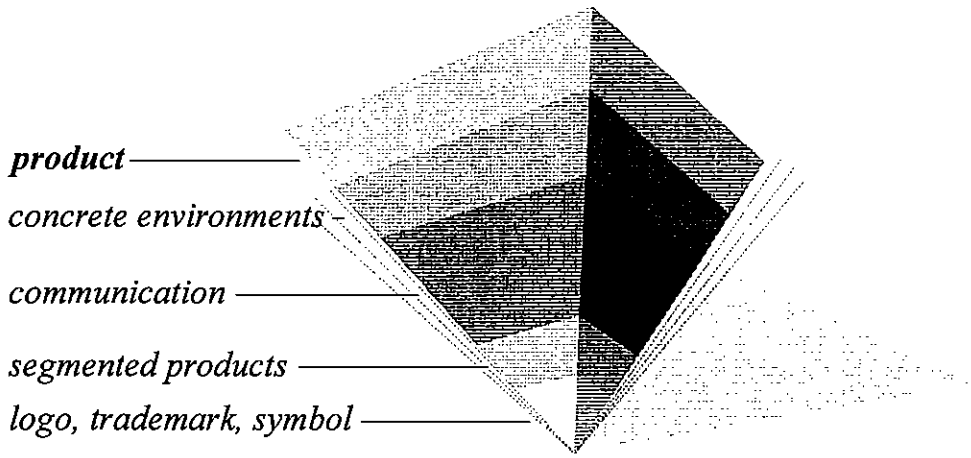

Figure 22. An upside-down and therefore unstable and thus finally collapsing identity pyramid.

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[187] idea for the figure from the term "identity pyramid", used by Lawrence; cf. Lawrence 1988: 75

In order to function, the logotype and other symbols of the firm have to reflect the firm itself, its identity and the image it has created for itself by its activities. When the customer sees the logotype, he has to be able to connect it with a specific enterprise in order to make the symbolism work - and in order to gain from the logotype the advantage, which it has been created for[188]. However, this will not be possible, unless the logotype reflects the enterprise, its line of business and its general principles.

When the concept of identity pyramid is developed further, it will take the shape of a spiral of circles within each other. These spiral circles reflect the continuity of the activities of a firm also then, when the traditional shape of a pyramid appears to visualize besides robustness and strength also - stagnancy, remaining in a status quo. The dynamics of the spiral circles reminds that the firm lives and struggles for its existence in a world of constant changes, in a network of changing competitive situations where one has to be able to perceive the changes of the environment in order to survive, and where one has to be flexible and transformative enough to be able to answer the changes quickly and effectively enough. Continuity is the basic demand for dynamic development and thereby it is a basic demand for success. Through constant learning[189] and flexible insight the firm can move closer to the succeeding it seeks.

Design management can also be described as being management of design in order to apply innovations and creativity into production. According to the basic idea of design management, the purpose of the image created by the firm and its products is undeniable when it comes to succeeding. However, many of the firms still need help in concretizing the theoretic knowledge of theirs. In several firms it is exactly the combining of "design" and "management" that limps.[190]

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188 see e.g. Landry 1998: 16-17

189 see e.g. Bogner and Thomas 1994: 188-119

190 See Karttunen 1987: 12; Takala and Valtanen 1990: 49

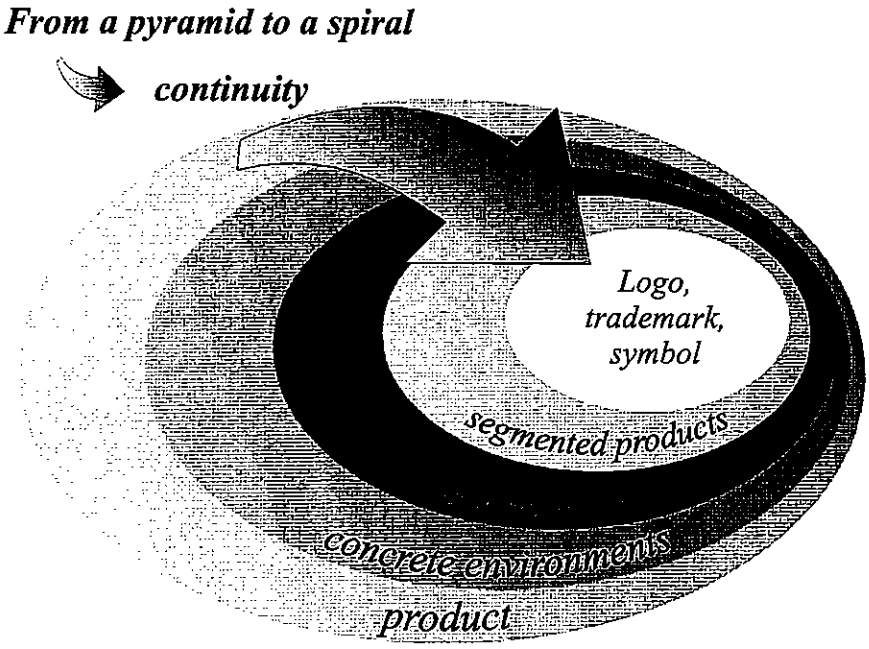

Figure 23. Identity spiral.

To succeed the design management process requires coordinated product, environment and communication design. It is a function that assists the normal operative organization, and it informs the industrial product design and marketing of the quality level of production[191] and thus helps the management in the visual and product political decision making. One of the basic tasks of design management is the coordinating of design with the marketing and communication of the firm.[192]

In a firm that has adopted the design management ideology the products will be produced through such a product strategy that consists of the development of production technology and the financial and design management as well. Each of these functions has an important position of their own in the organization of the firm. For example, in the design management functions of Sony special emphasis is placed on how the quality of the

191 cf. Viitala 1988b: 21

192 See e.g. Palshøj 1990: 37, 39; Borja de Mozota 1990: 73

product manufacturing is managed. The design team is in a close cooperation with the product managers who represent the technical knowledge. Employees are included in the product development team, and one, full-time member of the design team has responsibility for the quality requirements to be both understood and achieved inside the group.[193]

Design has a central part in the building of the competitiveness of a product, because a well-designed product is more competitive than a product to the design of which it has not been paid attention enough. When a product is well-designed, it is of a good quality, it is durable and functional, and its price is not in disproportion with the characteristics of the product. Thus design can be defined simply as a way to make the product better, because a goal of design is to combine the interests of the manufacturer and user of the product into an appropriate unity.[194]

There are several different elements that are paid attention to in a succeeded design besides the use of the product[195] and the technical functionality of it; elements, that as a harmonious unity form a product of a good quality, a product that fulfills at least the requirements made upon. The importance of product safety, as well as ergonomics, has already been understood to be an essential product character that yield competitive advantage.

The importance of economic and effective manufacturing will be emphasized further in the era of scanty resources; modulability[196] and recyclability are important requirements for product development. Related to these, the ease of use of the product, its serviceability and thus also the ease of the physical performance of the service operations, and thereby the

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193 Lawrence 1988: 77; Kääpä 1991: 29

194 See also Ahola 1980: 80; Lehtonen and Leppänen 1986: 15; Lorenz 1986: 4-5; Bernsen 1988: 81; 1990: 86; Nielsen 1988: 31; Kervinen 1990: 38

195 see e.g. Clipson 1990: 97

196 see e.g. Kaivos 1985: 4-7; Laurila 1987: 14; cf. Pakkaus 5/1997: 36

obtaining of cost savings even by eliminating unnecessary work stages have become increasingly important [197].

When the importance of the green values is getting more and more emphasized, even the traditional product life cycle theories have been extended to contain the time after the purchase situation, too; it can be talked about a real life cycle of a product in an ecological meaning. The product is used, serviced, repaired, as always before, but new demands are constantly made on the product design. A positive target can be, for instance, to find reuse possibilities for products; the product should be disposable as safely and with as little pollution as possible; the product, or at least parts of it, should be recyclable.[198] These points are worth to be taken into consideration already in the stage of product design.

With sensible design and functional shaping it is possible to lengthen the life cycle of a product and thus achieve product, production and logistic solutions that will burden the nature less than the earlier ones. It is often heard that a product that "works for ever" would be a nightmare for its producer: if a product lasts almost for ever, there will be no repurchase either. That way of thought is, however, gradually giving place to the realities; the consumer movements and organizations that have taken an active view of nature preservation have more and more made themselves audible, and manufacturers that are wasting the natural resources are more and more often and more readily threatened with a boycott. Hence, sensible design can also raise the social acceptance of a product.

The demands made by the markets do affect greatly in deciding if a design is succeeded: unless there is a so-called social order for the product, even the most innovative design can not be counted as a success, because it is always finally the customer who decides which product becomes a sales success. A distinct, aesthetically pleasant appearance together with suitableness into the environment and a certain "seek for the future"[199] does support

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197 see also Roy 1990: 49

198 Cf. e.g. Linnanen, Boström and Miettinen 1994: 110-112

199 cf. Takala and Valtanen 1990: 16; see also Lorenz 1986: 4-5; Bernsen 1988: 81; 1990: 86

the images of the customer segment of the suitability of the product to satisfy exactly the need that particular segment has.

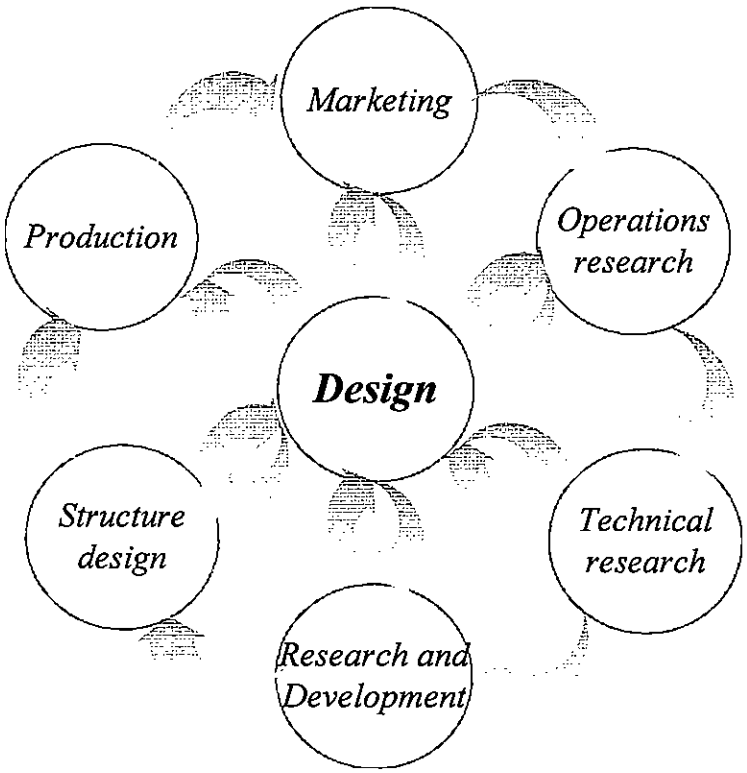

Figure 24. The net of the design functions[200].

A successful design process requires communication and cooperation between the different functions of a firm. The net of the design functions, presented in the figure 24, illustrates this comprehensive position of design and shaping in the activities of a firm: different activities of the firm affect the design and the realization of it; likewise the influences of the design policy the firm practices can be seen in the different functions of the firm. Marketing knows the needs of the customer, production knows the possibilities to realize the designs planned; the ones dealing with the operations and technical research, structure

200 cf. Poth and Poth 1986: 33; cf. Urban and Hauser 1993: 33

design and research and development master the technical dimensions of design functions and shape giving. And unless the financing is in order, even the technically most functioning design work will not be viable. Design and especially its management in a firm is a multidisciplinary activity: both the knowledge of technology and the knowledge of commercial sciences are in a central place there.[201]

It is tried to raise the use value of a product with the help of design considering the ergonomic requirements, use conveniences, pleasantness, safety and service related viewpoints. It is possible to make the visual quality of a product better with a good design; thus the requirements made by the psychological and aesthetic needs of the customers and the visual image of the firm will be met. It will be possible to make the manufacturing easier with the help of design, for example when the structure of the product is designed to be simpler and the simple manufacturing methods and installations are taken into account. From the point of view of the marketer, a valuable target for design is the possibility to make the marketability better with it. This will be enabled by taking the consumption habits, aspirations and wishes into consideration.[202]

A practical though difficult target for design is also the improvement of the sensible standardization[203]. Thus the extra costs caused by unnecessary stages of work can be avoided, when well-considerably designed standard components are used and commercially and technically meaningless differences are cut down. For instance, in a vehicle series of a module structure it is possible to build, on the same standard chassis, a bus, a delivery truck, a mobile library or a fire engine, only by changing the model of the body[204] (figure 25).

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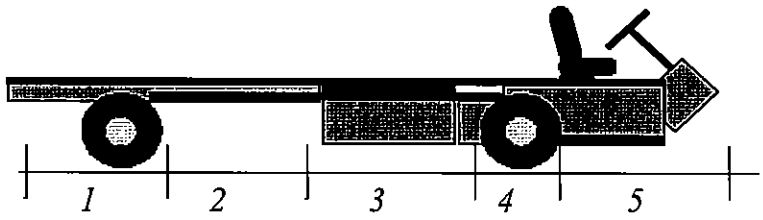
201 See Poth and Poth 1986: 33; Lehtonen and Leppänen 1986: 16-19; cf. also Urban and Hauser 1993: 33-34

202 Lehtonen and Leppänen 1986: 42-43; Nyroos 1990: 20; cf. Borja de Mozota 1990: 75

203 see Kaivos 1985: 4-7; Laurila 1987: 14

204 see Röyttä 1988: 17-19, 64



1 = rear axle; 2 = intermediate frame; 3 = engine + transmission; 4 = front axle; 5 = cab

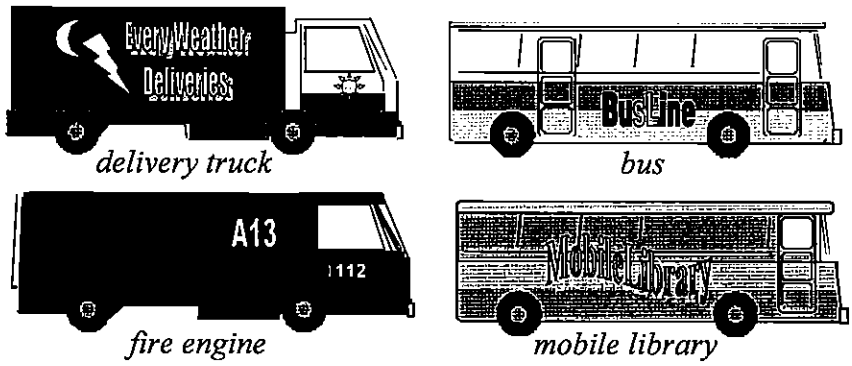


Figure 25. A vehicle series of a module structure build on a same, standard chassis[205].

A new challenge issued to the product design is to plan even the industrial products, cars and computers, for instance, to be such that they will be easily disassembled and that the reuse of them would be possible. The products can be designed to be able to be recycled as such or as removable parts, for example; they also can be tried to be made of raw-materials that are easy to destroy, are non-poisonous and that are decomposable. Also the lengthening of the product life cycle by easing the changing of parts and repairing will reduce the environmental strain in a long run.[206]

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205 cf. Röyttä 1988: 19; figure Ahopelto 1992: 96

206 Cf. Lehtonen and Leppänen 1986: 42-43; Jaakkola and Tunkelo 1987: 209-211; Röyttä 1988: 17-19, 64; Nyroos 1990: 20; Keskinen 1990a: 15; Valtanen 1991: 23; Biddle 1993: 145-156

When it is evaluated, how well the design management policy practiced by a firm, and especially the design of the products manufactured by it, has succeeded when achieving the goals presented earlier, the following questions can be asked[207]: does the product satisfy a need and does it fit in its environment and suit its environment. It also is worth considering, whether the product is safe or does it even decrease the possible risks, and is it easy to use and easy to be repaired. Another important aspect is whether the use of material, technology and energy in the product is economical. Aesthetics and innovativity should not to be forgotten, either. Furthermore, it can even be asked, if there is "fantasy" in the shape, form, color and function of the product. And finally: is the product truly worth its price. If the answer to most of these questions is positive, the firm can be considered to be succeeded in the use of one of its important competitive parameters, in the use of the product design.

4.1 The position of design in the product development process

Product development is one of the most important alternative growth strategies of a firm. Aaker[208] defines these growth strategies to be the growth in the markets of the existing products, product and market development, the strategies of the vertical integration and the diversifycation of the new products and markets.

Ansoff presents a comparable division in the context of the concept of the growth vector. The ansoffian growth vector describes the direction where the firm attempts to proceed in its strategic lines of business.[209] Ansoff presents as the contributory factors of the growth vector the capturing of the markets by increasing the market share; developing the markets and molding their needs for the existing products; new product development and as the last

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207 Design 1985: 2; cf. Lehtonen and Leppänen 1986: 43-44; O'Kane and Butcher 1986: 73; Ughanwa and Baker 1989: 339-341

208 Aaker 1988: 236; cf. Oakley 1984: 19-22

factor diversification, when both the products and the market needs will be new for the firm[210].

Aaker[211] divides the product development into four parts: enhancing the product features, the expansion of the product line, the development of a product of a new generation and as the fourth one, the development of a new product for the existing markets. From these four types of product development, design has traditionally been most closely connected with the first one, but along with the present trend the opportunities given by design have been started to be perceived even in the rest of the alternatives.

The associating of design still almost solely to the exterior of the products might be caused by the developmental chain that lies behind it: the industrial arts can be seen to be born from the art handicraft, industrial design therefore was developed later from the industrial arts and as late as in the 1980's the design can be seen to have become a part of the developing of the capital goods. A present practice is to attempt to include design in the product development in an early stage of the process, because that is the only way to optimally benefit the opportunities offered by design. All too often the share of the designer in the product design still is focused on the pure aesthetic repairing of a finished product.[212]

The risks in the product innovation are high. Many of the new products fail in the markets, and even more products have to be rejected even before the commercializing of them. There are eight different stages in the design and product development process in its widened form (cf. figure 19): idea generation, idea sifting, concept formulating and testing of it, creation of the market strategy and the developing of it, economical analysis, product development, test marketing which is rather rare for the domestic firms, and finally,

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209 Ansoff 1990: 112-113

210 Ansoff 1990: 112-113

211 Aaker 1988: 236

212 See e.g. Punkari 1983: 34; Lehtonen and Leppänen 1986: 88; Takala and Valtanen 1990: 28

commercializing. There is a task for each of the stages to help in finding out, whether the treated product idea that has passed the previous stage is vital; should the idea be developed further, or would it be more profitable to give it up for good.[213]

The purpose of design in the product development process varies a lot as well by the lines of business as by products, too. There is a significant difference also in the possibilities of the designer to influence in the structure qualities of the product in the different fields of design. Takala and Valtanen (1989)[214], and Pulkkinen and Oksanen (1998)[215] present a study, where the target firms were asked about their views of the designer's influence in the fields of design. Little had changed during the years when it comes to the opinions of the firms in this subject. Predictably enough, the significance of the designer got emphasized in the creating of the aesthetic characters of the product. However, the possibilities of the designer to influence the technical functioning of the product were in the firms seen very small. Nevertheless, in some firms the designer is also seen as a threat for the technology, as "a spoiler of the planning work of the engineers"[216].

Naturally the designer can mostly affect the aesthetic appearance of the product[217]. Often the designer has, thus, been hired for to create the product a distinguished, "outselling" appearance that would bring up the best characters of the product. The designer also has to be capable of taking care of the matter that the product will fulfill the existing product safety regulations when it has been completed. Even the most elegant appearance is not valuable, unless the product fits its purpose and unless it is safe to be used.

The taking care of the ergonomic characters of a product has commonly been a part of the job description of designers. A designer hired by an industrial corporation has to design

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213 Cf. Kotler 1980: 346-347

214 Takala and Valtanen 1990: 48

215 Oksanen and Pulkkinen 1998: 37-39

216 Ahopelto 1992: 70

217 Cf. Lautamäki 2000: 99, 154-155

the product so that its appearance does not fight against the requirements of ergonomics - the so-called manners of a great artist with design solutions where it has been compromised over the ergonomics in favor of an extraordinary appearance do not serve an ordinary firm. Some unique exhibits can be a different matter, not the normal utility articles. Unfortunately an unhealthy trend has been to be perceived in the present design that rewards articles unsuitable for their use only on the grounds that they have a novelty value and unconventionality in their design and material solutions; and thus the requirements of ergonomics and product safety, or even the use of product, might have been forgotten.

It is also possible for a firm to make the use properties of a product better with design. With the help of a succeeded design it is possible to make many of the products more easy to use - a juice jug that makes it easy to pour without spilling or a paper machine, which has the service manuals printed on the side of the machine instead of easily stained and lost paper forms.

However, sometimes even a product that by the first glance has a limping design when it comes to the use properties might become a sales success. It may sometimes be somewhat difficult to pour from the coffee and tea pots of the "Harlequin" set by Arabia because of the balancing of the pots, but that does not prevent the consumers to take a fancy to the reducibly beautiful, even though partly a little impractical shape. The product has sold well[218] despite this minor weakness in its use properties. The stylish, timeless shape of the product might please many of the consumers and thus it makes them forgive for example "the better coffee set of the house" even the kind of weaknesses that would not be approved in a set meant to an every day use. Sometimes also the name of the manufacturer and the high price of the product may become guarantees of the quality despite a self-assertive design, which is against the basic principles of design.

A skilled designer may be for a great benefit for a firm also in the development of a product to suit its use environment. Lately this aspect has been emphasized, and there

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218 Kolehmainen 1992

would be no marketing opportunities any longer for some of the product innovation solutions of the 1970's; after all, some of them have sometimes been classified as almost environmental catastrophes[219] even because of the materials used that time - as to be mentioned for example the almost plastic clothes that burst into flames when touched by fire. However, the cultural progress and alongside it the change in the fashion and taste trends into a more conservative direction when it comes to the shapes as well as the colors and the use of materials have also had their influence in that.

The plastics and other artificial materials that were very popular in the 1970's have since the past decade been ever more often replaced by the traditional natural materials; wood and leather in the furniture and the natural fibers in the clothing[220]. Also the shapes and forms have become more simple and there has been awakening to perceive the inaesthetics and environmental unsuitableness of the products of the so-called space age when they are reflected in front of the norms of the present time. While it is possible to wonder, why the unaesthetic "standard wings" of the buildings and the gas stations made of corrugated iron ever were designed; or what made the consumers to accept the glaring colors joined with the sultry materials in the furnishing of their homes and offices as well as in their clothing, one has to perceive, that somehow it seems that the form language of the seventies with the colors used then is coming back now in the beginning of the new millennium.

It is possible to affect the economical manufacturing of a product with the help of design. The purpose of design also is moderate when the requirements made by the markets and the ease of servicing comes into question, but there are no great opportunities for the designer to influence the technical functioning of a product. His/her share in it will mostly be contained of the making the shape and technology compatible, while the shape has to bend in front of the technological properties in the name of functionality.

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219 see e.g. Papanek 1985: 102-105, 250-251

220 an illustrative source for this is e.g. the annual booklet Design in Finland 19..

Design can either be a basic prerequisite for the activities of a firm, a significant part of its activities, or it can be possible to gain benefits for the activities of the firm with it. As its best, design can be a power that combines the principles of the organization.[221] Often the importance of design, however, is underestimated in the firms[222] or it is misunderstood, when the operating possibilities of it will get weaker. Also the limited resources of the smallest firms can partly influence the matter that the designer will not be able to get into the product development process before the product is almost finished and all of the essential decisions have been made.

In an ideal situation the designer will be in the product development process from the very beginning, when the design opportunities and for example the designer's possible strong knowledge of the trends will be used as effectively as possible. However, it rarely is that way.[223]

The more early stage it is when the designer gets into the product development process, the larger the opportunities he/she has to influence for example in the keeping of the costs of the product down. Nevertheless, despite that, it often is believed that the designer with his/her share increases the price of the product, though it is possible, that with his/her help there might be generated better and also cheaper products.[224]

The designers nowadays have bigger opportunities than before to participate the product development processes also in industry. The changes in the economic life have changed the attitudes of the firms towards design, and the durability, use value and the knowledge related to them has been started to be emphasized more than earlier[225]. In a process like

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221 Takala and Valtanen 1990: 51, 58; cf. Roy 1990: 51

222 cf. e.g. Pernaa 1988: 217

223 See e.g. Palshøj 1990: 38

224 Cf. Punkari 1983: 34; Lehtonen and Leppänen 1986: 88; Takala and Valtanen 1990: 75; Oakley 1984: 41

225 Lawrence 1988: 74-75; cf. Uusitalo 1990: C8

this the use of a skilled designer in the different stages of the product development process makes it possible to maintain the compatibility of the firm, and even the growth of it. The problem then, however, is caused by the matter, whether it is known in the firms how to use the skills of the designers in a right way, and effectively enough, or not.

In some of the firms it has been realized the importance of design and marketing in product development. A good example is Kemira Safety that since 1974 has well-planned and successfully used design as a competitive parameter[226]. Also in the Oras Oy the investing in design has been realized to be a lifeblood of business activities, because when the water taps are marketed outside Finland - in Finland the corporation has almost a monopoly position - the importance of design is decisive: even a technically brilliant tap can not compete in the united markets of Europe without a good design. As a solution they have had the presence of marketing and designer with the product development from the very beginning of the process[227]. Thus the opportunities given by design will be used optimally and the threshold between the making of technology and design compatible will not get the change to rise too high.

The design work itself has during the past years changed to be more and more computer aided. The cad (*Computer Aided Design*) and cam (*Computer Aided Manufacturing*) programs have made it possible to define the product into its final shape already in the stage of design and planning. Even though there will be plenty of changes when the process goes further and the idea develops, it is easier than before to mold them, when the product exists only in a computer program.[228]

With the cad equipment it is possible to find out in an early stage, how the product will act in reality, because the product can be observed in different angles in the screen. Likewise,

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226 see Ahopelto 1992: 72

227 Kivistö 1991: 11; cf. e.g. Röthig 1994: 47-48

228 Nykänen 1991a: 16; Nyroos 1988: 23; Nykänen 1991b: 16; Valtanen 1991: 23; cf. Oakley 1984: 17, 135-139; Farrar 1984: 23; Ughanwa and Baker 1989: 277-295; Srinivasan, Lovejoy and Beach 1997: 157-158

it is possible to test how for example the movement of the different parts of a machine affects the other parts of it. It is also possible to place the designed product with the program into a synthetic world that imitates the future use environment of the product and thus visualize the qualities of the product. Thus marketing, technology and production, the cooperation of these fields of business activities, will be linked into the product in as early a stage as possible. Exact outlines make also the after planning changes lesser, and so the cost savings with a work success will be significant when the production starts.[229]

For example, there is a traveling toothbrush in the product selection of the Swiss Trisa AG where the toothpaste container has been placed into the handle of the toothbrush. The toothpaste then can be pumped out of the container through the neck of the brush into the bristles. The corporation designed and made the molds for the product with a cad-cam system.[230]

4.2 The benefits and other features of design

There may not always be only benefits generated by design, but it is also possible to gain remarkably much benefit with design when compared with a situation where this resource of the firm will be totally unused. However, malpractice and creating of unnecessary things also is made possible in the name of design. A well designed product will stand out from the competitor's products that are of a similar quality when it comes to the functional characters. Contrary: a badly designed product also will differ from the competitor's product as well - for the benefit of the competitor.

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229 Nykänen 1991a: 16; Nyroos 1988: 23; Nykänen 1991b: 16; Valtanen 1991: 23; cf. Oakley 1984: 17, 135-139; Senker and Arnold 1984: 32; Oakley 1990: 11; Ughanwa and Baker 1989: 277-295; Korhonen 1997: D3; Walton 1992: 9; cf. Morecroft 1999: 17-18

230 Pakkaus 5/1997: 34

The firm is known for its products, and for its products a firm also is remembered - as long as the consumers do consider it worth of remembering. The products probably are the most important business card of the firm, because without the products there would be no firm, either. Therefore the importance of a consequential and well-planned design hardly can be emphasized too much; with a functional and logical design it will be possible to improve even the image of the firm itself, not only the one of its products. The products act as a mirror of the firm towards the consumers.

The creating of a positive corporate image usually is a slow process, whereas the image of a firm can collapse even surprisingly fast. Consumers have a bad and selective memory, and they are used to remember the negative features more specific and longer than the positive ones[231]. That is why a firm should carefully consider its design policy so that it would be the kind of one that would support the business idea of the firm even from the very basic questions.

The principle according to which the form should follow function has for long been common while there has been discussions about the role and nature of design in deciding of the appearance of a product. It has traditionally been meant with this that the natural, "right" appearance of a product - shape, color - will very far be determined by for example the use qualities and manufacturing technology of the product. The outward appearance of a product also should be able to give relevant information about the functions of the product, its use, its quality among other decisive factors, not to forget the personal, social and aesthetic values, either. The usage of the consumers' images in design is of vital importance. The product also has to have sentimental value in purpose to make the consumers react on it positively even before they are aware of its use.[232]

According to the functional tradition, the design of a product can be seen as a part of the improvement of its use value, which can also be even a remarkable selling argument. The

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231 see e.g. Kotler 1990: 18

232 SITRA 1972: 27; Heinonen 1990: 9

appearance of a product can be used directly as a selling argument, too. It is also possible to influence the purchase decisions of the consumers relatively easily and advantageously by varying the appearance of the product. This can lead to the matter that the products will be designed almost solely with a view to the outward effectiveness and the novelty of the shape and form[233], which is not the primary purpose of design. The phenotype must have a clear connection with the use of the product[234]. Unless for example a chair awarded for its design does not suit for its actual and primary use, sitting, its design does not work in the point of view of the consumer.

When a firm uses design as its competitive parameter, it can also end up in a situation, where a product priced more expensive than its actual value is marketed with the name of a famous designer. In a case like that the firm uses exclusively the good will value of the designer, not the one of its product nor even the one of the firm itself. However, it is difficult to unequivocally define whether it is a question about misleading the consumer or not, when she/he purchases for example the *Dali* perfume or eau de toilette because of the interestingly shaped bottle designed by the late surrealist Salvador Dali, not because of the odor of the perfume (see figure 26).

The term *styling* is usually used when a firm in a consciously misleading way tries to get the consumer to buy the product on the grounds of a confusing appearance of it. A stylistic design also usually does not have any connections with the primary function of the product, but there is in it a try to get, above all, into fast, self-assertive model changes. Especially the *good design* trend that emerged after the World War II and that aimed at functionality and pure, "honest" forms, has been seen as a counterbalance of styling. The modernists of

233 SITRA 1972: 28; cf. Sotamaa 1978: 9

234 cf. Heinonen 1990: 9; cf. e.g. Powell 2000: 5

Bauhaus and the British Sir Terrence Conran can be mentioned as champions for the "good design".[235]

Figure 26. *Eau de Dali* -eau de toilette; the shape of the bottle is traceable to the work of art called *Aphrodite de Cnide* by Salvador Dali[236].

There can be found plenty of examples for stylistic design from the products of the 1960's and 1970's, from the so-called wings of the cars to the hemispherical armchairs. A firm can lean on styling in its design policy for example in a situation, where the time and resources seem to be not enough for creating new products as a result of the keener competition or the ever fastening variations of the fashion. Styling can also be used even in purpose to hide the technical or functional lacks in the product, when it is a question of a conscious betraying of the customer, there. As the most pure sense of styling it is to be

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235 SITRA 1972: 28; Schultz 1986: 72; Jaakkola and Tunkelo 1987: 208-209; Oakley 1990: 5; cf. Julier 1993: 30-32, 56, 93-94; Ainamo 1996: 111-112

236 *e.g. Artexpo Forssa 88, Forssa 28.5.-31.8.1988*

perceived in the context of "outdating" products which can be done for example by the varying of fashion.[237]

The term *formalism* is also used besides styling. The industrial design that has emphatically formalist-aesthetic targets is meant with it. However, the means of formalism are not so purely commercial as the ones of styling, but it can be seen as to be aiming to pure aesthetics even in connection with complex technical products. Nevertheless, also in formalism the appearance of the product is more emphatic as a sales argument than the functional characteristics of it. When this is caused purely by a nothing but a marketing focused way of thinking, it may be seen as to be against the principles of design itself; sharply expressed it can be seen almost as a misuse of design. At its worse, formalism will even be in conflict with the product safety.[238]

Despite the as such justified critique on styling and formalism, it should be remembered that design is a noteworthy competition parameter especially in those lines of business, where many producers offer products that are similar to their functional characteristics. In a dynamic, ever-changing competitive situation a firm can with its design activities create an own product identity that differs from the competitors ones. And through a well-planned product identity a firm will be able to reflect the values it has adopted, as well as to reflect the relation of the firm to for example the social or culture bound factors.[239]

4.3 Product as a part of design management

Design does, within its fields, inevitably mold the image of the product, because though design alone cannot make a product functional, can a failed design torpedo even a good

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237 SITRA 1972: 28-29; Sotamaa 1978: 9; Oakley 1990: 5

238 SITRA 1972: 29-30; Sotamaa 1978: 9

239 SITRA 1972: 31; Henrion, Ludlow & Schmidt 1991: 6

product idea. In the figure 27 there has been collected those fields of design speculated by the researcher herself to be materials for product design, and which also were questioned about in the letter questionnaire of this study (appendixes 2 and 4). These variables also grouped themselves almost equally into the image factors and technical ones both in the model that described the present time and in the model that described the future (see tables 10 and 11). This means that the reliability of the research is high.

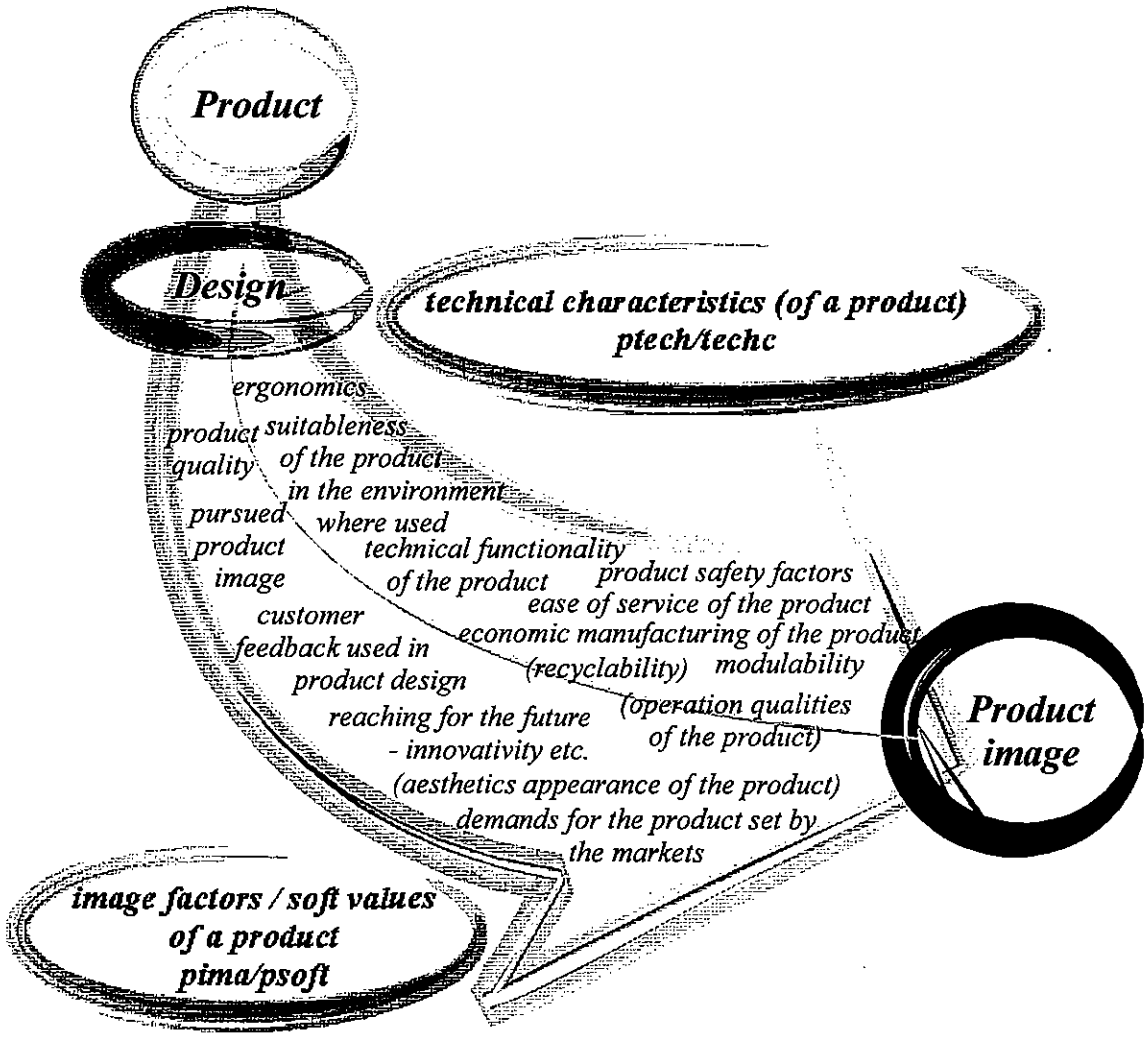

Figure 27. The share of design in the constructing of product image (cf. tables 10 and 11).

The quality of a product was determined in the research to be the most significant element of the product development. The mean value that described the present time was 4,47 while the standard deviation stayed in 0,48 in the scale 1 - 5, where 1 = *totally meaningless* and 5 = *very important*. The mean value that described the future time was 4,41 and the standard deviation was 0,78 in the scale 1 - 5, where 1 = *the importance will decrease a lot* and 5 = *the importance will increase a lot*.

Almost all of the mean values in the answers that handled the elements of the product development were over the value 3 ("neutral" / the importance will remain unchanged). Only the ergonomics of the product and the recyclability of the product got mean values below the average when questions about the present time were asked. This was certainly greatly affected by the matter that there were lines of business included in the inquiry that had products that were not directly touched by the characteristics in question; businesses like for example bakeries. The figures are presented in the table 12.

However, the variable of product quality behaved quite interestingly in the factor analysis made. In the three- and four-factor models that described the present time it was not included in any of the factors but got very low loadings. Nevertheless, in the three- and four-factor models that described the future time this variable was very clearly located as a part of the product factor.

In the five-factor models it could be seen that the product quality variable was connected with the image factor of product; it got high loadings in both the model that described the present time as well as in the one that described the future time. Then again, in the two-factor models it got low loadings in both of the factors of product and communication. This shows that quality is clearly perceived to be a part of the image-related side of product, and tables 12 and 13 show that quality generally was important for the respondents.

The material collected was examined by lines of business (industry and trade & services) with the t-tests. Somewhat significant differences were gained in the attitudes of the firms

towards the elements of product development in the present time when questions about the aesthetic appearance of the product (P-value 0,03 and the mean difference 0,35) and about the economic manufacturing of the product (P-value 0,02 and the mean difference 0,50) were asked (see table 12).

A quite significant difference in the attitudes towards the economic manufacturing of the product was to be found in the future, like in the present time, too (P-value 0,00 and the mean difference 0,48). This could have been affected by the different understanding the firms inside the different lines of business might have had about the matter, what it was meant with the economic manufacturing - respondents that dealt with the trade and service may have felt that the question was more about the productive manufacturing than the economic realization and offering of the services. Surprisingly enough, there were no more any significant differences between these two lines of business when it came to the aesthetic appearance of the product in the future time. The results from the t-test by the lines of business are in the table 12.

The product safety factors (P-value 0,08 and the mean difference 0,55) and aesthetic appearance of the product (P-value 0,00 but the mean difference only 0,22) were discerned in the interpretation of the t-test when the present time was examined by the provinces (table 13). The firms located in the Kuopio province found product safety as a quite clearly more important competitive factor than the ones located in the Vaasa province did. However, this was strongly affected by the lines of business of the firms participated in the research and thus also by the nature of the products they manufactured and delivered; for example, product safety might not be perceived as a competitive parameter in an enterprise of clothing industry in a same amount than it might be perceived in metal industry.

However, in this material it can clearly be seen that the respondents perceived the image-related variables to be more important than the technical ones were. The difference of the mean values between image-related variables and technical ones was approximately of the amount of one half a unit of measurement in favor of the image-related variables (see tables 12 - 14).

Table 12. The product development in the present time and in the future by the lines of business: mean values, P-values and the difference between the mean values (cf. tables 10 and 11).

img	tech	**Product development** - present time	industry	trade & service	P-value	mean diff.
x		product quality	4,77	4,73	0,26	0,04
	x	**economic manufacturing**	4,58	4,08	**0,02**	**0,50**
x	x	operation qualities of the product	4,53	4,21	0,65	0,32
x		demands for the product set by the markets	4,44	4,36	0,52	0,07
x		pursued product image	4,23	4,39	0,52	0,17
x		customer feedback used in product design	4,22	4,32	0,28	0,10
	x	suitableness in environment where used	4,23	4,18	0,56	0,04
	x	technical functionality of the product	4,18	4,10	0,20	0,08
x		reaching for the future, innovativity	4,01	4,16	0,98	0,15
		aesthetic appearance	4,08	3,73	**0,03**	**0,35**
	x	product safety factors	3,85	3,69	0,46	0,15
	x	modulability	3,34	2,96	0,89	0,38
	x	ease of service	3,22	3,16	0,44	0,06
	x	ergonomics	3,06	2,67	0,53	0,39
		recyclability	2,53	2,38	0,51	0,15
		Product development - future time	industry	trade & service	P-value	mean diff.
	x	**economic manufacturing**	4,60	4,13	**0,00**	**0,48**
x		product quality	4,41	4,41	0,39	0,00
x		demands for the product set by the markets	4,36	4,24	0,67	0,12
x		pursued product image	4,33	4,31	0,12	0,02
x		customer feedback used in product design	4,24	4,29	0,37	0,05
x	x	operation qualities of the product	4,28	4,01	0,02	0,27
x		reaching for the future, innovativity	3,87	4,23	0,33	0,35
	x	suitableness in environment where used	4,17	3,94	0,57	0,22
	x	product safety factors	4,00	3,94	0,91	0,06
		aesthetic appearance	3,97	3,70	0,27	0,28
	x	technical functionality of the product	3,96	3,83	0,58	0,13
		recyclability	3,59	3,42	0,81	0,17
	x	ease of service	3,42	3,56	0,28	0,14
	x	modulability	3,50	3,39	0,86	0,11
	x	ergonomics	3,21	3,07	0,68	0,14

There were small P-values in the aesthetic appearance of the product (P-value 0,02) and in the economic manufacturing of the product (P-value 0,00) once again, when it came to the questions that explained the future time in the target provinces, but when the mean values were compared together even their magnitude stayed in the order of barely 0,3 (see table 13). Most likely these small P-values were caused merely by the slightly different division of the lines of business instead of some real differences between the provinces. Thus the interpretation of the t-tests does not verify any practically significant differences in the attitudes of the firms towards the product development between the provinces of location examined, neither between the lines of business of theirs, although the image-related variables were found slightly more important among the respondents from the industry sector (also see table 14).

The results from the t-test by the provinces are presented in the table 13. There is also a clear difference between the perceived importance of the image-related variables and technical ones in this material, as it was in the material sorted out by the lines of business, too: the image-related variables were considered more important by the respondents than they felt the technical ones to be.

The variables presented in tables 12 and 13 were also classified by the image-related or technical nature of them. When the mean values of the mean values of the image-related product development variables are compared together, it shows that they are almost exactly the same in the models that describe the present or future times in the industry and trade/service lines of business (4,37/4,36 and 4,25/4,25) (see table 14). When it comes to the variables that described the technical aspects of present time product development the mean value of the mean values was little higher in the industry than it was in trade/service sector (3,87/3,63). Similar results were to be found in the model of the future time: industry 3,89 and trade/service 3,73. Also when it comes to the results by provinces there are similar values to be found: image-related variables gained slightly higher values than the technical ones did in both the provinces (present time: 4,43/4,29 and 3,89/ 3,60; future: 4,28/4,21 and 3,94/3,66).

Table 13. The product development in the present time and in the future by the provinces: mean values, P-values and the difference between the mean values (cf. tables 10 and 11).

img	tech	**Product development** - present time	Kuopio	Vaasa	P-value	mean diff.
x		product quality	4,76	4,74	0,57	0,03
x	x	operation qualities of the product	4,48	4,24	0,26	0,25
x		demands for the product set by the markets	4,42	4,38	0,71	0,045
x		pursued product image	4,40	4,20	0,76	0,19
x		customer feedback used in product design	4,37	4,16	0,87	0,20
	x	economic manufacturing	4,35	4,34	0,73	0,02
	x	technical functionality of the product	4,34	3,89	0,43	0,44
	x	suitableness in environment where used	4,27	4,13	0,40	0,14
x		reaching for the future, innovativity	4,13	4,03	0,10	0,10
	x	**product safety factors**	4,02	3,47	**0,08**	**0,55**
		aesthetic appearance	4,01	3,79	**0,00**	0,22
	x	ease of service	3,40	2,92	0,89	0,48
	x	modulability	3,27	3,02	0,98	0,25
	x	ergonomics	2,96	2,76	0,11	0,20
		recyclability	2,56	2,33	0,41	0,22
		Product development - future time	Kuopio	Vaasa	P-value	mean diff.
	x	economic manufacturing	4,49	4,24	**0,00**	0,25
x		product quality	4,39	4,44	0,80	0,05
x		demands for the product set by the markets	4,37	4,21	0,76	0,16
x		pursued product image	4,36	4,27	0,21	0,10
x		customer feedback used in product design	4,27	4,25	0,82	0,02
x	x	operation qualities of the product	4,22	4,07	0,41	0,14
	x	product safety factors	4,10	3,82	0,11	0,28
	x	suitableness in environment where used	4,08	4,04	0,23	0,03
x		reaching for the future, innovativity	4,06	4,02	0,81	0,05
	x	technical functionality of the product	4,01	3,75	0,38	0,26
		aesthetic appearance	3,93	3,74	**0,02**	0,19
	x	ease of service	3,68	3,25	0,23	0,43
		recyclability	3,60	3,39	0,06	0,21
	x	modulability	3,56	3,30	0,76	0,27
	x	ergonomics	3,38	2,84	0,45	0,54

Table 14. Mean values of mean values in product development.

means of means	present		future	
	image	technical	image	technical
industry	4,37	3,87	4,25	3,89
trade/service	4,36	3,63	4,25	3,73
Kuopio	4,43	3,89	4,28	3,94
Vaasa	4,29	3,60	4,21	3,66

The clear difference that was found in the mean values of the image-related factor and the technical one supports the conclusion that the nature of the product factor in design management can be explained further, and the usability of it as a developmental tool can be furthered through these factors. This also is an important research result that increases the understanding of the nature of the design management concept.

The use of the services of a skilled designer in the product development process is an important means for a firm to obtain competitive advantage. The firm will not get the advantage over its competitors until it is capable of offering an individual product[240], and design is one of the means to help making the qualities and quality of the products better. With the help of a succeeded design and well-considered design policy a firm will be able to increase its competitiveness, because design can be seen as a factor that unifies the functions of the firm, and which influence will be reflected over the functions of the firm.

The researcher's understanding of the product as a part of design management has been presented in the figure 28. There the product is seen as to be composed of not only the functional, physical product itself that has been generated for some specific purpose, but also of the design of the product as an important part of it; with the fields and factors affecting the design, and also of the purposeful image of the product originated from the interaction of all of these. The variables in the figure 28 are elements that have influence

240 cf. Anttila 1979: 18-19; Viitala 1988a: 21; Takala and Valtanen 1990: 14

on design and they are created and debated by the researcher herself for the research, they also have been examined by the letter questionnaires.

According to this material the first element of design management, product, can be divided into two different aspects, into the image-related and technical ones. Especially the variable of product quality was perceived to be very important for the respondents of this questionnaire. It also will be of great importance to understand the nature of product quality as not only a means of improving the technical characteristics of the product but also as a means that will help to improve especially the image-related functions of it.

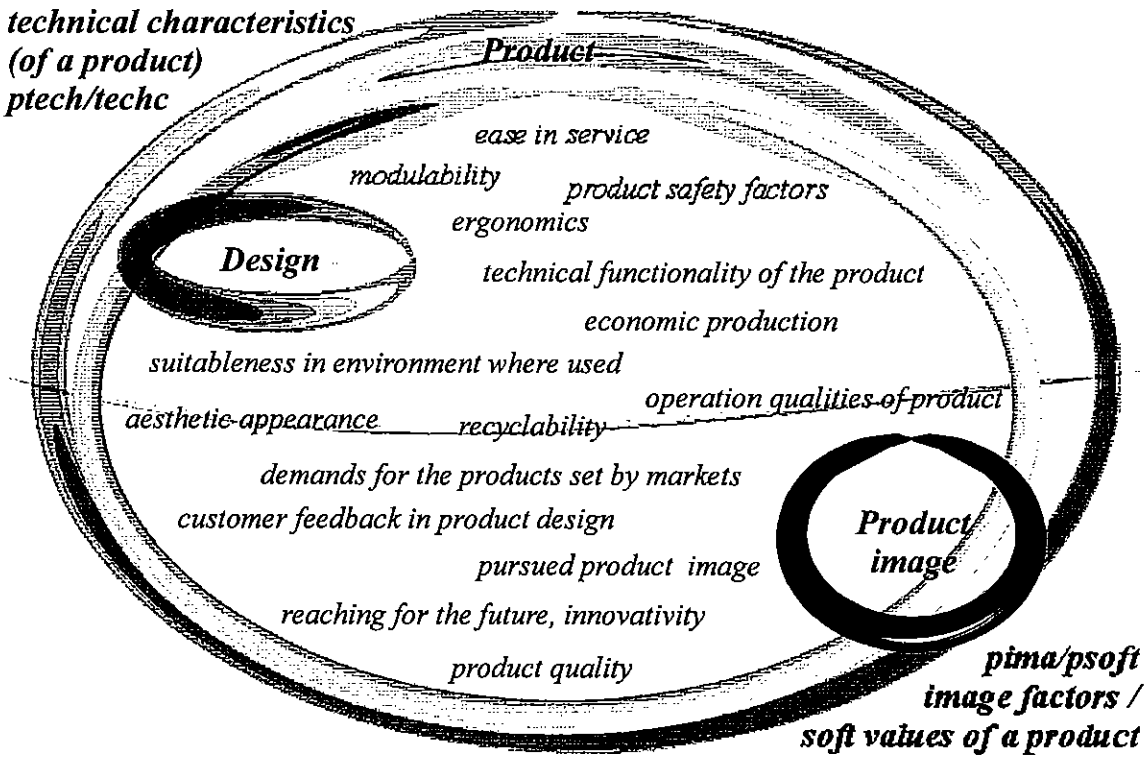

Figure 28. Product as a part of design management.

5 ENVIRONMENT AS AN ELEMENT OF DESIGN MANAGEMENT

The second basic element of design management, environment, is examined in this chapter. The purpose of this chapter is to solve the meaning, contents and nature of the corporate environment as a field of design management, and also the use possibilities of it as a competitive parameter, especially when design management is used as a strategic instrument. It is also important to understand that the concept of environment used in design management is a wider one than what we usually may think the corporate environment to be. Environment here includes the subjects created, used and influenced by a firm, not purely the parks and streets around the firm.

When environment is treated as a part of the construction of a controlled design management unity, it includes all of the concrete-visual elements of the firm from the architecture of the premises to the defining of furnishing. As a part of the visual environment of a firm, there are also the machines used, and the hauling equipment: with a well-considered, uniform appearance they will signal a controlled corporate unity and thus affect the corporate image itself, too.[241]

A good example for well-considered architecture as a part of the design management process is the office building of BMW that is located in Munich: the building manifests even with its own shape (a motor cylinder) the line of business of the enterprise. Otherwise, BMW is one of the leading firms in the world successfully engaged in design management: despite the relatively small size of the firm - as a car manufacturer BMW has been ranked as only the 16th largest one[242] - the trademark of the firm is among the most known ones.

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241 Cf. Andelmin and Casagrande 1994: 141, 144, 159,161-162

242 Eich 1988: 44

The design of the corporate environment has for decades been held important also in the Danish NOVO Industri A/S, concerning the architecture as well as the furniture of the premises, too. The Ant chair designed by Arne Jacobsen year 1952 for the new dining recesses of the firm[243] has kept its position as a piece of furniture recognized for its design: even after nearly five decades the chair made of moulded plywood and steel belongs to the furniture of many public premises as well as homes[244]; it was to be seen in the housing fairs in Tampere year 1990 as well as in the cafeteria of the University hospital of Kuopio in the late nineties.

If there is a design management manual designed for a firm, it should cover from the fields of the corporate environment at least the premises of the firm, the concrete corporate environment and finally the equipment used by the firm within its elements. It also should be based on the uniformity of those with the corporate image.

5.1 Buildings and architecture

The buildings and offices of a firm are a visible part of its activities. The buildings can, according to the principles of design management, reflect or even support the image and identity of the firm. Just during the recent years there has in the corporate world been paid more and more attention to the opportunities offered by a well-considered architecture in the creating of a well-planned corporate image[245]. The buildings of a firm, from the factories to the offices, are an important part of the design management activities. The building environment within all of its different fields is a unity, which as a well-

243 see Øvlisen 1988: 59; cf. Julier 1993: 107; McDermott 1999: 119

244 see e.g. Conran 1995: 140

245 see e.g. Miettinen 1990: 69; Currie, Pran and Turner 1994: 22

considerably systematic and well cared-for one can be an investment that functions flexibly for decades[246].

According to Lawrence[247], the architecture can either support the strategy of a firm or sabotage even the best business plan ever made. The atmosphere in the premises and buildings of a firm can be pleasant and thus it can motivate for better and better performances, or in the worst case, the premises can be even for their physical qualifications so poor that the working just does not start going on well. Working in the so-called bottle houses and offices that were built during the energy crises in the 1970's, within poor ventilation and fusty building materials, creates no more a positive image of the corporation, neither of the values it represents.

Also in the *mystery shopping* exercises made by the students during the lectures given by the researcher, there were, term after term, the same comments about the "lack of air" and about abrupt, strained behavior of the customer servants that had been felt in certain shops. Those experiments also support the understanding of the importance of functional architecture - and air-conditioning. Sometimes it might occur that the bad customer service was not a sign for careless corporate culture but for a bad feeling of the customer servant caused by poor ventilation.

When the premises and buildings of a firm are treated as a part of design management it generally is concentrated on only the building of the new ones[248]. However, there are only very few firms that have the possibilities to act in premises that have been designed totally according to the firm's own wishes; either the old ones have to be rebuild, or, when the firm moves to another, "second hand" office, it has to try to make those to be as close to the wishes as possible. The premises are an expensive investment project of a permanent

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246 cf. e.g. McDermott 1999: 46-47, 56

247 Lawrence 1989: 15

248 see e.g. Lawrence 1989: 15-19; Miettinen 1990: 70-71; cf. Crosby 1978: 190

nature, and that is one reason why it is important to attend to the planning of those carefully.

It is often useful to use skilled design services in the design and planning of the corporate environment in purpose to enable the creation of a uniform corporate image. Already on the stage of the designing of a new building, it is purposeful to consider the planned use of the building as well as the corporate identity it is wished to reflect - an engineering works desires a completely different premises than a jeweler's does when it comes to the location, construction as well as the appearance of the building[249]. When a firm moves into rented premises or into an old building it has to adapt itself to the resources that it has at its disposal, and by time it can, according to the possibilities, mold the premises to best meet the requirements for the use.

The furniture and equipment of the premises of a firm also have to suit in the image the firm wishes to convey from itself to its interest groups. A carefully and well-considered color scale and a well-considered use of the logotype in the furniture elements - tables, sets, chairs - helps to create a controlled corporate image. Sense also has to be used when the amount and places of the plants is decided: a mini jungle does not fit in the style of each firm.

The headquarters of the Amer group was at the end of the 1980's often exposed when there were discussions about a well-planned buildings design. The new headquarters of the corporation were built to symbolize the firm and the definitions linked with it, definitions that were at that time named as freedom from prejudice, dynamics and internationality. The logotype was repeated in a well-considered way in the floor areas and curtains, even in the triangle shaped tables that were placed end to end.[250] The logotype did not come out too much to enable speeches about its overexploitation. The use of the logotype, like for example in the curtains in the trains of the Finnish State Railways (*Valtion Rautatiet*), as a

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249 cf. Miettinen 1990: 69-72 ; Crosby 1978: 190

250 Peura 1988: 8

kind of a decorative pattern is a good means for profiling oneself. However, it has also to be remembered that an excessive scattering of the logotype into all of the targets that sound like at least a little bit possible lowers the logotype's value. It is important to place the logotype in a systematic and well-planned way.

What kind of requirements there then has to be created for the corporate environment and for its architecture? Where is the line between systematic planning and a dictation policy? These are questions that each of the firms that have a serious attitude towards design management has to solve.

During the design management course held by the researcher one of the students once criticized the systematic planning of the new premises of her workplace. She felt that the planning had gone too far: the architect had "ordered" also what kind of curtains there were allowed to be in each one of the rooms and this employee could not stand the "dark and gloomy ones" that were in hers. The absolute prohibition given by the corporate management against changing the curtains designed by the architect to some more pleasant ones had only annoyed the employee: after all, it was she who worked in that room, not the architect, nor the management. When the elements of a systematically planned corporate image are this badly in conflict with motivating there should be a situation for a compromise; it should be found out, where the real conflict is. Do those curtains irritate only because of their color, or is the reason perhaps in the matter that no-one ever even bothered to ask the employee, in which kind of an environment she wished to spend her working hours.

How the architecture of a firm then finally can reflect the identity of the firm and is the matter even important at all? There are two very different buildings presented in the figure 29. The building A could be described by stating that there is probably acting in it a kind of a firm that even with its premises wishes to reflect a modern, active corporate image that keeps the touch with the nerve of the time. It could be imagined that an enterprise familiar with the modern technology would be located in a building like that. In the building B, then, might act a firm that has an office building which by its side conveys a message of a

conservative corporate image that respects the old values and holds to the traditional methods. There could be perhaps headquarters of a bank or an insurance company in a building like that.

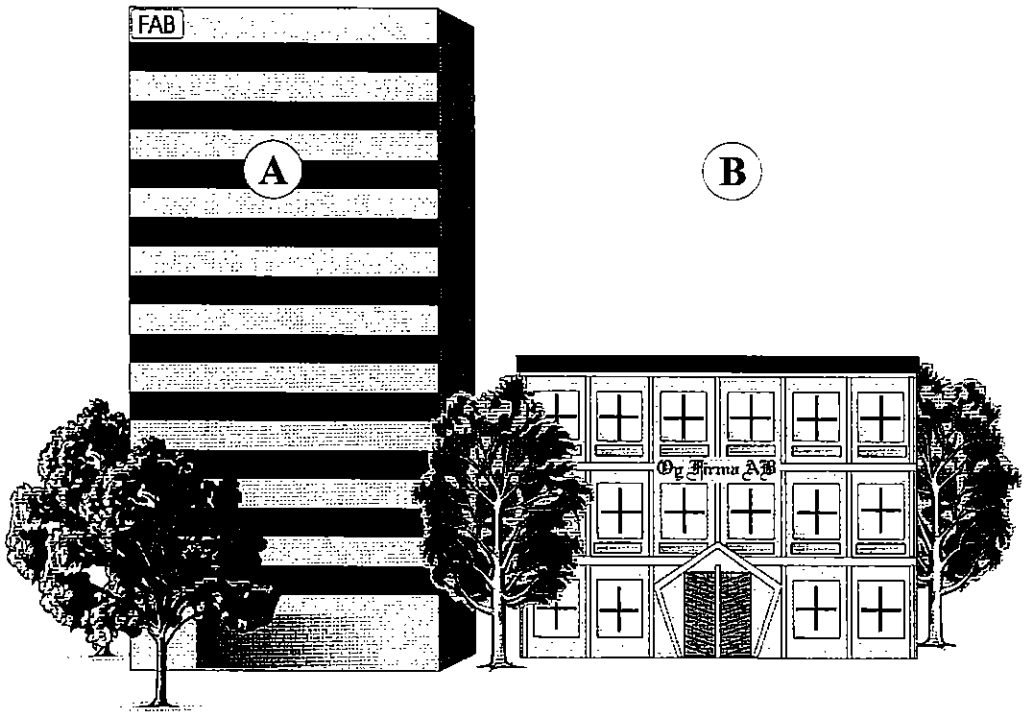

Figure 29. Two different office buildings.

The managing director Syrenius from T-Drill Oy [251] gave a good answer for the question whether it is important or not, how the environment and premises of a firm look out and what they symbolize. He stated that the visitors and customers of a firm first see the environment of the firm, then the inside premises, and only after that the products, if there still has been interest enough that far.

And that is actually what design management is about: to wake up the interest of the customer and maintain it ever until the moment he/she familiarizes him/herself with the product, buys it and founds it satisfactory. To promise what is meant to keep and keep what is promised. With the words of Syrenius: "if the factory is dirty and there's a mess around every place, so how come the customer believe that not the product also is bad". This should always be remembered when the line of business of a firm is the kind of one that the customers or other interest groups of the firm are in touch with the premises of the firm.

5.2 Corporate environment

The corporate environment can be described to be consisted of the concrete corporate environment, the flower arrangements and as a common part with the premises of the firm, the materials and architecture[252]. The managing director Syrenius[253] from T-Drill Oy described that the process of theirs that aimed at the improvement of the corporate environment of the factory first got the opposition of the employees, and later the prudence and commendations of theirs.

The nature of creating of a well-planned corporate environment has well realized in the T-Drill Oy. When there are new premises to be built in the firm, or the old ones are to be repaired and modified, it is done according to the plans agreed[254]. It has been recognized in the firm that it is wise to adapt oneself into the existing environment and to supplement it according to the possibilities.

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251 *based on answers in the questionnaire and on two interviews with managing director Syrenius during year 1994*

252 cf. Andelmin and Casagrande 1994: 141

253 *based on interviews with Syrenius during year 1994*

254 *based on answers by Syrenius in the questionnaire year 1994*

Design management does not mean that a firm should in one night's time drive down with a bulldozer all that already exists and then rebuild on the ruins all new from the very beginning. It is much more sensible to slowly and systematically mold the environment to a unity that supports the principles of the firm, by keeping from the old ones what rationally can be interpreted as worth of keeping - and by not forgetting the sentimental values either.

Sometimes it might be good if there is a tiny little crack to be found in the unity that has been polished to the very last, a crack that reminds from the humanity and from the fact that there are also people working on the enterprise, not only robots. However, it has to be carefully looked up that the amount of these cracks will not get too high. Also an exaggerated system can change itself to be a repressive one; one has to be able to stay inside the as such flexible limits of moderation. Perhaps it is healthy to remember the wisdom that chaos and order are not the ultimate ends of the same segment of a line, but the starting and ending points of a circle: one step too far can change the order into a chaos and otherwise, a chaotic situation enough can even begin to get the characteristics of an order into itself. Maybe chaos, then, is also ordered disorder and not only disordered order?[255]

When there was an old factory hall renovated in the T-Drill Oy, the workers had, according to the managing director Syrenius[256], made up jokes about how he sure was going to make those "lines" of T-Drill to be painted on the walls of the factory hall, too; lines, that at that time were considered as unnecessary cosmetics and also as a waste of money. Nowadays the employees proudly present the tidy and pleasant factory hall that is decorated with potplants, and there might not be many people around there anymore that would laugh about the tidy painted surfaces and the use of the T-Drill's burgundy colors in the environment, communication and products.

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255 Cf. e.g. Gleick 1989; Kantola 1984; Quinn 1995: 713-714; Luhta 1997: 4, 81

256 *based on interviews with Syrenius during year 1994*

Also the use of flower arrangements as a part of the corporate environment that expresses the positive corporate image has been recognized in T-Drill Oy: once it was made an experiment in shaping the word *T-Drill* with flower arrangements on the courtyard of the factory[257]. With well-considerably placed flower arrangements and restrained flower variety and bush choices a firm can give the finishing touches to its environment in an impressive way. The environment of a factory does not have to be covered with scrap and dirty gravel either; even a strip of green lawn can give the visitor pleasure[258].

There has also been shaped the name and logotype of the department store Prisma in Kokkola with the flower arrangements; the orange, yellow and fuchsia colored triangles of the logo were all planted of the flowers of the same colors. These are little efforts that will give an impression of finished and well-considered thoughts.

The green values are popular nowadays and thus a firm that takes care of its environment and the cleanness of it will arise more positive images than its possible rival that has an indifferent attitude towards the environment of its. If the outside environment of a firm already stays in the mind of an occasional visitor or a passer-by as a well-kept and positive toned one, this occasional wanderer might later come back as a potential customer or cooperation companion. The strengthening of a positive image is always easier than the changing of a negative one, thus a firm that is pleasant even by its concrete environment has a stronger bargaining position than a holder of a forbidding one.

5.3 Equipment as a message and in everyday use

Office equipment is clearly a part of the field of the corporate environment that can be named as - equipment. Besides that, the machines and devices and the cars, hauling

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257 *based on interviews with Syrenius during year 1994*

258 cf. e.g. Olson et.al. 2000: 11-12

equipment and other vehicles used by a firm are a part of the equipment, like the name of the category already tells. The hauling equipment that is painted on the colors of the firm and that has the logo or name of the firm on it is a part of both the environment of the firm and also a well-visible and moving part of its communications.

The bakeries of the Fazer group have recognized also the communicative values of the hauling equipment: there has been a by an artist beautifully painted truck operating between Helsinki and Lahti on a daily basis[259]. The truck acts as a moving advertisement of the firm while it simultaneously transports the bakery products on its normal route; besides that, it can be driven to special occasions - to be there as an advertisement. The trailer truck of Valio can bring in mind an image of a giant sized butter package. The hauling equipment does not, though, have to be this spectacular by its size or appearance to signal the corporate image, the tidiness and cleanness of the equipment already, together with for example the tapes and stickers on the sides of a car make such a big step forward in the field of the corporate image that it will be enough for most firms.

However, there is also another side of the matter of corporate vehicles to be signed and taped to show the corporate image and name. There is at least one globally acting corporation in the office machinery business that has neat service vans with the logotype of the corporation on the sides of them. They also use there a large piece of paper saying: "we are here to repair a copying machine of brand X". One might wonder whether this gives a signal of "let's buy copier X" or "once again there seems to be problems with copier X:s, let's avoid the brand". Only the van standing there in front of an office building without that kind of an explanation why they are there might be better.

The machines and devices are also an important investment for a firm. The most important aspect in them is naturally that they function correctly and suit on the purpose; in the factory machines the aspect of safety will be emphasized. It also is not equal what kind of personal computers it will be bought for the use of the personnel. Besides the fact that they

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259 *based on an interview with Kuustonen year 1994*

are a visible and essential part of the everyday actions of the firm, badly placed screens of a bad quality might cause sick absences caused by head, neck and back aches. However, in the decisions related to the corporate environment the appearance[260] of the purchase is in a position of quite a little value when compared with for example the ergonomic factors.

However, it cannot be claimed that an ergonomic device could not support the corporate image, too. When a pharmacy in the Vaasa province modernized its premises, also the computers and the screens used by the personnel were purchased to be in matching tones with the service desks. The screens with bending stands were meant to be able to be adjusted always on the right height to be used by the pharmacists that naturally are of different heights; and the screens also were of the right color with respect to the other furnishing. In the practice, however, the heights of the screens had hardly ever been adjusted during the days and the personnel found, according to the present experiments of theirs, the adjustment possibility of the use height of the keyboards to be much more important than the one of the screens.

5.4 The common elements of the different fields of corporate environment

The most visible of the elements that are common for the whole corporate environment might be the *color*. In some of the firms the scale of colors is a result of a long consideration, each color and the tones of it have been carefully thought and weighed about before the choice has been made, while in some other firm the choosing of colors has been a result of coincidences during the times.

In one small family-owned company interviewed during this study, a company that dealt with the estate maintenance, the first reaction of the owner/managing director for the question asked was that they had thought of no colors. However, after a little while of

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260 cf. e.g. Tolonen and Tyllilä 2000: 26-30

consideration he then said, that naturally all of the cars and other vehicles of theirs were blue-white, because he thought that they "looked out good" that way. It certainly was a sufficient explanation enough for the choose of colors used by that company, and environmental design management good enough for its needs.

So in many of the firms it has, during the times, been ended up with some certain colors, when it comes to the hauling equipment and other vehicles, maybe even some certain car brands, without having had any need to think or guide them more than that, they just are felt to be "the own ones". In a case like that exactly the chosen model signals the identity that is mostly the own one of the firm, when it feels like an own one and thus the right one. Even though a design management manual collected in fine covers recommended to use green Fords, the situation would not work out, if the personnel felt the white Opels to be the more right ones.

The most important aspect in a design management manual is not that it was collected in a map, but that it works and that it is followed. In many of the firms interviewed in this research there were expressed the regress about the fact that they did not actually have any real guides of these things, because those had not been collected on a written form. However, a design management manual can be an oral one, too, as long as the basic principles are so clear that they can and will be followed. The PMS color codes might not be easy to remember by heart, but already the matter that it is remembered to keep the equipment clean and functional and the courtyards not littered, brings design management a great leap forwards. It is not the most important thing at all to write everything down, but it is that the things are felt to be so significant that they are thought about, and through that, also realized in the daily activities.

The material choices of the corporate environment have their own, important place in the creating of the corporate image, too. A firm emphasizing the nature related values in a plastic office is not credible. Very far, it is a question about images, about the matter what the firm looks like. There is no way for a firm to simultaneously make statements of its concern over the state of the nature and cover an ecological catastrophe on its own back-

yard. Most of all it is a question about credibility, about the matter that one also seems to work for those values that the firm for example emphasizes in its media communications.

Besides functionality, durability and reflecting of the corporate image, it is in the architecture also a question about the matter how the buildings will suit among the other environment. If a building conspicuously breaks the street scene, it probably will not raise any unqualifiedly positive images among the interest groups of the firm. There are many buildings that can be described with stating that there is a right building in a wrong place. A succeeded environmental design management also requires that attention has been paid to both the immediate surroundings and to the local infrastructure.

5.5 Environment as a part of design management

The different fields of the corporate environment are by no means separate from each other, but closely linked with one another. When the corporate environment is divided into three categories - offices and other premises, the environment of a firm and the equipment - there will be some elements that belong to either two of the categories or to all of them, elements that are shared. It would be artificial to place for example architecture purely into the premises as a part of them or only into the environment of a firm as a part of it, because it belongs closely to both of them. As a commonly shared element of all of the fields of the corporate environment there can be mentioned the colors used by a firm, the uniform scale of colors that has been chosen to be the visual basis of the environmental planning of the firm as well as of the communication practiced by it.

When the environment was examined there were only the machines and other devices that got a value over 4 (= quite important) in the scale from 1 to 5. When the present time was examined the mean value of the machines and devices was 4,16 and the standard deviation was 0,90; the future time was described by the mean value of 4,01 and standard deviation 0,82. All the elements of the corporate environment got in the answers values from one to

five. The mean values, however, stayed fairly neutral both in the present time and in the future one (see tables 15-17).

Table 15. The corporate environment in the present and future times by the lines of business: mean values, P-values and the mean difference (cf. table 9).

tech	soft	**Environment** - present time	industry	trade & service	P-value	mean diff.
x		machines and devices	4,15	4,17	**0,03**	0,02
	x	furniture and equipment	3,45	4,08	0,28	0,63
		office machines: suitable in environment	3,60	3,90	**0,02**	0,30
(x)		concrete corporate environment	3,58	3,83	**0,00**	0,25
	x	colors used	3,19	3,71	0,30	0,52
		materials	3,58	3,64	0,12	0,08
	x	buildings	3,34	3,44	0,89	0,10
x		cars and haulage equipment	3,36	3,25	0,16	0,12
	x	architecture	2,95	3,32	0,87	0,37
	x	flower arrangements	2,76	2,97	0,54	0,21
		Environment - future time	industry	trade & service	P-value	mean diff.
x		machines and devices	4,04	3,99	0,10	0,05
	x	furniture and equipment	3,59	3,91	0,84	0,32
(x)		concrete corporate environment	3,67	3,86	0,16	0,19
		office machines: suitable in environment	3,76	3,78	0,46	0,03
		materials	3,30	3,64	0,21	0,06
	x	buildings	3,41	3,27	0,60	0,13
	x	colors used	3,48	3,59	0,35	0,11
x		cars and haulage equipment	3,37	3,35	0,48	0,02
	x	architecture	3,33	3,25	**0,03**	0,08
	x	flower arrangements	3,22	3,19	0,85	0,02

When examined by the lines of business (industry and trade & service) and by the provinces there were no significant differences gotten by the interpretation of the t-tests in the attitudes of the firms towards the importance of the elements of the corporate environment. When the present time was explained and thus examined by the lines of

business there were low P-values found in the variables of the suitableness into the environment of the office machines (P-value 0,02), in the ergonomics (P-value 0,00) and in the machines and devices (P-value 0,03), but when the mean values then were compared, they stayed into the amount of 0,3 at the maximum.

When the future time was evaluated, architecture got a small P-value (0,03) where the mean difference was only 0,08. Thus the differences are more like random than really significant ones. The results of the t-test by the lines of business are presented in the table 15.

When the present time was evaluated by the provinces, the t-test gave small P-values in the colors used (P-value 0,01) and in the concrete corporate environment (P-value 0,01), but the mean difference still stayed under 0,2. However, there were no clear significant differences when it comes to the questions about the future time, either (table 16).

Even though the office machines, the colors used and the concrete corporate environment got small P-values, there was also only a very small difference between the mean values of them. Thus in this material, according to the interpretation of the t-tests, it can not be stated that there had been any significant differences in the attitudes of the firms towards their environment after their lines of business or the province where they were located in. The results of the t-test in the Vaasa and Kuopio provinces are presented in the table 16.

All the environmental variables were found rather neutral of importance in this material. The differences between the variables were small and even though none of the variables in the environment factor was found totally meaningless, neither was there significant importance to be perceived in any of these variables. Only the variable that handled machines and other devices got a value of slightly important among both provinces as well as among the respondents of industry and trade/service sectors.

Table 16. The corporate environment in the present and future times by the provinces: mean values, P-values and the mean difference (cf. table 9).

tech	soft	**Environment** - present time	Kuopio	Vaasa	P-value	mean difference
x		machines and devices	4,20	4,10	0,24	0,10
	x	furniture and equipment	3,72	3,81	0,30	0,10
(x)		concrete corporate environment	3,78	3,60	**0,01**	0,18
		office machines: suitable in environment	3,76	3,73	0,11	0,03
		materials	3,60	3,59	0,81	0,01
	x	colors used	3,53	3,33	**0,01**	0,21
	x	buildings	3,45	3,31	0,38	0,13
x		cars and haulage equipment	3,39	3,20	0,98	0,19
	x	architecture	3,20	3,06	0,25	0,14
	x	flower arrangements	2,83	2,91	0,81	0,09
		Environment - future time	Kuopio	Vaasa	P-value	mean difference
x		machines and devices	3,99	4,04	0,46	0,05
(x)		concrete corporate environment	3,84	3,67	**0,01**	0,17
	x	furniture and equipment	3,80	3,69	0,12	0,12
		office machines: suitable in environment	3,79	3,75	**0,07**	0,05
		materials	3,71	3,61	0,86	0,10
	x	colors used	3,51	3,57	**0,09**	0,07
	x	buildings	3,44	3,21	0,31	0,23
x		cars and haulage equipment	3,43	3,27	0,19	0,16
	x	architecture	3,37	3,19	0,18	0,19
	x	flower arrangements	3,26	3,14	0,23	0,11

It can be seen in this material that dealt with corporate environment that the technical, "hard" functions were felt to be slightly more important by the respondents than the "soft" ones (see table 17). It is significant here that in the product factor (see e.g. table 14) the experienced importance was in another way; there in the product factor the image-related variables were found to be slightly more important to the respondents than the technical ones were. So it seems that in the environment factor the variables had higher technical, instrumental value than image-related, soft values; whereas the image values of an own

product obviously were found rather important. After all this is understandable: vehicles and equipment are tools for the users of them, the functionality of them is vital, and "aesthetics" come later.

Table 17. Mean values of mean values in corporate environment.

means of means	present		future	
	technical	soft	technical	soft
industry	3,70	3,14	3,70	3,41
trade/service	3,75	3,50	3,73	3,44
Kuopio	3,79	3,35	3,75	3,48
Vaasa	3,63	3,28	3,66	3,36

Altogether, importance of the environmental variables stays behind the one of the product factor. This is a noteworthy result when the contents of the design management concept and the elements of it are evaluated, especially when design management is used as a strategic instrument.

In the figure 30 there it has been presented a division made by the researcher of the variables figured out by her that were examined in the letter questionnaire in relation to the environment and its three main fields; offices and other premises; equipment and inventory; and the corporate environment. The variables stationed in the sectional areas can be seen to belong into both of the secant fields; for example the office machines used by the firm are an essential part of both the equipment of the firm as well as the premises of it, too, according to the station of theirs when it comes to the environment as a field of design management.

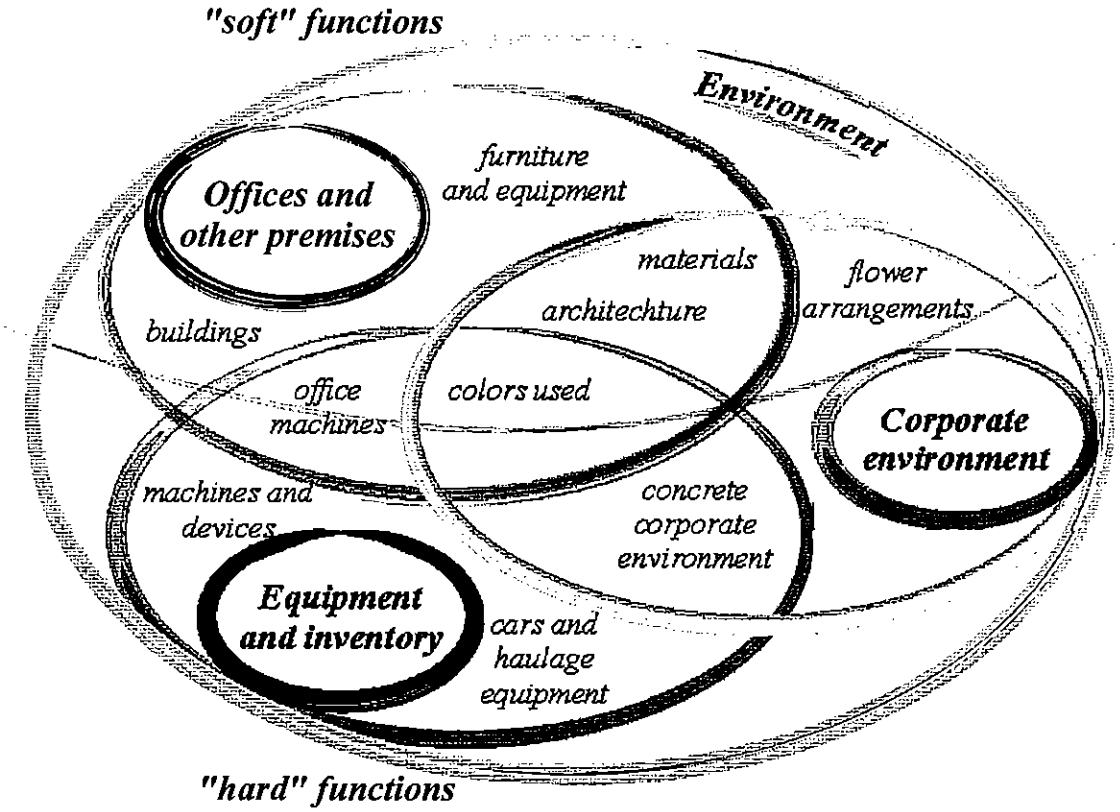

Figure 30. Environment as a field of design management.

6 COMMUNICATION AS AN ELEMENT OF DESIGN MANAGEMENT

The third basic element of design management, communication, is studied in this chapter. The purpose of this chapter is to explain the meaning, contents and nature of communication as a field of design management, and also to explain the use possibilities of it as a competitive parameter, especially when design management is used as a strategic instrument.

Communication, as a field of design management, includes all the visual communication of a firm, and connected to that, the graphic design practiced by it. In its communication a firm visualizes its corporate image to be persuaded by its interest groups. An uniform visual image in the communication practiced by a firm is one of the most important cornerstones of design management; with the help of it the corporate image can be signaled with a level that is the easiest to persuade.

As an important means of help in the design management program there will be a carefully compiled graphic manual. When it is followed, a lucid corporate image will be conveyed from all of the activities of the firm. Through a uniform corporate graphics it is possible to signal a controlled and uniform, well-planned corporate image and thus it is possible to personify the image of the firm. Among the Finnish firms, especially Partek and Arabia[261] have been known for a successful contribution to a controlled corporate communication created with the help of a graphic manual.

There are several fields, linked closely within each other, that can be taken as elements of the corporate communication, and that are able to be controlled through the graphic manual of the firm. Marketing, perhaps, is the best of the means of a firm to be seen and to be known, and closely linked with it are the advertising and the media chosen by the firm.

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261 Kolehmainen 1992

The graphic symbols of a firm, like the logotype[262], other symbols used and especially the name of the firm and the associations expressed by it, are among the most visual elements of the communication of a firm.

There are several means that are of an absolute importance for the succeeding of a well-planned communication. The uniformity of the appearance of printed material and announcements channeled to the outside world of a firm is important - these materials can include for example the annual report, announcements for open vacancies, forms used by the firm, and the language and style[263] used in the materials, the text and font types chosen, and the colors used. The visual identity of a firm is an important part of its design management[264].

6.1 Communication as a part of marketing

Marketing communication - advertising, sales promotion, publicity and personal selling - is a visual part of the activities of a firm. With communication a firm systematically aims at molding the images that its interest groups have of the firm itself as well as of its products, activities, services offered, or for example of the behavior of the personnel. A succeeded marketing communication needs a full support of the so-called passive marketing of the firm: what the firm tells about itself has to be consistent with the matter, what the firm really does and how it really acts.[265]

Behind a functional and reliable marketing communication there is the basic perception of the theories of inside marketing as well as design management: the outside message sent by

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262 cf. Spaeth 2000: 21-22

263 cf. e.g. Sametz 1995: 27

264 cf. Rosenlew 1987: 12

265 See e.g. Kotler 1990: 510-511

a firm does not function until the personnel has internalized the goals and targets set. Unless the personnel, especially the service personnel, with its own activities and behavior redeems the expectations created, the firm will finally loose its credibility.

6.1.1 Advertising and media

Weilbacher[266] defines advertising to mean communication with which it is aimed at increasing the probability that people reached by the advertising would behave or believe as the advertiser wished them to do. Weilbacher divides the theories of marketing further into four groups: *pressure-response theories of advertising*, *active learning theories in advertising*, *low-involvement theories of advertising*[267] and *dissonance reduction theories of advertising*. A mutual characteristic for all of the three last mentioned theories is that they all include the same elements of consumer behavior: learning, attitude change and behavior change.[268]

In the pressure-response theories of advertising it is assumed that there exists a stable connection between the "pressure" and influences. This theory emphasizes rather the amount than quality of advertising. The theories of active learning believe that the information offered by the advertisement will lead to an attitude change of the consumer and finally to a behavior change. However, Weilbacher finally questions the model because it does not answer to all of the connection and interaction relationships that there might be between the consumers and advertising.[269]

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266 Weilbacher 1984: 16

267 see e.g. Rajaniemi 1992: 67; 75-76; Engel, Blackwell and Miniard 1993: 276-278; Keefe 1995: 46

268 Weilbacher 1984: 460-469

269 Weilbacher 1984: 460-469

In 1947 Sherif and Cantril explained the attitude change with ego-involvement. The concept became general in marketing in the 1960's after Krugman had popularized the term *involvement*[270]. The concept refers to the matter that in which amount the object observed will be connected within the central values of the individual. The more the individual will connect meanings close to him/herself to the product, the more involved he/she is.[271]

The theory of low involvement assumes that the interest the consumer has in the advertisement is related to the amount of his/her involvement[272]; extra advertisement information will only be passively stored. Weilbacher states that there in the development of this theory will be needed also an understanding to the involvement of a consumer to for example a product group[273]. The fourth and last group, the dissonance reduction theories, gives advertising more a passive than an active role, and has not, according to Weilbacher, got any great success.[274]

The identity of a firm, the values, culture and principles of it, determines very far what kind of advertising practices there will be chosen to be realized in the firm. The advertising of a firm in the service sector will differ itself from the one of a production plant even for the dissimilarities of the product or service advertised. The advertising budget of a small firm for an entire year might be only a few thousands of marks while a large enterprise will invest in a pure brochure several hundreds of thousands of marks.

The needs and targets of firms are different, but a common factor is that nobody will come to buy the product unless he/she knows about its existence. The task of design

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270 Engel, Blackwell and Miniard 1993: 275

271 See Rajaniemi 1992: 9; Rossiter, Percy and Donovan 1991: 13; Keefe 1995: 45-46; cf. Bloemer and de Ruyter 1999: 326

272 cf. Ahopelto and Raatikainen 1994: 175-176; see also e.g. Rajaniemi 1992: 73; Engel, Blackwell and Miniard 1995: 163-164

273 see e.g. Kapferer and Laurent 1985/1986: 49; cf. Engel et al. 1995: 161-162

274 Weilbacher 1984: 470-471

management is not to question the necessity of the advertising means used, but the task of it is to criticize and to guide the competency and the suitableness to the use of them.

When a firm chooses media for its message it has to decide, who it wants to reach and for what price, and what kind of an image it wishes to create of itself[275]. It is possible to create quite different images of a firm and of its products with different media. Television, for instance, is an expensive piece of media, so a firm has to carefully consider of the price-advantage relation when it makes its media choice. And it also has to be remembered that "cheap" not necessarily is a synonym for "economic". It is important, how many potential customers can be reached with the input set, but especially what kind of a reaction the message that has reached them will cause.

6.1.2 Spoken and written communication

An essential part of communication is the language used[276]. A spoken language, a literary language, a professional slang, foreign languages - the use of language of a firm influences a lot the images created. The firm has to examine its own identity and to decide, whether its most own area to act is for example in a casually familiar way or in an elaborate style. The most important criteria for choice is naturalness along with the common practices of the line of business; a counterfeit communication in its emptiness does not convince.

In the research done by this study, the customer service and the behavior of the personnel were considered to be clearly the most important form of the communication policy; especially the compatibility of them and the compliance with the lines chosen by the firm. Actually 95,4% of the respondents of the questionnaire considered the customer service and the behavior of the personnel as important, 61% of them even found it as a very

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275 cf. Weilbacher 1984: 263-274, 278-279; Kotler 1990: 511, 515

276 cf. Eich 1988: 46

important competitive parameter. It was estimated that in the future the importance of the customer service and the behavior of the personnel would still rise (88,8%, of which 53,3% estimated that the importance of it would still rise extremely much).

In the interviews the firms were asked about which languages they used in their communication. All of these firms used Finnish in their communication. Among the other languages English and Swedish were used most. In this research 61% of the firms studied that were located in the Vaasa province used English, 72% used Swedish, 44% used German, 17% used French and 11% used Russian in their communication; from the ones located in the Kuopio province English was used in the firms communication by 76%, Swedish by 64%, German by 36%, French by 8% and Russian by 20%. Other languages used in the communications of the firms were for example Spanish, Italian, Japanese, Korean, Norwegian and Estonian.

The firms were also asked about how they had organized the translation of the brochure material that was in a foreign language. 40% of the firms made the translations themselves and 5% of the firms used a network of acquaintances to help in translations. 37% of the firms had found the services of a skilled translator to be useful, 12% of the firms used an expert of the field that spoke the language in question as his/her native language to check the final text. There were also a 35% of the firms that had no need for translations.

One of the most certain and similarly one of the most recommendable ways to translate the communication material is to have the text that seems to be ready and finished to be checked in the target country by a professional advertiser that speaks the language in question as his/her native language and that commands the possible special terminology of the industry. A good knowledge in the spoken language does not necessarily guarantee the knowledge in the technical terms.[277]

277 See e.g. Peltonen 1988: 44-46

While the European integration keeps going on, the need of good proficiency in foreign languages rises up even more clearly than before. Even though the Swedish language is here in Finland called a second official language, there are only a few Finns that are able to communicate fluently in Swedish. The position of the English language as a dominant language hardly will be threatened for ages, but German and French are raising their positions, and the need for people that know Russian does not seem to reach its end, either. It has been claimed that a German sells even in Chinese if necessary but buys only in German; an example presented in a pointed way that, nevertheless, does have a clue in it.[278]

The Finns have been criticized, even to a state of being a phrase, to falling silent in two, sometimes even more, languages. One reason for this silence might be the fear of making mistakes that has been learned already in the school. The written communication however, for example the brochure materials, has to be correct and finished also by its grammar to make a good impression of the firm, but when it comes to the oral communication in a foreign language, it often would be better to say even something than to fall completely silent.

Familiarity with the use of language of the communication does not mean only the validity of the communication in foreign languages. An advertising material teeming with terms not according to the grammar will offer a careless image of the other activities of the firm, too. The Swedish expressions in the Finnish language when it comes to the misuse of for example the adessive case[279] appearing in an advertising letter of a large department store may make one smile for a while, but they also show how little attention it actually has been paid to the preparing of the advertisement message.

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278 Cf. Peltonen 1988: 46-47; Lukkari 1988

279 e.g. "*huone parvekkeella*" actually means "a room on the balcony", not "a room with a balcony" like it is supposed to mean when the incorrect expression is used

Carelessness with the commercial correspondence will revenge itself at last as a deterioration of image[280]. Concretely this was experienced by a firm that got its invitation letter for a fair translated in German by a Dutch agent of the firm. The reasons for the decision to use this agent even in translating into a language that was foreign for himself can be seen from the statement of the managing director when he told about the incidence and added that "but the Dutch usually are linguist-type of guys, aren't they".

However, in this particular case the agent that translated the letter chose a wrong term from his dictionary and thus the firm ended up with expressing the German customers of theirs that they hoped the customers had gotten sexual satisfaction from the products offered by the firm. The mistake was not recognized until the recipients of the letter started making phone calls to the managing director, astonished at the peculiar sense of humor of the firm, and in order to ask, whether it had been a meaning to insult or had the firm just otherwise made careless work.

6.2 Printed material and announcements

A uniform set of forms will help in the creating of a controlled corporate image. Through a uniform written communication material the firm will also offer a reliable image of itself: the customer will know already when he/she receives the envelope of the firm, with whom he/she is transacting business. While Eich[281] describes the development of the corporate image of the BMW he divides the information offered by the forms into three groups: *identifying* of the firm especially through the name and the familiar symbol of it; *functional information* of the sender according to the normal letter standards; and as the third one, the actual *text* and the standard layout style of it. When BMW reorganized its set of forms it

280 cf. Peltonen 1988: 48

281 Eich 1988: 50

had as a principle to uniform the appearance of them and similarly to limit the amount of the different forms.

The correspondence of a firm is an important part in creating the image. Often the first customer contacts are established by letter, either in a modern way through a telefax or by mail, more and more often through the email-networks and Internet. A letterhead arrives from the sender to the receiver in an unchanged form and thus it allows even intricate patterns and color variations. However, there are still large differences in the telefax machines and in the grayscale separation abilities of theirs and neither can the email sender know in which font the message of his/hers will be read or printed. These will set some limits on the standards used in the fast written media.

There are several instructions and models about the typographic appearance of the forms, which has as their central content clarity and the ability to be glanced through. It is recommended to preprint on the form only the name, logotype and contact information of the firm[282]. Too much information will give a restless impression and thus eat into the value of the information. A uniform set of forms is a part of a controlled corporate image.

An announcement of free vacancies is also an advertisement. In it the firm advertises itself for not only the potential applicants but also for everyone that notices the announcement of the firm. Thus it is important to stand out - favorably. Likewise, the annual report of a firm is one of its most important advertisements, because it is examined through by the most essential interest groups of the firm when it comes to the economic profitability of it; that is, for example, the owners, the largest customers and the financiers. As a well-considered unity the annual report will support the image of the firm by plumbing of the corporate identity.

In the research made, the systematicness and uniformity of the different announcements of the firm and of the style of the communication of it were evaluated as quite important

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282 Peltonen 1988: 47

(47,8% and 47,1% of the ones that answered the questionnaire). The typography and appearance of printed communication material was found to be either quite important (42,1% of the respondents) or very important (38,4% of the respondents).

The answers diverged clearly when the advertising value of the annual report for the interest groups was asked. It was found to be either "neutral" or quite important (both of them by 25,5% of the respondents), but also the alternative "totally meaningless" and the one of "very important" got 17,6% of the answers. However, when the future time was questioned about still 39,6% of the respondents declared that the meaning of the annual report as an advertisement would increase to some extent and only 8,4% of the respondents stated that its importance would decrease from what it used to be. There were no significant differences in the attitudes between the target provinces, nor between the target lines of business.

A business card is often the first thing on grounds of which the new customer or business partner will strengthen his/her images of the person that handed the card and of the enterprise he/she represents. 72,2% of the firms in this research found the business card as a significant piece of communication. The uniformity and being in accordance with the corporate image of the greetings and invitation cards was found important by 55,1% of the business managers that answered the questionnaire; 52,9% of the respondents believed that the importance of the business cards would also increase in the future.

6.3 Symbolism as a part of communication

Jung[283] defines a symbol to mean such a term, name or picture that perhaps is familiar in the everyday life but which has special extra meanings besides its conventional or obvious meaning. Thus a word or a picture is symbolic when it points into something more than

283 Jung 1992: 20-21

the obvious and immediate meaning of it; when it has a larger side than the basic meaning of its, a "subconscious" one.

The marks, emblems and brands used by a firm are in a great deal based on symbolism[284]. What does the firm signal of itself with its name, logotype[285], colors, the forms of its products? People are used to connect the round, bent birch shapes with the furniture of Artek; the colors used by the Association for the Pulmonary Disabled (*Keuhkovammaliitto*) in its graphic communication - green, white and blue - symbolize the earth, air and sky[286]. A turtle is mostly perceived as a symbol of slowness, but there was a student that told that the picture of it, shown by the researcher during her lectures, symbolized for him a long life. When a firm chooses symbols to symbolize itself it can run across some even surprising interpretations - the "staircase of information" could symbolize a sudden fall for the spectator.

A firm can use in its communication either a logotype or for example the kind of a logo that is made from the name of the firm. The term *logo* is often used as a synonym for the word *logotype*[287]. The origin of the concept is traceable to the Greek words *logos*, a word and *typos*, a mark, and it has been defined to mean[288] a combination of type of one piece of composing and, for example, the name-emblem of a company or a newspaper; a standardized typographic form of the official name, the graphic form for the way of writing of it[289]. There is also a Finnish translation *liikemerkki*, a "company mark", that when compared with the term logo can be defined to be a registered or established emblem of a

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284 cf. Borja de Mozota 1990: 73-74; Fletcher 1978: 12-17; Keller 1999: 103

285 cf. Spaeth 2000: 22-23, 25

286 *based on an interview with Tikkanen year 1994*

287 Eskola, Kaurinkoski and Turtia 1988: 431; cf. e.g. Julier 1993:103, 189

288 *according to Webster's Encyclopedic Unabridged Dictionary of the English Language 1989: 843 a logotype means a single piece of type bearing two or more uncombined letters, a syllable, or a word; a trademark or a company name or device; a nameplate; also called logo*

289 Pellinen 1988:1; Julier 1993: 189; Taloussanasto 1994: 154; see also Forbes 1978a: 28-29, 34-37; cf. Robbins and McCuen 1997: 18-19; Koskinen et al. 1998: 57-58

business or a company[290]. The graphical symbol of a firm can be an abstract figure in shape or it can be formed from for example the letters of the name of the firm, but in order to function it always has to express the identity of the firm.

One of the first things that influence the identity of a firm is the name of it[291]. Likewise the name of the firm, the brand names[292] also are able to influence customers' choices. *Nomen est omen*, "the name is an omen" used the Romans say in their time. In a way that statement holds true still even nowadays: an imaginary firm called "Backwoods Tinware Workshop" may produce even high technology products of a very good quality, but the name of the company does not reveal it. And thus it would not tempt new buyers to inquire about the high tech products of the firm - instead there might well appear inquiries about tin buckets. Unless the name describes the line of business of the firm it can, because of the misleading nature of it, limit the contacts of the potential customers, or reciprocally lead to questions about goods or services that the firm does not offer.

The present trend to name almost any matter with a prefix "Euro-" seems to be a direct sequel to the "City-" fever of the previous years and the popularity of the names of a foreign origin does not seem to be dying down[293]. In the point of view of internationalization a name that is easy to pronounce is surely a sensible solution, but it is another matter, whether an Italian name pronounced in a Finnish accent necessarily reflects the most own identity of for example a flower shop in a parish village.

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290 Taloustiedon taloussanasto 1983: 77; Taloussanasto 1994: 147

291 cf. e.g. Olins 1990b:183

292 see e.g. Kohli and LaBahn 1997: 67, 69, 73-74; cf. Keller 1999: 103, 110

293 cf. Kaimio 2000: 6-10

6.4 Packages as a part of creating the corporate image

The uniformity of packages with the style and look the firm has chosen is also an important part of the communication of the firm: when all of the fields are in order it will signal the corporate identity and thus strengthen the elaborated corporate image. There is a solid bondage between the packages, especially the sales and consumer packages, and the identity of the firm[294]. Thus package design also is an important part of product design as well[295].

A package should reflect the values of the product and the firm that manufactured it, besides waking up the interest of the customer in familiarizing him/herself closer to the product (which familiarizing should, when it comes to the point of view of the firm, lead to a purchase decision). A package should also tell about the quality and contents of the product. It is not a matter of total indifference, in what kind of wrappings the consumer will get the product to be familiarized with; the first impression often determines, whether there will be a purchase decision or not[296]. The more differentiated, high involvement product, the more important a controlled design management process will become. Compatibility is a gate to succeeding.

Originally the custom to pack up the products originated from the need to protect the product, for example food, water, valuables and weapons, for the time of transportation[297]. Sometimes a product is by its nature the kind of one that it does not need an extra wrapping to protect itself, sometimes the product then cannot even be sold without a proper package. A toothpaste tube is a package on itself, but it is a matter of taste, whether it still needs a cardboard box for protection or not.

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294 see e.g. Olins 1978: 108; Marzano 2000: 26

295 see e.g. Pakkaus 2000/7-8: 45

296 cf. e.g. Lampikoski 1985: 57, 77, 84-85; Hansen 1994: 47; Keefe 1995: 46

297 Kurlansky 1978: 108

The common coffee brands were used to be bought in double packages: in a cardboard box that had a vacuum package inside. However, most spiced coffees and the "finer" varieties of coffee mixed by small coffee roasteries have for some years now been sold in simple folio bags or they have been in specialty shops ground directly in small paper bags (e.g. Robert's Coffee). In 1994 the large roastery of Paulig's began to pack up its coffee into colorful laminate; they calculated in the company that giving up the cardboard packages would save 1 100 000 kilos of cardboard every year[298]. Nowadays the trend seems to be so that the laminate packages are becoming the most usual type of package when it comes to coffee.

Generally it is required that the package technical possibilities have been gotten familiar even for the practical reasons: how to get the products out at the same time both as tempting and as practical and space saving as possible. The package also is a natural place for both the product information and for example the trademark of the firm; and as a well-designed one, it can be an advertisement as itself.

In the packages of the generic medicines of the AO series of Leiras they first ended up with reduced, simple colors and patterns - for example in the packages of the analgesic drugs there was red color on white background, in the hygiene products the main color was blue. The colors were chosen to reflect the image of the products: the green color of the stomach medicines was simultaneously the basic color of the whole series, "the color of pharmacy"; the red of the (painkiller) medicines was described as a masculine one and the orange of the vitamins as a feminine one, having there the potential sex distribution of the users in mind. The "clinically blue" color of the hygiene products was planned to lead the images of the consumer to problem solving. However, the simplified packages had later on to be changed to be a little more colorful, because the image the customers had got of the

298 Perttu 1994: A13; cf. Söderhjelm and Osmonen 1999: 57-58

product had not been the wished one: the reduced package was not found to be stylish while avoiding useless curls, but to be cheap, "eastern European" and even suspicious.[299]

Leiras like the other pharmaceutical industry is used to pack up its medicines in small plastic bottles that are inside cardboard boxes, because the required product information does not fit in the side of the bottle: a folded paper leaflet is needed to be added in[300]. The "problem of unnecessary packing" has not yet been possible to be solved in the lines of business where the amount of information required by the law should be fit in a small space.

Even now a consumer can test his or her need for stronger eyeglasses by trying to figure out the tiny, small letters of a medicine bottle; there would not be any sense in producing any more text with smaller letters on the side of the bottle. The pharmaceutical industry has solved this problem with the leaflets put in the cardboard boxes; a solution to a problem that will cause another problem: more "unnecessary" waste. However, this problem has been reduced by paying more attention to the disposability of the packages.

The recent trend aims at minimizing the packages and the amount of garbage originated on them[301]. Generally taken, it is unnecessary to pack up the products in multiple cardboard, carton and cellophane wrappings, unless they have an essential purpose for the preservation of the product. However, the necessity of the transportation packages can not be denied even with the most fanatic arguments of nature protection: the products have to be delivered from the manufacture to the end user, sometimes through complicated distribution networks, in a way that they remain unbroken as well as that they does not loose their tempting appearance. It tells a lot of the image and identity of a firm which package policy it ends up with.

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299 *based on an interview with Molin year 1993*

300 *based on an interview with Molin year 1993*; cf. e.g. Pakkaus 5/1998: 35

301 See e.g. McDermott 1999: 281

A firm can with its packages signal the identity of its own as well as the independent image of its products - and, naturally, the combination of these two. If a firm aims in its communication at creating an uniform identity for all of its products as members of a certain enterprise, group of companies or product family, also the packages have to support this attempt. A uniform, well-considered appearance in the transportation packages, in the introduction packages as well as in the final sales packages strengthens the idea of completely well-considered, systematic functions and thus it will support the image created by the firm of itself and of its products. The package, the shape and form of it, the colors and the materials will have an influence on the matter how and like which the consumer will experience the product.[302]

An individual package also has an influence on the identifying of trademarks. A well-known example of the use of a package as an essential part of the appearance of a trademark is the appearance of Coca-Cola that is divergent from the other soft drink bottles and has remained almost unchanged through the years. Coca-Cola has even transferred this arched shape that is strongly associated on its trademark to its soft drink cans and to the carton multiple packages of these drink cans; the cuttings of the corners of these packages also emphasize the arched, easily recognized lines of the cans.[303]

Olins[304] presents in his book *Corporate Personality* some experiments made by his colleague Michael Wolff of the matter, how much even the changing of the label of a product will affect the feelings the product wakes up in the spectator. In the example of the book it has ingeniously been toyed with a whisky bottle and a bottle of painkillers: pure changing of the label will turn the whisky bottle into chiefly a bottle of cough mixture and a simple bottle of painkillers into an elegant and valuable one. The package does have meaning.

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302 See e.g. Kurlansky 1978: 108-109; Olins 1978: 104-108, 117; cf. Gofton 1993: 38

303 See e.g. Pakkaus 5/1997: 37; cf. McDermott 1999: 294

304 Olins 1978: 118

According to the requirements of the present time the firms should aim at using even in the packaging materials of their products either already once recycled or at least recyclable, compostable or burnable raw materials[305]. A recyclable package call bring by its part some kind of an "eco-stamp" for several products, and that can be valuable for the image of them.

However, packages made from recycled materials do not suit for all products and all firms, because also the package has to, in the name of credibility, be equivalent to the image of the product as well as to the one of the firm that has manufactured the product. A gray, recycled carton does not necessarily suit too well for the package materials of for example crystal glasses when it comes to the style and certainly it does not emphasize the so-called luxury stamp of the product, which will complicate the pricing based on images and even the credibility of the product message[306]. On the other hand, it has been almost a tradition during the past few years to charge extra prices for some products if recycled materials has been used for either the manufacturing or even for pure package of them, and that has been done by pleading on the nature friendliness.

Even though the so-called green values have also in Finland got wider and wider support, it has not yet in our country ended up with such long-run solutions that there are for example in Germany, where the retailers are obliged to take care of the destroying of the packages of the products sold[307]. However, this may be the future trend for which also the Finnish product and package manufacturers have to prepare themselves.

It is a challenge to create a package which the consumer, the end user, would not perceive to be a piece of waste but an essential part of the product and its image. The other end would then be to pack up the product so that it would be solely the ease on disposal

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305 see e.g. Casey 1992: 19; cf. Burall 1991: 22, 25; Pakkaus 5/1997: 36

306 cf. e.g. Keefe 1995: 46; Remes 1999: 60-61; Laalo 1999: 13

307 see e.g. Käyhkö 1992: 9; Jokelin 1993

together with the other ecological aspects that will form the essential part of the image of the firm that supports the corporate identity.

6.5 The small in size but large in significance subjects of communication

A part of the communication of a firm is formed up of the signs and guides of it. A uniform basic appearance can create a trim and completely considered image with relatively small charges.[308] The importance of the signs and guides is most clearly noticed when a route is tried to be found inside a labyrinthine building. A carelessly marked road will annoy a customer or a business partner that gets lost and it also makes one doubt, whether the other functions of the firm also are as careless as that.

Also the text type and font used by the firm in its communication can reflect the identity of it. The same letter type will not suit on both the communication of a beauty parlor and a garage, neither will the style of the communication practiced by them be uniform with each other. The font type a firm chooses for its communication should be suitable for both the purpose[309] and for the nature of the message[310], was the question then about the inside notices or the typography of the annual report.

A firm can concretely express that its products belong to a product family of a certain company just by the colors it uses. For example the colors characteristic of the protectors made by Kemira Safety and of its communication material are graphite and yellow, T-Drill uses in the pipe machine tools manufactured by it, as well as in the graphic material of it

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308 See e.g. Ahopelto 1993: 26; cf. Forbes 1978b: 92-93

309 cf. e.g. Numminen and Eriksson 1980: 3; Forbes 1978a: 23, 27

310 cf. Forbes 1978a: 40

and even in its hauling equipment, a burgundy-gray color combination together with a logotype made of the name of the firm.[311]

6.6 Communication as a part of design management

In the research made during this study, the customer service and the behavior of the personnel were defined to be the most significant elements of communication policy (in the scale 1 - 5 the mean value that described the present time was 4,54 and the standard deviation was 0,68; the mean value that described the future time was 4,40 while the standard deviation stayed there in 0,74). Thus the purpose of this variable as an element of communication policy was comparable with the purpose of product quality as an element of product development. All of the means of the answers in the elements of communication policy were high; the smallest value was 3,12 (the importance of the annual report as an advertisement during the present time situation).

When the data was examined with the t-tests, regarding to industry and trade & service, there were no significant differences between the attitudes of the firms towards the elements of communication policy to be found. The representatives of the trade and service field found the customer service and the behavior of the personnel to be a little more important competitive parameter than the representatives of industry did, when the present time was studied, but practically taken the difference was insignificant (P-value 0,04 and the difference between the means 0,22).

In the future the trademarks and also the uniformity and suiting on the corporate image of the business cards, and the printed greeting materials, got all quite low P-values (0,08; 0,03 and 0,09), but the mean difference stayed in all of them in 0,2 at the most. Thus there

311 Ahopelto 1992: 69-71

cannot be interpreted to be any significant differences in these, either. The results of the t-test when examined by the lines of business are presented in the table 18.

Neither were there any significant differences to be found between the attitudes of the firms towards the different elements of communication policy when examined by the provinces on the interpretation of the t-test. When the situation of the present time was examined the only element that got a small P-value was the systematicness and uniformity of the signs and guides (0,03). However, the difference between the means was small (0,21). There were also no clear differences between these factors to be found when it comes to the importance perceived of these variables presented in tables 18 and 19 (cf. table 8 and table 20).

When the future time was evaluated a small P-value was found in the systematicness and uniformity of the bulletins (0,04) and also in the uniformity and suiting on the corporate image of the business cards (0,08). Nevertheless, the differences between the mean values were really small in all of these cases, too. Thus it can be stated that the t-test did not verify any significant differences between the attitudes towards the elements of communication policy when it came to the firms located in the Vaasa and Kuopio provinces. The results of the t-test in relation with the provinces are presented in the table 19.

It can also be seen from the tables 18 and 19 that the communication variables which in factor analysis were included in the factor that was named as symbolic functions (passive communication) were perceived here as less important. The variables of the factor systematicness and uniformity (active communication), however, were found to be as the most important ones (also see table 20).

Table 18. The communication policy in the present and future times by the lines of business: mean values, P-values and the mean difference (cf. tables 8, 10 and 11).

s&u/ actc	symb/ passc	**Communication policy - present time**	Industry	trade& service	P-value	mean diff.
x		systemat.+uniformity of customer service	4,43	4,65	**0,04**	0,22
x		systematicness & uniformity of brochures	4,18	4,51	0,18	0,34
	x	trademarks	4,43	4,09	0,84	0,34
(x)	x	logotype	4,29	4,32	0,59	0,03
x		systematicness&uniformity of advertising	3,95	4,27	0,49	0,32
x		typography of communication material	4,13	4,15	0,26	0,03
x		systemat.& uniformity of media selection	3,76	4,09	0,32	0,33
x	(x)	systematic.+uniform. of business cards	4,08	3,92	0,42	0,15
x		system.+unif. of style of communication	3,91	4,06	0,44	0,15
x	(x)	systematicness+uniform. of use of colors	3,92	4,04	0,48	0,11
x		systematic.+uniformity of signs & guides	3,60	3,90	0,16	0,30
x		systematicness+uniformity of bulletins	3,86	3,83	0,36	0,03
(x)	x	instruct. for use&write of name of firm	3,73	3,81	0,74	0,08
x		systemat.+uniformity of text types&fonts	3,64	3,76	0,29	0,12
(x)	x	systemat.+uniform. of package selection	3,65	3,14	0,34	0,50
	x	product codes etc.	3,56	3,34	0,12	0,22
x	(x)	systematic.+uniform. of printed material	3,54	3,47	0,58	0,06
	x	possible other symbols	3,13	3,29	0,24	0,16
x	(x)	importance of annual report as advertis.	3,19	3,04	0,54	0,15
		Communication policy - future time	industry	trade & service	P-value	mean diff.
x		systemat.+uniformity of customer service	4,32	4,49	0,89	0,17
x		systematicness&uniformity of advertising	4,09	4,27	0,26	0,18
	x	trademarks	4,27	4,10	**0,08**	0,16
(x)	x	logotype	4,19	4,25	0,34	0,06
x		systemat.& uniformity of media selection	3,95	4,13	0,23	0,18
x		system.+unif. of style of communication	4,01	4,12	0,62	0,10
x		systematicness & uniformity of brochures	4,10	4,09	0,85	0,01
x		typography of communication material	3,99	4,08	0,93	0,09
x	(x)	systematic.+uniformity of use of colors	3,90	4,03	0,78	0,13
x		systematicness + uniformity of bulletins	3,89	3,96	0,91	0,07
x	(x)	systematic.+uniform. of business cards	3,82	3,72	**0,03**	0,10
x		systemat.+uniformity of text types&fonts	3,72	3,80	0,22	0,08
x		systematic.+uniformity of signs & guides	3,65	3,79	0,27	0,15
(x)	x	systemat.+uniform. of package selection	3,78	3,55	0,38	0,24
(x)	x	instruct. for use&write of name of firm	3,61	3,73	0,52	0,12
x	(x)	importance of annual report as advertis.	3,64	3,63	0,62	0,01
x	(x)	systematic.+uniform. of printed material	3,63	3,42	**0,09**	0,21
	x	product codes etc.	3,56	3,40	0,71	0,16
	x	possible other symbols	3,34	3,55	0,68	0,21

Table 19. The communication policy in the present and future times by the provinces: mean values, P-values and the mean difference (cf. tables 8, 10 and 11).

s&u/ actc	symb/ passc	**Communication policy - present time**	Kuopio	Vaasa	P-value	mean diff.
x		systemat. + uniformity of customer service	4,58	4,49	0,68	0,08
(x)	x	logotype	4,32	4,29	0,90	0,03
	x	trademarks	4,29	4,23	0,14	0,06
x		systematicness and uniformity of brochures	4,25	4,06	0,42	0,19
x		typography of the communication material	4,22	4,04	0,70	0,17
x		systematicness & uniformity of advertising	4,13	4,09	0,23	0,04
x	(x)	systematicness + uniform. of business cards	4,10	3,87	0,65	0,23
x	(x)	systematicness + uniformity of use of colors	4,07	3,87	0,79	0,20
x		systemat. + unif. of style of communication	4,03	3,93	0,77	0,11
x		systemat. and uniformity of media selection	3,94	3,90	0,37	0,04
x		systematicness and uniformity of bulletins	3,87	3,82	0,33	0,06
x		systematic. + uniformity of signs & guides	3,84	3,63	**0,03**	0,21
(x)	x	instructions for use & write of name of firm	3,76	3,77	0,96	0,02
x		systemat. + uniformity of text types & fonts	3,82	3,55	0,24	0,27
x	(x)	systematic. + uniformity of printed material	3,58	3,41	0,60	0,17
	x	product codes etc.	3,53	3,35	0,28	0,18
(x)	x	systemat. + uniformity of package selection	3,47	3,30	0,98	0,17
x	(x)	importance of annual report as advertisem.	3,21	3,00	0,31	0,21
	x	possible other symbols	3,21	3,20	0,92	0,01
		Communication policy - future time	Kuopio	Vaasa	P-value	mean diff.
x		systemat. + uniformity of customer service	4,36	4,46	0,76	0,10
(x)	x	logotype	4,18	4,26	0,47	0,08
x		systematicness and uniformity of brochures	4,24	3,91	0,48	0,33
x		systematicness & uniformity of advertising	4,15	4,22	0,93	0,07
	x	trademarks	4,21	4,16	0,29	0,05
x		systemat. and uniformity of media selection	3,97	4,13	0,61	0,16
x		systemat. + unif. of style of communication	4,09	4,03	0,81	0,06
x		typography of the communication material	4,06	4,00	0,20	0,06
x	(x)	systematicness + uniformity of use of colors	3,98	3,94	0,64	0,03
x		systematicness and uniformity of bulletins	3,94	3,90	**0,04**	0,04
x	(x)	systematicness + uniform. of business cards	3,87	3,64	**0,08**	0,23
x		systematic. + uniformity of signs & guides	3,84	3,57	0,04	0,27
x		systemat. + uniformity of text types & fonts	3,80	3,71	0,16	0,10
x	(x)	importance of annual report as advertisem.	3,74	3,50	0,12	0,24
(x)	x	instructions for use & write of name of firm	3,68	3,66	0,48	0,02
(x)	x	systemat. + uniformity of package selection	3,67	3,65	0,73	0,02
	x	product codes etc.	3,58	3,36	0,24	0,22
x	(x)	systematic. + uniformity of printed material	3,55	3,50	0,41	0,05
	x	possible other symbols	3,45	3,43	0,51	0,02

Table 20. Mean values of mean values in communication policy.

means of means	present		future	
	active	passive	active	passive
industry	3,87	3,75	3,89	3,77
trade/service	3,94	3,65	3,94	3,74
Kuopio	3,95	3,75	3,94	3,79
Vaasa	3,81	3,63	3,88	3,71

The results of the t-tests show that the concrete fields of communication, i.e. the ones formed by the variables that were located in the technical factors of design management in factor analysis, were found in this material to be somewhat more important for the respondents than the more abstract, image-related ones were. This can be explained by the general fact that most often the concrete concepts of life, here in business life, are easier to be understood than the abstract ones. That could even subconsciously cause the phenomenon that the image-related functions were perceived to have less importance when the respondents evaluated the variables while answering the questionnaire.

Communication within its fields as an element of design management is presented in the figure 31. All of the variables considered by the researcher that were examined in the letter questionnaires and that measured the communication policy have been collected in the figure. The field of communication has been divided into three different fields according to the nature of the variables, and these fields are called marketing, symbolism, and the printed material and announcements. Those variables that can be determined to be shared by these three fields are stationed in the sectional areas of the circles.

When the data for this thesis was collected, there were but little signs of the amount of e-commerce of today. However, Internet with all its world wide offered possibilities is a significant method for a firm of any size to advertise its products and services. As the minimum, only a home page will do its own part of passive marketing; and investing somewhat more time and expertise, one can easily benefit the possibilities of new

technology in the business. A lot of development has to be done, though; some of the solutions made have not been technologically stable enough this far[312].

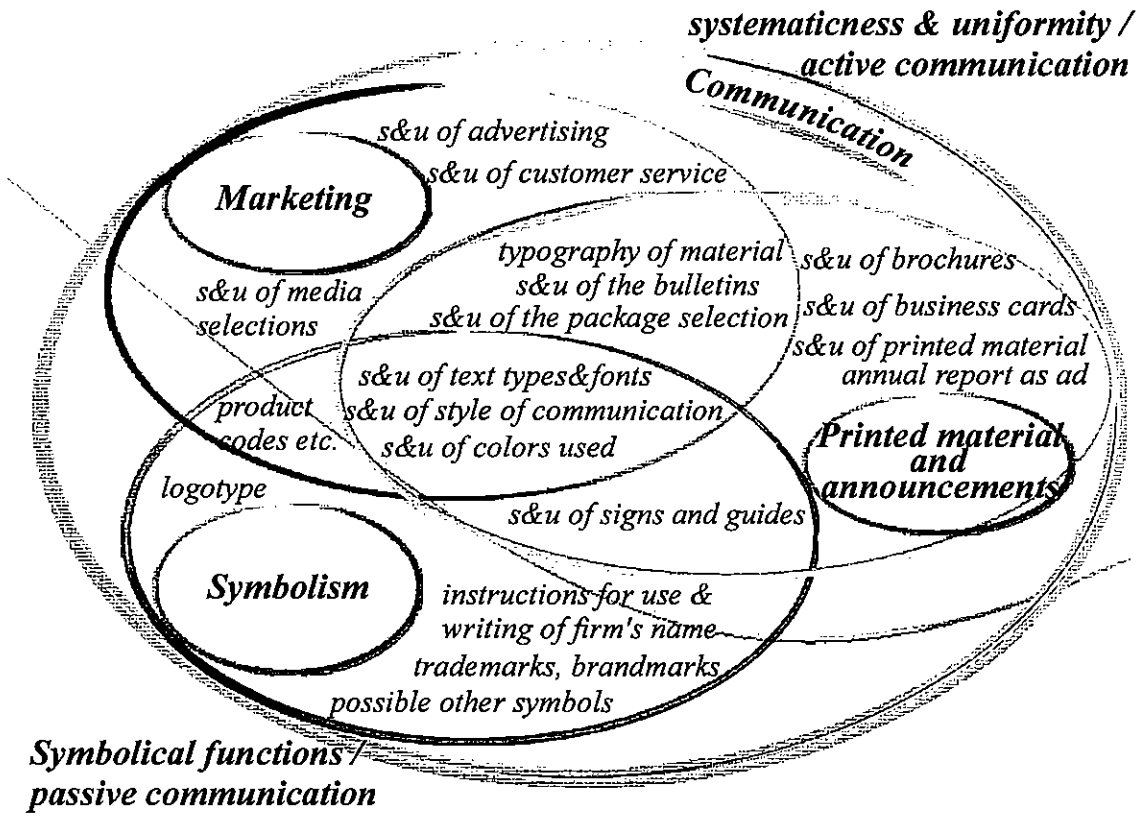

Figure 31. The communication practiced by a firm as a part of its design management policy.

312 see e.g. Niemistö 2001 *(source: http://www.izodia.com/finland/pr_1410.asp May 5th 2001)*; Markkinointi&Mainonta 2001 *(source: http://markkinointimainonta.talentum.com/doris/Doriswww.Dll?dpubl&SMmSNews,34556 November 6th 2001)*; Røsjorde 2001 *(source: http://-www.iconmedialab.com/news/press_releases/default.asp?news_id=1012&office=&year=&-keyword= December 3rd 2001)*; Junkkari 2001 *(source: http://www.helsinginsanomat.fi/uutiset/juttu.asp?id=20011204TA8 December 4th 2001)*

After the time of collecting the data for this research has brand management began more and more popular, at least as a term, and a subject of research and articles[313]. However, during the time of the data collection, there was but little discussion of brand management and the meaning of it, thus has the term brand itself in this research been treated only as a part of the symbolic characteristics of the communication of a firm.

Brand management, as it is seen today, has many similarities with the principles of design management[314]. Especially when it comes to corporate branding instead of pure product branding there is a distinct affinity between these two phenomena. Brand management, as well as design management, is a responsibility to be shared by everyone in the organization; brand management is a matter of identity and communication and thus a brand also is a promise to be kept; a promise to the customer. Brand can be seen as an umbrella covering the customers, channels, employees, partners, shareholders, and competitors.[315] Not to forget the meaning of e.g. product design in the consumer view of the brand[316] - the linkage between brand management and design management could be a fruitful subject for further research.

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313 See e.g. Schultz 1999: 14; cf. Laakso 1999: 22-29; Markkanen 1999: 21-22; Taipale 1999a; Taipale 1999b; Panigyrakis and Veloutsou 2000: 166; Horttana 2000; Vuorio 2000; WOW! Media 2000 (*source: http://www.wow.fi July 19th 2000)*

314 Hardy, Chung and So 2000: 68

315 Schultz 1999: 12, 21; Allen 2000: 35-37; Speak 2000: 48, 50-52; cf. Sametz 2000: 73

316 Schultz 1999: 15

7 DESIGN MANAGEMENT MODEL

When models are framed to guide and facilitate the functions of practical business life it is easily ended up with considerations of which would be a meaningful approach to the model and also a meaningful mode of representation of it in order that it would simultaneously support both the needs and targets of the business life and the scientific research. One solution to this problem is to start treating the modelling process through framing of questions.

When the design management model introduced here was built up, the real utilization ability was set as an important target alongside with the scientific requirements. Thus it was started up to resolve the model with the help of concrete questions. The framing of questions and similarly the modelling follows the tripartition into product, environment and communication that has been presented earlier in this study. Also the letter questionnaires and interviews made in connection with the model building were divided into the same fields as these.

When a design management model is to be built, it first has to be considered about which factors will have an influence on the matter like which the design management policy of a firm will by time be formed up to be - and which it is wished to systematically be formed up to be like. If generalized it can be stated that there is some kind of design management followed in every firm, it only is still rare that the process would be called that or even be talked about with that name, or that it even would be consciously perceived to be an activity under a particular concept. A firm has a product that it manufactures inside its premises - in its environment - and that it communicates about. How systematic this activity is, depends totally on the own principles of the firm and on that inside order of importance it has created for itself.

The concept as itself, "design management", "design leadership" or "the systematic management of design" that the researcher sometimes has used during her lectures, is not

important as such. A concept can not have a position of an absolute value. It is not important how the subjects are called but it is that they will be done.

Even though a kind of a template it is suggested here in this research to help in coordinating the design management functions and in the identifying of the contexts of them, it also is wished to emphasize that the plans never can be everlasting ones. What would here, in the light of this model, seem to be the most suitable solution right now, might not be that in the future anymore. Nothing is so permanent as the law of the eternal change[317]. The world is changing around us and we will be changing with it, that is why a firm will need its people with cultural know how, its marketing personnel and most of all, its good contact networks to all of its interest groups, to the customers as well as to the cooperation partners of the firm.

It is not possible to foretell the future very far ahead, and that is not even necessary, most important is to well-timely, fast enough react to the ever changing situations. Thus it can be stated that design management never is a project, a problem solving solution of a one-time nature, but a continuing, dynamic process where the unnecessary functions will be discarded and replaced by new ones. Nobody knows what the world will be like in the new millennium, nobody even knows, what the next year will bring in front of us; a firm only has to be able to prepare itself for the future[318] in order to be able to know how to avoid the threats and to utilize the opportunities presented for it. And in purpose to be worth of attention even tomorrow, too, as a customer, as a seller, as a competitor and as a partner as well.

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317 cf. Luhta 1997: 10

318 cf. Hamel and Prahalad 1994: 128, 197-198

7.1 Processing the results of the research

The purpose of this study was to explain the meaning, content, nature and usability of design management as a strategic instrument. A design management model presented in the next subchapter was created by using the research results, and the functions and attitudes towards design management of the firms acting into different lines of business and in two different provinces were also explained there. The model also was tested in two different groups of firms during the years 1995-1997, and in an organization operating in the public sector during the years 1997-2000.

It was not perceived any significant differences in the research in the attitudes towards the elements of design management between the firms studied that acted in the industry and in the trade & services. Also the design management activities of the firms located in the Vaasa and Kuopio provinces and the understanding of the importance of the elements of design management were very similar.

Perhaps the fact that design management was not very well known as a term had an influence in the great dispersion of the answers when the people that were interviewed were asked about how consciously design management had in the firm been familiarized with (appendix 3, question E12). In the scale from -3 to +3 where -3 = *we have not been familiarized with design management consciously*, and +3 = *we have been familiarized with design management consciously*, the mean value was 0,72 and the standard deviation was 2,05, which shows that there also were clear differences between the respondents. Even though the conscious applying of design management, exactly under this concept, maybe had been left with lesser attention, it obviously had been paid attention to the fields of it in the firms studied.

The importance of the elements of product and communication got clearly emphasized when compared with the one of environment. A corporate environment that had been left with less attention was often justified in the firms by stating that there was so very seldom anyone to visit them. However, even during the interviews there were in many of the firms

several customer contacts that could be followed and in which the customer actually arrived in the firm. The understanding represented in the firms of the functional quality of their environment towards the customer was often much higher than the observations made by the interviewers.

Attention had practically in every one of the firms studied been consciously paid to the quality and functionality of the product and communication. However, those are the kind of elements of traditional marketing that are the easiest ones to be visualized and thus they also are the kind of areas of action that there are not many people to deny the importance and usability of them. In some of the firms it also had consciously been paid attention to the functionality and pleasantness of the environment, too, because it had there been understood to be a resource and a competitive parameter that had not been utilized before.

Also the quality of contacts and how reachable the firm is had in one of the firms been stated to be such an important matter that one of the new production devices had been named after a pleasant secretary of the customer. Reciprocally the customers remembered especially the person in the telephone exchange due to her willingness to be of service and for her friendly efficiency.

All the elements of design management were in the research materials perceived to be rather important, but commitment to the action was not very conscious. Product quality together with a functional price/quality relationship rose up to be the clearest single competitive parameter with which firms wished to convince their customers of the fact that the product was worth of buying (appendix 2, the open question J01): fifty-three in all of the respondents of the letter questionnaire mentioned quality and twenty-three of the respondents mentioned price/quality relationship as a convincing method like that (see table 21).

On grounds of the research results the product quality could be seen as to be on loosing its importance as a convincing competitive parameter, because it does not bring much new into the normal commerce phraseology but is indisputably a basic selling argument of, one

could say, most of the firms. A product of a good quality seems even to be becoming a matter of course with witch it would not any longer be possible to be differed from the competitor, at least not on the paper; but in order to gain competitive advantage already on an early stage of the commercial activities a firm has to be able to invent some additional arguments to support its sales work.

Table 21. Means to convince the customer of the product[319].

answer	*n*	%
convincibility, reliability and reputation	58	17,8%
quality	53	16,3%
customer orientation, service and after purchase marketing	48	14,8%
characteristics of the product and image factors	44	13,5%
marketing communication, contacts and contents	43	13,2%
(advantageous) price and price/quality relationship	42	12,9%
references; researches and results	36	11,1%
none	1	0,3%
total	325	100,0%

As an equally strong means of convincing as quality there came up the unity of convincibility, reliability and reputation (58 mentions, cf. table 21 and figure 32). Especially the emphasizing of the corporate size and professional skills were popular means of convincing in this connection when it was explained how to win the customer to be a buyer of the product.

319 The total of the answers was 159, which means that there were about two means in average listed for this question in each paper. Quality or quality/price relationship was mentioned 76 times which is 48% of the answers and 23% of all of the listed different means there. Thus it was here in this material the most popular mean for convincing the customer of the product.

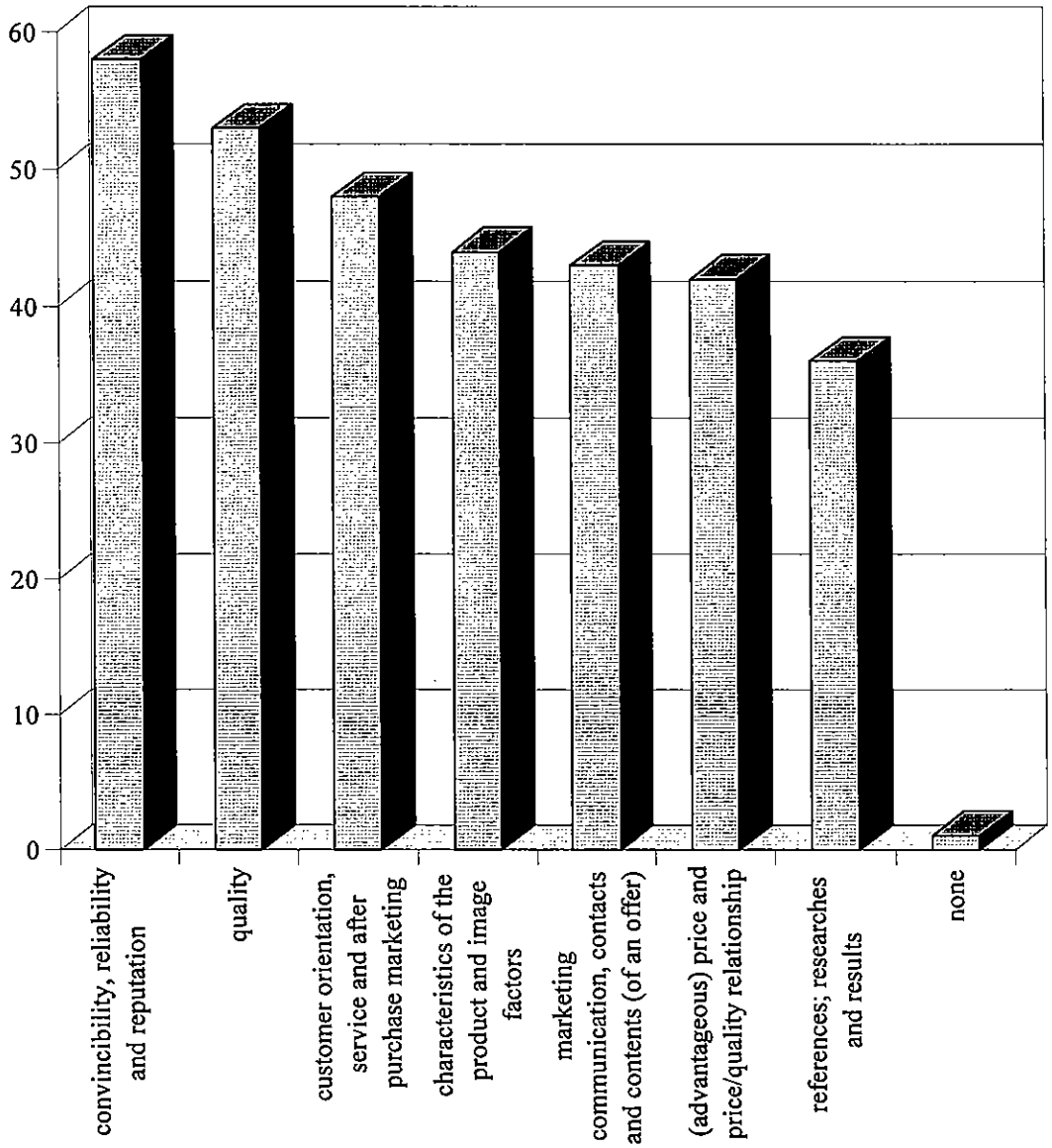

Figure 32. Means that are used in purpose to convince the customer of the product.

Also the importance of customer orientation and of the willingness to be of service were evident as competitive parameters. The distribution of different competitive parameters was very even in all; the 159 respondents that answered the questions mentioned a total of 325 different means to convince the customer of the matter that the product of their company was worth of buying. One of the respondents saw that their company had no

need to convince their customers in any means, otherwise the answers were divided in between 36 and 58 mentions (11% - 18%).

The firms were in the questionnaire also asked to describe how they stated reasons for the mutual benefits for their suppliers/subcontractors. A total of 184 answers came to this open question from 159 respondents that answered the questionnaire. The classification of the answers in the table 22, and in the figure 33 is made by the researcher during the analyzing of the materials.

Table 22. Sources for mutual benefits[320].

Answer	n	%
reliability, stability and persistency	69	37,5%
credibility	25	13,6%
networking and cooperation	25	13,6%
quality and product development	23	12,5%
common economic interest	23	12,5%
profitableness and price/quality relationship	14	7,6%
none	5	2,7%
total	184	100,0%

The reliability, stability and persistency of the business connections was by far the most popular reasoning for the mutual benefits (69 answers). Also in this connection the size of the firm rose up as a strong reasoning for stable business connections and through that as a source of mutual benefit. The other groups of reasoning means were very even by their

320 The total of the answers for the letter questionnaire was 159 and thus the average amount of means listed for this question was 1,2.

amounts of answers; all of them were about at the size of 10 percentage units. Five of the respondents of the questionnaire felt that there was no need in their companies to state any reasons for the mutual benefits at all.

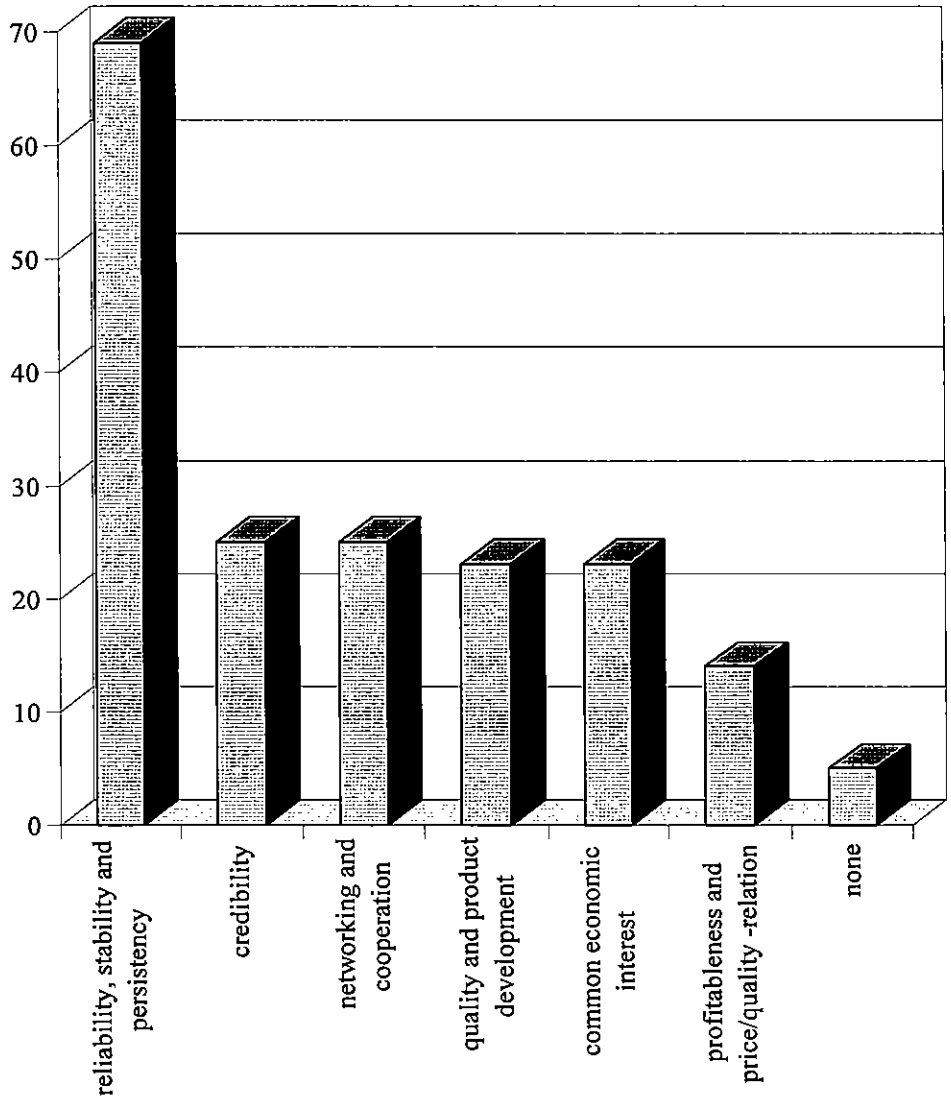

Figure 33. Reasons for mutual benefits.

Network thinking appeared also in the answers of this questionnaire as a means to state reasons for the mutual benefits (25 mentions). The experience of "being in the same boat" and pursuing through that the mutual benefits - also others than the economical one - will be rising up as a noteworthy model of thinking into the business life. Credibility (25 mentions) is one of the most important means in getting into the desired net and an essential part of creating a tempting net. Quality and a proper price/quality relationship will act as means to convince the customer as well as the cooperation partners of the matter that the firm will be a noteworthy business partner. Networking also is a modern means to achieve the benefits of a bigger size, i.e. for example credibility and visibility, with smaller risks.

When it is considered about what design management as a strategic instrument can give for a firm for example in purpose to gain competitive advantage through it, with the help of it, commitment arises as an answer, most of all. It is possible to direct the activities of a firm with design management to be uniform so that they will support the image the firm wishes to express of itself. The importance of a controlled corporate image has been recognized in the firms, but the correspondence with practice and plans still is not generally taken high. It also would be required to have commitment with the matter that it actually was acted according to the guidelines created. If the principles of design management only are written down on the paper they will be useless, to be useful they first have to become a part of the normal activities.

No significant differences between the firms studied were to be found when it came to the attitudes towards the elements of design management, when examined by the lines of business or by the provinces. Thus the design management model that is presented as following is not tied to any particular line of business nor to a location, but it has been wished to be done the kind of one that it could be used by different firms. Thus every firm can consider about which is the element the value of which it emphasizes in its own activities. The balance of the final result with the activities, strategy, objectives and goals of the firm is essential.

Competitive advantage cannot be gained until the customer prefers the product of the firm and the activities and image of the firm will agree with the identity, corporate culture, business policy and strategic goals of it - and the activities are economically profitable. The strong position gotten by reliability, stability and persistency, when the respondents of the questionnaire described with their own words the means of their firms to develop convincibility, supports the understanding that there are possibilities in design management to gain to a firm competitive advantage that finally will compensate the resources devoted to the activity, exactly through a stronger convincibility. Design management is a means to coordinate and direct everything a firm does to be uniform. Even if used as a strategic instrument, it is a slow process and thus it requires time and commitment to be successful and to gain competitive advantage.

7.2 Design management as a model

A design management model was decided to be framed by stating questions to clarify the concept and its contents. The answers gained then shaped the model and thus modified it to be more useful and practical than a purely theoretic one would have been. The questionnaire used in collecting the data by interviews is presented in appendix 5.

There were two different groups of companies and an organization that operated in the public sector as case ones while the model was tested. The first group of companies was at the time of their contact to the researcher in quite a difficult situation while having two very different main branches of business in addition of some other minor branches that had nothing in common with the main ones. The group of companies had realized the inconveniences of the situation and they contacted the researcher in purpose to ask to become a case company for this study.

The education, testing, interviewing and observation, and researching the group of companies took several months and it became clearer and clearer how urgent it was for the

group of companies to clarify its strategy - and that did certainly not include only the design management strategy of its. The then managing director took a very emotional point of view against the suggestions for the orientation of their design management related functions, and finally it was commonly agreed that the results of the research with their group of companies would not be used as a case study. However, interesting and valuable experience was gained during that time, and even though it was agreed not to mention the name of the group of companies in this study, the model presented in here was tested there.

The then managing director of the group of companies has since had to leave and the group of companies has also seemed to be quite a windy one for its management. However, many of the changes in the organizational structure that arose at that time to be vital have since been done.

The design management model was also tested in another group or firms as well. Unlike the first one, this testing took only a few months of time including factory visits, group interviews, questionnairies and an educational session. Feedback was also given twice during that time and experiences gained strengthened the interpretation of the contents of the design management model created.

The third case organization for the testing of the design management model presented in here was a kind of a network organization: the Technology Research Center Technobothnia, which was located in Vaasa, Finland years 1997-2000. Technobothnia was situated in an old cotton mill originating from 1892 and it was established by the Swedish Polytechnic, Finland; the Vaasa Polytechnic, and the University of Vaasa year 1997. Technobothnia offered services in the fields of research, product development, measurement, and general development to companies and organizations supporting entrepreneurship.[321]

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321 *See e.g.* Technology Research Center Technobothnia 2000 and Tekniikan tutkimuskeskus Technobothnia 2000 *(sources: http://www.uwasa.fi/techno/ and http:// www.uwasa.fi/techno/-Techno2000 July 7th 2000)*

The nature of a network organization was clear in Technobothnia. There were three strong organizational cultures behind the commonly owned research center, which established its very own identity and image differentiating from the educational organizations behind it. The writer of this study has had the privilege of being a part of the creating of this brand new identity while working in Technobothnia as a researcher and as a special researcher. The opportunity of creating a design management system from the very beginning of a new organization was a challenging basis for the testing of the design management model presented in here.

In a network organization like Technobothnia there were as many preferred identities as there were organizations behind it - or even projects inside it. The educational establishments seeked for different contact groups than the research center did; therefore the desirable image for seeking for new students or for seeking for assignments from the local or national industry was and had to be different. Design management and especially corporate communication processes have been subjects for even emotional quarrels between Technobothnia and some representatives of the different organizations behind it, but, pleased to say, during year 2000 Technobothnia was recognized from its unique appearance in e.g. advertisements, brochures, Technobothnia News periodical and Internet pages when measured by the spontaneous comments of the business contacts.

The design management development took three years and the process was still under development, when some major organizational changes took place in the organizational structure of Technobothnia, changes that undoubtedly had influence in Technobothnia's design management process as well. During years 1997 to 2000 Technobothnia was juridically a part of the University of Vaasa, which was an arrangement that the other cooperative partners, i.e. the polytechnics, considered not to be a good one for them, especially when the operations of the research center got wider and stronger. Thus in December 2000 the owners of the Research Center Technobothnia decided to close the research center and to establish a new limited company to start with the same name. However, the name

Technobothnia Ltd. could not be registered and the new name has not been published yet on the time of this writing.[322]

Nevertheless, this has been a great opportunity to test, with an inside view in an organization, the design management model created here. The need for continuity in the design management process as well as the ever changing nature of corporate situations has been clearly recognizable not only in the hypothetic model that it was before the testing but in the real business life as well.

When it comes to design management applications, Technobothnia was quite different as a case organization, especially when compared to the average material collected for this research. It was quite typical in this material that environment was not felt to be of much importance as an image factor, whereas in Technobothnia environment was a central identity factor from the very beginning. Technobothnia's location in an over 100 years old cotton mill milieu was also utilized as a differentiating factor in its communication materials.

Technobothnia's product as such was a high technology service product, which had a purely technological background especially when the activities in the organization still were young. Technobothnia's product image was in an early stage created on the grounds of the expertise of the background organizations, and within times the image was planned to be more and more created on grounds of the succeeded projects and thus on the case examples made there.[323]

The opinion management has of the subject in hand is essential for design management to be successful. The manager of the Research Center Technobothnia (i.e. years 1997-2000) had considered the high technical level of the characteristics of product, environment and communication as important. There were always the latest information technology and

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322 See e.g. University of Vaasa 2001 *(source: http://www.uwasa.fi/vuosikertomus00/tapahtui.-html August 13th 2001)*

323 *Based on several interviews with manager Raatikainen during years 1997-2000*

software versions introduced. This was also an important image factor as Technobothnia is a developmental organization of technology.[324]

The emphasizing of technology showed itself also in the requirements that all the graphic materials had to be compatible with the software and PC-devices of the organization. First the graphical services - advertisements, brochures - were bought outside Technobothnia from advertising agencies, but especially the demand of compatibility with the own devices and software was too much for them. Finally it was ended up with an own production in these.[325]

The use of own design and production, and versatile information technology linked devices did also give an opportunity to create unique and original design management applications with reasonable costs. Besides the conventional paper and electrical (Internet) applications there were done designs from several materials, that including also plastic, metal, and even flax fiber, as there was research done in Technobothnia also of the technical applications of flax material.[326]

Besides the emphasizing of the technical components of design management it is important to notice that there also was a realistic attitude towards the image-related ones as well in Technobothnia. It was understood there that image is something that cannot be bought as an outside service but it has to be done oneself. Although the slow nature of design management process may cause impatience, the goals and the reaching of them also have to be proportioned to the need of time in there.[327]

Product image was planned to be developed within time in Technobothnia. It was understood to be a process that needs successful product development and success in the

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324 *Based on several interviews with Raatikainen during years 1997-2000*

325 *Based on several interviews with Raatikainen during years 1997-2000*

326 *Based on several interviews with Raatikainen during years 1997-2000*

327 *Based on several interviews with Raatikainen during years 1997-2000*

markets, thus it aimed at the future. In the construction of the environmental image of Technobothnia in its design management process the location of the organization was utilized as well as the past of the environment, over 150 years of technical education and research. The image of Technobothnia's communication was planned to be developed every day, then and there when needed; logical choices made are vital for success in image construction.

Technobothnia as a case also shows how entangled together the elements of design management are. The basis for Technobothnia's design management process was the knowledge and expertise of its personnel in technology. However, the milieu of a modern high technology laboratory and research center in an old cotton mill formed the basis for communication design. In a young organization it is vital to be noticed and to be known, to stand out, in purpose to get contacts and thus assignments.

Technobothnia was located in a unique environment and this opportunity was used in its communication policy throughout the materials made. In Technobothnia the technical factors of design management also made up most of the image ones as well, mostly because of the nature of operations and activities in there. When design management was used in Technobothnia as a strategic instrument, it worked as a coordinating function throughout the communication policy, environmental design and product development. Thus Technobothnia was a tempting case for this research project.

7.2.1 The first stage of the design management model: the beginning

The framing of the design management model starts with an "input" stage (figure 34). The first question that an answer is searched for in the model is *where from does the design management model get its use power*. The answer to the question *where from the whole process of this is to be started* will logically be found from the traditional management and marketing literature.

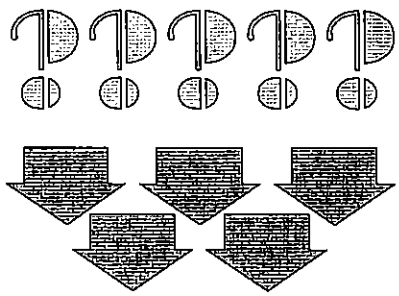

Figure 34. The beginning of framing the design management model.

The first question is where the design management process should begin from. The answer for the question can be sought through continued questions: what is the present competitive situation of the firm? Who are its most important competitors, how about cooperation partners? On grounds of which the firm has created its subcontractor contacts?

It is also important to explain, which are the strategic basic solutions of the firm. Which are the competitive parameters the firm uses, what is the mutual order of importance of them? What are the marketing measures and strategies like? And where does the firm take place in the porterian tripartition - is it, generally taken, a firm that differentiates, a kind of one that pursues for overall cost leadership, does it concentrate itself on focusing or is it a "jack-of-all-trades" that could be going on vanishing into a gray no-man's-land?[328]

It should also be explained which functions are considered to be the primary ones in the activities of the firm. What is the line of business of the firm and what is the general competitive situation of the lines of business closely related to it like? And finally: how well has it been taken care of what first is to be seen and that influences outside from the firm - what message does its products, environment and communication signal about?

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328 Cf. e.g. Porter 1984: 63; 1985a: 11-12, 16-17; 1985b: 25; 1991a: 64

The strategic basic solutions like in the figure 35 will act as the use power of the design management model. To be able to move on the next stage of the model a firm first has to solve the problem of what it is, why it has been established and for what purposes does it make its decisions.

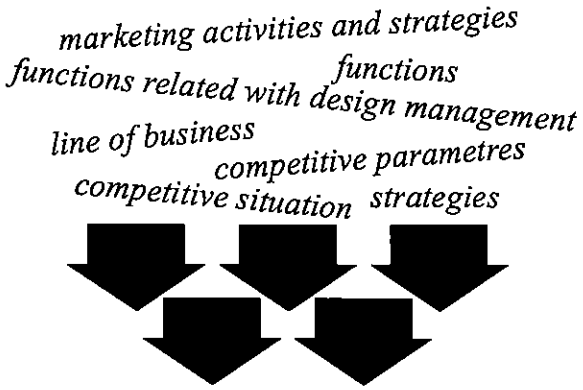

Figure 35. The using power of the design management model.

7.2.2 The second stage of the design management model: three basic elements

The second question will be formed of three parts with which a firm can better learn to know itself and learn to understand, for what purpose it is on the markets. By going through these questions the firm will get closer to the answer to the basic problem of which are those areas of a superior knowledge for which it will be worth the firm to exist; what is the surplus value that the firm will add to its product, activities and to that network it is a part of.

By learning to understand the fields of its business policy a firm can get deeper into the backgrounds of them and thus explain to itself which are the real success factors of its. When a firm knows itself it also will be capable of tying better cooperation nets when it has the knowledge needed for choosing the cooperation partners of its to be those firms that support the same values and aspirations as it does.

It is always easier to row a boat when all the rowers are going in the same direction. It either has to be decided together which this direction will be, or when that is not possible, those partners that are of their own free will going on exactly the same direction should be tried to be found.[329]

The first basic element of design management is product. When it comes to the product it is essential to explain, which is the image that is pursued for with it. It also has to be defined, what does the image of the firm signal from the product. And how about the image of the product, what does it signal from the firm - are these signals compatible with each other?

If the product is of such a nature that there are ergonomic characters included, is it ergonomic enough? It also should be thought about, whether it is possible to modulate the product or not[330] and which are the use characteristics of it.[331] Then there is also the technical functioning of the product, and it has also to be considered about, whether it had been paid attention to the product safety factors in the product development process or not.

How about the appearance of the product - is the product aesthetic enough? Is it easy to be serviced and how does it suit into its use environment? Is the manufacturing of the product economical and has it been paid attention enough to the recycling aspects of the product? An important question is also how well the requirements set for the product by the markets have been inquired about and whether they have been noticed in the product development activities or not.[332] And finally, it could be asked about, whether the product has a so-called reaching-for-the-future and innovativity value in it or not.[333]

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329 Cf. Lewis 1990: 173

330 see e.g. Kaivos 1985: 4-7; Laurila 1987: 14

331 Cf. e.g. Kulvik 1977: 81

332 Cf. Kulvik 1977: 47, 85-86; Kääpä 1979: 23; Vuorikari 1987: 27-28

333 Cf. e.g. Design 1985: 2; Takala and Valtanen 1990: 16; Kotler 1997: 288

The second part of answering in the question made in this subchapter is environment, the second basic element of design management. It has to be considered about, how well the buildings of a firm will answer the actual needs and if it has been paid attention to the use and job satisfaction in the furniture and equipment of the premises. And whether the office machinery suit into the use environment of theirs and meet the requirements of ergonomics or not.

Other questions included in this part are the questions about what kinds of materials there have been used in the premises and environment. How well-planned has the building of new and renovating the old been? Which architectonic line has been followed on in the firm and how well for example the colors used in the concrete environment of the firm do suit into the image the firm wishes to signal?

The outside environment of the firm, then, for example the flower arrangements and their design - how have they been planned? For which reasons the machines and equipment, cars and hauling equipment have been chosen? And finally there is the question about the matter, what all of these signal from the firm with the condition and cleanness of theirs - or with the lack of it.

Communication is the third basic element of design management and thus it is the final part of this second question that forms the second stage of the design management model. Here it comes to the question about the existence of a logotype or for example the kind of a logo that is made from the name of the firm. If a firm has a logo, what does it tell about the firm and its products? Why it originally was designed and what it is wished to signal from the firm? And which kind of trademarks the firm has on its use and what do they tell about the firm?

There is also the question about the matter, whether the firm has a manual that controls the usage and way of writing of its name or not. And which kinds of rules there are for the possible subsidiary companies and the use of their names? It also should be considered about, what the product codes among others tell about the firm and its products; and what

kind of other symbols the firm has at its use. There is also often signs and guide tables in a firm and there rises the question whether the choosing of them has been systematic and uniform or not. Same question rises up in connection with the choosing of the packages the firm uses.

How about the bulletins published by the firm, has it been paid attention enough to the systematicalness and uniformity of them? Here it comes to the question about as how important the appearance of the printed material and the print quality of that material has been taken in the firm. Has it been deliberated about the selection principles of the text types and fonts, and colors used in the firm there in the communications, and how controlled the use of them is? What is the style of the communication, advertising and media selections of the firm like, as how important it has been taken to maintain the uniformity of the selections and the look chosen?

A very important part of a firm's communication is its customer service, and close to that, the behavior of its personnel. The fact how successful, functional and practical the customer service actions are and how naturally kind and polite the behavior of all of the personnel is, shall be taken as a vital competition parameter; that also including the uniformity of the services given. Attention should also be paid at the matter, how the personnel know and will follow the policy of the firm also in their customer related activities.

Last but not least, there are also several business cards in a firm and firms usually send for example Christmas greetings, among others, so the position of those as well as the one of for example invitation cards should be taken under consideration as subsidiary media that either support the corporate image or gnaw it. There are a huge amount of different brochures in many firms, so the systematicalness of the design and forming of them is an important question. And, however, it should be paid attention to the annual report of the firm also as an advertisement for the interest groups of the firm.

When these questions above are answered the next stage of the design management model can be reached. In the figure 36 there it has been simplified those fields of the design management of a firm and of the three most important basic elements of the whole activity of it that must be in shape in order to make the firm to be able to successfully move on considering about the questions including in the next stage.

In order to be in shape the product of a firm has to suit the image of the firm, to be uniform with the functions of the firm and it also has to have the kind of use value that will justify its existence. The environment of the firm also has to harmonize with the image pursued by the firm and it has to be compatible with the functions of the firm. In purpose to be able to gain surplus value through the environment of the firm, there has to be stated an absolute requirement of functionality for it. Even the most aesthetic environment has no value unless it meets the requirements of functionality - and unless it is pleasant and meaningful to work in it.

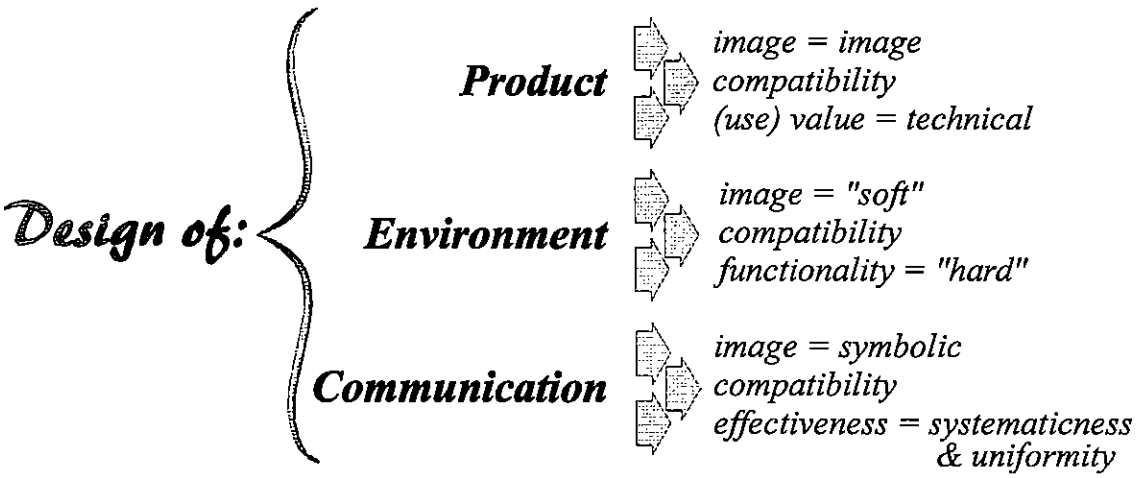

Figure 36. Product, environment and communication as essential elements of the design management model.

A succeeded communication also includes the requirements of suiting in the image and of the general compatibility. Communication has also to be affective in purpose to have a reason to practice it. A firm always signals, communicates from itself. With the means of passive communication it expresses the true essential nature of its, with the means of active communication it expresses what it wishes to be (cf. e.g. the results of the factor analysis, chapter 3). A succeeded communication coordinates both of these aspects into the field of compatibility and supports the corporate image.

The researcher of this study has had an opportunity to be closely involved with a process that aims at reorganizing and redesigning the visual materials of a firm that belongs in the group of small and medium sized enterprises in Finland. The project with this firm began when the management of the firm first ordered a design of a new product label from a firm that offers design and management development services.

During the negotiations between the firm of this case and the designer, the need to reorganize also the other visual aspects of the firm so that they all would reflect the picture of a uniform corporate identity came across. The customer firm was not satisfied with the previous logotype of its that consisted of simple, geometrically shaped figures. A new logotype was designed to better reflect the human and cheerful identity of the firm that manufactures sausages and other delicatessen, as well as the personal skills and experience of its personnel. Also the individual characteristics of a small firm were wished to be seen in the new logotype that was designed on the basis of the new label that had been ordered earlier.

The new logotype managed to visualize well the elements that already were in the name of the firm and that had a linkage with the manufacturing processes and the skills of the branch. The customers of the firm also gave positive feedback concerning the new logotype; it was perceived to reflect well the human image of the firm, image that had been developed during a long period of time. The new logotype was designed to consists of two, sketch-like male characters, "the master and his assistant", of the main product of the firm

and also of the new slogan that was designed on the basis of the registered trademark of the firm.

The colors used in the logotype were chosen to be easily reproduced on the printed materials. Also the fonts used and the colors of them were designed to reflect the warm and human identity of the firm. The chosen visual image, the central point of which is the new logotype, has during the past few years been included in all the visual materials the firm uses during its everyday activities, one by one based on the need and financial resources: envelopes, order forms, covering letters, sales promotion materials to be mentioned. The process has not still reached an end; the firm constantly orders new forms and materials to be redesigned as the older ones run out.

The firm of this case chose a reasonable way to handle the reorganizing and redesigning of its communication materials. There will not be any large, separate design costs when new materials will not replace the old ones until they would have been reordered anyway. The use of the same designer also guarantees the style and stability of the chosen line.

7.2.3 The third stage of the design management model: reality

When a firm has explained itself the meaning and nature of its product, environment and communication it is time for the next stage of the design management model: now the firm has to explain itself, which are the factors that influence in the reality where and from which the firm lives. Also in this stage of the design management model the firm is, once again, in front of questions that need to be answered.

The third basic question is, which attitude the firm has in its activities towards the positive and negative energies presented earlier in this study; how it avoids falling into the circle of negative energy and how it, on the other hand, will be capable of optimally utilizing the opportunities offered by the positive energy. Does the firm act on the grounds of illusions

and delusions, or is there, as the basis of the solutions, an iron knowledge of what the true identity of the firm really is?

An important question is also, whether it is known exactly, what the customers and cooperation partners think about the firm or not, how credible and of how good quality they will take the firm and its functions. Is the firm capable of utilizing the visions and creativity, of harnessing innovativity to be the use power in its intentions to reach the goals set?

As the use powers of the negative energy there can be mentioned illusions, presumptions, fears and beliefs, all those delusions a firm has of itself and of its functions, as the factors that make the general dissatisfaction, uncertainty and defeatism concrete. Unless the firm itself is not really aware of what it does and how well it is used to get through its tasks[334], it cannot be capable of getting the interest groups of its, either, to be convinced of its functionality.

The use power of the positive energy, on the other hand, is to be found from the honest working and toil, almost like according to the Protestant ethics[335]. All the hopes and aspirations, goals and visions that direct the firm to a better and better circle in the circulation aiming at succeeding, in the circulation that follows the design spiral, generate a fruitful soil for creativity and innovativity to create something that the firm can be proud of: an unique product, functional solutions for the premises, an unforgettable advertising campaign - whatever the firm will consider as to be a way to succeeding.

In the research made the firms were asked to name examples of both the succeeded and failed product, environment and communication. It seemed to be difficult for most of the firms to figure out anything positive nor negative to say about the environment of theirs, but the examples of succeeding in the products and communication were very easy to find.

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334 cf. Hamel and Prahalad 1994: 224-225

335 see e.g. Weber 1990: especially page 117

Especially the kinds of products and communication materials that had gotten positive feedback also from the outside of the firm were taken as succeeded ones. The most common ones of the failures were the ones where there had occurred discoloration in the printing of the communication material. Mainly the firms had a positive attitude towards the opportunities offered by the design management functions of theirs (see table 23).

Table 23. Examples of succeeded and failed fields of design management.

	An example of success	An example of failure	No example of either one
Product	**72%**	30%	28%
Environment	30%	19%	**65%**
Communication	**74%**	26%	26%

There are several means on choosing a product, or a product concept, to be commercialized. There are also many subjects worth of consideration, before the decisions can be made, as to mention product costs, customer acceptance, design and marketing, as well as manufacturing that all have a significant purpose in developing successful products[336].

The ideas are plenty and many of them do never come true. But it would be desirable that those ones that are accepted for further development created an even stronger basis for what the firm considers important to be achieved. The reality of the firm and the factors influencing it, with the positive and negative energies of them, is visualized in the figure 37.

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336 cf. e.g. Srinivasan, Lovejoy and Beach 1997: 154-163

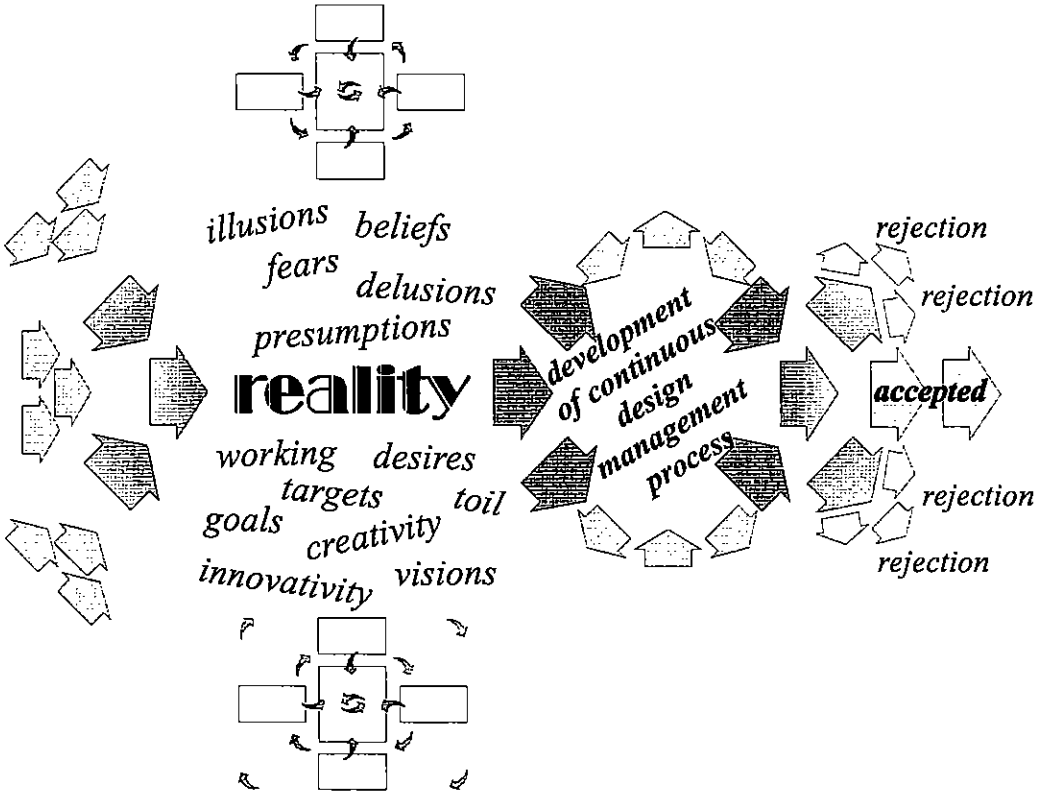

Figure 37. The reality of the firm and the factors influencing it.

7.2.4 The fourth stage of the design management model: succeeding

The firms were asked in the letter questionnaire to define two terms that were quite alike: succeeding (*onnistuminen*) and prosperity (*menestyminen*). With this open question it was wished to explain, how the firms felt the content of these concepts in their own activities to be.

As a thread through the answers it can be taken that prosperity was mostly perceived as something economical, measurable in money or otherwise quantitatively definable. Succeeding therefore was perceived to be something connected in the image factors, qualitative and similarly as something that covered also the factors included in prosperity: when one has been prosperous, he/she also has succeeded (see also figure 38). The

distribution of the answers on the questions *"how would You define **succeeding**; according to Your opinion, when has Your firm succeeded in its activities"* and *"how would You define **prosperity**; according to Your opinion, when has Your firm been prosperous in its activities"* has been presented in the table 24.

Table 24. Definitions of succeeding and prosperity.

Definition ↘	**succeeding**	*n*	**prosperity**	*n*
quantitative	economic result	24	economic result, funds, market share	69
qualitative	customer satisfaction, continuity of customer relationship	72	customer satisfaction, corporate image	20
quantitative and qualitative	*incl. the ones above*	50	*incl. the ones above*	56

As a whole the answers supported the presumption that there are as many attitudes towards succeeding and prosperity as there are people answering these questions. It is every firm itself that defines when it feels like having succeeded according to the goals it has set. Succeeding is a kind of comprehensive prosperity, and that is why it is the goal and the ultimate objective of the design management model. Every firm defines itself when it has succeeded in its aspirations; when the design management model carried through by it has yielded the result pursued.

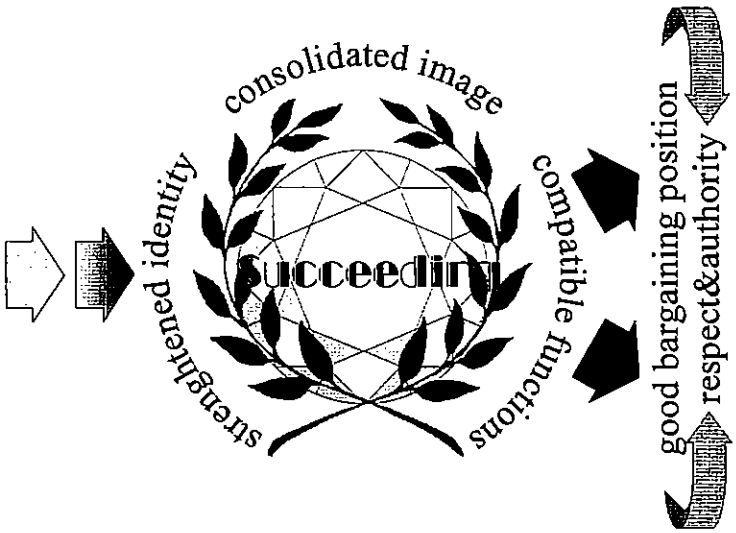

Figure 38. Succeeding.

7.2.5 Continuity in the design management model

The design management model formed of the parts described above as a whole is presented in the figure 39. The circular shape of the model illustrates the never-ending nature of the design management process[337], where the end of the old always forms up a starting point for the generation of the new. Thus continuity is a basic element of the model that on its part makes design management a useful instrument of corporate strategy; it adapts the changes of the surrounding world, changes when needed but remains the same where appreciated.

337 cf. e.g. Markkanen 1999: 37

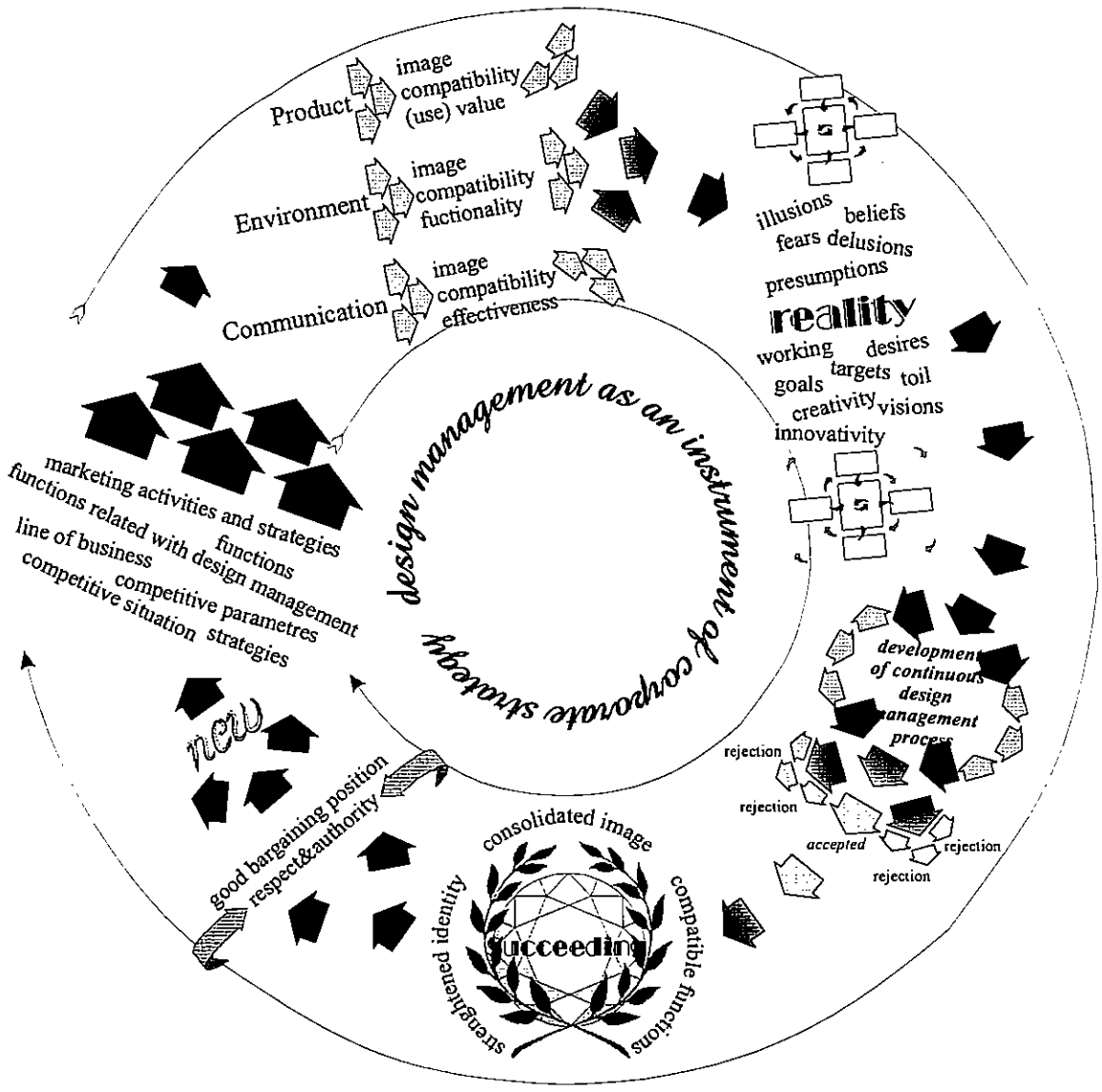

Figure 39. The design management model.

The design management model illustrates how succeeding is not the end point of the model though it once has been set as a goal for the process. This is caused by the fact that the rapid change in the business life shapes the targets and objectives all the time; at least it should, because if it is not paid attention to the changes there might occur so that the goals set for the firm, or for its design management process, would not be relevant after the process had reached the goal that had been taken as the end point of the project. Thus the

stage of succeeding should be taken as the stage of learning from the success; as a stage where the firm will be able to set better and better targets and goals for the future activities. The work never ends and that actually is how it should be.

8 CONCLUSION

Design management is an intellectual world of its own. The term has, ever since it once was created, suffered from a prejudiced attitude towards itself because of the peculiar insignificance of it. After having become naturalized in Finnish business language the term has, with reason, been found odd, sometimes maybe even partly been repelled by the ones that had been interested in the subject. "We've got no fancy managements here" has been heard as an answer of a few of the business managers when they have been inquired about their design management functions.

In the first chapter of this study the origin of the term was considered about and it was ended up with using the original English term even in Finnish. The researcher of this study has during her lectures talked about the systematic management of design as well as about the uniformity of all of the functions of the firm, but it seems that every attempt to try to make the term clearer should need more extra clarifications, once again. Thus the concept perhaps is quite right as the way it is.

But what design management is? It is a devoted attempt to make everything as well as possible - and even a little bit better. But not a pure attempt alone is design management; a succeeded result is that. An important part of applying design management is the understanding of the fact that it is a useful concept also in lines of business that are not particularly design oriented by nature. This is an important conclusion based on the material and analyzes of this research.

Hardly anything can nor is profitable to be made alone. There can be seen an approach to the paradigm of network thinking in this thought. The right cooperation partners have to be found; not necessarily the one that makes the subject in question best but the one that makes it in the most suitable way. It is essential for design management to find compatibility between the own functions and the cooperation partners as well as among them. When everybody knows in which direction it should be going and also do work for that, there they will get.

A firm will better be able to reach what it considers to be its own succeeding - was it then economical profitability or a better good will value - when it defines the route to follow into the knowledge of the whole personnel. For example an explicit graphic manual can be a valuable help for a firm when it standardizes its activities. However, it has to be remembered that not even the finest graphic manual will help a firm to realize its design management program unless the principles and purpose of this activity has been internalized inside the firm.

Design management always has to start from the inside of the firm; from the needs and resources of it. For a firm to be able to gain competitive advantage and to be prosperous the cooperation between its marketing, technology and design functions has to be smooth. A succeeded design management policy functions as a coordinator of these elements. Design management touches everything a firm does; everything it is.

As the basic research hypothesis of this research it was stated that there is a useable tripartition of design management into product, environment and communication. This hypothesis was proved with the results of the analyses made. The further results of the factor analysis also support the understanding that in a compatible design management product, environment and communication are inseparable from each other. The functions of these three basic elements and therefore of the whole design management will also divide themselves into two subfactors that can be called as technical and image-related ones by the nature of the variables included in them. There will be both technical and image-related factors of some amount to be found in every piece of product, environment and communication a firm deals with.

The fact that technical and image-related functions came distinctive from the three elements of design management that were known beforehand is an important finding that helps to understand further the nature and usability of design management. The respondents found the image-related factors of product as the clearly most important characteristics of design management (mean values of mean values in table 14 were from 4,2 to 4,4 when 5 was the maximum value). The technical factors of product (mean values

of mean values in table 14 from 3,6 to 3,9), the technical factors of environment (mean values of mean values in table 17 from 3,6 to 3,8) and all the factors included in communication (mean values of mean values in table 20 from 3,6 to 4,0) were found almost as similarly important with each other. Clearly the least important factor was the image-related ones of environment (mean values of mean values in table 17 from 3,1 to 3,5).

Although the differences between these mean values are small, it is noteworthy that the technical factors of all the elements of design management were found to be almost exactly important - or neutral - with each other. The largest positive deviation was the image-related factors of product and the largest negative deviation was the image-related ones of environment.

Hence it is possible to assume that the so-called design values are felt to be important when it comes to the product; in environment and communication it is the technical functionality that is understood to be important. However, this gives an opportunity to make a difference, to stand up from the others with for example not only functional but also aesthetically pleasant environment.

The brand management ideology has also been discussed a lot lately and it might have influence on the image-values of communication as well. It is possible that within time the image-related functions of design management will form a means of differentiation, as technology is becoming more and more common knowledge.

On grounds of the experiences gained through application of the design management model presented here, it seems that the traditional design management tripartition into product, environment and communication, as a strategic, developmental instrument, can be made more demonstrative and functional by deepening the contents of these three factors with the bipartition into technical and image-related ones. Technical functions, as subjects of development, are concrete and generally easily accepted by often "not so design oriented" managers and engineers. Succeeding in the development of the technical functions of

product, environment and communication usually materializes in image related advantages, too.

According to the experiences gained during this research, it usually is even more difficult to develop the image functions than the technical ones. The most important reason for that seems to be the fact that when image related functions are handled, emotional attitudes and differences in opinions usually are involved. Thus there also are several reasons why it often gets to a quite a slow and difficult process to reach a consensus upon the image related functions: there are often, especially in modern network organizations, people with different backgrounds from different organizational cultures with different histories and they seldom communicate with the same phrases.

However, according to my own application experiences, realizing the existence of the technical and image-related functions of the elements of design management will help in the practical development of product, environment and communication. In today's modern society, there are not many people to question the technical development of a product or corporative environment, or even to question the introducing of new technology in communication. Naturally the speed of adaptation of new technology innovations depends strongly on the line of business. But irrespective of the line of business, an image related development work connected with abstract phenomena like beauty or esthetics can cause serious counteractions, e.g. for being either distinguishable or uniform; not often is it recognized, that in successful design management it is possible to be the both at the same time.

There are several examples in the media that report the strong feelings people have for the logotypes, names, visual outlooks of firms and corporations. For example, year after year the officially misspelled name of the bank Merita Pankki (a grammatically right version in Finnish is Merita-pankki) sets ones teeth on the edge in Letters to the Editor, old names Tele or Postipankki were so much better than the new ones Sonera or Leonia, not to mention their new logos... these are often emotional subjects where everyone feels him/herself to be an expert. These strong feelings towards what was once found to be

"well-known and safe" have been easily recognized many times during this research work as well, especially when modifications or even large changes have been done.

Technological development, however, hardly ever raises these emotional feelings. There are some minor groups that have fear to be forced to learn something new, but technological development is commonly taken as natural evolution. Picasso once said, that everyone could be an artist. Frustrating enough, there still are people to believe in that.

However, the research results support the hypothesis that design management is not formed of three separate factors, product, environment and communication, but of the cooperative action of them, of a harmonious unity of these three factors. The further analyzing of the research results also supports the understanding of the nature of the elements of design management entangled together, and it would not be meaningful to separate them from each other. Design management is a long process that should touch everything a firm does.

In every field, even small, it has to be seen the same, systematic and uniform attempt to reach a carefully considered target. As intermediate stages during the journey there will be a lucid and controlled corporate image together with a sure corporate identity that comes straight from the business idea through the strategic choices and operation entireties. The uniformity and compatibility of the functions will create a basis for credibility, and through that, for competitive advantage.

Finally - whatever you do, do it properly from the very beginning; it is always more sensible to do things right from the outset than to mend them afterwards. Whatever the decisions to be made are, they will have a contributory influence on the future. Take your time to consider the alternatives carefully, so you do not have to do things twice, at least not so often.

Design management is a phenomenon that could be researched and studied for years. In my life, that has been a fact: I have spent a decade of my life researching design

management, giving lectures of the subject, doing my best to develop the concept to better suit the Finnish business culture. The deeper I have gone during the research, the more interesting characteristics there has been to be found entangled together with the basic design management.

The linkages between design management and identity management; design management and brand management; design management and network management - or all of these - could be very interesting subjects for further research. The design management model presented in this study should also be developed further; now the model has been tested with different organizations or groups of firms; a network approach to the functionality of design management could be a fruitful subject for further research when it comes to the model mentioned.

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APPENDIX 1

The lines of business of the firms that answered the letter questionnaire presented in the appendix 2: industry

LINE OF BUSINESS	Kuopio province	Vaasa province	Total
INDUSTRY			
Manufacturing of food *Elintarvikkeiden valmistus*	4	5	9
Manufacturing of textiles and clothes *Tekstiilien ja vaatteiden valmistus*	4	8	12
Manufacturing of forest industrial products *Metsäteollisuustuotteiden valmistus*	7	2	9
Publishing and printing *Kustantaminen ja painaminen*	3	4	7
Manufacturing of chemicals and chemical products *Kemikaalien ja kemiallisten tuotteiden valmistus*	2	1	3
Manufact. of rubber, plastic, glass, clay, stone products *Kumi-, muovi-, lasi-, savi- ja kivituotteiden valmistus*	3	2	5
Manufacturing of metal products *Metallituotteiden valmistus*	7	2	9
Manuf. of machines, devices, electr. products, vehicles *Koneiden, laitt., sähkötekn. tuotteiden, kulkuneuv. valm.*	4	2	6
Other manufacturing *Muu valmistus*	6	2	8
Energy and water services *Energia- ja vesihuolto*	4	2	6
Building *Rakentaminen*	4	2	6
Industry total	**48**	**32**	**80**

The lines of business of the firms that answered the letter questionnaire presented in the appendix 2: commerce and service

LINE OF BUSINESS	Kuopio province	Vaasa province	Total
COMMERCE AND SERVICE			
Commerce *Kauppa*	12	13	25
Accommodation and restaurants *Majoitus- ja ravitsemistoiminta*	4	2	6
Transportation *Kuljetus*	9	1	10
Communications *Tietoliikenne*	1	2	3
Financing and insurance *Rahoitus- ja vakuutustoiminta*	4	6	10
Real estate and cleaning services *Kiinteistö- ja puhtauspalvelut*	4	1	5
Technical service *Tekninen palvelu*	3	3	6
Marketing services *Markkinointipalvelut*	2	4	6
Education *Koulutus*	0	1	1
Health and social service *Terveys- ja sosiaalipalvelu*	0	4	4
Recreation and cultural service *Virkistys- ja kulttuuripalvelu*	1	1	2
Organization activities *Järjestötoiminta*	0	1	1
Commerce and service total	**40**	**39**	**79**

APPENDIX 2

Letter questionnaire used during the second stage of the research process

Yrityksen taustatiedot tilastoanalyysin luokittelua varten:
Background information on the firm for the statistical analysis

Yrityksen toimiala: _____
Line of business of the firm _____
_____

Yrityksen sijainti: ❒ Kuopion lääni – *Kuopio province*
Location ❒ Vaasan lääni – *Vaasa province*

Sijaintipaikkakunnan koko: ❒ alle 10 000 asukasta *less than 10 000 inhabitants*
Size of the locality ❒ 10 000 - 30 000 asukasta *10 000 - 30 000 inhabitants*
❒ 30 001 - 60 000 asukasta *30 001 - 60 000 inhabitants*
❒ 60 001 - 90 000 asukasta *60 001 - 90 000 inhabitants*
❒ yli 90 000 asukasta *over 90 000 inhabitants*

Yrityksen henkilökunnan lukumäärä _____ *Amount of personnel*

Yrityksen liikevaihto viime tilikaudella _____ mk *Turnover / previous accounting period*

Yrityksen perustamisvuosi _____ *Year of foundation of the firm*

Jos täydennätte myös yhteystietonne, lähetän teille yhteenvedon kyselyn tuloksista aineiston valmistuttua. */ If You included Your contact address in here, I will send You a summary of the results of this inquiry.*

Yrityksen nimi: _____
Name of the firm _____

Vastaajan nimi ja toimi yrityksessä: _____
Name and title of the respondent _____

Osoite: _____
Address _____

Puhelinnumero: (____) _____ *Telephone number*
Faxnumero: (____) _____ *Telefax number*

Kuinka suuri merkitys yrityksenne TUOTEKEHITYKSESSÄ on seuraavilla tekijöillä tällä hetkellä:

How do You consider the meaning of the following variables in the PRODUCT DEVELOPMENT PROCESS of Your firm right now at the moment

1 = täysin merkityksetön
2 = jokseenkin merkityksetön
3 = "neutraali"
4 = jokseenkin tärkeä
5 = erittäin tärkeä

	TÄLLÄ HETKELLÄ	*1*	*2*	*3*	*4*	*5*
C01.	Tavoiteltu tuotteen imago					
C02.	Ergonomia					
C03.	Moduloitavuus					
C04.	Tuotteen käyttöominaisuudet					
C05.	Tuotteen tekninen toiminta					
C06.	Tuoteturvallisuustekijät					
C07.	Tuotteen esteettinen ulkonäkö					
C08.	Tuotteen huollon helppous					
C09.	Tuotteen sopivuus käyttöympäristöönsä					
C10.	Tuotteen taloudellinen valmistus					
C11.	Tuotteen kierrätettävyys					
C12.	Markkinoiden tuotteelle asettamat vaatimukset					
C13.	Asiakaspalautteen käyttö tuotesuunnittelussa					
C14.	Tuotteen nk. tulevaisuushakuisuus - innovatiivisuus jne.					
C15.	Tuotteen laatu					

Entä mikä on arvionne tulevaisuudesta:

And how do You estimate the increase / decrease of the meaning of them in the future?

(translations on pages 267-268)

1 = merkitys vähenee erittäin paljon
2 = merkitys vähenee jonkin verran
3 = merkitys pysyy ennallaan
4 = merkitys kasvaa jonkin verran
5 = merkitys kasvaa erittäin paljon

	TULEVAISUUDESSA	*1*	*2*	*3*	*4*	*5*
D01.	Tavoiteltu tuotteen imago					
D02.	Ergonomia					
D03.	Moduloitavuus					
D04.	Tuotteen käyttöominaisuudet					
D05.	Tuotteen tekninen toiminta					
D06.	Tuoteturvallisuustekijät					
D07.	Tuotteen esteettinen ulkonäkö					
D08.	Tuotteen huollon helppous					
D09.	Tuotteen sopivuus käyttöympäristöönsä					
D10.	Tuotteen taloudellinen valmistus					
D11.	Tuotteen kierrätettävyys					
D12.	Markkinoiden tuotteelle asettamat vaatimukset					
D13.	Asiakaspalautteen käyttö tuotesuunnittelussa					
D14.	Tuotteen nk. tulevaisuushakuisuus - innovatiivisuus jne.					
D15.	Tuotteen laatu					

Kuinka suuri merkitys yrityksenne YMPÄRISTÖSSÄ on seuraavien tekijöiden yhteensopivuudella tällä hetkellä:

How do You consider the meaning of the following variables in the ENVIRONMENT of Your firm right now at the moment

1 = täysin merkityksetön
2 = jokseenkin merkityksetön
3 = "neutraali"
4 = jokseenkin tärkeä
5 = erittäin tärkeä

TÄLLÄ HETKELLÄ	*1*	*2*	*3*	*4*	*5*
E01. Rakennukset					
E02. Toimitilojen sisustus ja kalustus					
E03. Konttorikoneet: käyttöympäristöön sopivuus, ergonomia ym.					
E04. Materiaalit					
E05. Arkkitehtuuri					
E06. Käytetyt värit					
E07. Konkreettinen yritysympäristö					
E08. Istutukset					
E09. Koneet ja laitteet					
E10. Autot ja kuljetuskalusto					

Entä mikä on arvionne tulevaisuudesta:

And how do You estimate the increase / decrease of the meaning of them in the future?

(translations on pages 267-268)

1 = merkitys vähenee erittäin paljon
2 = merkitys vähenee jonkin verran
3 = merkitys pysyy ennallaan
4 = merkitys kasvaa jonkin verran
5 = merkitys kasvaa erittäin paljon

TULEVAISUUDESSA	*1*	*2*	*3*	*4*	*5*
F01. Rakennukset					
F02. Toimitilojen sisustus ja kalustus					
F03. Konttorikoneet: käyttöympäristöön sopivuus, ergonomia ym.					
F04. Materiaalit					
F05. Arkkitehtuuri					
F06. Käytetyt värit					
F07. Konkreettinen yritysympäristö					
F08. Istutukset					
F09. Koneet ja laitteet					
F10. Autot ja kuljetuskalusto					

Millaiseksi koette seuraavien tekijöiden merkityksen yrityksenne VIESTINTÄPOLITIIKASSA tällä hetkellä:

How do You consider the meaning of the following variables in the COMMUNICATION POLICY of Your firm right now at the moment

(translations on pages 267-268)

1 = täysin merkityksetön
2 = jokseenkin merkityksetön
3 = "neutraali"
4 = jokseenkin tärkeä
5 = erittäin tärkeä

	TÄLLÄ HETKELLÄ	*1*	*2*	*3*	*4*	*5*
G01.	Logo ja/tai nimilogo					
G02.	Tuotemerkki/-merkkejä					
G03.	Yrityksen nimen käyttöä ja kirjoitusasua säätelevä ohjeisto					
G04.	Tuote- ym. koodit					
G05.	Mahdolliset muut symbolit					
G06.	Kylttien ja opasteiden suunnitelmallisuus ja yhdenmukaisuus					
G07.	Pakkausten valinnan suunnitelmallisuus ja yhdenmukaisuus					
G08.	Tiedotteiden suunnitelmallisuus ja yhdenmukaisuus					
G09.	Viestintämateriaalin painoasu					
G10.	Viestinnässä käytettyjen teksti- ja kirjasintyyppien suunnitelmallisuus ja yhdenmukaisuus					
G11.	Yrityksen viestinnässään käyttämien värien suunnitelmallisuus ja yhdenmukaisuus					
G12.	Yrityksen viestinnän tyylin suunnitelmallisuus ja yhdenmukaisuus					
G13.	Yrityksen harjoittaman mainonnan suunnitelmallisuus ja yhdenmukaisuus					
G14.	Yrityksen medioiden valinnan suunnitelmallisuus ja yhdenmukaisuus					
G15.	Asiakaspalvelu ja henkilöstön käyttäytyminen, niiden yhdenmukaisuus ja yrityksen valitsemien linjojen noudattaminen					
G16.	Yrityksen käyntikorttien yhdenmukaisuus ja yrityskuvaa tukeminen					
G17.	Yrityksen lähettämien (joulu- ym.) tervehdysten sekä esim. kutsukorttien yhdenmukaisuus ja yrityskuvaa tukeminen					
G18.	Yrityksen esitteiden harkittu suunnittelu yhdenmukaisiksi sekä yrityskuvaa tukeviksi					
G19.	Miten suuressa määrin yrityksenne vuosikertomuksen laadinnassa on kiinnitetty huomiota myös sen ominaisuuteen toimia yrityksen mainoksena sidosryhmille					

Entä mikä on arvionne tulevaisuudesta:

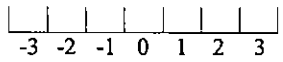
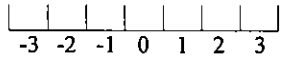
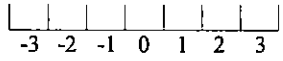
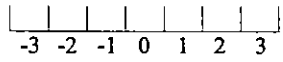
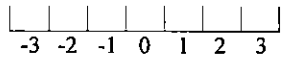
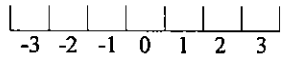
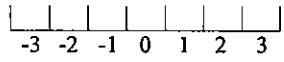
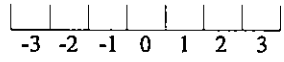
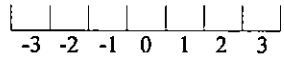
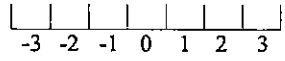
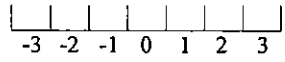
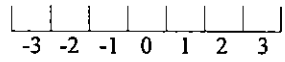
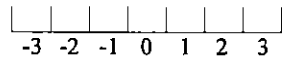
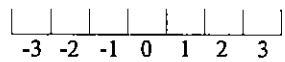
And how do You estimate the increase / decrease of the meaning of them in the future?

(translations on pages 267-268)

1 = merkitys vähenee erittäin paljon
2 = merkitys vähenee jonkin verran
3 = merkitys pysyy ennallaan
4 = merkitys kasvaa jonkin verran
5 = merkitys kasvaa erittäin paljon

	TULEVAISUUDESSA	*1*	*2*	*3*	*4*	*5*
H01.	Logo ja/tai nimilogo					
H02.	Tuotemerkki/-merkkejä					
H03.	Yrityksen nimen käyttöä ja kirjoitusasua säätelevä ohjeisto					
H04.	Tuote- ym. koodit					
H05.	Mahdolliset muut symbolit					
H06.	Kylttien ja opasteiden suunnitelmallisuus ja yhdenmukaisuus					
H07.	Pakkausten valinnan suunnitelmallisuus ja yhdenmukaisuus					
H08.	Tiedotteiden suunnitelmallisuus ja yhdenmukaisuus					
H09.	Viestintämateriaalin painoasu					
H10.	Viestinnässä käytettyjen teksti- ja kirjasintyyppien suunnitelmallisuus ja yhdenmukaisuus					
H11.	Yrityksen viestinnässään käyttämien värien suunnitelmallisuus ja yhdenmukaisuus					
H12.	Yrityksen viestinnän tyylin suunnitelmallisuus ja yhdenmukaisuus					
H13.	Yrityksen harjoittaman mainonnan suunnitelmallisuus ja yhdenmukaisuus					
H14.	Yrityksen medioiden valinnan suunnitelmallisuus ja yhdenmukaisuus					
H15.	Asiakaspalvelu ja henkilöstön käyttäytyminen, niiden yhdenmukaisuus ja yrityksen valitsemien linjojen noudattaminen					
H16.	Yrityksen käyntikorttien yhdenmukaisuus ja yrityskuvaa tukeminen					
H17.	Yrityksen lähettämien (joulu- ym.) tervehdysten sekä esim. kutsukorttien yhdenmukaisuus ja yrityskuvaa tukeminen					
H18.	Yrityksen esitteiden harkittu suunnittelu yhdenmukaisiksi sekä yrityskuvaa tukeviksi					
H19.	Miten suuressa määrin yrityksenne vuosikertomuksen laadinnassa on kiinnitetty huomiota myös sen ominaisuuteen toimia yrityksen mainoksena sidosryhmille					

Seuraavassa taulukossa on esitetty muutamia väittämiä siitä, millaisena yritys voi kokea tärkeimmän/t kilpailijansa. **Merkitkää rasti kunkin väittämän kohdalla olevalle asteikolle siten, että se mielestänne parhaiten kuvaa tilannetta Teidän yrityksessänne.** *(Translation on page 268.)*

I01	Kilpailu on meille uhka		Kilpailu on meille mahdollisuus
I02	Kilpailijamme on suositumpi kuin me		Me olemme suositumpia kuin kilpailijamme
I03	Kilpailijamme on innovatiivisempi kuin me		Me olemme innovatiivisempia kuin kilpailijamme
I04	Kilpailijamme on meille suurempi uhka kuin me sille		Me olemme kilpailijallemme suurempi uhka kuin se meille
I05	Jälleenmyyjät suosivat kilpailijamme designratkaisuja		Jälleenmyyjät suosivat meidän designratkaisujamme
I06	Kilpailijamme designratkaisut ovat vakuuttavampia ja uskottavampia kuin meidän		Meidän designratkaisumme ovat vakuuttavampia ja uskottavampia kuin kilpailijallamme
I07	Kilpailijamme tuote on helpommin kopioitavissa		Meidän tuotteemme on helpommin kopioitavissa
I08	Kilpailijamme tuotteet ovat halvempia		Meidän tuotteemme ovat halvempia
I09	Kilpailijamme tuotteet ovat ainutlaatuisempia		Meidän tuotteemme ovat ainutlaatuisempia
I10	Kilpailijamme on kustannustehokkaampi		Me olemme kustannustehokkaampia
I11	Kilpailijamme alihankinta on onnistuneempaa		Meidän alihankintamme on onnistuneempaa
I12	Kilpailijamme alihankintakontaktit ongelmaisempia		Meidän alihankintakontaktimme ovat ongelmaisempia
I13	Kilpailijamme laatu on parempi kuin meillä		Meidän laatumme on parempi kuin kilpailijallamme
I14	Kilpailijallamme on paremmat yhteistyösuhteet muihin yrityksiin		Meillä on paremmat yhteistyösuhteet muihin yrityksiin

J01 Millä keinoin vakuutatte asiakkaanne siitä, että tuotteenne on ostamisen arvoinen? / *By which means do You convince Your customers of the fact that Your product is worth of buying?*_____

_____

J02 Miten perustelette molemminpuolisen hyödyn tavarantoimittajillenne/alihankkijoillenne? / *How do You argue the mutual benefits to Your suppliers/subcontractors?* ____

_____

_____

J03 Miten määrittelisitte ONNISTUMISEN; milloin yrityksenne on mielestänne onnistunut toiminnassaan? / *How would You define the concept SUCCEEDING; according to Your opinion, when has Your firm succeeded in its activities?*_____

_____

_____

J04 Entä miten määrittelisitte MENESTYMISEN; milloin yrityksenne on mielestänne menestynyt toiminnassaan? / *And how would You define the concept* ***prosperity****; according to Your opinion, when has Your firm been prosperous in its activities?*_____

_____

_____

_____

Muuta huomionarvoista/kommentoitavaa / *Anything else noteworthy or to be commented*

_____

_____

Olemme käytettävissä myös laajempaan yhteistyöhön, esimerkiksi
We would also like to participate a wider cooperation, for example...

- ☐ laajempaan kirjekyselyyn - *a wider letter questionnaire*
- ☐ haastatteluun - *an interview*
- ☐ muuhun mahdolliseen yhteistyöhön: _____
  some other kind of cooperation _____

Kiitos vaivannäöstänne!
Thank You for all the trouble You've taken!

Palautusosoite - return address (University of Kuopio)

KUOPION YLIOPISTO
Yrityksen taloustieteen laitos
Johanna Ahopelto
PL 1627
70211 KUOPIO

Puh: (971) 162 943
Fax: (971) 163 903

Variables in English *(translations from pages 261-264)*

C/D01 pursued product image
C/D02 ergonomics
C/D03 modulability
C/D04 operation qualities of the product
C/D05 technical functionality of the product
C/D06 product safety factors
C/D07 aesthetics appearance of the product
C/D08 ease of service of the product
C/D09 suitableness of the product in the environment where used
C/D10 economic manufacturing of the product
C/D11 recyclability of the product
C/D12 demands for the product set by the markets
C/D13 customer feedback used in product design
C/D14 reaching for the future - innovativity etc.
C/D15 product quality
E/F01 buildings
E/F02 furniture and equipment of the offices and other buildings
E/F03 office machines: suitableness in environment where used, ergonomics etc.
E/F04 materials
E/F05 architecture
E/F06 colors used
E/F07 concrete corporate environment
E/F08 flower arrangements
E/F09 machines and devices
E/F10 cars, vehicles and haulage equipment
G/H01 logotype
G/H02 trademarks, brandmarks
G/H03 instructions manuals for the use and writing of the name of the firm
G/H04 product codes etc.
G/H05 possible other symbols
G/H06 systematicness and uniformity of the signs and guides
G/H07 systematicness and uniformity of the package selection
G/H08 systematicness and uniformity of the bulletins
G/H09 typography of the communication material
G/H10 systematicness & uniformity of the text types and fonts used in communication
G/H11 systematicness and uniformity of the colors used in communication by the firm
G/H12 systematicness and uniformity of the style of communication of the firm
G/H13 systematicness and uniformity of advertising methods of the firm
G/H14 systematicness and uniformity of media selections of the firm
G/H15 systematicness and uniformity of customer service and personnel behavior
G/H16 systemat. & uniformity of the business cards; suitability in the corporate image
G/H17 systemat.and uniformity of the printed material, greetings in corporate image
G/H18 systemat. and uniformity of the design of brochures with the corporate image
G/H19 in which amount it has been paid attention in Your firm to the importance of annual report as an advertisement for the interest groups

***Scale for questions on tables C to H** (pages 261-264)*

Importance of variables at the present time:	***Importance of variables at the future time:***
1 = totally meaningless	*1 = importance will decrease considerably*
2 = slightly meaningless	*2 = importance will decrease somewhat*
3 = "neutral"	*3 = importance will stay as present*
4 = slightly important	*4 = importance will increase somewhat*
5 = very important	*5 = importance will increase considerably*

Variables in English
(translations from page 265)

In the next table there are some statements of it how a firm can experience its most important competitor(s). **Please tick the alternative desired so that you feel it to best describe the situation in Your firm.** *(Scale -3...-2...-1...0...+1...+2...+3.)*

I01	Competition is us a threat	Competition is us an opportunity
I02	Our competitor is more popular than we are	We are more popular than our competitor is
I03	Our competitor is more innovative than we are	We are more innovative than our competitor is
I04	Our competitor is a greater threat to us than we are to it	We are a greater threat to our competitor than it is to us
I05	Retailers favor the design decisions of our competitor	Our retailers favor our design decisions
I06	The design decisions of our competitor are more convincing and more credible than the ones of ours	Our design decisions are more convincing and more credible than the ones of our competitor
I07	Our competitor's product is easier to be copied	Our product is easier to be copied
I08	Our competitor's products are cheaper	Our products are cheaper
I09	Our competitor's products are more unique than ours	Our products are more unique than the competitor's ones are
I10	Our competitor is more cost effective than we are	We are more cost effective than our competitor is
I11	Our competitor's subcontracting is more successful than ours	Our subcontracting is more successful than our competitor's one is
I12	There are more problems in the subcontracting contacts of our competitor	There are more problems in our subcontracting contacts
I13	Our competitor's quality is better than ours	Our quality is better than our competitor's one
I14	Our competitor has better cooperation relationships with the other firms	We have better cooperation relationships with the other firms

APPENDIX 3

Questionnaire frame for the interviews done during the third stage of the research process

Yrityksen suhde design managementiin osana yrityksen kilpailukeinokenttää:
The relation of the firm to design management as a part of the competition parameter field of the firm

Taustatiedot:
Background information

1. Yrityksen nimi _____
   Name of the firm _____

2. Haastateltavan nimi ja toimi yrityksessä _____
   Name and title of the person interviewed _____

3. Yhteystiedot: *Contact information*
   Osoite: _____
   Address _____

   Puhelinnumero: (____) _____ *Telephone number*
   Faxnumero: (____) _____ *Telefax number*

4. Yrityksen toimiala _____
   Line of business _____

5. Yrityksen henkilökunnan määrä _____ henkilöä
   Amount of personnel

6. Yrityksen liikevaihto viime tilikaudella _____ mk
   Turnover / previous accounting period (FIM)

7. Yrityksen perustamisvuosi _____
   Year of foundation of the firm

***Palautusosoite:** / Return address (University of Kuopio)*

KUOPION YLIOPISTO
Yrityksen taloustieteen laitos
Johanna Ahopelto
PL 1627
70211 KUOPIO

Puh: **(971) 162 943**
Fax: **(971) 163 967**

Tuote ja sen muotoilu / profilointi kilpailukeinona
Product and the design / profiling of it as a competition parameter

1. Miksi olette valinneet muotoilun/profiloinnin kilpailukeinoksenne / *Why have You chosen design / profiling as a competiotion parameter of Yours* _____

_____

2. Kenen ehdotuksesta / *Suggested by whom* _____

_____

❑ Emme koe muotoilua tai profilointia kilpailukeinoksi
We do not see design as a competition parameter

Miten muotoilu/profilointi on yrityksessänne organisoitu:
How has design / profiling been organized in your company

1. Mihin se sijoittuu organisaatiorakenteessa / *Where in the organization chart does it take place*_____

2. Oma vai ulkopuolinen muotoilija vai sekarakenne / *An own designer or an outside one, or a mixed structure* _____

_____

3. Miksi päädytty juuri tähän ratkaisuun / *Why exactly this solution* _____

_____

4. Kuka viime kädessä on yrityksessä vastuussa muotoilu- ja profilointitoiminnoista / *Who in Your firm is responsible for the design and profiling functions* _____

_____

5. Miksi juuri kyseinen henkilö / *Why is it he/she* _____

_____

Kokemukset muotoilusta/profiloinnista kilpailukeinona
Experiences in design/profiling as a competition parameter

1. Millaista hyötyä/haittaa profiloinnista ja/tai muotoilun käytöstä kilpailukeinona on ollut / *What kind of advantage/disadvantage have You had of profiling and/or design as a competition parameter used* _____

_____

2. Miten yhteistyö muotoilijan kanssa on sujunut / *How has the cooperation with the designer gone off*
   - aluksi: */at first* _____
   - ajan mittaan: */within time*_____

3. Onko projekteittain ollut eroja / *Have there been differencies in it in different projects*_____

4. Onko ilmennyt (etu)ristiriitoja osastojen / työntekijöiden / johtoryhmän keskuudessa - jos on, niin miten ne on selvitetty / *Have there been any conflicts / conflicting interests among departments / employees / management – and if there have been, how have those been sorted out* _____

_____

5. Onko yritys saanut palautetta käyttämästään muotoilusta/profilointitoimistaan: *Has the firm got any feedback from the design/profiling used by it*
   - ❑ ei lainkaan - *not at all*
   - ❑ positiivista - *positive*
   - ❑ negatiivista - *negative*
   - ❑ neutraalia - *neutral*

Jos yritys on saanut palautetta muotoilustaan/profiloinnistaan, millaista / *If the firm has got some kind of feedback from its design/profiling, which kind* _____

_____

Missä yhteydessä / *In which connection*_____

_____

Millaisia mahdollisia eroja on ollut yrityksen sisäisen ja ulkopuolisen palautteen välillä *Which kind of possible differences have there been between the inside and outside feedbacks* _____

6. Mihin toimenpiteisiin saadun palautteen johdosta on ryhdytty / aikomus ryhtyä? *What kind of actions have You taken / will take because of the feedback You have got*_____

7. Esimerkki sellaisesta yrityksen tuotteesta, jonka muotoilu on onnistunut erittäin hyvin tai jossa profilointi on onnistunut erinomaisesti (jos mahdollista, kuva liitteeksi); perustelut, miksi juuri tämä tuote koetaan onnistuneeksi / *An example of a product of Your firm in which You feel the design of it has succeeded very well or in which the profiling has been extremely successful (if possible, picture included); reasons, why exactly this product is felt to be successful* _____

_____

8. Esimerkki sellaisesta yrityksen tuotteesta, jonka muotoilun/profiloinnin voidaan katsoa tavallaan epäonnistuneen (jos mahdollista, kuva liitteeksi); perustelut, miksi juuri tämä tuote koetaan epäonnistuneeksi / *An example of a product of Your firm in which You feel the design/profiling of it can be taken as some kind of a failure (if possible, picture included); reasons, why exactly this product is felt to be a failure*

_____

_____

Yhtenäinen viestintä kilpailukeinona
A uniform communication as a competition parameter

1. Miksi olette valinneet viestinnän kilpailukeinoksenne / *Why have You chosen communication as a competition parameter*_____

2. Kenen ehdotuksesta / *Suggested by whom* _____

❑ Emme koe viestintää kilpailukeinoksi
We do not see communication as a competition parameter

Miten viestintä sekä viestintämateriaalin laadinta on yrityksessä organisoitu:
How has communication, and the design of communication materials, been organized in your company

1. Oma vai ulkopuolinen panos / *An own design or an outside one*_____

2. Miksi päädytty juuri tähän ratkaisuun / *Why exactly this solution* _____

3. Kuka viime kädessä on yrityksessä vastuussa yrityksen viestinnästä / *Who in Your firm is responsible for the communication of the firm*_____

4. Miksi juuri kyseinen henkilö / *Why is it he/she*_____

Kokemukset viestinnästä kilpailukeinona
Experiences in communication as a competition parameter

1. Onko yhtenäisen, yrityksen imagoa tukevan viestintämateriaalin käytöstä kilpailukeinona ollut yritykselle konkreettista hyötyä - jos on, mitä / *Have there been any concrete benefits from the use, as a competition parameter, of a communication material that supports the image of the firm - and if any, which* _____

2. Onko yritys saanut palautetta käyttämästään viestintämateriaalista:
Has the firm got any feedback from the communication material used by it
   - ❑ ei lainkaan - *not at all*
   - ❑ positiivista - *positive*
   - ❑ negatiivista - *negative*
   - ❑ neutraalia - *neutral*

Jos yritys on saanut palautetta käyttämästään viestintämateriaalista, millaista / *If the firm has got some kind of feedback from its the communication material, which kind* _____

_____

Missä yhteydessä / *In which connection*_____

_____

Millaisia mahdollisia eroja on ollut yrityksen sisäisen ja ulkopuolisen palautteen välillä *Which kind of possible differences have there been between the inside and outside feedbacks* _____

3. Mihin toimenpiteisiin saadun palautteen johdosta on ryhdytty / aikomus ryhtyä? *What kind of actions have You taken / will take because of the feedback You have got*_____

_____

4. Millaiseksi koette yrityksenne muun viestinnän kilpailukeinona: / *How do You experience the other communication of Your firm as competition parameters*
   - Esimerkiksi yrityksen saavutettavuus; miten toimivat (= sekä toiminnallinen että tekninen toimivuus) esimerkiksi: / *The reachability of the firm, for instance; how the following ones are functioning (= in both a functional and technical sense)*
     - puhelin- ja faxyhteydet - keskus, puhelinvastaajat ym. / *telephone and fax contacts - telephone exchange, answering machines etc.* _____

       _____
     - sähköposti- ym. muut tietoliikenneyhteydet / *email etc., and other telecommunications* _____

       _____
       - yrityksen sisällä / *inside the firm* _____
       - yrityksen ulkopuolelle / *from the firm outside it* _____

         _____

5. Esimerkki yrityksen erittäin hyvin onnistuneesta viestintämateriaalista (jos mahdollista, kuva liitteeksi); perustelut, miksi juuri tämä materiaali koetaan onnistuneeksi / *An example of a very successful communication material of Your firm (if possible, picture included); reasons, why exactly this material is felt to be successful*_____

_____

_____

6. Esimerkki sellaisesta yrityksen viestintämateriaalista, jonka voidaan katsoa epäonnistuneen (jos mahdollista, kuva liitteeksi); perustelut, miksi juuri tämä materiaali koetaan epäonnistuneeksi / *An example of a communication material of Your firm of which You feel it can be taken as some kind of a failure (if possible, picture included); reasons, why exactly this material is felt to be a failure*_____

_____

_____

Suunnitelmallinen yritysympäristö kilpailukeinona

A systematically designed corporate environment as a competition parameter

1. Miksi olette valinneet suunnitelmallisen yritysympäristön kilpailukeinoksenne / *Why have You chosen a systematically designed corporate environment as a competition parameter of Yours*_____

2. Kenen ehdotuksesta / *Suggested by whom* _____

❑ Emme koe yritysympäristöä kilpailukeinoksi
We do not see corporate environment as a competition parameter

Seuraavassa on esitetty vaihtoehtoisia hallitun yrityskuvan rakentamisen keinoja käsiteltäessä design managementin osa-alueista juuri yritysympäristöä. Vastausvaihtoehdot eivät ole toisiaan poissulkevia, mutta vaativat osaltaan lyhyen perustelun. */ In the following part there have been presented some alternative means of designing and building a controlled corporate image when exactly the corporate environment is treated as a part of design management. The alternatives presented here are not mutually exclusive. However, brief reasons are required.*

1. Rakennetaan/ostetaan uutta tietyn suunnitelman mukaan
We will build/buy new ones according to a specific plan
❑ kyllä - *yes*
❑ ei - *no*
perustelu: / *reasons*_____

2. *Korjataan* vanhaa tietyn suunnitelman mukaan
We will fix *old ones according to a specific plan*
❑ kyllä - *yes*
❑ ei - *no*
perustelu: / *reasons*_____

3. *Muokataan/uudistetaan* vanhaa tietyn suunnitelman mukaan
We will modify/improve *old ones according to a specific plan*
❑ kyllä - *yes*
❑ ei - *no*
perustelu: / *reasons*_____

4. Asiaan ei ole kiinnitetty lainkaan huomiota, sillä:
We have not paid any attention to the matter, because

- ❑ ei ole tullut mieleen - *it has not even crossed the mind*
- ❑ ei pidetä tärkeänä - *it is not considered as important*
- ❑ pidetään täysin turhana - *it is considered as totally useless*
- ❑ liian kallista - *it is considered as all too expensive*
- ❑ muuta, mitä? - *something else, what?*

perustelu: / *reasons*_____

_____

6. Kuka viime kädessä on yrityksessä vastuussa yrityksen ympäristöstä ja siihen liittyvistä päätöksistä / *Who in the firm is responsible for the corporate environment and for the decisions included* _____

_____

7. Miksi juuri kyseinen henkilö / *Why he/she*_____

_____

Kokemukset yritysympäristöstä
Experiences in corporate environment as a competition parameter

1. Onko yhtenäisestä, yrityksen imagoa tukevasta yritysympäristöstä ollut yritykselle konkreettista hyötyä / *Have there been any concrete benefits for the firm from the uniform corporate environment that supports the corporate image of it*
   - ❑ kyllä - *yes*
   - ❑ ei - *no*

perustelu: / *reasons*_____

_____

2. Onko yritys saanut palautetta yritysympäristöstään:
   Has the firm got any feedback from its corporate environment
   - ❑ ei lainkaan - *not at all*
   - ❑ positiivista - *positive*
   - ❑ negatiivista - *negative*
   - ❑ neutraalia - *neutral*

Jos yritys on saanut palautetta yritysympäristöstään, millaista / *If the firm has got some kind of feedback from its corporate environment, which kind*_____

_____

Missä yhteydessä / *In which connection* _____

_____

Millaisia mahdollisia eroja on ollut yrityksen sisäisen ja ulkopuolisen palautteen välillä *Which kind of possible differences have there been between the inside and outside feedbacks* _____

_____

3. Mihin toimenpiteisiin saadun palautteen johdosta on ryhdytty / aikomus ryhtyä? *What kind of actions have You taken / will take because of the feedback You have got* _____

_____

4. Esimerkki onnistumisesta yritysympäristön suhteen (jos mahdollista, kuva liitteeksi); perustelut, miksi juuri tämä koetaan onnistuneeksi / *An example of a success in corporate environment of Yours (if possible, picture included); reasons, why exactly this part of Your corporate environment is felt to be such a success*____

_____

_____

5. Esimerkki yritysympäristön epäonnistumisesta (jos mahdollista, kuva liitteeksi); perustelut, miksi juuri tämä koetaan epäonnistuneeksi / *An example of a part of Your corporate environment of which You feel it can be taken as some kind of a failure (if possible, picture included); reasons, why exactly this part is felt to be a failure*_____

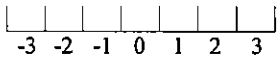
_____

Seuraavassa esitetään muutamia väitteitä.
Merkitkää asteikolle rasti siihen kohtaan, joka mielestänne kuvaa parhaiten tilannetta yrityksessänne.
In the next table there are some statements.
Please tick the alternative desired so that you feel it to best describe the situation in Your firm.
(Scale -3...-2...-1...0...+1...+2...+3)

Tässä yhteydessä termi "tuote" voi tarkoittaa sekä tavaraa että palvelua.
In this context here the term"product" can mean both goods and services.

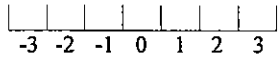
E01 Tuotesuunnittelussamme emme ota huomioon yrityksemme kokonaisimagoa lainkaan / *We don't pay any attention to the corporate image in our product design*	-3 -2 -1 0 1 2 3	Tuotesuunnittelussamme pyrimme yhtenäisen, yrityskuvaamme tukevan tuoteimagon luomiseen / *We aim at creating an uniform product image that will support our corporate image*
E02 Yrityksemme keskittyy yksittäisten tuotteiden erillisimagon vahvistamiseen / *Our firm focuses itself on the strengthening the images of separate products*	-3 -2 -1 0 1 2 3	Keskitymme yrityksemme yhtenäisen kokonaisimagon vahvistamiseen / *We focus ourselves on the strengthening of corporate image as a whole*

E03 Ei ole tärkeää, että yrityksemme tunnistetaan tuotteidemme taustalta / *It is not important for our firm to be recognized for being behind our products*



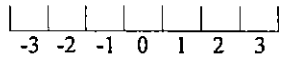
On tärkeää, että tuotteemme mielletään asiakkaidemme keskuudessa juuri meidän valmistamiksemme / *It is important that our customers understand that our products are manufactured by us*

E04 Keskitymme sekä tuotteidemme että yrityksemme imagon vahvistamiseen, mutta siten, että ne eivät tue toisiaan / *We are focusing ourselves on strengthening of both the product and corporate images but in a way that they don't support each other*



Keskitymme sekä tuotteidemme että yrityksemme imagon vahvistamiseen siten, että ne tukevat toisiaan / *We are focusing ourselves on strengthening of both the product and corporate images in a way that they do support each other*

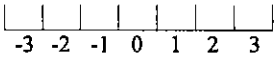
E05 Yrityksellämme ei ole emmekä suunnittele design management- tai graafista ohjeistoa / *Our firm doesn't have and we are not planning to have any design management nor graphic manual*



Yrityksellämme on tai on suunnitteilla design management- tai graafinen ohjeisto / *Our firm has or we are planning to have a design management or graphic manual*

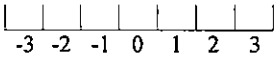
*Seuraavat **kaksi** kysymystä käsittelevät tarkemmin tilannetta, jossa yrityksellä **on** graafinen ohjeisto käytössään / The following **two** questions will go further on the situation where a firm **has** a graphic manual at its use:*

E06 Emme käytä graafista ohjeistoamme suunnitelmallisesti / *We don't use our graphic manual systematically*



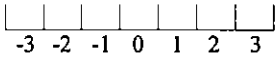
Käytämme yrityksemme graafista ohjeistoa suunnitelmallisesti / *We use the graphic manual of our firm systematically*

E07 Yrityksemme graafisesta ohjeistosta ei ole ollut havaittavaa hyötyä / *There has not been any benefit to be perceived from the use of our graphic manual*



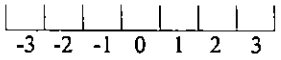
Yrityksemme graafisesta ohjeistosta on ollut havaittavaa hyötyä / *There has been some benefit to be perceived from the use of our graphic manual*

E08 Yrityksemme tuotteet, viestintä ja ympäristö eivät ole tyyliltään yhteensopivia / *The products, environment and communication of our firm are not compatible with each other by their styles*



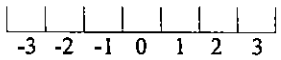
Yrityksemme tuotteet, viestintä ja ympäristö ovat tyyliltään yhteensopivia / *The products, environment and communication of our firm are compatible with each other by their style*

E09 Emme pidä tärkeänä sitä, että yrityksemme tuotteet, viestintä ja ympäristö olisivat tyyliltään yhteensopivia / *We don't consider it important to have the products, environment and communication of our firm compatible with each other by their styles*



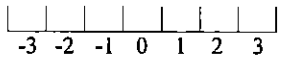
Koemme tärkeäksi sen, että yrityksemme tuotteet, viestintä ja ympäristö olisivat tyyliltään mahdollisimman yhteensopivia / *We consider it important to have the products, environment and communication of our firm to be as compatible with each other by their styles as possible*

E10 Toimintojamme ohjaa sattumanvaraisuus / *Coincidences guide our activities*



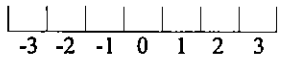
Toimintomme ovat erittäin suunnitelmallisia / *Our activities are extremely well-planned*

E11 Yrityksemme yritys- ja tuoteimagon luomistyö ei ole onnistunut oikeastaan lainkaan / *Actually the creation of our product and corporate images has not been successful at all*



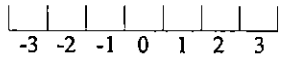
Olemme onnistuneet yritys- ja tuoteimagomme luomisessa kaikenkaikkiaan erittäin hyvin / *Taken as a whole, we have been extremely successful on the creation of our product and corporate images*

E12 Emme ole perehtyneet design managementiin tietoisesti / *We have not been consciously familiarized with design management*



Olemme perehtyneet design managementiin tietoisesti / *We have been consciously familiarized with design management*

E13 Yrityksemme tuotevalikoima on erittäin epäyhtenäinen / *The product selection of our firm is extremely non-uniform*



Yrityksemme tuotevalikoima on erittäin yhtenäinen / *The product selection of our firm is extremely uniform*

1. Mikä on yrityksenne toiminta-ajatus ja liikeidea / *What is the business idea of Your firm* _____

_____

2. Mistä tuotteenne tunnetaan / *Which are the characters Your products are known from* _____

3. Mistä yrityksenne tunnetaan / *Which are the characters Your firm is known from* ___

_____

5. Mikä on **haluttu** tuoteimagonne / *Which is the product image **desired** by Your firm*

_____

_____

6. Mikä on **haluttu** yritysimagonne / *Which is the corporate image **desired** by Your firm* _____

7. Mikäli yrityksellänne on käytössään graafinen ohjeisto, milloin ja mistä syystä hankitte sen? / *If Your firm has a graphic manual at use, when and for what reasons did You acquire it?* _____

   - kenen laatima / *formulated by whom* _____
   - millainen (sisältö lyhyesti) / *what is it like (contents, briefly)* _____

   _____

8. Mitkä ovat yrityksenne kehittymissuunnat ja kehittämiskeinot tulevaisuudessa, miksi näin / *Which are the trends and means of development of Your firm in the nearest future, why so* _____

   _____

9. Millainen on yrityksenne (ali)hankintapolitiikka / *What is the (sub)contracting policy of Your firm like* _____

   _____

Miten ja miksi tällaiseen ratkaisuun on päädytty / *How and why has it been ended up with a solution like this* _____

_____

Mitä kieliä käytätte yrityksenne viestinnässä:
Which languages do You use in the communications of Your firm

- ❑ suomi - *Finnish*
- ❑ ruotsi - *Swedish*
- ❑ englanti - *English*
- ❑ saksa - *German*
- ❑ ranska - *French*
- ❑ venäjä - *Russian*
- ❑ muita, mitä / *Others, which ones* _____

Miksi juuri näitä kieliä / *Why exactly these languages* _____

_____

Miten yrityksenne vieraskielisen esite- ym. viestintämateriaalin käännöstyö on järjestetty, miksi näin / *How have You organized the translation of our brochures and other communication materials in foreign languages; why these solutions* _____

_____

Muuta huomionarvoista/kommentoitavaa / *Anything else noteworthy or to be commented* _____

Kiitos vaivannäöstänne! Thank You for all the trouble You've taken!

APPENDIX 4

List of interviews;
excluding the ones that wished their name not to be published

15.10.1991	Acting professor Kari Asikainen, Länsi-Suomen Muotoilukeskus Muova, Vaasa; a telephone interview (reference marked as *see Ahopelto 1992*)
28.10.1991	Design manager Jyrki Järvinen, Kemira Safety, Vaasa (reference marked as *see Ahopelto 1992*)
19.11.1991	Managing director Eero Saikkonen, SK-Fastening Ltd., Sepänkylä (reference marked as *see Ahopelto 1992*)
02.12.1991	Head of product development and project team Pertti Lehto, T-Drill, Laihia (reference marked as *see Ahopelto 1992*)
05.03.1993	Managing director Ilpo Martikainen, Genelec Oy, Iisalmi
04.06.1993	Product group manager Kaj Molin, Leiras Oy, Turku
07.12.1993, 17.12.1993, 21.12.1993	Development manager Markku Ruuska, Kera Ltd., Mikkeli, telephone interviews and negotiations
17.03.1994, 06.07.1994	Managing director Osmo Syrenius, T-Drill Oy, Laihia (a telephone interview and also a meeting in Laihia)
07.06.1994	Marketing manager Antti Koivisto, Orion-yhtymä Oy, Kuopio
22.06.1994	Managing director Paavo Isotalo, Kuopion Opiskelija-asunnot Oy, Kuopio
23.06.1994	Regional director Esko Määttälä, Huoneistomarkkinointi Oy, Kuopio
23.06.1994	Managing director Nils Tuominen, Kuopion Seudun Paikallisradio Oy, Kuopio
27.06.1994	Marketing director Tuomo Holopainen, Kera Oy, Kuopio
28.06.1994	Vice managing director Olli Jukarainen, Lujabetoni Oy, Siilinjärvi
05.07.1994	Managing director Saara Harilahti, Parsal Ky, Kuopio
06.07.1994	Managing director Håkan Anttila, Ab Vasabladet, Vaasa

07.07.1994 Managing director Antti Hakala, Kiinteistöhuolto A. Hakala Oy, Kokkola

07.07.1994 Managing director Jorma Saloniemi and Matti Hakala, TOP-Housu, Kokkola

11.07.1994 Managing director Hannu Hellman, Vaasan Matkailu Oy, Vaasa

11.07.1994 Managing director Tapani Vieri, Ykkös-Offset Oy, Vaasa

19.08.1994 Managing director Toivo Vainikainen and sales manager Pertti Haapakorva, VA-Varuste Oy, Kuopio

24.08.1994 Managing director Pauli Kankaanpää, Etelä-Pohjanmaan Yrittäjät ry., Seinäjoki

24.08.1994 Managing director Marja-A Lehtimaa, Mainostoimisto AWAIN Oy, Seinäjoki

24.08.1994 Managing director Tapani Tuohiniemi and product manager Aimo Koivumäki, Alavuden Puunjalostustehdas Oy, Alavus

25.08.1994 Managing director Matti Mäkynen and financial manager Timo Mäkynen, Mäkynen Yhtiöt Oy, Lapua

26.08.1994 Managing director Jan Störling, HW-Company Ltd., Kokkola

26.08.1994 Product manager Auli Jylhä, Oy KWH-Plast Ab, Pietarsaari

05.09.1994 Regional director Heikki Kuustonen, Fazer leipomot Oy Oululainen, Kuopio

05.09.1994 Result unit manager Raimo Munck, Puumerkki Oy, Vuorela, Siilinjärvi

09.09.1994 Managing director Jukka Riekkinen, JR-Speeding Oy, Kuopio

12.09.1994 Result unit manager Reijo Närvänen, Parma Oy Master, Leppävirta

13.09.1994 Managing director Veli-Jussi Jalkanen, Easydoing Ky, Rautalampi

13.09.1994 Graduate engineering student Sari Hintikka-Varis, Hackman Meka Oy, Suonenjoki

16.09.1994 Managing director Mia Aminoff and designer Heli Juvonen, Tiara Fashion Oy, Lapinlahti

19.09.1994 Business activity manager Pekka Ovaskainen, Hotel Savonia, Kuopio

20.09.1994 Managing director Hannu Linna, Mellano Oy, Lapinlahti

20.09.1994	Prisma manager Heikki Lämpsä, Prisma, Iisalmi
22.09.1994	Managing director Martti Kankkunen, Savocon Oy, Kuopio
21.12.1994	Management group of a group of companies that wished to stay unidentified; especially the managing director and two managers
06.06.1995	Managing director and contact manager of a group of companies that wished to stay unidentified
31.01.1996a	Managing director of one of the companies in a group of companies that wished to stay unidentified
31.01.1996b	Managing director of one of the companies in a group of companies that wished to stay unidentified
05.02.1996a	Production manager of one of the companies in a group of companies that wished to stay unidentified
05.02.1996b	Managing director of one of the companies in a group of companies that wished to stay unidentified
05.02.1996c	Managing director of one of the companies in a group of companies that wished to stay unidentified
05.02.1996d	Administrative manager of one of the companies in a group of companies that wished to stay unidentified
06.02.1996	Production manager of one of the companies in a group of companies that wished to stay unidentified
01.03.1996a	Manager of one of the companies in a group of companies that wished to stay unidentified
01.03.1996b	Managing director and contact manager of a group of companies that wished to stay unidentified
19.03.1996	Production manager and foreman of one of the companies in a group of companies that wished to stay unidentified
18.06.1996	Development manager of a group of companies that wished to stay unidentified

Dialogues supporting the testing of the design management model

26.10.1994	Experts in business and psychology, Kuopio
21.11.1994	Experts in different business areas, Kuopio
26.04.1995	Managers of different lines of business, Suonenjoki
09.05.1995-10.05.1995	Experts in network management, Espoo.
25.10.1995-26.10.1995	Managers and key personnel of a group of companies, Vuokatti
27.10.1995	Decision-makers of several municipalities, Rautavaara
08.11.1995	Technology entrepreneurs, Tampere
21.03.1996	Key people of energy business, Jyväskylä
17.07.1996	Managing director of a meat processing SME, Kuopio
14.08.1996	Managing director and other managers of a meat processing SME, Kontiomäki
20.02.1997	Manager, a group of companies in electrical engineering business, Vaasa
04.03.1997	Three of the managers of a group of companies in electrical engineering business, Vaasa
20.03.1997	Managers of a group of companies in electrical engineering business, Vaasa
1992-1995	Department of Business Sciences, University of Kuopio
1997-2000	Technology Research Center Technobothnia, Vaasa

APPENDIX 5

Questionnaire frame for the interviews done during the fourth stage of the research process

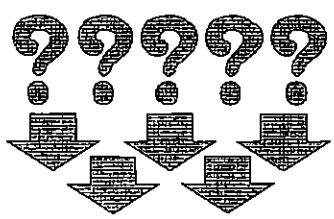
Design management mallina
Design management as a model

Oheisessa kyselyssä on esitetty yrityksen design management -toimintamallin laadinnassa huomioonotettavia seikkoja ja ominaispiirteitä. Kyselyyn vastattaessa pohditaan esitettyjä asioita oman yrityksenne kannalta ja otetaan kantaa siihen, miten esitetyt asiat toimivat / toteutuvat / ovat toteutuneet yrityksessänne. Useisiin luetteloihin on jätetty tilaa omien ajatusten kirjaamiselle ja on myös suotavaa kommentoida luetteloissa esitettyjen valmiiden esimerkkien tarpeellisuutta / toimivuutta / ajankohtaisuutta juuri Teidän yrityksessänne.

** In the following inquiry there it has been presented some noteworthy matters and characteristics when it comes to the framing of a design management model. When the inquiry is answered, the matters presented will be considered in the point of view of Your firm. A stand will also be taken on the matter how the characteristics discussed do function / will be / have been realized in Your firm. Space for the writing down of Your own thoughts have also been left in most of the lists presented in here, and it also will be highly desirable to comment the usability / functionality / topicality of the examples and alternatives presented for Your firm.*

Mallin ensimmäiset kysymykset
The first questions of the model

- mistä design management -malli saa käyttövoimansa / *where from does the design management model get its use power*
- mistä koko tämä prosessi aloitetaan / *where from shall this whole process be started*



Kuva 1. Design management -mallin laatimisen aloitus
Figure 1. The beginning of framing of the Design management model

Ensimmäinen kysymys
First question

1. Mistä design management -prosessi kannattaa aloittaa? / *where the design management process should begin from* _____

2. Mikä on yrityksen tämänhetkinen kilpailutilanne? / *What is the present competitive situation of the firm?* _____

3. Ketkä ovat yrityksen tärkeimmät kilpailijat, entä yhteistyökumppanit? / *Who are its most important competitors, how about cooperation partners?* _____

4. Millä perusteella yritys on luonut alihankkijakontaktinsa? / *On grounds of which the firm has created its subcontractor contacts?* _____

5. Mitkä ovat yrityksen strategiset perusvalinnat? / *Which are the strategic basic solutions of the firm?* _____

6. Mitkä ovat yrityksen käyttämät kilpailuparametrit, mikä on niiden keskinäinen tärkeysjärjestys? / *Which are the competitive parameters the firm uses, what is the mutual order of importance of them?* _____

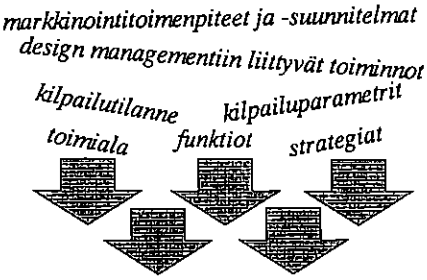
7. Millaiset ovat yrityksen harjoittamat markkinointitoimenpiteet ja -suunnitelmat? / *What are the marketing measures and strategies of the firm like?* _____

8. Mihin yritys sijoittuu porteriaanisessa kolmijaossa - onko se yleistäen differoija, kustannusjohtaja vai keskittyjä? / *Where does the firm take place in the porterian tripartition - is it, generally taken, a firm that differentiates, a kind of one that pursues for overall cost leadership, or does it concentrate itself on focusing?* _____

9. Mitä funktioita pidetään ensisijaisina yrityksen toiminnassa? / *Which functions are considered to be the primary ones in the activities of the firm?* _____

10. Mikä on yrityksen toimiala ja millainen on siihen läheisesti liittyvien toimialojen yleinen kilpailutilanne? / *What is the line of business of the firm and what is the general competitive situation of the lines of business closely related to it like?* _____

11. Miten hyvin on huolehdittu siitä, mikä yrityksestä ensimmäiseksi ulospäin näkyy ja vaikuttaa - mitä viestivät sen tuotteet, ympäristö ja viestintä? / *How well has it been taken care of what first is to be seen and that influences outside from the firm - what message does its products, environment and communication signal about?* _____



Kuva 2. Design management -mallin käyttövoima
Figure 2. The using power of the design management model (see also chapter 7, figure 35)

Design management -mallin käyttövoimana toimivat kuvan 2 mukaiset yrityksen strategiset perusratkaisut. Jotta yritys voisi siirtyä mallissa seuraavalle tasolle, on sen ensin ratkaistava probleema siitä, **mikä se on, miksi se on perustettu ja mitä tarkoitusta varten se päätöksensä tekee.** / *The strategic basic solutions like in the figure 2 will act as the use power of the design management model. To be able to move on the next stage of the model a firm first has to solve the problem of* ***what it is, why it has been established and for what purposes does it make its decisions.***

_____

_____

Toinen kysymys
Second question

1. Minkä vuoksi yritys on markkinoilla? / *Why the firm is on the markets?* _____

2. Mitkä ovat niitä ylivoimaisen osaamisen alueita, joiden vuoksi yrityksen kannattaa olla olemassa? / *Which are the areas of superior knowledge of the firm, which for it is worth existing?* _____

3. Mikä on se lisäarvo, jota se tuottaa tuotteeseensa, toimintaansa ja siihen verkostoon, jossa se on osallisena? / *Which is the surplus value the firm brings to its product, functions, activities and to that network it belongs?* _____

4. Mitkä ovat yrityksen todelliset menestystekijät? / *Which are the real success factors of the firm?* _____

5. Millainen on paras yhteistyöverkko - osataanko valita yhteistyökumppaneiksi ne yritykset, jotka kannattavat samoja arvoja ja samoja pyrkimyksiä kuin yritys itse? / *What is the best cooperation network like - do we know how to choose the firms of same values and aspirations as ours to be our cooperation partners?* _____

6. Kyetäänkö löytämään ne kumppanit, jotka ovat omasta halustaan menossa juuri samaan suuntaan? / *Are we able to find the kind of partners that are of their own free will going on the same direction as we are?* _____

Ensimmäinen osa - tuote
The first part - product

1. Mikä on se imago, jota tuotteella tavoitellaan? / *Which is the image that is pursued for with the product?* _____

2. Mitä yrityksen imago viestittää tuotteesta, entä tuotteen imago yrityksestä? / *What does the image of the firm signal from the product, and how about the image of the product, what does it signal from the firm?* _____

3. Ovatko yrityksen ja sen valmistamien tuotteiden imagot yhteensopivia keskenään? / *Are the images of the firm and of the products produced by it compatible with each other?* _____

4. Mikäli tuote on sen luonteinen, että siihen liittyy ergonomisia piirteitä, onko se riittävän ergonominen? / *If the product is of such a nature that there are ergonomic characters included, is it ergonomic enough?* _____

5. Onko tuote moduloitavissa? / *Is it possible to modulate the product or not?* _____

6. Mitkä ovat tuotteen käyttöominaisuudet? / *Which are the use characteristics of the product?* _____

7. Entä millainen tuote on tekniseltä toiminnaltaan? / *What is the product like, when it comes to the technical functions of it?*

8. Onko tuotekehityksessä otettu huomioon tuoteturvallisuustekijät? / *Has it been paid attention to the product safety factors in the product development process?*

9. Onko tuote riittävän esteettinen? / *Is the product aesthetic enough*?

10. Onko tuotteen huolto helppoa? / *Is the product easy for service functions?*

11. Miten tuote sopii käyttöympäristöönsä? / *How does the product suit into its use environment?*

12. Onko tuotteen valmistus taloudellista? / *Is the manufacturing of the product economical?*

13. Onko tuotteen kierrätettävyysnäkökohdat huomioitu? / *Has it been paid attention to the recycling aspects of the product?*

14. Miten hyvin markkinoiden tuotteelle asettamat vaatimukset on selvitetty ja otettu tuotekehitystoiminnassa huomioon? / *How well the requirements set for the product by the markets have been inquired about and also been noticed in the product development activities?*

15. Onko tuotteella nk. tulevaisuushakuisuus- ja innovatiivisuusarvoa? / *Does the product have a so-called reaching-for-the-future and innovativity value in it?*

Toinen osa - ympäristö
The second part - environment

1. Miten hyvin yrityksen rakennuskanta vastaa todellisia tarpeita? / *How well the buildings of a firm will answer the actual needs?*

2. Onko toimitilojen sisustuksessa ja kalustuksessa otettu huomioon käyttötarkoitus ja viihtyvyys? / *Has been paid attention to the use and job satisfaction in the furniture and equipment of the premises?* _____

3. Ovatko yrityksen konttorikoneet käyttöympäristöönsä sopivia ja ergonomiset vaatimukset täyttäviä? / *Do the office machinery suit into the use environment of theirs and meet the requirements of ergonomics?* _____

4. Millaisia materiaaleja yrityksen toimitiloissa ja ympäristössä on käytetty? / *What kinds of materials there have been used in the premises and environment of the firm?* _____

5. Miten suunnitelmallista uuden rakentaminen ja vanhan kunnostaminen on ollut? / *How well planned has the building of new and renovating the old been?* _____

6. Millaista arkkitehtonista linjaa yrityksessä on noudatettu? / *Which architectonic line has been followed on in the firm?* _____

7. Miten hyvin esimerkiksi yrityksen konkreettisessa ympäristössä käytetyt värit sopivat siihen imagoon, jota yritys tahtoo viestiä? / *How well, for instance, the colors used in the concrete environment of the firm do suit into the image the firm wishes to signal?* _____

8. Miten istutukset on suunniteltu? / *How have the flower arrangements been designed?* _____

9. Millä perustein koneet ja laitteet, autot sekä kuljetuskalusto on valittu ja mitä ne kunnollaan ja siisteydellään - tai sen puutteella - yrityksestä viestivät? / *For which reasons the machines and equipment, cars and hauling equipment have been chosen - and what do they signal from the firm with the condition and cleanness of theirs - or with the lack of it?* _____

Kolmas osa - viestintä
The third part - communication

1. Onko yrityksellä käytössään logo tai nimilogo ja mitä ne yrityksestä ja sen tuotteista kertovat? / *Does the firm has a logo, and what does it tell about the firm and its products?* _____

2. Miksi yrityksen logo tai nimilogo aikoinaan on suunniteltu ja mitä niiden tahdotaan viestivän yrityksestä? / *Why the logotype of the firm originally was designed and what it is wished to signal from the firm?* _____

_____

3. Millaisia tuotemerkkejä yrityksellä on käytössään, mitä ne yrityksestä kertovat? / *What kind of trademarks the firm has on its use and what do they tell about the firm?* _____

_____

4. Onko yrityksellä sen nimen käyttöä ja kirjoitusasua säätelevää ohjeistoa? / *Does the firm have a manual that gives guidelines to the usage and writing form of its name?*___

_____

5. Millaiset säännöt koskevat yrityksen mahdollisia aputoiminimiä ja niiden käyttöä? / *Which kinds of rules there are for the possible subsidiary companies and the use of their names?*_____

_____

6. Mitä yrityksen tuote- ym. koodit yrityksestä ja sen tuotteista kertovat? / *What the different product codes, among others, tell about the firm and its products?*_____

_____

7. Millaisia muita symboleja yrityksellä on käytössään? / *What kind of other symbols the firm has on its use?* _____

_____

8. Onko yrityksen kylttien ja opasteiden valinta ollut suunnitelmallista ja yhdenmukaista? / *Has the choosing of signs and guide tables of the firm been systematic and uniform?* _

_____

9. Miten suunnitelmallista ja yhdenmukaista yrityksen käyttämien pakkausten valinta on? / *How systematic and uniform has been the choosing of the packages used by the firm?*

_____

10. Onko yrityksen julkistamien tiedotteiden suunnitelmallisuuteen ja yhdenmukaisuuteen kiinnitetty riittävästi huomiota? / *Has it been paid attention enough to the systematicalness and uniformity of the bulletins published by the firm?* _____

_____

11. Miten tärkeänä pidetään yrityksen viestintämateriaalin painoasun ja painojäljen laatua? / *As how important the appearance of the printed material and the print quality of that material has been taken in the firm?* _____

_____

12. Onko yrityksessä pohdittu viestinnässä käytettävien teksti- ja kirjasintyyppien sekä värien valintaperusteita, entä miten säädeltyä niiden käyttö on? / *Has it been deliberated*

about the selection principles of the text types and fonts, and colors used in the firm there in the communications, and how controlled the use of them is? _____

_____

13. Millaisia yrityksen viestintä, mainonta ja mediavalinnat ovat tyyliltään? / *What is the style of the communication, advertising and media selections of the firm like?* _____

_____

14. Kuinka tärkeänä on koettu valintojen yhteensopivuuden ja valitun linjan säilyttäminen? / *As how important it has been taken to maintain the uniformity of the selections and the look chosen?* _____

_____

15. Onko pohdittu yrityksen käyntikorttien ja sen lähettämien joulu- ym. tervehdysten sekä esimerkiksi kutsukorttien asemaa joko yrityskuvaa tukevana tai sitä nakertavana apumediana? / *Has the nature of the business cards and Christmas greetings, among other cards and invitations, been taken under consideration as subsidiary media that either support the corporate image or gnaw it?* _____

_____

16. Miten suunnitelmallista yrityksen esitteiden laadinta on? / *How systematic it has been to design the brochures of the firm?* _____

_____

17. Onko yrityksen vuosikertomuksen laadinnassa kiinnitetty huomiota myös sen ominaisuuteen toimia yrityksen mainoksena sidosryhmilleen? / *Has it been paid attention to the annual report of the firm also as an advertisement for the interest groups of the firm?* _____

_____

18. Miten tärkeänä kilpailukeinona koetaan asiakaspalvelu ja henkilöstön käyttäytyminen, niiden yhdenmukaisuus sekä yrityksen valitsemien linjojen noudattaminen? / *In Your firm, how important is the customer service and the behavior of Your personnel taken as a competition parameter; including the uniformity of them and the following of the policy of the firm?* _____

_____

19. Entä miten onnistunutta ja tarkoituksenmukaista asiakaspalvelu ja henkilöstön käyttäytyminen yrityksessä on? / *How successful and functional the customer service and the behavior of the personnel are in the firm?* _____

_____

Vastaamalla näihin kysymyksiin päästään design management -mallin seuraavalle asteelle. Kuvassa 3 on yksinkertaistettu yrityksen design managementin ja koko toiminnan kolmen tärkeimmän elementin ne osa-alueet, joiden on oltava kunnossa, jotta yritys voisi menestyksekkäästi siirtyä pohtimaan mallin seuraavaan vaiheeseen liittyviä kysymyksiä.

When these questions are answered the next stage of the design management model can be reached. In the figure 3 there it has been simplified those fields of the design management of a firm and the three most important basic elements of the whole activity of it that must be in shape in order to make the firm be able to successfully move on considering about the questions including in the next stage.

Jotta yrityksen tuote olisi kunnossa, on sen
1. sovittava yrityksen imagoon,
2. oltava yhteensopiva yrityksen funktioiden kanssa ja
3. sillä on oltava sellaista käyttöarvoa, joka oikeuttaa sen olemassaolon.

•

** For a firm's product to be OK, it shall*
1. *suit the image of the firm*
2. *be uniform with the functions of the firm and*
3. *it also has to have the kind of use value that will justify its existence.*

Yrityksen ympäristön on
1. myös soinnuttava yrityksen tavoittelemaan imagoon ja
2. oltava yhteensopiva yrityksen funktioiden kanssa.
3. Jotta yrityksen ympäristön kautta voitaisiin saavuttaa lisäarvoa, on sille asetettava ehdoton vaatimus toimivuudesta. Esteettisimmälläkään ympäristöllä ei ole arvoa, ellei se täytä funktionaalisuuden vaatimuksia - ja ellei siellä ole mielekästä työskennellä.

•

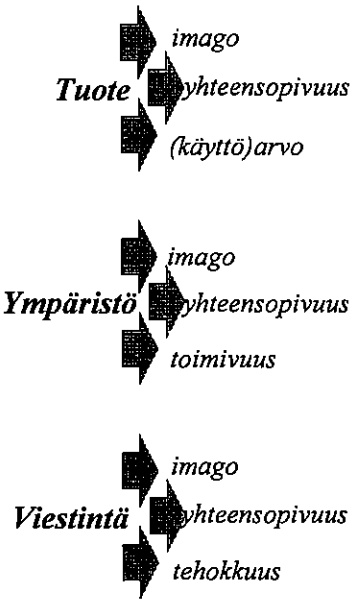
** The environment of the firm also*
1. *has to harmonize with the image pursued by the firm and*
2. *it has to be compatible with the functions of the firm.*
3. *In purpose to be able to gain surplus value through the environment of the firm, there has to be stated an absolute requirement of functionality for it. Even the most aesthetic environment has no value unless it meets the requirements of functionality - and unless it is pleasant and meaningful to work in it.*

Onnistunut viestintä sisältää samoin
1. imagoon sopivuuden ja
2. yleisen yhteensopivuuden vaatimukset.
3. Lisäksi viestinnän on oltava tehokasta, jotta olisi syy harjoittaa sitä. Yritys viestii aina itsestään, passiivisen viestinnän keinoin se ilmaisee todellista olemustaan, aktiivisen viestinnän keinoin sitä, mikä se tahtoo olla. Onnistunut viestintä koordinoi nämä molemmat aspektit yhteensopivuuden ja yrityksen imagoa tukevuuden kenttään.

•

** A succeeded communication also includes the requirements*

1. *of suiting in the image and*
2. *of the general compatibility.*
3. *Communication also has to be affective in purpose to have a reason to practice it. A firm always signals, communicates from itself. With the means of passive communication it expresses the true essential nature of its, with the means of active communication it expresses what it wishes to be. A succeeded communication coordinates both of these aspects into the field of compatibility and supports the corporate image.*



Kuva 3. Tuote, ympäristö ja viestintä design management -mallin olennaisina elementteinä

Figure 3. Product, environment and communication as essential elements of the design management model (see also chapter 7, figure 36)

Kun yritykselle on selvinnyt sen tuotteen, ympäristön ja viestinnän merkitys ja luonne on design management -mallin seuraavan asteen aika: nyt yrityksen on selvitettävä itselleen, mitkä ovat ne tekijät, jotka vaikuttavat siihen todellisuuteen, jossa ja josta yritys elää. Tässä design management -mallin vaiheessa yritys on jälleen vastausta odottavien kysymysten edessä.

** When a firm has explained itself the meaning and nature of its product, environment and communication it is time for the next stage of the design management model: now the firm has to explain itself, which are the factors that influence in the reality where and from which the firm lives. Also in this stage of the design management model the firm is, once again, in front of questions that need to be answered.*

Kolmas kysymys:
Third question:

1. Miten yritys suhtautuu "porteriaanisiin" positiivisiin ja negatiivisiin energioihin toiminnassaan eli keskittyykö yritys positiivisiin vai negatiivisiin mahdollisuuksiin toiminnassaan? / *Which attitude the firm has in its activities towards the "porterian" positive and negative energies presented; does the firm concentrate itself in the positive or negative possibilities in its activities?* _____

2. Miten yritys välttää joutumasta negatiivisen energian kierteeseen? / *How does the firm avoid the circle of negative energy?* _____

3. Miten yritys pystyy optimaalisesti hyödyntämään positiivisen energian tarjoamat mahdollisuudet? / *How can the firm optimally utilize the opportunities offered by the positive energy?* _____

4. Toimiiko yritys illuusioiden ja harhakuvitelmien varassa, vai onko päätösten pohjana rautainen tieto siitä, mikä yrityksen todellinen identiteetti on? / *Does the firm act on the grounds of illusions and delusions, or is there, as the basis of the solutions, an iron knowledge of what the true identity of the firm really is?* _____

5. Tiedetäänkö tarkasti, mitä asiakkaat ja yhteistyökumppanit yrityksestä ajattelevat? / *Is it known exactly, what the customers and cooperation partners think about the firm* _____

6. Miten luotettavana ja laadukkaana asiakkaat ja yhteistyökumppanit yritystä ja sen toimintoja pitävät? / *How credible and of how good quality the customers and cooperation partners take the firm and its functions?* _____

7. Osaako yritys hyödyntää visiot ja luovuuden; osaako yritys valjastaa innovatiivisuuden päämääriin pyrkimisensä käyttövoimaksi? / *Is the firm capable of utilizing the visions and creativity, of harnessing innovativity to be the use power in its intentions to reach the goals set?* _____

*** Luulo vai tieto? ***
*** Presumption or knowledge? ***

Negatiivisen energian käyttövoimia / *Use powers of the negative energy*

1. yleinen tyytymättömyys, _____ *general dissatisfaction*
2. epävarmuus ja _____ *uncertainty*
3. tappiomieliala _____ *defeatism*
4. illuusiot, _____ *illusions*
5. luulot, _____ *presumptions*
6. pelot ja _____ *fears and*
7. uskomukset, _____ *beliefs*
8. kaikki ne harhakuvitelmat, jotka yrityksellä on itsestään ja toiminnoistaan. / *all those delusions a firm has of itself and of its functions.* _____

Ellei yritys ole itsekään täysin selvillä siitä, mitä se tekee ja miten se tehtävistään suoriutuu, ei se kykene saamaan sidosryhmiäänkään vakuuttuneiksi toimivuudestaan.

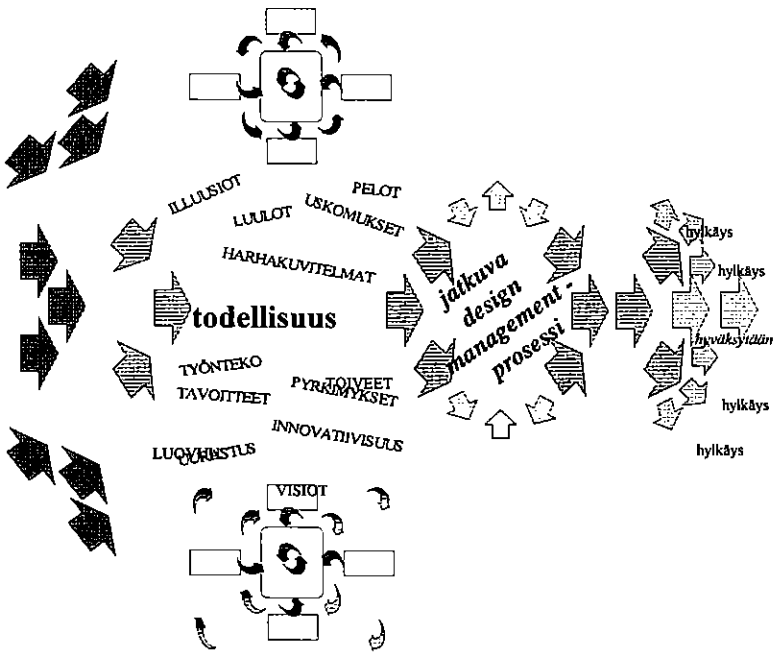
Unless the firm itself is not really aware of what it does and how well it is used to get through its tasks, it cannot be capable of getting the interest groups of its, either, to be convinced of its functionality.

Positiivisen energian käyttövoima löytyy / *the use power of the positive energy is to be found from*

1. rehellisestä työnteosta ja _____ *honest working and*
2. protestanttisen etiikan mukaisesta uurastuksesta. _____ *toil, like according to the Protestant ethics.*
3. Kaikki ne toiveet ja _____ *All the hopes and*
4. pyrkimykset, _____ *aspirations,*
5. tavoitteet ja _____ *goals and*
6. visiot, jotka ohjaavat yritystä yhä paremmalle kehälle designspiraalin mukaisessa onnistumiseen tähtäävässä kiertokulussaan luovat hedelmällistä maaperää / *visions that direct the firm to a better and better circle in the circulation aiming at succeeding, in the circulation that follows the design spiral, generate a fruitful soil for* _____
7. luovuuden ja _____ *creativity and*
8. innovatiivisuuden aikaansaada jotain sellaista, josta yritys voi olla ylpeä: ennenkokemattoman tuotteen, toimivat tilaratkaisut, ikimuistoisen mainoskampanjan - mitä ikinä yritys kokeekaan tieksi onnistumiseen. / *innovativity to create something that the firm can be proud of: an unique product, functional solutions for the premises, an unforgettable advertising campaign - whatever the firm will consider as to be a way to succeeding.* _____

Ideoita on paljon eikä suuri osa niistä koskaan toteudu. Mutta olisi suotavaa, että ne, jotka hyväksytään jatkokehitykseen, loisivat yhä vahvempaa perustaa sille, mitä yritys kokee tärkeäksi saavuttaa. Yrityksen todellisuutta ja siihen vaikuttavia tekijöitä positiivisine ja negatiivisine energioineen on havainnollistettu kuvassa 4.

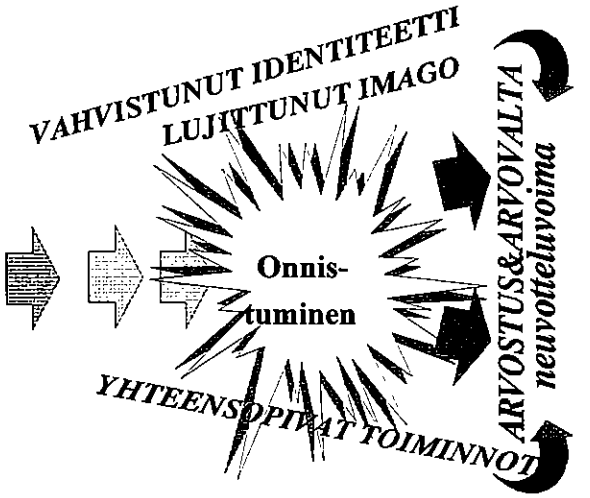
There are a lot of ideas and many of them do never see the light. But it would be desirable that the ones that are accepted to be developed further, would cast an even more robust foundation on it, what the firm experiences as important to achieve. The reality of a firm within the characters related to it has been visualized in figure 4. The nature of the positive and negative energies discussed has also been illustrated in this figure.



Kuva 4. Yrityksen todellisuus ja siihen vaikuttavat tekijät
Figure 4. The reality of the firm and the factors influencing it (see also chapter 7, figure 37)

- Menestys miellettiin useimmiten taloudelliseksi, rahassa mitattavaksi tai muutoin kvantitatiivisesti määriteltäväksi. / *Prosperity was mostly perceived as something economical, measurable in money or otherwise quantitatively definable.*
- Onnistuminen koettiin mielikuvatekijöihin liittyväksi, kvalitatiiviseksi ja samalla myös menestyksen ominaisuudet kattavaksi: kun on menestynyt, niin on myös onnistunut. / *Succeeding was perceived to be something connected in the image factors, qualitative and similarly as something that covered also the factors included in prosperity: when one has been prosperous, he/she also has succeeded.*

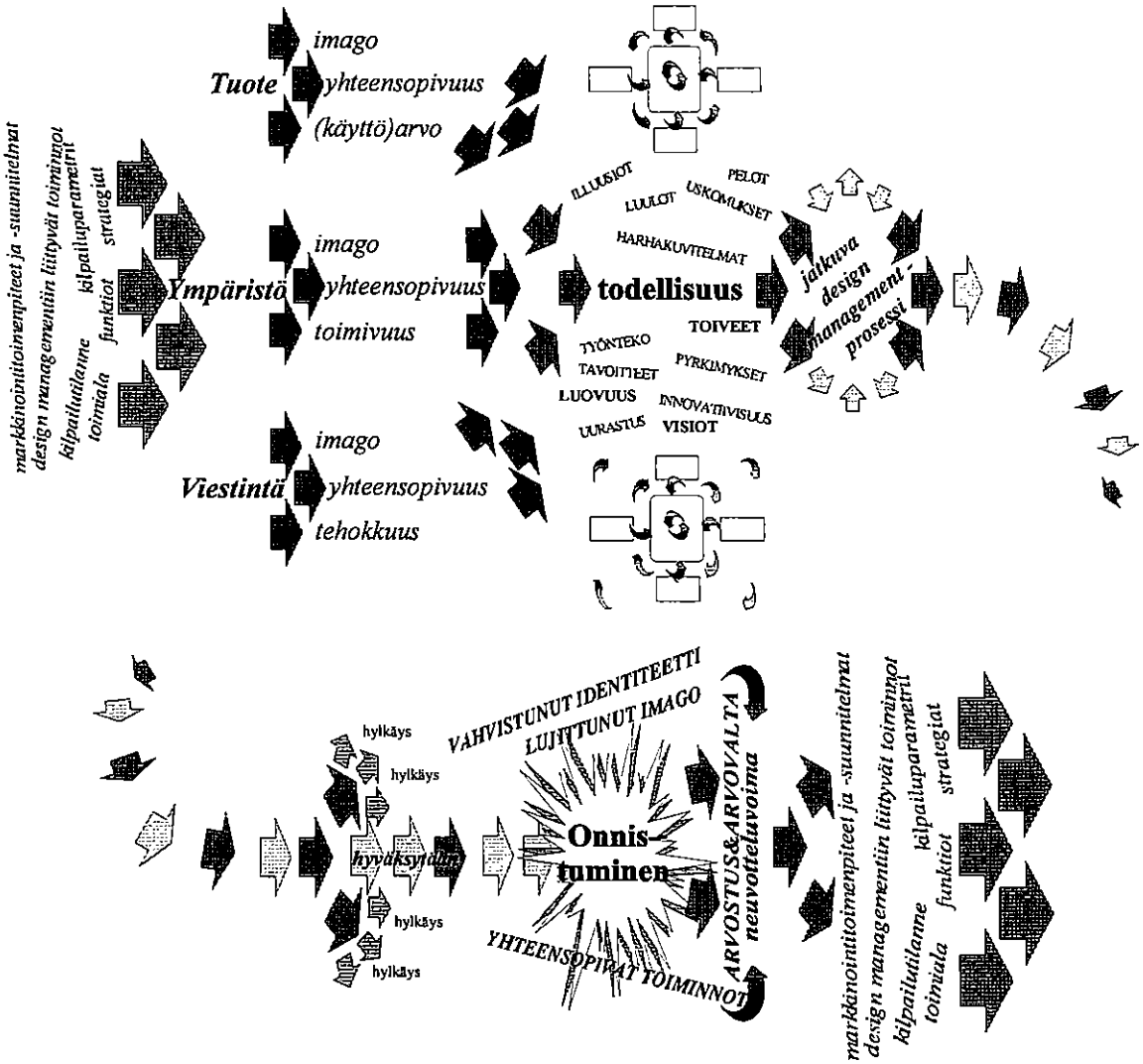
- Jokainen yritys määrittelee itse sen, milloin se kokee menestyneensä tavoitteidensa mukaisesti. / *It is every firm itself that defines when it feels like having succeeded according to the goals it has set.*
- Onnistuminen on osaltaan kokonaisvaltaista menestystä, ja siksi se on design management -mallin päämäärä. / *Succeeding is a kind of comprehensive prosperity, and that is why it is the goal and the ultimate objective of the design management model.*
- Kukin yritys määrittelee itse sen, milloin se on onnistunut pyrkimyksissään; milloin sen toteuttama design management -malli on tuottanut tavoitellun tuloksen. / *Every firm defines itself when it has succeeded in its aspirations; when the design management model carried through by it has yielded the result pursued.*
- _____
- _____
- _____



Kuva 5. Onnistuminen
Figure 5. *Succeeding (see also chapter 7, figure 38)*

Kuvassa 6 on esitetty edellä kuvatuista osista muodostuva design management -malli kokonaisuudessaan.

The design management model formed of the parts described above as a whole is presented in the figure 6.



Kuva 6. Design management -malli
Figure 6. The design management model (see also chapter 7, figure 39)

Kommentteja ja huomioita / Comments and observations _____