

Marketing Channels in High-Tech Industries: Creating Manufacturer – Distributor Partnerships

Michael Sjöberg & Alexis Wicén

Master Thesis
Department of Industrial Economics and Management
Royal Institute of Technology (KTH)
Supervisor: Henrik Uggla, PhD.
Stockholm 2008-01-31

Abstract

Today's business communication market is very turbulent, where technological evolution has caused manufacturers of hardware centric communications solutions to turn their eyes to software as well, and from being in a market with a strong pull, companies must now push their products on to their customers. As such, a once successful channel structure might become outdated, leading to an imperative revising of it.

The question: "How to reach customers the best way possible?" epitomizes the problem that unified communication manufacturer face. This master thesis will focus on describing the manufacturer – distributor relationship and how to make it as competitive as possible in the ever-changing unified communications market. The scope of this investigation is the Nordic market; a market which is in the beginning of its unified communication adoption.

To tackle this problem, interviews and surveys with manufacturers and distributors were conducted and have, together with literary studies of theories regarding channel management, core business, and high-tech marketing, formed the basis of this thesis. With these three areas of theory as bases, suitable qualities needed in a distributor have been identified. As a conclusion, a model, factoring in market adoption rate of unified communications and size of the targeted business segment, for determining what's needed in distributor when entering specific markets, has been devised.

Lastly, through the model, it is concluded that the most suitable partners for becoming competitive in the unified communications market are system integrators, for medium-to-large companies, and service providers, when targeting small-to-medium sized companies.

Table of Content

1. Introduction	1
1.1 Background	1
1.2 Problem Area	2
1.3 Purpose	2
1.4 Delimitations	2
1.4.1 Theoretical delimitations	3
1.4.2 Empirical delimitations	3
2. Methodology	4
2.1 Knowledge	4
2.2 Research Approach	4
2.2.1 Analysis Direction	4
2.2.2 Representation Direction	5
2.2.3 Research Outline	5
2.3 Data Collection Method	6
2.3.1 Data Types	6
2.3.2 Data Collection	6
2.3.3 Sample Selection	7
2.4 Reliability and Validity	7
3. Theoretical Framework	9
3.1 Business Core Theory	9
3.1.1 Core competence as a concept	9
3.1.2 Adjacencies from the Core	10
3.1.3 Assessing distance from the Core	11
3.2 High-tech Marketing Theory	12
3.2.1 High-tech characteristics	12
3.2.2 Product Adoption Curve	15
3.3 Distribution Channel Theory	16
3.3.1 Partnerships and the Supply Chain	17
3.3.1.1 Company-Specific Capabilities in Distribution	17
3.3.1.2 Building a Channel Structure	18
3.3.2 Reasons for Success	20
3.3.3 Channel conflicts	21
3.3.4 Channel Management in the High-Tech Industry	22
4. Empirical Study	25
4.1 Manufacturers	25
4.1.1 Microsoft	25
4.1.2 Nortel	26
4.1.3 Siemens	26
4.1.4 Manufacturer feedback	27

4.2 Distributors	28
4.2.1 WM-data (LogicaCMG)	28
4.2.2 Telenor	28
4.2.3 Telindus	28
4.2.4 Distributor Feedback	29
4.3 Unified Communications Adoption	31
5. Analysis	34
5.1 Market characteristics	34
5.1.1 Supply Chain in the Unified Communications Market.	34
5.2 Market changes	35
5.2.1 Distributors Core Business	35
5.2.2 Product Adoption Curve - Compilation of assessments	37
6. Conclusions	38
6.1 Distributor-specific Qualities	38
6.1.1 Direct Qualities	38
6.1.2 Indirect qualities	39
6.2 High-Tech Characteristics	40
6.3 Channel Coordination	43
6.4 Model for determining Quality worth	43
6.5 Recommendation	46
7. Suggestions for Further Research	47
8. References	48
8.1 Literature	48
8.2 Web-based information	50
Appendix A – Distributor Interviews	51
Appendix B – Manufacturer Survey	56
Questionnaire	56
Summary of answers	57
Appendix C – Manufacturer Interviews	60

1. Introduction

The introduction chapter aims to brief the reader of the problem that this master thesis intends to solve. This is done by a small background to the problem, followed by a description of the problem area. Furthermore, the purpose of this master thesis is concretized and finally the theoretical and empirical delimitations are explained.

1.1 Background

"A marketing or distribution channel is comprised of a set of interdependent institutions and agencies involved with the task of moving anything of value from its point of conception, extraction, or production to points of consumption." – (Stern & El-Ansary, 1982)

As companies globalize and try to become more efficient, the need for communication within the company and the need for company employees to be able to communicate at all times increases. This has led to many employees struggling with a vast array of different communication methods, such as e-mail, mobile phone, voice mail, text messaging etc (Evans, 2004). This is where unified communications solutions come in. Unified communications solutions unite and simplify the company's communication, so that its employees can save time and effort. For example, if a company invests in a state-of-the-art video conferencing system, they can save a lot of money by cutting down on traveling expenses as there is less incentive to have employees from different branches meet face to face. (Evans, 2004)

This is of course not the only way that companies can benefit from unified communications. Studies show that fewer than 25% of business calls reach their intended party (Gately, 1999, p.22). This means that 75% of the time spent trying to initiate contact within the company itself is wasted and unified communications can rectify this by providing a way to know the intended party's availability, and presence, before making a call. Unified communications solutions are, as shown by these two examples, a way for employees to become more productive by spending more time on value-adding work. (Evans, 2004)

As unified communications solutions is a relatively new concept it has not yet been fully accepted by enterprises. Many managers and business decision makers are still waiting to invest heavily in expensive systems before they see clear benefits displayed in end-user cases (InStat, 2007). Market research firms, such as Gartner, InStat and IDC, predict that the unified communications market will grow quite rapidly over the next few years, as more and more business leaders and IT-managers decide to invest in these solutions.

Manufacturers that have entered this new market are now facing challenges as their existing traditional supply chains might become obsolete. Lovell et al (2005) states:

"Supply chain management is now recognized as a major contributor to competitive advantage and to cost efficiency in major businesses. In the current environment these targets are becoming more difficult to achieve as the level of competition increases and product variety proliferates. Increasingly, an important factor in the quest for supply chain excellence is the quality of the supply chain design and selection; no longer can products be allowed to flow along the wrong channel."

This quote concretizes the obstacle that unified communications manufacturers now face; *how to reach their customers the best way possible?* Therefore, the need for a well-functioning distribution channel network is obvious. Companies use, among other strategies, horizontal partnerships, which is strategic alliances with other companies in the same level of the value chain, and vertical partnerships with companies located at other levels in the value chain, for example suppliers or other distribution channel members (Mohr et al, 1982). Vertical partnerships is the main focus of this master thesis, which will conduct an in-depth study of how distribution channel partnerships are and should be formed in the unified communications market to overcome the obstacles that actors in this market now face.

1.2 Problem Area

Many of today's unified communications manufacturers have a background in hardware centric PBX (Private Branch eXchange) solutions. As unified communications result in an integration of both hardware and software products, companies such as Ericsson, Nortel, Cisco and others must now turn their focus away from their traditional hardware view into a more software oriented business approach.

As customers' attitudes and beliefs changes, new demands on the corporation's distribution systems and new qualities are needed in value-added resellers. Current partner programs and lists are no longer fully applicable on this new market, and a need for new partnerships, to reach the market best way possible, might arise. This master thesis will focus on identifying what qualities distribution partners need to possess in order for the partnership to become a success.

1.3 Purpose

The purpose of this master thesis is to investigate distribution channel relationships between manufacturers and value-added resellers and to identify what qualities are most desirable in a distributor, from the manufacturer's point of view.

1.4 Delimitations

Unified communications is a very wide concept and no clear distinction has been made of what exactly should be incorporated in the term unified communications solutions. Many market analysts have different definitions of what unified communications is; some may incorporate most mobility solutions, while some feel that many mobility solutions should not be included under the term unified communications. For the duration of this study we will use the definition that we put forth in the beginning of chapter 4, *Empirical Study*.

1.4.1 Theoretical delimitations

Today, few private consumers have the need for unified communications and therefore our approach will be purely directed at distribution channels who through consultancy, implementation, support and/or management services supply businesses and large enterprises with unified communications solutions. As such, this master thesis focuses on distribution channels in the high-tech market and our theoretical delimitations are therefore theories regarding distribution channel, high-tech marketing, and business core.

1.4.2 Empirical delimitations

Understanding distribution channel relationships is a very broad task and as such this master thesis focuses on the unified communications sector only. Furthermore, the study is limited to the top companies in this sector and as such smaller actors will not be included. As a final, geographical, delimitation we have chosen the Nordic market as a base for our empirical chapter, analysis, and conclusions.

2. Methodology

In the first section of this chapter, general research approaches that need to be considered while conducting a research project along with our chosen research approach is discussed. The next section presents data collection methods and research method. The final section discusses reliability, validity and criticism of the sources.

2.1 Knowledge

There are basically two different approaches on what knowledge is and how one should perceive the reality, the *positivistic* and the *hermeneutic* which are each others opposites.

The positivistic view states that the reality is *objective* and can be *measured* thus making science and scientific theories possible to verify by empirical data. If the theories and the results retrieved from the empirical data agree; the theories are considered to be correct. In the positivistic view, everything that cannot be measured or verified by empirical methods is not to be considered as science (Eriksson and Wiedersheim-Paul, 2002). Because of this, the need for high validity on the data as well as the need for the research to remain objective and uninfluenced by feeling or values is emphasized in the positivism.

The hermeneutic view on the other hand states that the reality is *subjective* and is created by interaction between, and acts made by, people, and thus creating the need to be *interpreted*. It puts the meaning of actions and events in relation to which context they occur in. Therefore, in the hermeneutic view, judgment, interpretations and values cannot be excluded from the research (Eriksson and Wiedersheim-Paul, 2002).

Depending on which theory of knowledge, positivistic or hermeneutic, is chosen, the relationship between theory and empery differs. When choosing a positivistic view, a *deductive* research approach is often appropriate whilst, if a hermeneutic view is chosen, it is more appropriate with an *inductive* approach.

In the deductive approach, a theory is formulated based on facts. Data and empirical information is then collected to verify the theory's and the facts' validity. In the inductive approach however, the theory is generated from the empery, this flow is described in Figure 1.

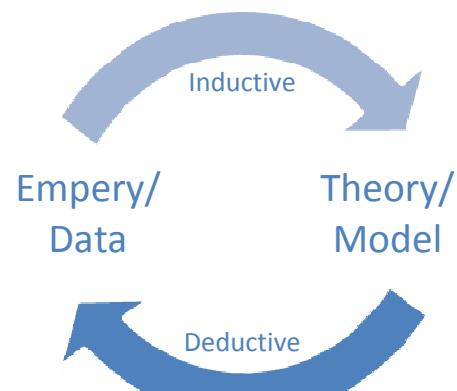


Figure 1, Hallin, 2007

2.2 Research Approach

The research approach can be divided into two main dimensions: Analysis Direction and Representation Direction.

2.2.1 Analysis Direction

Two scopes are possible when choosing a research approach, either you can choose to make an in-depth analysis, e.g. a *case study* on a single or a few cases, or you can choose to do a wider study, e.g. a *cross*

section study, where multiple cases are analyzed and compared with each other. As this master thesis is partly written on commission by Company X, a case study approach has been chosen and thus motivating the natural choice of an in-depth study of the company. However, to fully answer the purpose of this master thesis, a part of the study will be to map a cross section of the main actors' channel strategies in the unified communications market for comparison with each other. For this, a cross section study is the most appropriate (Lekvall and Wahlbin, 2001).

2.2.2 Representation Direction

When gathering data for research, different methods for presentation and analyzing are best applicable for different research methods. These methods can be divided into two main categories, *quantitative* and *qualitative*. In the first category, the collected material can be presented in numbers and by some mathematic-statistic calculations, further analyzed. The latter category includes research activity that collects data which is unable to obtain its meaning by being quantified into numbers. After choosing which approach to use for collecting data, it is necessary to decide which sort of data, *primary* or *secondary*, should be applied to which parts of the research. Often a mix of the types is used, where, for example, secondary data is used to get an overview of what information is missing, and thus what data needs to be collected through primary research (Lekvall and Wahlbin, 2001). More on this can be found in the chapter 2.3 "Data Collection Method".

2.2.3 Research Outline

In order to fully answer the purpose of this master thesis, we will combine theory with empirical material obtained by a case study at Company X. The starting point will be to *deductively* derive models, theories and conceptions from literature and previous analysis report in relevant areas, also, a shorter market analysis and a survey for a general market overview in the unified communications area will be conducted.

We divided our research into four phases, illustrated in Figure 2. The first phase, the *pre-study*, includes method discussions, literature study, project planning and some shorter interviews with managers and employees at Company X. When some insight in the market, and Company X, has been obtained we will start an *external analysis*. This is made parallel with the pre-study, with the purpose to identify, through previously made market analyses from independent research and advisory firms, major actors in the unified communications market. Once identified, a survey will be sent out to those actors for categorization, and will, supplemented by official information, help simplify further analysis of their channel strategies.

The third phase will be an *internal analysis* where a more thorough study on Company X's current and present channel strategies will be conducted and compared to leading channel strategy theories. In the *analysis* phase, we will compare the results derived from earlier phases to concurrent theory in the fields of distribution channel theory, high-tech marketing theory and to some extent business core theory. As a final step in our research we will attempt to create a suitable model for what qualities future distribution partners should possess.

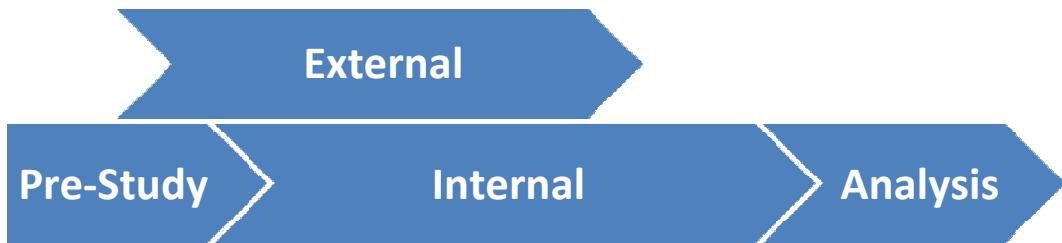


Figure 2, Sjöberg & Wicén, 2007

2.3 Data Collection Method

For the purpose of clarity, we have divided this section into three sub-categories. First, what types of data used will be discussed. Secondly, a description of data collection methods used during this study is presented. Lastly, the sample selection for this master thesis is introduced.

2.3.1 Data Types

For a market researcher there are two types of information available: primary and secondary data. Primary data refers to information gathered for the market researcher's specific purpose. How this collection is performed is discussed under the next section "Data Collection". Secondary data, on the other hand, is data that already exists somewhere and has been collected for some other purpose.

A research should always start with searching for secondary data. Secondary data helps to identify and better define the problem, develop an approach to the problem, and interpret primary data more insightfully (Burns & Bush, 2001).

However, there are some problems with secondary data. The main problem is that it is collected for a different purpose and as such it might not, and often doesn't, completely overlap with the researcher's question. There is, usually, also little information regarding the collection and analysis of such data.

The analysis in this master thesis will, mainly, be based on previous research and theory in the field of distribution channel strategy, channel management strategy and marketing strategy. This secondary data will also be used in order to create a survey for collecting primary data.

2.3.2 Data Collection

"There are three principal means of acquiring knowledge: observation of nature, reflection, and experimentation. Observation collects facts; reflection combines them; experimentation verifies the result of that combination." – Denis Diderot, 1713-1784

Much has happened since Diderot lived in late 18th century France, but his words about acquiring knowledge still holds true. This section will discuss observation and the collection of data. The collection of data consists of two basic methods: asking questions and observing. Asking questions is usually done

either through surveys or interviews (Burns & Bush, 2001). Surveys are usually conducted via telephone, mail (e-mail as well ever since the Internet was born) or in a group of participants.

Questionnaires are essential research instruments whilst conducting surveys. Two types of questionnaires can be used:

- **The structured one**, consisting of questions with multiple-choice answers.
- **The unstructured one**, consisting of questions where the respondents answer in their own words.

This master thesis will be using both personal interviews and a survey when collecting primary data. Our interviews will be conducted in person with parts of our sample selection. Our survey will consist of a questionnaire with both structured and unstructured questions which will be administered via e-mail to parts of our sample selection.

2.3.3 Sample Selection

Market research can either have a quantitative or a qualitative approach. One can either study the whole population or part of it. Studying the whole population is of course the best approach, but it is also the most time consuming and in most cases it's close to impossible.

When determining the sample selection, the primary objective is to identify the target group. In this master thesis, our target group consists of companies involved in the unified communications market, specifically manufacturers, distributors and customers. After establishing the target group, one must choose what sampling technique to use. There are two different techniques:

- **Probability sampling**, meaning every member of the target group has the same chance of being in the sample.
- **Non-probability sampling**, meaning the sample is chosen from the target group based on factors such as time constraints and convenience.

This master thesis uses a qualitative approach and therefore the non-probability sampling method is preferred. The reason is simply that statistical accuracy rates lower than quality in a qualitative research, and as such the sample selection has been limited to a few leading companies; a handful of service providers, system integrators and traditional telecom distributors.

2.4 Reliability and Validity

"In research, the term reliability means "repeatability" or "consistency". A measure is considered reliable if it would give us the same result over and over again (assuming that what we are measuring isn't changing)." – William Trochim, 2006

Research is the key to learning, but for research results to converge into knowledge and facts there is a need for validity and reliability. Validity is a measurement used to determine if a survey or any kind of measurement really measures what it is intended to measure. For example, when creating a

questionnaire, the questions need to be formulated so that the response obtained is the one asked for. The problem with validity is that it is very hard to determine whether or not the result is able to answer the phenomena that the researched aimed to explain.

Reliability is closely related to validity. For a result to have high reliability, you need to be able to, by repeated measurements, reproduce the same results. For example, when creating a questionnaire, the questions need to be formulated in a way, leaving nothing to the imagination of the participants. Every participant must interpret the queries in the questionnaire the same way. To be able to draw general conclusions from a result, a high ratio between surveys sent out and surveys answered is needed. Furthermore, if the fall out in a survey is too high, then no general conclusions can or should be drawn from the result without discussing the impact of the fall out.

In complex environments such as the marketing of high-tech products, there's always the problem that individual's and companies' beliefs aren't constant, they are instead frequently changing over time. It is very unlikely that you receive the same answer if you ask a company in the unified communications sector a question today, and then the same question one year from now. This poses a problem with reliability, especially when using a qualitative approach. If the result of a survey or a questionnaire doesn't produce the same result if reapplied to the same selection, then high reliability is impossible to achieve. This is something that the reader needs to be aware of when studying this thesis. Since this thesis is based on facts, surveys and interviews collected today, the results might not be applicable to the same extent in the future.

Furthermore, there is always the problem with objectivity. Any research in the field of economics will almost always be affected by the personal beliefs and knowledge possessed by the researcher and as such one can never claim a result to be the "absolute truth". The quote: "Give ten different researchers the task to investigate one and the same non-trivial research question and you will obtain ten different findings" sums up the fact that there is no data that is completely free from interpretations (Alvesson et al, 1994, p. 8).

3. Theoretical Framework

In order to form a solid foundation for this master thesis empirical analysis a framework of relevant theories are presented and discussed in this chapter. First, an overview of the main focus area of this study is briefly presented. The theoretical framework is thereafter presented and divided into the literary study's three main categories: Business Core theory, High-tech Marketing theory and Distribution Channel Theory.

The main focus of this master thesis is, as stated in the research purpose, to create a channel strategy model for marketing high-tech solutions. Our three main categories of research will together form the foundation for which the analysis and, perhaps more important, the conclusion will rest upon.

Understanding how business core theory and high-tech marketing work together leads to a better understanding of how to, together with distribution channel theory, choose amongst the countless distribution options available to companies in the high-tech market.

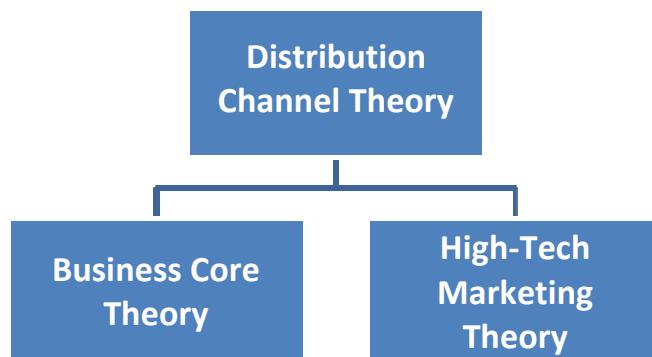


Figure 3, Sjöberg & Wicén, 2007

3.1 Business Core Theory

"An area of specialized expertise that is the result of harmonizing complex streams of technology and work activity". – Chris Zook, 2004

3.1.1 Core competence as a concept

Hamel and Prahalad (1990), defined core competence as something that a company can do well and that meets the following three conditions:

1. A core competence must make a significant contribution to the perceived benefits of the end product or service
2. Can be leveraged widely into many products, services and markets
3. Difficult for competitors to imitate or replicate

A core competency can take various forms; from technical or subject matter know-how, to a reliable process to close relationships with customers and suppliers (Mascarenhas et al. 1998). It may also include product development or culture such as employee dedication. Hamel and Prahalad mentioned Honda's expertise in engines as an example of core competency. Honda was able to exploit their core competency to develop a wide range of quality product from automobiles to lawn movers. For a clearer view of what core competency really is, Hamel and Prahalad also took Volvo into context. It has been claimed that Volvo's core competency is safety; this however is perhaps the *end result* of their competency in terms of customer benefit. Their core competency might be more about their ability to source and design high protection components, or to research and respond to market demands concerning safety.

3.1.2 Adjacencies from the Core

Throughout this master thesis, two of the six foremost adjacencies, identified by Zook (2004), that radiates from the core, see Figure 4, will be discussed and referred to.

Product adjacencies: One of the most commonly pursued and highest-potential adjacencies is: *Selling a new product or new services to core customers.* IBM's Global Services, for hardware customers, is one of many successful growth strategies triggered by a product adjacency. (Zook 2004)

Channel adjacencies: The move into a new distribution channel can produce an important source of value for a company. Rapidly increased market awareness, increase sales and return on investment are some of the benefits often related to successful new channel entries, but, it can also resolve in catastrophic failure if the adjacency is not connected to the core (Zook 2004).

In 1993, Dell made an attempt to enter the retail business, a move that stopped the company's trajectory in its tracks and that same year, Dell's earnings had plummeted from a \$102 million profit to a loss of \$36 million, despite of a 44 percent growth. Dell's management decided, in June 1994, to exit the indirect retail channel at any cost, this was made swiftly and allowed Dell to resume its previous trajectory, and, in 2000, the company had attained earnings of \$2.3 billions and a 355 percent ROI (Zook 2004).

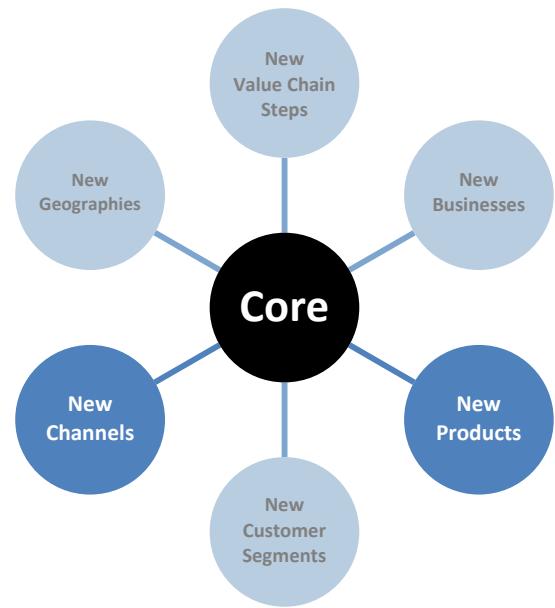


Figure 4, Zook, 2004

3.1.3 Assessing distance from the Core

A strong link between the core and new adjacencies is a common success factor in adjacency moves. One framework applicable to a concretization of this linkage is to think in the terms of the *economic distance* between the core business and potential adjacency. The economic linkage is directly correlated with the direct link between the existing business and a new adjacency, therefore, the distance between a new adjacency to the core business can be measured by shared economics (Zook 2004).

Generally, there are five dimensions to be determined whether the growth investment, correlated to an adjacency move, has characteristics identical, or only somewhat similar to, the core business.

- *Customers*: Are they the same as, or different from, those currently served?
- *Competitors*: Are they the same as, or different from, those currently encountered?
- *Cost structures*: Is the cost structure, infrastructure, the same or different?
- *Distribution channels*: Are these the same or different?
- *Singular capability*: If there is a *singular capability* (brand assets, technologies etc.), that gives the core business its uniqueness, then is this relevant in the new opportunity?

Identical characteristics results in a zero distance to the core whilst the somewhat similarity are to be divided into steps, with increasing distance, from the core business. Zook (2004) acknowledged that an increasing distance has proved to result in a pattern of declining odds of success, illustrated in Figure 5.

The trap of false enthusiasm

Zook (2004) describes the zone from about one and a half to three and a half steps away from the core as “the trap of false enthusiasm”, a dangerous zone to invest in. Often adjacency moves are made, thinking that it’s more related to the core than it actually is. The emerging pros are strong enough to create enthusiasm and excitement resulting in often clouded vision of the existing and emerging cons, a misperception that can sometimes be most costly.

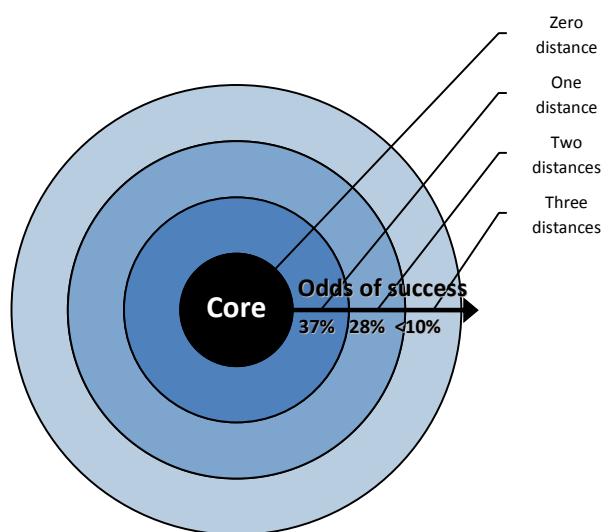


Figure 5, Success Declines with Distance from the Core, Zook, 2004

3.2 High-tech Marketing Theory

"High-tech industries are engaged in the design, development, and introduction of new products and/or innovative manufacturing processes through the systematic application of scientific and technical knowledge" – J. Mohr et al, 2005

High-tech industries are often volatile and, as such, they require a different approach to marketing. In this chapter, theories regarding the characteristics of high-tech industries, what problems they're facing and what different kinds of customer base they need to focus on during their products' lifetimes will be explained in detail.

3.2.1 High-tech characteristics

The problems with marketing of these new and innovative products are, according to Mohr et al (2005), threefold. These are market uncertainty, technological uncertainty and competitive volatility. How these three overlap and affect each other can be viewed in Figure 6.

Market uncertainty

When introducing new and innovative products and processes to the market there will always be uncertainties of how the market will react. The market uncertainty stems from, according to Mohr et al (2005), five sources:

- Current consumer needs
- Future consumer needs
- Industry standards
- Rate of innovation spread
- Potential market size

First, there are consumer worries and uncertainties of what needs the new technology will address. It may be very clear to the developer exactly what this new technology can do, but unless the consumer understands and wants it, the product itself will not sell. To address this problem one needs to inform the customer of what the product or innovation can do for them.

Secondly, there's always uncertainty of what the market will want and need in the future. Customers today might want something that the customers of tomorrow will find obsolete or unnecessary.

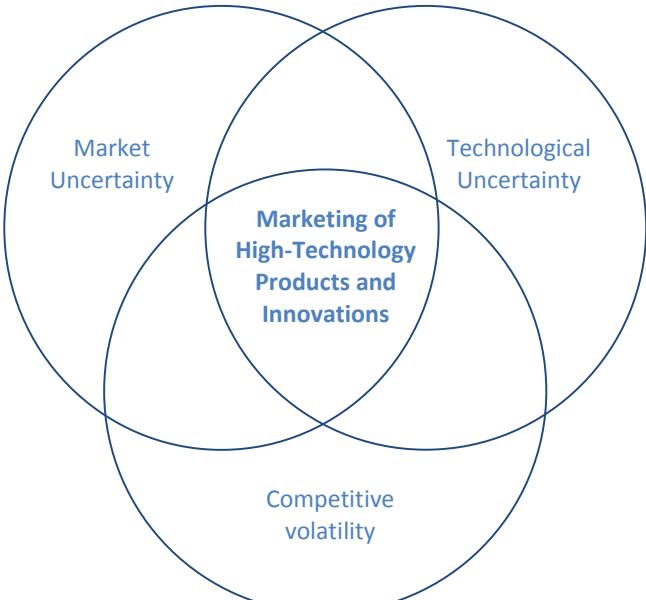


Figure 6, Mohr, 2005

Thirdly, there's the problem with industry standards. If an industry standard hasn't been set, customers are often reluctant to invest in this new technology, in fear of it becoming obsolete. The emergence of a universally accepted standard takes a lot of time. This is represented, in management literature, as the "dominant design" concept. According to Utterback (1994):

"...a dominant design is the one that wins the allegiance of the market place, the one that competitors and innovators should adhere to if they hope to command significant market share"

In the last few decades, there have been a lot of examples of this fact. One example was the VHS versus Betamax format war in the 1980s. In the beginning sales were hampered as consumers waited to invest until a standard had been set, but as acceptance grew in the market the VHS sales started to skyrocket while the Betamax technology faded out (Cusumano et al, 1992).

Furthermore, there's uncertainty of how fast the technology will spread. Some technologies are accepted by the market as soon as they are introduced, while others need time to mature first. One example being the color TV, which, ten years after first being introduced to the market, had still only been purchased by 3 percent of U.S. households (Mohr et al, 2005).

Lastly, there's ambiguity of how large the potential market will be. Market forecasts are crucial for companies due to the need for, amongst other things, product and cash flow planning (Mohr et al, 2005). This is of course related to how fast the spread of the technology is. High-tech products are characterized by a short product life cycle curve (Ryans and Shanklin, 1984; Rosenau, 1988), which adds to the uncertainty of the potential time a market will be available.

Technological Uncertainty

Uncertainties also arise about the technology itself. In this case Mohr et al formulates five sources for this uncertainty:

- Product function
- Delivery timetable
- Quality of service
- Unforeseen side-effects
- Threat of new technology

The first factor that gives rise to technological uncertainty is the issue of whether or not the product actually fulfills its promises. There have been many problems in the past and the present where early adopters of new products have faced problems with the functionality, especially in the computer industry where glitches and errors seem to have become part of every day life.

The second source, whether the timetable will be met, also cause uncertainty about a product. Product development in high-tech industries often take longer than expected, which in turn cause customers

grievances as they are holding off on investments in anticipation of this new technology (Mohr et al, 2005).

Thirdly, there's the issue of the vendor's capability of providing high-quality service. Consumers face the question of how reliable the supplier of the new technology is. For example, if the product malfunctions, will the supplier provide fast and effective service in fixing the problem? New high-tech companies struggle more with this issue, mostly due to the fact that more mature companies have dealt with the problem before and many have built up a well-functioning service unit to tackle the problem of customer satisfaction. There's also the fact that if a company has had a high customer satisfaction on past products, it is more likely that customers assume that so will be the case with this new technology.

Fourthly, there may be unforeseen consequences related to the new product. For example, many companies invested in information technologies expecting a more productive workplace. However, recent studies show that 85% of employees use the Internet for an average of 3.7 hours per week for personal purposes (Mohr et al, 2005). Of course, the gain in productivity from having information technologies far outweighs the loss in productivity from personal use of such technology, but this is still a factor which causes uncertainty, for some technologies more than others.

The fifth and last source of uncertainty that manufacturers face is the threat of a new technology entering the market, thus making their technology obsolete. As a new technology is introduced, its performance improves slowly, but as the technology is accepted by the market more and more R&D efforts are spent on improving the technology which leads to a rapid development. This can be seen in, for example, semiconductors where performance doubles every eighteen months (Mohr et al, 2005). A new technology that replaces the current one often starts at a lower performance than the current technology, but as more and more realize that the new technology will eventually replace the old one, heavy R&D efforts make the new technology quickly pass the current, which can be viewed in Figure 7.

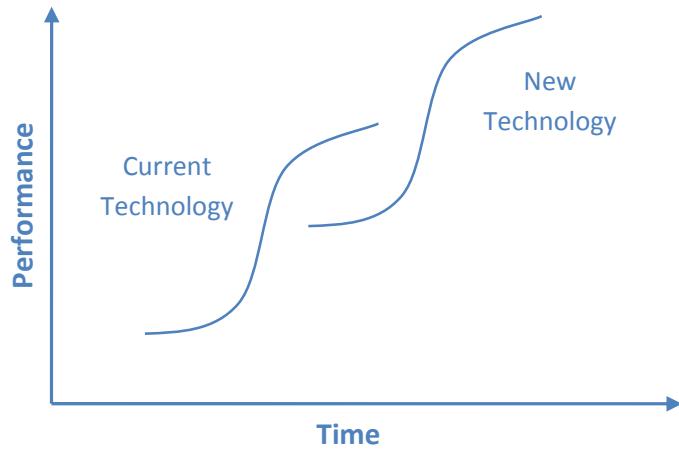


Figure 7, Mohr et al, 2005

Competitive Volatility

The third and last characteristic that affects high-tech markets is competitive volatility, which refers to changes in one's competition: which companies are one's competitors, their product offerings, the tools they use to compete et cetera (Mohr et al 2005). This volatility can be categorized into three distinct sources:

- Future Competition

- Competitive tactics
- Competition's products

Companies have trouble understanding high-tech markets due to the uncertainty over which actors will be ones competitors in the future. The majority of the time new technologies are commercialized; they are so by companies outside the threatened industry. (Mohr et al, 2005)

Furthermore, new competitors often bring new tactics to the market and in many cases they end up rewriting the rules of the game so to speak. This became very apparent to retail booksellers, airlines and travel agents when "dot.com"-players started to emerge (Mohr et al, 2005). These new players revolutionized the way that the retail business worked and many regular retail sellers had problems keeping up with this new way of conducting business.

Lastly, there's uncertainty regarding the competitions products, often expressing itself as new ways to satisfy consumer needs and problems. This connects back to the threat of a new technology under technological uncertainty.

3.2.2 Product Adoption Curve

Different consumers adopt new innovations differently. Some consumers are very open to change and often try new product, while others only change to a new technology once the old one has become completely obsolete. The adoption of a new technology can be viewed as a curve (Figure 8a) and consumers can be categorized into five distinct areas of this curve according to their rate of adoption: *Innovators, Early Adopters, Early Majority, Late Majority and Laggards*.

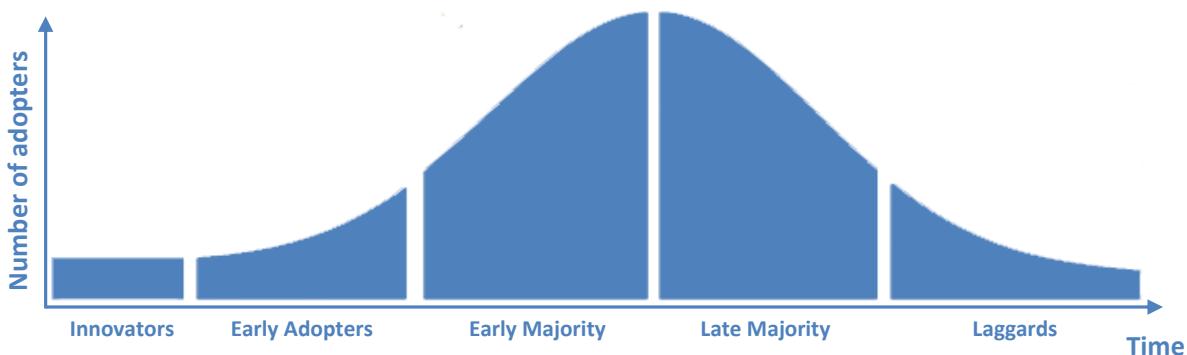


Figure 8a, Mohr et al, 2005

Innovators

These consumers are at the forefront and believe that the technology is bound to improve our lives. They love to adopt new technologies and they are the first to try something products that are brand-new (Mohr, 2005).

Early Adopters

These end-user customers help publicize the new technology and as they are many more than the innovators they bring real money to the table.

Early Majority

The early majority are the customers that invest in the technology for the sake of productivity enhancements. The bulk of all technology infrastructure purchases are made by these customers. (Mohr, 2005)

Late Majority

The late majority are pessimistic about the new products ability to produce any real value for their company or for themselves. It will often take a very long time and many success stories until these consumers decide to invest.

Laggards

The laggards are the ever-present critics, they rarely invest in new products or technologies unless there are no other alternatives and the cost justification for an investment is absolutely solid. The goal for high-tech marketing is not to sell to them, but to sell around them. (Moore, 1991)

Product adoption curve – Different point-of-view

Instead of setting “Number of adopters” on the y-axle, one can set it to “Adopters per total number of potential customers” and thus the curve will be altered, which can be viewed in Figure 8b. This gives a better overview of how the adoption of a technology reaches its full acceptance.

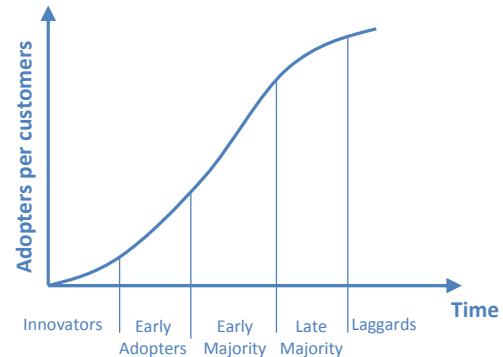


Figure 8b, Adaption of Mohr et al,
Sjöberg & Wicén, 2008

3.3 Distribution Channel Theory

“Over the last decade or so, there has emerged a view that recognizes that the route to competitive advantage lies through the supply chain. The idea being that the unique sets of relations that typify the web of inter-connections between organizations in a network enable the achievement of competitive advantage through lower costs and/or greater differentiation.” – Christopher and Towill, 1992

It has been suggested that “supply chains compete, not companies” (Christopher and Towill, 1992), and even though this is a very simplistic way of viewing the complex machinery of today’s marketplace, one can’t help but realizing that there lies some truth in Christopher’s statement. Surely there are many factors that contribute to a company’s success, but without a well functioning distribution channel structure, it is very difficult to stay competitive. In this chapter, theories regarding supply chain management and structuring will be covered, but also what makes partnerships between companies in the supply chain flourish.

3.3.1 Partnerships and the Supply Chain

"The distribution channel is like an hourglass with manufacturers at the top, customers at the bottom and distributors at the neck." – Fisher, 1997

There are many different kinds of partnerships available to companies at all levels in the supply chain. These partnerships can be vertical, with companies at other levels in the supply chain, or horizontal, with companies at the same level of the supply chain. As this master thesis main focus is partnerships in the distribution channel, vertical partnerships will be explained further. Figure 9 shows possible alliance partners for the focal firm in the supply chain.

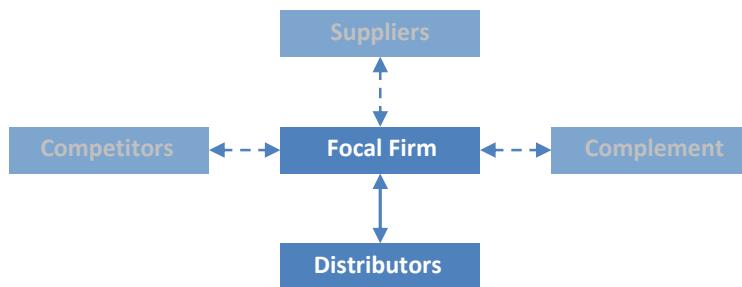


Figure 9, Adaptation of Mohr et al,
Sjöberg & Wicén, 2008

3.3.1.1 Company-Specific Capabilities in Distribution

Relationships with distribution channel members are often used to gain efficiency and effectiveness in accessing downstream markets. Collaborative relationships with distributors provide competitive advantages through more efficient implementation of marketing programs, but also as a conduit for market information back to the manufacturer (Mohr et al, 2005).

Coughlan et al (2006) mentions six major forms of company-specific capabilities that accrue in the distribution arena. These are:

1. Idiosyncratic Knowledge
2. Relationships
3. Brand equity that derives from the channel partner's activities
4. Customized Physical Facilities
5. Dedicated Capacity
6. Site specificity

Some of these (4-6) aren't applicable to this master thesis' area of focus; further explanation, as to why, can be found in the Analysis chapter. The first three are, however, highly important to this subject and needs to be further explained.

Idiosyncratic Knowledge

By idiosyncratic knowledge, Coughlan et al refers to not merely knowledge of the manufacturer, its products, its operating methods and the applications its customers make of these products, it's the *part* of this knowledge that cannot be *readily redeployed to another manufacturer*. Knowledge about a company that makes standard products, use generic operating procedures and have customers who use their products as they would any other company's product, is indeed an asset, but it isn't an idiosyncratic asset (Coughlan et al, 2006). It is instead a general-purpose asset, meaning that the same knowledge could be used for another principal without loss of productive value. For knowledge about a company to be idiosyncratic, the company itself must make unusual products, have its own unique methods of operations or have unique customers. Only then will the distributor or any downstream channel member be able to gain idiosyncratic insight.

Relationships

Relationships are connections between the distributor's personnel and persons within the manufacturer's organization or the manufacturer's customers. These connections imply that the partnership will be able to act with agility and swiftness. Relationships help get things done quickly and correctly and to make oneself understood swiftly (Coughlan et al, 2006).

Brand equity that derives from the channel partner's activities

Coughlan et al says that brand equity is a critical idiosyncratic investment in the manufacturer's brand, from the distributor, and that two cases of this can be distinguished. In the first case, the manufacturer's brand name will enjoy substantial brand equity with consumers independent of the distributor's actions. In this case, the manufacturer can use this brand equity as a source of referent power over the distributor. The second case, the opposite, is where the distributor's actions have a critical impact on the manufacturer's brand equity. This is important when a brand-specific support service is required to make sure the branded product is properly installed and maintained, in order to keep the customer satisfied, subsequently leading to a positive word-of-mouth and brand equity growth.

3.3.1.2 Building a Channel Structure

A good distribution channel meets customer needs for channel functions in the most effective and efficient way possible (Mohr et al, 2005). A manufacturer can choose multiple ways of reaching the customer with its product, as illustrated by Figure 10.

When developing a distribution channel structure there are a few issues that managers need to consider. Mohr et al have defined six steps one must take to make a channel structure as competitive as possible.

First, one must consider the channels constraints, objectives and its external environment. Fisher (1997) also states that before devising a supply chain strategy, one must consider the nature of the demand

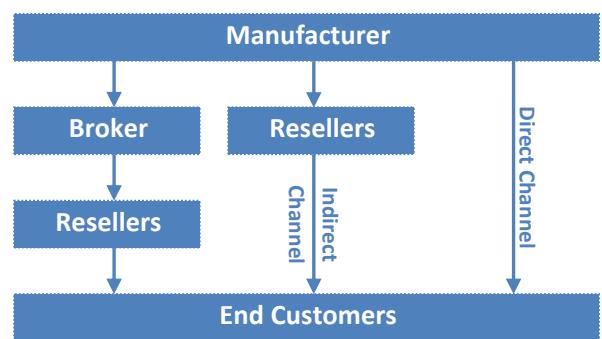


Figure 10, Mohr et al, 2005

that the market has for ones products. The concept that “one size does not fit all”, i.e. each product and market needs to be looked at differently, was first suggest by Fuller et al (1993). No matter how well a distribution system has been built; if it isn’t compatible with ones own products it will not be as successful as it could be. In the spirit of this, one must also consider competitors’ channel structures and their product characteristics to be able to make ones own structure competitive.

The next step is to choose channel structure, indirect or direct. Direct channels are channels where the manufacturer sells directly to the customers through an in-house sales office, while indirect channels use intermediaries to reach the customers. A manufacturer can also choose to use some sort of combination of them to get their products to the end-customers, a phenomenon known as a hybrid channel or dual channel.

The third step, given that an indirect channel has been chosen, is to choose what type of intermediaries to use. Each industry are prone do different sort of intermediaries that are determined, usually, by how complex their products are. According to Friedman and Furey (1999), the more complex a product is, the bigger the need for a “high touch”-channel. High touch channels are channels which can provide quality service and support, should the end-customer need it. Of course, this “high touch” does come at a price, which is shown in *the channel touch continuum* (Figure 11). Low touch channels cost less and provide less interaction with the customer, which leads to a limited ability to provide services such as configuration, design, training, support, and guidance (Friedman et al, 1999). As high-tech industries usually deal with complex products, they are more likely to use high touch channels, examples value-added resellers (VARs), who purchase products from one or several high-tech companies, add value through their own expertise and finally sell market-specific, bundled solutions to their core markets.

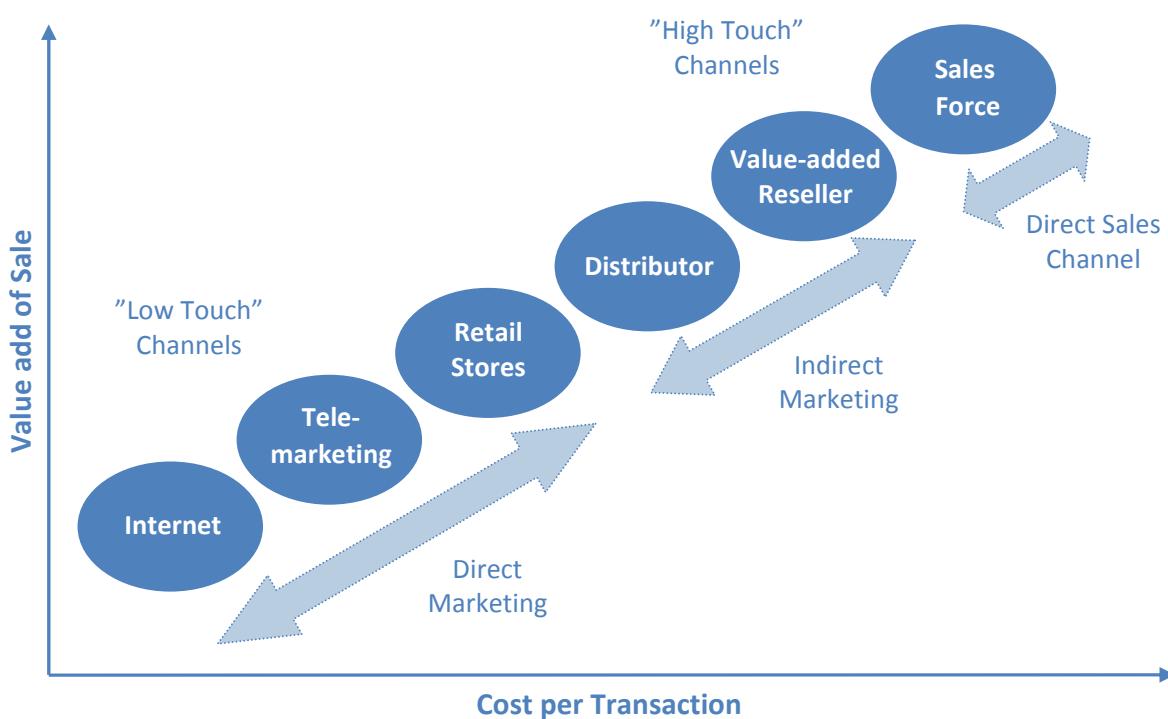


Figure 11, Friedman et al, 1999

Step four regards determining what penetration and coverage the channel structure should aim to achieve and thereafter choosing how many intermediaries to use. To achieve the highest market coverage and penetration, many manufacturers use as many intermediaries as possible. This may however cause problems if a company has many dealers in the same area, who are competing for the same customer base. Intradepart competition can cause problems because, in situations as this, dealers rely on price competition to attract customers. This can be damaging for the manufacturer's reputation and perceived quality, but the dealers themselves usually end up making lower margins and, as a result, having a hard time supporting a high level of service and training, which high-tech products often requires.

The last two steps in the procedure are continuous tasks: managing the channels and evaluating performance. Channel management includes activities such as: Selection and recruitment of new channel intermediaries; Control and coordination; and Consideration of legal issues. This area will be covered more thoroughly in the next chapter: "Reasons for Success". A company must also evaluate the performance of channels and channel members to ensure that they are successful, and if they aren't, the company might need to cancel further partnering with that particular intermediary.

There are, of course, also risks involved with partnerships. Although most risks arise when entering a horizontal partnership, i.e. a partnership with companies on the same level in the supply chain, there are some even in vertical partnerships. The main concern for high-tech companies is the potential loss of trade secrets. An alliance between a manufacturer and a distributor often requires the manufacturer to share and educate the distributor in their technology and their process. Another factor that business leaders have to weigh in when making a decision is if the gain from the alliance justifies the cost of it.

3.3.2 Reasons for Success

Mohr et al defines seven factors, not all of which are applicable to manufacturer-distributor relationships to the fullest, which are important for a partnership to be successful: *Interdependence, Appropriate Governance Structure, Commitment, Trust, Communication, Compatible Corporate Cultures, and Integrative Conflict Resolution and Negotiation Techniques*.

Interdependence

For a partnership to be successful, both parties must be dependent on the other to provide some important resource or function that is difficult to obtain elsewhere. By ensuring this, both parties are equally motivated to ensure the success of the alliance. Interdependence between manufacturer and distributor is a very important factor, because if one company isn't dependent on the other, it might not invest as much resources into the partnership or alternatively even cancel the partnership as a whole. The reasons for a manufacturer to depend on a distributor can be read earlier in this section, whilst the reason for the distributor is often increased sales or raising the market's perception of ones company.

Appropriate Governance Structure

The way that the managing of the interactions between the two companies in the partnership is structured is also a key to success. Governance structures can either be unilateral, one-way decision making, or bilateral, both companies have equal amount of influence. In the case of distribution channel

partnership, this factor is not as important as it is in horizontal partnerships. This is mainly due to the fact that the interaction between manufacturer and distributor is fairly scarce.

Commitment

Plans to continue the partnership in the future is an important factor for success. Partners who are committed to the alliance are also less likely to take advantage of the other partner or to make decisions that might sabotage the future viability of the relationship. If one company feels that the other lacks commitment they may be reluctant to continue the alliance. Coughlan et al (2006) supports this with the statement that commitment is nil if it isn't mutual. In the dyadic relationship between manufacturer and distributor future commitment is, of course, very important.

Trust

If a company cannot trust the other partner to not take advantage of vulnerabilities and act dishonestly, a partnership cannot survive. Distrust will eventually lead to the alliance collapsing unless trust can be regained.

Communication

In any partnership, communication is absolutely critical to success. Effective communication and sharing of information needs to be somewhat structured but there's also room for informal and ad hoc interactions (Mohr et al, 2005). The level of quality communication might also serve to increase the trust between two parties.

Compatible Corporate Cultures

In vertical partnerships with almost no synergistic skills there is no need for each company's corporate cultures to be compatible. This factor is most prominent in horizontal partnerships with joint ventures.

Integrative Conflict Resolution and Negotiation Techniques

If conflicts should arise, as often is the case when each partner's success is dependent on the other's decisions and actions, there is a clear need for conflict resolution and negotiation techniques. Conflicts are more prone to arise in horizontal partnerships, but even in vertical partnerships it is important to be prepared, should a conflict arise. More on this topic can be found in the following sub-section "Channel Conflicts".

3.3.3 Channel conflicts

When having established main goals for the distribution it is imperative that all channel partners are adopting and pursues these goals (Coughlan et al., 2006). However, this is not always easy to achieve. A highly discussed topic in channel management/strategy theory is *channel conflicts*.

When distributing through multiple channels, these often perform the same functions in the supply chain, overlapping respective domain and competing for the same business and sales. This creates a natural by-product addressed as channel conflict. Thus, when choosing a channel strategy, it is important to avoid most of the channel conflicts that may occur (Webb and Hogan, 2002, Coughlan et al., 2006).

Coughlan et al describes alternatives to minimize conflict:

- Segment the products (Different products can be sold through different channels)

- Establish exclusive or limited territories for the channels. However, this does not mean that parties should be put in a “silo” and become isolated, but more that they need to be given territories with flexible boundaries depending on the nature of their customers and businesses (Friedman, 2002).
- Set up different promotions for different resellers, rotating so they all have advantages at different times
- Establish reseller levels, rewarding higher margins and support for higher authorization (the resellers choose whether they can be competitive or not)
- Set up a process to determine if a customer has worked with a reseller prior to taking the business direct (so you don’t steal business they cultivated).

Once a conflict, decreasing the channel performance, has arisen it is imperative that clear boundaries and guidelines for managing these conflicts are established, preferably by contracts. These contracts can be based upon who owns which customer, and to some extent, even originates from which market (Webb and Hogan, 2002).

Some conflicts, however, are unavoidable and some even desirable; distributors may compete, to a certain extent, given that the competition does not affect the channel performance (Webb and Hogan, 2002, Coughlan et al., 2006, Friedman, 2002). A channel can be too peaceful; passivity often passes for harmony, concealing true issues and sometimes even cracks in the market coverage. In contrast, the parties in a contentious channel raise their differences and struggle through them for a better understanding and higher performance, and thus, channel conflicts are often a necessary stage on the way to adapting to changes in the market environment. Also, some conflicts are indications that you have wide supply and market coverage (Webb and Hogan, 2002; Friedman, 2002).

Also, Friedman (2002) states that in today’s complex multi-channel environment, efforts to eliminate channel conflicts often fail and therefore, these should not be in centre of attention when entering and managing partnerships. Instead companies should focus on channel *cooperation*. This cooperation should bring different channels to work together as a coordinated face to the customers and an indirect result of this is increased margins (Friedman, 2002).

3.3.4 Channel Management in the High-Tech Industry

The high-tech industry, with its volatility, poses new challenges to channel management. As discussed earlier in the “High-Tech Marketing Theory”-section, high-tech industries are faced with three uncertainties: Market, Technology and Competitive. Sahadev et al (2004) mentions five high-tech characteristics that affect channel management and can be divided amongst the three uncertainties:

- Shorter product life cycle (Market uncertainty)
- Greater risk of discontinuous change in product technology (Technology/Competitive uncertainty)
- Lack of well-established industry standards (Market uncertainty)

- Uncertainty about product functionality (Technology uncertainty)
- Indispensability of supporting infrastructure (Market/Competitive uncertainty)

Shorter product life cycle

"As the product passes through each stage in the life cycle, it is being adopted by different consumer segments. Each segment in the curve consists of groups of customers whose responses to marketing stimuli are different." – Sahadev et al (2004)

As high-tech products pass through each stages of the life-cycle rapidly, the customer profile need to be adjusted accordingly, as well as the channel structure. As described earlier, innovators and early adopters are those that believe that the technology is bound to change our lives for the better and therefore a marketing approach that focuses on the innovative technical features is to be preferred (Sahadev et al, 2004).

As the product moves to the growth stage and the majority starts to adopt the new technology, marketing and channel structure needs to put less emphasis on the innovative features and instead focus on economical benefits. As the technology matures, the performance to price ratio will show a declining trend (Smith et al, 1999), and thus leading to a need to, on a regular basis, deal with issues related to sharing of marketing costs in channel partnerships. High levels of cooperation and trust between the manufacturer and distributor are key factors when trying to achieve the required amount of agility and synchronization. The goal is to have the entire channel system act in unison like a single organization. (Sahadev et al, 2004).

Greater risk of discontinuous change in product technology

As high-tech product categories witness dynamic change in their product technologies, they also witness a shift in their consumption patterns, user profile, complementary products, and demand curve (Robertson, 1971). Shifts of this magnitude can have debilitating impacts on the channel structure and its constituents (Sahadev et al, 2004).

Channel members operating in a market with a particular set of variables that are predictable or even remain constant, tend to develop expertise in the form of, for example, consumption patterns, purchase decision-making process, personal contacts or specialized selling skills. Such expertise is a vital asset for distributors to offer the manufacturers. Discontinuous change in product technology can render such expertise virtually obsolete (Eisenhardt, 1989; Von Hippel, 1986). Discontinuous change can also cause the manufacturer to lose the confidence of the market, and in such extreme situations the only response is an adoption of survival tactics, such as aggressive pricing (Sahadev et al, 2004).

Furthermore, Achrol et al, (1983) say that macro environmental changes often cannot be countered proactively and one must instead use adaptive strategies like withdrawal. Glazer and Weiss (1993) argue that in highly turbulent markets, such as the high-tech industry, there's a need for fast, "real-time"

decision making because formal planning slows down the process. These measures are only possible with high levels of cooperation and trust between channel members.

Lack of well-established industry standards

Well-established industrial standards help reduce buyer uncertainty and thereby help manufacturers and distributors to convince customers (Moriarty and Kosnik, 1989). In the absence of well-established standards, customers tend to spend more time and effort in the search process (Cyert and March, 1963). Consequently, the marketing task will involve greater customer education and distributors' ability to learn and gather knowledge is crucial for the success of high-tech products (Ryans and Shanklin, 1984).

Uncertainty about product functionality

McKenna (1991) says that to command the customers when they are facing uncertainties, like product functionality, switching cost with the replacement of products, installation and maintenance costs, one must focus away from selling products and instead turn towards creating relationships. This is only possible if the manufacturer–distributor relationship work like a single organization, sacrificing short-term losses for long-term gains. Trust and cooperation in the partnership are key factors to achieve success.

Indispensability of supporting infrastructure

As high-tech products often are incapable of existing in isolation, the ability to create an associated infrastructure that can keep pace with the rapid and dynamic changes is a very important quality that helps determine the success of the launch of a new product (Sahadev et al, 2004). Many consider (McInnis and Heslop, 1990; Moriarty and Kosnik, 1989) the existence of a well-established service network to be a vital component in the marketing of high-tech products. McIntyre (1998), Olleros (1986) and Venkatesh and Vitalari (1989) describes associated infrastructure significantly affecting the customer adoption of the high-tech product in the “market adoption process”. If a product is launched prematurely, without a fully functioning service network, the risk of the market rejecting it is high.

In addition, developing supporting infrastructure may be uneven among different market segments. Being close to the market, the distributors play a key role in assessing the accessibility and availability of the support infrastructure (Sahadev et al, 2004). If the manufacturer depends on the distributor to supply such supporting infrastructure, characteristics such as expertise, willingness to employ and regularly train highly experienced servicemen should carry a lot of weight when assessing a partnership.

4. Empirical Study

There are many different definitions of unified communications out there, and therefore this chapter starts by defining our view on unified communications during this master thesis project. Subsequently, our empirical study contains a market research of leading companies in the unified communications market and, thereafter, an explorative view into a few distributor companies that represent different ways for the manufacturer to reach companies of all sizes.

Unified communications: Many companies and research and advisory firms are using the term unified communications to describe different things. Some use unified communications to describe the integration of a desktop launch point for communications, whilst others, define unified communications more as a communications-enabled business process.

To enable the most complete understanding of the value of unified communications, we have chosen a wider definition encompassing both of these aspects. Different forms of communication have historically been developed, marketed, distributed and sold as individual applications. Unified communications is the direct result of convergence in communication networks and applications and mobility. This includes the integration of voice (fixed and mobile), e-mail, Instant Messaging, desktop and advanced business applications, voicemail, fax and video conferencing into a single environment.

Also, we define unified communications products (equipment, applications and services), as those that enhance individual, teamwork and organizational productivity by enabling and facilitating greater control, easier administration/management of the system, integration and use of multiple enterprise communication methods.

For the end-user, unified communications is an experience that simplifies work and increases productivity by reducing delay when communicating with others.

4.1 Manufacturers

4.1.1 Microsoft

Our interview with Microsoft was conducted in January 2008 with Micael Berger, Product & Solutions Marketing Manager. (For more information concerning the interview, see Appendix C – Manufacturer Interviews.)

Microsoft Corporation, founded in 1975, is a world leading American multinational computer technology corporation with 79,000 employees in 102 countries and global annual revenue of \$51.12 billion as of 2007; note, however, that we have not been able to find out how large their enterprise sector is. Microsoft has strong expertise in developing, manufacturing, licensing and support for software products where functionality and stability is imperative, much as the unified communications environment. (Microsoft.com, 2007)

Microsoft is in the forefront of the unified communications market, worldwide, with strong marketing efforts and a large partner list, consisting of both manufacturer alliances and distributor partnerships (Microsoft.com, 2007).

4.1.2 Nortel

The survey sent out to Nortel was answered in November 2007. (For more information concerning the interview, see Appendix B – Manufacturer survey)

Nortel Networks Corporation started out as a spin-off named Northern Electric and Manufacturing Company Ltd. in 1895 from Bell Telephone Company in Canada, in order to manufacture, amongst other things, telephones for businesses. In 1976, the company disclosed its intentions to focus on digital technology and changed its name to Northern Telecom Ltd. Their current name, Nortel Networks Corporation was taken after its acquisition of Bay networks in 1998 (Nortel.com, 2007). Their revenue, from Enterprise Solutions, was \$1,187 million for the first half of 2007 (Nortel fiscal year 2007 quarterly report). Nortel are today mainly active in North America (about 50% of revenue), but also in Europe (25% of revenue), and Asia-Pacific and Latin America. (Survey, Appendix A)

Nortel is today one of the leading companies in the unified communications market and have a very close partnership with Microsoft. Almost all major manufacturers involved in the unified communications sector are partners with Microsoft in order to secure interoperability between their products and Microsoft's flagship the Office Communication Server (OCS). Nortel is, however, the only company who has planned to jointly develop products for large companies, the mobile market and wire line phone carriers. Their alliance is also about cross-licensing their products and having aligned offerings and sales persons from both companies in front of customers.

4.1.3 Siemens

The survey sent out to Siemens was answered in November 2007. (For more information concerning the survey, see Appendix B – Manufacturer survey)

Siemens is Europe's largest engineering conglomerate and involved in six major business divisions: Automation & Control, Power, Transportation, Medical, Information & Communication, and Lighting. Siemens Enterprise Communication's revenue was in 2006 around \$3.5 billion. They have over 17,000 employees spread over 80 countries, and, being a German based company, they are today mainly active in Europe, but planning to expand and gain market shares in North as well as South America by 2010. (Siemens.com, 2007)

As Siemens Enterprise Communications is part of a big conglomerate, their views on the unified communications market and how to tackle it might differ from the views of a company such as Nortel, which is one of the reason they were chosen as a subject for this survey. Another reason is that we wanted to compare the perspective of a European telecom company (Siemens), with that of an American (Nortel).

4.1.4 Manufacturer feedback

This section compares the information we gained from our interviews and surveys with Microsoft, Nortel and Siemens.

Distribution

When distributing unified communications solutions today, system integrators are strong distributors, common for all manufacturers. Depending on the nature of their business, other distributors are important. Traditional PBX resellers and system integrators are important for manufacturers with hardware as a base of their business, traditional PBX resellers and system integrators are important, whilst software centric manufacturers prioritize service providers, in order to reach the hosted services market, in combination with license resellers for their software solutions. Through our interviews we identified some highly ranked qualities, independent of manufacturer, a distributor should have: Expertise, customer satisfaction, geographic presence and that the market's perception of the company suits the product. Expertise and customer satisfaction is usually controlled by certification and reference cases with follow-ups.

Manufacturers emphasize the weight of qualities such as strong geographic presence together with high levels of expertise, when entering emerging markets. Software centric manufacturers do, as they see a strong and increasing market in communication over IP-networks, also look for service providers with the ability to extend the coverage of the emerging country's infrastructure.

Manufacturers are constantly updating and revising their partner programs and, as of today, many manufacturers see their partner programs as being compatible and "up-to-date" with the unified communications market, regardless of their nature of business. However, there are some who are struggling with the management of their old distribution channels, which aren't fully capable of providing the expertise and Quality of Service that is demanded by the customers. Gartner shares this view, which is further explained in their reports: *Discovering the Value of unified communications 2007, Unified Communications Product Overview 2007*.

Customer Relations

Many manufacturers have, today, chosen similar channels to distribute their unified communications solutions, covering all customers segments from small businesses to large enterprises, with a few exceptions, who are also offering some of their solutions through partnerships with joint sales forces e.g. Microsoft – Nortel. The idea being that with cooperation come interoperability, which is very important for the customers. Interoperability is especially apparent in some cases where some parts of the solution have been implemented in their IT-structure and if interoperability is an issue it may result in a double investment.

Future Projections

A general view on the future unified communications market is strong growth, new market possibilities and a change in the supply chain. In the distribution and supply chain, manufacturers foresee system integrators having a large impact on their business. They have the capability to provide the expertise and quality of service that the customers are demanding more and more in their communications solutions. Service providers will also have a distinct role as a distributor on the unified communications market,

with hosted services and package bundling for small-to-medium business. Most of the manufacturers are addressing every business segment as potential growth sectors but see great potential in small and medium businesses, where most companies not yet have who still haven't implemented unified communications solutions but are beginning to realize some of the strong advantages it can provide and are reaching a higher level of market awareness.

4.2 Distributors

4.2.1 WM-data (LogicaCMG)

Our interview with WM-Data was conducted in December 2007 with Tobias Östensson, Head of Consulting Services in the field of unified communications and Collaboration. (For more information concerning the interview, see Appendix A - Distributor interviews)

WM-data was founded in Sweden in 1969 and is today one of Sweden's leading IT-companies. In 2006, LogicaCMG, a large multinational company employing over 40 000 people, acquired WM-data, which has retained its name but is now a subsidiary of LogicaCMG. They have 9 000 employees in the Nordic area, and provide business consulting, system integration and IT, business process outsourcing solutions, and hosted services. As such their role on the unified communications market is as a System integrator, but also to some extent as a service provider.

WM-data is on the forefront, on the Nordic market, of providing unified communications for their customers, and customers are evaluated and handled based on what market segment, Financial, Industrial, Public and Healthcare, Retail and logistics, Utilities, Telecom, and Defense, they're part of.

4.2.2 Telenor

Our interview with Telenor was conducted in December 2007 with Katrin Calderón, Business Development/New. (For more information concerning the interview, see Appendix A – Distributor interviews.)

Telenor started off in 1855 as a government operated provider of telegraph services, named Telegrafverket. In the second half of the 1990s, Telenor became involved in mobile operations in a number of countries where emerging markets were, and still are, in focus. In the year 2000, the company was partially privatized and listed on Oslo Stock Exchange and NASDAQ. Telenor employs over 33 000 people worldwide (Telenor.com, 2007).

Telenor is organized into three business areas; Mobile operations, covering 12 countries, and Fixed-line and Broadcast services covering the Nordic region (Telenor.com, 2007). As a strong player for telecommunication in the Nordic market with high market shares, we find Telenor to have strong potential in the Nordic unified communications market and thus motivating the weight of their answers.

4.2.3 Telindus

Our interview with Telindus was conducted in January 2008 with Fredrik Hammargren, Account Manager. (For more information concerning the interview, see Appendix A - Distributor interviews)

Telindus, subsidiary of Belgacom ICT, is a group of companies offering ICT Solutions and Services on an international level. They are present in 14 countries, stretching from Western Europe to China, with a

total of 2,700 employees. In Sweden, Telindus is a medium sized company with about 80 employees and offices in Stockholm and Gothenburg. Their role is, for the most part, as a pure system integrator. However, they have a small service provider function, offering hosted services, but not at the same scale as WM-data. Telindus are amongst the major competitors on the Swedish market with several successful integrations of complete unified communications solutions for businesses.

4.2.4 Distributor Feedback

This section compares the information we gained from our interviews with Telenor, Telindus and WM-data. This section will also be divided into three subsections: Customer Relations, Partnership Relations, and Future Projections.

In this section we will divide business customers into segments according to their size (number of employees). This segmentation will be according to the European Union standards that the European Commission has set, which are:

- Small – Companies with fewer than 50 employees.
- Medium – Companies with fewer than 250 employees.
- Large – Companies with more than 250 employees.

The main focus of our interviews was to get a grasp of the differences in ways of conducting business and views on the unified communications area between a typical large system integrator (WM-data), a smaller system integrator (Telindus) and a typical Telecom Service Provider (Telenor).

Customer Relations

Distributors can offer customers a wide array of services, as displayed in Figure 12, spanning from single consultancies to operating a businesses' entire communication solutions.

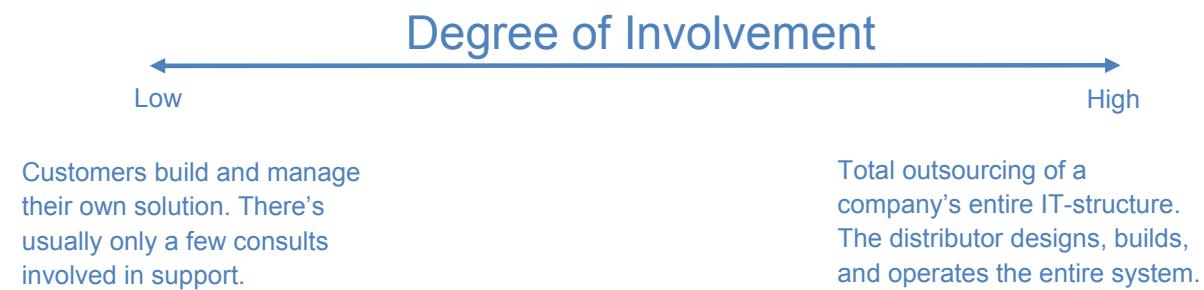


Figure 12, Sjöberg & Wicén, 2008

Depending on the size of a distributor, they can offer different services depending on their degree of involvement. A large system integrator, like WM-data for example, has the manpower to offer services that span all the way from a low involvement to maintaining a customers entire communication structure. Small system integrators, however, usually do not have the luxury of dividing their resources and offer a vast array of services. Instead they focus more heavily on expertise and providing their customers with the best solution. They offer services such as pre-studies, architecture consulting, installation and service. In other words, their degree of involvement tends to be high in many instances.

Service providers, lacking the know-how to compete with system integrators when it comes to designing and building a company's complete IT-structure, will instead focus on providing small and medium sized businesses with prepackaged solutions and hosted services.

The reason for Service Providers targeting small and medium businesses is because smaller companies often cannot afford a company-specific solution. A bundled solution may not be as good as a tailored solution, but it's good enough for its price. As they provide packaged solutions, service providers often use user-profiling as a way to determine what the customers need. There may be one package for executives, who are in need of functions such as video conferencing and push mail, whilst another package, designed for office workers, may contain only the basic functions such as unified messaging and instant messaging.

System integrators are for the same reason targeting medium and large companies, who need to be able to trust their communication solution to work without failure, and can afford to pay the price for having this luxury. Through our interviews we have also found that many companies feel that unified communications will grow in all sectors, regardless of which business segment your core customers are; a view that is supported by analytical firms, such as Gartner, InStat and Canalys.

Through our studies, we have noticed that, in the past, customers have, usually, been targeted according to their needs; a customer has a need and a manufacturer provides a solution to that need. However, in the unified communications market it has been somewhat reversed; the manufacturers have developed products satisfying needs that the customers didn't realize they had. Distributors are now facing issues like: how to convince customers that they needed this and how to measure and show the advantages unified communications brings. System integrators are now noticing trends among customers that they are starting to put new demands in their communication solutions. There's a growing demand for more converged solutions, between e.g. an employee's mobile phone and his or her laptop. Many customers are also beginning to realize that they could use and even need many of the functions that a well functioning unified communications solution can offer. System integrators, such as WM-data and Telindus, have noticed that, e.g. the demand for video-conferencing has grown.

Partnership Relations

From a manufacturer's point-of-view, it is very interesting to know what distributors can provide in partnerships and how these distributors work. System integrators, no matter the size, feel that their expertise in the field of designing and implementing solutions is one of their strongest attributes. A general guideline is that the larger the distributor, the more they can add to a partnership. For example, a large system integrator can work as an intermediary and introduce manufacturers to large enterprises, to which the system integrators have a previous relation with, and thus opening up that market for the manufacturer. They can also work as pure resellers of products, something that smaller integrators are unable to, due to the lack of warehouses. Smaller system integrators usually work as a second tier partner, who has an intermediary between themselves and the manufacturer, whose main purpose is to provide product storage, thus resulting in easy and fast access to products.

Service providers, on the other hand, feel that their strength is to bundle solutions and sell them to the customers in a sort of "over the counter" fashion. Because of this pre-packaged deal, they will act as the

manufacturer's way out to the mass of small companies. In most economies, smaller enterprises are much greater in number than larger enterprises and, in the European Union, small and medium sized companies constitutes approximately 99% of all companies and employ around 65 million people (European Commission, 2007).

It is important to know whether or not a distributor will use several manufacturers when providing unified communications solutions or if they will be dependent on one manufacturer. For example, if a distributor use a company like Microsoft for their unified messaging and instant messaging application for one customer, will they use Microsoft when providing the same functions to another customer? Through our interviews we have gained the insight that this varies depending on the size and the function of the distributor. As a Service Provider provides packaged solutions, they are more inclined to use the same manufacturers. Their solutions will often be a mix of products from different manufacturers, but each separate function in the solution will be provided by the same manufacturer every time. This is not to say that they won't change manufacturers if something doesn't work, but as they do not have the resources to learn about every manufacturer's products, they will most likely use one or just a few manufacturers.

System integrators on the other hand have a stronger connection to the customer and, as such, they are determined to provide a mix of products that best suits the needs of each specific customer. To be able to do this they try to remain manufacturer independent, and gain expertise in many different products. This means that for one customer the software may be provided by Microsoft, the servers from HP and the telephony integration from Avaya, while for another customer the servers and the software might come from Cisco and the telephony from Ericsson.

Future Projections

A distributor's views on the future and where they see themselves in a few years are important from a manufacturer's perspective when entering into partnerships. If both parties don't share the same views, conflicts might arise along the way. Through our interviews we have learned that many share the view that unified communications will become more and more software oriented and the distinct line separating telecom and data will start to dissolve and two networks, data and telephony, will eventually converge into one.

As technologies develop, our interviewees feel that collaboration will play a larger part; more powerful applications will be weaved into the concept of unified communications and collaboration. This means that several employees will be able to work with the same application at the same time from different locations, for example simultaneously editing a text document.

4.3 Unified Communications Adoption

As unified communications is a wide concept covering all areas of enterprise communication, we have decided to categorize its different parts into four categories: Live Communication, Live Conferencing, Asynchronous Communication, and Convergence Points. Each part has its own adoption rate amongst customers and thus requires to be assessed separately. These assessments are based on interviews and

market research papers. To rate the adoption of each part we will use a 5-point grading scale: *Very Low*, *Low*, *Medium*, *High*, and *Very High*.

Live Communication

We define Live Communication as all, mobile and fixed, synchronous communication that takes place between two separate parties. This involves: *Video telephony*, *Instant messaging*, and *Voice communication*. According to our interviewees and studies, Live communication holds a vital role in any unified communications structure, but instant messaging and voice communication is, however, more important than video telephony. Many employees, between the ages of 20 to 30 years, have grown up using instant messaging, and they are therefore more susceptible to its entry into the workplace. Instant messaging is, mainly due to its simplicity and low cost, highly adopted in many business communication solutions. It is, however, lacking in adoption when it comes to mobile phone integration.

Voice communication has been the most important live channel for countless years and still continues to be one of the most used communication channels. Traditionally voice has been delivered through a PBX or IP-PBX solution, but, through recent rapid evolution, a wide range of software-based solutions are now entering the market (Gartner, 2007).

Video telephony has the capability of providing its users with a wide range of information, such as facial expressions and subtle body queues. According to our interviewees, video telephony has got a low, but growing, penetration in the workplace.

Total assessment of Live Communication adoption: High

Live Conferencing

Conferencing is an important part in any large company, but it is a wide concept. Companies have two general conferencing methods to choose from:

- Single channel conferencing, encompassing audio, web, or video conferencing
- Multiple channel conferencing, such as an audio and web only solution, or a converged solution of audio, web, and video.

Single channel conferencing is the method that has reached the highest market penetration this far and companies can obtain, for example, basic audio conferencing for small groups, usually up to six participants, as part of their IP-PBX (Gartner, 2007).

The main focus should, from a unified communications perspective, be converged solutions, where different single channels complement each other. The converged solutions have yet to be adopted by enterprises, but, as the technology develops further, we will most likely see an increase in this communication method within companies. Another factor pushing for converged solutions is environmental policies, since, instead of traveling to an off-site location to have a meeting, one can host a conference through the company's unified communications solutions.

Total assessment of Live Conferencing adoption: Medium

Asynchronous Communication

E-mail, voice mail and SMS are examples of asynchronous communication, which have been part of business communication for a long time. This is mainly true for e-mail and voice mail, but there's also been an incline in the use of SMS within enterprises, mainly due to its booming use in the private sector. However, SMS is still far behind e-mail and voice mail, when it comes to adoption in the business sector.

The most important part, from our perspective, is unified messaging, which provides users with consolidated access to messages. It brings all messages, independent of sources, into a common e-mail system and provides multiple access points, e.g. phone or graphical user interface. There are also other approaches to unified messaging, one being a “separate but synchronized” approach, and multiple forms will, according to Gartner (2007), continue to be adopted as a single approach does not meet all needs, for the time being. E-mail and unified messaging has been adopted in many unified communications solutions, while SMS and voice mail have yet to be fully integrated with other ways of messaging.

Total assessment of Asynchronous Communication adoption: High

Convergence Points

Convergence points are the most important parts of a unified communications solution; these are points where the users can access the different parts of communication at their disposal. This includes desktop communicator clients, Soft phones, SIP phone, wireless phones, mobile phones and other mobile devices. Through our interviews we have learned that customers are demanding higher seamlessness in their communication, in other words easier transaction between different endpoints. For example, if an employee is talking on the phone and needs to leave for a meeting, it should be easy to redirect that call to another device, in this case a mobile phone, to continue the conversation while on the move.

Part of the endpoints is also presence applications that help the employee keep track of who is available and who isn't, which in turn reflects back on the statistics we put fourth in the background, which stated that over 75% of business calls never reach their intended party. With presence applications, employees can find out if the intended receiver is available or not before making the call, and thus save time.

These products, which could be described as the heart and brain of a unified communications solutions, are lagging behind in their adoption rate because customers are still looking for end-user cases that shows that the benefit of having these functions outweigh the cost of implementing them (InStat, 2007).

Total assessment of Convergence Points adoption: Low

5. Analysis

There are many different factors involved when analyzing the supply chain in the unified communications market. We have chosen to divide our analysis in three main sections; Market Characteristics, covering the current characteristics of the unified communications market; Market Changes, covering how the market is changing and what manufacturers and distributors need to adjust to these changes; and Partnership Characteristics, which will cover how a well functioning partnership with distributors should look.

5.1 Market characteristics

This chapter contains an analysis of the supply chain and the high-tech characteristics that are applicable on the unified communications market.

5.1.1 Supply Chain in the Unified Communications Market.

Figure 13 is a simplification of the supply chain options available to a unified communications solution (UCS). We can see that value-added resellers can occupy different tiers in the supply chain. They can be part of tier 1, where they deal directly with the manufacturer and then supply the customers with the product, or tier 2, where they deal with the manufacturer through another member of the supply chain, a distributor or a broker. Some manufacturers (Microsoft, Cisco et cetera) use a hybrid channel structure, combining their own dedicated sales force (a direct channel structure), with distribution partners (an indirect channel), while others rely on their partners to distribute their products. However, in this analysis we will focus on the indirect channel structure.

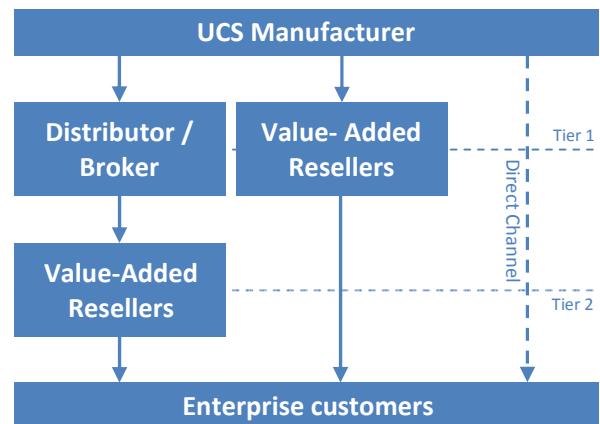


Figure 13, Adaptation of Mohr et al, Sjöberg & Wicén, 2008

Through our study we have identified two major types of companies who can take on the role as an indirect marketing channel for a unified communications solutions manufacturer: system integrators and service providers. The main difference between them, as described in the empirical study, is their degree of involvement with the customer. System integrators work closely with customers, developing their unified communications solution, while service providers provide bundled solutions. In other words, their degree of involvement is lower than that of a system integrator. By putting this into context with what was put fourth in the “Distribution Channel Theory” chapter, the cost per transaction for a system integrator will be higher than that of a service provider, due to the lower touch (See Figure 14).

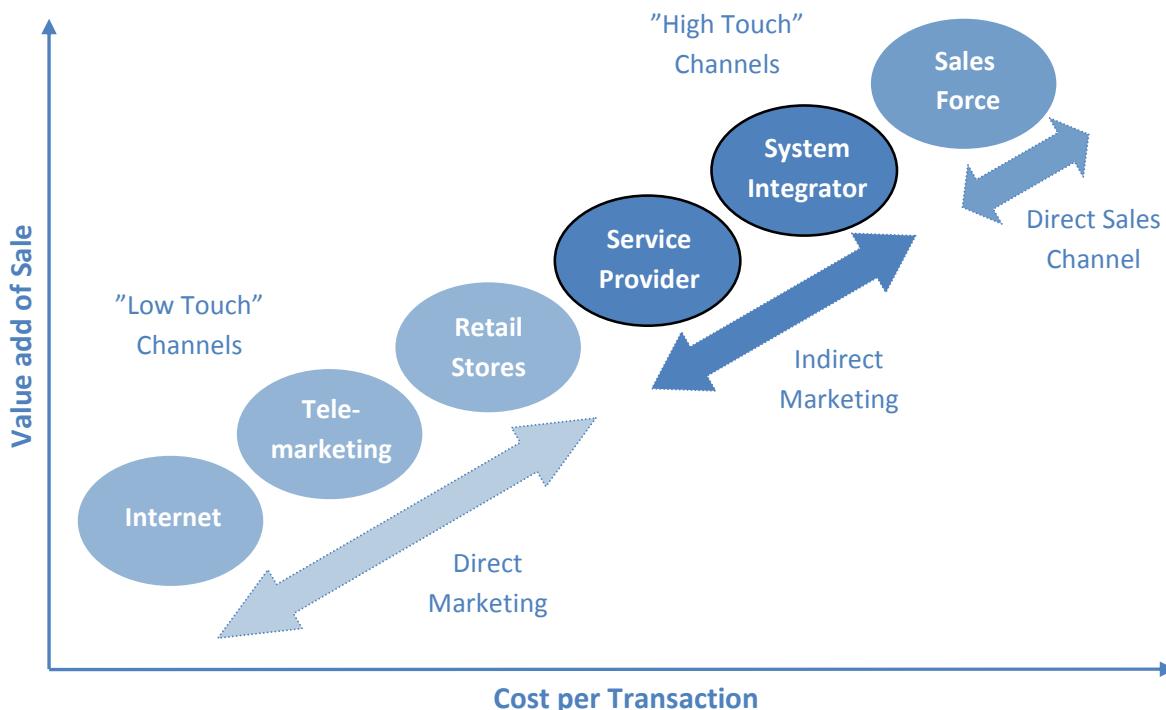


Figure 14, Adaptation of Friedman et al, Sjöberg & Wicén, 2008

The idea of using high-touch channels when marketing unified communications solutions is supported by Friedman and Furey (1999), who states that the more complex a product is, the bigger the need for a high-touch channel approach. Unified communications solutions is a highly complex product, especially when many solutions are mixes of different manufacturers' products, and requires channels that can provide support and a high quality of service.

When it comes to the risks involved in partnerships with distributors, the main issue, put fourth in our theory, is the potential loss of trade secrets that comes with sharing information and educating the distributors in the manufacturer's processes and technologies. According to the theory, this is more noticeable when it comes to partnerships between two manufacturers. The partnerships between manufacturers and distributors are not, according to our interviews and studies, as close as partnerships between two manufacturers, where joint development leads to higher insight into the other's organization.

5.2 Market changes

This chapter will present the unified communications market's momentum of change and, from theories presented in earlier chapters combined with empirical data, present factors that are affecting manufacturers and distributors in this change. Also, an analysis from a product adoption curve point-of-view will be conducted.

5.2.1 Distributors Core Business

Through a number of studies, reports, and interviews, it has come to our attention that the importance of distributor qualities, both from a manufacturer's point-of-view and market demands, are changing.

The unified communications market is demanding competence and expertise for the complete solution from one distributor, regardless of its business segment, and thus affecting other distributors', from a core perspective, way to work. As explained earlier, unified communications is an integration of telecom and software. Telecom distributors with core competence in architecture, installation, maintenance and support of hardware centric equipment are trying to gain competence in software centric solutions, whereas IT distributors, with core competence in software environments, are moving in the opposite direction by gaining competence in hardware and telecom.

This phenomenon is affecting distribution companies' core structure which, for some, results in an adjacency move. This identified move, defined in the "Business Core Theory" chapter as product adjacency move, (*selling a new product or new services to core customers*), needs to have a strong link between the core and itself. Determining the distance is done by assessing the five dimensions of the economic distance from the core, described in Business Core Theory chapter: *customers, competitors, cost structures, distribution channels and singular capability*.

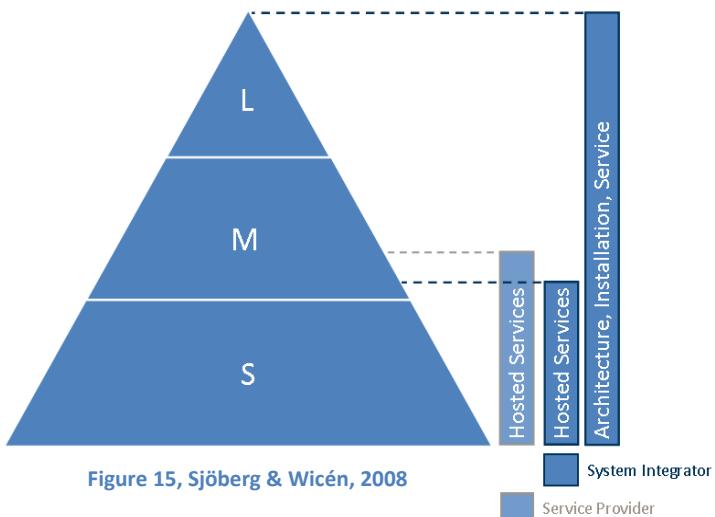
Through a number of reports and studies made by Gartner, Yankee Group and IDC we have derived that, when assessing *customers, cost structures, and distribution channels*, the economic distance is close to zero, independent of the manufacturer and its core business. However, when assessing the remaining two dimensions, we have identified some distance.

In *competitors* we have identified that, for distributors like system integrators, the competitor model is similar to what

has already been encountered in their core business. However, our interviews have shown that some system integrators plan on delivering hosted services solutions, a kind of *New Product adjacency move*, to small businesses. This results in a complex competitor situation, illustrated in Figure 15, where both system integrators and service providers are reaching out with hosted services to the same business segment, while still being partners. This situation decreases the weight of the *competitor distance* since each party is concerned with maintaining their partnership.

The distance of Singular capability is difficult to assess, regardless of which side of unified communications that is, or previously was, addressed as core. It will serve as an advantage while stretching out, as unified communications solutions are both requiring competence in telecom and software.

Through our studies we have identified, for a manufacturer, the *channel adjacency move* defined in the Business Core Theory chapter as a potential move. However, we have come to see that for a unified



communications market, such a move to a new, lower touch, channel is neither applicable nor appropriate in the *current* market situation; the reason being that customers, distributors, and manufacturers are expecting and currently encountering a high-touch channel approach, previously described in the “Market Characteristics” chapter. Thus, a move into a low-touch channel approach would result in great distance from the core in every dimension.

However, as the unified communications market changes and matures over time, this move can become more and more motivated, since the economical distance from the core is probable to decrease. Over time the extent of the core itself might increase as well, further motivating the move.

5.2.2 Product Adoption Curve - Compilation of assessments

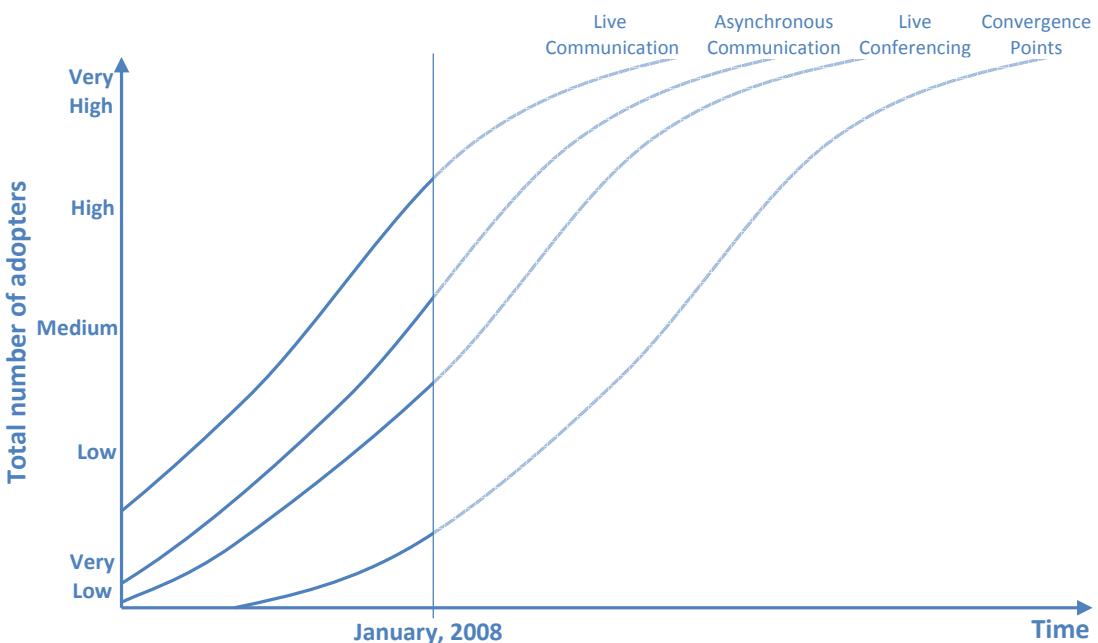


Figure 16, Market adoption curves UC, Sjöberg & Wicén, 2008

The rate of adoption of a new technology follows the product adoption curve put forth in the theory chapter. Figure 16 displays a compilation of four product adoption curves based on the assessments of the four distinct unified communications categories discussed in our empirical study. Through our above assessments, it is obvious that the adoption of Convergence points is far behind the adoption of the other parts of the unified communications package. We have, through our interviews, learned that business leaders need to be convinced on the positive influence it will have on their company. Speeding up the adoption of unified communications as a whole can be achieved by, for example, showcasing successful end-user cases according to InStat, 2007.

6. Conclusions

In this section we will continue our analysis by drawing conclusions based on the analysis and deductive reasoning.

6.1 Distributor-specific Qualities

We've divided the qualities a distributor can possess into two sub-groups: direct and indirect qualities. These qualities can affect either the manufacturer – distributor relationship (direct), or the distributor – customer relationship, and thus indirectly affect the manufacturer through customer satisfaction. Each quality will also be assessed from a market adoption perspective, i.e. how important the quality is in a market with high contra low unified communications adoption.

It is our belief that, in general, all qualities are tools to either make customers and potential future customers reflect positively back on the manufacturer, thus leading to increased brand equity, or to provide the manufacturer with market information and the ability to assert some power over the distributor (direct qualities). The customer must feel that the reason their communication solution is working well, isn't merely that the distributor made a great job supplying it, but also that the individual products are of high quality.

Furthermore, manufacturers can use direct-touch marketing to create a demand for unified communications solutions, hopefully moving the market, as a whole, into a state of pull instead of push.

The above explained relations are shown in Figure 17

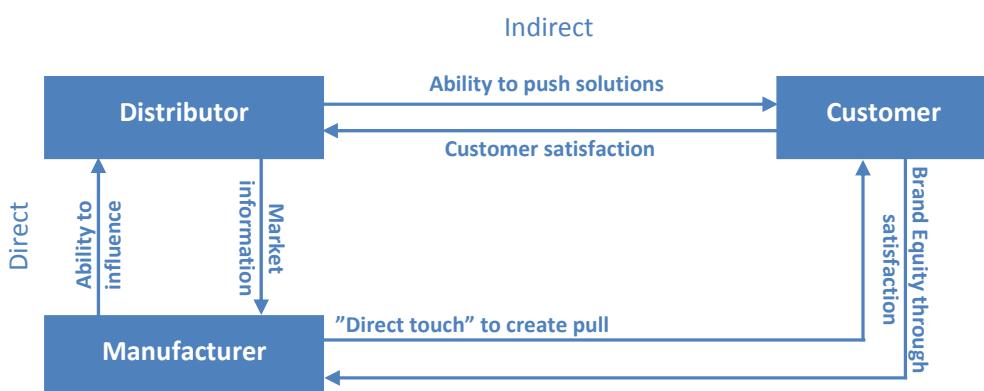


Figure 17, Effects of Qualities, Wicén & Sjöberg, 2008

6.1.1 Direct Qualities

Idiosyncratic knowledge

As discussed in the theory chapter, idiosyncratic knowledge is knowledge of the manufacturer gained by the distributor, which cannot be easily redeployed to another manufacturer. In the unified communications market, this can be specific knowledge of how to integrate or implement a manufacturer's products. Such knowledge is often gained by distributors through training and

information provided by the manufacturer, but also through practice. It is important for manufacturers to provide this information to their distributor for two reasons.

The first reason is that the more the distributor knows about your products, the better the final solutions will be, especially when it comes to multi-manufacturer solutions. The second reason is that knowledge is a valuable resource to have, and if the relationship were to end, the distributor would not be able to use that knowledge elsewhere, or at least not to the same extent as in the relationship. This will give the distributor a strong incentive to maintain the partnership, and thus providing the manufacturer with the ability to influence.

Relationships

In the theory chapter, relationships between the distributors personnel and either the manufacturer or the manufacturers customers can help quicken decision making and lead to fewer misunderstandings. Some industries are more reliant on relationships than other, due to specific needs that can benefit more from faster decision making, for example just-in-time supply arrangements. However, the unified communications market is not as dependent on a low response time when it comes to manufacturer – distributor relationships. Relationships can lead to other advantages for the unified communications market. It can help convey idiosyncratic knowledge, lead to fewer misunderstandings and also help to, through the distributor, spread a positive image of the manufacturer to its customers, and thus leading to an increased brand equity.

Customized Physical Facilities, Dedicated capacity and Site Specificity

These three qualities have little impact on manufacturer – distributor relationships, when it comes to the unified communications market. They concern the use and customization of warehousing and logistics to fit a specific manufacturer's needs and, if the partnership is dissolved, the distributor cannot easily redeploy these capabilities to another manufacturer. Another reason for these qualities not being applicable is the fact that we're looking into qualities suitable for last tier distributors, and their relations to customers.

6.1.2 Indirect qualities

Indirect qualities are qualities that a distributor has, which affect their relationship to their customers, and, according to the theory put fourth earlier, they lead to a positive word-of-mouth and brand equity growth for the manufacturer. Through our research and interviews, we have learned that examples of indirect qualities are:

- Flexibility
- Expertise and technical know-how
- Well-functioning support
- Geographic presence
- Strive for a high quality of service
- That the market's perception of the distributor, suits the product
- Ability to provide bundled solutions

6.2 High-Tech Characteristics

We have chosen to discuss and draw conclusions about the high-tech characteristics of the Unified Communications market from the three perspectives put fourth in our High-Tech Marketing Theory chapter: Market Uncertainty, Technological Uncertainty, and Competitive Volatility.

Market Uncertainty

As discussed in the theory chapter, Market Uncertainty stems from five sources: Current consumer needs, Future consumer needs, Industry standards, Rate of innovation spread, and Potential market size.

First of all, we have learned from our interviews and market analysts' report that customers aren't always aware of what unified communications can provide for them. Many may be content with their current communication solutions, while others are reluctant to invest heavily in a new system before seeing convincing end-user studies that pin-point its effects and benefits.

Secondly, when it comes to future consumer needs, companies will always need to become more effective, but they do not always know what needs ought to be satisfied in order to increase productivity. In accordance to this, we believe that product development will continue to be manufacturer driven, and that future consumer needs will be determined according to the products that manufacturers develop. The distributor's role will therefore be, as stated in the theory chapter, to work as a conduit between the market and the manufacturer, providing valuable information on market needs to the manufacturer and relaying information, regarding the manufacturers' products, to the consumers.

Thirdly, as there are many competitors in the unified communications area, there are also many different solutions to the same problem and, as companies' communication structure are, often, mixes of products, the major issue is that of interoperability. This has also been confirmed through our interviews. Industry standards would help to come to terms with this issue, but as unified communications is still very young, standards are yet to be set. Session Initiation Protocol, being an IETF standard, has been widely accepted and is used, either fully or to some extent, by most major manufacturers, including Microsoft and Cisco. This is a step towards a fully functioning interoperability, but there's still much work to be done. As mentioned in the channel management theory, in the absence of industry standards, customers tend to spend more time in the search process. As such, distributors' ability to educate customers is crucial to the success of high-tech products, which means that expertise is a highly ranked quality in the unified communications market.

Quite possibly, the biggest uncertainty is how fast the innovation will spread; uncertainty of how fast the market will adopt the new technology. Sahadev et al (2004) stated that as a product passes through each stage in the life cycle, different marketing approaches are needed to win customers. We have learned that unified communications as a whole is in the early stages of adoption and, according to the channel management theory; the appropriate marketing approach to handle innovators and early adopters is to focus on innovative technical features. Distributors and manufacturers would therefore need to focus more on what unifying communications can bring, and less on pointing out exact return on investment numbers, which, according to our studies and interviews, aren't even available yet. As unified communications move to the growth stage, manufacturers and distributors should, according to the

same theory, place more emphasis on economical benefits and point out return on investment numbers, which will be available by then through end-user studies of innovators and early adopters.

Furthermore, Sahadev et al states that as a technology matures, the performance to price ratio will show a declining trend. The consequences of this in the unified communications market will be to deal with issues related to sharing of marketing costs in channel partnerships, or a manufacturer might need to start searching for “low touch” channels to counter the declining performance per price ratio. A distributor will therefore need to be flexible and in close contact with the manufacturer to be able to adapt to the changing requirements.

Lastly, there's the uncertainty of the potential market size. Through our interviews and our own comprehension of unified communications, we have come to the conclusion that, in actuality, this isn't uncertain, at least not to a high degree. Of course, there's some uncertainty involved when estimating the potential market size for a certain year, but manufacturers, Microsoft for example, states that businesses with more than ten employees can benefit from the functions that unified communications brings. To be able to tackle such a large market, manufacturers need to have well-oiled marketing machineries and a high customer satisfaction.

Conclusion: To be able to affect market uncertainties the distributors needs:

- To work as a conduit between the market and the manufacturer
- Powerful marketing and high presence out in the field
- High customer satisfaction
- Flexibility
- Expertise

Technological Uncertainty

Uncertainties about the technology itself are dependent on five factors, according to Mohr et al (2005): Product function, Delivery timetable, Quality of service, Unforeseen side-effects, and the Threat of a new technology emerging.

Product function is very closely related to interoperability between different manufacturers' solutions; the functionality of a company's unified communications solution as a whole is dependant on how each part works together with the rest. This puts a lot of weight on the shoulders of distributors: system integrators, when they design and build systems, and service providers, when they bundle solutions. Their expertise will help solve potential problems, glitches and errors that early adopters of new technologies might face. Furthermore, our channel management theory states that, when customers face uncertainties such as product functionality, switching cost with the replacement of products, installation and maintenance costs, one must focus on creating relationships. This is apparent in the unified communications market, where product functionality, switching costs, installation costs, and maintenance costs are all uncertainties that the customer is facing and thus, according to the theory, a distributor need to form close relationships with the manufacturer.

The second source, delivery timetable, isn't applicable on the unified communications market from a consumer point-of-view. Since unified communications solutions have been manufacturer driven and not

consumer driven, each product's time table is instead posed against other manufacturers' products and their timetables.

Furthermore, consumers face the question of how reliable the manufacturer of unified communications is. If there's a problem, will the manufacturer provide fast and effective service? According to the channel management theory, distributors play a key role in assessing the support infrastructure, which means that the distributor will need to function as a conduit between the market and the manufacturer. Furthermore, in the unified communications market, support will most likely fall on the shoulders of the distributor who designed the solution; especially if the solution is a mix of different manufacturers' products. If this is the case, then expertise and high quality of service should carry a lot of weight in a partnership.

Unforeseen side-effects are consequences related to the product. When it comes to unified communications products and information technology in general, side-effects are highly related to how employees choose to use the technology. Side-effects of this nature are difficult to foresee and, as it is hard for distributors and manufacturers alike to affect them, we disregard this factor when assessing vertical partnerships.

Lastly, the threat of a new technology emerging is always present and, as the unified communications market is volatile, this will require distribution partners to possess a certain degree of flexibility. According to Robertson (1971) a new technology emerging also brings a shift in consumption patterns, user profiles, complementary products, demand curve etc. If this occurs, idiosyncratic knowledge that the distributor has gained about the manufacturer and the market can be rendered obsolete. Sahadev et al proposes that one should respond with aggressive pricing, Achrol et al (1983) believes that one should counter with an adaptive strategy such as withdrawal, and Glazer and Weiss (1993) argue the need for fast decision making because there isn't sufficient time for formal planning. One thing is clear; whichever tactic one chooses to use, the need for trust and cooperation between channel members is key. Distributors need to posses direct qualities such as relationships between the manufacturer's and the distributor's personnel because it will, according to Coughlan et al, help get things done quickly and correctly. Furthermore, distributors will need to be flexible to adapt to the new market.

Conclusion: To be able to affect technological uncertainties the distributors needs:

- Relationships
- Flexibility; to be able to adapt to unforeseen changes.
- Expertise
- High quality of service

Competitive Volatility

There are three factors, presented in the theory, that affect competitive volatility: Future competition, Competitive tactics, and Competition's products.

The threat of future competition, mainly outside competition entering the field of unified communications, is always present and interesting, but it's not something that can be affected by distributors and it will thus not be assessed in this master thesis. The threat of new competitor tactics

and new products are likewise very hard to affect as a distributor. However, if the competitions new tactics involve changes in the supply chain, like the way dot.com-players changed the way the retail business works, then this will put strains on the distributors' flexibility and ability to adapt to a new situation. The way that distributors can affect competitors' products is to provide the manufacturer with information on market needs and any problems that the current products face, giving the manufacturer a better chance at adapting their own products, and thereby beating the competition with a faster time-to-market.

Conclusion: To be able to affect Competitive Volatility the distributors needs:

- To provide the manufacturer with information regarding the market
- Flexibility, to be able to adapt to unforeseen changes.

6.3 Channel Coordination

One way for manufacturers to avoid channel conflicts and to encourage channel cooperation is through managing and coordinating channel partnerships. Coordination of existing partnerships is imperative when it comes to maintaining existing partnerships and when entering new partnerships. Coordination is, however, also important, as customers in the unified communications market demand trust and expertise, to create a simple "seamless" customer experience.

To avoid, or at least to reduce, channel conflicts, coordination of the supply coverage plays an important part. A well coordinated supply chain reduces factors such as: core domain intrusion and stolen business, resulting in decreased performance; and high supply over-coverage, resulting in unnecessary costs. Furthermore, by choosing distributors who are actively seeking or currently involved in horizontal partnerships, manufacturers can reduce the risk of uprising conflicts, due to the distributors' interest in maintaining their own partnerships. This also has implications on the importance of channel cooperation. If a manufacturer is in a position of power, where the distributor's need for the manufacturer's products/solutions is greater than the manufacturer's need for the distributor's services, encouragement of horizontal partnerships will become a highly efficient tool for harmony in the channel.

6.4 Model for determining Quality worth

We have devised a model for determining what indirect qualities a distributor should possess, depending on the target market. To our understanding, different strategies are needed to conquer different markets; an approach that is successful on one market, will not necessarily be successful on another. We have concluded that there are two main factors that need to be taken into account when partnering with distributors on a market.

The first factor is the market's adoption of unified communications, which can be described as the market's maturity. A market, where unified communications hasn't been adopted at all, requires a different set of qualities to enter than a market that has matured.

The second factor is what business segment, based on size, to target. Smaller companies have different demands than large corporations, and thus the qualities needed in distributors are different depending on the target consumer's size.

Furthermore, it is important to take into account that our model is based on a Nordic market, and as such might not be applicable to its fullest on all markets.

First off, keep in mind that qualities described in this quadrant, and the following, are, to our understanding, the most important ones for each quadrant. Most qualities stated earlier are of course positive to possess in each quadrant, but some are more important than others.

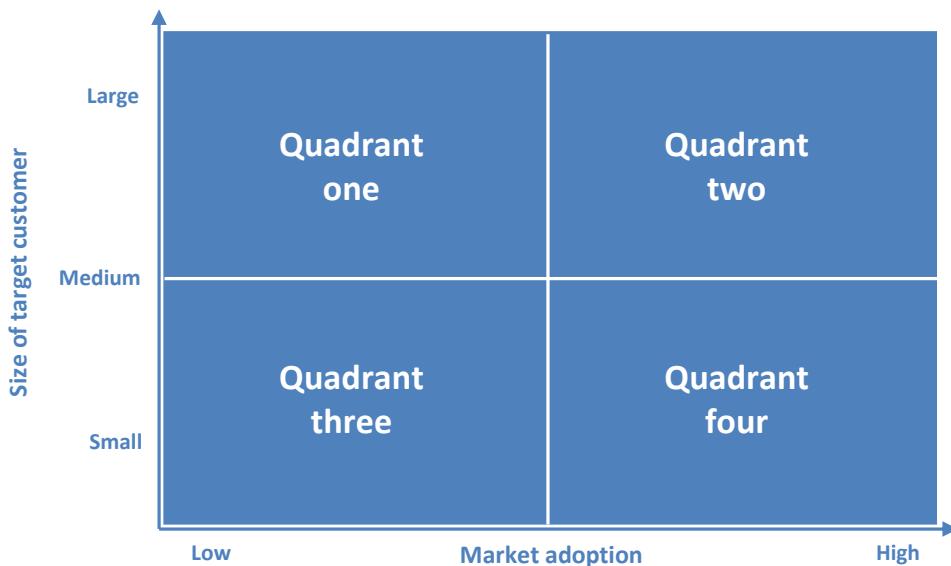


Figure 18, Distributor Qualities Model, Sjöberg & Wicén, 2008

Quadrant one- Out-shining the Competition

Quadrant one encompasses qualities needed when entering a market with a low-to-medium adoption, while targeting Medium to Large companies.

As discussed earlier, large companies need to be able to trust that their communications solution will work without fail, and they have the ability to pay for this assurance. Therefore, any distributor catering to these companies need to be able to instill this trust in their customer. They also need to have a high quality of service and a well-functioning support in order to maintain this trust. Furthermore, distributors with a large customer base and a strong established trust can use it to introduce manufacturer's products to their current customers and instill a trust in the manufacturer.

As the market is still young in this quadrant, companies are still looking for proof that the solution will fulfill its promises. They need to know that their investment will pay off, either through explicit benefits, such as lessened travel expenses, or through vague benefits, like an increased efficiency and productivity. To utilize this, a distributor needs to have a high geographical presence to able to gain market shares.

Furthermore, companies are easier to influence in quadrant one, due to lack of information, than those in a mature market. As such the distributor will play a large part in convincing the market of the

superiority of the manufacturer. The distributor needs to possess expertise and technical know-how to be able to design an exceptional solution and influence large companies.

A suitable partner for targeting quadrant one would be, in accordance to empirical studies and theory, a *system integrator*.

Quadrant two – Diversifying through uniqueness

In quadrant two, we find qualities a distributor needs to possess in order to become successful in a market with medium-to-high adoption, while targeting medium-to-large companies.

Companies' needs for efficient communication are ever-present, independent of the market's adoption rate, and therefore qualities, related to company size, which are preferred in quadrant one, are also desired in quadrant two. As mentioned in the empirical studies, unified communications is pushed on to the market by the manufacturers, through distributors, in the beginning. However, through increased market demand, customers will begin to get more familiar with the solution, call for more functions, and demand more from their communication solutions, which will lead to a state of pull. When this state occurs, the distributors need to be aware of the market and work as a conduit between the manufacturer and the market.

When the market has matured, so has, hopefully, the market's view on the manufacturer as well, which is why the market needs to be informed of the manufacturer's new products instead of being convinced of its superiority, as seen in quadrant one. Furthermore, the distributor needs to be flexible and adapt to the growing demands and wishes of the customers.

Finally, a distributor needs to possess expertise and technical know-how in this quadrant as well, but for different reasons than in quadrant one. In a mature market, with many competitors, a distributor needs expertise to be able to compete and help the market's perception of the company, suit the product. A high quality of service will also help keep existing customers and attract new customers.

As in quadrant one, *system integrators* are also suitable distribution partners for quadrant two.

Quadrant three – Showcasing oneself

Quadrant three characteristics comprise of a low-to-medium market adoption and small-to-medium sized companies.

We have, from studies and market research, concluded that medium-to-large companies are the first adopters of unified communications solutions. As such, quadrant three is difficult to enter, since, until the market adoption has reached the point where the manufacturer push converts into a customer pull, small companies are unlikely to invest. The main reason for entering this quadrant, as a distributor, would be to build brand equity in terms of brand recognition amongst potential future customers.

However, based on the company size, new qualities are needed, if a distributor decides to enter this quadrant. Smaller companies have, in general, a smaller communications budget than large enterprises and are therefore in need of cheaper solutions. They are therefore in need of a lower touch channel and

the lower cost per transaction it brings. As such, a quality needed to cater to small-to-medium size companies is the ability to provide bundled unified communications solutions at a low cost.

Distribution partners suitable for this quadrant would therefore be *service providers* willing to invest for future revenues.

Quadrant four – Conquering the Masses

The fourth quadrant consists of the qualities one needs to be able to distribute to small-to-medium sized companies in a market with medium-to-high adoption of unified communications.

As described earlier, the further along the adoption of a new technology, the higher the performance to price ratio will be; one will get better performance for the same or lower price. This will lead to low touch distributors, who are more dependent on pricing than high touch channels, who earn most of their money through value-added work. As such, low touch distributors need to be flexible and able to bundled packages even more efficiently than in quadrant three.

Furthermore, as the demand for unified communications grows, the door to the mass of smaller companies, who previously were unable to invest, will open up. Both geographical presence and that the market's perception of the company suits the product, are preferred qualities to possess.

It is our view that the ideal partner to distribute to this quadrant is a *service provider*, who can sell to the mass of small-to-medium sized companies out there.

6.5 Recommendation

As a final recommendation we want to express that, according to our understanding of the unified communications area, manufacturers should use multiple channels in their distribution structure, in order to address all business segments. Furthermore, it is our view that the most important distributors of this technology will be system integrators and service providers and as such a manufacturer should invest in building strong and healthy relationships with actors of these sorts. Lastly, we recommend that manufacturers look to competitors and try to forge horizontal partnerships in order to increase interoperability.

7. Suggestions for Further Research

In this chapter, ideas on interesting subjects that are connected to this master thesis' subject will be discussed briefly.

Throughout our research, we have come across issues and subjects that are very interesting for our subject, but, due to time restraints, couldn't be analyzed. The main issue is that we've only analyzed our model in reference to a market where unified communications has gotten fairly far in its adoption. One view that we would like to have had the time to analyze is how our model works in emerging markets, such as Brazil, Russia, India and China, and what qualities a distributor in those countries would need. How will these qualities differ and to what extent will they be the same?

Furthermore, our model is from a unified communications view, but it might be applicable to a certain degree to other technologies, where the adoption of a new product further ahead on some geographical markets than on others.

Another interesting subject, within the field of unified communications, is partnerships between manufacturers. Many analytical firms, distributors and manufacturers share the view that it will be very difficult for one manufacturer to provide a company's entire communication solutions, and that instead the most common way will be to mix several manufacturers' products in order to satisfy the customer's needs. Partnerships between manufacturers are important from this perspective, as they can guarantee interoperability, something that is essential to the customer. We feel that there is a need to investigate how to build strong partnerships between manufacturers, whether they are close partnerships with joint development, or more loose partnerships, which focus solely on interoperability. There is also the innate complication of having two competing companies work together, to take into account.

A final interesting aspect of unified communications is its effects on and off "Green IT". Should manufacturers take Green IT into consideration when developing and marketing unified communication solutions, and what potential implications this has on future customers?

8. References

8.1 Literature

Burns, A.C., and Bush, R.F., Marketing research. London: Prentice-Hall, 2001.

Christopher, Martin, Logistics and Supply Chain Management: Strategies for Reducing Costs and Improving Services, Pitman Publishing, London, 1992.

Coughlan, A. T, Stern, L. W., El-Ansary, A. I., and Anderson, E., Marketing Channels 7th edition, USA, 2006.

Cusumano, M., Mylonadis, Y. and Rosenbloom, R. Strategic Maneuvering and mass-market dynamic: the Triumph of VHS over Beta, Business History Review, Vol. 66, pp. 51-94, 1992.

Cyert, R.M. and March, J.G., Eisenhardt, K., Making Fast Strategic Decisions in High-Velocity Environments, Academy of Management Journal, Vol. 32, pp. 543-576, 1989.

Evans, D, An Introduction to Unified Communications: Challenges and Opportunities, Aslib Proceedings: New Information Perspective, Vol. 56, pp. 308-314, Emerald Group publishing limited. 2004.

Fisher, M. L., What is the Right Supply Chain for Your Product?, Harvard Business Review, March-April, 1997.

Friedman, L. G. and Furey, T. R., The Channel Advantage, Biddles Ltd, United Kingdom, 1999.

Fuller, J. B., O'Conor, J., and Rawlinson, R., Tailored Logistics: The Next Advantage, Harvard Business Review, pp. 87-93, 1993.

Gately, J., Road-Warrior Made Easy, Communications News, Vol. 36, No. 9, pp. 22-24, 1999.

Hamel, G. and Prahalad, C. K., The Core Competence of the Corporation, Harvard Business Review, vol. 68, May-June 1990.

Lekvall, P. and Wahlbin, C., Information för Marknadsföringsbeslut, Högsbo Grafiska, Sweden, 2001

Lovell, A., Saw, R., and Stimson, J., Product Value-density: Managing Diversity through Supply Chain Segmentation, The International Journal of Logistics Management vol. 16 No.1, Emerald Group publishing limited, 2005.

Mallen, B., Selecting Channels of Distribution: A Multi-Stage Process, International Journal of Physical Distribution & Logistics Management, Vol. 26 No. 5, 1996.

Mascarenhas, B., Baveja, A., and Jamil, M., Dynamics of Core Competencies in Leading Multinational Companies, California Management Review, Vol. 40, No. 4, pp. 117-132, 1998.

McKenna, R. (in Moore, G.A. 1991 (Ed.)), Crossing the Chasm: Marketing and Selling Technology Products to Mainstream Customers, Harper Collins, New York, 1991.

McIntyre, S.H., Marketing Adaptation as a Process in the Product Life Cycle of Radical Innovations and High-Technology Products, Journal of Product Innovation Management, Vol. 5, pp. 140-152. 1988.

Mohr, J. and Sengupta, S., Slater, S. Marketing of High-Technology Products and Innovations, Pearson Education Inc., 2005.

Moore, Geoffrey A., Crossing the Chasm: Marketing and Selling Technology Products to mainstream Customers, Harper Collins, New York, 1991.

Moriarty, R.T. and Kosnik, T.J., High-Tech Marketing: Concepts Continuity and Change, Sloan Management Review, Vol. 30, pp. 7-17. 1989.

Olleros, F.J., Emerging Industries and the Burnout of Pioneers, Journal of Production Innovation Management, Vol. 1, pp. 5-8. 1986.

Robertson, T. S., Innovative Behavior and Communication, Holt, New York, 1971.

Rosenau, M.D. Jr, "Speeding Your Product to Market", Journal of Consumer marketing, Vol.5, pp. 23-33, 1988.

Ryans, J.K. Jr and Shanklin, W.L., Principles of High-Technology Marketing, Business Marketing, September, pp. 100-106, 1984.

Sahadev, S. and Jayachandran, S., Managing the Distribution Channels for High-Technology Products, European Journal of marketing, vol. 38, No. ½, pp. 121-149, Emerald Group Publishing Ltd, 2004.

Smith, M., Sinha, I., Lancioni, R. and Forman, H., Role of Market Turbulence in Shaping Pricing Strategy, Industrial Marketing Management, Vol. 28, pp. 637-649, 1999.

Stern, L. W, and El-Ansary, A. I., Marketing Channels 2nd edition, London: Prentice-Hall, 1982.

Trochim, W., 2006, see Web-based information.

Utterback, J.M., Mastering the Dynamics of innovations, Harvard Business School Press, Boston, 1994.

Venkatesh, A. and Vitalari, N.P, Computing technology for the Home: Product Strategies for the Next Generation, Academy of Management Review, Vol. 11, pp. 71-86, 1986.

Webb, K.L. and Hogan, J.E., "Hybrid channel conflict: Causes and effects on channel performance", Journal of Business & Industrial Marketing, Vol. 17, No.5, pp. 338-356. 2002.

Zook, C., Beyond the Core: Expand your Market without Abandoning your Roots, Harvard Business School Press, Boston, 2004.

Friedman, L.G. , Go-To-Market Strategy, Butterworth-Heinemann, 2002.

8.2 Web-based information

European Commission, Enterprise – SME definition

http://ec.europa.eu/enterprise/enterprise_policy/sme_definition/index_en.htm, Jan 2008

Gartner, *A Framework for Unified Communications 2007*

<http://www.mediaproducts.gartner.com/gc/webletter/avanade/issue2/gartner1.html>, Oct 2007

Gartner, *Magic Quadrant for Unified Communications, 2006*

http://www.itbuda.com/files/Gartner_unifiedmessaging.pdf, Oct 2007

Global Information Technology Report 2006/2007

<http://www.weforum.org/en/initiatives/gcp/Global%20Information%20Technology%20Report/index.htm>,

Nov 2007

In-Stat, *Business end-users still need convincing on benefits of Unified Communications 2007*

<http://www.instat.com/press.asp?Sku=IN0703589CT&ID=2054>, Oct 2007

Microsoft homepage, <http://www.microsoft.com>, Dec 2007

Nortel fiscal year 2007 quarterly report,

http://www.nortel.com/corporate/investor/events/q2earnings2007/collateral/segmented_revenues.pdf,

Nov 2007

Nortel homepage, <http://www.nortel.com>, Dec 2007

Siemens homepage, <http://www.siemens.com>, Dec 2007

Statistics about Business size (including small businesses) 2004, The US Census Board,

<http://www.census.gov/epcd/www/smallbus.html>, Jan 2008

Telenor homepage: <http://www.telenor.com>, Dec 2007

Trochim, William M.K., Theory of Reliability, 2006, Social Research methods,

<http://www.socialresearchmethods.net/kb/relytypes.php>, Nov 2007

Appendix A – Distributor Interviews

1. Which different services are you able to offer customers? (E.g. Architecture, installation, Service)

Telenor: Telenor's offerings in the Unified Communications sector are, at the moment, limited to only Mobile Vo-IP and Fixed IP.

Telindus: They offer pre-studies of a company, architecture consulting, installation and service, basically the whole concept. Service contracts have a minimum of 1 year and a maximum of 3 year duration.

WM-data (LogicaCMG): They offer services stretching from small consulting services, to designing, building and operating the entire communications system for a customer.

2. What are you able to offer when entering partnerships with manufacturers? (E.g. Microsoft, Nortel, Avaya, Ericsson)

Telenor: Telenor is involved in a partnership with, amongst other distributors, Microsoft, where they work as a reseller and as a Service Provider. Their UC-strategy is, when writing this, not completed; it is due in February 2008.

Telindus: As an independent integrator, Telindus find that their biggest asset is their combination of strong expertise in both the telecom and the IT area. They offer their customers a base of Microsoft OCS and add-ons from other manufacturers, for example their telephony systems can come from any manufacturer but Avaya and Ericsson are the two that has been used the most. Belgacom, their mother company, pushes Telindus to start selling Cisco systems in a larger scale.

WM-data (LogicaCMG): They are already partner with Microsoft, which was natural since they have been partner with them in their work with managed workstations. They feel they can offer several things when entering partnerships with manufacturers, most notable:

- As a system integrator they feel that they know the customer's IT-structure and the more IT and telecom converge in UC solutions, the bigger part this knowledge will play.
- They act as a pure reseller to some extent
- They have the expertise to implement and integrate complex communications solutions
- As a service provider, they can provide their customers with bundled solutions, where many functions are combined and interoperability is key.
- They act as a consulting firm to businesses who want to design their own IT-structure, but still needs some guidance.
- Their close relation to large enterprises can be important, when manufacturers want to enter that market.

3. What do you feel your company's role in the UC-market is? Which customer segment do you address as core?

Telenor: Telenor will take a role in bundling products for both reselling and hosting solutions. They will be dependent on strong partnerships to be able to provide a complete solutions offering.

Telindus: Their role is for the most part a pure system integrator. They have, however, a small service provider function, offering hosted exchange services, but not at all in the same scale as WM-data.

WM-data (LogicaCMG): Their role is mostly as a system integrator, but also as a service provider with hosted exchange.

4. Which customer segments are the most lucrative to address in terms of potential/size/growth?

Telenor: For Telenor, the most lucrative segment will be the small businesses. Telenor feels that customers in this segment are more likely to choose a hosted service with pre-bundled packages. However, by creating value-added services they feel that some extension to the medium and maybe even large segment is possible and probable.

Telindus: Every customer segment will grow in the future, but Belgacom pushes Telindus to aim for the larger segment instead of the small/medium segments that they are currently mostly active in.

WM-data (LogicaCMG): This varies depending on the local market, but for the most part they feel that medium to large enterprises are the most lucrative.

5. Have you noticed any change in the demands that your customers place on their communications solutions?

Telenor: Telenor have noticed that customers tend to work more with their mobile phones and thus creating a need for a more seamless laptop to mobile phone environment. There's also a growing demand for more converged solutions.

Telindus: Whenever talking to a new customer, the discussion always starts with their telephony needs and how their current system is/feels outdated. Video conferencing is something that more and more companies are seeing potential in. Some companies, like Tandberg, are very strong in the video conferencing area, but it is not something that Telindus uses, since Microsoft's OCS has got a built-in video conferencing already.

The mobile phone integration into Unified Communications hasn't taken a foothold yet, but it's coming, as more and more functions become available on the mobile phone as well as your laptop.

Presence is something that companies didn't realize they needed, but after a trial period of 30 days, they usually feel that it's something they can't live without.

WM-data (LogicaCMG):

Businesses must be able to trust their communication, and as such trust in the company who designed their communication solution is very important. Communication has also moved from being asynchronous (e-mail) to becoming more synchronous (Instant messaging, telephony). Their customers have also started having higher demands on their communications solutions and feel that they need many, if not all, of the functions that a well functioning UC solutions offers.

6. How do you target your customers?

- **Do you look at the solutions available and sell them to the customer?**
- **Do you look at the customers need and adjust the solutions available to fit them?**

Telenor:

Telenor is looking at this new technology and trying to find ways of selling it to businesses. They are working a lot with customers and developing solutions together with large customers.

Telindus:

The customer is always right, but the customer doesn't always know what they need. Unified Communications is a new concept and the customers aren't really aware of the vast functionality it can bring to their company. Telindus knows what solutions are available, but they look primarily at their customer's needs and try to build a solution that fits.

WM-data (LogicaCMG):

WM-data feel that this is very dependant on how far along the market is in its adoption of the product. Early in the adoption phase it is mostly about pushing the product onto the market, but as more and more businesses realize the potential, the demand for it grows, and thereby moving the customer's needs into focus. WM-data feel that different parts of UC have different adoption curves. For example is Unified Messaging almost 100% integrated in most large companies, Video communication has been adopted by many companies, SIP is small but growing, and Instant Messaging is in the early stages.

7. Are you User-profiling specifically for UC?**Telenor:**

As their UC-strategy is not completed yet, this question couldn't be answered. Their strategy has traditionally been to profile according to the size of their customers. They've divided companies into 5 different segments:

- 0-9 employees.
- 10-49 employees.
- 50-99 employees.
- 100-499 employees.
- 500+ employees.

Telindus:

No, but in the end the system gets segmented as different parts of the company doesn't need, and don't get access to some parts of the UC-system. For example, an executive needs different functionality than an office worker needs.

WM-data (LogicaCMG):

WM-data are currently not user-profiling; instead they work according to their seven market segments or "verticals", namely the Public sector and Healthcare, Defense, Industrial, Financial Services, Telecom, Retail and Logistics, and Utilities. They have a base offering, containing the basic Unified Communications functions, such as Unified Messaging and Instant Messaging for example. This base offering is neutral and each workstation can thereafter be adjusted according to its needs by adding specific UC functions. WM-data believes that user-profiling might be more necessary when it comes to SIP and Vo-IP solutions and not when it comes to UM/IM solutions, as these solutions are cheaper so every workstation can have them.

8. When providing UC-solutions to customers, do/will you use one or several vendors?**Telenor:**

Yes, they use several partners to provide solutions. However, to be able to provide fully functioning bundled solutions they will partner with manufacturers. This means one or a few partners for IP-telephony, one or a few for messaging (IM/UM), and so on.

Telindus:

They work with Microsoft for the software, HP for the main servers, and Avaya and Ericsson for the telephony.

WM-data (LogicaCMG):

When working as a system integrator, WM-data tries to stay as independent as possible so that they can provide the best solution for their customers, often by mixing different manufacturers products, to get a "Best of Breed"-solution.

9. Are your company involved in any / or actively seeking partnerships with other firms on the same level in the value chain? I.e. other resellers.**Telenor:**

It is possible that they will partner up with different Service Providers and System integrators. They are at the moment involved with, amongst others, IBM and LogicaCMG in the area of IP-telephony.

Telindus:

They do not actively search for partnerships, but they are however acting as an intermediary between their customers and major service providers. Manufacturers have usually good and specific guidelines to prevent partner conflicts from arising.

WM-data (LogicaCMG):

They are at the moment involved in partnerships with different service providers, for example Telenor. WM-data have observed a growing trend amongst their customers, where they want more integrated solutions. In some cases, WM-data uses their partners to provide some parts of the solutions.

10. What are your plans for the future?

Telenor:

This question couldn't be answered, as their strategy for UC isn't finished.

Telindus:

Telindus divides the future into three areas that they will be active in, namely, System and Application, Unified Communications and Security. Out of these they feel that UC will grow the most and parts of both System and Applications and Security will start to intertwine with it. Video conferencing is a part of UC that Telindus feels will grow as more and more companies see the ability to save money from travel expenses and realize that it is not that much difference from having a "live" meeting. Also, collaboration will play a larger role in meetings, being able to work on the same document in real time from different locations.

WM-data (LogicaCMG):

They feel that businesses are starting to see the potential in UC, and as such the market for providing UC solutions is growing, and will probably continue to do so. WM-data have also observed that many companies are now starting to demand UCC (Unified Communication and Collaboration). Many employees in many companies also start demanding a larger unification of their mobile phone and their laptop.

WM-data also feel that the integration between data and telecom will lead to:

- One net instead of two.
- Everything will be controlled from one console, instead of several, and thereby becoming easier for IT-support to supervise and handle.
- A more cost-efficient workplace.
- Digital assets will be archived, indexed and saved. All information critical for the business needs to be able to be tracked.

Appendix B – Manufacturer Survey

Questionnaire

The questionnaire consists of seven multiple-choice questions and three essay questions.

1. In which geographical areas does your company have the strongest market presence?

Please arrange North America, South America, EMEA (Europe, Middle-East and Africa) and Asia-Pacific from strongest to weakest.

2. In 2010, where will your company have the strongest market presence?

Please arrange North America, South America, EMEA (Europe, Middle-East and Africa) and Asia-Pacific from strongest to weakest.

3. Who are the most important distributors of Unified Communications Solutions to businesses for your company? Mark first and second choice out of:

- System integrators
- Telecom service providers
- SMB resellers
- Security Resellers
- Traditional PBX resellers

4. In 2010, who will be the most important distributors of Unified Communications Solutions to businesses for your company? Mark fist and second choice out of:

- System integrators
- Telecom service providers
- SMB resellers
- Security Resellers
- Traditional PBX resellers

5. How important will close collaboration between your company and value-added resellers be to serve customers' communication needs? Choose one alternative:

- Important in areas where a reseller lacks internal expertise
- Crucial, impossible for a reseller to invest in expertise in all areas
- Not very important, resellers need to invest in expertise to be successful

6. What qualities does your company value the most in its distribution channel partners? Mark first and second choice out of:
 - Size
 - Expertise/Technical Know-How
 - Market's perception of the company
 - Customer satisfaction
 - Geographical presence
7. When entering emerging markets, what qualities does your company value the most in its distribution channel partners? Mark first and second choice out of:
 - Size
 - Expertise/Technical Know-How
 - Market's perception of the company
 - Customer satisfaction
 - Geographical presence

Essay Questions:

8. Do you consider your company's partner program to be up-to-date with the current product portfolio?
9. Do you consider your company's partner program to be successful compared to other actors in the UC-market?
10. Which do you consider your company's biggest strengths to be in the UC market?

Summary of answers

1. In which geographical areas does your company have the strongest market presence?

Siemens:

Siemens has got their strongest presence in EMEA followed by NA and SA; however their presence in Asia is low.

Nortel:

Nortel's strongest presence is in NA, followed by EMEA and SA. They have a low presence in Asia just like Siemens.

2. In 2010, where will your company have the strongest market presence?

Siemens:

Siemens plan on NA being number 1 by 2010, followed by SA and then EMEA on 3rd. Asia last.

Nortel:

Nortel does not make forward looking statements or rankings on the development of our regions. Traditionally, NA represents about 50% of Nortel's business, EMEA 25% and then comes AsiaPac (Asia Pacific) and CALA (Central and Latin America).

3. Who are most important for your company when distributing Unified Communication (UC) solutions for businesses?**Siemens:**

At the moment, traditional PBX resellers are most important for Siemens, with System integrators as the second choice.

Nortel:

For Nortel on the other hand, Service Providers (SPs) claim the 1st spot, with System integrators taking the 2nd spot. Nortel also considers voice vendors (com specialists) plus channels with IT expertise to be important.

4. In 2010, who will be the most important for your company when distributing Unified Communication (UC) solutions for businesses?**Siemens:**

In the future, Siemens believe that System integrators will play a large role in distributing UCC solutions and SMB resellers will be second.

Nortel:

In 2010, Nortel believe that System integrators will have passed SPs and become the most important distribution channel. SPs will however still be strong and retain their position compared to other channels. Nortel also considers voice vendors (com specialists) plus channels with IT expertise to be important in 2010.

5. How important will close collaboration with value-added resellers be to serve customers' communication needs?**Siemens & Nortel:**

Both Siemens and Nortel feel that relationships between themselves and value-added resellers are crucial to provide expertise regarding their products and by extension help serve customers' needs.

6. What qualities does your company look for in its distribution channel partners?**Siemens:**

Geographic presence and Market's perception of the company are the two qualities that Siemens rank highest.

Nortel:

For Nortel, expertise is the most important quality, while customer satisfaction also ranks high.

7. When entering emerging markets, what qualities does your company look for in its distribution channel partners?

Siemens:

When entering emerging markets, Siemens still look for the same qualities.

Nortel:

Here, Nortel still ranks expertise high, but geographic presence has taken the 2nd spot.

8. Do you consider your company's partner program to be up-to-date with the current product portfolio?

Siemens:

Yes.

Nortel:

Nortel has been successful in driving programs with both Microsoft and IBM and is in deep discussion with many channels on training, services support, and joint go to market campaigns and, most importantly, wins. Nortel continues to develop uniquely strong and deep relationships with Microsoft and IBM to build solutions propositions with channels in order to establish market leadership in this field.

9. Do you consider your company's partner program to be successful compared to other actors in the UC-market?

Siemens:

No.

Nortel:

Accreditation is timed to be ready for product launch to the market and gets updated or refreshed for major product changes. Associated Go-To-Market projects, marketing promotions and programs are also scheduled for launch and growth effectiveness throughout the life of the product release.

10. Which do you consider your company's biggest strengths to be in the UC market?

Siemens:

Siemens consider themselves to have the most mature and open architected product in industry.

Nortel:

Nortel's biggest strengths in UC market:

1. Partnerships with Microsoft and IBM
2. Breadth and Depth of Portfolio - data, voice, applications
3. Go-to-market network (good coverage of market)
4. Large installed base

Appendix C – Manufacturer Interviews

- 1. On which geographical markets does your company have the highest market presence, from a Unified Communications perspective? Will this change by the year 2010?**

Microsoft:

Microsoft has strongest market presence in North America followed by Western Europe and APAC. A strong growth in APAC-area as well as Brazil, Russia, India and China is expected but hard to estimate exact numbers.

- 2. Which kind of distributors is most important for your company when distributing Unified Communications solutions? By the year 2010, will this have changed?**

Microsoft:

Microsoft is using direct sales to our top-200-customers; to other business segments they see License Resellers, system integrators and Service Providers, for hosted services, as big distributors of UC. No major change by 2010.

Which qualities does your company value the most in their distribution partners?

Microsoft:

Specialists and high level of expertise to deliver Quality of Service as well as Quality of Experience is the key. Partners as system integrators will need to be certified and show reference cases and customers

- 3. Does this list of qualities change when searching partners in emerging markets, for example India or China?**

Microsoft:

Emerging markets are difficult in general, there are great potential for these markets but for communication solutions a working infrastructure is a key component, and thus, the need for partnerships with strong Service Providers with carrier operations.

- 4. What can you offer when entering into partnerships with distributors? (E.g. system integrators, Service Providers)**

Microsoft:

System integrators do not receive any license-kickback, however they get the possibility to charge man-hours when designing, installing and upgrade systems with our products. Service Providers with hosted services get margins with quantity and also when they sell packages and bundled solutions. When it comes to UC, partners established on the software market needs to develop expertise in telecom, whilst telecom partners needs to develop expertise in software, Microsoft provides them with this possibility.

5. What is your company's role on the Unified Communications market? Which business segments are your core customers?

Microsoft:

Microsoft is prioritizing the UC-market within the organization and will take a leading role on the market. Customer segmentation is only used in terms of "top-200-customers", which have a direct sales force, and a base segment with 10+ employees as potential customers.

6. Which business segments are the most lucrative ones, from the perspective of size, growth and future potential?

Microsoft:

When it comes to growth, Small and Medium-segment have great potential. Most of the firms in this segment have not yet a complete UC-solution but have enough market awareness to realize its possibilities.

7. Which manufacturers (other than your company) do you think are best at bundling solutions that see to the customers needs?

Microsoft:

The number one competitor is Cisco; however they have a different starting point. They are emerging from being hardware based to a more software centric approach, whilst Microsoft is having an opposite approach. Cisco has a very strong relation to their customers with high level of customer-satisfaction and loyal customers.

8. Is your company's partner program up to date with your current product portfolio?

Microsoft:

From Microsoft's perspective on the UC-market our partner programs are functioning well. Partners like: Ericsson, Mitel and Nortel provides strong competence from a telecom perspective to our products and environments.

9. Have you seen any clear changes in customer demands on the communication market?

Microsoft:

Simplicity is a major part of the software industry; this is reflected on the UC-market where effectiveness is a direct result of simplicity. Also, interoperability and seamlessness between all components in a UC-solution is important, customers expect many of their previously made investments to work with new solutions, manufacturer independent. The demand for mobility will increase, different global markets will have different types of mobility, but the demand to be flexible and available will remain nonetheless.

From upper management we can see higher demands in security, cost reduction and the ability to manage the platform effectively.

10. Which are Microsoft's strengths, specifically for the UC-market?

Microsoft:

Microsoft is very well known in the IT-industry, from their point of view, the software development will decide how the UC-market will evolve and as Microsoft is in the forefront in this industry they will have a large impact on future UC-solutions.

Microsoft can offer an enormous partner channel in many business areas and tasks with strong innovation capabilities along the supply chain.

11. Are you user-profiling for Unified Communications?

Microsoft:

Microsoft is constantly investigating the customer's needs and their will to invest; they have no specific user-profiling for UC, however, when developing products

12. Is your company involved in or actively searching for partnerships in the same level of the value chain? What is motivating these choices?

Microsoft:

Microsoft is open for new partnerships as long as they contribute to a stronger business.

13. What are your company's plans for the future?

Microsoft:

Globally the UC-market is calculated to grow, in 2008, with ~9% and by 2010, Microsoft have set up goals of 100 million users calling through a Microsoft interface like OCS; numbers which are motivated by 500 million present Microsoft Office users. They see the future in business communication being more and more software centered and VoIP will have a large impact on global markets with strong infrastructure.