Copenhagen
Business School
HANDELSHØJSKOLEN

Internationalization of a Entrepreneurial start-up

A case study of SpiderCloud Wireless Inc.

MASTER THESIS
DECEMBER 9TH. 2010

MSC INTERNATIONAL BUSINESS
DEPARTMENT OF INTERNATIONAL ECONOMICS AND MANAGEMENT

AUTHOR:
HANS-HENRIK STENSAKER

SUPERVISOR:
MARCUS MØLLER LARSEN

CHARCTERS (WITH SPACES):
167 566

Executive summary

This thesis has addressed the internationalization process of an entrepreneurial start up, trying to identify the most critical factors to address in regards to the entry mode decision. SpiderCloud Wireless Inc. has been applied as case company. SpiderCloud Wireless Inc. is a Silicon Valley start-up serving on the telecommunication technology market.

Main focus of the thesis has been to provide the case company with a plan on how to enter the European market with its product. SpiderClouds system is designed to increase the capacity and coverage on the 3G network and the company is targeting mobile operators as their customers. The system is currently not available on the market. The essence of the research has been to find the most suitable entry mode for the company and the theoretical framework different schools of thought of internationalization theory has been applied to provide the company a number of factors to analyze in the pursuit of the most effective entry mode.

In the research are the European market, and then especially Germany, France and the United Kingdom, viewed as the natural starting point for SpiderCloud, due to the valuable relationships existing between mobile operators in Europe and the executives of SpiderCloud Wireless Inc. The expected growth in 3G usage combined with the introduction of the smartphone and the density of people in the three markets is central factors defending a market entry.

Through the analysis a number of factors were discussed to conclude with the most effective entry mode. The factors discussed in the research reflected the different levels of commitment possible when deciding an entry mode. In the end it was recommended that SpiderCloud Wireless Inc. should try to establish a market presence in Germany, France and the United Kingdom through a Joint Venture entry mode in collaboration with one of the mobile operators present in the markets. Ideally should the company try to collaborate with one of the mobile operators they have prior relationships with. This increases the possibility of taking the product into new markets through the Joint Venture, with the help of the mobile operator.

Table of Contents

1. Introduction

The introduction of the smartphone on the market has resulted in a fundamental problem for the operators. The smartphone take use of the internet to offer the subscriber different services and the possibility to download applications to their smartphone. E-mails direct to the smartphone, browsing on internet from the smartphone and popular applications like Facebook®, Twitter®, Skype® and YouTube® all contributes to the mobile operators' problem. The problem for the operators lies in the limit of capacity on the 3G network. This problem increases as the competition between the mobile operator increases and low cost data plans for potential subscribers is introduced.

The problem will affect the subscribers in the way that even though they have full coverage they might not be able to make the call or get the data needed due to maximized capacity. The problem is very noticeable inside buildings and is affecting enterprises which are more and more relying on mobile phone on a day to day use, potentially replacing the desktop phones i.e. there is a need for reliable indoor coverage. There is now days a possibility to solve this problem through the so called femtocell system. The femtocell system is built to only serve between 2 to 4 active mobile phones in a residential setting and 8 to 16 active mobile phones in enterprise settings. The number of mobile phones served in the enterprise setting is not a sufficient solution for larger enterprise with the need of a system that can serve a larger number of mobile phone.

SpiderCloud Wireless Inc. (from now: SpiderCloud) is a Silicon Valley based telecommunication technology company that have addressed the problem for the mobile operators. They have developed a solution to be installed inside buildings to help increase capacity and coverage on a larger scale than the femtocell system. The SpiderCloud solution is a mini 3G network takes use of the buildings local area network (LAN) and use the local area network for its backhaul. The unique system architecture is comprised of a number of radio nodes deployed around the building and the central traffic aggregation point, the service node. These factors combined, makes the system able to create a unique indoor 3G network.

SpiderClouds target customer is mobile operators. For mobile operators it is calculated a cost of approx. 700-800 Euros to gain a new subscriber, when targeting enterprises the cost is estimated to be around 1000 Euro. When the subscriber has committed themselves to the mobile operator it

is expected an additional costs of 400 to 500 Euros over a period of 2-3 years to keep the subscriber. What SpiderCloud enables the mobile operator to do with their product is, instead of fighting for each subscriber, does SpiderClouds solution allow them to go inside an enterprise with a system that actually gets installed on the premises of the enterprise and give the mobile operators a chance to establish relationship with the enterprise and all its subscribers for a period of 2 -3 years to reduce churn, to reduce cost of acquisition, solve the problem of capacity, solve the problem the enterprise have with indoor coverage. Once the solution is installed at the enterprise, the mobile operators have the opportunity to up-sell new solution for a period of 5-7 years later.

SpiderCloud has by, December 2010, not started the distribution and sale of the system, but have started product testing in the United Kingdom (UK) and Germany.

1.1 Problem Identification

SpiderCloud are offering a solution to the market no other company, at the moment, can match. The possibility to be the only supplier on the market is present and the choice of best suited market to enter has now risen. As mentioned above has the company started product testing in Germany and the United Kingdom. The main reason for targeting these two countries and Europe is justified of SpiderCloud on the basis of different reasons. The adoption of mobile broadband was much faster here than other regions of the world and the density of people living in Europe is also an important factor for choosing the European market.

Another aspect that have had an impact of choosing focusing on Europe rather than the United States, which is SpiderClouds home country, is the possibility engage in relationships with European based mobile operators. From previous companies have members of SpiderClouds executive board relationships with some of Europe’s biggest mobile operators. These existing relationships were vital for SpiderCloud in the search of product testing trial.

SpiderCloud has no experience from prior sales, both domestic and international. The company has an obvious interest in obtaining new contracts in the time to come, thus allowing for long-term cooperation with the target customers, the mobile operators. SpiderCloud are operating in an industry with high technological know -how and rapid changes and if the firm is going to start

their growth their ability to internationalize is a crucial parameter. With the limited number of customer present, combined with the advanced technology can SpiderCloud not consider the option of not internationalize. What SpiderCloud has to concentrate on is finding the most efficient mode of entry.

The choice of entry mode is considered is one of the most critical decisions in international marketing and SpiderCloud is in need of is a strategic analytical approach to help them with the considerations related to the foreign market entry and help them pursue the most effective market entry strategy given the situation they are in. To find a generalized model for SpiderCloud to follow is very difficult, but evaluating every relevant factor in relation to the internationalization process will provide valuable knowledge to the decision.

When conducting the entry mode analysis a target market(s) is needed. As mentioned above is the company targeting Europe, but they have not specified any preference on specific countries. Below will a discussion on which target market(s) SpiderCloud should pursue follow. SpiderClouds main focus is on the European market. The European market is broad and it is therefore important to choose potential markets that are best suited for SpiderCloud. During this research the most suitable markets within the European market will be used as a case target market. There are huge differences in regards to the countries in Europe. The most nearby will be to set a membership in the European Union as a parameter when choosing a target market. To be approved as a member country in the European Union there are a number of requirements needed to be fulfilled. These requirements can be comprised down to the three so called Copenhagen criteria that are in regards to having a functioning market economy, being able to deal with the competitive pressure and market pressure within the European Union, having stable institutions guaranteeing democracy, rule of law human rights and respect for and protection of minorities and last, the country must be able to undertake the obligations arising from membership, including accepting the aims of a political, economic and monetary union. Targeting a European Union member ensures SpiderCloud a stable country to operate in.

Another aspect is the potential market size represented in the potential target market in combination with the presence of a global mobile operator, which has the target market as their

home market. With a global mobile operator present in the market there opens an opportunity for SpiderCloud to approach these mobile operators and potentially follow the mobile operators into other markets they are already engaged in. The top 10 global mobile operators in the world is listed below, where the companies in bold are European based companies. Please refer to appendix 4 for the top 10 global mobile operators.

Five of the ten biggest mobile operators in the world (in regards to revenue) based in European countries, all of them European Union members. By comparing the markets the companies are operating in there is two combinations of three operators which seems to maximize the opportunity for SpiderCloud (please see appendix 15 for operating countries of the four mobile operators). First combination is Germany (T-Mobile), the UK (Vodaphone Mobile), and France (Orange Mobile). The other combination is Germany (T-Mobile), France (Orange Mobile) and Spain (Telefonica Movil). These two combinations are both composed of mobile operators that have divided the global market between them. There is two very important factors to keep in mind when deciding on the two combinations and that is that SpiderCloud already has established a sales office in London, UK as well as they are having product testing in United Kingdom and Germany. These trials are in cooperation with mobile operators, i.e. there are already been contact between SpiderCloud and the mobile operators. Based on this are Germany, France and the United Kingdom be viewed as the case target markets in this research.

1.2 Problem Statement

This research will address the challenge SpiderCloud are facing and will attempt to answer the following research question:

What entry mode should SpiderCloud pursue in Germany, France and the United Kingdom?

In order to better structure the analysis and to give the research question a more comprehensive answer, the following sub-question will also be attempted to answer:

(1) Which market specific factors are important to evaluate when discussing the entry mode?

(2) Which industry specific factors are important to evaluate when discussing the entry mode?

(3) Which organizational factors are important to evaluate when discussing the entry mode?

By combining the main research question with the sub research questions and applying it to the internationalization theory, it will be assed how SpiderCloud should enter the target markets. Through the analysis it will, naturally, also be verified if the company should at all enter the three target market.

1.3 Scope

This section is made to provide the reader an overview of the different parts of the thesis and how they correlate.

Part one of this thesis is designed to establish a profound understanding of the background for the thesis, SpiderCloud, the problem they are addressing and introduction to research question and sub research question. The sub research questions are made to better structure the analysis and to give a better conclusion and recommendation on the main research question.

Part two presents the methodology, literature and case company used in the research. First, the theories used to answer the research question and the sub research questions will be presented as well as an introduction to the relevant factors. This is followed by a literature review. The literature review will be used to discuss the different theories and reflect the relevance of the chosen theories. Last, the case company will be presented.

Part is the empirical analysis of the research question and the sub research question. Each of the factors will be thoroughly analyzed in regards to the findings made through the data collection. The empirical analysis will attempt to provide a better understanding of the entry mode decision SpiderCloud are facing and a through a discussion of the empirical analysis entry modes viewed as not recommendable will be eliminated.

Part four is recommendations and conclusion of the research. In the recommendation part the remaining entry modes will be discussed against each other and a suitable entry mode will be

presented. This is followed by a conclusion that will attempt to answer the research question and the three sub-research questions.

Part five will contain references.

2. Methodology

2.1 Research strategy

The concept of triangulation was discussed by Saunders, Lewis, & Thornhill, 2009. Triangulation refers to the use of different data collection methods to secure valid and credible data. In this thesis triangulation have been applied through studying the research question from different angles and research method triangulation has been applied by mixing secondary data with the qualitative interview.

The emperical analysis of the thesis is based on the case study of SpiderCloud. The singel case study gives the opportunity to observe and analyse a phenomonen that have not been considered before (Saunders, Lewis, & Thornhill, 2009). Case studies are often used where it represents a critical case or an unique case (Saunders, Lewis, & Thornhill, 2009), and the outcome may provide new insights the might not have been covered otherwise (Brewerton & Millward, 2001). Eisenhardt (1989) suggested that case studies is an approach were one can employ an embedded design, that is, multiple levels of analysis within the single case study. In addition does Saunders, Lewis, & Thornhill, 2009 state that a well-constructed case study strategy may enable the author to challenge existing theory. In comparison would a multi - case design contributed with more substantial insights then a single - case study. A multiple design must follow a replication rather than sampling logic. When no other cases are available for replication, the researcher is limited to single-case designs (Tellis, 1997). In this research we are limited to a single-case study since there is no company present suited for a comparison to SpiderCloud.

Critics claims that a study of a small number of cases can undermine reliability and the opportunity to generalize the findings, but the combination of methods and multiple sources allows for a strong conclusion of the case study (Saunders, Lewis, & Thornhill, 2009).

2.2 Research approach

In the search for the best suited entry mode for SpiderCloud, have the exploratory study design been deployed. The reasoning for deploying the exploratory study design is that this is a valuable mean when explaining the context between market, firm, and industry specific factors in relation to entry mode strategy, as is one of the motives in this research. In combination with this study design, has the deductive approach been applied. Creswell (2002) suggested that the inductive approach would be suitable when the research topic is within a field where there is a wealth of literature from where one can define a broad theoretical framework. In this thesis the focus is on internationalization theory, which is a field of research where there is a broad access to literature.

2.3 Data collection

To best answer the research question of this thesis and to get a better understanding of the situation have people, institutions, journals and books been pursued.

Primary data

The primary data for this research was obtained through a common method in qualitative research, qualitative interview. The interview was conducted in September 2010, with the vice-president of marketing at SpiderCloud, Ronny Haraldsvik in Bergen, Norway. Mr. Haraldsvik has also in addition to the interview received several follow-up questions on e-mail. Due to the risk of a biased information through the interview and e-mails have the information received been handled with a critical eye.

Secondary data

When searching for the most optimal research method for SpiderCloud the research relies heavily on market reports and documentation in regards to the telecommunication market. The findings will support the information received through the interview. Articles from respected business journals, books related to the internationalization process of a company and strategy are also been taken into account in this research. There are also gathered documents in form of media coverage in an attempt to better describe and understand the circumstances. The disadvantages of the usage of secondary data is that the data may have been collected for a purpose that does not match the research project at hand, in other words, you have no real control over the data quality (Saunders,

Lewis, & Thornhill, 2003). To overcome the potential biases, has the quality and credibility of all secondary data been considered.

2.4 Interview design

The interview conducted was semi-structured, allowing the interviewer to make adjustments to the interview along the way (Saunders, Lewis, & Thornhill, 2003), and allowing for discussion on unforeseen subjects. This was crucial to get an in-depth understanding of the company and the market they operate in. The choice of interview design corresponds well with the explorative approach also chosen in the research. It is important to mention that the interviewee is likely to paint a favorable picture of the company. Another aspect is that there might be a willingness to disclose sensitive information from the interviewee since the interviewer is an outsider of the firm. These facts can undermine the credibility and quality of the findings.

In order to secure the reliability and validity of the findings, the interview was recorded and citations were sent Mr. Haraldsvik in order to eliminate potential misunderstandings. Mr. Haraldsvik was the only employee present from SpiderCloud, a fact that may potentially have affected his answers and made them more subjective and may divert from the views of the company. It is assumed that the high rank of Mr. Haraldsvik gives insurance that the answers given is in general accordance of SpiderCloud.

2.5 Delimitations

There are some clear limitations related to the research needed to be highlighted. First limitation is in regards to geographic scope. SpiderCloud are targeting the European market, but in this research has the European market been limited down to three case target markets, Germany, United Kingdom and France. Comparisons of the three target markets have been made to SpiderClouds home, the United States. There are also limitations in regards to the number of interviews conducted. Ideally would more members of SpiderClouds executive boards been interviewed to better validate the information gathered, but due to the circumstances this was not possible to implement. The lack of financial statements is also regarded as a limitation. With the financial statement present it would be possible to make thorough calculations of what entry mode that will be most suitable. SpiderCloud is a privately owned company registered in the United States of America. The firm is therefore not obliged to publish their financial statements.

In regards to the financial estimates one have to regard that the information received from the company is correct.

3. Construction of the Theoretical framework

In this section the theoretical models applied in the thesis will be presented and discussed. First an introduction to the internationalization theory will be made, followed by identifying the relevant factors within each theory which will be subject for a closer investigation. This will lead on to a presentation of the entry modes available for SpiderCloud. Subsequently a discussion of the derived factors will take place.

3.1 Evolution within Internationalization Theory

Internationalization has been subject for research and discussion since the 1950's. Since then, there has been introduced a number of internationalization theories. It has been an evolution where three theories are most prominent. The international life cycle (also known as the international product life cycle, PLC) was introduced by Vernon 1966. The international life cycle is a processual view of the international business activities. This was the first approach integrating the time dimension into internationalization theory. The theory was design to document the life of a business from its birth to its death along different stages. The PLC model underpinned its theory that the location of production will initially take place in the home country. As the demand increases home and abroad, later in the cycle, most firms will be most successful in countries with similar high-income patterns. Later in the cycle, as the product becomes more standardized, it will be subject of imitation from competitors. These competitors are not driven on the uniqueness of the product, but more on cost-cutting activities. As the product reaches the maturity stage of the model trade will return to a cost-based comparative advantage pattern. In such a situation, an MNE will have to trust on trade barriers to avoid activities from competitors rather than the technological advantages. Vernon's PLC model has met inadequacy from a number of authors. Yamin (2000) argued that with an increase in international integration combined with the change of perspective in the internationalization process of firms are likely to encounter each other in the international arena and thereby eliminating the unrivalled technological leadership by American firms. Cantwell (1995) was also critical to Vernon's model, questioning its hypotheses. He demonstrated the geographical

dispersion of the innovation within MNEs as well as restating that the internationalization of technological development is led by firms with strong records in innovation.

On contrary to the processual internationalization process Vernon's PLC model builds on, is the Uppsala Internationalization model a result of the learning-based stage theories developed by the Uppsala School, Helsinki School and the Innovation School. The studies were conducted by the Swedish researchers Johanson, Wiedersheim-Paul and Vahlne in the 1970`s. The model builds on four concept internationalization process also known as the establishment chain. During the first stage does the firm have occasional exporting activities. In the second face does the firm have regular exporting through agents due to its growing knowledge of the foreign market. The third step is where the firm has a deeper involvement abroad and exploits the market through a subsidiary and the fourth step is where the firm engages in international production. Forsgren (2002) stated that the model predicts the basic pattern of firms´ internationalization is to start and continue to invest in just one or in a few neighboring countries, instead of several countries simultaneously and secondly that the investments in a specific country are carried out cautiously, sequentially and concurrently with the learning of the firms` people operating in the market.

The models states that a company will internationalize gradually when the firm`s experiential knowledge grows. According to the model, a company will first seek markets in countries that have physical distance close to themselves, where physical distance is defined in terms of factors such as differences in language, culture, political systems etc. (Johanson & Vahlne, 1990). As the firm achieve better knowledge abroad, the firm is likely to established subsidiaries in foreign markets. Johanson & Vahlne (1990) also concluded in their research that SMEs in their first movements abroad would locate to low physic distant markets and once they gained better knowledge abroad they would expand to a more physic distant market. Johanson &Vahlne (1977, 1990) also claimed that not all firms had to go through all stages. Some firm were resource intensive or large enough to skip some of the stages; merger and acquisition can be examples of this. Also when foreign markets are stable as the local markets or when a firm has strong knowledge gained from other markets firms can, as a consequence of their prior knowledge skip stages (Johanson &Vahlne, 1977, 1990).

Critics have put light on different aspects of the Uppsala theory. Reid (1983) and Andersen (1993) enlightened the fact that the theory does not explain the reasons why a firm starts on each stage. Leonidou and Katiskeas (1996) have also criticized the model on different levels. They pointed their critic on structural, methodological and conceptual grounds. They mean that casting away business activity besides those being assessed clearly undermines the operationality of the Uppsala model. They also highlights the lack of support of the physic distance which they mean was totally different when the model was created, opposed to the business environment one faces today.

More recently the emergence of Born Globals has been awarded more focus. The Born Global theory questions the traditional pattern of internationalization processes which has been affected by the globalization process and the development of new communication and information technologies. A prevalent myth is that only large MNEs do business abroad and that SMEs mostly operate domestically. This myth, based on historical stereotypes, is being increasingly challenged, as more and more SMEs become internationalized (Peng, 2009). Cavusgil & Knight (1996) identifies these SMEs as Born Globals. Born Globals are small, have less than 500 employees and their annual sale are under $100 million. These companies start exporting one or more products within two years of their establishment and tend to export 25% of total production (Knight & Cavusgil, 1996). Hashai and Almor (2002) defines a born global company as: An SME with technological or knowledge intensive profile that derives most of its income from foreign markets, has started its organisational life while exploiting international opportunitites and is international in its orientation although entrepreneurial in terms of ownership and management structure.

Oviatt and McDougall (1995) identified seven characteristics of successful global start-ups. The following characteristics are **(1)** a global vision exists from inception. **(2)** Managers are internationally experienced, **(3)** Global entrepreneurs have strong international business networks, **(4)** Preemptive technology or marketing is exploited, **(5)** a unique intangible asset is present, **(6)** Product or service extensions are closely linked and last **(7)** the organization is closely coordinated worldwide.

Madsen and Servais (1997) states that one can explain the internationalization process of Born Globals as follows: since the founder of the Born Global has a high market knowledge built up through years of business activities in the industry, then the Born Global firm can easily take commitment decisions concerning international markets. Furthermore, market commitment may be relatively low because the country specificity of market knowledge is relatively low and international sales and marketing channels are alredy in place. The growing number of firms internationally involved from the start are challenging the traditional approach of the Uppsala theory. Opposite to the gradual patterns of the Uppsala model, new technology - based firms relies more on a number of cooperative agreements to underpin their international agreements.

Network theory offers a fresh perspective on the internationalization process of firms, especially for SME`s which tends to be dependent on relationship with other (Axelsson & Easton, 1992). The importance of relationship between agents of the value chain was introduced by Håkansson (1987). In this theory, markets are looked at as relationship between a number of players including customers, suppliers and private/public support agencies (Coviello & Munro, 1995). Johanson & Mattsson (1988) states that in terms of internationalization, firm`s success in entering a new international markets is more dependent on its relationship within current markets, both domestic and international, than it is on the chosen market its cultural characteristics. Firms that expand from domestic to international markets can do this through existing relationships which help the the firm to develop new partners and positions in the market as well as new contacts. At the same time, network relationships may restrict the nature of a firms growth initiative. Coviello & Munro (1995) conclude in their research that foreign market selection and entry initiatives emanate from opportunities created through network contacts, rather than solely from the strategic decisions of managers in the firm. These contacts may be formal (i.e. business-related) or informal (i.e. family, friends etc.). Researh done on the internationalization process of high technology firms indicates that in a highly competetive environment where a products life cycle is short, the observed patterens of international market growth for entrepreneurial high-technology firms differ from the process of larger manufacturing firms outlined in for instance the Uppsala model (Coviello & Munro, 1995). As the Born Global theory, the network theory

questions the patterns in the Uppsala theory and emphasizes instead the importance of networking activities that support the firm's resources.

An additional dimension to the entry mode issue is Dunning`s (1979) eclectic paradigm, or OLI theory. This theory states that a company`s entry mode is determined by the composition of the three following advantages: (1) Ownership advantages, (2) Location specific advantages, (3) Internalization advantages (please see to Appendix 5). The more OLI advantages a firm possesses, the greater the propensity of adopting an entry mode with a high control level such as wholly owned subsidiaries.

To be a serious contender on the market, a company needs to possess ownership advantages or competitive advantages compared to its competitors. Determinants of ownership specific advantages include firm size, proprietary technology, organizational capacity, and marketing skills, among others. These actors can be transferred across borders (Dunning, 1979)
Location-specific advantages refer to what the home or host country offers the firm. The different variables in location-specific advantages include input prices, quality and productivity of different factors (labor, energy, materials, components, etc.), transport and communication costs, infrastructure, government intervention, tax rates, investment climate, and economies of research and development (R&D) and marketing, among others (Dunning, 1979).
The last component is internalization-specific advantages, which looks at the advantages by producing through a partnership arrangement such as licensing or a Joint Venture. Dunning states that: a firm will engage in foreign direct investment if all three criteria are fulfilled. First, the firm possesses net ownership advantages vis à vis firms of other nationalities in serving particular markets. These ownership advantages largely take form of the possession of intangible assets which is exclusive or specific for the firm possessing them. Second, the firm must benefit more from these advantages itself, rather than to sell or lease them to foreign companies, i.e. to internalize them instead of externalize. Last, it must be profitable for the enterprise to utilize these advantages in conjunction with at least some factor of input outside their home country; otherwise foreign markets would be served entirely by exports and domestic markets by domestic production (Dunning, 1979).

The eclectic paradigm has been basis for many empirical studies on how market and firm specific factors influence the choice of strategy. Hill, Hwang and Kim (1990) extended the paradigm with a strategic variable or strategic orientation. This factor will likewise, as the existing factors, impact the optimal entry mode for the firm.

The findings of Coase (1937) can be applied to the entry strategy decision. When applied the transaction cost theory is focusing on finding the most efficient arrangement for an economic transaction where there are two choices for the firm. First, they can choose two carry out the transaction itself, called internalization, or the second choice, collaboration with a third party called externalization. When applying the transaction cost theory to the choice of entry mode strategy, the choice will depend upon the transaction cost related to each mode of market entry. The advantages of internalization are the reduction of the so called dissemination risk, the risk related to a company's know –how will be expropriated by a partner (Hill, Hwang and Kim, 1990) Opposite, transaction cost related to collaboration include direct and indirect cost related to minimize opportunism. Transaction cost varies according to inherent inefficiencies in knowledge transfer (Teece, 1977). Some of the knowledge is more difficult to transfer than others and does therefore contain higher transaction costs are transferred to a partner. An example of this is highly complex, tacit knowledge which means that it is highly unteachable and makes it difficult and costly to distribute.

The limitations of the transaction cost theory are that it does not mark the difference between different types of partnerships (externalizations). It also emphasizes on the economic costs and the contractual relationships instead of accounting for the role and influence of social relationships in business.

The resource based view suggests that strategic schools of thought are lacking since they fail to explain how firm succeed in achieving competitive advantage. As other theories applied to the entry mode decision not emphasizes the internal resources in the firm, the resource based view does. The theory suggests that firm size, introduced in the Uppsala theory and the Eclectic paradigm, is not a sufficient measure and that a firms internal resources must be analyzed. The resource based view identifies the following resources to be identified: Human, financial physical

and organizational (Barney, 1995). The resource based view is important to implement in the empirical analysis since SpiderCloud is small company that may lack the necessary resources to justify a high control entry mode.

3.2 Identified factors from the theory

The theoretical framework for this research contains seven different perspectives in regards internationalization and entry mode. Based on the literature review it will be outlined different factors from the five perspectives that will be subjects for a closer investigation.
The Uppsala theory purposes the key factors to be multinational experience and physic distance. Dunning's eclectic paradigm suggest a quite a number a relevant factors to address through its three different variables, ownership, location and internalization. To define the attractiveness of the market will market potential and market risk discussed. Other factors like differentiation, competitive intensity, multinational experience, market understanding and strategic orientation are other factors from Dunning's eclectic paradigm that will be investigated**.** The transaction cost perspective sets focus on the teachability of SpiderClouds technology as well as the dissemination risk related to bounded rationality and opportunism on the transfer of technology between partners. The network theory introduces a different perspective on the internationalizations of firms and purpose that existing and previous multinational customers should be viewed as a valuable resource, giving the opportunity for client followership. The Resource Based view contributes with internal resources and the Born Global perspective will consider the specific characteristics of knowledge intensive SME that can differ from traditional internationalizing firms which may have an impact on the entry mode decision for SpiderCloud. Vernon's (1966) perspective has also emphasized how the product life cycle (PLC) should be considered when deciding on an entry strategy.

4. Introduction to the chosen factors

In this section the focus will be on the list of factors that potentially can impact SpiderClouds entry mode decision. The factors will be examined and will highlight their relevance for the thesis. The relevant resource commitment and control in the venture will be discussed as well as presenting applicable theoretical framework to be applied in the empirical analysis.

4.1 Market potential

The potential size and potential growth in a particular market is viewed as an important aspect when determining a potential foreign investment. In high market potential countries an investment mode are expected to provide a high long-term profitability to a firm through the opportunity to achieve economies of scale and consequently lower marginal cost of production (Agarwal & Ramaswami, 1992). Agarwal and Ramaswami (1992) also states that even if economies of scale are not significant, a firm may still choose investment modes since they provide the firm with the opportunity to establish a long-term market presence. Caves (1999) found that small market size is a stimulation of licensing, but is viewed as an obstacle of FDI. This is also confirmed by Agarwal and Ramaswami (1992).

This research will consider the findings by Caves (1999) and Agarwal and Ramaswami (1992) as valid, i.e. the correlation between market potential and a high resource commitment/high control entry mode. By considering the findings as valid, the growth potential of the new market(s) must be evaluated as a factor that will affect the choice of entry mode.

4.2 Market risk

The investment risk or market risk in a specific country reflects the uncertainty over the continuation of present political and economic conditions and government policies. These factors are combined, very critical to the survival and profitability of a firm's operations in that specific country (Agarwal & Ramaswami, 1992). From this statement one can perceive that these factors deals with the following aspects; Economical risk, regulation, corruption etc. These are all factors that can hinder the company on gaining return on its investments.

Hill, Hwang and Kim (1990) stated that when a firm is faced by a volatile host market, the firms tend to chose low resource commitments, e.g. licensing. Oviatt and McDougall (2000) findings were similar. Through their research they found that firms entering countries characterized by a high country risk tend to go for non-equity modes, when firms in low-risk countries select equity modes of entry. According to the majority of research does a high market risk point to a low resource commitment and a low risk entry mode.

In the empirical research will analyze the potential risk in regards to corruption, economy and regulations as they are viewed as the most crucial factors that can affect the entry mode decision.

4.3 Physic Distance

In their studies did Johanson and Vahlne (1977) define physic distance as number of factors stopping the flow of information to the market and from the market. These factors mentioned are language, education business practices, culture and industrial development. Anderson and Gatignon (1986) call these differences for sosio-cultural differences. Uppsala stage model said originally that a firm would first target neighboring countries and then enter foreign market with greater sosio-cultural differences. In other words, the Uppsala stage model builds on learning in one market, and then this new knowledge can be utilized in the internationalization process into markets that are physically more distant.

Through researches it has been found that the greater the sosio-cultural differences, the lower degree of control is needed by the entrant. Anderson and Gatignon (1986) supported these findings. This is explained by the higher uncertainty level, which is perceived in unknown cultures. This uncertainty may very well be an obstacle for companies that are internationalizing and may result in avoiding any involvement due to the lack of understanding of the cultural norms and business practice in the host country. Hofstede (1980) confirmed that the greater the distance in values, customs and behaviors between their home country and target country, the more difficult it would be for foreign investors to operate successfully in the host country. Bell (1995) on the other hand stated that “New Ventures” or Born do not enter close market first, as suggested by the Uppsala stage model, instead do they enter markets where their networks increases their presence in the market.

Through the number of findings is it possible to conclude that sosio-cultural differences have influence on the choice of entry mode. A company will be reluctant to enter a country with large sosio-cultural differences compared to the firms’ home country. If there are large sosio-cultural differences present the company will facilitate a relatively low control and low commitment mode in the market. To evaluate the potential sosio-cultural differences will SpiderCloud and the target markets be examined by employing Geert Hofstede’s cultural dimensions.

Gert Hofstede analyzed a large database of employee scores collected by IBM. The database covered more than 70 countries. Subsequent studies by other researchers covered students in 23 countries, commercial airline pilots in 23 countries, civil service managers in 14 countries and up-market customers in 15 countries. These two studies combined indentified four independent dimension with a fifth dimension added on a later stage (Itim International, 2009). This research will only take into account the four original dimensions the dimensions indentified were the following: (1) *Power Distance Index* – This dimension deals with how less powerful members of organization and institutions accept and expect that power is distributed unequally, (2) *Individualism* – Individualism versus collectivism (the degree to which individuals are integrated into groups), (3) *Masculinity* – Masculinity versus femininity focus on the distribution of roles between the genders. This is a fundamental issue for any society to which a range of solutions are found, (4) *Uncertainty Avoidance Index* – deals with the society's tolerance for uncertainty and ambiguity, (4) *Long-Term Orientation* – long-term orientation versus short-term orientation. Values associated with long-term orientation are thrift and perseverance. Values associated with short-term orientations are respect for tradition, fulfilling, social obligations and protecting one's "face".

4.4 Client followership

When researching networking theory in the case of knowledge intensive SMEs have a number of researchers found that SMEs often target their target markets where their key customer's have a subsidiary or a sister company. To underpin these findings did Bell (1995) find, through his studies of Born Global companies, that 15 of 24 managing directors indicated that the internationalization strategies of their domestic clients had a strong impact on their own choice of export market.

Client followership is a relevant aspect when deciding possible entry modes. For SpiderCloud the possibility for client followership would justify a higher resource commitment in the chosen market. The high resource commitment is justified due to the reduced financial risk since the first customer already is obtained, before entering the market. It should be stated that no studies have examined the consequences of client followership.

4.5 Intensity of rivalry

The intensity of completion in a market may influence the options of different entry modes. When competition is volatile the choice of entry mode should not reduce the strategic flexibility of the firm since this may influence the response time. In such conditions it is required quick response from the firm. Caves (1996) investigated the relationship between market structure and multinational investments and found that foreign direct investments are more usual in markets with low competition. Caves (1996) also argued that when competitive advantages of local firms are substantial, they serve as a barrier to entry.

To identify the intensity of rivalry on the market the Porter's Five Forces will be applied. This framework is a powerful tool to understand where the power lies and help to assess the competitive intensity in the target markets. If the Five forces prove favorable, it will justify a high resource commitment/ high control entry mode. Next follows an introduction to the Five Forces.

4.5.1 Porters 5 Forces

The competition of an industry is a result of economic and competitive factors. Porters 5 forces is a framework created by Michael Porter that has addressed five basic factors that determines the competitive climate and the collective strength of the forces determine the ultimate profit potential of an industry. The factors are; bargaining power of suppliers, bargaining power of customers, threat of new entrants, threat of substitute products and competitive rivalry within the industry. The competitive climate varies from intense, where no company earns high returns on investment, to mild where there are possibilities for the companies to gain quite high returns. (Please see Appendix 6 for an illustration).

Threat of New Entrants: New entrants to a market bring in new capacity, the desire to gain market share and often substantial resources. Companies diversifying through acquisitions into the industry from other markets often leverage their resources to cause a shake-up (Porter, 1979). The threat of an entry depends on the barriers of entry and on the reactions from existing competitors. If the barriers are high the newcomers can expect sharp competition from the existing players on the market and thereby the new entrants will pose a serious threat. For new entrants Porter (1979) identifies six major sources of barriers to entry: (1*) Economies of scale*, (2)

Product differentiation, (3) *Capital requirements*, (4) *Cost disadvantages independent of size*, (5) *Access to distribution channels* and (6*) Government policy* (Porter, 1979).

In addition to these six sources Porter (1979) mentions two points. First, when the conditions change the threat of entry changes. Secondly, strategic decisions involving a large segment of an industry can have a major impact on the conditions determining the threat of entry.

Bargaining Power of Suppliers*:* Powerful suppliers are able to squeeze profitability out of an industry by raising prices or reducing the quality of purchased goods and services. The power for suppliers depends on the market situation and on the relative importance of its sales or purchases to the industry compared to its overall business (Porter, 1979). A supplier group is regarded as powerful if: (1) *it is dominated by a few numbers of companies and is more concentrated than the industry it sells to*, (2) *Its product is unique or at least differentiated or it it has built up switching cost (fixed costs) for their customers*, (3) *It is not obliged to contend with other products for sale to the industry*, (4) *It poses a threat of integrating forward into the industry's business. This provides a check against the industry's ability to improve the terms on which it purchases* (Porter, 1979), (5) *the industry is not a very important customer for the supplier* (Porter, 1979).

Bargaining Power of Buyers: Customers can force prices down, demand higher quality and put competitors up against each other. All these actions are at the expense of the industry's profit. Like suppliers, buyers depend on a number of characteristics of its market situation and on the relative importance of its sales or purchases to the industry compared with its overall business (Porter, 1979). A buyer group is powerful if: (1) *it is concentrated or purchases in large volumes*, *(2) The products it purchases from the industry are standards and undifferentiated,* (3) *It earns low profits, which create great incentive to lower its purchasing cost,* (4) T*he industry's product is unimportant to the quality of the buyers' products or services*, (5) *The industry's product does not save the buyer money* and last (6) *The buyers pose a credible threat of integrating backward to make the industry's product* (Porter, 1979).
These sources of buyer power can be attributed to consumers as a group as to industrial and commercial buyers. Consumers tend to be more price sensitive if they are purchasing products

that are undifferentiated, expensive relative to their incomes, and of a sort where quality is not particularly important (Porter, 1979).

Threat of substitutes: Substitute products that deserve most attention are products that are subjects to trends improving their price-performance trade-off with the industry's product, or are produced by industries earning high profits. Substitutes often come rapidly into play if some development increases competition in their industries and causes price reduction or high performance improvement (Porter, 1979). Substitute products or services can limit the potential of an industry by placing a ceiling on the price. If the industry can't upgrade or differentiate it will suffer in earnings and possibly growth (Porter, 1979). Substitutes do not only limit the profits in normal times, but also limit the profit and reduces the bonanza an industry can experience in times with explosive growth.

Competitive Rivalry within the industry: Competitive rivalry within an industry usually takes form through using tactics like price competition, product introduction and advertising. Intense rivalry occurs when the following factors are present: (1) *Competitors are numerous or are roughly equal in size and power*, (2) *Industry growth is slow, precipitating fights for market share that involve expansion-minded members*, (3) *The product or service lacks differentiation or switching costs*, (4) *Fixed costs are high or the product is perishable, creating strong temptation to cut prices*, (5) *Capacity is normally augmented in large increments*, (6) *Exit barriers are high* and last (7) *The industry is not an important customer of the supplier group* (Porter, 1979).

After assessing the mentioned factors it is easier to identify the company's strength and weaknesses. The crucial strength and weaknesses from a strategic standpoint are the company's posture vis-à-vis the underlying causes of each force. The next step may then be to make a plan of action for the company to better position the company, influence the balance of the forces and anticipate shifts in the factors underlying the forces (Porter, 1979).

4.6 Product life cycle

The product life cycle is a very important factor when considering a possible internationalization, especially in markets with very dynamic market life cycle. Empirical studies have shown that high tech firm in volatile markets find it beneficial to use low control/ low commitment entry

modes in order to get the product to market fast and thereby get a fast return on their so called "short lived" products. Bell (1995) concluded on the basis on a large empirical study that due to the short life cycle of many software offerings, direct export was considered to be the most effective way of entering all overseas markets. Caves (1996) concluded that the lead time required to license a producer was less than starting a subsidiary from the scratch.

If the window of opportunity is small, the best suited entry mode will be a strategy with little commitment and investment as possible.

4.7 Differentiation

With a differentiated product a company will be able to strengthen their competitive position on the new market by serving their customer's need. This justifies a higher resources commitment when deciding on an entry mode strategy since the financial risk is reduced. Richard Caves highlighted in his book "Multinational enterprises and economic analysis" (1996) another aspect in regards to the possibility of potential problems in regards to a local partner having less to lose from degrading or confusing the international positioning of the product. This implies that a highly differentiated product should be brought to market by a hierarchical mode to avoid problems related to integrations of a partner in the value chain. From the paragraph above it is reasonable to say that a company's differentiation or competitive advantage is a result of the firms' internal resources and competencies. It is therefore important to analyze SpiderClouds degree of differentiation to the competition to define if the product is truly differentiated.

4.8 Market understanding

As discussed does multinational experience have an influence on entry mode strategy. Specific market knowledge from previous engagements in the market does also have an effect on the entry mode strategy choice. Experimental learning provides the firm with a greater ability to detect the opportunities reduces the uncertainties of going abroad and may make international investor more willing to commit to a larger amount of resources If a company possess experience in a given country increases the chances for the company to choose a wholly owned subsidiary than choosing a licensing entry mode. This again, will prove that previous experience is a factor leading to a more willingness to use resources in a foreign market. Through the analysis it will

be examined whether SpiderCloud are in possess of any specific experience in the three target markets.

4.9 Strategic orientation

It is reasonable to suggest that a company's strategic orientation has an impact on the entry mode decision of the company. SpiderCloud is a knowledge intensive firm operating in a volatile industry. This fact makes the strategic decision of the firm especially focused on the firm's product development strategy. If the firm holds a long term product development strategy it suggests a high commitment/high resource entry mode.

Hill, Hwang &Kim (1990) argued that an MNC's counteractions to their competitor's initiatives or choice of pursuing a global vs. a multinational strategy impact the level of control it should seek in its foreign investments. Among others did Caves (1996) confirm that firms with high R&D expenditures tended to use more direct investment when going abroad.

As a result of the academic findings the strategic orientation of SpiderCloud should be examined.

4.10 Multinational Experience

In the Uppsala stage model of internationalization made Johanson and Vahlne (1977, 1990) the multinational experience an important factors. They stated in the model that the more multinational experience a firm possesses, the higher control modes can be chosen when choosing an entry mode strategy. Bell (1995) argued that a low control mode would be more efficient when a company lacks experience with foreign markets. Leonidou and Katsikeas (1996) argued that multinational experience only was a small factor in the entry mode decision compared to firm specific and market specific factors and it seems reasonable that a firm will decide on a low-control mode and gain experience through different settings internationally before committing themselves through a high control mode. The most recent research to this area of internationalization theory has been on the subject of Born Globals and the differences theses cases.

4.11 Internal Resources

Cavusgil and Knight (2009) stated that an internationalizing firm must chose a well suited entry mode, but that Born Global firms may face problems when trying to undertake a costly foreign

market entry mode, e.g. FDI. Compared to traditional MNE's would born global firms tend to favor exporting as their entry mode, giving the company the flexibility to change rapidly and cost-effectively which is a critical factor in evolving foreign markets (Cavusgil & Knight, 2009). Burgel & Murray (2000) said that since technolohy-based start-ups could experience negative cash-flows during their early years, the following consequences could be that they would lack fincial and human resources required to maintain an effective commercialization of their own product. The resource based view suggest that an internal analysis should be conducted to examine the financial, human and organizational resources avaliable to best decide on the most suitable entry mode. Through the emperical analysis it will also be discussed if the internal resources present can be viewed as competitve advatage for SpiderCloud.

4.12Teachability of technology

If a firms is considering a licensing entry mode is important that the technology is teachable and not entail a high level of tacit knowledge (Hill, Hwang &Kim, 1990).

Bell (1995) and others have shown that a high level of control is essential for success if the knowledge of production is tacit, and thereby unteachable. Hill, Hwang and Kim (1990) purposed that to a firm which the technology is closely linked to human capital, a licensing agreement could prove to be uneconomical because the potential return generated from the technology by the licensee would be lower than the returns generated by the licensor since the licensee bears most of the costs related to opening up and serving the foreign market.

Researchers have found that the age of the technology can affect the choice of entry mode, arguing that new technology are more complex and more expensive to implement than older technologies. This impacts the choice of entry mode in that way that new technology is unlikely to be transferred if a firm is engaged in a collaborative mode. Through their studies have other researchers found the opposite trend when studying knowledge intensive Born Global SMEs (Burgel & Murray, 2000).

Through the analysis it will be attempted to find out to what degree SpiderClouds technology is complex and teachable as well as how embedded it is to tacit knowledge.

4.13 Dissemination risk

In regards to transaction based problems associated with a strategic partner is dissemination risk also a factor important to consider. Dissemination risk was introduced by Hill, Hwang & Kim (1990) and refers to the cost of protecting proprietary technology. This cost is one of the main reasons companies internalizes their operations. Hill, Hwang & Kim (1990) defines dissemination risk as the risk that firm specific advantages in know-how will be expropriated by a licensing or Joint Venture partner. The more valuable technology, the higher are the potential gains from expropriation and therefore are the costs of preventing such actions higher.

Dissemination risk can be divided into two different sets of categories. The first category is related to those costs that can be insured for by having licensing or Joint Venture partners by commit contractually to a mutual agreement. The second category of costs is those who occur as a consequence of a partnership. These costs are called expected losses. Expected losses are losses a firm will have to anticipate due to unpredicted situations which lead to opportunistic behavior on the part of the partner (Hill, Hwang & Kim, 1990).

4.14 Distribution of factors

To better structure the empirical analysis the factors identified will be divided into three different groups. The groups will the three advantages Dunning (1979) identified in his Eclectic Paradigm. This is done to better understand, through the empirical analysis, if SpiderCloud holds the advantages to enter in a high commitment entry mode or if they should pursue a low commitment. The three advantages with identified factors follow:

OWNERSHIP SPECIFIC:	**LOCATION SPECIFIC:**	**INTERNALIZATION SPECIFIC:**
• Client followership • Differentiation • PLC • Market understanding • Strategic orientation • Internal resources • Born Global • Multinational experience	• Market potential • Market risk • Intensity of competition • Physic distance	• Teachability of technology • Dissemination risk

Figure 4: Distribution of identified factors (Authors' design)

Born Global was not mentioned in the discussion of the factors, but is in this research identified as an ownership advantage.

In the previous sections have the factors identified to affect SpiderClouds entry mode decision been discussed. To give a better overview of the factors and their affect on the entry mode decision, high or low resource commitment entry mode strategy, the factors have been implemented in the model on the next page. The affect of the factor is shown with the (+) and (-) sign where (+) indicates an affect justifying high resource commitment and (-) justifies low resource commitment.

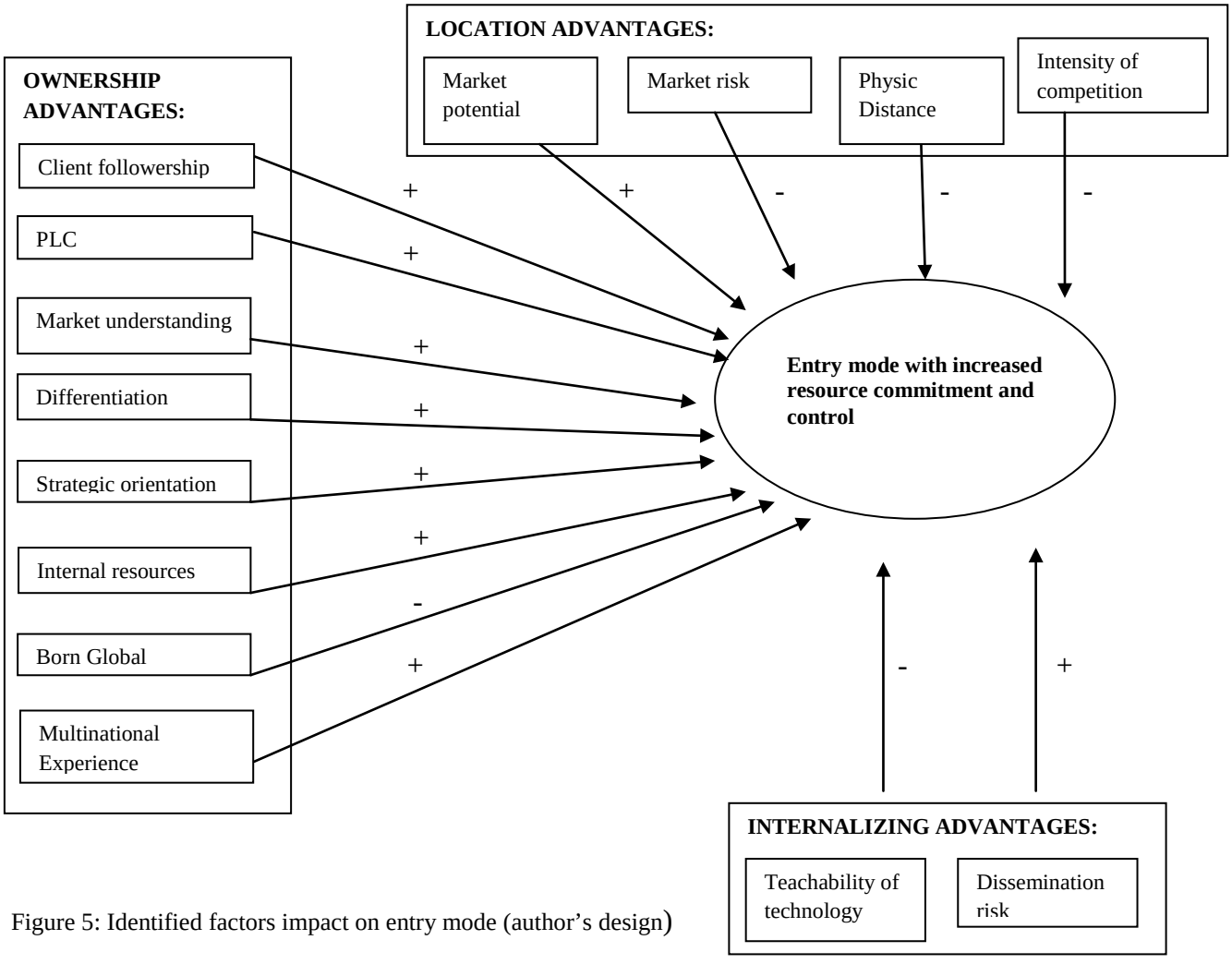


Figure 5: Identified factors impact on entry mode (author's design)

5. Modes of entry

Selecting the optimal method for entry into a foreign market is an important factor in the success of international operations. The different modes of entry vary from full equity (acquisition, Joint Venture) to non-equity mode (licensing or contractual) and each mode has its benefits and drawbacks which makes it appropriate in different business situations (Anderson & Gatignon, 1986) The benefit of having a high level of control is that it makes it possible to increase the profit through influencing decision- making. On the other side, the price you pay for having control is the greater the commitment of resources, increased responsibility for decisions and increased exposure to variability in the foreign economy.

5.1 Licensing

Licensing means that a company allows a licensee in the target market to use the property of the company. Such property is usually intangible assets as patents, trademarks and production techniques. By employing this strategy the licensor sacrifice almost all control over operations in return for royalty fees for its property. The option constitutes a minor financial risk and allows the expanding company to capitalize on the existing distribution system of a partner with more market presence and understanding in the exact venue it is needed (Hollensen, 2007). It is also argued that a licensing strategy allows a company to achieve an economic breakeven point at an earlier time, which means that when time windows are short, a licensing strategy is a sensible option, in order to reap the returns at an earlier stage before the market for the product starts declining (Caves, 1996). When employing the licensing strategy the company will experience dissemination risk. This refers to the risk that firm-specific advantages in know-how will be expropriated by a licensing partner (Hill, Hwang, & Chan Kim, 1990). By getting this access the licensee can exploit this knowledge in other applications, other than stated in the contract between the two parties.

For SpiderCloud, a licensing agreement would comprise that they would transfer their production techniques to the licensee. SpiderCloud would limit it risk by outsourcing the distribution, implementing and supporting the product e.g. most of their value chain.

5.2 Acquisition

Through this strategy the company decides to buy another company's ownership stakes in order to assume control over the firm. Using acquisition as an entry mode is a viable option if the company is willing and is able to commit larges resources to the expansion. Acquisition is a often used tool in growth strategy. The strategy represents approximately 70% of worldwide FDI (Peng, 2009). The main advantage of this strategy is the speed of the market penetration. An existing firm will have a company infrastructure ready to be exploited. Other advantages by selecting Acquisition as entry mode is complete equity and operational control, protection of company know-how and the ability to coordinate globally (Peng, 2009). Drawbacks with acquisition are that it comes with high development costs and post-acquisition problems.

5.3 Joint Venture

A Joint Venture (JV) is a "corporate child" - that is, a new company given birth and jointly owned by two or more parent companies. JV has three principal forms: Minority JV (less than 50% of the equity), 50/50 JV and majority JV (more than 50% equity) (Peng, 2009).Through the JV the two parties share all costs, risks, profits and access to each other's knowledge and assets. One can identify the entry mode as a high commitment strategy. The potential drawback for this entry mode is the divergent goals and interests of the partners. Further, effective equity and operational control may be difficult to achieve since everything has to be negotiated. Finally, the nature of the JV does not give a company the tight control over a foreign subsidiary that it may need for global coordination (Peng, 2009). As with the licensing entry mode, the dissemination risk also play a role as a drawback in this type of entry mode.

In SpiderClouds case a Joint Venture would fit the company better than an acquisition. By sharing know-how between the parent companies, the JV can, without much R&D, take their products one step further. The cost and risk profile is also very appealing in this scenario.

5.4 Direct export

Direct exports represent the most basic mode, capitalizing on economies of scale in production concentrated in the home country and affording better control over distribution (Salomon & Shaver, 2005 see Peng, 2009). Direct export involves selling directly to an importer or buyer

located in a foreign market. The main advantages linked to direct export is the economies of scale in production concentrated in home country and the fact that the firm gets better control over distribution. The main drawbacks are high transportation costs, the marketing distance from customers and trade barriers and protectionism.

5.5 Indirect export

Indirect export means that some other entity handles the distribution and marketing of the company of the company`s product in the market (Hollensen, 2007). The intermediate takes directly control of the export processes for the firm, but the firm remains control over its technology and know-how as well as the production. The great advantage of indirect export is that the firm can concentrate on production and avoids the overhead costs and administrative burden involved in managing its own export affairs. The potential drawbacks of the strategy are less control over distribution (relative to direct export) and the inability to learn how to operate overseas.

6. Presentation of case firm

This section will introduce the company and highlight important insights such as management, history, product and competitors for SpiderCloud. The knowledge and background of the company is important to know to understand the analysis in the thesis.

6.1 SpiderCloud Wireless Inc.

SpiderCloud is a telecommunication company with headquarters in Silicon Valley, CA. and consist of around 60 people, divided on facilities in Silicon Valley, Ohio, New Jersey and London. The company vision is to solve a fundamental problem on the 3G network, the capacity and coverage problem and to have s scalable enterprise portable system. SpiderClouds thoughts on the next 3-5 years are to continue to innovate on the existing platform.

The company was established by people with extensive international experience in the industry. The senior executives are uniquely picked and they have all prior relationship from previous companies. SpiderCloud has at the moment no sales, but started lab testing November 2009 and is the moment doing friendly user trials in both the US and Europe. Their main focus at the start was the European market, after being approached by a major global mobile operator based in

Europe. It has also been established relationships with operators in the US and South Asia. The main focus is still Europe but as soon as the commercial system is ready it is likely to see early adoption into three geographies by the end 2011.

The shortage of capacity and coverage is a growing problem and it is already a big problem inside buildings. The fact that people and enterprises rely more and more on smartphones is one of the main reasons for the problem. The company has created a system that addresses the coverage and capacity problem on the Universal Mobile Telecommunications System (UMTS) 3G network, a system called enterprise radio access network (E-RAN). The potential market size for the company is quite large with every UMTS operator in the world as a potential customer.

The company was first out with the new revolutionary product and there are no direct competitors which uses the same technology/system architecture. There are others that address on the same problem, but not using the same approach as SpiderCloud.

6.2 History

SpiderCloud was founded in November 2006 and is privately funded with 4 investment groups as main investors, Charles River Ventures, Opus Capital, Matrix Partners and Shasta Ventures. Through two investment rounds has the company raised US $40 million, and is expecting to raise another US $ 10-15 million during October 2010. Until today's date has the company been focusing on developing a sustainable technology to overcome the coverage and capacity problem on the 3G network. They are recently started market testing and are looking towards releasing their system in the market.

SpiderClouds main target from the start has been the European market. Main reason for looking towards Europe is that the capacity problem is fundamentally bigger here than anywhere else in the world. The density of people is so great that the coverage and capacity problem has to be solved in another way then the traditional methods. Another very important reason is that the senior executives have strong relationships with global mobile operators based in Europe from previous companies.

The executives are comprised by people with proven success from multi-billion dollar companies within the telecommunication market. Their routine span from a number different companies such Cisco Systems, Flarion Technologies, Juniper Networks, Shasta Networks, Stoke, Trapeze Networks and Qualcomm, and every senior executive has been handpicked for through their previous relationships. The composition of the executive team makes it to a world-class team that has the knowledge and routine to address the problem in the wireless industry.

6.3 Strategy and target customers

At this stage has the firm no concrete strategy that they are following or are planning to follow. Their focus is to continue to be a technology innovator and prepare their system to meet the challenges of the changing technology according to the 3GPP LTE (4G) (from now: LTE) roadmap (please see appendix 1 for definition). This can be described as a long term product development strategy.

SpiderCloud are set out to solve a fundamental problem for the mobile operators, i.e. mobile operators are their target customer. It is the mobile operators that are delivering the 3G network to their subscribers, and it is them who have to take matters into their own hands to solve the problem.

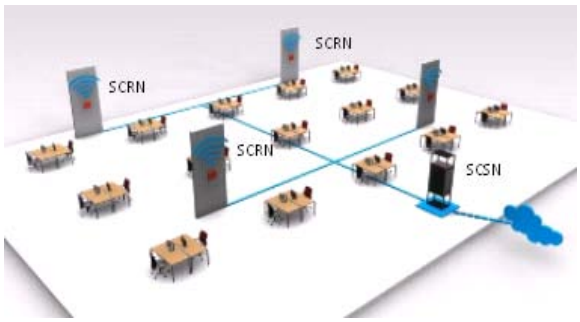
The firm is not following a certain marketing strategy. The company has not started selling the product to their target customer and is at the moment focusing on approaching different mobile operators to attract interest in their product.

6.4 Technology and Product

The SpiderCloud system is called the SmartCloud E-RAN solution. The solution is designed to meet scalability requirements of small cell technologies when deployed inside a medium to large building. The E-RAN system is comprised of the SmartCloud Services Node (SCSN), which controls a number of SmartCloud Radio Nodes (SCRN) deployed throughout the enterprise. When connecting the Service Node with the Radio Nodes you create a unique in-house 3G network. The SCSN is the central traffic point in SpiderClouds architecture. The SCSN provides traffic aggregation and session management for all mobile sessions delivered through the

SmartCloud Radio Nodes. Please see figure below for a better understanding of the system build-up.

The E-RAN represents a mobile broadband service delivery platform that is tightly integrated within the corporate network infrastructure. As a result the SCSN is in a unique network position inside the enterprise local area network (LAN) to provide direct integration between corporate assets and mobile devices through any radio access technology combination. The Service Nodes also provide direct integration between mobile devices and corporate intranet for data applications and services, which means that the mobile devices can have a direct and secure access to corporate data applications without requiring the sessions to go back to the mobile core network. As a result, mobile operators now have a cost-effective and operationally efficient an in-building mobile broadband solution - previously too expensive and difficult to deploy.



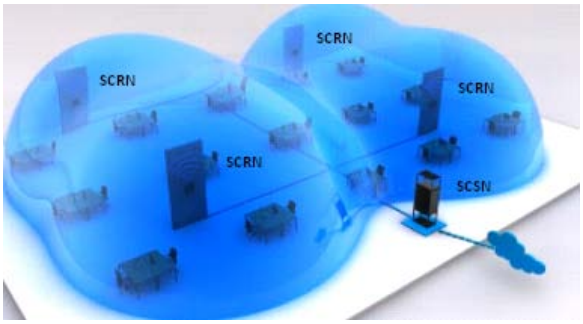


Figure 6: An description of how the SCSN and SCRN is connected (SpiderCloud, SmartCloud Wireless Technology, 2010a)

Figure 7: Result of the combination of SCRN and SCSN, where the blue area is the new improved coverage inside the enterprise (SpiderCloud, SpiderCloud Wireless inc products, 2010b)

7. Analyses

The analysis is divided into four major parts where the theoretical models will be applied to analyze the factors indentified within each part. The parts subject for analysis is market specific factors, industry specific factors, organizational specific factors and transaction specific factors. Further on will the analysis of the factors will be discussed, both relevance and effect on entry mode, which subsequently will end up in possible eliminations of the various entry modes. Through a discussion of the remaining entry modes, a recommendation for SpiderCloud will be outlined.

7.1 Ownership advantages

7.1.1 Client followership

Small and medium knowledge intensive companies are often influenced by their major clients when choosing foreign markets. The entry mode will also be affected by this influence as the possibility to follow the major client into other markets is present.

SpiderClouds executive team has, from earlier companies, a broad network and good contacts within global mobile operators. One of the most important reasons for SpiderCloud to pursue the European market was that they were able to seek and secure lab testing approval from a major European (global) operator. This was a company SpiderClouds executive team had previous relationship with. They have also prior relationship with 2-3 leading European mobile operators and as vice-president of marketing, Ronny Haraldsvik (2010) says; “Relationship matters!”

It is clear that this factor is very important and will influence the entry mode to Germany, France and the UK. SpiderCloud has a golden opportunity to pursue a strategy of client followership when they have a global operator which stands up and says that they are willing to help SpiderCloud with the trials. The operator is interested to make the product a reality since it will solve a fundamental problem for them. A possibility for SpiderCloud is to target different global operators which operates in different geographies and in that way avoid conflicts between the operators.

7.1.2 Differentiation

Through a differentiated product, SpiderCloud will be able to serve the customers exactly what they need and thereby strengthen their position in the market. The differentiation is derived from the company's internal resources and this means that SpiderClouds differentiation relative to the competition must be analyzed in order to determine whether the product is differentiated and by this gives the company a competitive advantage.

It is fair to say that SpiderCloud has a fairly differentiated product. They have to address the different 3G technologies present in the market as well as focusing on R&D to address the challenges in the future of the company. SpiderClouds product is differentiated in that way that it developed systems that can support a technology that is available anywhere in the world as well as it offers the customers a value added solution. The product has given the customers the possibility to take the femtocell solution available on the market and scale it. This gives the customers possibilities that were not available for them earlier. This is a result of the system architecture. This architecture is without a doubt the company's competitive advantage and from what they know do they have a head start on all other competitors on 12- 18 months. It is clear that SpiderCloud has a competitive advantage present (Haraldsvik, 2010).

The first mover advantage is also an important factor that can help the company. The first mover advantage gives SpiderCloud the possibility to offer the market a product differentiated from the competitors as a sole provider. This advantage can help the company to gain a massive market share and, thanks to the competitive advantages developed, it will also be able to defend its leadership position from potential new entrants.

The company is offering a well differentiated well situated in the market and has differentiated products that are able to serve their customers' need in the market. Hence, a high resource commitment can be justified.

7.1.3 Product Life Cycles

A company entry mode is often related to their products realistic lifetime. For SpiderCloud this is a more important for other companies with diversification in their product line. SpiderCloud only have one product which is looked at as the only source return for the company. This section will

look at the expected future for the mobile market, both advances in technology as well as the increase of traffic on the 3G network in the years to come.

As the mobile operators already are experiencing problems in regards to capacity and coverage at to this date, the focus will be more and more centered on finding solutions to address the fundamental problem in the years to come. By 2014, Cisco System estimates that the mobile data usages will be 39 times higher than what it was in 2009 (Cisco Systems, 2010b). The business usage, which is SpiderClouds systems' most suitable users the growth is estimated to be 27 times higher than in 2009. This growth in mobile usage will force mobile operators to find alternative solutions to the capacity and coverage problem. Please refer to Appendix 11 and Appendix 12 to see expected growth in Global Mobile Usage and Global Mobile Business Usage estimated by Cisco System.

One also has to consider the changes in technology. Within the 3G technology there is a different sub-technology. The most prominent technology used today is the WCDMA and the HSDPA. Those to combined, shares all the 3G subscribers between them, globally. In Appendix 13 and Appendix 14 is the evolution of mobile systems as well as the LTE roadmap illustrated.

There are rapid changes the technology of mobile systems. At this time the most prominent technologies are, as mentioned, WCDMA and HSDPA. The new step is the launch of the HSPA+ network, a network already introduced in parts of the world. The focus for the mobile operators in the years to come is the implementation of the LTE network.

Earlier studies has shown that high tech firms in very volatile markets find it beneficial to use low commitment and low control modes of entry, such as licensing or exporting in order to get fast return on their short lived products (Caves 1996).

The technology is always at the center of focus, trying to improve it. SpiderClouds product is built to support the 3G network where WCDMA and HSDPA are the most prominent technologies. The next step is as mentioned the HSPA+ technology. HSPA+ is new software that will improve the speed of the network, it will not require a new product because the SpiderCloud

E-RAN system is already compatible with the technology, thus, the PLC will be longer since the growth stage increases.

In regards to the new LTE technology the situation is somewhat different. The LTE technology is hardware for radio nodes and new software for the service nodes. This means that SpiderCloud has to produce a new product that can support the new technology. This is something SpiderCloud already has taken into account and according to Vice- President of Marketing, Ronny Haraldsvik, are they prepared to support the LTE technology when necessary (Haraldsvik, 2010).

But one also has to consider the rapid change in technology applied by the mobile operators. The LTE system may not be offered by all mobile operators in the start, but history shows that all carriers will build up systems that support the LTE system and likely systems that will take LTE one step forward at a later stage. The LTE technology will increase the capacity on the network, compared to the 3G, and will not be dependent of SpiderClouds system in the start. When the LTE system has been implemented by the mobile operators and the number of subscribers relying on the network starts to increase the LTE network will meet the same capacity problem the 3G network are facing today. SpiderCloud does in fact not have to introduce a system applicable design to fit new technologies before they have seen traction in the market. This suggests that SpiderClouds E-RAN solution has a long life cycle.

7.1.4 Market Understanding

Internationalization theory suggests that the learning experience in a country increases the possibility of a high control and resource commitment entry mode. Market understanding covers the characteristics e.g. concrete learning from doing business in the target market, business networks, industry characteristics etc.

SpiderCloud have no experience in none of the three target markets. In fact, they do not have any experience at all in any other markets. This fact contributes to a high uncertainty level related to the market entry. The firm has an office present in London, UK which can have a positive effect on the uncertainty level since they are building up market knowledge by already being present in

one of the target countries. But there is no doubt that SpiderCloud are lacking market understanding which indicates that a low resource/ low commitment entry mode.

7.1.5 Strategic Orientation

SpiderCloud is a small and very knowledge intensive company that operates in a volatile industry. Due to this the strategic orientation the company chooses will affect the entry mode. Since the company are in the situation they are it will be important to focus on a product development strategy so that they can hold their long term perspective in the industry. On the other hand could the company decide to focus on a more short term strategy and try to maximize their return from the existing technology. The two options represent two very different entry modes.

It would be reasonable to believe that the executive will focus on a strategy that will secure the long term perspective for the company. Both for the company itself and if potential buyers would approach them, they will have a well functional company with a long term plan. As Ronny Haraldsvik say: *"They (the executives) want to build a successful company that can stand alone. I think in the case of SpiderCloud we just hope that we can last as long as possible because we solve a fundamental problem"* (Haraldsvik, 2010). He also states that: *(…) we will continue to focus on being a technology innovator"* (Haraldsvik, 2010). This strategic orientation is the best solution for SpiderCloud. The fact that they are at the moment the only supplier of the system and system architecture also reminds one of that their return will be fairly high until a competitor establishes itself on the market. If they continue on developing the product and focus to be a technology innovator, the entry barriers for potential entrant will increase significantly.

As a long term product development strategy is best suited for SpiderCloud, a higher resource commitment market entry is justified.

7.1.6 Internal resources

7.1.6.1 Financial Resources

As of today does SpiderCloud not have any sales that can generate income. The only source of income is from four different investors groups. These four groups have been with SpiderCloud from the beginning, helping them out financially to reach the goal. The company have been through two investment rounds and generated a combined amount of 40 million dollar. An

additional 10-15 million dollars have been put up by the investors and was expected to be in place at the end of October 2010, increasing the investment to between 50 and 55 million dollars. Mr. Haraldsvik stated that; "*We have to give a lot of credit to our investors for taking the risk and putting in 40 million dollars, soon 50, 55 million dollars. There is not a company in the world right know in the infrastructure space for 3G that gets 40 – 50 million dollars to do what we are doing"* (Haraldsvik, 2010). He also states that the company has enough resources to take the product to market by themselves.

Even though SpiderCloud not have any registered sales it is reasonable to say that the company has strong financial resources and enough equity to continue the development of their product as well as the internationalization process. The willingness to help with equity from the investors may suggest a high commitment entry mode.

7.1.6.2 Organizational Resources

The human and organizational resources are very much present and easy to spot in SpiderCloud. The company is comprised by people with broad experience from the telecommunication market and there is good relationships present between the executives from earlier start-ups. The CEO, Mike Gallagher, have uniquely handpick each executives to their position, based on earlier work together, fully aware that each person can perform their best in that exact position. In the start-up process potential investor groups criticized the choice of picking Senior Executives with broad experience would mean a high cost upfront The feedback from the CEO was; *"if you want a global company from the get go you need the international experience right away"* (Haraldsvik, 2010). The decision to pick the executives was made out of previous experiences in earlier start-ups and the team knew that they could trust each other. All executives have earlier been involved in successful international start-ups within the telecommunication industry. Most known was Flarion Technologies were all executives had a role, except senior vice president of engineering and operations, Behrooz Parsay. Flarion Technologies were sold to Qualcomm in 2006 for a fee of 600 million dollars, according to Business Week (Kharif, 2005).

According too was has been discussed in section 7.3.5.1 and section 7.3.5.2 it can be determined that SpiderCloud possesses the resources needed to engage in a foreign market entry. The

company seems strong financially and has extensive knowledge within the market, which indicates that a high commitment entry mode can be feasible.

7.1.7 The Born Global Aspect

The following sections will focus on analyzing if SpiderCloud can be defined as a Born Global and which affect this can have on the choice of entry mode and hereby answer the second research question in the thesis.

Hashai and Almor (2002) defines a born global company as an SME with technological or knowledge intensive profile that derives most of its income from foreign markets, has started its organisational life while exploiting international opportunitites and is international in its orientation although entrepreneurial in terms of ownership and management structure (Hashai & Tamar, 2002). Oviatt and McDougall (1995) identified seven characteritics that are much the same as Hashai & Tamar (2002) The seven characteritics will be discussed up against the case of SpiderCloud, below.

The first characteristic Oviatt and MacDougall (1995) identifies is a global vision exists from inception. As vice-president of marketing, Ronny Haraldsvik (2010) states: "*We didn`t solve a problem for 700 MHz band in the US and rural area. We set up to solve a worldwide problem, which is capacity.*" SpiderClouds vision is to solve a fundamental problem for operators worldwide. The technological architecture by SpiderCloud is unique and is not to be found anywhere in the world.

The second characteristic mentioned is Managers are internationally experienced. All managers in SpiderCloud have international experience from Qualcomm, Flarion Technologies etc. The CEO, Mike Gallagher, has broad international experience after 25 years in the telecommunication and wireless industry. At Flarion Technologies, where he was President, Mr. Gallagher led the mobile broadband communication company's day-to-day operational strategy, sales and marketing, and expansion into Europe and Asia. Vice-president of systems engineering, Michael Finlayson, also have substantial experience from Europe and Asia after serving as a technical consultant for Flarion Technologies where he was responsible for technical consulting worldwide, including the deployment and testing of 3G/4G mobile broadband networks for major

cellular operators across the U.S., Europe and Asia. Ron Pelley, Vice-president and managing director for Europe, has considerable expertise within the European market after leading the European business development activities at Qualcomm, and before that, the European sales team in at Flarion Technologies. The rest of the managers have built up their expertise through working for international enterprises in a global industry through a number of years.

Third characteristic introduced by Oviatt and McDougall (1995) is Global entrepreneurs have strong international business networks. The entrepreneurs of SpiderCloud have numerous successful start-ups behind them within the telecommunication and wireless industry. Through these start-ups have they established a strong international business network and have strong existing relationships with global mobile operators. These relationships have resulted in cooperation with one of the largest mobile operators in the world after the mobile operator approached SpiderCloud saying that they were interested to work together and help SpiderCloud to bring the product to market. The international business network of the entrepreneurs have also resulted in several companies have approached SpiderCloud, interested in a cooperation.

Next characteristic is focusing on technology and marketing. Preemptive technology or marketing is exploited. Ronny Haraldsvik (2010) stated the following: "*This is absolutely preemptive technology because we identified a problem we saw coming, when no one else did, and we have to give a lot of credit to our investors for taking the risk and putting in 40 million dollars, soon 50-55 million dollars. There is not a company in the world right know in the infrastructure space for 3G that gets 40 – 50 million dollars to do what we are doing."* SpiderCloud are the only company who, publicly, addresses the fundamental problem on the 3G net. As mentioned are there femtocell players in the market, but no one that focuses on serving customers on a large scale instead of the limited service of 8-16 subscribers.

A unique intangible asset is present is the fifth characteristic mentioned. When asked about this, Mr. Haraldsvik (2010) answered; *"(…) a unique intangible asset is not present. It is a must have."* The company has different patent on the system which will protect their entry to the market. Having these intangible assets, increases the barriers for entry for potential competitors.

As the sixth characteristic Oviatt and McDougall (1995) indentify: Product or service extensions are closely linked. They also add: Continual innovation allows the small firm to continue to exploit its niche market. SpiderCloud have identified the need to continue to innovate their product as well to try to find new solution to bring to market and are aware that they have to continue to be a technology innovator.

A last characteristic mentioned is the organization is closely coordinated worldwide. With offices in Silicon Valley, London, Ohio, South Asia and a possible expansion to Southern America in 2011 one can say that the company is coordinated worldwide. What makes the organization so closely coordinated is something already discussed in the analysis. The team is comprised by handpicked personal that trust each other. The CEO, Mike Gallagher, know that he can delegate work without worrying on the quality of the work being done. Closely coordinated through existing relationship with a lot of trust is according to Ronny Haraldsvik; *"The best thing you can have"* (Haraldsvik, 2010).

Through the analysis of the statements of Oviatt and McDougall (1995) and Hashai & Tamar (2002) it is reasonable to conclude that SpiderCloud fit with the statements and thereby can be defined as a Born Global company.

7.1.8 Multinational Experience

In this section we will look at Multinational Experience of the firm. This factor is derived the Ownership Advantages in the Eclectic Paradigm. The reason for defining it as an Ownership Advantage is that the more multinational experience the company possesses, the less market risk is involved and thereby a high commitment entry mode will be plausible.
SpiderCloud is a new company with no sales experience at all and have none prior multinational experience. Burgel and Murray (2000) concluded in their research of international Born Globals that direct firm experience do not have a significant impact on the commitment of the chosen entry mode. What they did find was a correlation for the opposite from the traditional "Step by Step" model. The personal experience of a firm's manager's, instead of the firm, suggestes that the firm will committ less resources to the internationalisation process, i.e. exporting is pursued more often than indirect exporting through intermediary. As it was concluded in section 7.1.7 that

SpiderCloud can be defined as a Born Global. It has been more and more aceppted in the academic litterature that knowledge intensive firms are international from the start, hereby not following the traditional stages introduced in the Uppsala theory. It is therefore questionable the importance of "Multinational experience" in this research. For the remainer of this research will the factor "Multinational experience" therefore not be considered as a factors influencing the foreign market entry mode.

7.2 Location advantages

7.2.1 Market potential

The target market potential is likely to impact SpiderClouds entry mode decision. If the target market is expecting substantial growth in the near future a quick entry mode would be preferred, and a large market size can justify a large resource commitment entry mode. This section will outline an estimate of the potential market size for the next 5 years. As earlier mentioned, is this thesis looking at the European market with Germany, the UK and France as the main case target markets. The estimations are not made solely on SpiderClouds target customers, as they are the mobile operators, but on the 3G market as a whole. High expectations of growth in the 3G market will consequently affect number of subscribers for the mobile operators..

This section will focus on the number of subscribers on the 3G network globally and in the case target markets, as well as the estimated growth for 3G usage until 2014.

One of the main reasons for SpiderCloud has decided to focus on Europe is the density of people present here. The density of people and number of commercial 3G network operators have affected the coverage and capacity problem to be more fundamental here than in other geographies.

To benefit from SpiderClouds system one has to be a user of the 3G network. In the 3 target markets there are 12 different 3G WCDMA (please see Appendix 1 for definition) networks with mobile operators in every country that has launched the HSPA technology (please see Appendix 1 for definition). In Western Europe there are 140 WCDMA/HSPA networks present which served, by the second quarter of 2010, 42% of all of the 3G subscribers in the world, approx. 242 million subscribers (Global Mobile Suppliers Association, 2010). Please Appendix 7.

The three target markets have approx. 305 million subscribers combined on the GSM network and the WCDMA/HSDPA networks. Investments have also been made by the operators with future focus with investments made in all three target countries making commitments to the future HSPA+ and LTE technology (Global Mobile Suppliers Association, 2010).

By the second quarter of 2010 it was registered 529 million WCDMA/HSPA subscribers globally. The GSM technology had at the same time estimated 3,891 billion subscribers globally and by the end of 2012 it is estimated that WCDMA technology will pass GSM as the prominent technology on the market (Global Mobile Suppliers Association, 2010).

According to Cisco System the data usage on mobile telephones are coming to be used more and more in the years to come. They have estimated a compound average growth rate (CAGR) for global usage of petabyte pr. month (please see Appendix 1 for definition) to be 108% until 2014. Cisco System estimates that mobile data in the 3 markets will be 47 times higher than what it was in 2009. Since SpiderCloud are targeting enterprises is it more interesting to look at the estimated growth for business mobile data. The estimated shows that this usage is expected to grow, globally, 93% on a yearly average. When looking at the total business data traffic in the 3 target countries, is it here expected a traffic which will be 37 times higher than in 2009 (Cisco Systems, 2010).

By the second quarter in 2010 the total number of 3G subscribers in all geography was 529, 6 million divided on the HSPA and WCDMA, the two main 3G technologies. The growth from the second quarter 2009 to second quarter in 2010 was a massive 41, 1%. This growth is expected to maintain in the years to come and Global Mobile Supplier Association has estimated that by the end of 2013 will there be 1, 8 billion subscribers on the 3G network (Global Mobile Suppliers Association, 2010). The expected subscription growth and forecast for WCDMA/HSPA is shown in Appendix 8 and Appendix 9.

The 3G technology is changing rapidly and the most prominent technologies are the two mentioned, WCDMA and HSPA. The focus for the mobile operators is now changing to the new technology called HSPA+, evolution of the existing HSPA technology. At the moment there are 127 HSPA+ global network commitments in 57 countries and 73 commercial HSPA+ system

launched in 41 countries. There have also been heavy investments in the LTE technology. The LTE technology is also referred to as the 4G technology. At the moment are there 156 operators investing in the LTE technology in 64 countries (Global Mobile Suppliers Association, 2010).

Having mobile operators present in the case target markets is also important when defining the market potential. Having global operators present increases the market potential through the opportunity of client followership and the fact that global mobile operators has the resources to invest in new technology introduced to the market, e.g. HSPA+, LTE. Each of the three case target markets has major global mobile operator present, and the 3G subscribers in the three case target markets are divided between a range of different mobile operators. In Germany there are four main operators: T-Mobile, Vodaphone, O2 and E-plus. In the UK the main operators are O2, Vodaphone and Everything Everywhere (result of a merger between Orange UK and T-Mobile UK). Last, in France the main operators are Orange, SFR (44% owned by Vodaphone) and Bouygues Télécom. The market share for the mobile operators in each country is illustrated in Appendix 10.

With all the numbers now presented it is very important to have in mind that the market not is directly accessible. For SpiderCloud it is not the subscribers itself which are the potential customer, but the operator. This is important to emphasize. The number of customers for SpiderCloud is therefore relatively small, but one also should consider that once a contract is signed with an operator it would be reasonable to expect that the mobile operator will stay with SpiderCloud for a substantial amount of time. This expectation is strengthened by the fact that SpiderCloud is the only provider in the market at the time.

7.2.2 Market risk

Market risk comprises the following: political conditions, government policies and economical conditions which are essential for the firm's survival and profitability. This section will discuss the degree of market risk present in the three countries.

7.2.2.1 Economical risk

Germany

The German economy is recovering after a serve recession that followed after the global financial crisis. It is expected that Germany will reach pre-crisis production levels, but the unemployment and the budget deficit is expected to rise further. The global financial crisis has showed how exposed the German economy is global developments and has revealed some underlying structural weaknesses. According to Global Rates, Germany had by August 2010 inflation by 1,025% which is below the upper limit of 2% set by the European Central Bank (Global Rates, 2010). By looking at the GDP of Germany it is easy to see that the economy took a big hit during the financial crisis and reached a record low GDP of -6, 60% March 2009. Since March 2009 the economical growth has turned around and by June 30th 2010 the GDP was +3, 70% (Trading Economics, 2010). The GDP is measured by the year over year change in Gross Domestic Production. The annual GDP growth rate takes into account a full year of economic activity, thus avoiding the need to make any type of seasonal adjustment as one has to make when using the quarterly GDP. Germany does, as a member of the European Monetary Union, follow the monetary policy decided by the European Central Bank. The primary objective of the ECB's monetary policy is to maintain price stability. The ECB aims at inflation rates of below, but close to, 2% over the medium term. Germany is using the Euro as currency and since the Euro is one of the four most traded currencies in the world the currency is looked at as a safe haven (European Central Bank, 2010).

United Kingdom

By the second quarter 2010 key indicators such as employment expectations, investing and domestic sales was pointing in positive direction. Even though UK experienced positive growth there are underlying weaknesses in the economy due to the global financial crisis. UK had, by August 2010, an inflation rate at 3, 1% (Trading Economics, 2010b). This is more than one

percent higher than Bank of England has set as their inflation rate target (2%). As Germany the UK had a negative inflation rate in mid 2009, but has maintained a positive change in inflation rate. When looking at the GDP, the UK has had the same development as Germany. The annual GDP showed that the UK economy expanded 1, 60 % over the last year and has made a very convincing recovery from second quarter 2009, when the annual GDP was at a record low -5, 90 % (Trading Economics, 2010c). Since January 2007, the pound has dropped -23.5% against its major trading partners with the decline against the euro slightly more than that against the dollar. Although the pound managed to gain against most of these partners in 2009, much of the return was erased in the second half of the year as Bank of England committed to adopt extremely loose monetary policies and economic contraction was more serious than previously anticipated (ActionForex.com, 2010). As the British pound is one of the four most traded currencies in the world the currency is looked at as a safe haven.

France

As most developed countries, France has neither escaped the global financial crisis and has, as Germany and the UK, suffered a recession. The annual GDP was by August 2010 1, 70 %, recovering from an all time low in July 2009, -3, 90% (Trading Economics, 2010d). The inflation was by August 2010 reported to be 1, 40 (Trading Economics, 2010e). France is along with Germany a member of the European Monetary Union. As mentioned is one of the objectives to the European Monetary Union to keep the inflation of the member countries to higher, but close to 2 %. With 1, 40% France have an acceptable inflation and have, along with Germany and the UK, turned the negative inflation by the second quarter in 2009 to a positive inflation by August 2010. Through their membership in the European Monetary Union have France along with Germany changed currency from the French franc to the Euro. Since the Euro is one of the four most traded currencies in the world the currency is looked at as a safe haven.

By looking at the three countries' economy one can conclude that even though all countries have suffered hard by the global financial crisis, all three economies have managed to turn around and are delivering positive growth in their respective economies. Many economies in the Europe are still suffering from the financial crisis, but Germany, UK and France seem to have a healthy economy and have turned the negative trend quickly.

7.2.2.2 Regulation

All three countries are member of the European Union. This means that all three countries have the same regulation to follow. One of the pillars in the European Union is the open trade between the member states which has brought a growing prosperity to all the member states. The European Union therefore takes a lead in efforts to open up for world trade. The EU is a firm supporter of the World Trade Organization, which lays down a set of rules to help open up global trade and ensure fair treatment for all participants. The EU's trade policy is closely linked to its development policy (European Commission, 2009). To improve innovation and increase efficiency in the telecommunications sector, the European Union promotes increased competition through a series of regulatory rules. Increased competition has brought new entrants into the telecoms sector throughout Europe and has forced incumbent providers to raise their standards of service and reduce their prices. There are also no restrictions towards 100% foreign ownership, which along with the other regulations mentioned, justifies a high commitment/control entry mode.

7.2.2.3 Corruption

The European Union is prioritizing the work against corruption within their member countries and has developed a comprehensive anti-corruption policy which reviews the progress in tackling corruption and suggests improvements. The aim for the policy is to reduce all forms of corruption, at every level, in all European Union countries and institutions. The policy also addresses possible areas where the European Union might be an appropriate actor to take initiatives in the fight against corruption. The policy sets out the principle elements of a future EU anti-corruption policy (European Union, 2007):

- a strong political commitment at the highest level
- The implementation of existing anti-corruption instruments should be closely monitored and strengthened. The Commission recommends that the European Community adhere to the Council of Europe's conventions on corruption and participate in its monitoring mechanism, GRECO
- EU Member States should develop and improve investigative tools and allocate more specialized staff to the fight against corruption

- Member States and EU institutions and bodies should redouble their efforts to combat corruption damaging the financial interests of the European Community
- common integrity standards should be established for public administrations across the EU
- the efforts of the private sector to raise integrity and corporate responsibility should be supported
- the fight against political corruption and illicit financing of social partner entities and other interest groups should be stepped up
- corruption-related issues should be addressed in dialogues with acceding, candidate and other third countries
- The EU should continue to make the fight against corruption an integral part of its external and trade police.

According to the Corruption Perceptions Index 2009 Germany scored 8.0 (14th out of 180 countries), The UK scored 7.7 (17th out of 180 countries) and France scored 6, 9 (24th out of 180 countries). Out from this list on can conclude that the three countries are being perceived as countries with low public sector corruption. This doesn`t mean that the countries are immune against corruption, but that they have successful frameworks against corruption (Transparency International, 2009).

Looking at all three market risk factors it is viable to conclude that the market risk associated to a market entry is low.

7.2.3 Intensity of competition

To best evaluate the intensity of competition in the industry the Michael Porter Five Forces model will be applied. This model is simple, but powerful tool to better understand who the intensity of competition is. By understanding how the intensity of the industry is, it is easier to improve a situation of weakness, and avoid taking wrong steps. The model consists of 5 different variables which help understanding the where the power lies and how strong the intensity is.

Threat of substitute product: As the situation is at the moment SpiderCloud are enjoying the position as the only supplier of a product with the architecture they have developed. The firm has been approached by major operators all over the world and is experiencing quite a boom. A potential source for reduced profit for SpiderCloud is the threat of a substitute product. And there are substitute products available. There are already products available on the market focusing on capacity and coverage problem, but it is not a direct substitute. They do not use the same architecture as SpiderCloud, but use the femtocell architecture. SpiderClouds system is built to provide a service for big enterprises or sports arenas. The femtocell system is built to only serve between 2 to 4 active mobile phones in a residential setting and 8 to 16 active mobile phones in enterprise settings and is focusing on a whole other target group. One can say that SpiderClouds system is a substitute for the femtocell system.

Apart from the different femtocell products available it is difficult to find any substitutes from SpiderClouds product. Unless someone adopts the architecture SpiderCloud has developed and offers it to the same target customers as SpiderCloud the threat of substitute product seems low. The chance that someone will adopt the architecture is present and it is a known fact that there are players in the industry focusing on addressing to solve the same fundamental problem as SpiderCloud. One also has to have in mind that there also is a threat of substitutes when the new LTE technology is launched

The threat of substitute is considered as high

Threat of New Entrant: The seriousness of the threat of entry depends on the barriers present. As Porter (1978) stated, there is six sources of barriers to entry.

Source:	**Characteristics:**
Economies of scale	Scale economics in production, research, marketing and service. The ability to come in on a large scale
Product differentiation	Brand identification, customer loyalty, first in the market, customer service, advertising
Capital requirements	Large financial resources

Cost disadvantages independent of size	Cost advantages as a result of the learning curve, proprietary technology, access to the best raw materials sources, assets purchased at preinflation prices, government subsidies, or favorable locations
Access to distribution channels	Secure distribution of products and services
Government policy	License requirement, limit on access to raw material

Table 1: Sources of barriers to entry (Porter, 1979)

To overcome the different entry barriers mentioned above it is reasonable to expect that it is going to by a large company with resources to overcome the entry barriers. According to vice-president of marketing Ronny Haraldsvik are there no other direct competitors for SpiderCloud: "*We are the only one who can do it this way, scaling system. There is a lot of femtocell players out there, but we don`t look at them as competitors."* But he also stated that: *We know that Cisco are looking to adapt this architecture , but I think if you ask them they probably will not disclose whether they want to make it themselves, buy it or partner. So we know that they, along with others have endorsed, publicly, that the only way to scars is to adapt architecture like we have* (Haraldsvik, 2010)

As one can understand by Ronny Haraldsvik statement, is Cisco System the most plausible company to try to enter the market. This is a company with large experience in the telecommunication industry and has the ability to overcome the entry barriers. It is also reasonable to expect that other large companies will follow Cisco Systems into the market.

With the mentioned in mind it is expected that the threat of new entrants is high.

Bargaining power of the customer: Porter (1978) said that customers can force down prices, demand higher quality or more service and play competitors up against each other – all at the expense of the industry profit. When evaluating the bargaining power of the customer in this exact case there are some points that are very clear and does the increase the customers bargaining power. (1) The buyers cannot buy the product through another supplier, (2) The buyer

does not have the possibility to play the suppliers up against each other, (3) It is very unlikely that mobile operators (SpiderClouds target customer) will integrate backwards and produce the product themselves, (4) The buyer is dependent of the product so that they can improve their own product and service. As long as SpiderCloud don't have any direct competitors the assumptions will hold. It is therefore, based on the statements, easy to conclude with the following: The bargaining power for customers is low.

Bargaining Power of Suppliers: SpiderCloud leverage the existing femto and small cell Radio Access Node supplier system. This is a well established supplier network with a number of different suppliers. It is easy access to low-cost components as well as great availability to processing components and power supplies. For the core processing and the radio frequency inside the node there are two critical suppliers, but SpiderCloud have other options available to replace them. If the company should decide to change supplier this would mean a 3 month process and there will be a switching cost present (an undisclosed fee).

But what SpiderCloud look as an important bargaining card toward to suppliers is that they are not dependent on any unique supplier that can make or break the product. What make SpiderClouds product unique is the architecture they build around available components with easy access to. As a result of the mentioned, the bargaining power of the supplier can be regarded as low.

Competitive Rivalry within the industry: Since the companies that offer the femtocell system is targeting different end customers and there are no other direct competitors for SpiderCloud in the market, it is reasonable to say that the competitive rivalry within the industry is low.

Conclusive words: After analyzing the different factors in the model, one can conclude that SpiderCloud is in a very good position in the market with low competition. The risk of substitute products and new entrants are both viewed as high, but for the new products and new entrants to succeed they have to adopt to SpiderClouds architecture. The bargaining power for the customers is low which is very positive for SpiderCloud. This means that the customers are depending on SpiderCloud to get their hands on the product and don't have the possibility to go to another player in the market. The bargaining power for the suppliers is also looked as low. This gives

SpiderCloud more freedom towards the suppliers when choosing best suited supplier and is thereby locked to one supplier that can pressure fir a higher price of the components. The fact that the competitive rivalry is regards as low is a positive sign for the company. This can be seen as an assurance that SpiderCloud will have a safe position in the market in the years to come.

As the intensity is regarded as low in the market a high commitment is justified *if* they want to secure a solid place in the market for the future. If they want to have quick and high return on their investment a low commitment entry mode is to be preferred. Vice-president of marketing, Ronny Haraldsvik (2010), said that they are interested in building a successful company that can stand alone and continue to be a technology innovator. On this background it is reasonable to say that a high commitment entry mode is justified.

7.2.4 Physic distance

A company will first seek markets in countries that physical distance are close to themselves, where physical distance is defined in terms of factors such as differences in language, culture, political systems etc (Johanson & Vahlne, 1990). This analysis will try to uncover sosio-cultral differences between SpiderCloud and the target markets, through examine the following factors; Language and Business Practices.

7.2.4.1 Language

SpiderCloud will face three different languages in the three different markets, with English as the native language in the UK, German in Germany and French in France. In the UK market the language will not be an obstacle, since English is spoken in both countries, though in a British version and an American version. In Germany and France the situation is different. In both countries foreign languages skills are poor and English are not necessarily second language as it is in many other countries in the EU. Both the German and the French are characterized by having educational system which is looked as at two of the most successful educational system in the world. Having in mind that the telecommunication industry is a global industry, with the biggest operators being from English speaking countries, SpiderCloud will not experience the language as the an inhibitor.

7.2.4.2 Business Practices

To better understand the business practices in the three markets this analysis will use the cultural dimensions of Geert Hofstede. The dimensions include Individualism, masculinity, uncertainty avoidance and power distance. The framework is simplistic and builds on studies made during the 1970's, but is used a practical guideline for this analysis.

Germany and France scores almost the same Individualism, respectively 67 and 71 (Itim International, 2009). The United Kingdom scores somewhat higher with a score of 89. SpiderClouds home country, the United States has a score almost similar to the UK (91) (Itim International, 2009). This shows that there is not a great physic distance present between the countries when looking on individualism versus collectivism. All countries have a high score which indicates that individualism is present in all countries.

In regards to Masculinity Germany and the UK has an even score at 66, which is much the same of what are present in the United States where the score is 62. France on the other hand has a lower score, scoring 43 according to Geert Hofstede's studies (Itim International, 2009). This indicates that people in Germany and the UK tend to value having a high opportunity for earnings, getting recognition for doing a good job, having challenging work to derive a sense of accomplishment and having the opportunity to for advancement to a higher – level job. By France's low score in comparison to the United States one can say that there is a minor physic distance present between what SpiderCloud are used to in the United States.

The study shows that there are big differences when looking at uncertainty avoidance. France is the country which has the highest score in this cultural dimension (86), while the UK has the lowest (35). Germany has a score of 65. France's score, as well as Germany's, is indicating the society's low level of tolerance for uncertainty and the ultimate goal for the population is to consequently try to control as many variables as possible in order to avoid the uncertainty. The United States has a score of 46 which is relatively low, as in the UK. This difference in uncertainty avoidance can create problem for a relatively unknown American company, as SpiderCloud, when trying to establish themselves in France and Germany (Itim International, 2009).

In regards to Power Distance it is, once again, France that has a score which is worth noticing. The UK and Germany have both a score of 35. France on the other hand has a score of 65 (Itim International, 2009). This high score indicates that there to a large degree is acceptance of the fact that power is distributed unequally between people in the country. By scoring 35, the UK and Germany indicate that they don't have a large gap between the wealthy and the poor, but have a strong belief in equality for each citizen. People in Germany and the UK have the opportunity to rise in society. The situation is the same in the United States where the score is 40 (Itim International, 2009). The large gap in Power Distance might cause problems for SpiderCloud with possible business partners and customers in France due to different expectations in power distribution.

The last dimension, the long-term orientation there are not noted any score on France. Germany has a score of 31 which similar to the UK and the United States which score respectively 25 and 29. This score is perceived as low and means that the procedures from establishing contract to negotiating contracts will happened relatively quick.

7.3 Internalizing advantages

7.3.1 Teachability of technology

In the internationalization theory, a technology's complexity and tacitness reduces the efficiency with which it can be transferred. If the technology is highly unteachable an entry mode which entails substantial technology transfer is not recommendable.

SpiderClouds is a supplier to global mobile operators serving the 3G network and offers a product a product tailored to solve a fundamental problem on the 3G network. Their product is a standardized product built to serve all potential customers, i.e. the product is customized to the most prominent 3G technology (WCDMA/HSPA) and fits to every operator's system without the need of any level of adjustments.

Next variable that adds to the tacit nature of the technology and will be analyzed is the level of the technology's embeddedness in the human capital and organizational routines. This is a variable which is relative and hard to assess. SpiderClouds core competence and competitive advantage, the system architecture, is very much embedded in the human capital of the firm. In

very knowledge intensive companies, such as SpiderCloud, where the employees are the company's primary asset, it is very important that the organizational routines are based on prior experience and knowledge. This may be an obstacle of a licensing strategy if it entails a full transfer of the company's technology. Hence could this mean that a licensing partner not will be able to produce SpiderClouds product with the same efficiency. The company's technology is to somewhat degree embedded in the human resources of the company, but it is not embedded to such a degree that it does not serve as an obstacle for a licensing agreement.

The last factor that may subtract from the technology's degree of teachability is the level of complexity. As mentioned above, the technology and the components are relatively unsophisticated and build on present technology. It is the system architecture which is the complex part of the product and what makes it special. This, again, emphasizes the possibility of a license agreement.

As mentioned the teachability of the product is hard to assess, but a good indication is what the company itself perceive their technology as. By already establishing relationships for third-party support and volume production the company indicates that the technology is teachable as well as it shows that the technology is not embedded to the human resource and organizational routines to such a degree as it serves as an obstacle. It is therefore viable to say that the teachability of the technology does not an obstacle for licensing.

7.3.2 Dissemination Risk

The dissemination risk refers to transaction costs related to contracting costs for collaborative modes of entry and the expected losses that the company risks due to potential opportunistic behavior on the part of the strategic partner. The two costs will be analyzed in this section.

Contracting costs:

If SpiderCloud was to pursue a mode of entry with an intermediary it will entail a time consuming process of negotiation around details in the contract for the relationship. As teachability of technology is it very difficult to assess, in this case, the costs related to the process. The firm has no prior negotiations with a potential partner so it is difficult to illustrate the expected contractual expenditures.

It can be determined that SpiderCloud, if they where to engaged in a negotiation process will experience substantial opportunity costs, through the number of hours that will be spent in the negotiations. If the negotiations should succeed one has to include costs related to monitoring and enforcing the contract. It is also relevant to mention the concept of bargaining power. SpiderCloud are approaching global mobile operators and it is reasonable to assume that SpiderClouds bargaining power will be much less than their potential partner. There is no evidence that this will occur, but as the situation is, SpiderCloud is potentially more exposed of negative effects of contracting costs.

Expected losses:

The expected losses focus on potential losses as a result of opportunistic behavior on the part of a strategic partner. These are as the transaction costs in general, hard to assess. The theory states that the more valuable and imitable the technology is, the greater the risk is of potential opportunism on the part of a strategic collaborator.

What is important to emphasize in this section is that SpiderCloud are approaching global mobile operator as potential strategic partners and for the mobile operators does SpiderClouds technology represent a minor value. It is very unlikely that mobile operators like T-Mobile and Vodaphone will even consider expropriating SpiderClouds technology or copying it with the purpose of producing a direct competitor. If SpiderCloud were to approach smaller strategic partners the risk of expected losses should be taken into account as such a strategic partner could have an incentive for expropriating the firms' technology and this potential product could very well be highly imitable. The expected losses are regarded as a potential critical issue for SpiderCloud when considering potential partnership as an entry mode strategy.

8. Discussion

In the following section a discussion of the findings in the analysis will take place.

After the empirical analysis one of the factors are eliminated. Multinational experience is no longer a factor to take into account due to the findings of Burgel and Murray (2000). They concluded in their research of international Born Globals that direct firm experience does not have a significant impact on the commitment of the chosen entry mode.

The remaining factors are shown below:

OWNERSHIP ADVANTAGES:	**LOCATION ADVANTAGES:**	**INTERNALIZATION ADVANTAGES:**
• Client followership • Differentiation • PLC • Market understanding • Strategic orientation • Internal resources • Born Global	• Market potential • Market risk • Intensity of rivalry • Physic distance	• Teachability of technology • Dissemination risk

Figure 17: Overview of remaining factors divided into the OLI paradigm. (Author's own construction)

Dunning states that: a firm will engage in foreign direct investment if all three criteria are fulfilled. First, the firm possesses net ownership advantages vis-à-vis firms of other nationalities in serving particular markets. These ownership advantages largely take form of the possession of intangible assets which is exclusive or specific for the firm possessing them. This ownership advantage is present through the combination of system architecture and the strong executive board which is an intangible asset for them. Second, Dunning states that the firm must benefit more from these advantages itself, rather than to sell or lease them to foreign companies, i.e. to internalize them instead of externalize. Last, it must be profitable for the enterprise to utilize these advantages in conjunction with at least some factor of input outside their home country; otherwise foreign markets would be served entirely by exports and domestic markets by domestic production (Dunning, 1979).

8.1 Ownership Advantages

The ownership advantages will include the following factors from the analysis: Client followership, Differentiation, Product Life Cycle, Internal Resources, Strategic Orientation and finally Born Global.

Through the analysis of strategic orientation it was emphasized that SpiderCloud was focusing on being a technology innovator and on a strategy securing the company a long term perspective. Focusing on a long term product development strategy is consistent with the focus on a differentiated product strategy the company is pursuing. Setting up a strategic orientation with the LTE orientation as a basis may very well be the best solution for SpiderCloud. Using the LTE roadmap maintains the focus on the product and will prepare the company to meet the demands in the market. Sharing the focus on the current technology as well as the future changes will make the company better suited to respond to the changes and make them able to launch new products customized for the new technology faster as well as having resources allocated on improving the Product Life Cycle on existing products, if needed.

The analyses of the organizational resources focused on the human capital embedded in SpiderCloud. The executive team of SpiderCloud are comprised of executives with multinational experience with the sole purpose to have a global company from the get go. This multinational experience is also increasing the possibility of client followership since the executives possess valuable relationships from previous companies.

Through the analysis was SpiderCloud defined as a Born Global. Cavusgil and Knight (2009) stated that an internationalizing firm must chose a well suited entry mode, but that Born Globals may face problems when trying to undertake a costly foreign market entry mode, e.g. FDI. This is important to have in mind when deciding on the entry mode and may suggest that the firm should pursue a low commitment entry mode.

8.2 Location Advantages

In this section the following factors will be up for discussion: market potential, market risk, intensity of competition and physic distance.

In the analyses of market potential was it emphasized the expected growth in usage of the 3G network as well as the planned LTE system. The growth is expected to be explosive and it is estimated that by 2013 there will be 1, 8 billion 3G subscribers and the global data traffic will increase from two Exabyte to 18 Exabyte by 2014 (Global mobile Suppliers Association, 2010). When looking at the total business data traffic in the 3 target countries, is it here expected a traffic which will be 37 times higher than in 2009 in 2014. The opportunity for SpiderCloud is extraordinary and the demand for their product will increase dramatically in the years to come due to the increased traffic over the 3G net, hence an increase in the coverage/capacity problem. One aspect that is very favorable for SpiderCloud is the first mover advantage. The company is the only one, at the moment, addressing the problem on a large scale (femtocell can serve a small number of subscribers), at this time, and they are considering a move into an area where the density of people is high and a large predominant UMTS deployments present here, i.e. the demand for the product is substantial. To exploit this possibility to the fullest a high control and resource commitment entry mode would be a viable choice. To gain from the first mover advantage a quick entry mode would be recommended. The intensity of competition also suggests the possibility of the first mover advantage. The competition on the market is very low, and the company has no direct competitor. There are a lot of companies that offers the femtocell solution, but this solution cannot serve on the same scale as SpiderClouds solution.

The market risk is closely affected by the physic distance between the markets. If there is a large physic present, not only geographic, but in business practice as well, internationalization can prove to be a failure. Through the analyses market risk is not viewed as a possible obstacle and justifies a high commitment and resource mode. The physic distance on the other hand shows that are differences the company should be aware of. It is mainly the business practice in France that showed prove of a physic distance between the US and the target markets. This physic distance can result in problems related to mutual understanding and communication and thereby indicates that a less resources should be committed to the entry.

8.3 Internalization Advanteges

The last component is internalization-specific advantages.

SpiderCloud are producing a product customized to fit all mobile operators in the world and the product is in general not a complex one. SpiderCloud core competence and competitive advantage is the system architecture which is embedded in the human capital of the firm. It is very important that the organizational routines in knowledge intensive companies are based on prior experience and knowledge. This may be an obstacle of a licensing strategy if it entails a full transfer of the company's technology. By already establishing relationships for third-party support and volume production the company indicates that the technology is teachable as well as it shows that the technology is not embedded to the human resource and organizational routines to such a degree as it serves as an obstacle. It is therefore viable to say that the teachability of the technology does not an obstacle for licensing.

In the case of the expected losses the analyses showed that it is not to be expected any losses as a consequence of opportunistic behavior on the part of a strategic partner. This is a reasonable assumptions as it is difficult to see any of SpiderClouds potential strategic partner (global mobile operators) expropriating the firms technology. However, SpiderCloud are exposed to negative effects of contracting costs (if they should occur), which should be taken into account.

8.4 Elimination of Entry Modes

The factors identified in this research expected to influence the choice of entry mode were in section 4.14 divided into three categories, the three advantages from Dunning's Eclectic Paradigm (1979). If the paradigm was to be followed it would have suggested that SpiderCloud should pursue an relatively resource high /commitment entry mode. This can be concluded on the background of the presences of two advantages, the ownership specific and location specific. Burgel &Murray (2009) on the other hand suggests that, due to the multinational experience of the firm in combination to the fact that SpiderCloud is defined as a Born Global company, they should pursue a low resource/ low commitment entry mode. They also found a correlation between the multinational experience of a firm's manager's and low resource commitment when committing to the internationalization process. Cavusgil and Knight (2009) stated that an internationalizing firm must chose a well suited entry mode, but that Born Globals may face problems when trying to undertake a costly foreign market entry mode, e.g. FDI. Below will the eliminated entry modes be argued, followed by a discussion of the remaining entry modes.

Indirect export:

The choice of indirect export represent a strategy where SpiderCloud gives the export responsibility to an intermediary and are left with control over its technology, know-how as well as the production. Through the empirical analysis and again in the discussion were there emphasized different factors which not make the indirect strategy viable. In the ownership factors is was a focus on the effect of the combination of organizational resources, multinational experience and client followership. SpiderCloud already has an office present in one of the target market, more specific in London, UK, which makes the need for an intermediate lower since they already have a physical presence in one of the target markets. By not choosing the indirect export mode can the company also gain valuable knowledge and know-how in regards to doing business abroad. SpiderCloud has enough market understanding, i.e. network, relationships, understanding of business practice etc., to approach their potential clients themselves without the help of an intermediary.

The production variable is also worth mentioning. The company is not, at the moment and is not planning, to produce the product itself. Hence, the control over the production as the entry mode suggests is not a variable SpiderCloud is looking for to benefit from.

Last significant factor mentioned is that the company possesses valuable relationships with potential customers already. There is no reason present that suggests that SpiderCloud is to engage in an agreement with an intermediate. They possess the needed market understanding, they are physically present in the market through their office in London and there is no viable reason for partnering up with an intermediate that will decrease the company's income. With these factors in mind, the remaining of this research will not regard indirect export as a viable entry mode into the target markets.

Acquisition:

For SpiderCloud to consider an acquisition strategy as an entry mode the right target company must be identified. To justify an acquisition, SpiderCloud has to identify a company that possesses critical resources that the company does not currently have and the target should also

have product portfolio supplements for SpiderClouds product or offer a certain synergy effect that could justify such a large resource commitment.

An important factor when considering an acquisition is the financial costs. SpiderCloud has received 55 million dollars from investors and are debt free, but there are also no income registered. Having in mind that they are operating in a very high tech industry where there are not many players present it would be plausible to expect that the price would be high. Since the company are producing a product no other can offer it is difficult to identify a company the can offer SpiderCloud any form of synergy effects.

With this in mind will acquisition not be regarded as a plausible entry mode for SpiderCloud in the remaining of this research.

8.5 Discussion of Remaining Entry Modes

The remaining entry modes are therefore:

Licensing:

A licensing agreement which contains outsourcing of everything from production and support to sales and marketing would be beneficial for SpiderCloud it the sense that it would not require much human resources and the financial commitment would be very low. The risk related to a market investment will also be deleted. The licensing strategy also gives SpiderCloud to reach an economical break even on an earlier stage. Reason for that is that the licensing strategy is a high speed entry mode which makes it possible to reap the returns at an earlier stage as well as gaining from the first mover advantage.

The product offered by SpiderCloud is not a complex product and is assembled by existing components which have been in the market for 3-5 years. The core competence is, as mentioned, the architecture they have built around available components. The risk that firm-specific advantages in know-how will be expropriated by a licensing partner is regarded as low as mobile operators are very unlikely to expropriate the firms technology as it is expected that the technology will be a minor value added for the mobile operators and it is not expected that the mobile operators are considering the option of producing a competitive product to SpiderClouds.

Dissemination risk is also an important aspect when considering a licensing agreement. In the discussion it was made clear that SpiderCloud is subject to contracting cost if entering negotiations i.e. a licensing agreement, but there is not any expected losses to focus on.

Having the possibility of a quick market entry with low financial commitment as well a high return on investment in mind, seems a licensing agreement as a viable entry mode for the company. By choosing this entry mode they will have the opportunity to stay focused on one of their main goal: continue being a technology innovator.

Direct export:
Direct export allows for full control and channels the entire revenue stream from the contract directly back to SpiderCloud.

This entry mode suggests that the firm should have substantial market understanding, something the company possesses, in the three target markets. The disadvantage of having a long geographical distance to the customers in regards to marketing etc., which the entry mode means, is not relevant as the firm have an office in London, UK. This office will cut down the geographical distance and help to minimize a potential physic distance.

In regards to the production does this strategy represent a mode which gives the opportunity of capitalizing on economies of scale in production concentrated in the home country and affording better control over distribution. As discussed earlier is SpiderCloud planning to license out the production and third-party support. This fact will make the choice of direct export less attractive since this is not a variable the company is not planning to gain from.

Joint Venture:
A Joint Venture for SpiderCloud could be a good solution. The company can overcome their lacking resources, e.g. market understanding and the minor physical distance identified by collaborating with a partner in possession of the companies lacking resources.

There is dissemination risk involved with a Joint Venture agreement, but the most important aspect to discuss is whether there are any suitable partners available for them that possesses the resources needed in SpiderCloud. If the company can agree with a potential JV partner on a 50/50

equity deal it is reasonable to expect that this deal will give the company high returns and it is important that a potential partner will have enough incentives to contribute to the JV.

8.6 Recommendations

First worth mentioning in the recommendation is that SpiderCloud should not considering to not entering an internationalization process. The company has a unique opportunity to maximize their return and establish them in all three case target markets.

In regards to the entry mode decision is the licensing strategy not regarded as an optimal entry mode for SpiderCloud. One of drawback for licensing is in regards to the dissemination risk the strategy brings. Even though there are not any expected losses to identify does the company have to expect substantial contracting costs. Another potential drawback is the risk of expected losses. If SpiderCloud approach a small licensing partner the licensing partner could have an incentive for expropriating the firms' technology and this potential product could very well be highly imitable. The licensing strategy does not support the possibility of client followership either.

As the licensing strategy is the direct export strategy a quicke entry mode which gives the opportunity to reap the returns. But the direct export is a somewhat better choice than the licensing strategy. Direct export gives SpiderCloud control and channels the entire revenue stream from the contract directly back to themselves. The company is present in the region through their sales office in London, UK, which reduces the geographical distance. It is also beneficial that this entry mode do not suggest new investment in production facilities. Both licensing and direct export are to entry modes suited to products with short PLC. SpiderClouds solution has a long PLC which in fact indicates that direct export and licensing is not necessary.

Findings from different researchers state that born global firms may lack the financial resources to undertake a costly foreign market entry mode. Through discussion with vice-president of marketing, Ronny Haraldsvik, does SpiderCloud have the financial resources to take it to market as well as investors willing to support them to take the product to market. It is therefore reasonable to assume that SpiderCloud possesses the financial resources to go to market through a high control entry mode. Joint Venture is therefore regarded to be the best suited entry mode for SpiderCloud. The company's executives have prior relationship with two of the biggest mobile

operators in Europe and the possibility of entering a Joint Venture with a mobile operator as their partner is regarded as the best solution for SpiderCloud. There is already established good relationship with one of the biggest mobile operators in the world through the product testing. This is an operator which already have declared their interest for the product and said they are willing to help SpiderCloud bringing the product to market.

SpiderCloud should try to establish a Joint Venture with this mobile operator to serve in all three markets. If the mobile operator is not present in one of the target markets, the opportunity to target enterprises with SpiderClouds product increases the mobile operators' chances to get a commitment from the enterprise and thereby penetrate the market. If the mobile operator is not willing to enter the market, SpiderCloud should approach a mobile operator present in the market. Should SpiderCloud succeed in entering in a Joint Venture with a global mobile operator it could open up for the opportunity to expand the operations of the Joint Venture into new markets, markets where the mobile operators already are established.

9. Conclusion

The focus of this thesis has been on internationalization and entry mode strategy, with SpiderCloud as a case company. First in the conclusion will the three sub-questions be answered, since they have a direct affect on the entry mode strategy decision. The sub-questions in the research were:

(1) Which market specific factors are important to evaluate when discussing the entry mode?

(2) Which industry specific factors are important to evaluate when discussing the entry mode?

(3) Which organizational factors are important to evaluate when discussing the entry mode?

In order to provide a thorough empirical analysis was 14 factors was identified from six different internationalization theories. These factors was discussed and analyzed to identify each factors contribution and relevance in regards to the entry mode decision. From the factors identified was 13 found to have a significant impact on the entry mode decision. The effect of each factor is in regards to the choice of having a low control mode and resource commitment or a high control mode and resource commitment. The entry modes presented in the research are representing both the commitments opportunities. Licensing, direct export and indirect export are usually called low control and low resource commitment entry mode strategy. Joint Venture and acquisition is on the other hand called high control and high resource commitment entry modes.

All factors identified were divided into four different groups. Each factor was awarded a group according to their focus. The four groups selected were the following: Market specific factors, organizational specific factors, industry specific factors and transaction specific factors. The four groups are shown on the next page along with each factors effect.

OWNERSHIP SPECIFIC:	**LOCATION SPECIFIC:**	**INTERNALIZATION SPECIFIC:**
• Client followership (+) • Differentiation (+) • PLC (+) • Market understanding (+) • Strategic orientation (+) • Internal resources (+) • Born Global (-)	• Market potential (+) • Market risk (+) • Intensity of competition (+) • Physic distance (+)	• Teachability of technology (-) • Dissemination risk (+)

Figure 18: The impacting factors (Author's design)

The factors are applicable for SpiderCloud in the discussion of the engagement in an internationalization process and future entry mode strategies. In this research these factors was used as a model to best answer the main research question:

"What entry mode should SpiderCloud pursue in Germany, France and the United Kingdom?"

In the empirical analysis of the research each of the factors was analyzed up against the case company, SpiderCloud. Through the analysis of the four main categories of factors it was clear that two of the potential entry modes could be rejected. Indirect export and acquisition were both eliminated as potential entry mode for SpiderCloud in Germany, France and the United Kingdom. The three remaining entry modes were discussed up against each other and based on the situation in the company the present time, in regards to international experience and financial, was both direct export and licensing eliminated due to the fact that SpiderCloud not could utilize their resources best.

The company are in possess of valuable human resources and especially the prior relationship of the executive team. Through many years in the industry they have established valuable relationships with some of the largest mobile operators in the world with one them are performing the product testing for SpiderCloud. By establishing Joint Venture with one or more of the mobile operators, will SpiderCloud have an unique chance to get their product out in the market on a broad scale, establishing themselves as competitive player on the market. There are no direct competitors to SpiderCloud now and with rapid negotiations, both the mobile operators and SpiderCloud can benefit from the first mover advantage setting up entry barriers for new entrants. By engaging in a Joint Venture with a mobile operator does SpiderCloud also gain extremely valuable relationships with the mobile operators, opening the possibility in following them into new markets.

10. References

Articles:

Agarwal, S., & Ramaswami, S. (1992). Choice of Foreign Entry Mode: Impact of ownership, Location and Internalization factors. *Journal of International Business Studies Vol.23 Issue 1* .

Andersen, O. (1993). On the Internationalization process of the firms: a critical analysis. *Journal of International Business Studies, Vol.24, Issue 2* , 209-231.

Anderson, E., & Gatignon, H. (Fall 1986). Modes of Foreign Entry: A Transaction Cost Analysis and Propositions. *Abstracted from Journal of International Business Studies 18, No.3* , 1-26.

Barney, J. (1995). Looking inside for competitive advantage. *Academy of Management Executives* , 49-61.

Bell, J. (1995). The internationalization of small computer software firms. *European Journal of Marketing, Vol. 29, Issue 8* , 60-75.

Burgel, O., & Murray, G. (2000). The International Market Entry Choice of Start-Up Companies in High-Technology Industries. *Journal of International Marketing* , 33-62.

Cantwell, J. (1995). The globalisation of technology: What remains of the product cycle model? *Cambridge Journal of Economics, Vol. 19, Issue 1* , 155-174.

Coase, R. (1937). The nature of the Firm. *Economia, New Series Vol.4, Issue 16* , 386-405.

Coviello, N. E., & Munro, H. J. (1995). Growing the Entrepreneurial Firm - Networking for International Market Development. *European Journal of Marketing Vol. 29, No.7* , 49-61.

Dunning, J. (1979). Explaining Changing Patterns of International Production: In Defence of the Eclectic Theory. *Oxford Bulletin of Economics & Statistics* , 269-295.

Eisenhardt, K. M. (1989). Building Theories from Case Study Research. *Academy of Management Review*, 532-550.

Forsgren, M. (2002). The Concept of Learning in the Uppsala Internationalization process model: a critical review. *International Business Review Vol.11* , 257-277.

Hashai, N., & Tamar, A. (2002). Small and Medium Sized Multinationals: The Internationalization Process of Born Global Companies. *Working Paper no. 02/22 Bradford University School of Management* .

Hill, C. W., Hwang, P., & Chan Kim, W. (1990). An Eclectic Theory of the Choice of International Entry Mode. *Strategic Managment Journal, Vol 11* , 117-128.

Johanson, J., & Vahlne, J.-E. (1977). The Internationalization process of the firm-a model of knowledge development and increasing foreign commitments. *Journal of International Business Studies, Issue 8* , 23-32.

Johanson, J., & Vahlne, J.-E. (1990). The Mechanism of Internationalisation. *International Marketing Review, Vol.7 Issue 4* , 11-24.

Knight, G., & Cavusgil, S. (1996). The born global firm: a challenge to traditional internationalization theory. *Advances in International Marketing* , 11-26.

Leonidas, C., & Katsikeas, C. (1996). The Export development process: An integrative review of empirical models. *Journal of International Business Studies Vol.27, Issue 3* , 517-551.

Madsen, T., & Servais, P. (1997). The Internationalization Process of Born Globals: an Evolutionary Process? *International Business Review, Vol. 6, Issue 6* , 561-583.

Oviatt, B. M., & McDougall, P. P. (1995). Global start-ups: Entrepreneurs on a worldwide stage. *Academy of Management Executive Vol.9 No.2* , 30-43.

Porter, M. E. (1979). How Competitive Forces Shape Strategy. *Haravard Business Review* 92-101

Reid, S. (1981). The decision-maker and export entry and expansion. *Journal of International Business Studies, Vol. 12, Issue 2* , 101-112.

Teece, D. (1977). Technology transfer by multinational firms: The resource cost of transferring technological know-how. *The Economic Journal* , 242-261.

Vernon, R. (1966). International investment and International trade in the product cycle. *Quarterly Journal of Economics, Vol. 80, Issue 2* , 190-207.

Yamin, M. (2000). A critical re-evaluation of Hymer's contribution to the theory of the transnational corporation. I C. Pitelis, & R. Sugden, *The nature of the transnational firm* (s. 58-72). London: Routledge

Books:

Axelsson, B., & Easton, G. (1992). *Industrial Network - A New View of Reality.* London: Routledge.

Brewerton, P., & Millward, L. (2001). *Organizational Research Methods.* London: SAGE Publications Ltd.

Caves, R. E. (1996). *Multinational enterprise and economic analysis.* Cambridge: Cambridge Univeristy Press.

Caves, R. (1999). *Multinational enterprise and economic analysis .* Cambridge: Cambridge University Press.

Cavusgil, S., & Knight, G. (2009). *Born Global Firms - A New International Enterprise.* New York: Business Expert Press.

Hofstede, G. (1980). *Culture's consequences. International Differences in Work related Values.* Beverly Hills: SAGE Publications.

Hollensen, S. (2007). *Global marketing : a decision-oriented approach 4th ed. .* Essex: Pearson Education.

Håkansson, H. (1987). *Industrial Technological Development, A Network Approach.* London: Routledge

Johanson, J., & Mattsson, L. (1988). *Internationalization in Industrial Systems - a network approach.* London: Croom Helm.

Peng, M. W. (2009). Global Strategy. I M. W. Peng, *Global Strategy* (s. 138). Mason: South-Western Cengage Learning.

Saunders, M., Lewis, P., & Thornhill, A. (2003). *Research Methods for Business Students.* Essex: Pearson Education Limited.

Saunder, M., Lewis, P., & Thornhill, A. (2009). *Research methods for business students, 5th Edition.* Essex: Pearson Education Limited.

Interviews:

Haraldsvik, R. (13. September 2010). SpiderCloud Wireless Inc. (H.-H. Stensaker, Interviewer)

Web-pages:

ActionForex.com. (2010). *2010 Currency Outlook: GDP*. Hentede 15. October 2010 fra ActionForex.com Web site: http://www.actionforex.com/action-insight/special-reports/2010-currency-outlook:-gbp-20100121105031/

Cisco Systems. (June 2010b). *Cisco VNI Downloads.* Hentede 4. October 2010 fra Cisco Systems Web site: http://ciscovni.com/vni_forecast/advanced.html

European Central Bank. (2010). *ECB: Monetary Policy*. Hentede 15. October 2010 fra European Central Bank Web site: http://www.ecb.int/mopo/html/index.en.html

European Commission. (12. December 2009). *Trade Policy*. Hentede 16. October 2010 fra European Commision Web Site: http://ec.europa.eu/world/what/trade_policy/index_en.htm

European Union. (12. July 2007). *A comprehensive EU anti-corruption policy*. Hentede 16. October 2010 fra European Union legislation Web site: http://europa.eu/legislation_summaries/fight_against_fraud/fight_against_corruption/l33301_en.htm

Forbes.com LLC™. (21. April 201004.21.10). *The Global 2000*. Hentede 17. October 2010 fra Forbes.com LLC™: http://www.forbes.com/lists/2010/18/global-2000-10_The-Global-2000_IndName_18.html

Global Rates. (2010). *Inflation in Germany - current and historic German consumer price index (CPI)*. Hentede 15. October 2010 fra Triami Media BV webpage: http://www.global-rates.com/economic-indicators/inflation/consumer-prices/cpi/germany.aspx

Globale Mobile Suppliers Association. (2010). Hentede 30. September 2010 fra GSM/3G Stats: http://www.gsacom.com/news/statistics.php4

Itim International. (2009). *Geert Hofstede Cultural Dimensions*. Hentede 2. October 2010 fra Itim International Web site: www.geert-hofstede.com

Kharif, O. (22. August 2005). *Why Qualcomm has its Wallet out*. Hentede 27. October 2010 fra BusinessWeek Web site: http://www.businessweek.com/technology/content/aug2005/tc20050822_7017_tc024.htm

Porter's Five Forces – The Missing Link. (5. January 2010). Hentede 18. September 2010 fra The Marketers Marketing Simplified: http://www.themarketers.in/?p=446

SpiderCloud. (2010a). *SmartCloud Wireless Technology*. Hentede 23. May 2010 fra SpiderCloud Wireless Web site: http://spidercloud.com/technology/technology

SpiderCloud. (2010b). *SpiderCloud Wireless inc products*. Hentede 23. May 2010 fra SpiderCloud Wireless Inv Web site: http://spidercloud.com/products/products

Tellis, W. (June 1997). *Introduction to Case Study by Winston Tellis.* Hentede 8. June 2010 fra Nova Southeastern Univeristy: http://www.nova.edu/ssss/QR/QR3-2/tellis1.html

Trading Economics. (2010). *Germany GDP Annual Growth Rate*. Hentede 15. October 2010 fra Trading Economics Web Site: http://www.tradingeconomics.com/Economics/GDP-Growth-Annual.aspx?Symbol=DEM

Trading Economics. (2010b). *United Kingdom Inflation Rate*. Hentede 15. October 2010 fra Trading Economics Web site: http://www.tradingeconomics.com/Economics/Inflation-CPI.aspx?Symbol=GBP

Trading Economics. (2010c). *United Kingdom GDP Annual Growth Rate*. Hentede 15. October 2010 fra Trading Economics Web site: http://www.tradingeconomics.com/Economics/GDP-Growth-Annual.aspx?Symbol=GBP

Trading Economics. (2010d). *France GDP Annual Growth Rate*. Hentede 15. October 2010 fra Trading Economics Web site: http://www.tradingeconomics.com/Economics/GDP-Growth-Annual.aspx?Symbol=FRF

Trading Economics. (2010e). *France Inflation Rate*. Hentede 15. October 2010 fra Trading Economics Web Site: http://www.tradingeconomics.com/Economics/Inflation-CPI.aspx?Symbol=FRF

Transparency International. (2009). *CPI 2009/ Table/2009/cpi/surveys/_indices/policy_research*. Hentede 16. October 2010 fra Transparecy International - The Global Coalition against Coreruption: http://www.transparency.org/policy_research/surveys_indices/cpi/2009/cpi_2009_table

.

.

APPENDICES

List of appendices:

APPENDIX 1: DEFINITIONS

3G: 3G refers to the third generation of mobile telephony cellular technology. The third generation, as the name suggests, follows two earlier generations.

BACKHAUL (telecommunication): concerned with transporting traffic between distributed sites (typically access points) and more centralized points of presence

E-RAN: Enterprise Radio Access Network. Is the system architecture solution provided by SpiderCloud. The E-RAN solution allows the creation of a unified mobile corporate network that integrates mobile workers distributed throughout the overall enterprise domain with centrally located corporate assets.

FEMTOCELL: is a small cellular base station, typically designed for use in a home or small business. A femtocell allows service providers to extend service coverage indoors, especially where access would otherwise be limited or unavailable

GDP: Gross Domestic Product.

HSPA: High-Speed Packet Access. A wireless broadband focused on improving the existing WCDMA technology.

HSPA+: Evolved High-Speed Packet Access. A wireless broadband that provides data rates up to 56 Mbit/s in the downlink and 22 Mbit/s in the uplink

LAN: Local area network. LAN is a collection of computers and devices interconnected by communications channels that facilitate communications among users and allow users to share resources.

3GPP LTE: 3GPP Long Term Evolution. is the latest standard in the mobile network technology tree that produced the GSM/EDGE and UMTS/HSxPA network technologies. The current generation of mobile telecommunication networks is collectively known as 3G. Although LTE is often marketed as 4G, first-release LTE does not fully comply with the 4G requirements.

MOBILE OPERATOR: A company that operates a mobile network and holds a subscriber base of users within that network.

PETABYTE: is a unit of information equal to one quadrillion (short scale) bytes, or 1000 terabytes. The unit symbol for the petabyte is PB.

SCRN: SmartCloud Radio Node. SmartCloud Radio Node is the radio nodes deployed inside the building. The SCRN supports a multi-radio architecture that allows for a flexible upgrade path to higher user counts.

SCSN: SmartCloud Services Node. The SmartCloud Services Node is the central control point in the Enterprise Radio Access Network.

SMARTPHONE: A smartphone is a device that lets you make telephone calls, but also adds features that you might find on a personal digital assistant or a computer. A smartphone also offers the ability to send and receive e-mail and edit Office documents.

UMTS: Universal Mobile Telecommunication System. UMTS is a 3G networking standard used throughout much of the world as an upgrade to existing GSM mobile networks.

WCDMA: Wideband Code Division Multiple Access. WCDMA is an air interface (radio-based communication link between the mobile station and the active base station) standard found in 3G mobile telecommunications networks and the most-commonly used member of the UMTS family

APPENDIX 2: INTERVIEW GUIDE

1. Can you please start by giving a quick overview of SpiderCloud? How many employees are there, annual sales etc.

2. It might be difficult to understand what you are producing. How would you describe it to an unknown person?

3. What is your vision/mission and which strategy are you focusing on to reach the goals you have set?

4. Who do you look at as your ideal customer and how are you planning to distribute your product?

5. Why have you decided to focus on the European market instead of the US market?

6. It has been stated by Coviello & Munro that market selection and entry initiatives emanate from opportunities created through network contacts, rather from the strategic decisions of the managers in the firm. Would you agree, and how important has the network aspect been for SpiderClouds market entry?

7. What immediate advantages do you see by entering the EU-market?

8. Does the company has the financial means to succeed with the move to the EU-market or is it planned another investor funding round?

9. What is looked as the greatest barrier for SpiderCloud when entering the EU-market?

10. Are the some countries/markets in the EU that is more interesting than others? Why?

11. How important is the economic, political and legal situation in a country? What is the most important aspect when evaluating the different markets?

12. At the moment, where do you have your production facility? Is it possible that you will outsource the production/ move the production to a country with cheaper labor?

13. If you read the text below, would you agree with the statements?

    1. A global vision exists from inception
    2. Managers are internationally experienced
    3. Global entrepreneurs have strong international business networks
    4. Preemptive technology or marketing is exploited
    5. A unique intangible asset is present
    6. Product or service extensions are closely linked
    7. The organization is closely coordinated worldwide

14. Do you have any direct competitors? If yes, what is your competitive advantage? If no, is it likely that you will get competitors in the near future?

15. You have mentioned in an e-mail that you are doing product testing; can I ask in which countries/companies?

16. Which plan are you having for the future?

Appendix 3: Interview with Vice-president of Marketing Ronny Haraldsvik

Where: Restaurant Dickens, Bergen, Norway

When: Monday 13th of September 2010 at 14.00

Present: Ronny Haraldsvik (RH) and Hans-Henrik Stensaker (HHS)

HHS: Can you please start giving an overview of SpiderCloud? How many employees do you have at the moment, do you have any sales, how do you generate revenue etc?

RH: So the company is made out of roughly 60 people and we have secured around 40 million US dollars in funding through a series A and B founding and the additional funding is roughly 15 million US dollars which will be ready in about 4-5 weeks. The company focuses on solving fundamental problems for mobile operators which is which is capacity and now the mobile operators do not have enough capacity to go around, especially given the data plans they had, that their selling, the 3G phones and it rely is an inflation of these in the hands of people. Not just people, but also enterprises. You know, right now you can look at this smartphone and say I got a 5 bar coverage, but I can`t make a call or I can`t get my data, and that problem is just so much more bigger inside buildings. You have businesses that are more and more relying on using the phone on a day to day use potentially replacing the desktop phones there is a need for reliable indoor coverage. So the enterprises have one problem. They perceive that they don`t have coverage. But for the operators the reality is that they have a capacity problem in the networks today, and you can`t just throw more spectrum at it. Just because LTE comes around doesn`t mean that you have a better capacity, it may mean you have more spectrum, it doesn`t give you additional capacity to the salt tower. You know it solves the problem for people who spend 70% of their time inside the enterprise making call and making data sessions from their 3G devices. So how do you cost effectively go and solve that problem? One way to do it is to actually leverage what we already exist which is the local area network of enterprises and the SpiderCloud solution is an mini 3G network that get installed inside a building where there is a LAN and the services node is plugged into a local area network and use the local area network for its backhaul. The radio nodes are powered over Ethernet so you can plug in radio nodes that are controlled by the services node and therefore create your own, unique indoor 3G network. And all those people

that are using that network are no longer dragging the signal inside or using the capacity that are already scares from the outside, so its solves a fundamental problem for the operator and it solves the problem for the enterprise and our business case are based on having the operator subsidizing the system that is as easy to install as a Wi-Fi system for the enterprise and get that installed and get a commitment for the enterprise to be with them, stay with them for a period of time, 2-3 years which solves a fundamental problem for the operators to in case of sustainable revenue, predictable revenue and reducing churn in their network. It is a little known fact that it cost an operator anywhere between 700- 800 Euros just to gain a new subscriber and when a enterprises that is actually up to closely a 1000 Euros including matters like operating expenditures like marketing, supporting and so forth. Now, as soon as you get that subscriber it cost additional 400 to 500 Euros for a period of 2-3 years to keep that subscriber. So what we enable the operators to do is, instead of fighting for each subscriber which is primarily the consumer, we allow them to go inside an enterprise with a system that actually gets installed on the premises of the enterprise and get that relationship with the enterprise and all its subscribers for a period of 2 -3 years to reduce churn, to reduce cost of acquisition, solve the problem of capacity, solve the problem the enterprise have with indoor coverage. And at the same time have a on-premises solution so they can up-sell new services for a period of 5-7 years later. All of this comes to a price of course but with as a little as 30% penetration into any enterprise accounts, doesn't matter if it is 50 people, 500 people or 5000 people. The payback is measured in a period of months instead of years and that is significantly different from what is available today when it comes to distributing systems and so forth. The other thing that is a major differential is femtocell today cannot scale. You cannot have more than two femtocells in an area without causing interference, so you cannot just take consumer femtocell and put it into the enterprise and expect it to solve the problem. Cause you don`t have any set place management or anything like that of femtocell. We solve that problem that problem by having scalability, a scalable system that actually can handle the traffic of thousands and thousands of subscribers.

HHS: What are you looking at as your main customers? Is it global mobile carriers or enterprises?

RH: We are solving a problem for the operators.

HHS: So you are going to target the operators? And they can bring the product to the enterprises?

RH: Yes, they can take it to the enterprises direct or through a system integrator, solution integrator an existing partner like Ericsson, Nokia Siemens and Cisco Systems. Or even any solution like Adea which in Norway, Denmark, Sweden and so forth. Anyone who is an existing partner or operator today with enterprise can be a channel to bring this to market.

HHS: Where do you have production facilities? Is that in Silicon Valley?

RH: Yes. We have the beta systems manufactured at a small contract supplier in Silicon Valley. We already have relationships in place for third-party support and volume production In Taiwan. But we do expect that, as soon we get an adoption by a major operator, which should happen soon, we already have three different trials plus we get engagement with all the system integrators in existing business partners of these operators like I mentioned before, Ericsson, Nokia Siemens, Cisco. We already have discussions and projects going on with these guys. As soon as we see traction, no one will rely upon us to provide volume production. You know that will be licensed to Ericsson, it will be licensed to Nokia Siemens and it will be licensed to Cisco. And they will make use of, most likely China and Taiwan for volume production.

HHS: What is your vision/mission and which strategy are you focusing on to reach the goals you have set?

RH: 3 years ago we set out to solve the fundamental problem of targeting capacity for mobile operators and have a scalable enterprise portable system. And so far we are actually the only ones solving it. Others are coming into our space. Our vision is to continue to innovate on the existing platform, in the next to 3-5 years. And so far we know for a fact that we have 12- 18 months head start, because we are about to drive the commercial system into the markets within the next 6 months. We are fully funded to take the product to market so our strategy getting operators

interested, they then direct their business partners. Our job is to prove a solution through lab friendly user trials then do the licensing agreement with these companies so they can bring it to market and scale. So we will continue to focus on being a technology innovator.

HHS: Do you have any direct competitors or is it anyone else delivering a similar product?

RH: We are the only one how can do it this way, scaling system. There is a lot of femtocell players out there, but we don`t look at them as competitors. No direct competitors, but we know that Cisco are looking to adapt this architecture , but I think if you ask them they probably will not disclose whether they want to make it themselves, buy it or partner. So we know that they, along with others have endorsed, publicly, that the only way to scars is to adapt architecture like we have.

HHS: In regards to the 4G net. Can that be solved with the same solution or?

RH: We are part of the UMTS 3G evolution. Just because it is a 4G enabled system available, it is going to be 5 years before we see a 10% penetration of 4G worldwide. We think it is going to happened, but the other problem is LTE in various countries cover up to 42 dans, you can`t put 42 dans into on a device, you got to choose which device. Which device gets which band and which country and so forth. So there is no united band across the world that has 4G just like 3G. That's a problem. That means that you going to have LTE in metropolitan areas in various spectrum and various bands. What we see is that when there is going to be a 30-40 % penetration of 4G, that is when we are going to bring out a 4G system. It doesn't make sense to make a system that is 4G capable when there is no devices out there which can use it. People think, you got to have 4G, that is the latest thing, but well….. We are addressing to serve 90% of the market which is UMTS 3G. 10% is CDMA and we are not going to focus on that at all, but we have a roadmap that we have shared with the operators that we will support LTE when it is need. But we do not expect that to be in the next 2 years.

HHS: Where do you see SpiderCloud in 5 years? Are you expecting to sell the company?

RH: I think that any one that sets out to sell the company will fail. You got to have a focus. This group of people, the executives, has worked together for 12 years in 4 different companies have never set out to sell a company. They want to build a successful company that can stand alone. I think in the case of SpiderCloud we just hope that we can last as long as possible because we solve a fundamental problem and I don`t want to speculate in where we are in 4-5 years. I just do not know. And just for the record. Three years ago, if you didn`t have a 3 to 5 year plan, you were an idiot. I think today, if you have a 3 to 5 year plan, you are an idiot. The market is changing too fast.

HHS: You have earlier said that you are going to focus on the European market. Why the European market, when you are a US based company?

RH: We may be a US company, but we are very much a company with a global focus. A lot of us are repeat entrepreneurs that have existing relationships with mobile operators and some of the strongest relationships we have from prior companies, Qualcom, Flarion etc, are mainly European operators. We had a operator that stood up and said we will work with you and help you find the product because you are solving a fundamental problem and it happened to be one of the largest operator in the world and it happened to based in Europe so we focused on them first. Biggest mistake a start-up makes is that they try to be, they try serving too many customers too soon. And it is very easy to be tempted by customers that will make you do all kinds of things and make you all kinds of features and never buy a product and that is where a lot of companies fail. So we focus on serving one or two operators in the first couple of years and then broaden to include some others. We hold off going into US, which was a risky strategy, but we are now involved in the US with operators. They were not happy we hadn't engaged them before, but they also respected us for not doing it because now the system is much more ready for them then it would be before. Same thing with South Asia: Singapore, Hong Kong and Malaysia. We are very much being dragged into that area. Soon as we are ready with our commercial system we are probably going to see early adoption so we could see commercial system deployed into three geographies by the end 2011.

HHS: What are the immediate advantages you see by entering the European market?

RH: By side from the relationships is that the capacity problem is fundamentally bigger here than anywhere else in the world. Because there is only so much fiber you can put in the ground, there are only so many towers you can put up, and the density of population is great so you need to solve the problem in a different way so we are focusing on the European market because of the density problem.
The adoption of mobile broadband was much faster here than anywhere else in the world.

HHS: What are the greatest barriers by entering the European market?

RH: The greatest barrier in the European market is the same barrier we have all the other markets. How do you scale and support the interest? We say a lot of no and a lot of our customers get angry by the fact that we say no. They would like to engage us, but we say, you know what, we are not big enough unless you provide investment money so that we can scale up and support your effort and even put an order. We can't do it. But they also respect us for that so greatest barrier for the European market is just to scale faster.

HHS: But when you are entering the European market, are you focusing on some countries instead of others?

RH: No. The operators we are engaged with are truly multinational companies so for us it doesn't matter if it is England, Germany or Spain. We are talking to the entities that are serving these markets regardless, for instance Vodaphone UK, Vodaphone Spain and so forth. The technology decisions are made centrally so even though the decision is made by Vodaphone UK it is deployed to other countries. So it is truly a global economy now and it is no longer a country by country approach. Even though in Scandinavia Telia- Sonera and Telenor do not only cover the Scandinavian countries.

HHS: It has been stated by Coviello & Munro that market selection and entry initiatives emanate from opportunities created through network contacts, rather from the strategic decisions of the managers in the firm. Would you agree, and how important has the network aspect been for SpiderClouds market entry?

RH: It's everything. We are focusing on Europe because we have existing relationships, and the conversations we had with them where such as they wanted us to work with them, created features they wanted and needed so it was purely based on what we had of contacts, rather than strategic decisions. Closest to home is always the easiest solution, but the fact the we have decided otherwise since the get go has made it easier for us to open up the market in the US cause we can say to the US operators, look, we have already proven case with some big ones that are bigger than you. And there are not many operators bigger than AT&T and Verizon in the US, except from the ones in Europe. Except of course the China based operators. Revenue wise the biggest operators are in Europe.

HHS: Have you at any point thought about legal, political and economic situation when trying to decide where to enter?

RH: It is less of an issue for us because the focus on the mobile market and …… Think about 3G, it globally. We work in the same spectrum over the whole world, in various degrees of course, and there are set regulation admittance of power, when the equipment needs to do and how to integrate with the network and so forth. For the most part, 80% of a based product would work everywhere in the world and then it is just, but it is no limitations when it is comes to legislation and government regulations. There are some unique differences and there are some first respond requirements that exist in the US, but this is small various degrees you need to put on top of your product.

HHS: If you read the text below, would you agree with the statements?

1. A global vision exists from inception
2. Managers are internationally experienced

3. Global entrepreneurs have strong international business networks
4. Preemptive technology or marketing is exploited
5. A unique intangible asset is present
6. Product or service extensions are closely linked
7. The organization is closely coordinated worldwide

RH: By far global vision from the inception. We didn`t solve a problem for 700 MHz band in the US and rural area. We set up to solve a worldwide problem, which is capacity. All over our managers has had international experience from Qualcom, Flarion etc. They have all played in the different theaters as they like to call it. Cisco is big on calling every different geography a theater. We have people that have been around the block several times and have a lot of experience of working with mobile operators as well as working with the enterprise so international experience is a must have.

Global entrepreneurs…… We have successful exits behind us. Example Flarion was bought by Qualcom so we know how to start up companies thinking that we have the courage to say 200 million US dollar and that normally gets the interest from someone to take you out. But that is not our focus.

Preemptive technology or marketing is exploiting. This is absolutely preemptive technology because identifying the problem we saw coming, when no one else did and we have to give a lot of credit to our investors for taking the risk and putting in 40 million dollars, soon 50,55 million dollars. There is not a company in the world right know in the infrastructure space for 3G that gets 40 – 50 million dollars to do what we are doing. I am not going to say that the technology and marketing is exploited, but we defiantly have a preemptive technology and a unique intangible asset is not present. It is a must have. You can have a patent to 2 of 5 or 10 of 20 that protects your entry into the market with a product for any system. You have a barrier of entry for other competitors and we do absolutely have a intellectual property patents for a couple of our system.

Product or service extensions are closely linked. Absolutely, our company is focused on solving a technology problem. What we are actually doing, which is solving a capacity problem we are enabling the operators to sell a service which they never ever been able to sell before. So, they are closely linked and the closer they are linked, the better it is. Like I said, you can have successful company that is technology focused and solving a technical problem but not being linked to service. But if you put the two together it is unique.

The organization is closely coordinated worldwide. Well, yeah, if you don`t do that you are not going to succeed. The difference between us and other companies is that we did not just put a couple of guys together; they knew each other from before. Each one of our senior executives are uniquely handpicking because we have worked together before, we trust each other. Our CEO can point to two countries and say; go take care of that etc. And he does not have to worry about it. Closely coordinated is essential if you can have existing relationship where there is a lot of trust. That is absolutely the best thing you can have.
Some of our investors have invested in us before and two had not invested in this team before. And they pushed back in the beginning. Why do you have to put in senior executives and pay them so much money upfront? Can`t we just get some junior guys? And the feedback from the CEO was; if you want a global company from the get go you need the international experience right away. You can do it, but to what price?

HHS: Have you any plans in regards to the future?

RH: We have the engineering team in Ohio just because their where already a team established there. But we have the HQ in Silicon Valley and a team which is going from 3 to 6 persons in the next 6 months and probably close to 10 in the next 12 months in London. The South Asia office is one person and if we are lucky there will be 3 people in the next 6 months. In the US we are likely to hire 12 more people in the next 6 months, all to support technical trial and commercial development. So we are going to focus on those areas, but I can easily see us in doing market development in South America in 2011.

HHS: You talked about that you have started product testing?

RH: Yes. The lab testing started in last November and we are now doing what is known as friendly user trials, where we have a system turned on and talks to a live network and actually have live devices, of the shelf devices which can be purchased at the store, being tested over the network?

HHS: And that is here in the US?

RH: We are doing that in both in Europe and the US during next couple of months.

HHS: Have you thought about entering other clusters like Silicon Valley? Clusters like Shanghai and the one under development outside Beijing?

RH: Yes. We have thought about that, and decided not to, only because of our focus. If you are a big conglomerate like Siemens or Cisco, you can set up an office and hire 10, 20 or a 100 people and try to go after the China market since it is such a big market and everybody wants a bite of it. But a lot of companies also fail miserably in trying to be small and grow themselves. The best way strategy for a company like our one is to partner when going into China, and not necessarily set up an own separate office, but having one or two people on the ground supporting another organization which is you channel into that market. So currently we don`t have any plan in setting up an office in China only because you cannot be very costly, timed, consuming and frankly defocus the company. So we are just going to focus on satisfying the few to be successful instead of trying to satisfy many and be unsuccessful.

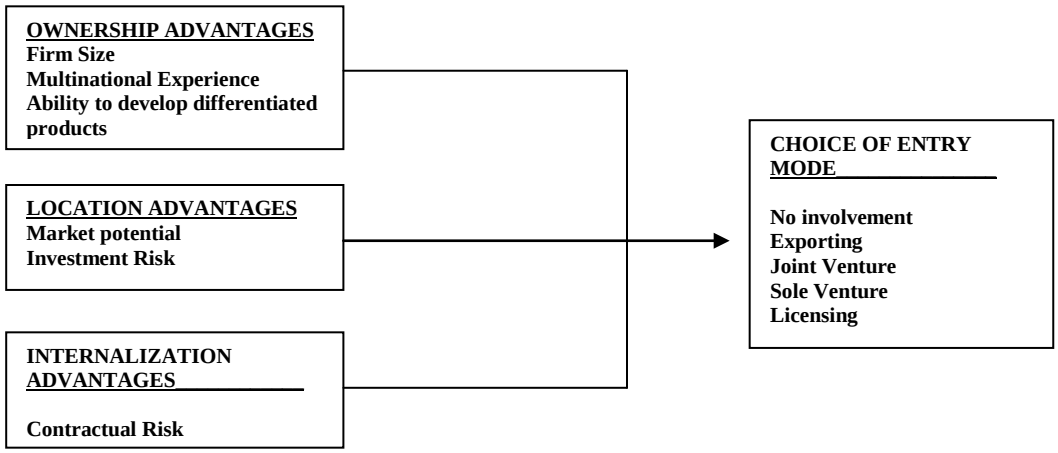
Appendix 4: Figure 1: Top 10 Global Mobile Operators

TOP 10 GLOBAL MOBILE OPERATORS

Rank	Company	Country	Sales ($BIL)
1	AT&T Wireless	USA	123,02
2	Verizon Mobile	USA	107,81
3	Nippon Telegraph & Tel	Japan	106,98
4	**T-Mobile**	**Germany**	**90,08**
5	**Telefoncia Movil**	**Spain**	**79,11**
6	China Mobile	China	66,22
7	**Orange Mobile**	**France**	**65,92**
8	**Vodaphone Mobile**	**UK**	**58,35**
9	**TIM**	**Italy**	**42**
10	America Movil	Mexico	30,22

Source: (Forbes.com LLC™, 2010)

Appendix 5: Figure 2: An overview of the entry mode choice according to OLI

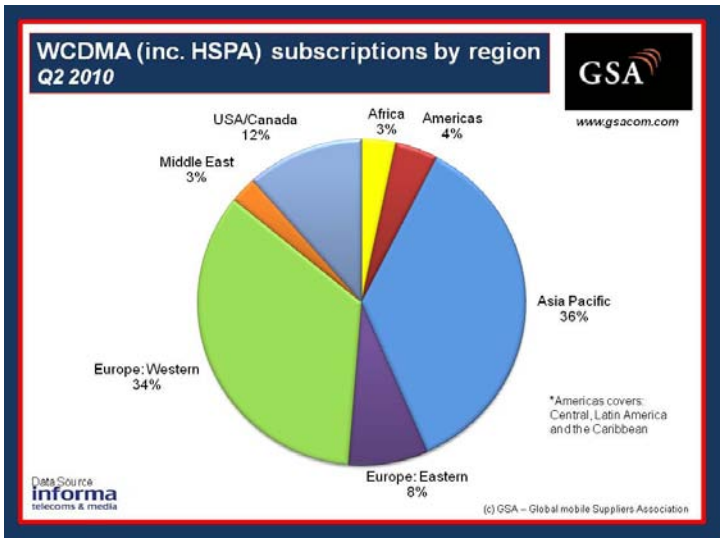


Source: (Agarwal & Ramaswami, 1992)

Appendix 6: Figure 3: Porter Five Forces

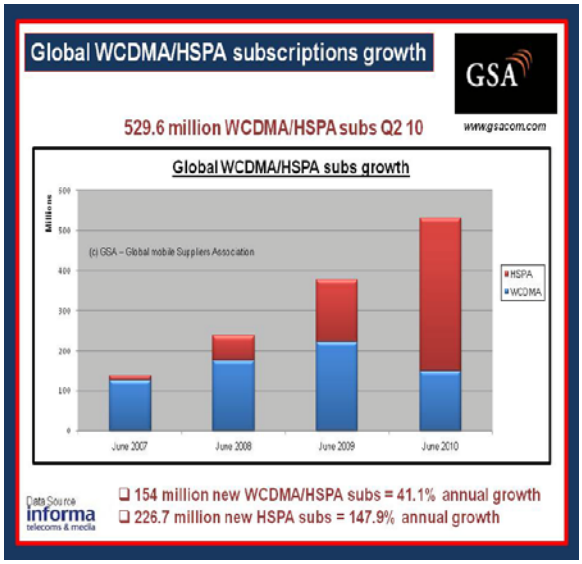
Source: (Porter's Five Forces – The Missing Link, 2010)

Appendix 7: Figure 8: WCDMA/HSPA subscriptions by region



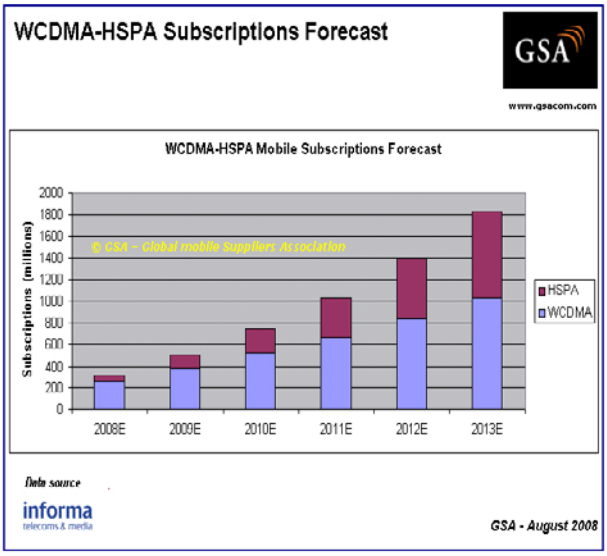
Source: (Global Mobile Suppliers Association, 2010)

Appendix 8: Figure 9: Global WCDMA/HSPA subscription growth



Source: Figure 9: Global WCDMA/HSPA subscription growth figure 10 (Globale Mobile Suppliers Association, 2010)

Appendix 9: Figure 10: Global WCDMA/HSPA subscription Forecast



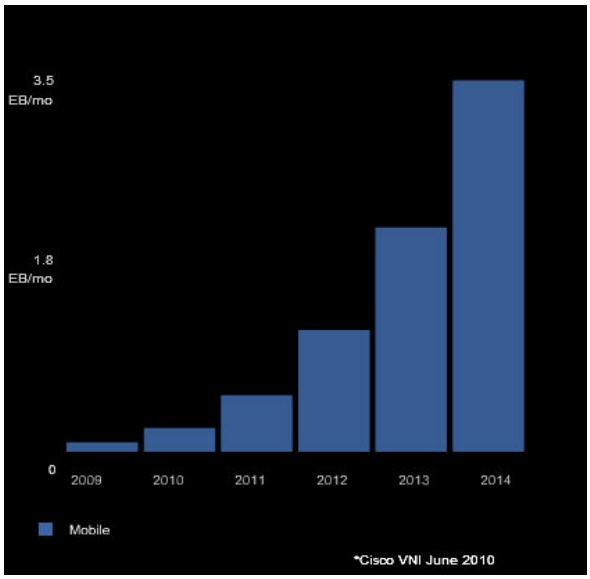
Source: (Globale Mobile Suppliers Association, 2010)

Appendix 10: Figure 11: Overview of operator market share country by country

France	Market share (%)	UK	Market share (%)
Orange	45,38	Everything Everywhere	24,11
SFR	36,66	O2	17,44
Bouygues Télécom	17,95	Vodaphone	15,84

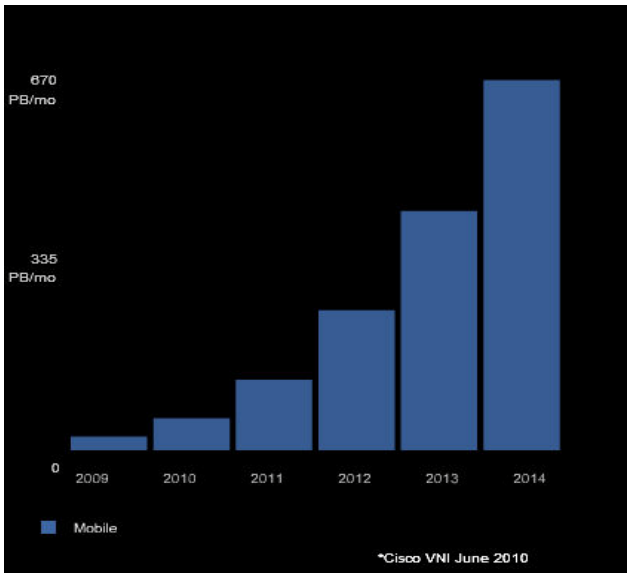
Germany	Market share (%)
T-Mobile	41,05
Vodaphone	36,35
E-Plus	20,25
O2	22,68

Appendix 11: Figure: 12: Global Mobile Usage per EB per Month



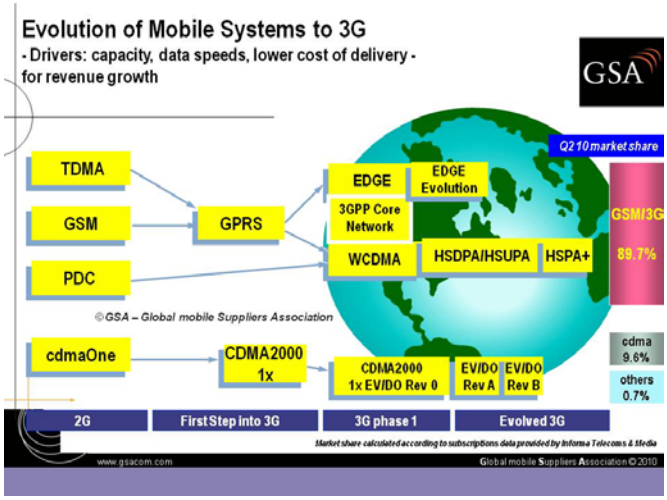
Source: (Cisco Systems, 2010b)

Appendix 12: Figure 13: Global Mobile Business Usage per EB per Month



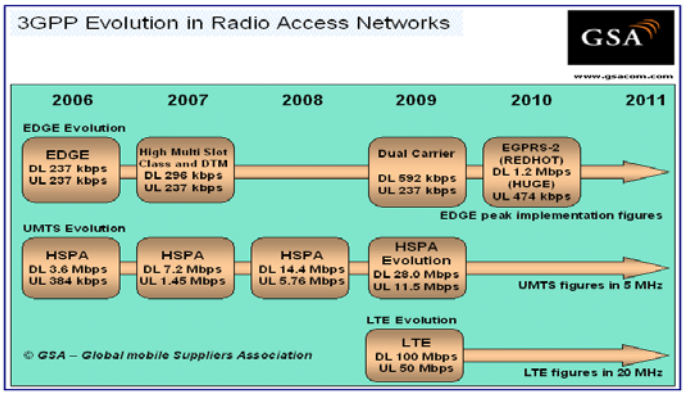
Source: (Cisco Systems, 2010b)

Appendix 13: Figure 14: Evolution within Mobile Systems, GSM to 3G



Source: (Global Mobile Suppliers Association, 2010)

Appendix 14: Figure 15: The LTE Roadmap



Source: (Global Mobile Suppliers Association, 2010).

Appendix 15: Operating countries of the mobile operators

Vodaphone:

Middle East & Africa	
Egypt	Ghana
Qatar	DR Congo
Bahrain	Lesotho
Kenya	Mozambique
Libya	Tanzania
South Africa	
United Arab Emirates	

Asia & Australia	
Australia	India
New Zealand	Fiji
Afghanistan	Armenia
Azerbaijan	China
Hong Kong	Japan
Malaysia	Singapore
Sri Lanka	Taiwan
Thailand	Turkmenistan
Uzbekistan	

Europe		
Albania	Austria	Belgium
Germany	Bulgaria	Croatia
Hungary	Cyprus	Denmark
Italy	Estonia	Faroe Islands
Netherlands	Finland	France
Romania	Guernsey	Iceland
Turkey	Jersey	Latvia
Czech Republic	Lithuania	Luxembourg
Greece	Macedonia	Norway
Ireland	Poland	Russia
Malta	Poland	Slovenia
Portugal	Serbia	Switzerland
Spain	Sweden	
UK	Ukraine	

America
Caribbean
Honduras
USA
Chile
Panama

T-Mobile:

Europe	
Albania	Netherlands
Austria	Poland
Belgium	Romania
Bulgaria	Russia
Croatia	Serbia
Czech Republic	Slovakia
Denmark	Spain
Macedonia	Switzerland
France	Turkey
Greece	Ukraine
Hungary	United Kingdom
Italy	
Luxembourg	
Montenegro	

America	
Canada	Argentina
Mexico	Brazil
USA	

Asia
Hong Kong
Japan
China
Singapore

Africa
South Africa

Orange:

Europe
France
United Kingdom
Poland
Belgium
Slovakia
Switzerland
Austria
Moldova
Spain
Romania
Russia

Africa	
Senegal	Cameroon
Mali	Uganda
Niger	Kenya
Egypt	Equatorial Guinea
Guinea Bissau	Madagascar
Guinea Conakry	Botswana
Ivory Coast	
Central African Republic	

America
United States
Dominican Republic
Caribbean

Asia/ Oceania	
China	Jordan
India	Bahrain
Vietnam	Mauritius
Japan	Reunion
Vanuatu	New Caledonia

Telefonica Movil:

Europe
Germany
Spain
Slovakia
Ireland
UK
Czech Republic

America	
Argentina	Nicaragua
Brazil	Panama
Chile	Peru
Colombia	Puerto Rico
Ecuador	Venezuela
El Salvador	Uruguay
United States	Mexico

Appendix 15: E-mail correspondence with Ronny Haraldsvik

from Hans- Henrik Stensaker <h @gmail.com> hide details 26 Oct Reply

to Ronny Haraldsvik <ronny@spidercloud.com>
date 26 October 2010 15:14
subject question about supplier
mailed-by gmail.com

I am at the moment doing an analysis regarding the bargaining power of the suppliers and have some questions for you:

1. Do you use many different supplier?

2. Are any of your suppliers more important than others? Why? Have they an unique product?

3. Have you the possibility to change from one supplier to another without difficulties? In other words, there is no switching costs involved and you have a large number of suppliers to choose from.

Hope you can help and it does'nt take up much of your time.

--
Best

Hans-Henrik Stensaker

Tlf:
Norge:
Danmark:

Reply Forward

from Ronny Haraldsvik < @spidercloud.com> hide details 26 Oct Reply

to Hans- Henrik Stensaker <hans.stensaker@gmail.com>
date 26 October 2010 17:13
subject RE: question about supplier
mailed-by spidercloud.com

We leverage the existing Femto and small cell RAN supplier eco system which has been around for the last 3-5 years = easy access to low-cost components for our radio node (radio side) as well as great availability of cpu, memory and other processing components and power supplies (and options) for our Services Node (Enterprise vendor eco system of HW suppliers for routers and switches) = many suppliers.

Of course, for core processing (Services Node) and the RF chip inside the node –2 suppliers are critical. But, we have options for both (already in place). We could switch these vendors (3 month process at a cost which we cannot disclose) if we had to – for any reason. There's NO unique vendor that will make or break our system (OUR uniqueness is the architecture we built around available components some intellectual properties for software and optimization)

Source: Print screen from authors e-mail.