**LAPPEENRANTA UNIVERSITY OF TECHNOLOGY**

**Department of Industrial Engineering and Management**

**International Operations and Marketing**

# CORE COMPETENCE OF A SMALL OR MEDIUM SIZED CONTENT PROVIDING COMPANY OPERATING IN THE INFORMATION AND COMMUNICATION TECHNOLOGIES SECTOR

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**ABSTRACT**

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**Keywords:** core competence, content production, content producer company, information and communication technology

The main objective of this work is to study the factors behind the core competence. How it is build up and how the companies can most effectively take advantage of their available resources through understanding of core competence. In the theory part we go through the definition of core competence and the means how companies can clarify their own core competence internally to themselves.

In the empirical part we illustrate the competencies of three case-companies chosen for the qualitative study from a larger company base of a quantitative study made at the Telecom Business Research Center. Writer has acted as a co-author in the qualitative study. Gathered information from the case-companies is based on the views of the interviewees. These views are utmost relevant, because the core competence is in real-life defined by just these core players in the company. In addition one action-oriented case is presented.

The study should be utilized as a tool in the company's core competence definition process. The examples here are intended to help in the process.

**TIIVISTELMÄ**

**Tekijä:** Jukka Niiranen

**Työn nimi:** Ydinosaaminen pienessä tai keskisuuressa tietoliikennetoimialalla toimivassa sisällöntuottajayrityksessä

**Osasto:** Tuotantotalous

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**Hakusanat:** ydinosaaminen, sisällöntuotanto, sisällöntuottajayritys, tietoliikennetoimiala

Tutkimuksen tavoitteena on tarkastella tekijöitä, joista ydinosaaminen muodostuu, sekä sitä kuinka yritykset voisivat parhaiten hyödyntää omia resurssejaan ja osaamistaan tunnistetun ydinosaamisen avulla. Teoria osuudessa käydään läpi kuinka ydinosaaminen on kirjallisuudessa määritelty ja miten yritykset voivat sen määritellä sisäisesti itselleen.

Empiirisessä osiossa käydään läpi Telecom Business Research Centerissä tehdyn kvantitatiivisen selvityksen pohjalta valitut kolme sisällöntuottaja case -yritystä sekä kuvataan näiden osaamista. Tiedot yrityksistä perustuvat niiden edustajille tehtyihin haastatteluihin ja heidän käsitykseensä omasta yrityksestään. Tämä näkemys on tutkimuksen kannalta äärimmäisen relevanttia, koska ydinosaamisen määrittely tehdään yrityksessä sisäisesti juuri haastatellun kaltaisten yrityksen ydintoimijoiden toimesta. Varsinaisten case -yritysten lisäksi käydään läpi käytännön tapaus action-oriented -tutkimusosuudessa.

Tutkimusta ja siinä käsiteltyjä esimerkkejä tulisi hyödyntää yrityksen oman ydinosaamisselvityksen apuna prosessin varrella.

## PROLOGUE

This master's thesis work has been done at the Telecom Business Research Center institute for my master's degree from the Department of Industrial Engineering and Management at the Lappeenranta University of Technology. Professor Veli-Matti Virolainen, whom I would like to thank greatly, has extremely patiently supervised the work.

My warmest thanks go also to my wife Hanna, to the former director of TBRC professor Jarmo Partanen and to dean of the Industrial Engineering and Management department professor Markku Tuominen.

When reading, please keep in mind that the text has been written during 2000-2001, although the Master's Thesis was published in the end of 2004.

Lappeenranta, December 7, 2004

Jukka Niiranen

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## ABBREVIATIONS

| | |
|---|---|
| 3G | 3rd Generation GSM |
| CSCW | Computer-Supported Cooperative Work |
| DRM | Digital Rights Managment |
| EDGE | Enhanced Data rates for GSM Evolution |
| GDSS | Group Decision Support System |
| GSS | Group Support System |
| GUI | Graphical User Interface |
| GPRS | General Packet Radio Service |
| GSM | Global System for Mobile communication<br>or Groupe Spéciale Mobile |
| ICT | Information and Communications Technology |
| IP | Internet Protocol |
| ISP | Internet Service Provider |
| IT | Information Technology |
| LUT | Lappeenranta University of Technology |
| SBU | Strategic Business Unit |
| SMS | Short Message Service |
| TBRC | Telecom Business Research Center |
| UMTS | Universal Mobile Telecommunications System |
| WLAN | Wireless Local Area Network |
| XML | Extensible Markup Language |

# CORE COMPETENCE OF A SMALL OR MEDIUM SIZED CONTENT PROVIDING COMPANY OPERATING IN THE INFORMATION AND COMMUNICATION TECHNOLOGIES SECTOR

## 1. INTRODUCTION

The idea of core competencies in its current comprehension was originally introduced by Prahalad and Hamel (Prahalad, Hamel, 1990), who suggested, that “core competencies are the collective learning in the organization, especially how to coordinate diverse production skills and integrate multiple streams of technologies”. They argued that a company’s core competencies are the foundation from which competitive advantage can be built in the market.

This work concentrates on the future challenges of a content producer operating in the information and telecommunication sector and discusses their competences and the means they must take to develop them into core competences. Understanding the company’s own core competence is utmost important for a content producing company operating in such a turbulent business area as the information and communication technologies sector. New means of content delivery are introduces almost daily and other – may be just a few months ago very promising looking – methods are buried into the pages of history. Extremely good example of this is the “DataPlay” optical disk format. It was introduced at the CeBIT in 2001 and decided to be old fashioned in October 2002. The technology was over taken by other similar, but more efficient technologies, in just little over a year. (Digitoday, 2002) Now if one company would have developed it’s operations too closely related to such a technology as the “DataPlay” was it would have been in great troubles. While some other company understanding that its own core competence does actually lie in some other factor than the distribution method, could just shrug it shoulders and continue doing business as usual.

## 1.1. Background of the study

As it will become clear in the empirical part of this paper the concept of core competence is not clear to the common company. In addition to that it came evident, in the quantitative study of the current players in the information and telecommunication business in Finland, that only a hand full of companies has formally studied their core competencies. In some cases the core competence was mixed up with competitive advantage or even into technological know-how. It should be clear, that if company does not know its own competencies it is impossible to define strategies and goals for future activities, at least with any accuracy. So if any company should want to plan its future, it must familiarize itself with its own core competencies and its building blocks.

Often even in the literature the concept of core competence is stated to be too vague and several attempts have been made to clarify it. Regardless of that and due to the managerial nature of the core competence definition process the success rate has not been very good. The different companies' management teams hold different skills and abilities to fulfill the definition process; while some huge conglomerates might have even dedicated personnel doing such internal development, the small of medium sized company will have to do process with just one or two persons and their limited resources.

In the past the core competence has been studied in connection with several different areas of industry. But all the same, core competence has been defined through cross-organizational learning in every case. (Prahalad, Hamel, 1990) In their article "Building Core Competencies in Crisis Management through Organizational Learning" Christophe Roux-Dufort and Emmanuel Metais, both professors in the Department of Management and Strategy at the EDHEC Graduate School of Management, Lille, France describe the ideology behind the area of core competence rather unambiguously.

“Proper combined and coordinated, resources contribute to the optimum level of competence at the organizational level. They represent existing basic competencies that the firm may exploit. These competencies lie at the heart of the firm’s identity. They represent its true abilities, that is, its very soul or raison d’étre. Competencies thus represent the collective know-how of the firm in initiating or responding to change, through organizational processes, systems, and procedures, all integrated into modes of behavior, internal networks, and interpersonal relations. Like all tacit abilities competencies have been developed through the years through specific investments and the accumulation of know-how derived from the daily activities of individuals.” (Roux-Dufort, Metais, 1999)

In their organizational learning views Roux-Dufort and Metais see that there are two levels of learning. The first level of learning is so called ‘single-loop learning’, which consists of changing methods and routines without questioning any fundamental way the general operational structure or core driving value of the organization in implemented. On the other hand the second level of learning is called ’the double-loop learning’. It consists of questioning the rationale behind actions in order to transform the logics or the governing variables of the organization. Being able to reach a double-loop type of learning requires an analysis of the operational mechanisms of individuals and institutions. Organizational learning has been studied more in the field of strategic management with an aim to explain the ways in which firms modify, create and accumulate knowledge. And furthermore transform their organizational functioning in order to improve their competencies. (Roux-Dufort, Metais, 1999)

Often the organizational commitment and perseverance are driven by the desire to make difference in people’s lives – the bigger the difference, the deeper the commitment. This illustrates difference between competition for the future and competition for the present, namely, the prospect of making an impact, rather than the certitude of immediate financial returns. This is just the case in the

early stages of competition for the future. No one for example in the early 1960s could have produces a reality based forecast around the VCR business opportunity. But as soon as by the early 1970s, one might have legitimately made an effort at developing a business case. Anyway be then it was too late for anyone who had not been working on videotape competencies since early 1960s to catch up without help from one of the pioneers. This is not to say that commitment to a new opportunity arena is based solely on “gut feeling”, or that companies at work to create the future are not hoping for substantial financial rewards. Commitments substantial enough to build the required will to create the future must be based on something more than a hunch. But when such efforts and competencies are organized appropriately the reward for developing a core competence could be the market leader position. (Hamel, Prahalad, 1994, p. 37-38)

### 1.2. Objectives and content of the study

The aim of this study is to go through the basic building blocks of core competence, how it builds up from company’s resources and how a conscious corporate management can use the identified core competences to company’s benefit. Furthermore we walk through the actual steps needed to identify the core competences in real life.

Correctly identified core competences can and will bring the company in hand new business opportunities, while miss identification might lead to situation where company’s management decide to out-source factors from company structure that actually uphold the company’s well-being and development. This study helps the management team of a small content providing company to identify, enhance, utilize and further develop their core competences.

**Success with Core Competence:**

**1. Identify it !**
**2. Enhance it !**
**3. Utilize it !**
**4. Develop it !**

Discussion upon the nature of the core competence has been going on for over a decade now, but still the concept itself seems to need more clarification. Especially when it is implemented in real corporate life situations its character seems to be too ambiguous. This study offers help and clarification of the process for the companies struggling with definition of their core competence.

Although the definition of the Core Competence within a certain company needs a thorough knowledge about the organization and thus must be done by the management itself the work also requires help from certain experts from company's different organs. This study gives pointers for the decision makers who to take along to the decision making process and how to go on with it.

What makes this core competence definition process even more challenging is that every organization is different, every product line has its unique character and people making the decision upon competencies and their development are – as we all know – human. Completing this decision making in straightforward way will be a life or death issue for many companies operating in such a turbulent and fast evolving industry as the information and communication technologies is. In this study we focus ourselves to content producer companies and issues concerning them when defining the core competence.

### 1.3. Research approach, methodology and methods

The theoretical study is based mainly on a review of articles of the core competence. This is due to relatively low number of books written on this rather young concept. Based on the theoretical references questions for the quantitative questionnaire were prepared. The questionnaire was completed in Telecom Business Research Center (TBRC) as a joint effort among a larger researcher team, in which of the author belonged to. The comprehensive results from this study have been published in the TBRC's Research Reports –series

under name “Tietoliikennetoimialan PK-lisäarvopalvelutuottajat Suomessa” (Small and Medium Sized Value-Add Suppliers for the ICT Sector in Finland). The main focus of the larger quantitative study was to explain the current situation and future direction of the small and medium sized Finnish content producers and telecommunication software companies. (Puumalainen et al., 2000)

The more in-depth semi-structured interviews were then conducted in three case-companies. These companies were selected for this qualitative study based on the answers the companies gave in the quantitative questionnaire, so that the chosen companies would best represent current Finnish content producer companies. The interviews were carried out at the interviewees’ premises by the author. Appropriate questions were prepared for the entire set of interviews beforehand and the same skeleton was used in every case. Naturally due to the varying characteristics of the case-companies the interviews did include case specific questions raised during the interview sessions. But the main structure stayed the same. The main goal of the interviews was to identify the key elements that add up to core competencies in companies operating in the content production business area. The prepared questions skeleton can be found from the APPENDIX 2.

Case companies did actually give permission to use their actual names in this study, but the names were excluded to ensure that the reader’s previous knowledge and conception of the companies would not disturb. The case companies were rather different to each other. One is extremely commercially oriented and operates mainly in one or two Finnish provinces. Second one is on the other hand artistically oriented and renowned for its high creativity and know-how. Third company operates in mainstream popular culture scene and focuses its content to the youth of the biggest cities in the country. But what links all these companies together is that they all produce content that is, or could be, distributed through telecommunication networks.

Due to the newborn nature of the telecommunication content business even more hands on methods were used. Participating research was implemented in the forth-case study through action-oriented approach.

### 1.4. Definitions and limitations of the study

More precise definition of the concept of the core competence can be found later in the conceptual discussion chapter. But in the perspective of an entrepreneur the main problem is to define what core competence actually is when it is viewed by the company itself and on the other hand by one of the other players in the market field. Understanding the concept of core competence and being able to pinpoint it would help the players to get answers to questions listed in the Table 1.

**Table 1: Key benefits resulted from the understanding of the core competence**

| Seen by | Key benefits from the understanding of the core competence |
|---|---|
| The company itself | What is it what we really do better than anyone else? |
| The partners of the company | What benefits would a partnership with a particular company bring to us? How can they help us create added value to our customers? How do they complement our own knowledge in a potential partnership? |
| The financers of the company | Does the company in hand really have some unique competences? Is it really worth investing in? |

| | |
|---|---|
| The rivals of the company | What makes our competitor tick? How could we enhance our own operations to beat them in the market? |

### 1.4.1. Focus on SMEs

In this work the focus is set on the small and medium sized enterprises (SMEs). This is in regard to the fact that the current content production market in Finland is rather polarized. There are small agile content producers and on the other hand there are large media houses controlling the main newspapers and television channels.

According to European Union's commission recommendation the small or medium sized company employs fewer than 250 employees, it's annual turnover does not exceed 40 million € or an annual balance-sheet total is not exceeding 27 million €. The enterprises must also be independent, so that they are not owned as to 25 % or more of the capital or the voting rights by one enterprise, or jointly by several enterprises, falling outside the definition of an SME or a small enterprise, whichever may apply. (EU, 1996)

### 1.4.2. Content production

Content production is extremely vast as a concept. Just until lately "content" has meant merely traditional media content for newspapers, radio and television. As Internet and other electronic media have evolved the concept "content" has expanded to cover also entertainment and electronic commerce related contents. Examples of these could be different kinds of games and World Wide Web pages.

**Table 2: Definition of content producer**

| Definer | Definition |
|---|---|
| Ministry of Trade and Industry (Finland) | Content producer is a company or a part of it, that produces culture, teaching, entertainment, documentary, market communication materials or combinations of these, which are intended to be published in traditional or in digital form.<br><br>Traditional radio- and television broadcast corporations, media and press houses, IT-companies, software houses and telecommunication companies, that could otherwise be included in the definition, are considered as content producers' sub contractor, customers, marketing channels, financing resources and partners..<br>(Translated from Finnish by author.)<br>(Sisältötuotannon kilpailukyvyn kehittäminen, I, 1997) |
| The National Technology Agency TEKES (Finland) | Content means news, advertisement, network commerce, interactive entertainment, expert information services, public services and communication between organizations and individuals distributed by traditional media companies.<br>(Translated from Finnish by author.) |
| The author | Content producer is a company or a person extraditing, sending or selling any intellectual material to one or many recipients through traditional or digital distribution channels. |

### 1.4.3. Limitations

In this paper we discuss the content producers only as information content producers, while the content software producers are left on less observation. Information content producers are seen as companies producing the actual intellectual content to the chosen distribution channel, thus making their product intangible in its nature. The content software producers on the other hand are companies producing software intended to generate, handle and / or store the content information or data.

According to the definition above the intellectual content can be either “information” or mere “data” this thesis focuses on the companies that cultivate the data into information or produce new information through their own intellectual capital.

The author’s opinion is that the excluded automatically gathered and generated “data” –type of content will be considerable source of income to several companies in quite near future, however it is not that interesting in the context of this thesis work.

## 1.5. Current situation in the society

In recent past there have been several examples of new start-up companies, which have been provided with huge amount of capital to build up their businesses. Especially during the change of the millennium all (almost) any company had to show to get venture capital or private investors was a vague idea of some sort of a business plan to operate in the Internet or better jet both in the mobile and the Internet worlds.

Despite of these astronomical amounts of cash these companies had available for the productization and the marketing of their ideas, the success stories are scarce. Although the so called “Internet Investing Fever” during 1999 and 2000 heated the stock markets so that the common sense seemed to be forgotten by several investors, the last two factors that brought several companies down were lack of understanding what the paying customers really wanted or needed and the lack of knowledge of their own competencies and the competencies of the rivals.

Although it might seem after wise to say, but shouldn’t it be clear, that if the company’s entire product line was based on one innovation, which by itself is more than simple for the competitors to imitate, the future of the business cannot be that rosy. Take for an example a SMS (Short Message Service) – service, which was intended to sell jokes and news updates to customers. A second after the product was released the business idea was out in the open, the back-office technology of the service was openly available in the markets and the actual content was more or less easy to buy from numerous vendors. The only two things the first company entering the markets had on its benefit were 1) the first comer advantage and 2) their brand. The virgin market let the company be the only vendor for maybe two to three months – in maximum. And as these content provider companies were new and small in size (in Finland for example: WapIt, RiotE etc.) they really did not have the brand for their products. While then new players entered, the market situation turned quickly into a vicious circle towards dropping prices and lowering margin.

Maybe, and I do emphasize maybe, nowadays the mentality in the information technology sector of the industry has matured so, that new starting businesses do think about their own competencies and thus focus on and development of their core competencies to protect their innovations better than before.

## 2. CONCEPTUAL DISCUSSION OF CORE COMPETENCE

The idea of core competencies was originally introduced by Prahalad and Hamel (Prahalad, Hamel, 1990), who suggested, that “core competencies are the collective learning in the organization, especially how to coordinate diverse production skills and integrate multiple streams of technologies”. They argued that a company’s core competencies are the foundation from which competitive advantage can be built in the market.

Information technology (IT) can be seen as the basic building block of competencies and inputs into the organization’s value chain. Each corporation has various resources (here technologies), but companies differ in how they leverage them. Core competencies do cross Strategic Business Unit (SBU) boundaries and they result from interaction between the different SBUs’ competencies. A core competence is therefore a collection of competencies that are widespread in the corporation (Javidan, 1998).

In his article “The Architecture of Core Competence” Jules Goddard lists out seven critical properties that can be identified to transform generic corporate competencies into the core competencies of a particular company (Goddard, 1997):”

1. They are imbued with experimental or tacit knowledge that competitors would find impossible to replicate; thus, they are not simply products, functions or assets;

2. They define what the company does better than or differently from, any other company and therefore the source of whatever success it enjoys; thus, they are definable only in relation to the competence of all other companies;

3. They are embedded in the organization's modus operandi as though the company were "wired up" to operate at a level of "intelligence" greater than that of the sum of its people; thus, they do not reside simply in the minds of a small number of highly talented stars but find day-to-day expression in the behavior of everyone in the firm;

4. They are rare, limited perhaps to two or three activities in the value chain, namely those that are most critical to the firm's future success; thus, they are not synonymous with the entire activity set performed by a company;

5. They are the source of the company's ability to deliver unique value to its customers; thus, they are not to be mistaken with "leading-edge technologies", "world-class processes", or other "production-driven" definitions of distinctiveness;

6. They are flexible enough to straddle a variety of business functions, product families, and technologies; thus, they are not tied to existing ways of doing business but are platforms for growth – and stimuli for growth;

7. They also define the unique opportunity set available to the firm, being those market openings or knowledge gaps that the company is uniquely qualified to fill; thus, they serve to narrow the focus of the firm's forward strategy;"

Core competencies and their significance to the company can be better understood by looking at the hierarchy of competencies and how it is built from company's own building blocks. Figure 1 below describes this hierarchy (Javidan, 1998):

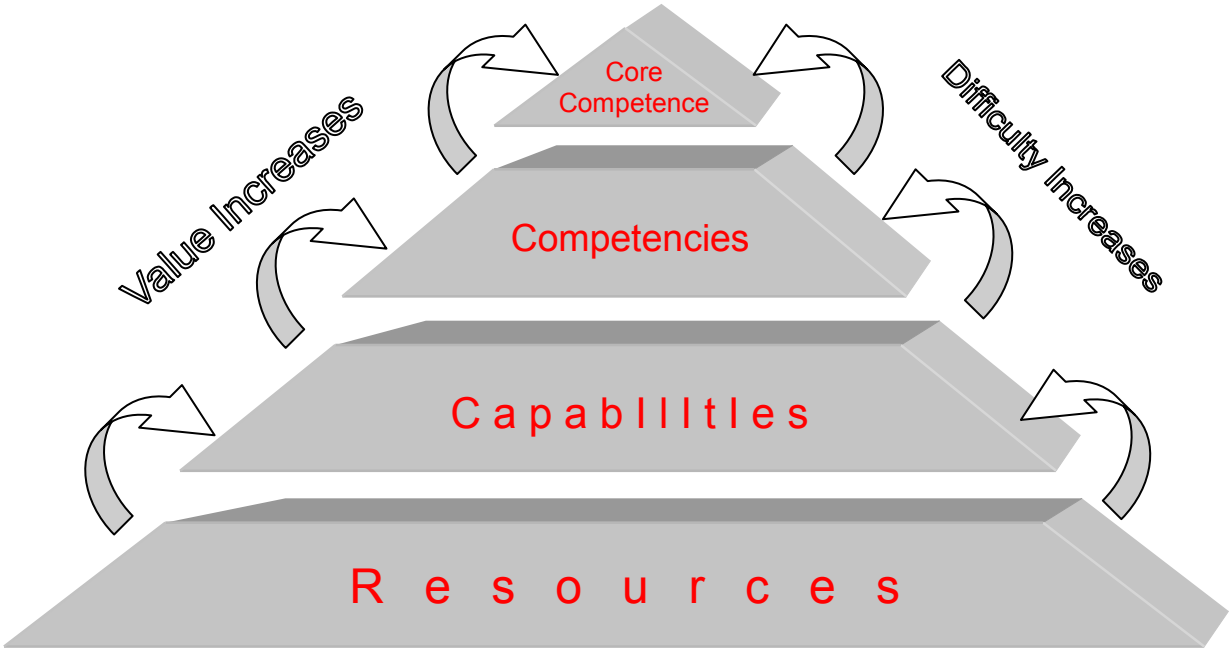


**Figure 1: Core competence building blocks. Adopted from (Javidan, 1998).**

On the lowest level of this hierarchy are the resources, which are the building blocks of competencies and inputs into the organization's value chain. Each corporation has various resources, but companies differ in how they leverage them. At this point we come to the second level of the hierarchy: Capabilities refer to the corporation's ability to exploit its resources. They consist of a series of business processes and routines that manage the interaction among the company's resources. A distinctive feature of capabilities is also that they are functionally based. A competency, the third level in the hierarchy, is a cross-functional integration and co-ordination of capabilities. Competencies usually result from the interfaces and integration among the SBU's (strategic business unit) functional capabilities. Finally, on the highest level of the hierarchy are core competencies. Core competencies cross SBU boundaries and they result from the interaction between different SBU's competencies. A core competence is therefore a collection of competencies that are widespread in the corporation (Javidan, 1998).

**Table 3: Two concepts of the corporation: SBU or Core Competence (Prahalad, Hamel, 1990)**

| | Strategic Business Unit -centric corporation | Core Competence -centric corporation |
|---|---|---|
| Basis for competition | Competitiveness of today's products | Interfirm competition to build competencies |
| Corporate structure | Portfolio of businesses related in product – market terms | Portfolio of competencies, core products and businesses |
| Status of the business unit | Autonomy is sacrosanct; the SBU "owns" all resources other than cash. | SBU is a potential reservoir of core competencies. |
| Resource allocation | Discrete businesses are the unit of analysis; capital is allocated business by business | Businesses and competencies are the unit of analysis: top management allocates capital and talent |
| Value added of top management | Optimizing corporate returns through capital allocation trade-offs among businesses | Enunciating strategic architecture and building competencies to secure the future |

Two different concepts of the corporation are shown in Table 3. From this table we can gather that in more traditional companies that are focused around their strategic business units the management could miss their opportunity to combine resources situated in different SBU and thus miss new business opportunities as well. While – in contrast – in a company managing their operations as a portfolio of competencies the ability to deploy different skills,

allocate resources, manage diversification and approach alliances and out-sourcing is greatly enhanced. (Prahalad, Hamel, 1990)

## 2.1. Management of core competence

One approach to core competence management is proposed by Hamel and Prahalad (Hamel and Prahalad, 1994), who argue that there are five key core competence management tasks. The first task in this process is identifying the existing core competencies. After the core competencies have been identified, the second task is to establish a core competence acquisition agenda. A company's competence-building agenda is mainly determined by its strategic architecture. However, a competence-product matrix is often a useful tool in setting specific competence acquisition and deployment goals. This matrix helps to distinguish between existing and new core competencies as well as between existing and new product markets.

The third task in core competence management is to build new core competencies. Building a world leadership in a core competence area takes years, so it requires consistency from the company. This consistency depends firstly on consensus about which competencies must be built and supported. If the senior managers do not agree on these decisions, the company is likely to fragment its competence-building efforts, as various business units pursue their independent competence-building agendas. This means also that the company may fail to build these new competencies. Secondly, the consistency depends on the stability of the management teams, which are responsible for competence development. Continuing support for research projects is a recipe for efficient competence development. (Hamel and Prahalad, 1994)

Deploying core competencies, the fourth task in core competence management, is often necessary to leverage a core competence across multiple businesses and into new markets. Many companies have several core competencies and

people with world-class skills, but not the ability to deploy the individuals behind new market opportunities. Thus, companies that deploy their competencies internally – from one division or SBU to another – usually get greater effective use out of them. The mobility of core competencies can be increased through frequent meetings, where employees with particular competencies exchange ideas and experience. (Hamel and Prahalad, 1994)

The final task in core competence management is protecting and defending them. Core competencies may wither in many ways: they can become fragmented through divisionalization, they can be inadvertently surrendered to alliance partners, there may be a lack of funding etc. In order to protect the core competencies from this erosion the top management must be constantly alert and follow the health of these competencies. There should be regular "competence review" meetings which focus on the levels of investment, plans for strengthening constituent skills and technologies, internal patterns of deployment, the impact of alliances, and outsourcing. (Hamel and Prahalad, 1994)

## 2.2. Utilization of core competence

A growing body of evidence suggests that distinctive technological competence provides the basis for superior firm performance. However, few if any firms possess all the prerequisite competencies required for a given technology-product-market paradigm as they enter that market. Technological competence involves a deep understanding of the scientific properties, interrelationships and latest developments in the subject area. This knowledge is valuable for a company only if the competitors do not have a similar knowledge base and if it can be converted into superior products for customers. According to Mascarenhas (Mascarenhas, Baveja and Jamil, 1998) executives emphasize most often an exposure to a demanding technical, operating, or economic environment when the company is developing a technical competence.

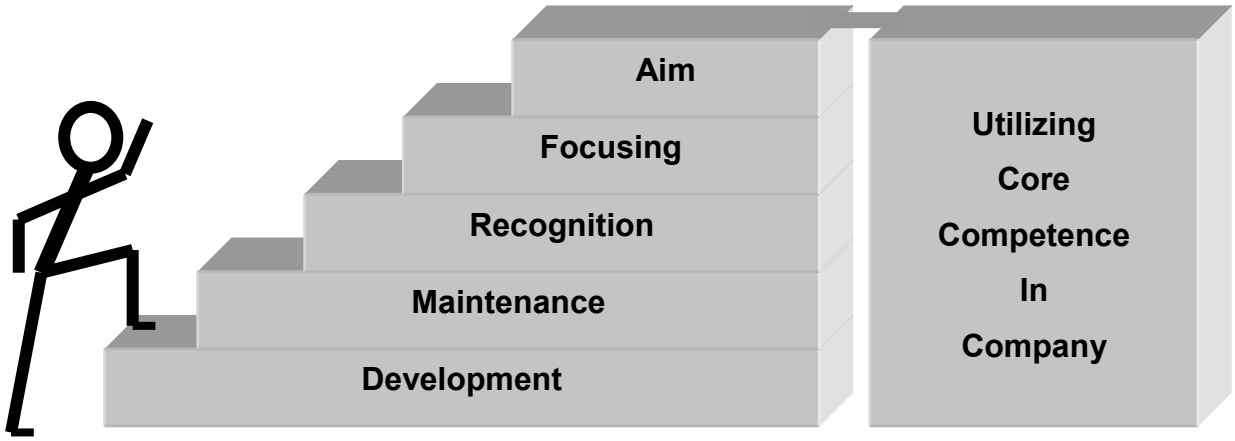


**Figure 2: The five steps of core competence**

Figure 2 is adapted from articles by C.K.Prahalad and Gary Hamel (Prahalad, Hamel, 1990) , Mansour Javidan (Javidan, 1998) and Briance Mascarenhas, Alok Baveja and Mamnoon Jamil (Mascarenhas, Baveja and Jamil, 1998).

Figure 2 illustrates the steps a company must take to archive a situation where it really benefits from its core competencies and thus advance in the

competition environment. Naturally the “ground floor” in this picture is the situation where one core competence has already been recognized. (More on how the recognition should be done can be found from chapter 2.4) On the first stair there is a need to develop the recognized core competence to get most out of it. Next the company must be able to maintain that core competence, this means that the company must guard the recognized factors that the core competence is built of. On the recognition level the company should try to recognize the most important parts of the core competence and how these parts could be used to further develop the company’s products or to create new products through this incomparable know-how. After recognizing these parts of the core competence the management should focus itself to them and the comprehensive utilization of them. Finally the company reaches the highest stair and that means aiming the business efforts so that the core competence turns into competitive advantage and thus added value to the customer.

## 2.3. Past views of core competence

In his article “Building growth on core competence – a practical approach” Nigel Petts sees that “a core competence is a unique combination of technologies, knowledge and skills that are possessed by one company in a market. Its intangible assets render it invisible to external observers and make it difficult to analyze. This benefits the possessing firm as the competence cannot be copied easily by competitors. A core competence is usually the basis for a whole variety of end products and services, both now and in the future. It is also the reason why some companies can successfully diversify into apparently disparate markets. Core competence has various attributes such as complexity (it is possessed by a group of individuals using diverse technologies); invisibility (it is not easy to identify); inimitability (it cannot be copied easily); durability (it lasts longer than mere products); appropriability (its advantages are bestowed solely upon the owner); non-substitutability (it cannot be replaced by an

alternative competence); and superiority (it is clearly better than similar competences owned by others).
“ (Petts, p.552, 1997)

Another viewpoint is presented by Huttunen et al. in their paper about recognizing dynamic core capabilities. They write that “one cannot successfully define a strategy without taking into account the actual structure of the firm. Balance between the strategy and the structure depends on the hierarchy of the lower and higher level routines and capabilities that, in fact, determines the set of activities the firm is capable of doing in a competitive way. The set of these performing activities based on the routines is called distinctive or core competencies or organizational core capabilities” (Huttunen et al. 2000)

### 2.4. Recognizing one’s core competence

Even though the importance of understanding a company’s competencies is widely acknowledged, the literature on core competence does not provide an organizational process for identifying core competencies or capabilities. There is also little information on who should be involved and what specific steps should be taken to successfully exploit the identified opportunities.

Javidan (Javidan, 1998) proposes the following course of action: The first step in the process is to determine who will participate in it. It is obvious that senior management should be involved, but there are risks associated with relying solely on their views. For example they may not have sufficient in-depth knowledge to go beyond very broad statements. On the other hand, there are limits to how many people and what parts of the company can be involved in this process. The optimal solution could therefore lie in a situation where managers representing the key functions, all business units, important cross functional or cross-SBU teams and important projects are invited as part of the company’s regular strategic planning exercise.

When the participants have been chosen and assigned to groups (of e.g. 5-6 people), they need to attend workshops. In these workshops managers can begin the process by discussing the following eight questions (Javidan, 1998)

1. What are the aspects of the value chain where the company does a particularly good job? In order to ensure clarity on the meaning of each competency, and to be able to discuss their actionable implications, the competencies should be disaggregated into their components as far as possible, i.e. all the way down to the level of specific individuals with specific talents (Hamel and Prahalad, 1994)

2. Is this what we do well actually capabilities (functionally based), real competencies (SBU based) or core competencies (cross-SBU)? This question helps managers understand the existing level of value added by each competence. It will also facilitate the discussion on how to increase the value of the company.

3. Are the corporation's capabilities and competencies stronger than other companies' in the industry? The purpose of this question is to initiate the process of linking competencies to competitive advantage and to prevent too much introspection by forcing decision-makers to consider the external environment.

4. What kind of a link is there between competitive advantage and core competence? This is an important question because these two are not necessarily the same, but can and should be closely related. It is also true that not every competence results in a competitive advantage and not every competitive advantage is related to a competence. However, the causal relationship between core

competence, competitive advantage and added value should be as in the Figure 3.

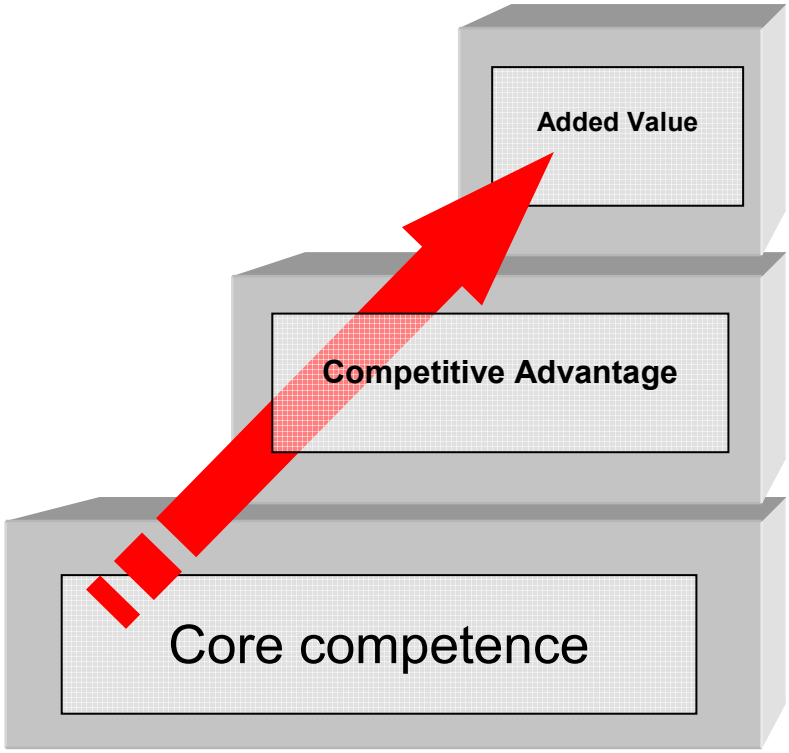


**Figure 3: Causal relationship between core competence, competitive advantage and added value.**

This means that a core competence should lead to a competitive advantage (if the company is better at it than its competitors) and competitive advantage should lead to added value (if that superiority is somehow valued on the market).

5. How durable is the competitive advantage? Capabilities or competencies can create competitive advantages for the company and the more such advantages result, the higher is the pressure on competitors to respond. It is important to remember that very few advantages last for a long time, so the challenge is to understand competitive dynamics and to prepare for such an eventuality.

6. What are the key changes taking place in the industry? The manager's response to this question is not usually sufficient, so a methodological and comprehensive analysis of the external environment prepared by experts in the planning or marketing groups within the company will improve the quality of discussion. Such an analysis would cover the expected changes in the macro environment, changes in the industry structure and competitive dynamics and changes in the marketplace. Furthermore, Prahalad (Prahalad, 1998) points out that the next millennium will witness dramatic changes in the competitive landscape and thus firms will have to rethink the nature of their core competencies and acquire new ones that will shape their future.

7. Given the changes taking place in the industry, a) which competencies or capabilities will be obsolete or irrelevant? b) Which competencies or capabilities should be sustained and improved upon? c) How can we better leverage our existing resources, capabilities and competencies? d) What new competencies or capabilities should be developed? This set of four questions is designed to encourage a strategic and dynamic discussion of competencies and capabilities. They help managers to focus on the implications of environmental changes for the company's present and future competencies and also on how to better exploit the company's current assets.

8. Where does the company go from here? At this stage the competence exercise must be fully connected with the strategic planning process. The ideas generated during the discussion on questions 7 a-d require an implementation plan along with time frames. The first five questions above use a static approach and are

designed to identify the firm's current and historical competencies and capabilities. Questions 6-8 provide a dynamic view and they attempt to integrate this process with the company's strategic planning effort by linking the results of external and internal analyses. The process outlined here is designed to help companies optimally develop and exploit their competencies and capabilities.

## 2.5. Decision making

To ease up the discussion different forms should be prepared for the participants of the workshops. The formal advancement of the process ensures that the results will be conclusive and the work process can also be rewind to check that nothing is forgotten on the way. The Table 4 (below) is an example of a potential discussion form to be prepared for the workshop. Different forms are naturally needed for different stages of the process. The forms should and must also be customized to meet the specific needs of a company in hand.

**Table 4: Example of a discussion form**

| | Compared to competitors, we perform … | | | Does It Matter ? | | Is This Durable ? | |
|---|---|---|---|---|---|---|---|
| **Our own Know-how** | **Better** | **Equal** | **Worse** | **Yes** | **No** | **Yes** | **No** |
| First thing we are good at | | | | | | | |
| Second thing we are good at | | | | | | | |
| Third thing we are good at | | | | | | | |
| Forth thing we are good at | | | | | | | |
| …and so on | | | | | | | |

In addition to traditional way of group work using paper forms another good way to implement these workshops is definitely usage of computer-supported cooperative work systems (CSCW), which are usually called Group Support

System (GSS) or groupware. Group Support System is sometimes also referred as Group Decision Support System (GDSS). In modern organizations most major decisions are made by groups and thus the traditional decision-making is evolving towards group collaboration. While communication primarily transmits information from a sender to a receiver, collaboration is much deeper. During a group collaboration the material is actively worked and developed, the collaboration actually conveys meaning or knowledge among the group members. This work includes sharing documents, information and knowledge as well as brainstorming and voting upon the issues in hand. (Turban, Aronson, 2001, pp.266-271)

A group support system (GSS) can be defined to be any combination of hardware and software that enhances group work and GSS is a generic term that includes all forms of collaborative computing. GSS has evolved since it has been recognized that technology can be developed to support many activities normally occurring at face-to-face meetings; for example idea generation, consensus building, anonymous ranking, voting and so on and so forth. Although a complete GSS is still considered as a specially designed information system, many of the special capabilities of GSS have been embedded in productivity tools since the mid-1990s and thus been available to larger groups of users. Usually most group support systems are easy to use because they are built upon a standard Windows graphical user interface (GUI) or a Web browser interface. (Turban, Aronson, 2001, pp.266-271)

In their book Decision Support Systems and Intelligent Systems Turban and Aronson suggest that the effectiveness of a computerized collaboration technology depends on the location of the members of the group and on the time that shared information is sent and received. The cells organized along these two dimensions (time and place) in the Table 5, illustrate which computer supported collaboration technologies suit best each type of a group work situation. Time defines the moment when the information is sent and received. When this happens almost simultaneously the communication is synchronous,

but when there is gap between the sending and receiving time the communication is considered asynchronous. Place in this context is the geographical position of the participants.

**Table 5: Time / place communication framework and some collaborative computing support technologies (Turban, Aronson, 2001, pp.266-271)**

| | Same time | Different time |
|---|---|---|
| **Same Place** | • GSS in a decision room<br>• Web-based GSS<br>• Multimedia presentation systems<br>• Whiteboard<br>• Document sharing | • GSS in a decision room<br>• Web-based GSS<br>• Workflow management system<br>• Document sharing<br>• E-mail, V-mail |
| **Different place** | • Web-based GSS<br>• Whiteboard<br>• Document sharing<br>• Video conferencing<br>• Audio conferencing<br>• Computer conferencing<br>• E-mail, V-mail | • Web-based GSS<br>• Whiteboard<br>• E-mail, V-mail<br>• Workflow management system<br>• Document sharing<br>• Computer conferencing with memory |

It should also be noticed that as the computer technologies, telecommunication connections and encryption technologies evolve the significance of time and place become less and less important.

In these systems the ideas and comments about the company's competencies and the business performance in general will most certainly be more sincere than in an open discussion. When using GSS in core competence definition process all the comments and suggestions are made anonymously and thus allowing any member of the workshop to "speak freely" without the threat of getting into trouble in the working community. For example a lower level

manager might have valuable information to share, but is unwilling to dispute with higher-ranking executives. GSS will also facilitate the decision making process by helping to bring up new unorthodox ideas and enabling voting about these ideas.

### 2.6. Core competence in content business

Content production business has a quite unique character, which becomes more and clearer when we look deeper into the business. Coarsely we can see that movie and music businesses have much in common with content production which is quite natural as they actually are part of the content production business area. So what could be used for benchmarking the content business? If we consider the history of telecommunication the first content was the Morse code, which could be considered similar to today's short messages. Soon after that the talk and music became the content of radios and later movies in TV. Thus we probably can compare the content business to the development of music and movie business.

Music and movie businesses have especially recently had to scrutinize and supervise their immaterial product rights as new methods of reproduction and distribution of electronic content has become available. In addition to these the modern content producer also has harder things to control; the imitations and short life-cycles of the products.

## 3. CONTENT BUSINESS AND INFORMATION TECHNOLOGY

As the convergence proceeds, it can be seen that different media and communication technologies not only merge to each other, but they also begin to communicate with each other. For example one might start an IP-based video telephone conference through the office WLAN using his multimedia terminal but as the conference prolongs he must get moving to the airport to catch a flight. Nowadays he would have to break the conference and continue it at later time or he could switch to mobile phone, but anyhow the conference must be broken for a while. In a convergenced communication environment he could also choose to just take his terminal along and it would automatically switch from WLAN to EDGE, GPRS or UMTS networks as they become available or the WLAN becomes unavailable and thus continue the conference uninterrupted. This kind of handing the connection over to a new network is called seamless connectivity. On the other hand he could choose to continue the conference via totally different communication terminal, for example his mobile terminal. The company's conferencing software would just start routing the conference to user's video camera equipped mobile terminal, and again the conference could be carried out without any interruption. This is just an example, to make this scenario real the different terminals would have to be able to not only communicate with each other to notify about their existence, but also express each other about their own capabilities. It is easy to see, that sending video or audio data to a terminal that is only able to present text is not that advisable.

In a conference described above the emphasis is quite naturally on the technology used to create the conference and the conference itself then is the content just delivered to different terminals. Now, let us consider another situation where in addition to above the actual form of the content is also a key factor. The user has ordered him a news service – a service that should be available all the time, in any and every place in several different forms. The service could consist of text, audio, video and in the future maybe also of scents

and feels. Now as the service should be available to the users no matter which kind of terminal he chooses to use, the content it self must be tagged so that when it is sent to the user he gets only such data his terminal is able to display or reproduce. This kind of content handling and diversification asks for new kind of content producers and new kind of know-how upon content delivery systems. This is just one of the future challenges of the content producer companies.

### 3.1. Past technological development

“Radio is based on the studies of James Clerk Maxwell, who developed the mathematical theory of electromagnetic waves, and Heinrich Hertz, who devised an apparatus for generating and detecting them. Guglielmo Marconi, recognizing the possibility of using these waves for a wireless communication system, gave a demonstration (1895) of the wireless telegraph, using Hertz's spark coil as a transmitter and Edouard Branly's coherer (a radio detector in which the conductance between two conductors is improved by the passage of a high-frequency current) as the first radio receiver. The effective operating distance of this system increased as the equipment was improved, and in 1901, Marconi succeeded in sending the letter S across the Atlantic Ocean using Morse code. In 1904, Sir John A. Fleming developed the first vacuum electron tube, which was able to detect radio waves electronically. Two years later, Lee de Forest invented the audion, a type of triode, or three-element tube, which not only detected radio waves but also amplified them.

The beginning of radio telephony—the transmission of music and speech—also began in 1906 with the work of Reginald Fessiden and Ernst F. W. Alexanderson. However, it was not until Edwin H. Armstrong patented (1913) the circuit for the regenerative receiver that long-range radio reception became practicable. The major developments in radio initially were for ship-to-shore communications. Following the establishment (1920) of station KDKA at Pittsburgh, Pa., the first commercial broadcasting station in the United States,

technical improvements in the industry increased, as did radio's popularity. Particularly in the United States, the radio receiver became a standard household fixture. Subsequent research gave rise to countless technical improvements and to such applications as radio facsimile, radar, and television." (Infoplease.com)

After the basis for wireless communication was invented it became soon clear that it is extremely beneficial for inter-human communication when distances between people get longer. On the other hand different communication methods have always brought people closer to each other and the world has gotten smaller by day. Nowadays the discussion has shifted from the actual communication methods (the networks) more towards the joint operation, the convergence, of these different systems.

"Mobile wireless has exploded in popularity because of the fact that it simplifies and revolutionizes communication. The market for mobile wireless is increasing by leaps and bounds. The success of mobile communications lies in the ability to provide instant connectivity anytime and anywhere and the ability to provide high-speed data services to the mobile user. The quality and speeds available in the mobile environment must match the fixed networks if the convergence of the mobile wireless and fixed communication networks is to happen in the real sense. So, the challenges for the mobile networks lie in providing a very large footprint of mobile services (to make the movement from one network to another as transparent to the user as possible) and the availability of high speed reliable data services along with high quality voice. A range of successful mobile technologies exists today in various parts of the world and every technology must evolve to fulfill all these requirements." (Wireless Development Network)

### 3.2. Expectations to the near future

“Nokia's and InterTrust's relationship reflects the increasing demand for legitimate content delivery solutions. InterTrust's platform is an ideal technology for Nokia and many other companies planning to offer a broad range of rights-enabled products and solutions to both business and consumer markets worldwide. In the future, an increased part of digital media consumption will happen in the mobile context. Content and services will become event, situation and location specific. Mobile communications and portability of rights will create entirely new ways of consuming media and Nokia is committed to ensuring that consumers will be able to enjoy exciting and easy-to-use services while protecting the rights of content owners. InterTrust has a leading edge DRM technology with the most advanced features to help realize this goal.” (Nokia, 2001)

"Labtec's combination of audio and other technologies, professional skills and market presence will accelerate Logitech's expansion into Internet-enabled media-rich communication solutions," said Guerrino De Luca, Logitech's president and chief executive officer. "In the PC arena, we are seeing an ever-increasing impact from technologies such as voice-over-IP, voice chat and digital music, and a resulting mainstream role for audio interface devices. In addition, audio technologies such as voice command and input are rapidly becoming a significant part of next-generation computing platforms. Therefore, we expect a pervasive presence of such devices among a broad base of consumers.” (Logitech, 2001)

"This acquisition thus adds a further growth engine to our business and supports our strategy to bring Logitech beyond the PC and into markets such as mobile telephony and telecom, placing the company at the forefront of future human interface developments across a variety of digital platforms." (Logitech, 2001)

Above press releases are just few of their kind. All major players in the fields of computing, telecommunications, traditional broadcast and even printed media as well as the Logitech's press release shows even formerly mere peripherals manufacturers seem to be unanimous of the future developments of the IT industry: different means of communication are merging more and more together and mixing to each other – on other words converging.

Different media and communication technologies have been getting closer and closer to each other in recent years. We have already several years ago seen television being integrated into a computer and a telephone being integrated into a car and then again music players integrated into a telephone. But just quite previously we have seen the integration of digital cameras to phones and computers to television as the interactive digital television technology seeks it market share.

### 3.3. Technological challenges

As if the actual intellectual content production would not be hard enough for the content production companies, there is also another touchstone for them: the ever changing and developing world of telecommunication technologies. There are two clearly visible mega trends in the telecommunication technologies at the moment; all-IP and mobile solutions.

#### 3.3.1. Packet switched networks

Firstly the convergence of the different communication networks towards one huge all-IP –network. Eventually all networks including mobile and fixed telephone networks as well as the digital terrestrial television network will be transferring data communication using the Internet protocol. The previously circuit switched networks are evolving towards packet switched technology. An

recent example of this is the development of the GSM network towards the GPRS. At length the network is the same, but enhanced to be able to transfer packet form communication.

### 3.3.2. Mobile solutions

Second mega trend in telecommunications is the ever-increasing need for mobility and communication between humans and machines over the networks. Of course one could ask which came first, the need for moving around with one's computer and telephone or the equipment. Has the development been driven by the technologist or the actual need of the users?

**Mobile**

In this work the concept 'Mobile' is defined to represent any technology, which has been designed wirelessly from the beginning.

**Wireless**

In this work the concept 'Wireless' is defined to represent any technology intended to replace wires.

Mobile solutions can roughly be divided into two categories, to the wireless solutions and to the actual mobile solutions. The differentiation between the wireless and mobile is neither precise nor unanimous even among the experts. In this paper the concept of 'wireless' is seen as something that has previously in the history been connected via wires. For example in a regular telephone the handset is connected with a cable to the actual device, while in a wireless (or cordless) telephone the cable has been replaced with a wireless connection to the handset. Another example could be a television remote control unit. Up even until the 80's the remote controls of some televisions or VCRs were plastic clumps connected to the device with a clumsy long cable. Soon these cables were then replaced with the ultra sound transmitter and later with infra red led,

thus making the remote control unit wireless. To conclude the wireless device is intended to work in a relatively close range from the mother device.

On the other hand there is need for real mobility. In this paper the concept of ‘mobile’ is seen as something that has been designed to work “on the road” from the beginning; something that never has had wired connection and something that has not been possible to implement before. For example a mobile phone is considered mobile, as there has never been a wired connection to the device.

Another more detailed way to see and combine the concepts of ‘wireless’ and ‘mobile’ is introduced by Whatis.com. They see that ‘wireless’ is a term used to describe telecommunications in which electromagnetic waves (rather than some form of wire) carry the signal over part or all of the communication path. Some monitoring devices, such as intrusion alarms, employ acoustic waves at frequencies above the range of human hearing; these are also sometimes classified as wireless.

The first wireless transmitters went on the air in the early 20th century using radiotelegraphy (Morse code). Later, as modulation made it possible to transmit voices and music via wireless, the medium came to be called "radio." With the advent of television, fax, data communication, and the effective use of a larger portion of the spectrum, the term "wireless" has been resurrected.

Common examples of wireless equipment in use today include:

- Cellular phones and pagers, they provide connectivity for portable and mobile applications, both personal and business
- Global Positioning System (GPS) allows drivers of cars and trucks, captains of boats and ships, and pilots of aircraft to ascertain their location anywhere on earth

- Cordless computer peripherals like the cordless mouse is a common example; keyboards and printers can also be linked to a computer via wireless connection
- Cordless telephone sets are limited-range devices, not to be confused with cell phones
- Home-entertainment-system control boxes of which the VCR control and the TV channel control are the most common examples; some hi-fi sound systems and FM broadcast receivers also use this technology
- Remote garage-door openers are one of the oldest wireless devices in common use by consumers; usually operates at radio frequencies
- Two-way radios include Amateur and Citizens Radio Service, as well as business, marine, and military communications
- Baby monitor devices are simplified radio transmitter/receiver units with limited range
- satellite television allows viewers in almost any location to select from hundreds of TV channels
- wireless LANs or local area networks provide flexibility and reliability for home and business computer users

Wireless technology is rapidly evolving, and is playing an increasing role in the lives of people throughout the world. In addition, ever-larger numbers of people are relying on the technology directly or indirectly. (It has been suggested that wireless is overused in some situations, creating a social nuisance.) More specialized and exotic examples of wireless communications and control include:

- Global System for Mobile Communication (GSM) which is a digital mobile telephone system used in Europe and other parts of the world; the de facto wireless telephone standard
- General Packet Radio Service (GPRS) is a packet-based wireless communication service that provides continuous connection to the Internet for mobile phone and computer users
- Enhanced Data GSM Environment (EDGE) is a faster version of the Global System for Mobile (GSM) wireless service
- Universal Mobile Telecommunications System (UMTS) is a broadband, packet-based system offering a consistent set of services to mobile computer and phone users no matter where they are located in the world
- Wireless Application Protocol (WAP) is a set of communication protocols to standardize the way that wireless devices, such as cellular telephones and radio transceivers, can be used for Internet access
- i-Mode was the world's first "smart phone" for Web browsing, first introduced in Japan; provides color and video over telephone sets

Wireless can be divided into:

1. Fixed Wireless

The operation of wireless devices or systems in homes and offices, and in particular, equipment connected to the Internet via specialized modems

2. Mobile Wireless

The use of wireless devices or systems aboard motorized, moving vehicles; examples include the automotive cell phone and PCS (personal communications services)

3. Portable Wireless

The operation of autonomous, battery-powered wireless devices or systems outside the office, home, or vehicle; examples include handheld cell phones and PCS units

4. IR Wireless

The use of devices that convey data via IR (infrared) radiation; employed in certain limited-range communications and control systems

(Whatis.com, 2001)

### 3.4. Mix and match

It was rather easy to make difference between mobile and wireless technologies based on the historical development of the devices and the proximity to the mother device. But as always the world just is not that easy!

To witch category should we then place the wireless local area networks and similar technologies? To the “wireless” –category one might quickly think. Of course the WLAN is a substitutes the Ethernet cable and is thus a replacing the wired connection. But on the other hand it is also able to roam between different networks and communicate over relatively long distances.

WLAN and other jet emerging technologies really turn the operating environment of the content producer to complex one. On the other hand these technologies also create both challenges as well as possibilities for new business models.

A good example of the addictive nature of mobile and wireless technologies is research institute, the Telecom Business Research Center. When the center was established in 1999 all computer were connected to the networks with

traditional Ethernet adapter cards and wired connection. Some of the users had even 100Mbit per second transfer rates available, but all had at least 10Mbit/sec. During the year 2000 the wireless local area network was gradually introduced to the research group. Firstly there were just a few users using the WLAN connection on their every day work, but as the number of users crew and the others saw the flexibility and mobility of the laptop computers connected to the wireless LAN the switch to the new technology did not take much more that 6 months. No one was forced to move nor did they have to. The first year until the early 2001 went fine, the ‘wirelessness’ was helping the research work so much that no one even cared that they were now sharing the one just a bit over 10Mbit per second connection with over 10 users! Dropping their previously generous bandwidth “down” to just 1Mbit per second. Despite of happy users some problems were in sight.

In the early 2001 a research group from the University of California at Berkeley published a report citing "major security flaws" in Wired Equivalent Privacy (WEP) which is the security protocol the WLAN (IEEE 801.11b) uses. This led to a reconsideration of the use of the entire WLAN system. WEP left WLANs using the protocol vulnerable to attacks called ‘wireless equivalent privacy attacks’. In the course of the group's examination of the technology, they were able to intercept and modify transmissions and gain access to restricted networks. The Wireless Ethernet Compatibility Alliance (WECA) claimed that WEP - which was included in many networking products - was never intended to be the sole security mechanism for a WLAN, and that, in conjunction with traditional security practices, it is very effective.

Due to these facts the using of WLAN technology in research work was forbidden until the needed “traditional security practice” would be implemented. Now the users were again hooked to the cables and walls in the office! During the summer and autumn months of 2002 the flexibility of the research group took a huge step backwards. The researchers were again sitting tightly behind their desks and regrouping only for dedicated meetings and other events – one

very effective mean of group work was lost for a while. While writing this passage it still remains to be seen how quickly the group will re-embrace the wireless technology when it will be available once again after the implementation of virtual private networks or other encryption methods

### 3.5. Bandwidth

Another challenge is also the available bandwidth, which can be used to transfer the content. Actually this question revolves around the same issue of knowing which kind of terminal the user is using but it adds a new question to the equation; which kind of connection is he using? Just a couple of years ago (1998) the average mobile user was able to use a mere 9,6kb per second connection for his mobile data needs. In the year 2000 he was easily able to achieve 43,2kb per second data transfer speed though standard multi-channel GSM connections. In the end of the year 2001 he is able to go up to 114kb per second data transfer speed using GPRS service on the GSM network. Furthermore probably during the year 2002 he should be offered jet another enhancement to the GSM network as EDGE (enhanced data GSM environment) is introduced. EDGE will be able to deliver data at rates up to 384kb per second. In just a few years this transfer speed will increase remarkably. As 3G (third generation) broadband, packet-based GSM transmissions services become available. As one of these services UMTS (Universal Mobile Telecommunications Service) offers data transfer rates up to 2 megabits per second. (whatis.com, 2001) Figure 4 below illustrates this growth of the bandwidth offered to mobile consumers.

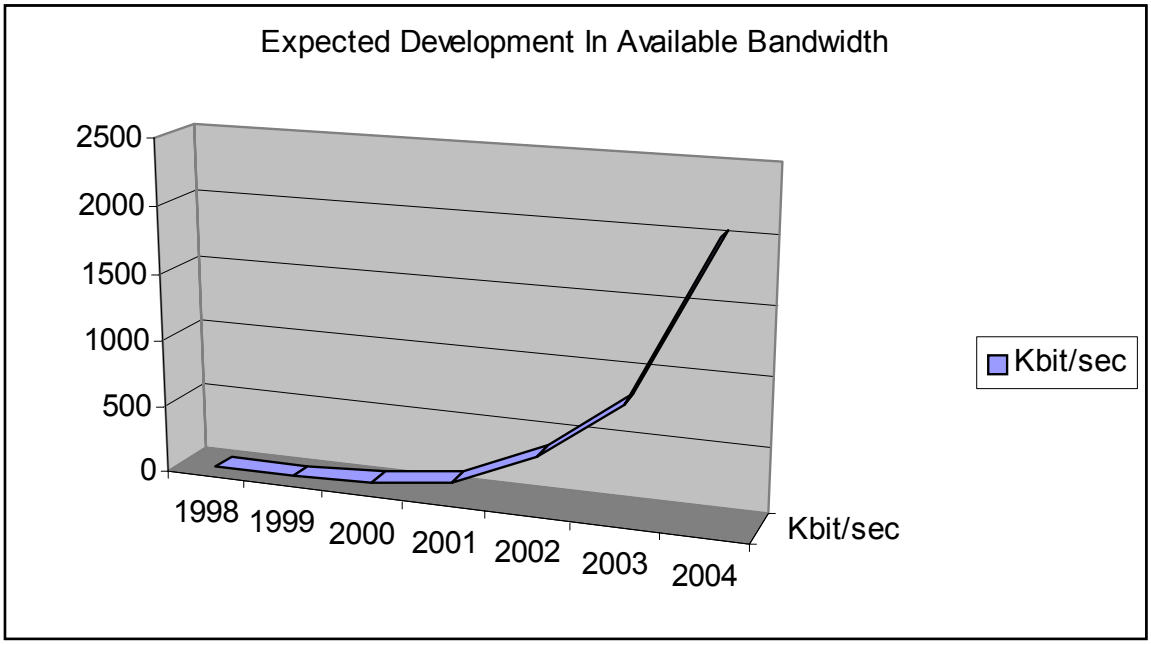


**Figure 4: Expected development in available mobile bandwidth in next few years**

Although this scenario is based on the best available technologies it gives us a good idea of the future. We must also keep in mind that new technologies are often too expensive for the average user and their availability might be limited geographically, but consumer behavior in recent years has shown that if mobile services are not priced out of consumers reach and there is even some useful services available the technologies are implemented very quickly.

When we consider the development in the technology and transfer rates of the mobile IT world we must also keep in mind that there are also the wireless solutions that have already proven themselves both in reliability and pricing. When mobile user might be able to expect transfer rates up to 2Mbit per second sometime around 2005 the wireless users have already connections that provide up to 12 Mbit per second speeds. WLAN (Wireless Local Area Network) have become status quo in business facilities during 2000 and 2001 and it is on its way to home environments as new plug and play type base stations are priced affordably.

As several research and commercial wireless network projects are conducted around the world, it can be forecasted that these networks will be soon available in at least densely populated city centre areas.

All these and new future networks create diverse and utmost challenging operating environment for the content producer of today and tomorrow.

### 3.6. Very close range technologies

In addition to mentioned mobile and wireless technologies there has been great interest recently put into the development of new very close range technologies. At first these technologies will be merely replacing earlier wired connections between devices, but there is clear commercial interest in the markets to use these communication methods in creating Very-local –service networks.

One of these technologies is the infrared –connection that was already mentioned, but there are also several more sophisticated methods for very close range communication and which are possibly suitable also for creating regulator free (or lightly regulated) Very-local –service networks. The idea of Very-local –service networks is a market driven because it would enable sponsoring of the use of the terminals for the end customer by a commercial entity. For example there could be a Very-local –service network build into a shopping center or other tightly populated area where the usage of the network is free but the user must accept same form of advertising and/or user profiling by the service provider, which is the shopping center or other local actor.

There is an illustration of the difference between global, local and Very-local service networks in Figure 5 below. This illustration does not really take into account any specific technological solution for the network, but it describes the relations between different types of service networks. While mobile networks eventually are becoming really global service networks as well as the Internet

is, the smaller wireless networks offer much broader bandwidth in a much smaller service area. On the other hand, the Very-local –service networks are meant to be operated within buildings and complexes. Their bandwidth is (at least at the moment) even smaller than the global mobile networks have, but the idea behind them is extreme locality and location based services. One way to see the Very-local –service networks could be to illustrate them as a kind of "remote controller" for close by services.

Because the Very-local –service networks will probably stay rather unregulated they can be seen as extremely interesting target for the content producers. There will be numerous networks and thus numerous network service providers and they will all need content for their networks that is tailor-made for their own network.

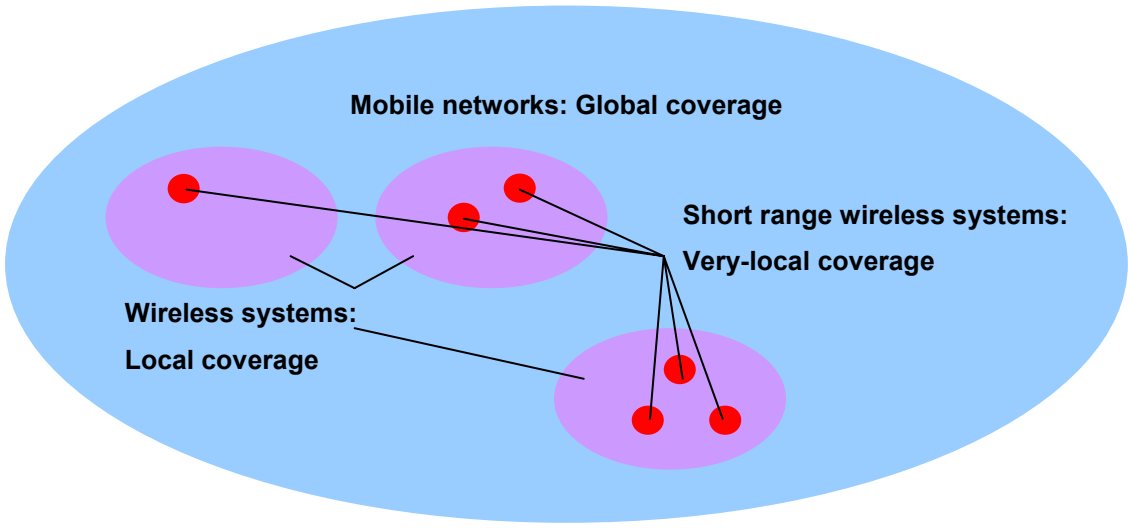


**Figure 5: Illustration of the idea and the relations between the global, local and Very-local service networks.**

One very promising technology for the Very-local –networks could be the Bluetooth technology. Bluetooth supports point-to-point and point-to-multipoint connections. The connection can be formed between two or up to eight devices within the radio range. A group of devices forming an ad hoc connection is called a piconet: it starts with two devices, such as a laptop and a mobile

phone, and may grow to eight connected devices. All Bluetooth devices are peer units and have identical implementations. However, the device that initiates the connection acts as a master and the other devices function as slaves for the duration of the piconet connection. The master controls the slaves and ensures that the slaves continue hopping on the same frequency as the master. (Piven 1999, 24) Configuration of a Bluetooth system is highly adaptable, allowing a Bluetooth unit to simultaneously act as a master in one piconet and as a slave in another. Within the piconet, slaves communicate only with the master but they can be connected to devices in other piconets. That way they create multiple connected piconets, called scatternet, where each piconet has an individual hopping frequency. Ten of these piconets can coexist in the same coverage range of the Bluetooth radio. (Zeichick 2000, 242) Despite that there has been great discussion upon whether the scatternet is possible or not the possibilities for this kind of networks do seem very interesting.

The master/slave relationship in a piconet is handled by a link processor that also converts voice to digital data, splits it into packets and performs error correction. The link processors have to be functionally identical on all Bluetooth-compliant devices for the devices to be able to communicate with each other. Communication between devices happens automatically and transparently when the device is turned on. Each device in a piconet has its own address, on the basis of which the devices are able to identify themselves to each other. The identification includes a description of the type of the device, the functions it supports and which devices are authorized to access those functions. (Zeichick 2000, 242) Proper identification is essential, because without it the devices would try to contact every Bluetooth device around, which would considerably slow down the data traffic and cause security problems.

Other possible technologies for Very-local –service networks are infrared, IrDA with up to 4Mbps transfer speed which is planned to be raised up to 16Mbps and HomeRF –technology which is quite similar to WLAN IEEE802.11b.

(Sainio, Sikiö, Niiranen 2000, 6,7) Anyhow at the moment it seems that these latter technologies are really fighting a loosing battle against Bluetooth and WLAN.

### 3.7. What about the actual content then?

Content in the information and telecommunication has been seen as almost anything that can be sent via electronic data networks and delivered to end users terminal. As these terminals have recently multiplied in the number the forms the content can and should be delivered has multiplied also.

The main problem with the content itself is not the actual production of the content; newspapers, radio and television has been around for a pretty long time and the content production to them is well rehearsed. Nor is the problem the delivery of the content; as described previously there are numerous ways to deliver it – may be we are just not jet able to deliver it in fancy ways in different media, but in some of them anyway. The problem is how to protect one's intellectual rights and one's business idea. Electronic content is often very easy to copy as we have seen with the music CDs and the enormous number of MP3 music files traveling through the Internet. How can the content producer sell their products if it is immediately copied to free distribution?

The next chapters will discuss also this, but the focus will be on the other problem, how to protect the business idea. It should be possible through the understanding of company's own core competences and by developing them.

# 4. CASE STUDY

The case study chapter shows the current outline of the content producing companies in the information and communication technologies market in Finland. This chapter is somewhat tripartite. Firstly we go through the results of the quantitative study upon the Finnish value-add suppliers for the telecom sector, and describe how the case companies where chosen for qualitative observation. Secondly this chapter gives information about these case companies and their resources, capabilities, competencies and their conception of their own core competencies. Finally the chapter introduces one extra case of content production; InfoScreen –project completed in the Telecom Business Research Center by the author, which main focus was to produce an actual media convergence in practice and pinpoint problems that actually do occur in such research and development projects involving several software and content vendors. The action-oriented approach was implemented in this third case.

## 4.1. Background

In this study we used qualitative case method in the form of semi-structured interviews (the basic interview questions can be found from the APPENDIX 2), but the selection of the case companies was done using large quantitative background research sent to 366 Finnish small and medium sized information technology companies. (Puumalainen et al., 2000) A database upon these companies was collected in a large study made in the Telecom Business Research Center at Lappeenranta University of Technology during the winter 1999-2000. The author of this Master's Thesis was one of the organizers and collectors of this database and the original database was also designed by the author. These companies were asked to participate in a quantitative study concerning several fields of their business area. The study was conducted as an internet-based questionnaire, using a new platform developed by VMI Verkonmerkki Ltd. (presently a part of Digital Information Architects Inc., Digia).

On the basis of the answers from this larger study three interesting and differently profiled content providing companies were chosen for further interviews, which were done during the end of May and the beginning of June 2000. The results from these interviews are presented below as Cases.

In the interviews a representative from each of the companies were asked at least over 30 essential questions. The actual number of the questions varied because some matters needed more clarification. These approximately 30 main questions can be categorized in 5 classes specified in the Table 6. The actual interview situation did not follow this classification, but the questions were posed in more practical oriented order to help the interviewee think one thing at a time.

**Table 6: Qualitative interview question types.**

| Class | Questions upon… |
|---|---|
| I | the company's background |
| II | the company's resources |
| III | the company's knowledge |
| IV | the company's perception of the core competence |
| V | the company's vision of their future |

Due to the fact that many content providing companies in Finland are quite small, they have seldom specifically determined their competence areas. However at this time one of the case companies had actually completed a formal company profiling by an outside consultant, so especially for them the questions about competencies seemed appropriate.

## 4.2. The quantitative questionnaire

Due to the nature of the target companies the quantitative questionnaire was decided to be done over the Internet. The aim was to produce a questionnaire form, that was easy and fast to complete for the respondent. One of the financier of the research projects at hand had a ready software tool (Quest Net) for the Internet questionnaires such as this, thus it was easy choice to choose their software for the job.

### 4.2.1. Preparation of the questionnaire

The joint preparation was done to collect all of the needed questions for the questionnaire from a large group of researchers participating. The author participated in eight preliminary group interview sessions to be able to form a thorough basic understanding of the content industry in Finland. These interviews were made in groups (approximately 6 researchers) and the interviewees represented participating co-operation companies. Six of these interviewees were representatives of Soneraplaza web-portal sections (Games “Peli-kanava”, Youth “Kaista-kanava”, Economics “Talous-kanava” and Women “Ellit”-kanava, Travelling “Matka-kanava” and Sports “Stadion”) and the other two were aimed to smaller companies; Sportslink, a subcontractor of content for Soneraplaza Sports-section and MSG-Software a co-operation research partner of TBRC. These interviews gave good insights to the current situation and helped the author and other interviewers to ask appropriate questions within the upcoming quantitative questionnaire.

As the number of questions grew some methods had to be taken in to cut out some groups of questions. The main criteria for these cuts were a) such questions were left out which were not absolutely essential for any particular part of the large research project. Also b) such questions that handled very confidential matters were left out, because the research group believed that the

respondents would be reluctant to answer them appropriately. And finally c) such questions were left out that would be more suitable for further interview studies.

Also to ease up the answering procedure the questionnaire were split into three parts (and three themes), which could be answered in different times. Each of these parts took about 15 minutes to answer. Finally before the questionnaire was released it was tested in four co-operating companies. After this test some questions were still modified and some answer options were added to make the questionnaire more viable. In the end of the third part of the questionnaire there was a possibility for the respondent to receive a small gift for their efforts; a good quality college shirt with Lappeenranta University of Technology impression.

During the iteration with the huge amount of questions one mistake was done concerning the results from the questionnaire for this particular study. At the beginning a classification was made upon different types of value add service providers in Finland. And there were two classes in the content production a) the actual information content producers and b) the content management system producers, which of this thesis work concentrates on the actual information content producers. During the process of compaction of the joint questionnaire of the research group these two classes were combined by mistake into one content production class, thus making the choosing of the qualitative interview companies a bit more tricky for the author.

### 4.2.2. Goals of the questionnaire

The goal of the questionnaire was to clarify the current situation of the Finnish small and medium sized content producer and telecommunication software companies. How these Finnish SME-value add service providers see their own

core competence and technological strengths as well as how they perceive the need for co-operation through partnerships and the internationalization.

This large questionnaire survey acted as a quantitative basis for a large research project performed by the Telecom Business Research Center. The main goal was to be able to give quantitative support for upcoming case studies and company specific interviews. (as the cases in this thesis) The results from the questionnaire were especially meant to be helpful in choosing the case companies for further research and to be helpful for the companies themselves in comparing their own situation to other players in the markets.

The statistical results from this quantitative research were published by the TBRC in a Research Report:"Tietoliikennetoimialan PK-lisäarvopalvelutuottajat Suomessa". (Small and Medium Sized Value-Add Suppliers for the ICT Sector in Finland) The results from the questionnaire are confidential and thus the reader cannot pick up any company specific information from the research results.

### 4.2.3. Classification of the companies according to their products' characteristics

The quantitative research questionnaire was sent to 366 Finnish small and medium-sized ICT –companies. When the analysis started, up to 171 companies had answered to at least the first part of the questionnaire thus raising the answering percentage as high as 47%. As the questionnaire was compiled of three parts it was quite expected that all respondents would not answer all parts, but even then the number of respondents to all three parts were surprisingly high: 148 companies (equaling to over 40% response rate)!

Companies were classified with cluster analysis taking into account the focal points of the operations, subcontracting, the share of the software production and consultation of the company's turnover and the product life cycles. Four groups were discovered as a result from this classification. The distribution of companies into the groups is illustrated in Figure 6.

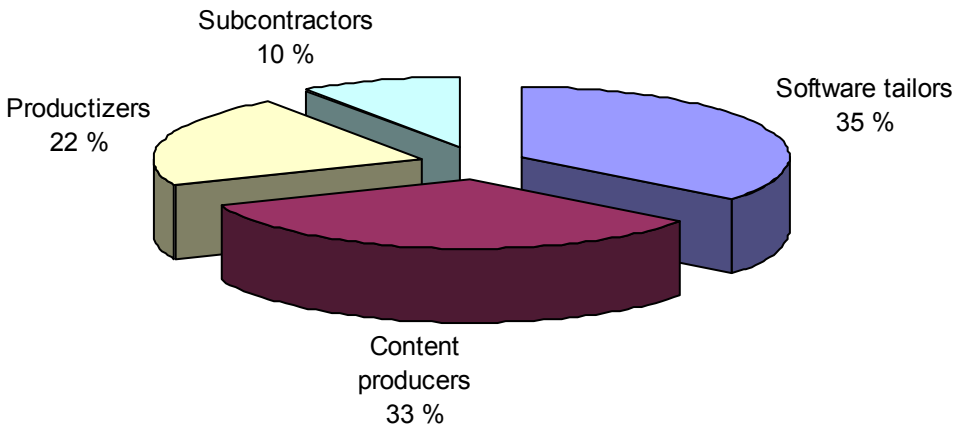


**Figure 6: Distribution of companies into the groups.**

Groups were defined in more detail as follows:

1. Software tailors (total 59 companies), which operations were focused on the platform and management systems. The share of the tailored software and the consultation of the turn over were high and the product life cycles were of medium length.

2. Content producers (total 55 companies), which operations were focused clearly on content production and which turnover was mainly composed of subcontracting or consultation. Their product life cycles and upgrade intervals were extremely short.

3. Productizers (total 36 companies), which operations were focused on management systems and almost 70% of their turnover was composed of

productized software. Product life cycles in these companies were relatively long, while their upgrading tempo was mediocre.

4. Subcontractors (total 16 companies), which operations were slightly focused on platform systems and over half of their turnover was composed of subcontracting. Their product's upgrading tempo was extremely slow.

Typical products for the software tailors were for example business area specific customer information systems, while the content producers on their behalf focused on multimedia production, enterprise communication and graphical design. The productizers usually deliver software for financial, material and personnel management, while software or system designing and development as subcontracting characterize the subcontractors' products.

### 4.2.4. Core competence in quantitative questionnaire

Core competence was naturally discussed also in the quantitative questionnaire. There all questions were posed to all responding companies, making the answer analysis a bit irrelevant to this thesis. Despite of this some results from quantitative analysis is well-founded to be discusses also here to illustrate the companies' views upon core competence in general.

There was a list of 14 areas in the questionnaire of which the respondents were to evaluate their own knowledge on a scale of one to five. (1=weakness and 5=strength) When analyzing the strengths and weaknesses of the companies no considerable differences were noticed between the company groups (clusters). Only in 'technology management' and in 'human resource management' the content producers were on the average weaker than the others, while the subcontractors were on the average stronger in the latter than the others.

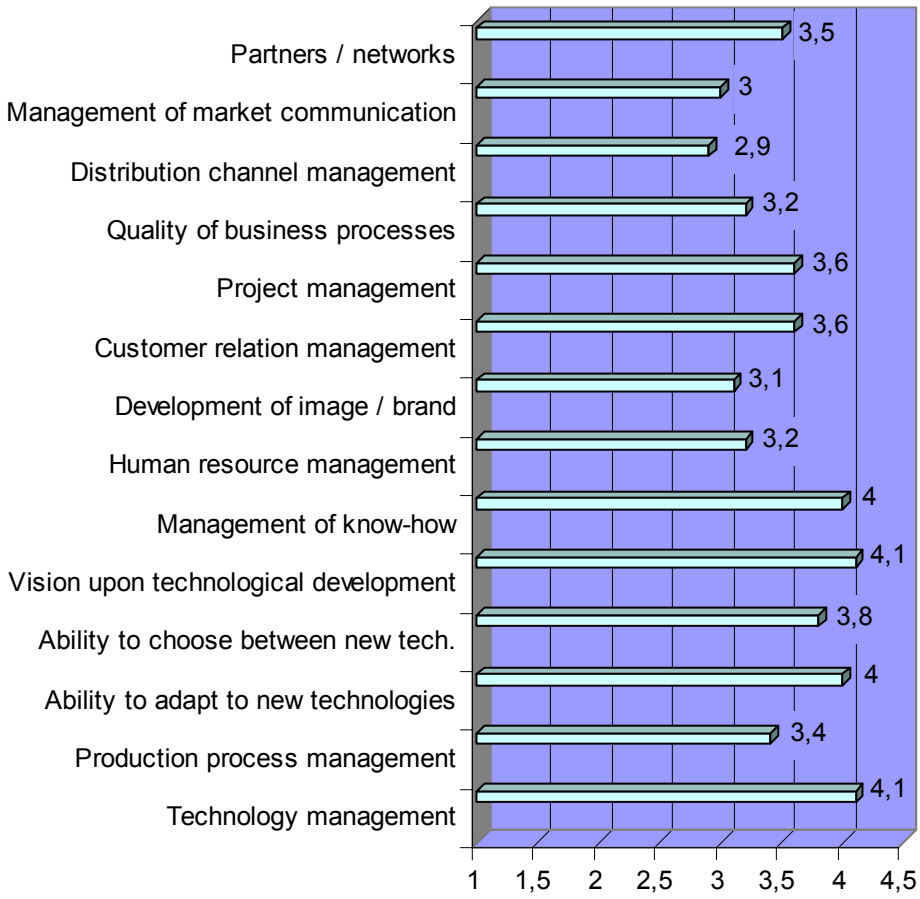


**Figure 7: The strengths (5) and weaknesses (1) of the companies, in average.**

On the average the companies saw that their greatest strength was the technology management, vision upon technological development, management of know-how and the ability to adapt to new technologies. On the other hand the greatest weaknesses were in the management of distribution channels and marketing communication as well as in the development of image / brand.

Almost every company that responded to the second part of the questionnaire (146 responses in total) did define their core competence in open questions. In most cases (38%) the core competence was directly connected to software or

information systems. 14% of the responses indicated that the company's core competence is compiled of special knowledge of some line of business combined with software / information technology competencies. Also 14% of the respondents saw that their core competence is connected with content production. Only two companies mentioned here electronic trade or e-business as their core competence. Instead understanding of customer companies' business needs and marketing / communication know-how was emphasized as core competence. Seven respondents saw project know-how as their core competence. When asked about the adjusting the current core competence to better correspond with new technologies 18% of the companies saw that rather easy, 56% quite easy, 5% rather difficult and none saw it very difficult. (20% of the respondents did not have opinion on this)

### 4.2.5. Choosing the companies for qualitative interviews

The above-mentioned clustering offered a list of 55 content producing companies to be scrutinized in more detail when choosing the three case companies for this thesis work. As mentioned earlier this cluster (or a group of companies) did include both the actual information content producers and the content software producers, thus the first task when choosing the case companies was to mark off the content software companies. (as this work focuses on the information content producer companies)

After this trimming the author took in the answers the companies had given to the open questions posed to them about their core competencies in the questionnaire. The final selection of the case companies was done by evaluating the answers to these questions, basing the decision on the companies' perceived understanding of the competence questions and interest towards the questionnaire as a whole. The three case companies were also chosen to be as different to each other as possible regarding their background,

geographical location and domain, so that different views could be brought up in this thesis.

### 4.3. Case company; Firm-1

Firm-1 is an audiovisual arts and multimedia production company located in Porvoo in southeastern Finland. They operate within a production house with three other companies in the audio-visual business. Firm-1's products contain a large range of pre- and post-production services, and their emphasis has been on electronic media and cultural contents. They produce their contents always in at least two languages, in Finnish or Swedish and in English. (Interview; Firm-1)

Porvoo is a small town with just over 40000 inhabitants, 50 kilometers from Finland's capital city Helsinki. (City of Porvoo, 2000) Firm-1 found the premises for their business through former contacts and it proved to be big and cheap enough for a crowing company. The Company has also previously operated in the center of Helsinki for about one and half years, but the place was not seen to give any extra value to their operations. They also stated that the contacts in their business can as well be nurtured from Porvoo. One and a half years was seen to be enough as a trial period for the company, established in 1993. (Interview; Firm-1)

Firm-1 has 8 full time employees and several dozens of freelancers. The core employees of the company are all professionals; all of them possess the highest possible basic degrees from their areas. At the time of the interview two of them are also finalizing their Doctoral Theses. This might also be the reason why they feel at home with the new technological media. They are mainly artists by their backgrounds but they are still used to trying all new gimmicks and gadgets in their art. (Interview; Firm-1)

From the companies operating within the production house, Firm-1 is the only company focusing in video production. The company is in a favorable situation, because almost all its employees are able to produce both linear and non-linear (e.g. video and multimedia) products. Human resources have not been a great problem for the company, mostly thanks to the production house's good reputation in the eyes of the professionals in the field. Although the psychological distance from Helsinki to Porvoo is much longer than the other way round, recruitment has not been a problem. (Interview; Firm-1)

Thanks to the high level of education of the company's employees the adaptation to new production methods has been relatively simple. Everyone in the company has educated themselves in the last years and they have obtained experience through pilot projects how to make multimedia and how it differs from plain video or TV production. They have been looking for their own way to do projects economically and without wasting their human resources. The small size of the organization has been seen as a great advantage when going quickly through changes. (Interview; Firm-1)

The company has, even a bit surprisingly, finished a yearlong enterprise consultation and development project just couple of months ago. During this project they formally defined their competencies, mission, strategies and even went through all their products and services. As a result they abandoned a large number of their former activities and focused highly on the "cultural content" - production. This was seen as a relief, because the situation before the consultation was tiring and the current competition in their focus area is not very harsh. (Interview; Firm-1)

The future is seen bright in the Firm-1. They feel that the digital television is coming in any case and they have already been preparing to this along with the domestic TV companies. Although they see that the development will be focusing on the Internet, digital TV and wireless communication, they still do not see that traditional TV production would be disappearing, it will only become

more segmented and the price paid for produced minute is going to drop. (Interview; Firm-1)

### 4.4. Case company; Firm-2

Firm-2 is a free 24 hours a day -operating cable-TV channel focusing on current topics of popular culture, bands, music, movies, sports and games. The company's ideology is to be a believable youth channel for a not so mainstream audience. The image they pursue is "edge and/or underground". The company operates in the center of Finland's capital city Helsinki and the programs can been seen in a couple of cities in southern and western Finland. During summer 2000 they had decided to open their service also in a geographically different area, in Kuopio in eastern Finland. (Interview; Firm-2)

At the time of interview the Firm-2 employed 15-17 people permanently and approximately 8-10 part-time workers. Recruitment of new employees has been seen extremely easy, because the Internet makes it easy for job seekers to approach the company. The location in the heart of Helsinki is seen as a must, and a great advantage. Band interviews and other street-based programs would otherwise be almost impossible to produce. Firm-2 has also considered establishing some small local editorial offices in other cities they operate in, but nothing concrete has been done yet. (Interview; Firm-2)

The company is owned by a mother company, which has been in business since 1990. Firm-2 was established in December 1997 as a test platform for mother company's new interactive game programs. In the present form, Firm-2 has been operating for just under one year (at the time of the interview). Before that resources put in the TV channel were very small, for example there was no marketing to talk about and the reputation of the channel grew through users telling about it to each other thought the "bush network". Now Firm-2 has gained an image and status among the audience and they do not see they have very

much competition at all, but in the same breath it is also said that all media targeted to youth are their competitors. (TV, magazines, Internet) (Interview; Firm-2)

For the Firm-2, their current location is seen as the only place where they can operate, but the mother company, which also is responsible for the technology development for the Firm-2, has already been thinking about moving somewhere else, perhaps abroad. (Interview; Firm-2)

For Firm-2 the customers are domestic, so they have to produce a vast majority of the content of their TV-channel themselves. All though the production in-house is probably more expensive than buying from outside, they see that their producers, video jockeys etc. are the most believable and competent for the job. Also Finnish customers have their own taste in music and for example the movie reviews must be in synchronized with Finnish release dates. Some outside production could be usable and available, but they have not been seeking for those very much. (Interview; Firm-2)

As the core competence of the company, Firm-2 sees its ability to innovate new program formats and new ways of doing TV programming. Their channel is entirely digital and based on pre-recorded content; they do not even have equipment for direct broadcasting (in its traditional form). The programs are compiled in the Helsinki office and then transported to other cities´ computerized broadcasting sites by courier service on a weekly basis. All programs are in the mpeg2 –format and transportation is done on hard drives. As they have just introduced new computers for the broadcasting, and been able to add the channel-logo to the upper right hand corner of the TV screen, they believe that the channel will soon be more widely known.
(Interview; Firm-2)

In the future Firm-2 expects interactivity in TV-programs to increase. Maybe the audience can participate more in the shows via short messages or Internet.

They have also been weighing possibilities of taking some of the content from their TV-channel to the Internet by streaming it, which they are planning to begin piloting during summer 2000, with Elisa Communication's new ADSL (Asymmetric Digital Subscriber Line) service portal. For Firm-2, sending their programs in the Internet is more alluring than for other TV channels, this is because they own rights for almost all of their programs, through the in-house production. For some other TV stations this might be more difficult, because of foreign series and subcontracted content. At the time of the interview Firm-2 did not see TV and Internet as equivalent distribution channels, but in the future the role of Internet will be rising along with digital television. (Interview; Firm-2)

### 4.5. Case company; Firm-3

The company is a small enterprise with only 13 employees. It is originally an advertising agency from Kuopio, in eastern central Finland. Kuopio is the 8$^{th}$ biggest city in Finland with over 85000 inhabitants (Statistics Finland, 1999), and the obvious center of the eastern Finland. The distance from Kuopio to the capital city is over 380 kilometres. (Interview; Firm-3)

The company's roots are deep in the advertising business. The company was founded in 1991 as an extension to a marketing communication office established earlier in the end of the 1980's. After the mother company went bankrupt the management bought Firm-3 to them selves. Later the company also started operating in Helsinki, and some time during 1996-97 Digital Information Architects Inc., Digia was formed as an extension to it. Nowadays Digia has been separated into its own company and has grown in size, by far outnumbering its parents. Although Digia and the case company still have the same owner, the companies do not operate together and the even last strings a joint email services, has been cut off. (Interview; Firm-3)

The case company has its customers relatively close to itself, about 70-80% of them come from the Kuopio area, and only a few customers come from further away. Despite of this they are the biggest advertising agency in the area and comparable companies can be found only in the biggest cities in Finland. This situation has ensured some big local customers for the company, as well as a possibility to develop their capabilities in the new media area. Their position in the market has also enabled them to look for smaller partners to do the actual coding in new media projects, and because there are several small competing programming houses in the area it is easy for Firm-3 to hold the strings to itself. If and when something does not work anymore with one vendor, there is always someone else to turn to next time – and the software houses know this as well. Due to the small size of the software vendors it is pretty rare that jobs would be coming to the case company from them. (Interview; Firm-3)

A vast majority of the company's customers need help with the collection of the data about their own organization, but there is also an exception, the local major newspaper, which quite naturally produces its own contents. This customer is also otherwise different from the others, as their web site changes every day and bigger alterations are made in six-month intervals. While other client companies often update their services just once and a while. In every case the product life cycle in the new media is much shorter than in the older print. (Interview; Firm-3)

In firm-3 they see themselves as lucky, because their employees are very interested in their jobs and do research about new methods, publication tools and programs spontaneously, which helps them to keep up with the ever changing technology world. Their goal is to keep graphical and other visual program tool knowledge within the company, almost at any cost, but outsource all hardware and server coding to the vendors. (Interview; Firm-3)

The core competence in the company is specified as being in the design of marketing communication and the new media is seen more as a distribution

channel to marketing communication. Unique factors in the company are graphical design, text design and creation of company image.
(Interview; Firm-3)

Competition does not seem to bother the company that much. They rely on their contacts, customers and know-how. In their opinion customers prefer a local presence of their advertisement agency rather than a hype name and an office in the capital city. They see however, that in the future the roles of the advertising agencies and new-media offices will be mixed. They also believe that digital TV is the form they should focus on more, but that the “old fashioned” print media will not disappear in the near future, even in the new pressure from the new media. (Interview; Firm-3)

### 4.6. Case: Infoscreen

So far there have been numerous technological designs and a lot of planning as well as visions about media content filtering and delivery to different media in the markets. Many of these ideas have not shown up to be viable. Of course there have also been success stories, but often after great customization for some particular reason. InfoScreen –project led by the author at Telecom Business Research Center (TBRC) showed, that such media convergence is already possible and with almost “home baked” ingredients. One can just wait what are the contingencies in just a few years from now!

#### 4.6.1. Action-oriented approach

The case Infoscreen represents action-oriented approach to the research dilemma. This research method is called action-oriented just because it involves – as the name suggests – both action and research. The main idea behind this research approach is that the researchers participate at a workplace level in the

development of working life, thus allowing the researcher to better understand the basis of the reality of the task in hand. Action research can be carried out in a variety of ways, some of which stress the traditional methods of social research, questionnaires, interviews and statistical analysis while others (which is also the case here) rely more on action and the increased understanding it produces. Unlike the traditional sense of the work research, the action research does not aim for experimental research arrangements, but is more a question of field experiments. The problems that have often occurred when working with action research have been difficulties in distinguishing the actual changes in the working group during the research period. The group tends to change their actions during the research scrutiny even though actual changes have not been implemented consciously. This however has not been a problem in this case due to the technological nature of the action research object: the Infoscreen. (Action research in Finland, 1993)

Pekka Pihlanto discusses the nature of action-oriented approach in comparison with other case-study methods in more depth in his article “the action-oriented approach and case study method in management studies”. He sees the action-oriented approach as follows. “The aim of the action-oriented approach is to achieve a profound understanding of the behavior of people in real-world organizations; this approach is thus also empirical. The explanatory model adopted is teleological, and it is therefore assumed that the actors are not acting on a stimulus-response basis; rather, the aims or intentions of the actors have a crucial role in explaining their actions. This approach is characterized as an Aristotelian “action science” or “human science”, precisely because of the human emphasis. This approach is rather similar to the methodological approach described as “verstehen” or hermeneutic.

The action-oriented approach is not basically geared to altering the behavior of the actors studied or to providing them with advice (although either might be secondary aims). In contrast to the nomothetical approach, no well-established methodological rules are available. The real world is studied in terms of a few

research objects, or in some instances only one such object, since the aim is not to generalize but to understand profoundly – and from the actor's point of view – the nature of the activities studied." (Pihlanto, 1994)

### 4.6.2. Description of the system

Management and delivery of information content has already proven to be rather tricky for the companies worldwide. Finland has exceptional possibility to become a world leader in content know-how, if enough effort will be put in. The Finnish consumers already carry several different kinds of media terminals with them in their everyday life and in near future it can be seen that the number of and the complexity of these terminals will grow rapidly.

The problem so far with different terminals has been that given information content is often designed to be presented only via certain terminal(s) and thus users have had to carry several media terminals along. For example, if the content has been designed for web use, the small and often colorless screen of a mobile phone has not been able to display the content required. On other cases problems might have risen from the lack of bandwidth available to terminal in use.

In this case we describe the InfoScreen, which is a good example of working and existing media convergence. In this solution the same content primarily designed for TBRC´s Web-site is filtered to content server and presented in a new environment. The Figure 8 below illustrates the outline of the InfoScreen – system.

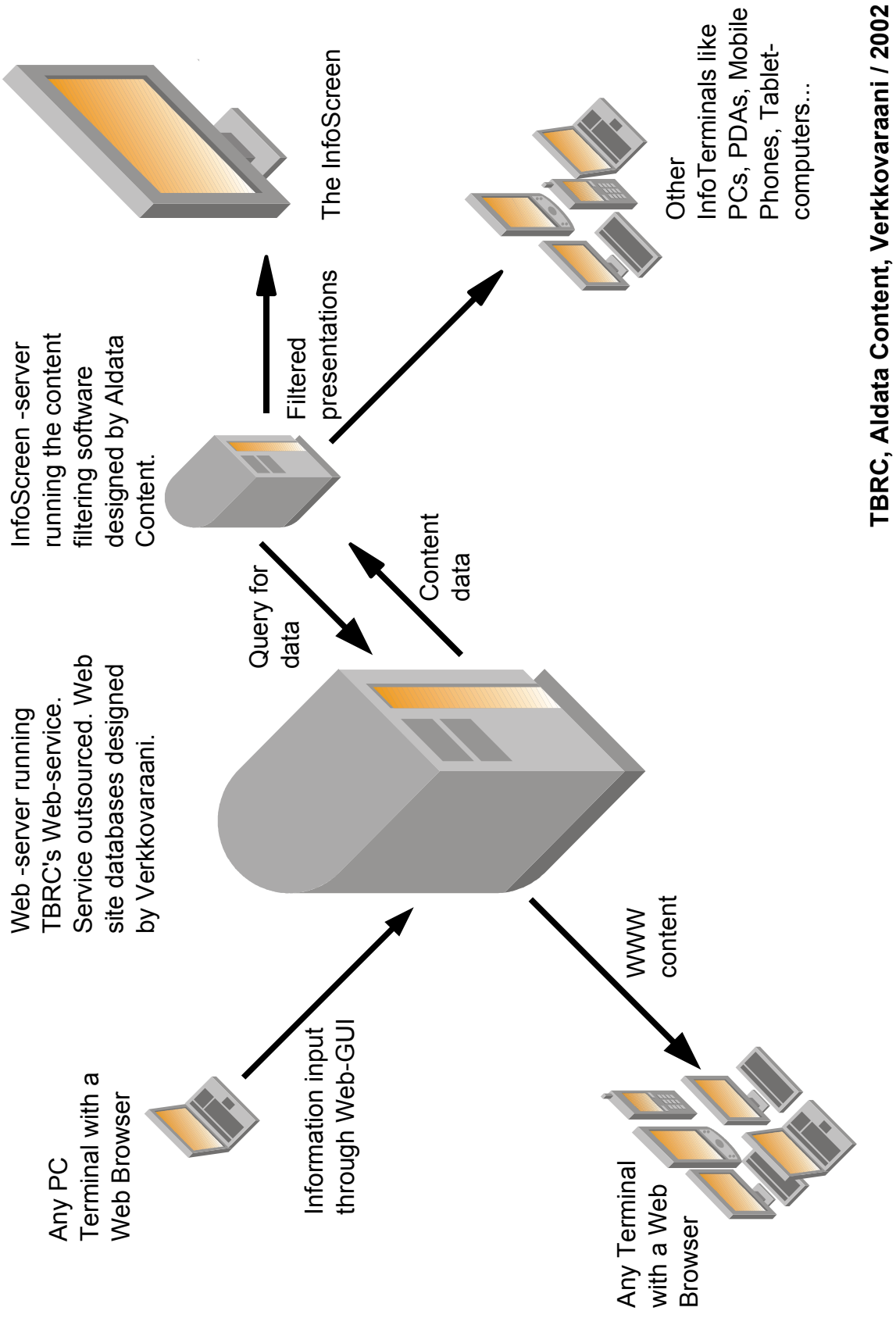


**Figure 8: The structure of the TBRC InfoScreen –system**


**Figure 9: A view from the web-based content input tool.**

The content input to the system is done through normal web form. The added content is usually delivered immediately by email to a group of people who has previously chosen to receive these messages and at the same time it is appended to the web-site databases to be then served to a browser on-demand. The entire back office system for TBRC's web-service was designed by Verkkovaraani (http://www.verkkovaraani.fi). The Figure 9 illustrates the type of the content input forms used throughout TBRC´s web-site.

Now in TBRC´s InfoScreen system the information added to the system through web-pages is stored into a database, which then can be queried by other systems also – not only by web-server. One other system using this same information is the InfoScreen –server software coded by Content Bakery Oy also previously known as Aldata Content. (http://www.contentbakery.fi/)

The InfoScreen server queries the TBRC's web-server over the Internet and gathers the new information from the web-server. As new content emerges it

will be given a priority number, which then equals to the priority of that piece of information – a new addition to the database is considered as “never shown” and is given top priority to be shown in the “InfoScreens”. There are also several possibilities to adjust the show or define in more detail the slides to be shown in any particular InfoScreen, or a group of InfoScreens.

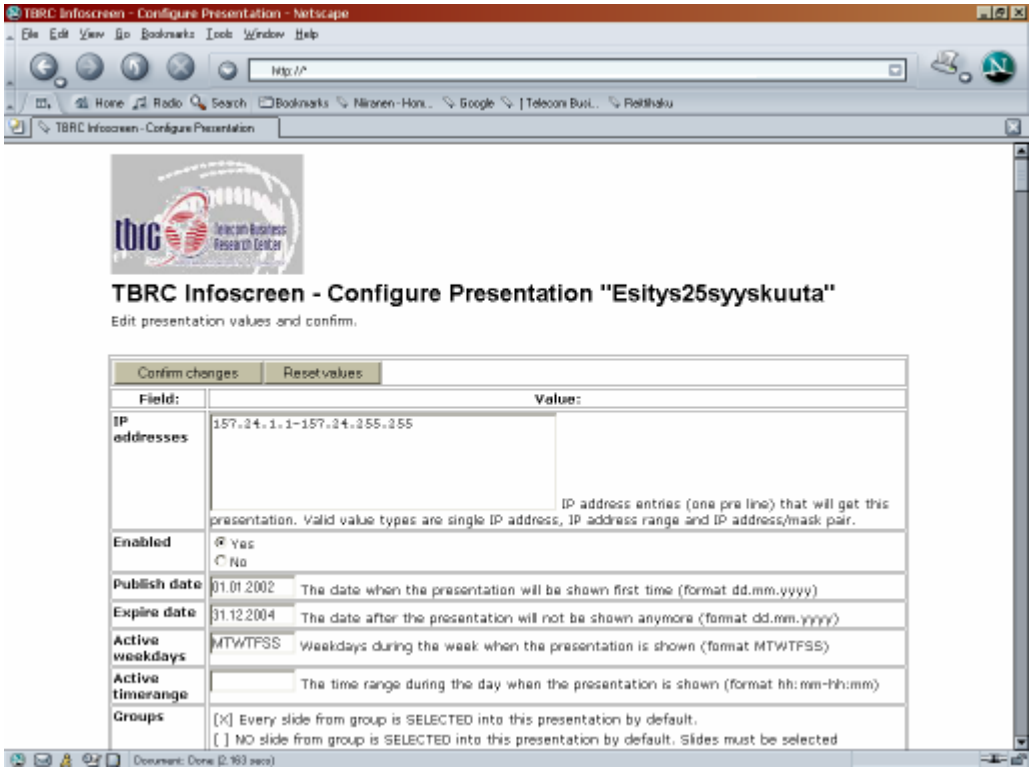


**Figure 10: InfoScreen -server presentation configuration view.**

As the initial input of the information is done through a web browser, so is the configuration of the InfoScreen presentations, see Figure 10. The web browser was chosen to be the tool for all management, because it is extremely easy to use and all users are more or less familiar with its operation. As seen from the example view of the InfoScreen –server (Figure 10) a presentation can be defined in great detail, but if the user chooses to let the system work by itself he/she is free to do so. In both cases the main benefits acquired from this system are that a) there is a centralized database for the information, so one piece of information only needs to be added to the system once and b) the information stays up-to-date more easily on all information distribution points.

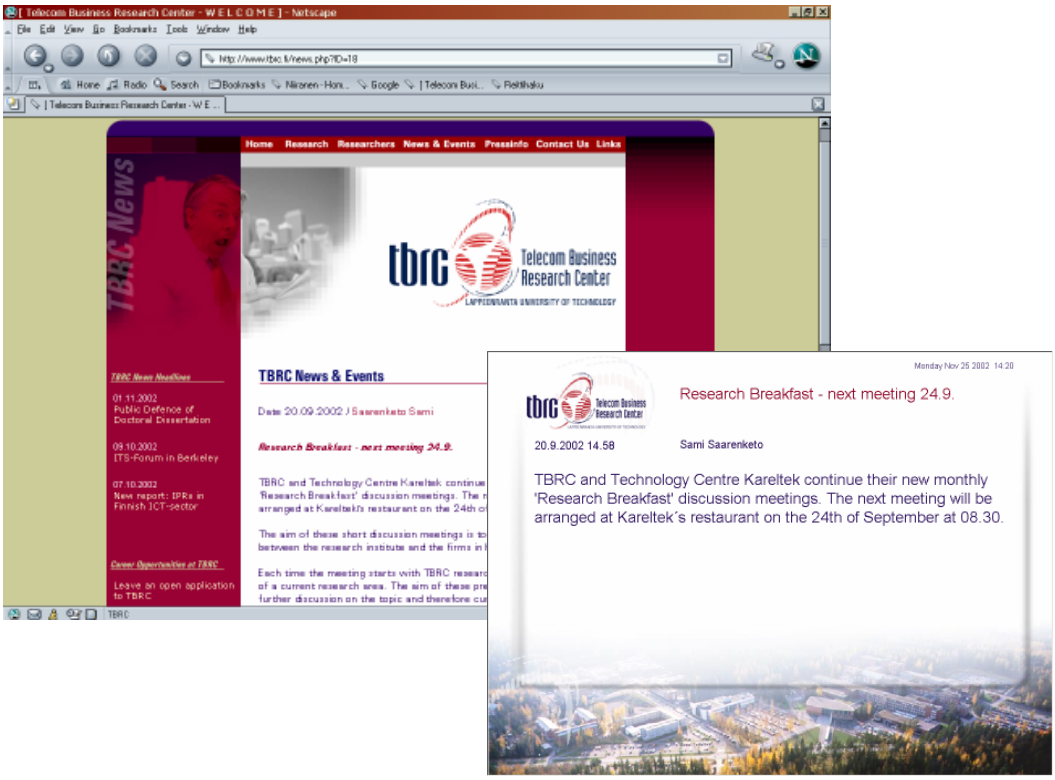


**Figure 11: Same content in two formats; seen through web browser on the left and through InfoScreen on the right.**

To present the slides combined by the InfoScreen –server a client computer needs specific client software for the task. The system is designed so that the InfoScreen –server can deliver different slideshows to different clients and the clients can be “forced” to start the show at specific incident or moment in time.

In Figure 11 there is an example of actual media convergence. One and a same news flash (or any other piece of information) is shown through two different media. On the top left screen is a view of the “Research Breakfast –meeting” seen through web browser and placed into TBRC´s Web-layout. On the other hand, on the lower right hand side screen there is the same news shown by the InfoScreen client within InfoScreen-layout. Naturally the InfoScreen is not able to show all the same details one can find from the web service, but it shows a predefined part of the information. After seeing the InfoScreen information the

information consumer can then choose to turn to other media (here the web-site) for additional details.

In practice the Web-service and the content database is run on a commercial web-hotel –server, which operates as a part of the Internet. The InfoScreen –server on the other hand is placed with in TBRC's premises and thus within the firewall of Lappeenranta University of Technology. The InfoScreen –server software is run in a normal PC using Linux operating system. The actual screens or the InfoScreens (that is the computers showing the compiled slideshows) are placed in several places around the university. The main display used is a 42-inch plasma screen placed in a public hall. The plasma screen is served by a standard PC running the client software within a Windows operating system.

### 4.6.3. Problems with the implementation

As the InfoScreen –project was conducted several problems occurred illustrating clearly several problems with multi-vendor content production projects. First of all the web-database was designed to be as general as possible to make the data filtering possible later on. The web-design company produced the appropriate databases and web-based management tools as the project defined. Both of these solutions served their purpose well. The database nature and the complexity of the tools used to create the information to the service added up to a situation where quite a long process of testing and re-testing different web-hotel services of different Internet Service Providers (ISPs) were needed. The system was just not supported by standard web-hotels.

After the web-service was up and running the project faced problems with the filtering of the information to the InfoScreen system. Company designing this system would have preferred different kind of database from where to take the data from. And some additional data-fields would have been appreciated.

Anyhow these problems were rather small and were solved quite quickly. The first versions of the content filtering software for the InfoScreen –server was ready also rather fast but the system was everything but ready. The first tests done by the vendor within their own premises went fine but when the server was moved to the clients (TBRC's) premises the actual problems began.

The InfoScreen –client was build over a freely distributed multimedia component by an internationally operating company. Although the component was intended to such use the documentation was not complete enough and when some specific computer environmental preconditions were fulfilled the system went into an error state. As these preconditions weren't ever achieved within the vendors own environment finding the solution to the problem was very time consuming. After the problems with the third party multimedia component were solved, yet another problem emerged. Now the problem was with the time stamping of the information. As the slides within the slideshows have priority and thus presentation order is based on several factors including the current time, the system tumbled into problems as improper time stamping in the customer's computers caused a situation where all of the slides had expired. Again a problem which was not endogenous by its nature!

As if these software and environment problems would not have been enough there were also problems with the actual hardware. The display system was build to be as movable as possible and thus the primary InfoScreen display was chosen to be connected to the network through wireless local area network (WLAN). As WLANs were under heavy development during that time the project run into problems with the interoperability of different hardware components and the (otherwise perfectly standard) PC computer running the client software for the plasma screen had to be rebuild for couple of times using different components. These problems combined together folded up as a mess where pinpointing any specific problem became a quite a nightmare.

Finally after extensive “tweaking” of all components (both software and hardware) by the software vendors and by TBRC personnel the system got up and running. After just few weeks of operation it became evident that the original web-database and its management components needed to be improved – as the demand for more in depth web-content crew. New databases were created and large parts of the filtering software of the InfoScreen –server needed to be rewritten.

### 4.6.4. Lessons learned

What did we end up with from the InfoScreen project? After all problems and continuous development we ended up with a first class web-service and an working InfoScreen -system. But we also learned about competencies of the vendor companies and possible problems emerging in such undertakings.

Both of these vendor companies have good knowledge upon the content creation and presentation in chosen media, but when we scrutinize the entire outcome of the project we can pinpoint several problematic issues:

1. Combining one database to be used in several applications over the Internet is not yet that easy. Perhaps some future description languages like increasingly common Extensible Markup Language (XML) will provide answer for this problem. One does not have to be a great clairvoyant to see that such content and media convergence (as described above) will become more and more common in just a few years.
2. Usage of freely distributable but not open-source components is risky. As the case illustrated bringing in ready components to products can and will make the product development faster, but as these components are not fully documented and/or they are not completely understood by the own coding team problems with the end product can emerge.

3. Changes in the operating environment can cause unexpected problems. As far as the producer can use only their own components and operate in insulated environment the problems do not occur – but as the different networks convergence in the future the situation turns ever more complex. Although a company's main products are content information or content tools they must possess knowledge and competencies to get over technological problems of different operating environments.
4. Hardware can always refuse to work. Throughout the history of personal computing the users have had to adapt to surprises produced by the different combinations of hardware. As we remember there were problems with compatibility of different components in the client computer in this case. One way to solve these problems could be the usage of embedded systems – but the environment is always a big question.

### 4.7. Core competence in the case companies

All of the case companies have relatively well been able to recognize their core competence areas; whether it was within the content they produce or the way they produce it. Somewhat surprisingly one of the companies had actually carried out formal enterprise consultation to define their capabilities and competencies. When comparing this observation to the results from quantitative survey one must ask, were these chosen content companies somehow special. In quantitative research the result was that IT companies in general have been assessing their core competencies, but it is generally defined very narrowly to a single, easy to reproduce, program or technology knowledge. This is quite alarming, because core competence should be something that is hard to duplicate or imitate by the others.

As a strategy to develop their competencies these companies have chosen to pilot as many new ideas as possible and as soon as possible. At the time of the

interviews this strategy was absolutely advisable and finding a partner from the more technologically oriented companies to implement it was not very hard. As the forthcoming technologies are still open and possibilities are numerous “trial and error” can really be seen as a method to advance, but pretty soon there will be so many different ways to deliver your content, whether it is audio, video, text or even something else like scent or feel that the companies must make a choice. Making these choices will affect their businesses for a long period of time. This is why partnering with other players in the media game must now be taken into consideration. Then again, if that choice is wrong (e.g. wrong media block), you could end up observing other companies’ success.

All three of our case companies had built their reputation and competencies in the “old world” with traditional media. Now as they are entering into the new era, they are able to use at least some of their former contacts when seeking for new business opportunities. They bring their old knowledge and old contents to the new media. This can be seen as a favorable way to enter the markets, but there is also a risk present. If they do not sharpen their capabilities in the new area, some other fast moving young companies might be able to overtake their markets beforehand. So far most of the content in cellular phones and Internet is just transformed from the old print and audio/video world; in the future a successful new media company must bring in something new to the new terminals. As media converges the old content might quite suddenly be available in the new terminals just by filtering it in a specific way as our InfoScreen case has shown us.

In content providing companies the protection of the core competence seems to be a bit easier than in more technologically oriented IT companies, their core competence is derived from the knowledge, experience, ideas and intellectual capital of their employees. As far as the key personnel risk is minimized and the tacit knowledge is spread widely enough in the company, the core competence; the way they produce the contents as well as the artistic and cultural knowledge, is safe. Two of our case companies had managed to minimize the

personnel risk, in these cases buying out the company's core competence would mean buying the entire organization.

### 4.8. Future needs of the case companies concerning core competence

These case companies act in their value chain precisely in the same manner that all the other IT companies also did in the quantitative research. They do not solely produce their products to the end customers, but also to other companies. In the quantitative research 92 companies gave answer to the question about their value chain, and half of them indicated that they are the closest company to the end customer. Furthermore 32% of them indicated to be the next company from the closest one.

In the future we can see that need for marketing and business communication as well as demand for information and entertainment will grow. Every company must offer its services in several forms and in different media. Also the time of day when the services are required will not only be the regular "office hours", which is already now the case with banking business. All these factors, and upcoming convergence, will create even greater demand for competent content providers in every medium. This equals to new needs and new distribution channel for the same content and new place in the value chain for the content providers.

Location within the country and distance from the capital city is often seen as a way to evaluate companies. Especially the enterprises situated in the capital city area see the companies operating elsewhere often inferior. The interviews here show evidence of the opposite. Both of the companies operating outside of the capital city area see their location to be extremely good. None of the companies interviewed, did complain about difficulties in recruitment or lack of subcontractors, and the company located most far away from capital city even indicated that their local presence is a great advantage for them. Now we must

speculate whether this situation is going to change in the future, following questions have to be asked; how does the new technological innovations influence this, does new computer applications make distances insignificant, and if so which way do the customers aim; to the biggest cities or the other way around. Further more how about the personnel, where will they want to live, which place gives them best quality of life? As we can see the core competence in these content providing companies is welded into the employees and their artistic minds, their ability to create new content. So it is not difficult to conclude that keeping employees happy is utmost important for these companies.

In addition to problems with personnel, these content providers face also real risks they really cannot fight against. The risk of interruption in the communication services or even worse, in power delivery, must always be kept in mind. The general power network only guarantees 99,9% reliability. (Tietokone Webline, 2000) Availability of these two resources, if any, is the basic building block of any content providing company. A couple of days long interruption in data communication services might even be a question of life or death for companies like these. This was the case with one of the interviewed companies, their insurance covered the risk, but are all the companies as well prepared? These problems might sound far fetched, but we must remember that no one wants to get the information of the winning of one's favorite football team two hours after one's acquaintances – or at least he will not be willing to pay for that information!

## 5. DISCUSSION

The companies had managed to study their core competencies quite correctly, although maybe partly by lucky mistake. A bit surprising was the fact that the content producing companies have not been partnering with bigger players in media field and even the contacts with the smaller companies are mostly based on subcontracting. This could be explained by the still turbulent business environment and unclear advantages gained by the outsourcing in the content production. The case study mainly supported facts shown by the quantitative study, but it still seemed that the content providers have defined their core competencies better than the more technologically oriented IT companies.

In the future studies upon the content providers the focus must be set to the study of the companies' personnel. Their artistic views, mental capital and contentment are crucial for the success of these companies.

As the theory of the core competence is originally created in an American research environment (Hamel and Prahalad originally met at the University of Michigan, US) the ideology might turn out to be too heavy for a small or medium sized content providing company operating in domestic environment. But nevertheless the results that come out from this core competence defining process is outmost important to them also. So it might not need actual workshops and numerous sessions to define the company's resources, capabilities, competencies and finally core competencies if the entire company is formed out of 10 employees. But even then a formal proceeding through the definition directs the thoughts of the company's management towards right tracks.

In the case companies their main resources turned out to be the intellectual skills of their employees as well as their creditability in the eyes of their product's consumer group. Furthermore this leads to the fact that main capability of these companies is how they are able to direct the intellectual skills

into profitable products and business. In most cases this asks for understanding of the needs of the customers and the needs of the end users (consumers). The company's management's must then be capable to find an appropriate resource to match the task.

The case companies – small as they are – do not have different strategic business units within them. This makes the definition of the competency in these companies a bit trickier. As stated in the theory the competency is a cross-functional integration and co-ordination of capabilities. In these cases we should focus on the "integration" and "cross-functionality" attributes. The authors view is that in a smaller company such as these the competency (in this context) is formed from the integration of company's different competencies done under a competent management team.

Finally when one or several of the company's competencies rises to such an important role that it creates new competitive advantage to the company it might turn out to be a core competency. Still it will have to fulfill the qualities set to core competence; it must be unique to the company in hand and it must be difficult for an external observer to perceive, analyze and imitate.

Even more important for the SMEs (like the case companies) than the actual recognition process of the core competence is the "five step procedure" to utilizing the core competence in full. (Illustrated in Figure 2) This model facilitates the company's effort in developing and maintaining the recognized core competencies. And furthermore to recognize greater details of their core competencies and risks that at that moment in time are the biggest threats to them.

As discussed in technological part of the work the distribution technologies for content is growing fast in number. Historical radio got TV at it's side, phone was cross-bread with radio to give birth to mobile phone and now computers, TV, mobile technologies, vehicles, home terminals etc. are converging together to

form a new always on-line terminal for a content consumer. The amounts of different content products consumed daily will grow rapidly; first implications towards mobile photographic and movie content saw daylight during the autumn 2002.

In near future the content production will be divided into two, hopefully three, categories. Firstly into a user originated content (UOC), a content that is produced and distributed by an end user himself. This content could for example be a small video clip or a photograph with some audio along, or it could be even larger written unity like a restaurant review or even a self-published electronic book. The second category will be apparatus originated content (AOC). This type of content is gathered, filtered, combined and distributed through automated systems. It could be for example traffic amount data, photographic content like pictures from important traffic junctions or information from industrial production facilities and processes. The main idea is that the content is automatically produced and distributed. Finally – for the sake of the content production companies – we must believe (and there is no reason why not to) that "traditional" company originated content (COC) will still be needed. This content will be more sophisticated and includes advanced processing of the information and cultivation of knowledge. It could for example be large information source for travelers or mere music video. The important attribute is that the content is produced by professional company and distributed against some type of compensation. Naturally when the billing systems will allow there is no restrains for the UOC or AOC type of content also to be sold to interested consumers – which might eventually become a new threat to the traditional content producer companies. More details about the categories are illustrated in the Table 7.

**Table 7: Future categories of content production (J.Niiranen 2002)**

| Content production category | Description |
|---|---|
| User Originated Content (UOC) | • Created and distributed by an end user<br>• Personal and human originated<br>• Examples: photo, video clip, music, e-book, review etc.<br>• Distribution: free / shareware / small fee |
| Apparatus Originated Content (AOC) | • Gathered, filtered, combined and distributed through automated systems<br>• No humans involved in content creation process<br>• Impersonal, data-like<br>• Examples: traffic or production information; photos, numerical values (temperatures, number of units / items) etc.<br>• Distribution: for organizational use / gift / small monthly fee |
| Company Originated Content (COC) | • Produced by a content producing company<br>• Intellectual and designed to be a commodity<br>• Examples: information and entertainment<br>• Distribution: monthly fee / one time fee |

The final deduction of this work can be summarized as that any corporation will benefit from a systematic and methodical analysis of its own resources, capabilities and competencies.

## 6. CONCLUSION

In past couple of years it has been evident that large companies have been focusing to their core competencies, thus out-sourcing their non-core businesses that do not support the main business functions. On the other hand it also seems that this focusing has happened within companies own traditional business areas, for example Phillips and Toshiba have sold out their battery producing businesses and redirected these effort to other operations (i.e. Phillips in medical systems). Sanyo on its behalf has collected battery-manufacturing competencies to itself. Although it has been easy to notice such movement in the markets in past years it is much harder to point-out real cross-industry convergence development which would be extremely interesting from the content producer's point of view. Finding out whether this kind of development exists should be set as target for future research.

This work concentrated on the future challenges of a content producer company operating in the information and telecommunication sector and discussed their competences and the means they must take to develop them into core competences. Understanding the company's own core competence is utmost important for a content producing company operating in such a turbulent business area as the information and communication technologies sector is.

In this paper we discussed the concept of the core competence as a whole and further as a tool for small and medium sized content providing companies to evaluate their own business. The structure of core competence was explained and we went through the organizational building blocks that add-up to the core competence of a particular organization. To help managers and strategic decision makers, the work provided a framework to integrate these building blocks into the process of strategic planning. The theoretical part also presented a detailed process for identifying a company's competencies and their contemporary and future consequences. The empirical analysis was based on a large quantitative research study, which gave the direction for the more in-depth

qualitative research. The qualitative part of the empirical research was combined of three semi-structured interviews of content producing companies and one action-oriented research project.

During the research it became evident that the concept of core competence is not clear to the common company. In addition it was shown that of the current players in the information and telecommunication business in Finland, only a hand full of companies has formally studied their core competencies. In some cases the core competence was mixed up with competitive advantage or even with technological know-how. In the study we indicated, that if a company does not know its own competencies it is impossible to define strategies and goals for future activities, at least with any accuracy. So if any company should want to plan its future, it must familiarize itself with its own core competencies and how it builds up.

The set goals were achieved rather well, despite of small problems with the qualitative study and definition of content producers within it. In the paper we went through the core competence and its building blocks. The case studies were presented supporting the theory. The empirical part also gave proof of difficulties that the content producing industry faces at the moment. And in the discussion it was shown that, through understanding of core competence, at least a part of these problems could be solved and thus the survival of the company can be reinforced, although the competition in the markets become rougher day by day.

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**APPENDIX 1: The quantitative questionnaire**

The quantitative questionnaire was implemented in Finnish, so the questions on the next pages are also shown in their original form in Finnish language. The quantitative questionnaire was completed by a larger research group within the Telecom Business Research Center. The author of this paper was a member of this group. The complete results are shown in a research report by Puumalainen, K., Varis, J., Saarenketo, S., Niiranen, J., Blomqvist, K., Kuivalainen, O., Kyläheiko, K., Porras, J., Savolainen, P., Virolainen, V-M., Äijö, T. ”Tietoliikennetoimialan PK-lisäarvopalvelutuottajat Suomessa Tutkimusraportti” Telecom Business Research Center, Lappeenranta University of Technology, 2000, (in Finnish).

To be continued

# KYSELY PK-LISÄARVOPALVELUTUOTTAJILLE, OSA 1

## PERUSTIEDOT YRITYKSESTÄ

1. Vastaajan nimi

2. Mitkä seuraavista kuvaavat asemaanne yrityksessä?

- ☐ toimitusjohtaja
- ☐ muu avainhenkilö
- ☐ omistaja
- ☐ muu, mikä?

3. Yrityksen nimi

4. Yritys on toiminut vuodesta

5. Yrityksen liikevaihto on vuonna 1999

- ○ Alle 1 milj. mk
- ○ 1-5 milj. mk
- ○ 5-10 milj. mk
- ○ 10-50 milj. mk
- ○ Yli 50 milj. mk

6. Millaiseksi arvioitte yrityksenne kannattavuuden? (1=heikko, 2=välttävä, 3=tyydyttävä, 4=hyvä, 5=erinomainen)

| | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| Vuonna 1999 | ○ | ○ | ○ | ○ | ○ |
| Vuonna 1998 | ○ | ○ | ○ | ○ | ○ |

7. Mikä on yrityksenne toiminta-ajatus/liikeidea?

8. Mitkä seuraavista ovat rahoittaneet yritystänne viimeisten kolmen vuoden aikana?

- ☐ Pankit
- ☐ Kera/Finnvera
- ☐ EU
- ☐ TEKES
- ☐ Muu, mikä
- ☐ Ei ulkopuolisia rahoittajia

9. Yrityksen pääomistajat ja näiden omistusosuudet: (kirjoittakaa ruutuun nimi ja omistusosuus %)

1. omistaja
2. omistaja
3. omistaja

# TUOTTEET JA PALVELUT

1. Miten näet toimintanne painopisteet nyt ja tulevaisuudessa?
Merkitse ensimmäiseen "1-2-3-4-5" -sarakkeeseen toimintanne nykytilanne ja jälkimmäiseen tavoitteenne tulevaisuudessa. Valintojen skaala 1-5 on tässä seuraavanlainen:

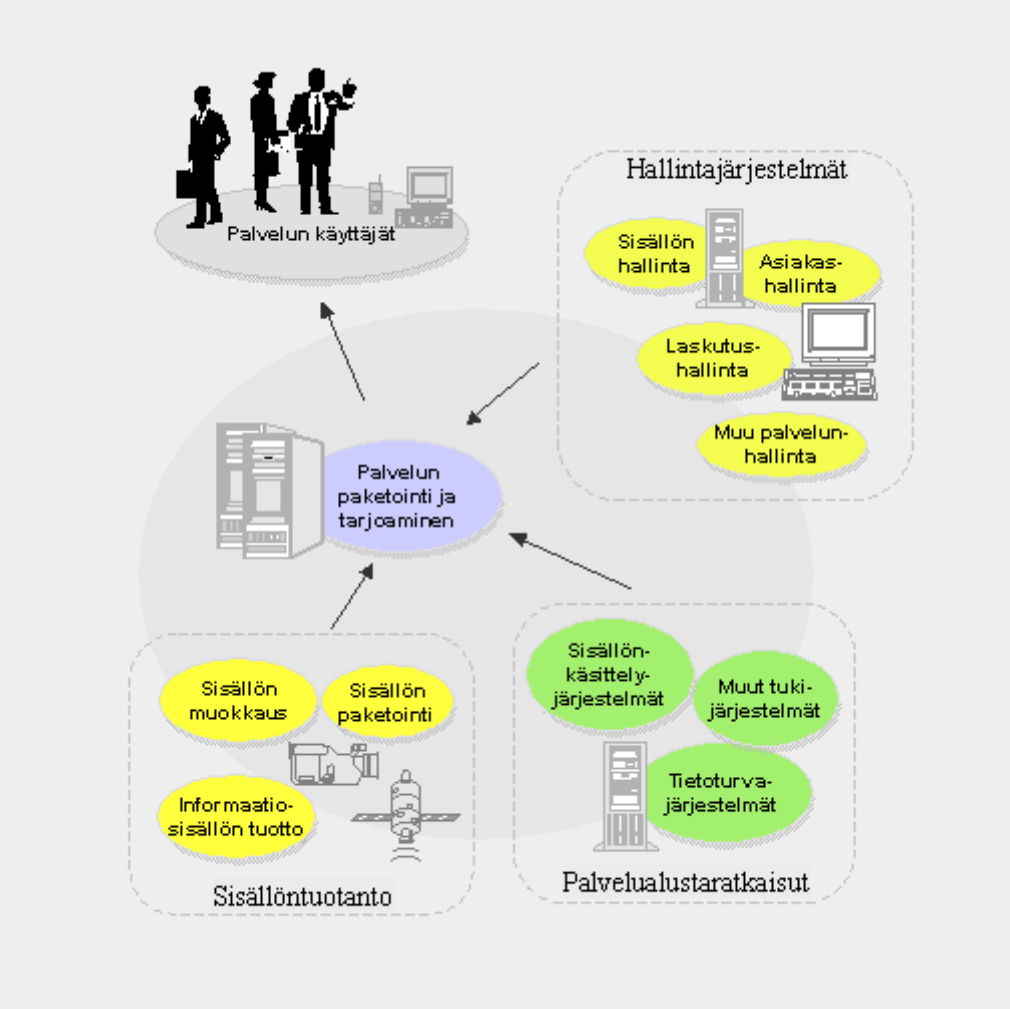
1= toiminnalla on hyvin vähäinen osuus bisneksestä
5= toiminta muodostaa suurimman osan bisnestänne
Alempana oleva kuva on tarkoitettu selventämään tässä annettuja kategorioita.

| | 1 | 2 | 3 | 4 | 5 | | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Informaatiosisällön tuotanto ja/tai siihen liittyvät tuotteet/palvelut | ○ | ○ | ○ | ○ | ○ | : | ○ | ○ | ○ | ○ | ○ |
| Palvelualustajärjestelmätuotteet ja/tai -palvelut | ○ | ○ | ○ | ○ | ○ | : | ○ | ○ | ○ | ○ | ○ |
| Hallintajärjestelmätuotteet ja/tai -palvelut | ○ | ○ | ○ | ○ | ○ | : | ○ | ○ | ○ | ○ | ○ |

*Huom! Mikäli koet että ylläoleva kategorisointi ei laisinkaan riitä kuvaamaan yrityksenne toimintaa, ole hyvä ja merkitse tähän kategoria joka kuvaa nykyistä ydintoimintaanne.*

☐ Ylläolevista puuttuu meille oleellinen kategoria: _____

[Kuva] Hahmotelma erilaisten lisäarvopalvelujen rakentumisesta ja niiden tuotantoon liittyvistä arvo- ja integraatioketjuista.




2. Mitä seuraavista myytte, ja kuinka suuren osan kukin muodostaa liikevaihdostanne

- ☐ Alihankintaa (työtä)
- ☐ Asiakaskohtaisesti räätälöityjä ohjelmistoja
- ☐ Suoraan asiakkaalle myytäviä tuotteistettuja ohjelmistoja
- ☐ Teknistä konsultointia

3. Kumpi seuraavista kuvaa paremmin teidän tuotettanne?

- ○ Tuotteitamme voidaan myydä loppukäyttäjälle itsenäisenä
- ○ Tuotteemme päätyvät loppukäyttäjälle osana laajempaa kokonaisuutta

4. Kuinka monta kuukautta keskimäärin on tuotteidenne elinkaari?

5. Kuinka monta kertaa päivitätte tuottamianne tuotteita/palveluja näiden elinkaaren aikana?

6. Mainitkaa joitakin haastavimpia toimituksianne/referenssejänne?

Millainen tuote, kenelle asiakkaalle

7. Mikä on seuraavien teknologioiden osaamisen taso yrityksessänne nyt ja tulevaisuudessa? Skaala on seuraava:

Osaamisen taso nyt: 1=ei lainkaan osaamista, 5=vahva osaaminen
Panostus (tulevaisuutta ajatellen): 1=ei lainkaan panostusta, 5=vahva panostus

7.1 Sisällön tuotanto (esim. uutisinformaatio, audio/video)

| | 1 | 2 | 3 | 4 | 5 | | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MP3 ja/tai RealAudio | ○ | ○ | ○ | ○ | ○ | : | ○ | ○ | ○ | ○ | ○ |
| RealVideo ja/tai Windows Media | ○ | ○ | ○ | ○ | ○ | : | ○ | ○ | ○ | ○ | ○ |

7.2. Sisällön esitys ja muokkaus

| | 1 | 2 | 3 | 4 | 5 | | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| HTML ja/tai WML | ○ | ○ | ○ | ○ | ○ | : | ○ | ○ | ○ | ○ | ○ |
| XML | ○ | ○ | ○ | ○ | ○ | : | ○ | ○ | ○ | ○ | ○ |
| Macromedia Flash | ○ | ○ | ○ | ○ | ○ | : | ○ | ○ | ○ | ○ | ○ |
| Client-skriptauskielet (Javascript/VBScript jne.) | ○ | ○ | ○ | ○ | ○ | : | ○ | ○ | ○ | ○ | ○ |

7.3. Sisällön hallinta ja jakelu

| | 1 | 2 | 3 | 4 | 5 | | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| SMIL ja/tai MPEG4 | ○ | ○ | ○ | ○ | ○ | : | ○ | ○ | ○ | ○ | ○ |
| Konversiojärjestelmät (esim. kuvaformaatin) | ○ | ○ | ○ | ○ | ○ | : | ○ | ○ | ○ | ○ | ○ |
| RDF ja/tai RSS | ○ | ○ | ○ | ○ | ○ | : | ○ | ○ | ○ | ○ | ○ |
| Muut sisällönkäsittelyjärjestelmät | ○ | ○ | ○ | ○ | ○ | : | ○ | ○ | ○ | ○ | ○ |

7.4 Tietoturva

| | 1 | 2 | 3 | 4 | 5 | | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| PKI ja/tai X.509, PGP, IPSEC | ○ | ○ | ○ | ○ | ○ | : | ○ | ○ | ○ | ○ | ○ |
| Algoritmit (kuten MD5, RSA, DES, Blowfish) | ○ | ○ | ○ | ○ | ○ | : | ○ | ○ | ○ | ○ | ○ |

7.5. Palvelinkäyttöjärjestelmät

| | 1 | 2 | 3 | 4 | 5 | | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Linux (ja/tai FreeBSD) | ○ | ○ | ○ | ○ | ○ | : | ○ | ○ | ○ | ○ | ○ |
| Windows NT | ○ | ○ | ○ | ○ | ○ | : | ○ | ○ | ○ | ○ | ○ |
| Sun Solaris | ○ | ○ | ○ | ○ | ○ | : | ○ | ○ | ○ | ○ | ○ |
| Muut kaupalliset Unix - järjestelmät | ○ | ○ | ○ | ○ | ○ | : | ○ | ○ | ○ | ○ | ○ |

7.6. Hajautetut tekniikat

| | 1 | 2 | 3 | 4 | 5 | | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Corba | ○ | ○ | ○ | ○ | ○ | : | ○ | ○ | ○ | ○ | ○ |
| DCOM | ○ | ○ | ○ | ○ | ○ | : | ○ | ○ | ○ | ○ | ○ |
| Jini (ja muut Java-perustaiset) | ○ | ○ | ○ | ○ | ○ | : | ○ | ○ | ○ | ○ | ○ |

7.7. Verkkoinfrastruktuuritekniikat

| | 1 | 2 | 3 | 4 | 5 | | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| SS7 (ja muut vast. signalointiprotokollat) | ○ | ○ | ○ | ○ | ○ | : | ○ | ○ | ○ | ○ | ○ |
| GPRS | ○ | ○ | ○ | ○ | ○ | : | ○ | ○ | ○ | ○ | ○ |
| HSCSD | ○ | ○ | ○ | ○ | ○ | : | ○ | ○ | ○ | ○ | ○ |
| SMS | ○ | ○ | ○ | ○ | ○ | : | ○ | ○ | ○ | ○ | ○ |
| WAP | ○ | ○ | ○ | ○ | ○ | : | ○ | ○ | ○ | ○ | ○ |
| xDSL | ○ | ○ | ○ | ○ | ○ | : | ○ | ○ | ○ | ○ | ○ |
| DVB | ○ | ○ | ○ | ○ | ○ | : | ○ | ○ | ○ | ○ | ○ |
| Irda | ○ | ○ | ○ | ○ | ○ | : | ○ | ○ | ○ | ○ | ○ |
| Bluetooth | ○ | ○ | ○ | ○ | ○ | : | ○ | ○ | ○ | ○ | ○ |

7.8. Mobiilikäyttöjärjestelmät

| | 1 | 2 | 3 | 4 | 5 | | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| EPOC | ○ | ○ | ○ | ○ | ○ | : | ○ | ○ | ○ | ○ | ○ |
| Win CE | ○ | ○ | ○ | ○ | ○ | : | ○ | ○ | ○ | ○ | ○ |
| Palm OS | ○ | ○ | ○ | ○ | ○ | : | ○ | ○ | ○ | ○ | ○ |

## YRITYKSEN ASIAKKAAT

1. Paljonko yrityksellänne on ollut asiakkaita tänä vuonna?

- ○ 1-5
- ○ 6-10
- ○ 11-50
- ○ 51-100
- ○ 101-500
- ○ Yli 500

2. Miten arvioitte asiakasmäärän kehittyvän vuonna 2000?

- ○ Kasvavan, prosenttia _____
- ○ Pysyvän ennallaan
- ○ Laskevan, prosenttia _____

3. Myyttekö tuotteitanne lähinnä

- ☐ Suoraan yksittäisille loppukäyttäjille
- ☐ Yrityksille, jotka välittävät tuotteen/palvelun edelleen loppukäyttäjille
- ☐ Yrityksille, jotka liittävät tuotteen osaksi omaa tuotettaan
- ☐ Yrityksille, jotka käyttävät tuotteen/palvelun itse

4. Miten suuri osuus tuotteistanne siirtyy asiakkaalle

1. Fyysisesti, prosenttia
2. Internetin välityksellä, prosenttia
3. Muutoin sähköisessä muodossa, prosenttia

5. Miten asiakaskuntanne on jakautunut alueellisesti?

Paikallisia asiakkaita, prosenttia
Muualla Suomessa, prosenttia
Ulkomailla, prosenttia

6. Kuinka suuri osa liikevaihdostanne tulee merkittäviltä ns. avainasiakkailtanne?

- Alle 10 %
- 10-30 %
- 30-50 %
- 50-80 %
- Yli 80 %

## HENKILÖSTÖ

1. Kuinka monta henkilöä yrityksessänne työskentelee tänä vuonna?

Päätoimisia, henkilöä
Osa-aikaisia, henkilöä

2. Tiedot henkilöstönne koulutustaustasta: Kuinka monella henkilöllä on suoritettuna tai osittain suoritettuna

Tutkijankoulutus: lisensiaatin tai tohtorin tutkinto
Yliopisto- tai korkeakoulututkinto
Opisto- tai amk-tutkinto
Muu ammattitutkinto
Itseoppineita ammattilaisia ilman tutkintoa

3. Koulutusalat:

Teknillinen/tietojenkäsittely, henkilöllä
Kaupallinen, henkilöllä
Taiteellinen, henkilöllä
Viestintä, henkilöllä
Muu, henkilöllä

4. Kuinka monella prosentilla henkilöstöstänne on kansainvälistä työkokemusta?

## KILPAILUTILANNE

1. Kuinka paljon on sellaisia yrityksiä, joita pidätte varsinaisina kilpailijoinanne?

- Ei yhtään
- Yksi
- 2-5
- 6-10
- Yli 10

2. Haastavimmat kilpailijamme ovat

3. Mikä seuraavista lähinnä kuvastaa asemaanne kilpailijoihinne nähden?

- Markkinaosuutemme on suurempi kuin muilla, olemme markkinajohtaja
- Olemme haastajan asemassa, pienempi kuin markkinajohtaja
- Olemme yksi monista pienehkön markkinaosuuden yrityksistä
- Olemme niin erikoistuneita, ettei varsinaisia kilpailijoita ole

4. Mitä mieltä olette seuraavista kilpailutilanteeseen liittyvistä väittämistä? (1=täysin eri mieltä, 2=hieman eri mieltä, 3=vaikea sanoa, 4=jokseenkin samaa mieltä, 5=täysin samaa mieltä)

| | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| 4.1. Alallemme tulee jatkuvasti paljon uusia yrityksiä | ○ | ○ | ○ | ○ | ○ |
| 4.2. Asiakas pystyy yleensä vaikuttamaan kaupan ehtoihin myyjää enemmän | ○ | ○ | ○ | ○ | ○ |
| 4.3. Uusia korvaavia tuotteita tulee todennäköisesti markkinoille vuoden sisällä | ○ | ○ | ○ | ○ | ○ |
| 4.4. Alallamme ei menesty, ellei pysty tuomaan jotain uutta markkinoille jatkuvasti | ○ | ○ | ○ | ○ | ○ |
| 4.5. Kilpailua ei tällä hetkellä ole kovin paljoa | ○ | ○ | ○ | ○ | ○ |
| 4.6. Kilpailu tulee kiristymään rajusti lähivuosina | ○ | ○ | ○ | ○ | ○ |

5. Miltä muilta toimialoilta uskotte tulevan uusia yrityksiä alallenne?

**KIITOKSIA VASTAUKSESTANNE! KUN OLETTE VASTANNEET LOMAKKEEN KYSYMYKSIIN, PAINAKAA ALLA OLEVAA LÄHETÄ-PAINIKETTA!**

Lähetä

# KYSELY PK-LISÄARVOPALVELUTUOTTAJILLE, OSA 2

## YDINOSAAMINEN

Yrityksen nimi

1. Mikä on yrityksenne ydinosaamista eli missä olette kaikkein vahvin?

2. Miten vahvaksi koette yrityksenne osaamisen seuraavilla osa-alueilla? (1=heikkous, 5=vahvuus)

| | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| 2.1. Teknologian hallinta | ○ | ○ | ○ | ○ | ○ |
| 2.2. Tuotantoprosessien hallinta | ○ | ○ | ○ | ○ | ○ |
| 2.3. Uusien teknologioiden nopea omaksuminen | ○ | ○ | ○ | ○ | ○ |
| 2.4. Uusien teknologioiden valinta | ○ | ○ | ○ | ○ | ○ |
| 2.5. Näkemys teknologisesta kehityksestä | ○ | ○ | ○ | ○ | ○ |
| 2.6. Tietotaidon hallinta | ○ | ○ | ○ | ○ | ○ |
| 2.7. Henkilöstöresurssien hallinta | ○ | ○ | ○ | ○ | ○ |
| 2.8. Imagon /brandin kehittäminen ja ylläpito | ○ | ○ | ○ | ○ | ○ |
| 2.9. Asiakassuhteiden hallinta | ○ | ○ | ○ | ○ | ○ |
| 2.10. Projektien hallinta | ○ | ○ | ○ | ○ | ○ |
| 2.11. Liiketoimintaprosessien laadun hallinta | ○ | ○ | ○ | ○ | ○ |
| 2.12. Jakeluteiden hallinta | ○ | ○ | ○ | ○ | ○ |
| 2.13. Markkinointiviestinnän hallinta | ○ | ○ | ○ | ○ | ○ |
| 2.14. Yhteistyökumppanit ja -verkostot | ○ | ○ | ○ | ○ | ○ |
| 2.15. Muu heikkous, mikä? | | | | | |
| 2.16. Muu vahvuus, mikä? | | | | | |

| | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| 3. Miten hyvin uskotte tulevaisuudessa pystyvänne mukauttamaan ydinosaamistanne vastaamaan uusia teknologioita? (1=erittäin työlästä, 5=helppoa) | ○ | ○ | ○ | ○ | ○ |

4. Mitä hyötyä/ lisäarvoa loppukäyttäjä saa käyttäessään juuri teidän tuotteitanne/osaamistanne?

5. Asemanne toimitusketjussa eli arvoketjussa? (Täyttäkää itsenne ja kumppanienne nimet laatikoihin)

| | |
|---|---|
| lähinnä loppukäyttäjää oleva yritys | |
| edellinen yritys | |
| edellinen yritys | |
| edellinen yritys | |
| kauimpana loppukäyttäjästä oleva yritys | |

6. Arvioikaa, miten tärkeitä seuraavat tekijät ovat kilpailuetunne ylläpitämisen kannalta. (1=ei lainkaan tärkeä, 5=erittäin tärkeä)

| | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| 6.1. Vaikeasti kopioitavissa oleva yrityssidonnainen erityistietämys eli ns. hiljainen tieto (tacit knowledge) | ○ | ○ | ○ | ○ | ○ |
| 6.2. Patentin, copyrightin tai tuotemerkin tuottama juridinen erityisasema, joka suojaa tehokkaasti kilpailijoilta | ○ | ○ | ○ | ○ | ○ |
| 6.3. Kyky omaksua nopeasti uutta tietämystä markkinoilta (vaikka ei tätä tietoa sinänsä itse tuotakaan) sekä soveltaa sitä ensimmäisenä (ns. ensimmäisen toimijan etu) | ○ | ○ | ○ | ○ | ○ |
| 6.4. Kyky jäljitellä kustannustehokkaasti alan pioneerikilpailijoiden ideoita ja kaapata markkinat heidän edestään | ○ | ○ | ○ | ○ | ○ |
| 6.5. Kyky löytää markkinoilta omia pieniä "nichejä" tai katvealueita, joita muut eivät halua/kykene hyödyntämään | ○ | ○ | ○ | ○ | ○ |

7. Yrityksemme vaikeasti kopioitavissa oleva "hiljainen tietämys"

○ rajoittuu yhden henkilön erityisosaamiseen, ts.jos hänet ostetaan kilpailijalle niin menetämme kilpailuasemamme

○ rajoittuu muutaman henkilön teamiin, jonka siirtyminen veisi kilpailukykymme

○ on hajallaan lähes koko organisaatiossamme, ja siksi kilpailuedun menettämisen vaara henkilöstön mahdollisesti siirtyessä kilpailijoille, on pieni

8. Miten paljon alallanne on oppimiseen/kokemukseen perustuvia mittakaavaetuja (mitä enemmän tuotamme, sitä alhaisemmat yksikkökustannukset) seuraavilla osa-alueilla (1=ei lainkaan, 5=huomattavasti)

| | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| 8.1. Tutkimus ja tuotekehitys | ○ | ○ | ○ | ○ | ○ |
| 8.2. Tuotanto | ○ | ○ | ○ | ○ | ○ |
| 8.3. Markkinointi | ○ | ○ | ○ | ○ | ○ |
| 8.4. Jakelu | ○ | ○ | ○ | ○ | ○ |
| 8.5. Rahoitus | ○ | ○ | ○ | ○ | ○ |

| | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| 9. Miten paljon alallanne on synergiaetuja eli sitä, että kykenette käyttämään ydinosaamistanne monien erilaisten tuotteiden/palveluiden tuottamiseen (1=ei lainkaan, 5=huomattavasti) | ○ | ○ | ○ | ○ | ○ |

10. Mitä mieltä olette seuraavista väittämistä? (1=täysin eri mieltä, 5=täysin samaa mieltä)

| | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| 10.1. Patenteilla ei ole alallamme merkitystä kilpailuaseman ylläpitämisessä | ○ | ○ | ○ | ○ | ○ |
| 10.2. Patentit estävät tehokkaasti kilpailijoita "varastamasta" ideoitamme | ○ | ○ | ○ | ○ | ○ |
| 10.3. Patentit toimivat referensseinä siitä, että olemme huippuosaajia | ○ | ○ | ○ | ○ | ○ |
| 10.4. Patenttien avulla voidaan muokata alan kehitystä (esim. standardit) | ○ | ○ | ○ | ○ | ○ |
| 10.5. "Hiljaisen tietämyksemme" ansiosta meidän ei tarvitse pelätä ideoiden vuotamista muille | ○ | ○ | ○ | ○ | ○ |
| 10.6. "Hiljainen tietämys" vaikeuttaa tiedonkulkua ja verkostoitumista yhteistyökumppaneiden kanssa | ○ | ○ | ○ | ○ | ○ |
| 10.7. Pyrkimys mittakaavaetujen hyödyntämiseen johtaa siihen, että erikoistumme yhä kapeammalle osaamisalueelle | ○ | ○ | ○ | ○ | ○ |
| 10.8. Ydinosaamisemme tehokas kaupallinen hyödyntäminen riippuu olennaisesti muista samassa arvoketjussa toimivista yrityksistä | ○ | ○ | ○ | ○ | ○ |
| 10.9. Olemme hyvin riippuvaisia muista arvoketjussa toimivista yrityksistä | ○ | ○ | ○ | ○ | ○ |
| 10.10. Aiemmat ratkaisumme (esim. teknologiavalinnat) sanelevat pitkälti sen, mihin suuntaan ydinosaamisemme voi kehittyä jatkossa | ○ | ○ | ○ | ○ | ○ |

11. Millaiseksi arvioitte seuraavat riskit? (1=ei riskiä, 5=erittäin suuri riski)

| | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| 11.1. Kilpailijat "varastavat" keskeiset ideamme | ○ | ○ | ○ | ○ | ○ |
| 11.2. Kilpailijat ostavat itselleen avainhenkilöstömme | ○ | ○ | ○ | ○ | ○ |
| 11.3. Kilpailijat pystyvät kiertämään patenttisuojamme | ○ | ○ | ○ | ○ | ○ |
| 11.4. Emme pysty säilyttämään kilpailuasemaamme henkilöstöpulan vuoksi | ○ | ○ | ○ | ○ | ○ |
| 11.5. Emme pysty säilyttämään kilpailuasemaamme rajusti nousevien kustannusten vuoksi | ○ | ○ | ○ | ○ | ○ |
| 11.6. Emme pysty hyödyntämään kilpailijoidemme ideoita, koska niiden juridinen (esim. patenttiin perustuva) suoja tehostuu | ○ | ○ | ○ | ○ | ○ |
| 11.7. Erityisosaamisemme suuntautuu väistyvään teknologiavaihtoehtoon | ○ | ○ | ○ | ○ | ○ |
| 11.8. Mahdolliset yhteistyökumppanit rikkovat sopimuksessa sovittuja ehtoja | ○ | ○ | ○ | ○ | ○ |
| 11.9. Suurten ostajien ja yrityksemme välille tulee luottamuksen puutetta | ○ | ○ | ○ | ○ | ○ |
| 11.10. Strategisesti tärkeiden partnereiden ja yrityksemme välille tulee luottamuksen puutetta | ○ | ○ | ○ | ○ | ○ |
| 11.11. Alihankkijoiden ja yrityksemme välille tulee luottamuksen puutetta | ○ | ○ | ○ | ○ | ○ |
| 11.12. Suuri ostaja pakottaa investointeihin, jotka tekevät meidät siitä riippuvaiseksi | ○ | ○ | ○ | ○ | ○ |
| 11.13. Neuvotteluvoimamme heikkenee, kun potentiaalisia ostajia on hyvin vähän | ○ | ○ | ○ | ○ | ○ |
| 11.14. Aiemmat teknologiavalintamme tekevät meistä hyvin haavoittuvaisen, mikäli teknologian kehityksen suunta muuttuu rajusti | ○ | ○ | ○ | ○ | ○ |

12. Miten suureksi arvioisitte epävarmuutta alallanne? (1=erittäin vaikea ennustaa, 5=helppo ennustaa)

| | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| 12.1. Markkinoiden kehitys | ○ | ○ | ○ | ○ | ○ |
| 12.2. Teknologian kehitys | ○ | ○ | ○ | ○ | ○ |

13. Miten reagoitte, kun epävarmuus markkinoiden kehityksestä lisääntyy?

- ○ Pyrimme yhdistymään (fuusioitumaan) johonkin suurista ostajistamme/kumppaneistamme
- ○ Pyrimme lisäämään yhteistyötä keskeisten osapuolten kanssa
- ○ Jatkamme yksinään luottaen siihen että markkinoilla on tilaa

14. Miten reagoitte, kun epävarmuus teknologian kehityksestä lisääntyy?

- ○ Pyrimme yhdistymään (fuusioitumaan) johonkin suurista ostajistamme/kumppaneistamme
- ○ Pyrimme lisäämään yhteistyötä keskeisten osapuolten kanssa
- ○ Jatkamme yksinään luottaen siihen että pysymme kehityksessä mukana

15. Miten varaudutte siihen, ettei partneri pidä kiinni sopimuksestanne?

- ○ Pyrimme yhdistymään (fuusioitumaan) tärkeimmän partnerimme kanssa
- ○ Pyrimme lisäämään luottamusta verkostoitumalla läheisten partnerien kanssa
- ○ Pyrimme kehittämään omaa erityisosaamistamme sellaiseksi, ettei meitä voi sivuuttaa

16. Miten varaudutte siihen, ettette tulisi liian riippuvaiseksi suuresta ostajasta/kumppanista?

- ○ Pyrimme yhdistymään (fuusioitumaan) ostajan/ kumppanin kanssa
- ○ Pyrimme verkostoyhteistyöhön suurostajien kanssa
- ○ Pyrimme kehittämään omaa erityisosaamistamme sellaiseksi, ettei meitä voi sivuuttaa

17. Miten pyritte vähentämään riippuvuuttanne muista arvoketjun osapuolista?

- ☐ Pyrimme yhdistymään arvoketjun kannalta keskeiseen osapuoleen
- ☐ Pyrimme verkostoyhteistyöhön keskeisten osapuolten kanssa
- ☐ Pyrimme kehittämään omaa erityisosaamistamme vaikeasti korvattavaksi, muille strategisesti keskeiseksi
- ☐ Pyrimme olemaan erittäin kustannustehokas

18. Miten pyritte vähentämään sitä riskiä, mikä liittyy teknologisen kehityksen mahdolliseen muuttumiseen ratkaisevasti?

- ☐ Luotamme että valitsemamme polku on oikea emmekä kehittele varastrategioita
- ☐ Pyrimme aina säilyttämään mahdollisuuden joustavalle uudelleenvalinnalle
- ☐ Varomme erikoistumasta liian pitkälle
- ☐ Olemme valmiita yhdistymään/verkostoitumaan vaihtoehtoisia ratkaisuja tarjoavien kilpailijoiden kanssa
- ☐ Pyrimme läheiseen verkostosuhteeseen alan suurostajien kanssa

## YHTEISTYÖKUVIOT

1. Onko yrityksellänne partnership-suhteiksi luokiteltavia yhteistyösuhteita suuryritysten kanssa? (Partnership-suhteella tarkoitetaan läheistä ja pitkäaikaista yhteistyösuhdetta, jossa tavoitellaan molempien osapuolten kaupallista etua)

- ○ Ei ole (siirtykää kysymykseen 9)
- ○ On, kuinka monta kotimaista ja ulkomaista (merkitse esim. 2 + 0) _____

2. Tärkeimmät partnerimme ovat

3. Mihin yrityksenne toimintoihin yhteistyönne liittyvät?

- [ ] Tuotanto
- [ ] Tuotekehitys
- [ ] Myynti
- [ ] Jakelu
- [ ] Alihankinta
- [ ] Kansainvälistyminen

4. Miten yhteistyösuhteista on sovittu?

- [ ] Suullisesti
- [ ] Kirjallinen yhteistyösopimus
- [ ] Omistuksellinen suhde

5. Mitä seuraavista yhteistyökumppaninne ovat suhteessa yritykseenne?

- [ ] Asiakas
- [ ] Jälleenmyyjä
- [ ] Alihankkija
- [ ] Toimittaja
- [ ] Rinnakkainen yritys (horisontaalinen yhteistyö)
- [ ] Muu, mikä

6. Onko neuvotteluvoimanne suhteessa partneriinne yleisesti ottaen?

- ○ vahvempi
- ○ keskimäärin sama
- ○ heikompi

7. Millaiseksi arvioitte partnershipsuhteidenne strategisen tärkeyden (1=ei strategista merkitystä, 5=erittäin tärkeä)

| | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| 7.1. oman yrityksenne kannalta | ○ | ○ | ○ | ○ | ○ |
| 7.2. partnerinne kannalta | ○ | ○ | ○ | ○ | ○ |

8. Harkitsetteko joidenkin partnershipsuhteidenne lopettamista?

- ○ Kyllä harkitsemme, koska
- ○ Emme harkitse

| | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| 9. Katsotteko tarvitsevanne yhteistyökumppaneita? (1=ehdottomasti emme, 5=tarvitsemme ehdottomasti) | ○ | ○ | ○ | ○ | ○ |

10. Mitkä seuraavista ovat sopivimpia yhteistyökumppaneiksi ?

- [ ] Kotimainen suuryritys
- [ ] Ulkomainen suuryritys
- [ ] Kotimainen PK-yritys
- [ ] Ulkomainen PK-yritys
- [ ] Tutkimuslaitos tai yliopisto

11. Millaista osaamista yhteistyökumppanilla pitäisi olla?

- [ ] Teknologista, mitä
- [ ] Kaupallista,mitä
- [ ] Sisällöntuotto-osaamista, mitä
- [ ] Muuta, mitä

12. Mitkä seuraavista ovat mielestänne tärkeimmät edellytykset yhteistyön onnistumiselle? (asettakaa tärkeysjärjestykseen:1=tärkein, 7=vähiten tärkeä)

| | |
|---|---|
| Luottamus | |
| Avoin tiedonkulku | |
| Oman organisaation tuki | |
| Sitoutuminen | |
| Yhteiset tavoitteet | |
| Osapuolten toisiaan täydentävyys | |
| Muu, mikä | |

13. Mitkä seuraavista ovat mielestänne pahimmat yhteistyön epäonnistumista aiheuttavat tekijät? (asettakaa järjestykseen:1=haitallisin, 8=vähiten haitallinen)

| | |
|---|---|
| Luottamuksen puute | |
| Informaation puute | |
| Yhteisten tavoitteiden puute | |
| Erilainen yrityskulttuuri | |
| Kumppanin laatuongelmat | |
| Kumppanin toimitusongelmat | |
| Kumppanin sitoutumisen puute | |
| Muu, mikä | |

14. Mihin toimintoon liittyviä uusia partnershipsuhteita haette?

- [ ] Emme hae uusia partnereita
- [ ] Tuotanto
- [ ] Tuotekehitys
- [ ] Myynti
- [ ] Jakelu
- [ ] Alihankinta
- [ ] Kansainvälistyminen

15. Mainitkaa kolme tärkeintä motiivia/syytä, miksi haluatte yhteistyösuhteeseen toisen yrityksen kanssa?

motiivi 1

motiivi 2

motiivi 3

16. Onko hakemanne yhteistyö luonteeltaan

- strategista
- operatiivista

**KIITOS VASTAUKSESTANNE! KUN OLETTE VASTANNUT KYSYMYKSIIN, PAINAKAA ALLA OLEVAA LÄHETÄ-PAINIKETTA.**

Lähetä

# KYSELY PK-LISÄARVOTUOTTAJILLE, OSA 3

Yrityksen nimi

## KANSAINVÄLISTYMINEN

1. Onko yrityksellänne kansainvälistä toimintaa:

- ○ Ei ole ollut
- ○ On ollut, muttei enää
- ○ On ollut, satunnaisesti vuodesta
- ○ On ollut, säännöllisesti vuodesta

2. Miten seuraavat tekijät ovat vaikuttaneet päätökseenne lähteä / olla lähtemättä kansainvälisille markkinoille? (-2=vaikeuttanut kansainvälistymistä huomattavasti, -1=vaikeuttanut hieman, 0=ei vaikutusta, +1=edesauttanut hieman, +2=edesauttanut kansainvälistymistä huomattavasti)

| | -2 | -1 | 0 | +1 | +2 |
|---|---|---|---|---|---|
| 2.1. Henkilöstön kokemus kansainvälisestä toiminnasta | ○ | ○ | ○ | ○ | ○ |
| 2.2. Henkilöstön tuote/palveluosaaminen | ○ | ○ | ○ | ○ | ○ |
| 2.3. Henkilöstön kohdemarkkinatuntemus | ○ | ○ | ○ | ○ | ○ |
| 2.4. Henkilöstön markkinointiosaaminen | ○ | ○ | ○ | ○ | ○ |
| 2.5. Henkilöstön halukkuus kansainvälistyä | ○ | ○ | ○ | ○ | ○ |
| 2.6. Henkilöstön kielitaito | ○ | ○ | ○ | ○ | ○ |
| 2.7. Kansainvälistymisen rooli yrityksen strategiassa | ○ | ○ | ○ | ○ | ○ |
| 2.8. Kotimaisen asiakkaan kansainvälisyys | ○ | ○ | ○ | ○ | ○ |
| 2.9. Kotimaisen toimittajan/yhteistyökumppanin kansainvälisyys | ○ | ○ | ○ | ○ | ○ |
| 2.10. Ulkomaisen asiakkaan olemassaolo/puute | ○ | ○ | ○ | ○ | ○ |
| 2.11. Ulkomainen toimittaja/yhteistyökumppani | ○ | ○ | ○ | ○ | ○ |
| 2.12. Kilpailutilanne kotimarkkinoilla | ○ | ○ | ○ | ○ | ○ |
| 2.13. Ulkomaalaisten kilpailijoiden tulo Suomeen | ○ | ○ | ○ | ○ | ○ |
| 2.14. Kilpailijoiden kansainvälistyminen | ○ | ○ | ○ | ○ | ○ |
| 2.15. Kysynnän määrä kansainvälisillä markkinoilla | ○ | ○ | ○ | ○ | ○ |
| 2.16. Rahoituksen saatavuus | ○ | ○ | ○ | ○ | ○ |
| 2.17. Ulkopuolisen asiantuntija-avun saatavuus | ○ | ○ | ○ | ○ | ○ |
| 2.18. Alan tuotteiden lyhyt elinkaari | ○ | ○ | ○ | ○ | ○ |
| 2.19. Kansainvälinen toiminta tarjoaa tuotannon skaalaetuja | ○ | ○ | ○ | ○ | ○ |
| 2.20. Tuotteen/palvelun kilpailijoita alempi hinta | ○ | ○ | ○ | ○ | ○ |
| 2.21. Sillanpääaseman tarve | ○ | ○ | ○ | ○ | ○ |
| 2.22. Lainsäädännölliset/oikeudelliset tekijät | ○ | ○ | ○ | ○ | ○ |
| 2.23. Kansainvälisen liiketoiminnan riskit | ○ | ○ | ○ | ○ | ○ |
| 2.24. Kotimarkkinoiden pienuus | ○ | ○ | ○ | ○ | ○ |
| 2.25. Muu, mikä | ○ | ○ | ○ | ○ | ○ |

3. Mitkä ovat yrityksenne käyttämät operaatiomuodot kansainvälisillä markkinoilla (tällä hetkellä ja tulevaisuudessa)? Mikäli kansainvälistä toimintaa ei ole tällä hetkellä, vastatkaa vain tulevaisuudessa-kohtaan ja siirtykää sitten alemmas kysymysryhmään: näkemys tulevaisuudesta!

*Tällä hetkellä:*

- [ ] Myynti Internetin kautta
- [ ] Vienti toisen suomalaisen yrityksen toimesta
- [ ] Vienti ulkomaalaisen jälleenmyyjän toimesta
- [ ] Vienti suoraan omien myyjien toimesta asiakkaille
- [ ] Hankintaa ulkomailta
- [ ] Lisensiointi
- [ ] Palvelusopimukset (tukipalvelut)
- [ ] Sopimusvalmistus tai alihankinta
- [ ] Yhteistyösopimukset, strategiset allianssit
- [ ] Oma ulkomaalainen myyntiyksikkö
- [ ] Oma tytäryritys (greenfield)
- [ ] Oma tytäryritys yritysoston avulla
- [ ] Yhteisyritys
- [ ] Muu, mikä

*Tulevaisuudessa:*

- [ ] Myynti Internetin kautta
- [ ] Vienti toisen suomalaisen yrityksen toimesta
- [ ] Vienti ulkomaalaisen jälleenmyyjän toimesta
- [ ] Vienti suoraan omien myyjien toimesta asiakkaille
- [ ] Hankintaa ulkomailta
- [ ] Lisensiointi
- [ ] Palvelusopimukset (tukipalvelut)
- [ ] Sopimusvalmistus tai alihankinta
- [ ] Yhteistyösopimukset, strategiset allianssit
- [ ] Oma ulkomaalainen myyntiyksikkö
- [ ] Oma tytäryritys (greenfield)
- [ ] Oma tytäryritys yritysoston avulla
- [ ] Yhteisyritys
- [ ] Muu, mikä

4. Kuinka monessa maassa kotimaan lisäksi yrityksellänne on ollut toimintaa/asikkaita?

5. Yrityksenne toiminta kansainvälisillä markkinoilla? (mikäli toimintaa ko. alueella, merkitse aloitusvuosi ja alueen osuus yrityksen liikevaihdosta -%)

5.1. Pohjoismaat

5.2. Venäjä ja Baltia

5.3. Iso-Britannia ja Irlanti

5.4. Saksa ja Itävalta

5.5. Ranska ja Benelux-maat

5.6. Espanja, Italia, Portugal ja Kreikka

5.7. Muu Eurooppa

5.8. Pohjois-Amerikka

5.9. Latinalainen-Amerikka

| | |
|---|---|
| 5.10. Afrikka | |
| 5.11. Aasia | |
| 5.12. Muu, mikä | |

6. Mitä vahvuuksia koette yrityksellänne olevan kansainvälisessä toiminnassa? (1=ei vahvuus kansainvälisessä toiminnassa, 5=ydinosaaminen, joka erottaa meidät kilpailijoistamme)

| | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| 6.1. Teknologian hallinta | ○ | ○ | ○ | ○ | ○ |
| 6.2. Tuotantoprosessien hallinta | ○ | ○ | ○ | ○ | ○ |
| 6.3. Tietotaidon hallinta | ○ | ○ | ○ | ○ | ○ |
| 6.4. Tuote tai palvelu kilpailijoihin verrattuna | ○ | ○ | ○ | ○ | ○ |
| 6.5. henkilöstöresurssien hallinta | ○ | ○ | ○ | ○ | ○ |
| 6.6. Imagon / brandin kehittäminen / ylläpito | ○ | ○ | ○ | ○ | ○ |
| 6.7. Asiakassuhteiden hallinta | ○ | ○ | ○ | ○ | ○ |
| 6.8. Projektien hallinta | ○ | ○ | ○ | ○ | ○ |
| 6.9. Liiketoimintaprosessien laadun hallinta | ○ | ○ | ○ | ○ | ○ |
| 6.10. Jakeluteiden hallinta | ○ | ○ | ○ | ○ | ○ |
| 6.11. Markkinointiviestinnän hallinta | ○ | ○ | ○ | ○ | ○ |
| 6.12. Kustannusetu suhteessa kilpailijoihin | ○ | ○ | ○ | ○ | ○ |
| 6.13. Yhteistyökumppanit / verkostot | ○ | ○ | ○ | ○ | ○ |
| 6.14. Muu, mikä | ○ | ○ | ○ | ○ | ○ |
| | | | | | |

7. Mitä ongelmia yrityksenne on kohdannut kansainvälisessä toiminnassaan? (1=ei ongelma, 5=keskeinen ongelma kansainvälisessä toiminnassa)

| | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| 7.1. Jo markkinoilla toimivien yritysten luottamukselliset ja vakiintuneet suhteet asiakkaisiin | ○ | ○ | ○ | ○ | ○ |
| 7.2. Osaavan henkilöstön puute | ○ | ○ | ○ | ○ | ○ |
| 7.3. Paikallisten yritysten parempi markkinatuntemus | ○ | ○ | ○ | ○ | ○ |
| 7.4. Yrityksen tuntemattomuus ulkomailla | ○ | ○ | ○ | ○ | ○ |
| 7.5. Suomalaisyritysten heikko tunnettuus | ○ | ○ | ○ | ○ | ○ |
| 7.6. Markkinoilla jo olevien kilpailijoiden vastatoimenpiteet | ○ | ○ | ○ | ○ | ○ |
| 7.7. Rahoituksen riittämättömyys markkinoilla näkymiseen | ○ | ○ | ○ | ○ | ○ |
| 7.8. Hintakilpailukykymme on heikko | ○ | ○ | ○ | ○ | ○ |
| 7.9. Eroavaisuudet lainsäädännössä kotimarkkinoihin nähden | ○ | ○ | ○ | ○ | ○ |
| 7.10. Kohdemaan poliittiset olosuhteet | ○ | ○ | ○ | ○ | ○ |
| 7.11. Kulttuurierot | ○ | ○ | ○ | ○ | ○ |
| 7.12. Teknologiaerot | ○ | ○ | ○ | ○ | ○ |
| 7.13. Maantieteelliset etäisyydet | ○ | ○ | ○ | ○ | ○ |
| 7.14. Muu, mikä | ○ | ○ | ○ | ○ | ○ |
| | | | | | |

8. Kansainvälistymisen tulokset (-2=negatiivinen vaikutus, 0=ei vaikutusta, +2=positiivinen vaikutus)

| | -2 | -1 | 0 | +1 | +2 |
|---|---|---|---|---|---|
| 8.1. Vaikutus yrityksen kannattavuuteen | ○ | ○ | ○ | ○ | ○ |
| 8.2. Vaikutus yrityksen osaamiseen | ○ | ○ | ○ | ○ | ○ |
| 8.3. Vaikutus yrityksen liikevaihtoon | ○ | ○ | ○ | ○ | ○ |
| 8.4. Vaikutus yrityksen imagoon | ○ | ○ | ○ | ○ | ○ |
| 8.5. Vaikutus yritykseen yleisesti ottaen | ○ | ○ | ○ | ○ | ○ |

## NÄKEMYS TULEVAISUUDESTA

1. Miten uskotte liikevaihtonne kehittyvän tulevan vuoden aikana?

○ Kasvavan -% _____

○ Pysyvän ennallaan

○ Laskevan -% _____

2. Miten uskotte henkilöstömääränne kehittyvän tulevan vuoden aikana?

○ Kasvavan -% _____

○ Pysyvän ennallaan

○ Laskevan -% _____

3. Mitä mieltä olette seuraavista väittämistä? (1=täysin eri mieltä, 2=hieman eri mieltä, 3=vaikea sanoa, 4=jokseenkin samaa mieltä, 5=täysin samaa mieltä)

| | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| 3.1. Vahva kasvu on välttämätöntä tulevien asemiemme turvaamiseksi | ○ | ○ | ○ | ○ | ○ |
| 3.2. Yrityksemme on nykyisellään optimikokoinen | ○ | ○ | ○ | ○ | ○ |
| 3.3. Haemme maltillista kasvua | ○ | ○ | ○ | ○ | ○ |
| 3.4. Kasvu voidaan saavuttaa lähinnä kansainvälistymällä | ○ | ○ | ○ | ○ | ○ |
| 3.5. Kotimaan markkinoilla on vielä riittävästi kasvupotentiaalia | ○ | ○ | ○ | ○ | ○ |
| 3.6. Kansainvälistymisen tuomat riskit ovat liian suuret | ○ | ○ | ○ | ○ | ○ |
| 3.7. Meidän täytyy kansainvälistyä menestyäksemme tulevaisuudessa | ○ | ○ | ○ | ○ | ○ |
| 3.8. Tarvitsemme yhteistyökumppaneita voidaksemme kansainvälistyä | ○ | ○ | ○ | ○ | ○ |
| 3.9. Meillä on riittävästi resursseja kansainvälistymiseen | ○ | ○ | ○ | ○ | ○ |

4. Miten uskotte seuraavien tekijöiden vaikuttavan yrityksenne kasvumahdollisuuksiin? (1=ei tuota ongelmia, 2=tuskin ongelmia, 3=voi olla ongelmia, 4=jonkin verran ongelmia, 5=tuottaa suuria ongelmia)

| | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| 4.1. Henkilöstön osaaminen | ○ | ○ | ○ | ○ | ○ |
| 4.2. Henkilöstön saatavuus | ○ | ○ | ○ | ○ | ○ |
| 4.3. Rahoituksen järjestäminen | ○ | ○ | ○ | ○ | ○ |
| 4.4. Jakelukanavien löytäminen | ○ | ○ | ○ | ○ | ○ |
| 4.5. Markkinointitoimenpiteiden toteutus | ○ | ○ | ○ | ○ | ○ |
| 4.6. Ulkopuolisen asiantuntija-avun saanti | ○ | ○ | ○ | ○ | ○ |

5. Aiotteko laajentaa toimintaanne seuraavien kolmen vuoden aikana? (merkitse sopivat)

☐ Uusille markkina-alueille, mihin

☐ Muuntelemalla nykyisiä tuotteita/palveluita

☐ Tuomalla kokonaan uusia tuotteita/palveluita

☐ Uusille asiakasryhmille

6. Kuinka suuren osan liikevaihdostanne uskotte tulevan kansainvälisiltä markkinoilta

Vuonna 2000 -%

Vuonna 2002 -%

7. Mikä tulee olemaan suurin liiketoimintaympäristössänne lähivuosina tapahtuva muutos?

**SUURKIITOKSET VASTAUKSESTANNE! KUN OLETTE VASTANNEET KAIKKIIN LOMAKKEEN KYSYMYKSIIN, PAINAKAA ALLA OLEVAA LÄHETÄ-PAINIKETTA!**

☐ Haluan osallistua tutkimusprojektiin myös jatkossa, suostun tutkijoiden haastateltavaksi

☐ Haluan yhteenvedon tutkimuksen tuloksista

☐ Haluan osallistua Summer School of Telecommunications -tapahtuman arvontaan

Valitsen kiitoslahjakseni

○ snapsisetin

○ collegepuseron

Jos valitsit collegepuseron, niin valitse koko- ja värivaihtoehto seuraavista

○ koko M

○ koko L

○ koko XL

○ koko XXL

○ grafiitinharmaa

○ tummansininen

○ havunvihreä

(Muistittehan merkitä nimenne sekä yrityksenne nimen)

*Kysely toteutettiin Verkonmerkin QuestNet -työkalun avulla*

Lähetä

**APPENDIX 2: The qualitative questionnaire skeleton. (Semi-structured interview)**

The interviews were held in Finnish, so the questions are also listed in Finnish language. All of the interviewees spoke Finnish and thus the translation and combination of the answers was done by the author. The following questionnaire skeleton was intended for the interviewer only.

**YLEISTÄ JA YDINOSAAMISESTA:**

1. Yrityksen perustiedot (varmistetaan, että ennakkoon kerätyt tiedot ovat oikein)
2. Mikä on yrityksenne tuote? Jos useampia tuotteita, mitkä ovat eri tuotteiden % -osuudet lv:stä nyt, entä mitkä on tavoitteet tulevaisuudessa? Tuotteiden kilpailuedut? Tuotteiden elinkaaret? Oletteko pystyneet tuotteistamaan osaamista vai myyttekö asiakasräätälöityä osaamista?
3. Näkemyksenne siitä kuinka monella yrityksellä Suomessa on samaa osaamista kuin Teillä?
4. Mikä on yrityksenne erityisosaamisalue? Minkä koette kilpailueduksenne eli mitä osaatte paremmin kuin muut? Mikä on teidän ydinosaamisenne?
    a. Onko ydinosaamistanne määritelty koskaan formaalisti
    b. Onko tultu toimeen ilman ydinosaamisen määrittelyä
    c. Koetteko, että formaalin määrittelyn tekeminen voisi olla tarpeen tulevaisuudessa?
5. Keitä ja millaisia ovat asiakkaat? Tärkeimmät referenssit? Pitkäaikaisia sopimuksia? Onko teillä partnerisuhteita ja mihin suuntaan? (isot operaattorit, kotimaiset vs. ulkomaiset etc.)
6. Miksi asiakas kiinnostuu teistä / ostaa teiltä? Miksi asiakas valitsee juuri teidät? Milloin häviätte kaupan?
7. Minkä koette suurimmaksi haasteeksenne? (ennen, nyt, tulevaisuudessa, onko tapahtunut muutosta?)

To be continued

8. Mitä resursseja tarvitsette ulkopuolelta? Mistä?
    a. Oletteko siirtäneet joitakin toimintojanne ulkopuolisten yritysten hoidettavaksi? (out-sourcing)
    b. Kuinka määrittelitte minkä toiminnon siirtäminen ulkopuolisen yrityksen hoidettavaksi on järkevää?
    c. Miksi valitsitte jättää juuri ne toiminnot jotka olette pitäneet itsellänne?
        i. henkilökohtaista kiinnostusta?
        ii. henkilökunnalla osaamista?
        iii. teknologista osaamista?
        iv. prosessi osaamista?
        v. imago kysymys?
9. Mitkä ovat pahimmat kilpailijanne? Toimialan kilpailutekijät?
    a. Oletteko kyenneet keskittymään valitsemiinne ydintoimintoihin, vai onko ne vain toimintoja toisten seassa?
    b. Pelkäättekö kilpailijoita näillä alueilla?
    c. Muutos? (tähän mennessä, tulevaisuudessa)
10. Mikä on mielestänne tärkein tuotekehityksen suunta juuri nyt? Miten näette mobiilin maailman tulevaisuuden? Paljonko panostatte tuotekehitykseen? Mitä työkaluja käytätte? Miten ne toimivat?
11. Oletteko tottuneet yhteistyöhön toisten yritysten tai yliopistojen tai ammattikorkeakoulujen kanssa, vai puurratteko enemmän omin voimin? (Käynnissä olevat, käynnistyvät tuotekehityshankkeet)
12. Onko yrityksessänne kiinnostusta tällaiseen yhteistyöhön?
13. Millainen on johdon tausta? (koulutus ja kokemus) Entä bisnesfilosofia ja kehittämistavoitteet?
14. Strategiset valinnat ja tavoitteet? Missä bisneksessä yrityksenne aikoo olla mukana tulevaisuudessa? Strateginen suunnittelu? Johtoryhmätyöskentely? Hallitustyöskentely? Laatujärjestelmä?
15. Millainen on avainhenkilöstön koulutus- ja kokemustausta ja vaihtuvuus/pysyvyys? Mitä teette henkilöstön viihtyvyyden

parantamiseksi? Mistä yrityksenne saa henkilöstöä? Onko aktiivista rekrytointia?

16. Yrityksenne omistussuhteet nyt ja jatkossa? Onko hallitustyöskentelyä? Ketä? Onko riskirahoittajia? Ketä? Mitä lisäarvoa tästä saadaan?
17. Talous? Rahoitus? Kannattavuus ja vakavaraisuus?
18. Toiminnan suurimmat riskit ja haasteet? (nyt / tulevaisuudessa) Tulevaisuuden tavoitteet ja visiot? Mihin aiotte erityisesti panostaa? Mihin näette alan kehityksen olevan menossa?
19. Kenet koette asiakkaaksenne? Lähinnä arvoketjun seuraavan yrityksen vai loppuasiakkaan?
20. Onko osaamisenne todellakin uniikkia?

**HENKILÖSTÖ:**

1. Mitkä tekijät erityisesti ovat myötävaikuttaneet, että Teille on kehittynyt osaamista mikä teillä nyt on?
    a. henkilökunta yleensä
    b. johdon henkilökohtaiset ominaisuudet
    c. yhteistyö toisen yritysten kanssa
    d. yhteistyö yliopistojen / korkeakoulujen kanssa
    e. yhteistyö muiden oppilaitosten kanssa, minkä?
2. Kuinka kiinnostavana yrityksenä pidätte itseänne?
    a. henkilöstön kannalta
    b. ostajan kannalta
    c. sijoittajien kannalta
    d. toisten yritysten kannalta
3. Onko henkilöstön saaminen töihin ollut helppoa?
4. Onko yrityksen maantieteellisellä sijainnilla mielestänne merkitystä?
    a. Suomen sisällä?
    b. Euroopassa?
    c. Maailmalla?

**YRITYSYHTEISTYÖ:**

1. Onko yrityksellänne kokemuksia yhteistyöstä suuryritysten kanssa? Kokemukset? (positiivisia vai negatiivisia) Miten näette yhteistyömahdollisuudet suuryritysten kanssa tulevaisuudessa?
2. Onko yhteistyöstä seurannut mitään ongelmia, entä miten näette tulevaisuuden? Riskejä?
3. Millaisia yhteistyösuhteita yrityksellänne yleensä on?
4. Kuinka tuotteiden loppukäyttäjät näkevät teidät arvoketjussa?
    a. tietääkö loppukäyttäjä teidän olemassa olostanne
    b. Oletteko pohtineet voisitteko sijoittua arvoketjussa muuallekin? Siis voisitteko myydä tuotettanne suoraan loppukäyttäjälle? Tai jollekin toiselle yritykselle lähempänä loppukäyttäjää?
5. Mitä osaatte suuryrityksiä paremmin? Missä on teidän vahvuus?

**TEKNOLOGIA:**

1. Mitä teknologista osaamista yrityksellänne on? (softa, prosessit, ihmiset)
2. Mistä osasista osaamisenne koostuu? (asiakkaat, toimiala, eri softat/teknologiat)
3. Miten osaaminen voitaisiin siirtää esim. yrityskaupassa? Tacit / codified.
4. Miten teknologiaanne voidaan suojata? Voiko sitä suojata / onko sitä yritetty suojata?
5. Mitä teknologinen osaaminen on ohjelmistoalalla? Miten teknologinen kilpailukyky erottelee pienet ohjelmistoyritykset toisistaan? Milloin PK-teknologiayritykset voivat olla suuria teknologiayrityksiä parempia?
6. Voiko yrityksenne myydä osaamista yksin loppuasiakkaalle (autonominen) vai onko osaaminen myytävä osana suurempaa kokonaisuutta (systeeminen)?
7. Miten tuotteenne myydään? Osana tuotepalettia? Oletteko yrittäneet tuotteistaa? Miten ja kenen kanssa?
8. Millaista innovaatiotoimintaa? Radical / incremental.
9. Miten standardisointi vaikuttaa yrityksen kilpailutilanteeseen?

**KUULUMINEN LIITTOIHIN / ORGANISAATIOIHIN:**

1. Kuulutteko johonkin liittoon tai muuhun vastaavaan järjestöön? (Ohjelmistoalan liitto)
2. Onko yleensä olemassa mitään uusmedia alan tai sisällöntuottajien yhdistystä tai liittoa?
3. Tunnetteko että projektistamme saattaisi olla teille jotain hyötyä? Oletteko kiinnostunut olemaan mukana?