Strategy for Entering a New Business Segment
A case study of a diversification move with disruptive ambitions

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ABSTRACT

This thesis concerns a technology company that plans to enter a new industry. Their intent is to challenge existing industry structure by launching a product utilizing their technological know-how as well as transferring their business model and partner network. The company has a successful history in a related industry where they were pioneers in driving a technology shift from analog to digital technology and transforming the industry. It has become the leading actor in their current industry and is now looking for new opportunities to grow.

The purpose of this study is to investigate the factors that influence the company's chances to get established in this industry and once again drive industry transformation. The aim is to provide the company with recommendations on how they should act. A deductive and qualitative case study has been performed primarily based on 38 internal and external interviews.

It was found that the company has potential to get established and transform the industry. Transformation will most likely not be driven by technological superiority. There are instead other aspects of the product enable a new way of doing business in the industry. Firstly, the product will enable new business opportunities in cloud services that are greatly desired by the company's existing customers. Secondly, the product will also be an open platform, inviting new actors into the industry. It was concluded that the company will be able to leverage their technology capabilities, brand, and established relationships with key actors in the new industry.

The company will face challenges regarding product adoption since it was found that the product is not clearly differentiated in terms of functionality. Another challenge is that the open platform constitutes dependence towards external actors to develop software and support for their product.

The company is recommended push the cloud service offer into the market, by leveraging their current partner relationships and strong brand. By gaining adoption they will increase the incentives for other actors to support their open standard. Simultaneously the company is recommended to allocate resources in order to bring in software partners from their current industry to join the move into the new industry. By managing incentives for external actors to support their open platform they will be able to transform the industry and increase their chances of getting established in the new industry.

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ABBREVIATIONS

API – Application Programming Interface

GUI – Graphical User Interface

IP – Internet Protocol

PoE – Power over Ethernet

RoI – Return on Investment

SDP – Software Development Partner

SI – System Integrator

1 INTRODUCTION

This thesis project concerns a company entering a new industry with a desire to challenge the existing industry structures by transferring its existing business model and partner network into to context of the new industry. This section will give an introduction to the study by describing its' background, aim, purpose and presenting research questions that the study wishes to answer. This is followed by brief discussion of limitations of this project.

1.1 BACKGROUND

Fixcom is an innovative company with a strong track record of double digit growth. Today the company has over 1000 employees all over the world and has become a dominant force in their business. The company has a successful history of pioneering a related industry in the late 1990s and is currently driving the technology shift from analog to digital systems, based on IP technology. The shift has gained momentum in recent years and while Fixcom has successfully focused its efforts to this area for a long time, the company is now looking for new growth opportunities in related fields. (Co-Founder & Board Member, 2012) The company has made initial investigations of one particular business area which indicate a large potential. There might however still be many unknown obstacles.

The end products of the new industry are systems consisting of many pieces that can look quite different in terms of in term of technical design. At the heart of the system there is a hardware component, which communicates with the other pieces of the system and the software. The software is either in the product itself or externally talking to the hardware. A main divider between the systems available today is if the system is based on analog or IP technology. (New Business Developer, 2012)

Fixcom works according to a network structure with 45000 partners globally, a two-tier distribution network and a large eco-system of software developers developing complementary software used in many applications. This network based model is seen as one of the most important pillars in Fixcom success within network the current industry and the company wishes to transfer this business model and leverage their existing partner network when entering the new industry. Furthermore the company once again wishes to act as disruptive force in the new industry by driving IP convergence and creating an open platform, similar to what they have done in the current industry. Generally, the industry is very conservative and as an IT company in a largely analog business, there are significant opportunities for Fixcom if the right commercialization strategy is enacted. (New Business Developer, 2012; Director New Business Development, 2012)

1.2 PROBLEM FORMULATION

The new industry is unchartered land for Fixcom. Even if there are many similarities between the current and new industries in terms of what technologies that is used and many actors are active in both industries, the way for getting established as a new industry manufacturer is anything but straight forward. Fixcom has entered and transformed their current industry with great success and proven their competence and business model. But Fixcom is a completely different company today and has much more

at stake when moving into a new business area. Not only do they have to consider the effects it might have on their brand and existing industry relationships, but also the alternative cost related with moving resources away from the core business into this new venture.

Furthermore, as described by Byers & Dorf (2011, s. 191)one of the most common problem for new business development within existing firms is the inability or unwillingness to forget about the existing business model that might not be suitable for the new venture. At the same time there may be valuable synergies between the new venture and its parent company in terms of shared resources, capabilities and established relationship. (Katila, 2008) With this in mind Fixcom cannot expect that their current business model and strategy will be directly transferable to the new business without complications. Therefore it is important that Fixcom thoroughly investigate the conditions of this new industry, evaluate and possibly revise their planned new strategy based on facts instead of beliefs, before entering and hopefully ones again become the driving force in transforming an industry.

1.3 AIM AND PURPOSE

The main purpose of this thesis project is to investigate Fixcom chances of getting established in the new industry and what implications this move may have on their current business, partner network and the new industry. The aim is to provide Fixcom with well-informed recommendations on how to avoid the pitfalls of transferring the existing business model to their new venture while at the same time exploit synergies between the two businesses. Furthermore the project should deliver suggestions for how Fixcom could act in order to challenge the current industry structure and handle possible barriers related to this.

The main purpose has been broken down into three major areas of investigation, namely the way Fixcom work today; their plans and strategy for entering the new industry and how the new industry works today. To fulfill the aim of the project these three areas should be studied and analyzed in order to ultimately give answer to the research questions presented in the section below.

1.4   RESEARCH QUESTIONS

The main research question that should be answered in this thesis project is "How should Fixcom act in order to get established in the new industry and at the same transform the current industry structure?". As seen in table 1 below this main question has been broken down into three sub-questions, which in turn have further been broken down in to specific questions for investigation.

The reason for this breakdown structure is first and foremost to decrease the complexity of the main questions into more manageable parts, i.e. sub questions. But it is also a way to visualize and structure what data that needs to be collected in order to answer the research questions, i.e. what specific questions have to be asked in the data collection process.

Main Research Question	Sub Questions	Specific Questions for Investigations
1. How should Fixcom act in order to get established in the new industry and at the same time transform the current industry structure?	1. What is Fixcom position to get established in as a new industry manufacturer according to their current plans?	a) How does Fixcom work today? b) What are Fixcom plans for entering the new industry? c) What internal resources and capabilities does Fixcom have? d) How does the new industry work today? e) What are major industry trends? f) What is the market interest in Fixcom's offers?
	2. How could Fixcom transform and/or disrupt the current new industry structure?	a) How do Fixcom's plans differ from what the industry looks like today? b) What would be possible sources to change the industry c) What are forces and barriers for these sources? d) Who would be for and against the industry transformation?
	3. How should Fixcom handle risks connected with entering the industry?	a) What is needed for Fixcom to reach their goals? b) How would it effect current relations? c) How would current industry actors react on Fixcom initiative? d) What are possible risks and sources of failure?

Table 1- Project research questions

1.5 LIMITATIONS

As this thesis project was initiated the company their initial plans have been used as a starting point. For example the North American market had been decided as the choice for the initial launch and the product offers is already long gone in the development project. Therefore the project has not questioned these decisions to a great extent, but rather focused on the North American market with the suggested offers as a basis for the investigation.

Furthermore this study has not been concerned with how Fixcom should organize the new business internally. Some internal functions that have to be in place and internal challenges that need to be addressed have been identified but further investigations on these issues has been left aside as it has been considered to be outside the project scope and furthermore belongs to a different theoretical domain.

2 METHODOLOGY

This chapter presents how the project has been conducted methodologically. First the research design and choice of research methods is described. Thereafter the working model that has been the basis for the project is explained on an aggregated level. This is followed by a description of the data collection and analysis processes. Lastly the validity and reliability of this study is discussed.

2.1 CHOICE OF METHOD

This thesis project has been practice oriented by the definition presented by Holmén (2011), i.e. the main objective is to contribute to the knowledge of a specified practitioner. Kumar (2005, p. 9) divides the application of research between pure research and applied research. The former is defined as the development of something new that not yet is of practical value, while the latter is defined as applying the results of research in order to understand or explain a phenomenon. In this project existing research results has been applied to analyze Fixcom's situation and should therefore be characterized as an applied research. Similarly, since the object of the study is a single event in a real life context, i.e. Fixcom entering the new industry, it can be defined as a case study. (Yin, 1981)

The case study is a research design where data is collected and analyzed in a qualitative manner. (Holmén, 2011; Yin, 1981) Thus, the research strategy of this project has primarily been of qualitative nature, meaning that the collection and analysis of data has not been focus on quantification, although some quantitative elements have been included when seen as relevant.

The most challenging part of case studies and also with qualitative research is that there often are many relevant sources of information and research methods. For example data can be collected through open face-to-face interviews with key informant, semi-structured telephone interview with other informants, by reading publications or on-site observations. (Yin, 1981) The main research methods for primary data in qualitative research are, according to Bryman & Bell (2010), participant observation, unstructured and semi structured interviews and focus groups. For secondary data the documents is the most important source. (Bryman & Bell, 2010) In this project primary data has been collected through unstructured and semi structured interviews with both internal and external sources, secondary data has been collected from internal and external documents and publications.

The research process has been hypothesis driven and the reason this is twofold. First and foremost, the company already has their product offers, existing business model and partner network that they want to transfer into the new industry. Hence, there is already a clear hypothesis, stated by the company, that the current business model and partner network will be applicable in the new business. There are also existing beliefs of how Fixcom by entering the industry according to their plans will challenge the current industry structure. This project should therefore aim at testing this initial hypothesis, develop it and eventually deliver a final hypothesis of the most suitable way for Fixcom to enter the new business segment and in how they can challenge and disrupt the current industry . Furthermore, it is believed that working with hypothesis provides structure and enables visualization of processes and progress in what is known. The reasoning behind this choice is based on deductive research theory as described by (Bryman & Bell, 2010, ss.

11-13)where hypothesis are deduced based on existing theory and knowledge before new data is collected. The hypothesis is then to be tested and revised based on the findings of the study.

2.2 WORKING MODEL

In order to give well informed answers to the project research questions information had to be gathered from many different sources and viewed from different perspectives, both internally at the company and from external actors such as network partners, end customers and competitors. In the early phase of the project much effort was made in structuring the research process in order to cover the necessary areas of investigation. In this work a working model for the project was developed, which can be seen in Figure 1.

The model is in reality a further developed variant of the deductive research process as presented by Bryman and Bell (2010, s. 11) with the difference that the data collection and findings process is expressed in more detailed and that the process is repeated, which is visualized by the two loops. The process within each loop has also been iterative; meaning the steps in the loop has been repeated until the satisfying data has been collected.
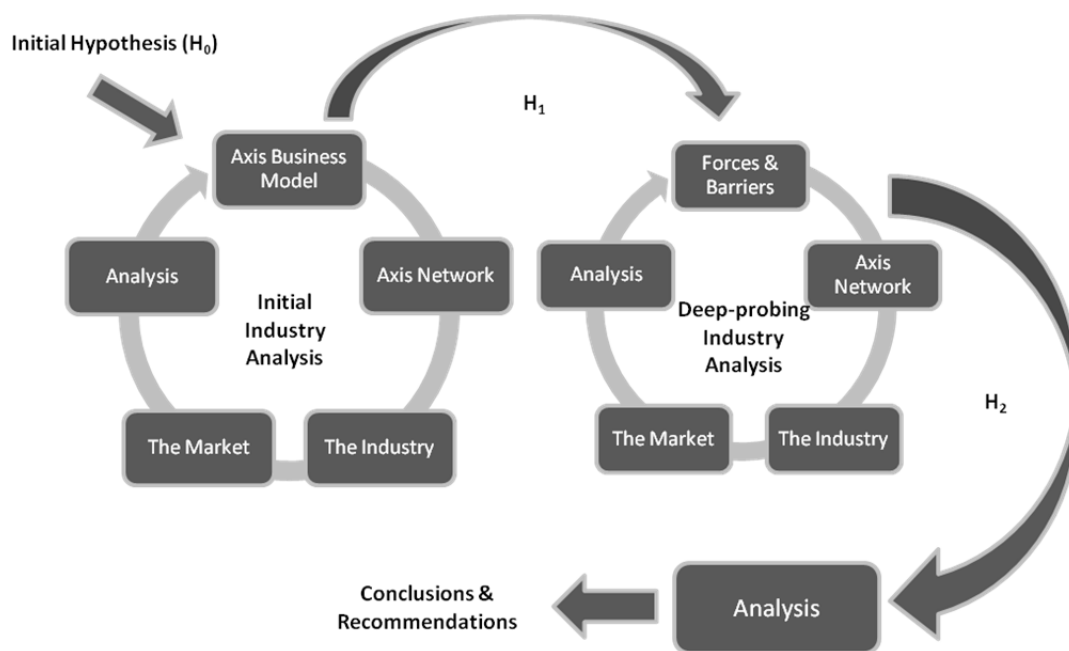
Figure 1 - Aggregated Working Model

The working model is divided into three main parts, which in turn has been divided into sub parts. The first part is called "Initial Industry Analysis" and is meant to increase the understanding of Fixcom's current business model, partner network and the new industry on an aggregated level. The purpose of this is to understand the meaning of the initial hypothesis and, when this is achieved, to test and revise the hypothesis against the initial findings. The outcomes from this part should be a more detailed hypothesis of how Fixcom should approach the new product market, possible ways to challenge the industry structure, identification of barriers that might hinder Fixcom's success and issues that have to be further investigated before any conclusions can be made.

The second part is named "Focused & Deep Probing Industry Analysis" and is basically the same as the prior part with the difference that focus now is on specific issues that was identified in the initial studies. For example market studies is now focused on what implications the strategy of the new hypothesis will have for specific actors and relationships in the partner network and specific informational gaps that has to be filled. The outcomes of this part is again a more detailed hypothesis and possible barriers to succeed in the market and possible ways for Fixcom to be a disruptive force, but this time accompanied by suggestions for how this barriers can be solved or avoided.

The third part consists of analysis of all collected data and evaluations of what implications the strategy suggested in the hypothesis will have for Fixcom internally, partner relations and in the market. Examples of issues may be additional resources and capabilities that are needed for launching the strategy, how different customer segment should be reached and how different factors or forces could be leveraged in order to drive industry transformation. The outcome of the analysis process should be conclusions giving answers to the previously stated research questions and recommendations on how Fixcom should proceed with in their new initiative.

An important note to make is that throughout the project existing literature and theories has been studied in order to, first, ensure that all vital aspects of the research subject was covered in the data collection process. The second reason was to develop an analytical framework based on generally accepted and relevant theory that could be applied for data analysis and interpretation, as is custom in applied research and practice oriented case studies. (Kumar, 2005; Bryman & Bell, 2010) The analytical framework has evolved in parallel with the phases of the working model and been revised in order to be consistently relevant for where the project stands. The final version of the framework is presented in coming chapters.

2.3 DATA COLLECTION

Table 2 below presents what questions that were handled in different research areas and phases of the project, what types of data that has been collected and also what methods and sources that was used. As can be seen in the table, unstructured interviews and documents of various kinds were the dominating methods in the early phases of the project, while semi-structured interviews dominated later phases. The reason for this is that the emphasis in the initial industry analysis was on understanding areas were existing knowledge was poor, hence the ability ask relevant and precise questions was low. But as knowledge and understanding was increased in the early phase it was possible to focus the data collection on relevant issues in the later phases, thus making semi-structured interview more suitable as research method. This logic is in seen as being very much in line with the previously discussed working model.

		Primary data				Secondary Data	Source(s)
Research Area	Main Questions	Internal (Interviews)		External (Interviews)			
		Un-struct.	Semi-struct.	Un-struct.	Semi-struct.		
Initial Industry Analysis — Fixcom Business Model	• How does Fixcom work today? • What are Fixcom plans for entering the new industry? • What internal resources and capabilities does Fixcom have?	X				X	Internal experts Internal documents
Fixcom Network	• What partners does Fixcom have? • Who is active or has interest in the new industry? • What are their relations to Fixcom and/or to other industry actors?	X	X	X		X	Internal experts Industry experts Internal documents External documents
The Industry	• How does the new industry work? • Who are the main actors? • What technologies and offers is available • Who will be the main competitors? • What are major industry trends?		X	X	X	X	Internal experts Industry experts Non-partner SIs External documents Publications
The Market	• How does the new industry work? • Who are the customers? • What is the market interest in Fixcom's offers?			X	X	X	Industry experts Non-partner SIs End customers External documents Publications
Focused Industry Analysis — Forces & Barriers	• What are possible barriers and forces for Fixcom's succeeding in the new industry? • What would be possible sources to drive industry transformation? • What are forces and barriers for these sources?		X		X		Internal experts Industry experts Partner SIs Partner distributors
Fixcom Network	• What partners and relations are needed? • How can Fixcom current partners be utilized in the new initiative? • What do partners need and expect from Fixcom new initiative? • How would it affect current relations?	X	X		X		Internal Experts Partner SIs Partner distributors
The Industry	• How does Fixcom business model fit the new Industry? • How competitive and attractive are Fixcom offers? • What is needed and Fixcom to reach their goals? • How would current industry actors react on Fixcom initiative?		X	X	X	X	Internal experts Industry Experts Non-partner SIs Partner SIs Partner distributors End customers Publications
The Market	• What is the market interest in Fixcom's offers? • Does Fixcom reach their target customers? • What is needed for Fixcom to reach their goals? • How would current industry actors react on Fixcom initiative?		X		X	X	Internal experts Partner SIs Partner dist. End customers Publications

Table 2 – Data Collection Methods

In total 39 interviews (with different sampling methods) has been performed in the data collection process divided between 20 internal experts (chosen through snowballing); 7 non-partner system integrators (chosen randomly from an industry organization list); 3 partner system integrators (selected by the company); 2 partner distributors (selected by the company); and 7 end customers (chosen through stratified convenience sample based on company size). As is also shown in the table secondary information has been used throughout the project with the aim to find documentations from different sources in order to capture different angles of the subject.

All external interviews was done over telephone since all interviewees was very distant from Sweden, most of them in the US. All telephone interviews was recorded and transcribed. All internal interviews with Swedish personnel has been carried face-to-face and been recorded using notes. The internal interviews with American personnel was done over telephone and treated as described earlier.

2.4 ANALYSIS METHOD

Before the collected data was analyzed all notes and transcripts was read and coded, as suggested by Bryman & Bell (2010, s. 587). This was done in order to break down the complexity of organizing and grasping large amounts of data by identifying patterns and common subjects in the data. Based on the emerging subjects and patterns different categories was formed and all information related to a category was collected and analyzed using relevant parts of the analytical framework. This analysis method is described as qualitative content analysis by Bryman & Bell (2010, s. 553) and allows the researcher to break up the collected data without losing the context since the categories has emerged from the data in its' original context.

This process was repeated in all analysis phases of the project. In the early analysis phases the outcomes was revision of the hypothesis and issues that needed further investigations. While in the later stages the outcomes shifted more towards conclusions, suggestions for how to handle specific issues and what implications it may bring.

2.5 VALIDITY AND RELIABILITY

Yin (2003) as expressed by Holmén (2011) presents a model for judging the quality of a case study. The basis for the model is the concepts of reliability and validity in three different forms. Construct validity refers to whether or not the study has investigated what it intended to investigate and can be strengthened by triangulation (i.e. using multiple sources of evidence), chain of evidence (i.e. the logical relationship between research questions, research procedures, findings and conclusions) and having respondents review draft reports or notes.

Internal validity refers to if the findings of the study can be seen as believable and is strengthen if "thick description" of how the study has been performed is available, if findings are internally coherent, if the concepts of the study has been systematically related and rival explanations has been considered. External validity refers to how the results of the study can be generalized and applies in other contexts and is strengthened if thick descriptions are available and the results are in line with prior research.

Reliability refers to if the findings are likely to apply at other times, i.e. if other researches would be able to repeat the research and get the same results. The reliability of a study is

seen as high if the research questions are clear, the study has been done with reasonable care, the research process has been clearly described and the collected data is readily available.

For each of these four concepts, with their respective definitions and criteria, the quality of this study has been tested and evaluated as low, medium or high. The results from the tests are presented in table 3 below along with a motivation to the suggested status.

Concept Tested	Status	Motivation
Construct Validity	High	• Multiple sources and methods have been used for each question. • Report drafts and results has been reviewed and discussed by external parts but not all interviewees. • The chain of evidence is seen as clearly described
Internal Validity	Medium	• Analysis has been done with care and process is documented • Much material of how the study has been performed in terms of data collection tools, transcripts and interviewee information is available • All findings and leads have not been given equal attention, the findings and leads have been prioritized in the analysis processes and the once seen as most important has been followed. Hence, there may be rival explanations that have not been examined in this study.
External Validity	Low	• Case studies have low external validity and it is not possible to generalize • Many results of the study have been confirmed by previous studies
Reliability	High	• Research questions is seen as clear and broken down into more understandable components • Data from many different sources has been collected and compared • The research process is documented and available • Most but not all of the collected raw data is documented and available • All interviewees are listed

Table 3 - Validity and Reliability Evaluation

3 ANALYTICAL FRAMEWORK

This chapter presents an analytical framework which sets up the theoretical foundation of how the findings of the study has been evaluated and analyzed. The framework is divided into three main sections. The first section presents a framework for understanding firms from a resource perspective as well as a relationship perspective. The second section highlights characteristics of products and technology and how these characteristics influence firms. The last section frames industries as value networks and put forward how such a network perspective influences strategy.

3.1 UNDERSTANDING FIRMS

This section presents a framework which is meant to join the resource perspectives and relationship perspectives of firms. The framework portrays firms as actors connected to others utilizing certain resources and capabilities directly within the firm and indirectly through the reach of their relationships.

3.1.1 RESOURCES AND CAPABILITIES OF FIRMS

The resource based view of firms is a paradigm that focuses on firms being dependent on what they are capable of achieving. A resource can be defined as an *"asset or input to production, tangible or intangible, that an organization owns, controls, or has access to on a semi-permanent basis"* (Helfat & Peteraf, 2003, p. 999). Resources can be defined as; tangible, human, or intangible (Grant, 2010).

An organizational capability can be defined as "*the ability of an organization to perform a coordinated set of tasks, utilizing organizational resources, for the purpose of achieving a particular end result*" (Helfat & Peteraf, 2003, p. 999). Capabilities are varying in nature and are not limited to what can be achieved within the firm as the firm uses their relationships to access external capabilities (Araujo, Dubois, & Gadde, 2003). Capabilities do not just exist but evolve by changing slowly as the firm tries to adapt to its dynamic environment, learn and strives to improve its performance (Helfat & Peteraf, 2003). Past experience within the company shape the future capabilities. (Christensen C. M., 1997)

The resource based view dictates that firms need to identify what resources a firm has and what capabilities they give rise too. Then the firm needs to appraise these resources and construct a strategy based on what the firm is able to do relative to its external environment (Grant, 2010). The firm has to assess the relevance, sustainability and appropriability of these capabilities (Grant, 2010). Firms must exploit their capabilities in relation to the opportunities and reinforce their position by building the resources and capabilities they lack in order to better match the opportunities (Grant, 2010).
The resource based perspective provides a basis for addressing some key issues in the formulation of strategy regarding diversification (Wernerfelt, 1984). Such considerations are what should form the basis for diversification and what should be developed further, in what markets a company should enter, and what companies to acquire (Wernerfelt, 1984).

By looking at the capabilities (or competencies) that are at the core of the corporation the company can find guidance in how it should be diversified (Prahalad & Hamel, 1990). The company should identify its core products that correspond to these capabilities. On these core products different business units can be built with different products, as it

schematically presented in Figure 2. (Prahalad & Hamel, 1990) Such a focus creates an integrated view on fit among the company's diverse capabilities helping it to leverage them in a way that is hard to imitate (Prahalad & Hamel, 1990).
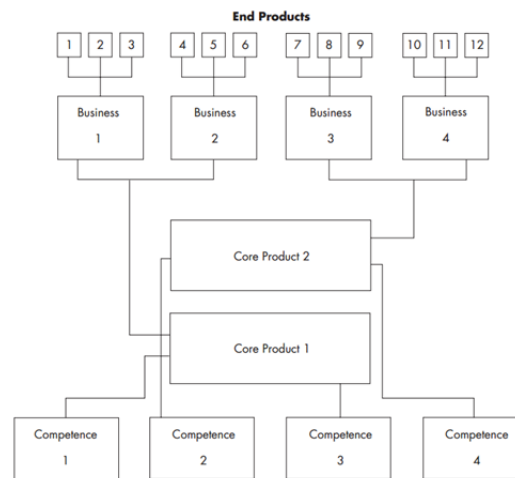

Figure 2 - Diversification Based on Competences

3.1.2 RELATIONSHIP BASED VIEW OF THE FIRM

Companies are not independent from their environment but are connected to others through relationships. Companies are not complete in the sense that they within their boundaries have everything they need but are dependent for their survival and development on their relationships (Ford, Gadde, Håkansson, & Snehota, 2011). The relationships of a firm can be categorized with reference to a focal firm and its relational exchanges involving suppliers, lateral organizations, customers, or one's own employees or business units (Morgan & Hunt, 1994).

Relationships have the potential to help achieve efficiency, innovation and influence both immediately and indirectly. They can be seen as an asset with a value of its future potential and a cost from the investment consciously and unconsciously made in creating it. Relationships also constitute problems related to the loss of freedom and the mixed effects from having closer bounds. (Ford, Gadde, Håkansson, & Snehota, 2011). Relationships often run over a long time since they often include adaptations made to improve joint performance which give rise to interdependence between the parties (Gadde & Dubois, 2010). Relationships are not static but evolve in a dynamic matter (Ford, Gadde, Håkansson, & Snehota, 2011).

Relationship commitment and trust are the two most important factors contributing to successful relationships (Morgan & Hunt, 1994). The interaction and the relationship are shaped by the firm's experience of previous interactions and shape expectations about future interactions creating a relationship atmosphere (Gadde & Dubois, 2010). Commitment and trust encourage firms to work at preserving relationship investments by cooperating with exchange partners, resist attractive short-term alternatives in favor of the expected long-term benefits of staying with existing partners, and willingness to invest in riskier projects (Morgan & Hunt, 1994).

Relationships between two different firms are more than just a single exchange, they constitute a setting in which future exchanges are done (Ford, Gadde, Håkansson, & Snehota, 2011). By establishing this trust the companies can begin to mutually invest (Morgan & Hunt, 1994). Investing in building long-term relationships increases their potential importance but also makes both firms dependent and rigid to change (Ford, Gadde, Håkansson, & Snehota, 2011).

Building relationship commitment and trust enable firms and their networks to enjoy sustainable competitive advantages over their rival networks in the global marketplace (Morgan & Hunt, 1994) Relationship makes strategy interactive, evolutionary and responsive (Ford, Gadde, Håkansson, & Snehota, 2011). Strategy hence cannot only be concerned with competition but also with cooperation (Ford, Gadde, Håkansson, & Snehota, 2011), (Nalebuff & Brandenburger, 1996, 290). In the new paradigm innovators needs to consider the whole ecosystem, broadening their strategic lens and take in to account their full set of dependencies (Adner, 2012) and manage the entire network's capabilities. (Moore J. F., 2006).

Shared values, communication and withstanding opportunistic behavior builds trust. Trust, relationship benefits and costs related to terminating it gives relationship commitment. Relationship commitment increases consensus, decreases propensity to leave and together with trust gives rise to cooperation. Trust also decreases uncertainty and allows better handling of conflicts of interest (Morgan & Hunt, 1994). Evolving interactions over time give rise to mutual orientation (Gadde & Dubois, 2010)

3.2 Products and Technology

This section extends the framework to include an understanding of products and technology how these bring utility, are adopted and influence firms.

3.2.1 UTILITY OF PRODUCTS AND TECHNOLOGY

Technology only has a value when it brings a certain utility as perceived by the user depending on the context. Technology is the knowledge of how to transform input to more desirable forms (Ayres 1994). The technology base of a product is the different technologies required to develop, manufacture, and market the product (Lindmark, 2006). A product can be characterized by the function or set of functions it delivers. This function can be further specified by a number of technical performance attributes. Different technologies typically allow for different performance and improvement in technology is linked to improvements in the technical attributes and their performance. Through its fit in a particular purpose the product gives value or utility to users by solving their needs. (Lindmark, 2006). The potential of a new technology to create utility through new uses are often not well understood (Christensen C. M., 1997). The demand and utility for increased technical performance is partly independent from the ability to create it, making it possible to overshoot demand (Christensen C. M., 1997).

The utility of a product can be divided into its standalone, complement, and installed base utility (Schilling, 2010, p. 79). The total value is the sum of all the components of value as described in Figure *3*. It is the value as it is perceived by customers that matter but also the expectations about future installed base and complements (Schilling, 2010, p. 81). A customers values a new product compared to existing products and will therefore be interested in the marginal value of a new product (Schilling, 2010, p. 79).
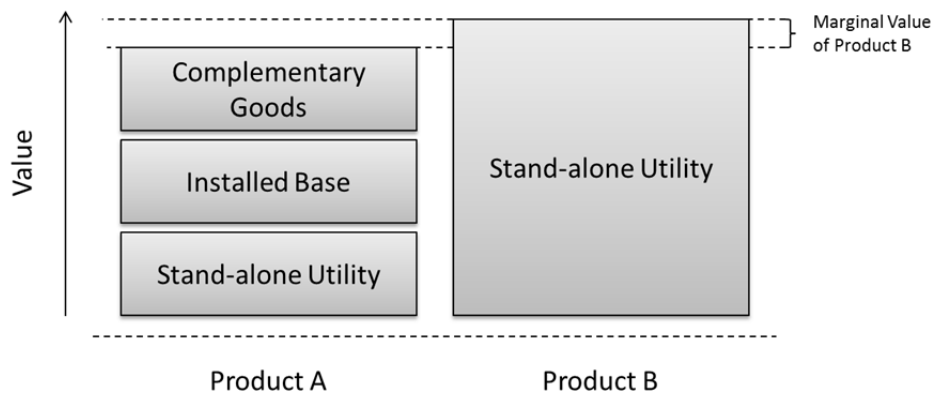
Figure 3 - Components of Value

3.2.2 NETWORK EXTERNALITY – COMPLEMENTS AND INSTALLED BASE

Network externalities are when the value of a good increases with the number of others users of the same good (Schilling, 2010, p. 73). There are many ways in which network externalities can occur, among other if complements or the installed base are important. Installed base is the number users of a particular good (Schilling, 2010, p. 73). Complements are products that enhance the usefulness and desirability of another product (Schilling, 2010, p. 73). The size of installed base and availability of complementary goods creates a self-reinforcing cycle where increase in one attracts more of the other, as described in figure 4 (Schilling, 2010, p. 75).
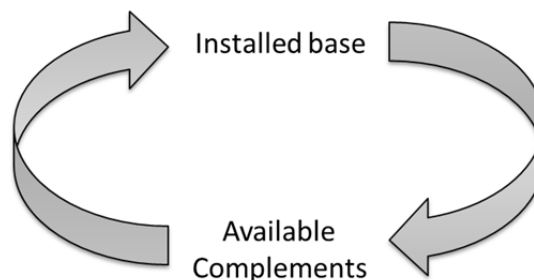
Figure 4 - Self-reinforcing Cycle

3.2.3 DIFFUSION

Diffusion is the process by which an innovation is spread through certain channels over time among the members of asocial system. It is a social process that through interacting people in which norms, values, history, and competencies are all important. Diffusion can be seen as a five step process: knowledge, persuasion, decision, implementation and confirmation (Rogers, 1963). Diffusion will depend on five perceived characteristics of the technology: compatibility (with values, beliefs, and past experiences of individuals in the social system), complexity, relative advantage, trialability, and observability (Rogers, 1963). However, technology is not static and changes impact the rate of diffusion (Lindmark, 2006) . In a single adoption decision a customer adopts a solution is often a complex issue since the customer adopts more than a technology– a product, a supplier relationship, and a future ability to solve their problem (Moore G. A., 1999).

3.2.4 MODULARIZATION AND ARCHITECTURE

Modularity is a strategy for organizing complex products and processes (Baldwin & Clark, 1997) and can be seen as the degree to which a system's components can be separated and recombined (Schilling, 2010). A modular system is composed of modules that are designed independently but still function as a whole and requires partition to be precise, unambiguous, and complete (Baldwin & Clark, 1997). Modularity allows developing parts separately, offering wide market variety, changing and removing parts as they wear, and allows for adding functionality without changing the entire system (Dahmus, Gonzalez-Zugasti, & Otto, 2001). Modularity has the most impact when identical modules are used in various different products (Dahmus, Gonzalez-Zugasti, & Otto, 2001).

Architecture relates to what modules are parts of a system and what their functions are to form a product. Interfaces that describe in detail how the modules interact, including how they will fit together, connect, and communicate. Architectures can either be closed to a single company or open. To some degree producers can decide how the modularization looks, but often standards have emerged, formally or informally, creating dominant designs of architectures (Schilling, 2010). Such standards facilitate transactions and focus process improvement efforts. However, this focus make the system as a whole more rigid to change (Schilling, 2010).

There are several considerations when deciding system architecture. Market variance (how variety is needed by customers), usage variance (how variety is needed after purchase), technology change (how fast modules change); and design implication (how design, production, supply, and lifecycle criteria) (Dahmus, Gonzalez-Zugasti, & Otto, 2001). However there are more profound strategic implications that should be added to the list of considerations, since product architecture relates to vertical integration, competition, and market power (Baldwin, 2007).

Within modules there is a high degree of complexity which makes the transaction costs higher than the costs is for a firm to manage that module complexity within the boundaries of the firm. Transaction costs are the lowest where the module has its boundaries (Baldwin, 2007). Hence modular boundaries of products end up following the boundaries of firms and even departments within firms (Christensen C. M., 1997). As complexity of products rises, modularization is likely to increase to allow continued specialized innovation (Baldwin, 2007). Complexity of products also influence barriers to entry as technology knowledge is expensive for a company to build or acquire but can be lowered by modularization and technologically discontinuous innovation (Albers, 2007).

3.2.5 STANDARDS

Standards define the interface between the product and the world by which it fits in and provides value. For example when two products need to interact with each there is a need to define how they interact. When customers, suppliers, distributors, or complementary providers invest into complying with standards by changing their products, operations, or by learning to use a product, efficacy gains are achieved through compatibility (Afuah & Bahram, 1995). However this compliance forces organizational lock-in as well as user lock-in. This is because efficiency gains from increasing returns to adoption both on the producers and the users side comes with higher switching costs and thus a lock-in effect (Schilling, 2010).

3.3 INDUSTRIES AS VALUE NETWORKS

Industries can be seen as containing streams of activities that are needed to be done to make a particular end-product, commonly called the value chain (Davies, 2004). In the end of the value chain there is a person using the product to fill a need and it can be seen as a collection of tasks (Baldwin, 2007) where there is a combination of resources creating resources that are the inputs of the next task (Moran & Ghoshal, 1999)and in between there are flows of material, energy and information (Baldwin, 2007).

As a result of companies being closely tied together through extensive relationships, networks of firms emerge (Ford, Gadde, Håkansson, & Snehota, 2011). Christensen (1997, p. 32) similarly notes that the value chains branch out, intertwine and form value networks; *"the context in within which a firm identifies and responds to customers' needs, solves problems, procures input, reacts to competitors and strives for profit".* These value networks are determined by a unique definition of product performance with rank ordering of specific performance attributes and associated cost structures (Christensen C. M., 1997). Relating this perspective to the resource based view the indirect capabilities is a framing of different actors' importance in a value network in relation to a focal firm,

Firm presence and experiences within a specific network are likely to mold firms that are part of it (Christensen C. M., 1997). Firms not only influence their environment but are also influenced themselves (Ford, Gadde, Håkansson, & Snehota, 2011)making it likely to develop their capabilities, organizational structures and cultures to fit the network's distinctive requirements (Christensen C. M., 1997).

According to Powell (1990) networks represent a special kind of organizing, characterized by complex patterns of communication and exchange, different from both markets and hierarchies. The market offers choice, flexibility and opportunity for the actor, a simplifying mechanism with fast simple communication that coordinates, without allowing integration (Coase, 1937) suitable for simple, standardized and substitutable goods (Baldwin, 2007) and extends the resources within the reach of the firm enabling specialization, economies of scale and recombination (Moran & Ghoshal, 1999).

A firm on the other hand offers reliability, stability, efficiency, executive power and control by minimizing opportunistic behavior (Coase, 1937) allowing more advance forms or coordination (Baldwin, 2007).

The level of product complexity and the level of division of labor of modules created in a value network set the limitations of how independent firms are in relation to firms in their value network (Cusumano & Cawer, 2002). The implications of firms relations towards other actors thus depend on the characteristics of the product or services created in the value network.

The result of network sharing characteristics with both of the extremes gives rise to unique challenges. The network structure is slow changing (and path dependent), evolves complex system dynamics (large complexities, unpredictability, and feedback loops), leads to interdependence (resource dependence), and lacks direction since no one is in charge (collective action problems) (Håkansson & Ford, 2002; Christensen C. M., 1997). Specialized know-how, trust, and a need for speed and flexibility are factors that favor network organization and when a company has knowledge which has applications in different settings then networks give scalability (Håkansson & Ford, 2002)

3.3.1 VALUE NETWORK DISRUPTIONS

Resource dependence theory suggests that firms to a certain degree always are governed by the stakes of the firm's stakeholders (Christensen C. M., 1997). Firms depend on resources which ultimately originate from a firm's environment. The resources one firm needs are often in the hands of other actors around the firm, such as their customers. Resources become a basis of power which turns firm´s to become dependent on each other which creates a situation where power is relational, situational and potentially mutual. A particular organization's power over another organization could be explained to be equal to the other organization's dependence on the first organization's resources. (Pfeffer & Salancik, 1973) Through the network of relations a company can be indirectly resource dependent in chains making entire value networks resource dependent on end customer demand (Christensen C. M., 1997).

Disruptive innovations are innovations that disrupt value networks by redefining product performance by creating new types of performance and initially having lower performance in the traditional dimensions. Because of this characteristic, the new and potentially disruptive technology initially only fits in a value network that appreciates new performance dimension that the technology can offer. This means small new markets or the very low-end of an existing one (Christensen C. M., 1997).

Small markets appear unattractive to large firms where the ultimate usages and future performance for disruptive technologies are not always known. Even when the firm understand it is hard to mobilize the organization since it will direct itself towards the customers that are currently profitable. The established firms' resources thus become absorbed by the incremental innovations needed to fight for the big chunks of business connected to the established technology and value network (Christensen C. M., 1997).

Since technology performance often increases faster than demand, it sooner or later is possible for the technology to migrate from one value network to another. Technological progress has diminished the relevance of differences in the rank ordering of performance attributes across different value networks. That attributes that make disruptive technologies unattractive in established markets often are the very ones that constitutes their greatest value in emerging markets. (Christensen C. M., The innovators diemma, 1997)

3.3.2 ECOSYSTEM STRATEGY

To illustrate the complex inherencies in value networks the metaphor of business ecosystems is often used. Increasing inter-firm dependencies leads to a need for managers to shift their way of viewing the concept of competition (Moore J. F., 1996). Well-being of the network as a whole is central in the ecosystem approach (Moore J. F., 1996). By framing a firm as part of an ecosystem Adner (2012) suggests that the firm's innovation strategy is dependent on not just execution, but also complementary innovators and adaptation in the downstream value chain, a view shared by Affuah & Bahram (1995).

In order to successfully launch a new product the innovating firm needs to recognize that there are many customers before the end customer. Innovators and customers have different views on what make benefits and costs (Adner, 2012) and the adoption decision is based on the perceived characteristics of the innovation (Rogers, 1963). The customer considers the relative benefit that the new product brings compared to the old solution

and compares it to the total cost of the product which includes other costs and risk associated with choosing the new product (Adner, 2012).

The actors in the value chain are different and therefore different value propositions will be required. There needs to be a surplus of relative advantage in every step along the adoption chain for the innovation. If there is a lack of benefit in any link the diffusion will fail (Adner, 2012). This means that if an actor in the chain would not gain from the innovation and reject it, there is a risk that the entire chain breaks. It is thus not the level of value that could be offered to the end customer that is the critical issue but rather if the chain of incentives are aligned. If actors are spotted not to gain significantly from the innovation this is then seen as an adoption chain risk. It is then vital to innovate around that challenge and thus innovation in the innovation ecosystem (Adner, 2012).

Networks are thus slow to change and likely to become a brake to innovation (Håkansson & Ford, 2002). This is consistent with the finding that a firm is better of being vertically integrated in a new technology and vertically disintegrated in old technologies and the suggestions that coordination of firms are needed to innovate (Moran & Ghoshal, 1999). Innovations might even actively be worked against by actors in the existing value network, especially if it destroys competences, network externalities, and complements of existing innovations (Afuah & Bahram, 1995) or if they are not valued by existing customers (Christensen , 1997).

A firm should strive to create sustainable advantage by establishing hubs or platforms of which the livelihood other actors are dependent. (Iansiti & Levien, 2004) However, the more a firm tries to influence the network the more it becomes similar to a hierarchical structure. Having a self-centered view makes the company fail to see the dynamics and how the well-being of others is related to the well-being of the firm. (Håkansson & Ford, 2002)

3.3.3 PLATFORM STRATEGY

A platform is an evolving system made of interdependent pieces (Cusumano & Cawer, 2002, p. 3). When designing and validating a strategy for creating a platform four main considerations have to be made (Cusumano & Cawer, 2002). The first is the "scope of the firm", i.e. whether the firm could develop complementary products inside the firm and what is better to encourage external firms to develop. The second is the level of openness of the firm's platform and what should disclosed to outside firms such as complementors with the risk in mind that these could become competitors. The third is about relationships with external complementors and how the platform creator should reach consensus with their partners on how competitive or cooperative the relationship should be. The fourth is the internal organizations culture and processes circumventing discussion about strategy. Complementors can turn to competitors and notions possessed by employees within the firm having contact with partners need to be able to communicate and stimulate strategic reformulations (Cusumano & Cawer, 2002). Managing the evolution of the platform interfaces and architecture by being open for what is demanded by the platform to do in order for complementary innovation to flourish (Cusumano & Cawer, 2002). Encouraging complementary innovation is crucial which can be done by dedicate groups in the organization to put forward these issues (Cusumano & Cawer, 2002)

When launching a new platform a company can get stuck in a catch 22 because of network effects. Dixon & Rhodes (2003) present a handful of strategies on how firms can overcome these obstacles. First of all it is important that the firm signals long-term commitment to platform success. Furthermore the company can use backwards and sideways compatibility to benefit from existing complements. Another option is to try to influence the firms that produce vital complements or integrate vertically into critical complements when supply is not certain. The firm can also exploit irregular network topologies and provide standalone value for the base product (Dixon & Rhodes, 2003).

4 EMPIRICAL FINDINGS

This chapter presents the findings of the data collection process and sets the basis for coming analysis. The first section presents findings from internal studies of Fixcom as a company and their new initiative. The section after that presents findings from external studies of the new industry and its actors.

4.1 THE COMPANY

It is Fixcom desire to transfer their existing business model and partner network into the new industry. In fact this is a prerequisite for Fixcom to consider entering the industry at all. (New Business Developer, 2012) This section aims at explaining findings of central aspects of Fixcom as a company as well as important aspects in Fixcom initiative.

4.1.1 TECHNOLOGY & OFFERS

Fixcom is planning to enter the new market with a single hardware product further referred to as the product. The product is based on TCP/IP and powered by Power over Ethernet (PoE). This in general terms means a unit that is installed directly connected to the network infrastructure and provided electricity through the network cable. The difference with the product is that it utilizes the network infrastructure in a different way than the architecture of hybrid or analog systems do.

The product is going to be packaged in three different product offers targeting three different installation types. (Fixcom, 2012) The different offers and target installation types are graphically presented in Figure 5 and further explained in following paragraphs. There are two further notions that are important to make about the product that is common to all offers. First, there will be an application programming interface (API) available which is a way for software to talk to the product. The API will be open which enables anyone to develop software that can communicate with the product. Second, the systems will be scalable on a unit by unit basis meaning that the end user always can have the exact number of units that he needs in his system and never have to pay for over capacity, as may be the case with traditional fixed number of units per systems. In relation to this it is also possible for the end user to change between the offers below as the system grows or premises change. (New Business Developer, Fixcom, 2012)
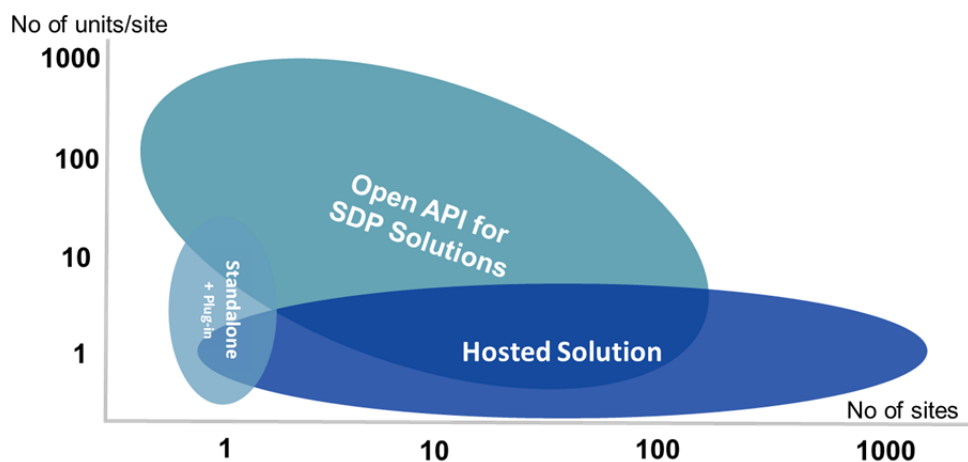

Figure 5 - Offers and target installation types

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The standalone offer is targeting installations at one single site and quite few units. In this case the product comes with an embedded software, developed by Fixcom, that runs directly on the on the product hardware. Hence, there is no need for a server and the products in the system communicate directly with each other. The embedded software will have very basic functions. This offer also includes a plug-in for one of Fixcom's current business software targeting similar customers as the standalone offer. This enables integration between the two systems, as the existing system can bring in information from the embedded software. (New Business Developer, Fixcom, 2012)

The second offer is hosted service, which enables software as a service to end customers. In a simplified way, this means that the end customer does not host, administer, manage or maintain their system but buys these functions to a service provider as hosted or cloud based service. The service providers in this case are typically system integrators or installation firms which are closest to the end customer in the sales channel. The hosted offer is targeting installations from one to many geographical sites with only a few units per site. (New Business Developer, Fixcom, 2012)The software for hosted is developed by Fixcom and offers basic functions with the possibility to integrate with Fixcom offer enabling hosted software in the current business. Fixcom have developed a special patented install function applied in their current products. The function saves installation time and costs, and further reduces the level of knowledge needed by the installers. This function will be applied to the product for simplifying installation. (Hosted Product Manager, 2012).

The third offer is actually a category of offers that represents the product in the role as a platform in which external software development partners (SDPs) provide the software. These offers may take many shapes but the typical installations are likely to be installations consisting of many units, many sites or both. These types of installations are often called enterprise installations and in general means that the installed systems are more advanced in terms of functionality and capacity. In the typical enterprise installation the software is installed on the end customers' servers. (New Business Developer, Fixcom, 2012) These offers are meant to incorporate integration with current products by making it straight forward for SDPs to achieve through very similar APIs. Fixcom aims to provide a solution for all customer segments through the different offers. In the long run the company is aiming for the global market but the initial launch will be in North America.

4.1.2 RESOURCES & CAPABILITIES

Product development is at the heart of Fixcom's organization. From a technological perspective Fixcom have leading skills and capabilities in IP and network technologies and they have been a driving force in IP convergence in the current industry. Fixcom is a company that has realized the importance and benefits of working in a cooperative manner with actors in the current industry. By working this way Fixcom has over the years managed to position themselves as an important player in the diffusion of IP technology in the current industry and this is based on their philosophy of being open to external software development and new partnerships. Another result of Fixcom success in their current industry is that the company gained extensive experience and capabilities in the area of technology commercialization. (Director New Business Development, 2012)

In order to accomplish openness to external development they have made their products to function as platforms. This has led to an ability to outsource development of

complementary software and specialized analytics applications. This way, Fixcom has been able to create competitive products and high rates of demand for their current products. Fixcom has, because of their current product platforms created leading capabilities in API development. (New Business Developer, Fixcom, 2012; Product Specialist Hosted, 2012)

Consultancy and support with partners and end customers are capabilities that can be said to be the outcome of Fixcom's open attitude towards new partnerships. Fixcom's brand name thus stand for innovativeness, high quality and easy to install products, good support and extensive market reach. For these reasons Fixcom is a well-respected actor and attractive partner in the overall industry, but it also sets the industry's expectations on what Fixcom will deliver as a new industry supplier quite high. (Vice President Sales, 2012; Vice President Sales, 2012; Director Strategy Technology, 2012; Director of Emerging Technology, 2012; Product Manager, SI 1, 2012)

What Fixcom is currently missing in terms of resources and capabilities is an internal widespread knowledge and an established support and sales organization for the new type of systems. (New Business Developer, Fixcom, 2012)Furthermore, Fixcom is entering the new industry as a new player and therefore lacks the valuable installed base and end customer relationships that established industry players have. Connected to this is that, even if Fixcom's brand is well respected in the industry, they have not yet proven their credibility as vendor in the new industry. Credibility is an important resource that has to be earned. (Product Manager, S1, 2012; Director Strategy Technology, 2012; Director of Emerging Technology, 2012)

4.1.3 RELATIONSHIPS & NETWORK

Fixcom's business model is based on loyal, long-term partnerships and a large part of the company's success can be explained by the extensive partner network (Director New Business Development, 2012). Today Fixcom has over 45 000 partners, present in 179 countries (Fixcom, 2011). Fixcom distribution channel consists of distributors, system integrators (SIs) and resellers that are all partners to Fixcom. Furthermore, the bulk of management systems for Fixcom's current products are developed by software development partners (SDPs). Apart these there are also hosting and service providers, technology and engineering partners. Fixcom works actively supporting all these partners through partners programs. (Programs & Partner Marketing, 2012)

Different partners have different functions, size, and needs which make relationships to them differ greatly. There are three types of channel partners, distributors (1st tier), SIs (2nd tier) and resellers (2nd tier). In general, if a channel partner sells a lot of Fixcom products Fixcom will try to have a closer relationship with them. In accordance to this, the most important distributors are categorized as global partners and the most important SIs and SDPs are labeled as gold partners. (Programs & Partner Marketing, 2012)

The current partners and relationships that initially will matter the most for the success of Fixcom's initiative are the global distributors, gold SIs and SDPs. The reason for this is that they are the only ones that will be actively involved from the beginning and that these are the relationships that are most important not to harm when entering a new business. Table 4 below gives a very short introduction to the most important types of partners and their respective role. (New Business Developer, 2012)

Partner Type	Role
Distributor	The distributors are the link between Fixcom and 2nd tier partners. Their core business is to keep stock of Fixcom products and thereby provide availability to the market. They are also invoicing and offering credit to the Fixcom resellers and SIs. The distributors can also provide value added services to the resellers like marketing and product information (Fixcom, 2011)
System Integrator	System integrators are the link between Fixcom distributors and end customers. Their key purpose is to have the knowledge and manpower to transform components into turnkey solutions at a competitive price, i.e. design and install the system for the end customer. (Fixcom, 2011)
SDP	SDPs develop software to be used together with Fixcom products. They provide a larger set of software, more specialized applications and allow increased customization than would have been possible with solely in-house software. (Software Partner Manager, 2012)

Table 4 – Definition of partner roles

In the new initiative, getting commitment from software developers to provide software for Fixcom product is a necessity for the SDP solution offer. Fixcom has approached their current gold SDPs, who are developing software solutions for Fixcom current products by inviting them to develop software for the new product. A handful of current gold SDPs have expressed their interest. Among the handful of committed SDPs there is currently one that is active in the industry with integration that is based on another competing product. (New Business Developer, Fixcom, 2012) Developing a new system, especially one with more advanced functions, will take time for the SDPs that do not have any experience in this type of systems. Fixcom hopes that their SDPs will make close integration between the new and current functions, in different forms and levels. (Software Partner Manager, 2012) Competition between software developers is fierce and when resources are relatively scarce a move in to the new industry is perceived as a significant strategic decision (Software Partner Manager, 2012).

4.1.4 CHANNEL MODEL

Fixcom never sells their products directly to the end user, but always through their two-tier distribution model, shown in Figure 6. Even big SIs with established direct relationships to Fixcom have to buy their products through the channel model and thus from a distributor. This loyalty towards channel partners is said to be one of the cornerstones of Fixcom success. (Director New Business Development, 2012) This statement was also confirmed in interviews with two of Fixcom global distributors when they explained that loyalty in the channel is of great importance for them to push a manufacturer's product (Product Manager, Distributor 1, 2012; Vice President Sales, 2012). Similarly, the interviewed gold SIs expressed the importance of manufacturer not going around them in the sales channel, even if they would consider cutting out the distributor and buy directly from Fixcom. Fixcom channel model does also stand for non-

exclusivity, which means that no one has exclusive rights to sell Fixcom products (Director Global Partners and Business Development, 2012).
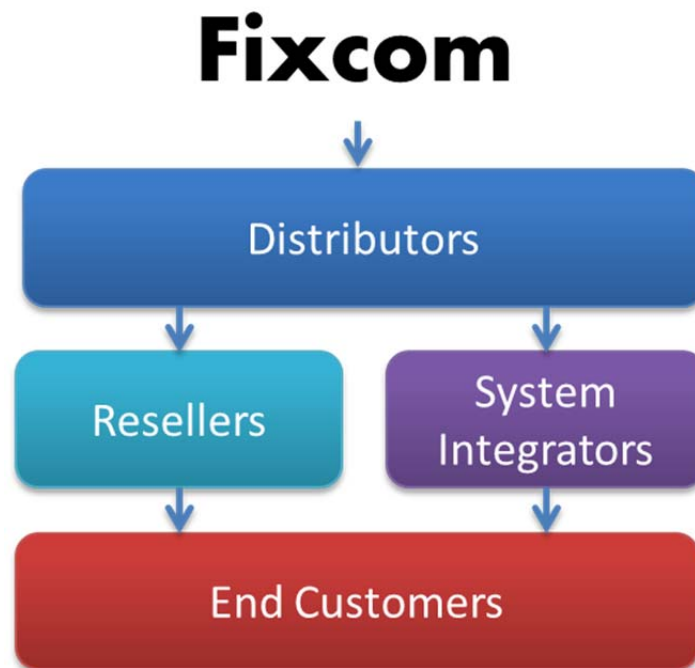
Figure 6 - Fixcom's Two-Tier Channel Model

Since such a big part of Fixcom value chain relies on external actors, it is of great importance to manage the network for everything to run smoothly. (Director Global Partners and Business Development, 2012) Support, education and training for partners have to be in place. Marketing and sales activities targeting different actors (partners and end users) has to be coordinated, market information and feedback has to be brought in. (Programs & Partner Marketing, 2012) Fixcom has a lot of experience in this way of working from the current industry. They have well working partner programs, are known for great support and strong relationships with actors from many areas in the current industry. But Fixcom does not yet have the competence and knowledge to provide education and support for their new system and there is still know clear strategy for how these issues are going to be handled. (New Business Developer, Fixcom, 2012; Programs & Partner Marketing, 2012)

4.2 THE INDUSTRY

The current and new industries are connected in several ways. They are both parts of the overarching industry and many of the main players in current industry are also active in the new industry, the systems are sold through the same channels and to a large extent installed by the same companies. (Founder, 2012; IMS Reserch, 2009)*This section presents findings of central aspects in the new industry that relates to Fixcom and their new initiative.*

4.2.1 TECHNOLOGY & OFFERS

IP technology is well established in the new market and all interviewed SIs, partners and non-partners, have worked with some kind of IP based system. The technology has been steadily increasing its market share over that last ten years, especially in the enterprise segment. It is no longer a question if IP technology will dominate the industry in the future rather a question of how fast the transition from traditional systems will be. (Director of Emerging Technology, 2012; Director Strategy Technology, 2012; Founder, 2012; Product Manager, Distributor 1, 2012)The trend in recent years is the emergence of Edge devices and PoE. In these systems the network infrastructure and thereby the hardware is moved further out in the system which to a greater extent allows end users and installers to enjoy the benefits of faster, easier and cheaper installation and maintenance. (Product Manager, SI 1, 2012; Founder, 2012; Vice President Sales, 2012)

The end user benefits from choosing an IP based system are reduced installation and maintenance costs, increased functionality and easier to manage. But end customers, especially to small SIs, do not care what system they buy as long as it functions and therefore the installer and chooses mostly on price. (Product Manager, Distributor 1, 2012) IP is well diffused and most installers have tried installing a PoE based product, but the diffusion of IP systems is slower in the small installation segment. (Director Strategy Technology, 2012) Smaller SIs finds it more problematic to work with IP systems than the interviewed gold SIs. However, in both groups many mentioned limitation using certain complements together with PoE due to US regulation as a problem. In many cases this removes the benefits of installing PoE based products.

In recent years and together with the development of IT technology integration between systems has become increasingly common and important, making the link between Fixcom's current and new systems even more obvious. Integration is one of the biggest trends in the new industry. (IMS Reserch, 2009)

The level and quality of integration between the systems differ widely in the market. In some cases the SIs develop custom-made software integration between the two systems from different vendors, a process that in many cases is quite time consuming. (Director of Emerging Technology, 2012) There are also examples of readily integrated solutions in different forms. Furthermore, the two biggest vendors are currently working on enterprise systems with full integration.

The interviewed channel partners agree that integration has not yet reached its full potential and has to be made simpler. Their expectations on what Fixcom will deliver in terms of integration are high and they are looking for seamless out-of-the-box integration, with better API and graphical user interface (GUI) than what is currently available on the market. (Product Manager, Distributor 1, 2012; Vice President Sales, 2012; Director of Emerging Technology, 2012; Director Strategy Technology, 2012) One SI adds to this that

integration is what will drive Fixcom into the new field, and another believes that good integration could be the differentiator that will move Fixcom into the enterprise segment. (Product Manager, SI 1, 2012; Founder, 2012) According to the interviewed smaller and non-partner SIs customers buying small installations seldom need integration between systems, even if they quite often buy different systems at the same time. In many interviews several other forms of integration was mentioned as interesting and important for the future.

4.2.2 THE CUSTOMERS

The new market is fragmented in terms installations size and type, customer types and preferences. This was confirmed by the interviewed SIs as they expressed their inability to define their typical installation. Findings from the end customer interviews also demonstrated situations with installations spanning from two to 1700 units (See Appendix 1 for a longer discussion). One of the gold SIs divided the market into three segments based on installation size, namely small medium and large installations. The small segment in this case is below 20 units, medium 20 – 60 units and large installations above 60 units. (Director Strategy Technology, 2012)

There are no clear cut way to segment the industry in terms of customer preferences and functional needs, but in very general terms customers who buy small installations does not demand advanced functionality to the same extent as customers buying larger installations. (Vice President Sales, 2012; Director Strategy Technology, 2012; Founder, 2012) But small installation customers are increasingly looking for more functionality as advanced technology becomes more available and affordable. Especially important in this trend is the developments of GUIs were systems becoming easier to use and manage, enabling the end user to use more functionality without the need for dedicated resources. (Director of Emerging Technology, 2012)

The product manager at one of the SIs defines the enterprise customers as having high demands on system functionality, quality of installation and system integration. It is not a question of how many units and sites. He also adds that a full feature enterprise system with high quality preferably seamless integration is what they are missing in their current product range. (Product Manager, Distributor 1, 2012) Table 6 gives an overview for the different customer segment together with their respective needs and values when buying systems. The information in the table is consolidated from interviews with seven end customers, ten SIs and two global distributors.

	Small Basic Installations	Enterprise
Description	• Small to medium organizations • +25 employees • Few sites	• Large organizations • High functional demands • Integration important • Few to many sites
Example	• Offices, Small Industry, Retail	• Universities, Industry, Hospitals, Government
Characteristics	• Basic functional needs • Very price sensitive • Indifferent to technology	• High demands on functionality • Integration between systems important
Values	• Reliability, Ease of use	• Credibility, Reliability, Functionality, Integration, Scalability

Table 5 - Segmentation of Installations

Within the small basic installations segment a significant part are end-customers whom in fact are part of a bigger organization with many installations spread over many sites. One example could be a nationwide retail chain. (Director Strategy Technology, 2012; Managing Director North America, 2012) The customers for this type of installations generally does not need advanced functionality, and would therefore belong to the SBI customer segment based on the functionality parameter. On the other hand their reasons for buying are easier administration and control which move them towards the enterprise segment. (Director Strategy Technology, 2012)

4.2.3 NETWORK & CHANNEL MODEL

Systems are sold through different channels depending on manufacturer, installation size and target customer. The distribution of the total market size between the channels is illustrated in Figure 7 below. As can be seen distributors are cut out from approximately 64% of the market. (IMS Reserch, 2009) One channel actor that is not represented in Figure 7 is the rep-firm, which is basically an outsourced sales force, working on commission that sells and market manufacturer's products basically towards all the different actors in the channel. Furthermore the rep firms' work towards consultants in order to get the systems they represent specified for projects. (McFadden, 2012) The rep-firms are likely to be more technology conservative than other parts of the channel since their business is based on their system knowledge and contact network, they therefore have low incentives to change technology as long as their current systems still sell. (Managing Director North America, 2012)
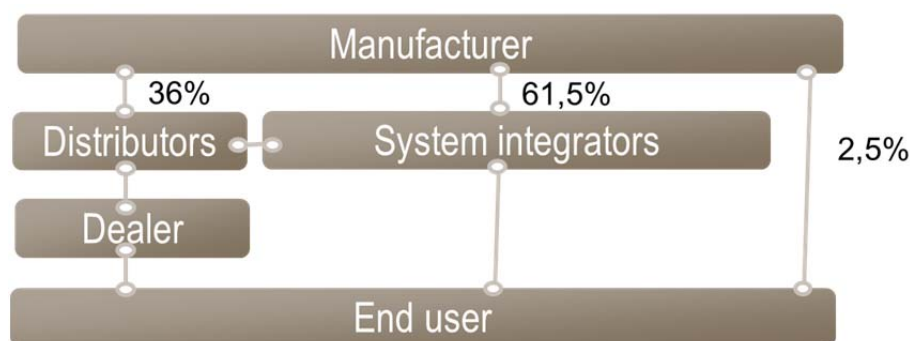

Figure 7 - Sales by channel

Both distributors and SIs are very keen not to be cut out in the channel by their manufacturer. Especially since there is a tendency that the project they miss when manufacturer sell directly towards are the end customer are the attractive big installations. (Vice President Sales, 2012; Product Manager, Distributor 1, 2012; Director of Emerging Technology, 2012) Many SIs sees the value that distributors add as valuable enough to defend the fact that they lose a few percent in margins (Director of Emerging Technology, 2012; Director Strategy Technology, 2012). A few on the other hand would prefer to buy directly from the manufacturer (Product Manager, SI 1, 2012).

All Fixcom gold SIs and global distributor partners are already active in the new industry with established manufacturer and customer relations. (Fixcom, 2012) Nonetheless, all partners that have been contacted in this study are excited about Fixcom new initiative even if their individual focuses of interest differ. One SI and a distributor are mainly are interested in a full-featured enterprise solution with great integration. Meanwhile two are most excited about the possibility to offer hosted systems and a simple solution for small systems.

Findings from the interviewed gold SIs showed that they performed all types and sizes of installations except for the really small one or two units systems. But still their main focus differed a bit as well as gold SIs respective technological background, current industry brands and what they would like the product to be capable of. The smaller non-partner SIs that were interviewed performed more of the small size, single site installations but most of them were still more interested in talking about their big enterprise installations.

The channel partners also differ in what they expect Fixcom to deliver in terms of technology and product offer at the time of launch. Three of the interviewed partners are expecting a "forward looking" product in terms of functionality. While the other two are more up-to-date with what to expect for the product launch. In the long run though, all interviewed channel partners, except one, expect Fixcom to have an enterprise offer with more advanced functionality available (Product Manager, Distributor 1, 2012; Vice President Sales, 2012; Director Strategy Technology, 2012; Product Manager, SI 1, 2012; Director of Emerging Technology, 2012).

Fixcom can reach the target customer segments for all offerings through their existing channels (Product Manager, Distributor 1, 2012; Vice President Sales, 2012; Director Strategy Technology, 2012; Product Manager, SI 1, 2012; Director of Emerging Technology, 2012). But for the partners to adopt the product there has to be clear incentives. Training in a system takes time and is costly therefore a partner will not likely change manufacturer or add a new if they do not offer little or no difference than the current manufacturers.

4.2.4 COMPETITION

The industry is very fragmented. (Founder, 2012; Managing Director North America, 2012). There are many competing vendors of systems where the biggest vendor only controls 10 % of the market (IMS Reserch, 2009). Competition is fierce in basically all market segments and many new entrants do not become long lived. The implication of this is that in order to become established and adopted by actors in the channel the offer need either to be clearly differentiated on valuable aspects such as functionality or have a pricing point considerably lower than comparable competing offers.

A second implication of this fragmented market is that credibility is very important, as a manufacturer you have to earn your right in the industry by having reliable products and an installed base that implies that you will be around for quite some time. The issue of credibility is always important and sometimes can outweigh that the product offer does not stand out, but a manufacturer that combine a competitive offer with being seen as a credible actor heavily increases their chances to get adopted in the channel and thereby penetrate the market. (Product Manager, SI 1, 2012; Director of Emerging Technology, 2012; Founder, 2012; Product Manager, Distributor 1, 2012)

Almost all major manufacturers selling systems today design and manufacture hardware as well as develop software and all actors sell systems with bundled software and hardware. The exception are two established players that develop and manufacture OEM hardware to several mid-size software manufacturers who then bundle the hardware with their own software and sell as complete solutions. (New Business Developer, 2012; Product Manager, Distributor 1, 2012)

4.2.5 OPEN PLATFORM

Today basically all systems are proprietary meaning that hardware and software are sold together. The hardware either is manufactured by the system vendor or sold by OEMs from a handful of companies and are not compatible with other manufacturers' products. Although there recently have been some initiatives to get different systems to communicate. (Director of Emerging Technology, 2012; Consultant Manager, 2012) A few actors have launched API platforms but still control and actively choose who has access to the API. (New Business Developer, Fixcom, 2012)

All of Fixcom's channel partners that have been interviewed are positive to open architecture in the new industry and believe that it is where the industry is going. It would reduce the current lock-in effects that the proprietary systems have both for SIs and end customers. For end customers that already have a system installed the lock-in effect means that you are forced to buy from the same manufacturer if you want to extend your system and if you are unsatisfied with some part of the system you have to change everything, which is likely to be very expensive. For the same reasons SIs have to be able to serve their existing customer base and are therefore locked to the systems that they have previously installed, furthermore the SIs today are forced to compromise when choosing what systems to work with since they cannot choose the most suitable hardware and software independently. Although one of the SIs expressed that he believes that there will always be proprietary systems to some extent, since customers will be skeptical to that systems that are built from components from different manufacturers are as secure and reliable as the proprietary systems. (Product Manager, SI 1, 2012; Product Manager, Distributor 1, 2012; Vice President Sales, 2012; Founder, 2012; Director of Emerging Technology, 2012; Director Strategy Technology, 2012) It should be noted though that the interviewed non-partner SIs were less concerned with the lock-in effects of proprietary systems and that these SIs are significantly smaller than the gold partner SIs.

The gold partners also explained that even if an open standard and platform would be good for the industry it may be a struggle to get there. In order to become credible in the new industry and get other parties join the open platform, Fixcom will have to prove it by a large installed base. For this the large players are needed and they will be reluctant to open up their systems since they make good money on the proprietary systems. (Product Manager, SI 1, 2012; Director Strategy Technology, 2012) One aspect that was brought forward and that might put Fixcom in a better position to drive the new industry towards an open architecture would be to bring new players in to the industry. For example by engaging partners and leveraging the network from the current industry and thereby create an open standard coalition. (Founder, 2012; Vice President Sales, 2012; Director Strategy Technology, 2012)

It also takes time and costs a lot of money to learn a new system and therefore once you got the needed knowledge for a manufacturer's system in place, there have to be very good incentives to change. "*You live and die with your manufacturer.*" as one interviewee expressed it (Founder, 2012). The issue of training and education is important for SIs independent of their size but according to two of the largest distributors in the industry small SIs tend to be less brand loyal than larger. (Vice President Sales, 2012; Product Manager, Distributor 1, 2012).

5 ANALYSIS

By going into the new industry Fixcom will impact its business and industry in several ways. In order to figure out how Fixcom should act to get established in the new industry and at the same time transform the current industry structure it is essential to understand the implications of their position, current plans and what risks the company needs to handle. By breaking down the problem into several aspects it was possible to analyze their implications.

Firstly the product is a specific new product. It uses certain technologies in certain ways to create utilities in specific contexts that Fixcom wants their channel partners to adopt. Secondly, the product introduces Fixcom as a new industry hardware vendor with a specific business model representing a new way of selling hardware in the industry. Finally, the product is also an open platform, and in itself part of one, defining a common interface between software and hardware which is dependent on positive networks effects and getting software developers on board for its survival.

A strategy should be based on the relationships, resources, and capabilities Fixcom has, within its boundaries and leveraging its value network. The firm has to assess the relevance, sustainability and appropriability of these capabilities as well as the relationship commitment, incentives, and trust of the external actors on which they are dependent upon. There are two important external dependencies, dependency on downstream adoption, i.e. customers and distribution channel; and dependency on complementary suppliers. Fixcom must exploit their capabilities in relation to the opportunities and reinforce their position by building the resources and capabilities they lack in order to better match the opportunities. The analysis will link the findings in our study to these theoretical constructs to deepen the understanding of the implications for the success of Fixcom when entering this industry.

5.1 TECHNOLOGY AND OFFERS

Fixcom can reach the target customer segments for all offerings through their existing channels, but as described by Adner (2012), the adoption of a product do not only depend the on utility and adoption of end customers. Rather the whole chain of adopters needs to be taken in to account order to reach the customers. The following paragraphs analyze the incentives for the central actors in the value chain to adopt Fixcom technology and three different offers, with the basis in technology performance and utility Ayers (1994) (Christensen C. M., 1997; Lindmark, 2006) and adoption chain risk as described by Adner (2012). The main actors that are handled are distributors, SIs and end customers.

5.1.1 DISTRIBUTORS

The main motives for distributors to adopt Fixcom's product offers are the multipurpose use of the unit, the valuable relationship with Fixcom and that the open platform is perceived as have a strong potential to become a vital part of the new industry in the future. These factors give relative advantage and compatibility according to Rogers' (1963) model. Perhaps one of the strongest incentives for distributors' adoption is that the relationship with Fixcom, which through the channel model opens up new business opportunities in the enterprise segment. This will further be analyzed in the next section of Fixcom channel model.

The fact that the product can be used in three different solution types that each can be customized to meet the needs of the end customer, does not only creates utility for distributors by reducing the number of articles that has to be kept in stock. Perhaps even more important is that it strengthens the distributors' position as value adding actors and allows them to capitalize on their resources in IP knowledge by customizing solutions towards smaller SIs and resellers.

The offer that is seen as most attractive for the gold distributors to adopt is the SDP solution for enterprise customers, especially if it would incorporate good integration. The utilities with this offer would be that distributors would reach a market niche from which they are currently cut out to a great extent and give them a system based on technology that they see as attractive for the future.

The distributors will sell what the customer demands and putting efforts on pushing a customer from choosing one system over another equally good has little or no utility for them. The standalone offer was found to be undifferentiated compared to what is available in the market today and the hosted offer's potential to increase sales is yet to be proven. This means that distributors need to be encouraged to push Fixcom's standalone offer even though these products do not constitute any significant relative advantage in relation to competing solutions. This is why Fixcom vision of creating a well-established SDP platform offer needs to be communicated in a clear way to distributors so that the reason for pushing adoption of the embedded and hosted solutions is the future businesses opportunities distributors could get by getting access to the enterprise segment.

The other of Rogers' (1963) dimensions trialability, complexity, and observability. The trialability of the product is related to the time needed to test and educate the sales force in the system. For distributors it is fairly simple to distribute a box, but to sell the more complex system more efforts is needed in training and education. Observability is less of a concern because of relatively few distributors which allows Fixcom to spread knowledge about the product.

5.1.2 SYSTEM INTEGRATORS

The system integrators are perhaps the most central actor in the adoption chain since they to a great extent decide what systems that are installed at the end customer. The identified main system integrator utilities for each of Fixcom offer is presented in Table 7 below, along with the technical attributes that they are based on. An important notion on the table is that the listed utilities for one offer are also true for the offers below.

Offer	SIs Utility	Performance attributes
Standalone + Plug-in	1. Scalability of a system 2. Higher RoI 3. Stronger offer	• Distributed communication intelligence • Lower maintenance and cabling costs (PoE) • Integration possibilities • Possibility to change offer
SDP Solution	4. Higher customizability 5. Easier Integration of systems 6. Independence from vendor	• Open API • Easy and fast installation with special patent • Multipurpose system • No lock-in between hardware and software
Hosted Solution	7. New business opportunities 8. Recurring revenue	• Coordinated hosted platform • Reliable hosting partners

Table 6 - System Integrator Utility

For the standalone offer there are similar systems available today that offers the same utilities of scalability and higher return on investment due to lower maintenance and cabling costs. Fixcom's offer stands out with the possibilities for simple integration which to some extent makes it stronger. But the incentives for SI adoption due to this factor is to a large extent dependent on end-customers of small systems incentives to adopt the concept of integration at a lower price than what is possible to get with current proprietary systems. This demand is currently not perceived to be strong enough to create incentives for SIs to adopt, therefore it will be important for Fixcom to meet the price point of competing systems in order to qualify for SI adoption. If the price is equal the integration possibility might make Fixcom's solution the preferred choice for system integrators.

The hosted offer is the one seen as most attractive for system integrators who has strong incentives for adoption in the new business opportunities it brings, this offer is further strengthen by Fixcom special patented installation function, which makes the installations of hosted systems less complicated than it is with current systems. Furthermore, the ease of installing Fixcom's system significantly reduces the barriers to enter the hosted business for SIs since it puts less demand on IP knowledge and capabilities than competing systems, hence less needed investments in education, decreasing complexity and increasing trialability.

Many large SIs have high focus on their enterprise customers and installations. The main utilities that Fixcom's SDP solution offer, compared to what is available today, are independency from vendors and connected to this the possibility to customize the systems by choosing software and hardware independently. Another differentiating utility is the open API that allows for integration with other external systems. A downside with Fixcom's SDP solution is that it is unclear how competitive it will be in terms of functionality. System integrators are looking for reliable systems with advanced

functionality for their enterprise customers, if possible they also want seamless solutions for integration with other systems. If Fixcom SDP solution cannot meet the SIs functional demands on an enterprise system it is unlikely they will adopt it regardless of the differentiating utilities listed in Table 6.

Another general barrier for SIs adoption is the costs associated with switching vendors, giving low trialability. As said many times education and training is costly and takes time and SIs will not likely make these investments in a system that is no different from what they already have or is perceived as very promising for the future.

With this in mind the hosted offer is seen as having the highest chances of smooth SI adoption. It is well differentiated in the ease of installation and the possibility to integrate with Fixcom's current hosted offer. Furthermore, there are strong incentives for SIs to adopt in the fact that it opens new business opportunities for them to act as service providers and collect recurring revenues. The hosted offer may well be Fixcom way to get an installed base in the new industry and getting established in the industry, but this far the hosted market is slow moving.

5.1.3 END-CUSTOMERS

Even though end-customers often do not make the buying decision it is important to understand end customers incentives to adopt Fixcom's solutions and how these incentives relate to the other actors in the adoption chain.

From a diffusion perspective it is useful to segment the customers in two parts who will perceive the characteristics of the technology differently in Rogers' (1963) dimensions. On the one hand there are customers who currently have a system and want to expand it. For whom technical compatibility is a large concern, and where the product will not fit. On the other hand there are customers who are planning on buying a new system or changing their entire system. For these relative advantage will be more important and compatibility less of a technical issue, it is this later buying decision we will explore further below.

The standalone offer system fits the smaller installations with a need for basic system functionality. Typical customers in this segment would be single site retail, small manufacturing and offices. These customers are served by small SIs and or installers with whom Fixcom have no close relationship with even if they in many cases install Fixcom equipment. The utility the standalone solution brings to these customers is a reliable system that is easy to install and use, i.e. as much utility with as little effort as possible needed from the customer. Since these customers in many cases are indifferent to what technology that is used in their system and more concerned with the price tag Fixcom should focus on matching the price point of competing systems. A factor that may give some extra momentum to the customer adoption or the standalone offer is the plug-in to Fixcom's current basic software, which is targeting basically the same customers. The customers in this segment currently do not demand integration but if costs can be kept down by buying both systems together it is likely to be an attractive offer.

The hosted offer should target the customer segments that do not fit into the small basic installation buyers or in the enterprise segment. These are organization of all sizes that do not need enterprise level functionality but buy systems for similar reasons as the enterprise customer. That is easier administration and increased control. The typical

customer in this segment would be a national retail chain or branch offices of a large organization. These customers utility of adopting the hosted solution is being able to have the same system installed in all their sites while not having to put resources into managing and hosting what would be a quite complex system. Another factor that might affect the willingness for end users to adopt the hosted offer is the general trend of outsourcing server capacity out on the cloud. And as the systems increasingly are becoming an area handled by IT departments and acceptance towards adopting cloud-based solutions over in-house server dependent solutions are therefore increasing.

Enterprise installations are rare, but still constitute a large share of the market moneywise and are therefore very attractive. The SDP solutions targets enterprise customers that has high demands on functionality. The typical customer in this segment is a larger organization on single site or geographically dispersed, for example universities, hospitals, large industry or governments. The main utilities for end user that differentiate Fixcom against competing proprietary systems is the freedom to choose hardware and software independently and also the change between different offers or software solutions as needs change. This enables end users to always have a solution that is suitable for their current demands without the need for heavy investments. In connection to this the open API allows for customization and integration with other systems according to the customer needs. Integration between the old and new industry systems is one of the big trends in the industry and with Fixcom SDPs experience from developing current industry software this factor may be what truly can separate Fixcom from competition on a product performance level and open the units into the enterprise segment.

5.1.4 DIFFUSION

A majority of current systems incorporates some level of IP technology but the industry's technology the change has been slow, especially in the small installations segment. Some installers and technicians still find it hard to understand and work with IP systems. An easy to learn and easy to install system would drive IP diffusion in the small installation segment, but it probably still need to have price point in level of competing systems in order to be adopted. Still the IP diffusion in the new industry is a long gone fact and no one is questioning IP as the fundamental technology for the industry in the near future.

The IP diffusion has so far been able to occur without disrupting the industry. The innovations launched have only had a sustaining effect on the new industry, to classify it according to Christensen (1997). Incumbents have been able to rationally defend investments in the technology. IP technology has therefore made incremental improvement in current systems functionality and this without pressuring incumbents' relationships and lock-in business model. The rules of competition have therefore sustained. The technical performance attributes of Fixcom solution alone will thus not be enough to disrupt the industry. Fixcom's potential to disrupt is dependent on their ability to leverage the full potential of the IP technology by creating open platforms and changing the architecture of systems.

5.2 CHANNEL MODEL

Fixcom wants to change the way that business is done in the new industry. The structural difference between the way the new industry works today and Fixcom model is visualized in Figure 8 below. The most significant difference is that Fixcom rearranges the industry value chain as the software will be developed by a third party. This means that the SIs will be buying software and hardware from different actors. The other difference is that Fixcom will rely on a simple and consistent sales model where all distribution goes through the two-tier channel model, where pricing is transparent and anyone can buy the product.

Dividing hardware and software development is a step towards a more market-like network organization in Powell's (1990) terminology and would in theory allow for more flexibility, specialization, economies of scale and recombination (Moran & Ghoshal, 1999).The flexibility and specialization factors would allow Fixcom to focus R&D resources on a tighter technological area compared to competitors while still allowing their products to be used in many different applications. The downside would be that Fixcom is that it makes Fixcom more dependent on partners and complements which may slow down the innovation process and, since they control less of the value chain, have to put more efforts in coordination between partners as is described by Baldwin (2007), these issues will be handled in more detail in coming chapters.
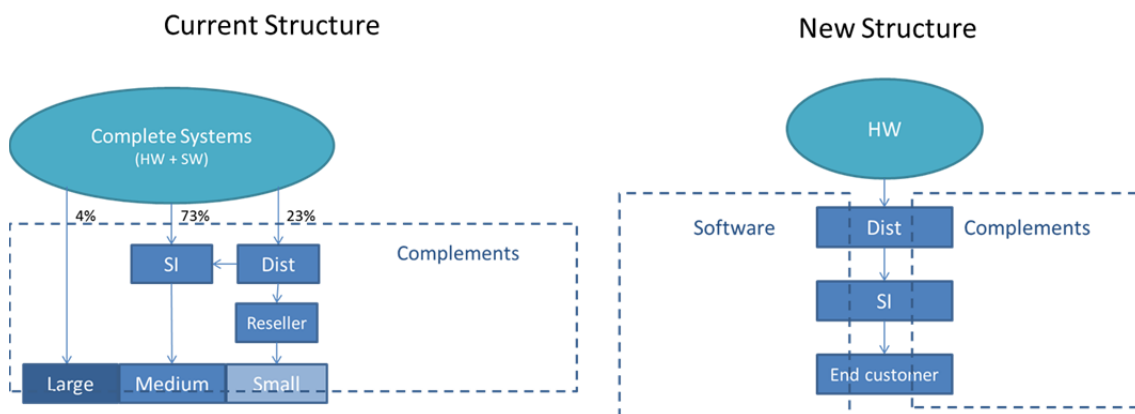

Figure 8 - Difference in Industry Structure

The current industry structure and business models deployed by incumbent firms create lock-in effects for channel actors as well as end customers. Since the majority of proprietary systems are not compatible with either hardware or software from other vendors a customer that has once chosen a system is forced to continue buying that system.

The lock-in effect of proprietary systems bounds the customer to the vendor of the system when they want to replace hardware or expand their system. This business model is very favorable for vendors with an existing installed base as it forces the customers to continue buying from them unless they want to replace their entire system. SIs earn a large part of their revenue from upgrades to the installed base and therefore also locked to the vendors of their customers which are reinforced by switching costs related to learning new systems. It is hard for new entrants to enter since system integrators are not free to choose which software to use in the existing installations they serve. New entrants need to have capabilities to supply hardware and software.

The idea behind Fixcom's channel model is to create loyal long term relationship with channel partners while at the same time build incentives for SIs and distributors to work with Fixcom's products. Channel loyalty is also seen as very important in the industry and this way of working has given Fixcom a reputation of being always being loyal to their partners. For this reason Fixcom would be an attractive new vendor for many channel partners, but in the same time they already have established relationships with other vendors and an existing installed base of other proprietary systems. This means that in order to get established in their preferred sales channels Fixcom does not only compete against current technologies and offers, but also established relationships.

A concern when the system components are sold separately is that no single vendor takes responsibility for the complete system functionality. In the proprietary system industry SIs are often certified in a vendor's system and as long as not installed in the wrong way the vendor is responsible if the system breaks. In Fixcom's model, systems may be put together by combining Fixcom's product, SDP software, and complement components from other actors having everything installed by an unknown installer. In this case, it is not clear who should take the blame in the case of the different parts of the system does not work together as they are supposed to. Issues like this might provide some resistance for channel actors' willingness to adopt Fixcom's product.

Distributors expressed dissatisfaction from currently being cut out from a big part of the market and restricted in what accounts they are allowed to open. These issues are to a great extent solved by Fixcom channel loyalty and non-exclusivity policy. Fixcom loyal relation towards distributors is not the conventional way in the industry, but in the current industry it has resulted in Fixcom being able to reach the many applications where current products are deployed and get established in most market segments. Furthermore it has put Fixcom in a situation where leading distributors are very positive towards Fixcom as a vendor and willing to commit in relationships based on mutual benefits that, in accordance with Ford et al. (2011) and Morgan& Hunt (1994), can constitute sustainable competitive advantages to rival networks.

If Fixcom manages to create a new industry value network parallel to what exists in the industry today based on trust, specialized know how, speed and flexibility and possibly nurture it in the low end segments of the market they may force competing systems out of their sales channels not solely on superior or cheaper products by being the preferred and loyal partner. Furthermore, having an enterprise solution available is much desired by the channel partners in the long run and entering the new industry without SDP software would in fact not make Fixcom channel model any different from what the industry looks like today.

5.3 RESOURCES & CAPABILITIES

Fixcom is a company selling certain types of IP products and the company has developed certain resources and capabilities that these constitute a competitive advantage in that industry (Grant, 2010). These capabilities are mainly related to technology and sales. Given that diversification is a good idea a resource based perspective would suggest that the diversification should be based on the capabilities within the firm's reach (Prahalad & Hamel, 1990).

To succeed Fixcom has to work with developing its capabilities in developing, manufacturing, and selling the new systems. Since the value networks in the current and new industries are similar there are synergies between the two businesses coming from Fixcom's existing sales organization and brand. The new product also share common technical features making it possible for Fixcom to utilize their capabilities in developing network products in this new industry.

Fixcom has existing marketing and sales capabilities through its presence in all major markets with a direct sales force. These would allow Fixcom to relatively quickly roll out a new product on a global scale, compared to new entrants. A shared sales force can be seen as both an advantage a potential challenge. The sales force has limited knowledge in the new industry today and would need education. Furthermore there could arise cannibalization of current sales or resistance in the sales channel when the sales force needs to decide what to focus their efforts on.

Fixcom has developed capabilities in handling their vast network of partner firms. These allow Fixcom to handle their large network and leverage the capabilities of their partner firms to make their offering more valuable. Fixcom has numerous partner programs aimed at influencing these actors in structured way. Through such capabilities Fixcom has been able to keep a narrow integration, both horizontally and vertically by relying on others. By using contract manufacturing Fixcom has been able to keep capital costs down and leverage economies of scale and cluster effects in Asia. Software has been left to SDPs and integration and distribution to the channel partners, while Fixcom supports their efforts.

Fixcom has strong product support, an area that Fixcom has prioritized and developed superior capabilities around. This has led to strengthening Fixcom brand as well as loyalty. Fixcom capability of delivering support through their established support processes will be highly valuable in the new industry. However, the knowledge backing up support functions in new systems needs to be developed and spread in the organization.

Fixcom brand as an innovative, technically competent current industry manufacturer will be a very important asset when entering the industry. But from a marketing and communicative perspective, customers could perceive Fixcom to be less focused and thus less specialized if they are developing two different types of products. At the same time Fixcom brand is very strong among channel partners who associate Fixcom with innovation, forward looking products, reliability, good support and loyalty in relationships. Fixcom will need to convince the industry that they are a credible new vendor and need to communicate that the Fixcom brand stands for supremacy in general IP technology and openness, not just current products.

Fixcom also has technical core capabilities of relevance in the new industry. Traditionally Fixcom has developed a range of network-based products for different purposes. Based on this one can identify the capability of commercializing the IP technology in different applications. This can be seen as having been the core product, as defined by Prahalad & Hamel (1990), connecting the efforts in different network products. This core capability will be of use in when developing the new products as they share this common infrastructure. Also capabilities related to manufacturing, and testing network product will give synergies.

Fixcom has a strong capability in developing good APIs and it becomes a resource that the knowledge how to use it is diffused in the industry and a part of the core product. There are synergies in the partner network as partners have invested in learning API, a knowledge that will be largely transferable to the new industry products, since it will be easy for any system integrator or developer with knowledge in the existing systems to work with the new ones. Since the API is open for anyone to implement this will give benefits on a standard level. It is worth noting that most competitors have some kind of API in which SIs already have knowledge, these standards are however most often proprietary and closed and Fixcom is perceived to make more consistent, easier to use APIs.

Finally, Fixcom has several patents regarding IP communication that could be beneficial. Most notably the patented installation functionality has been described by some SIs as a main differentiator. Until competitors invent around this patent, this provides a competitive advantage. On the flip side, it is possible that competitors have patents in new industry that might limit Fixcom's ability to supply product functionality.

5.4 RELATIONSHIPS & NETWORK

The overall industry is characterized by strong, long-term relationships. This together with strong modularity of the end system gives rise to a structured very similar to the idealized network structure (Powell, 1990). For end-customers equipment is generally bought on a project basis from SIs. However, these tend to be fairly loyal to their suppliers. SIs needs to invest in certification and education to be able to install products. Compatibility needs to be ensured where there are no open standards or when new functions are added. Reliability and credibility are also important factors making the SIs favor continuing current relationships and proven concepts.

Fixcom has a large reach through their partner network's distribution channels. This is an example of an important capability given by existing relationships as described by Ford et al. (2011). The new industry shares to a very large degree the structure of the current industry. Hence, Fixcom will be able to leverage existing relationships with distributors and SIs to gain a position in the new industry. Building relationships is costly which gives Fixcom a competitive advantage over new entrants. However, the incumbent firms have even stronger positions stemming from their long presence in the industry. Relative to these firms Fixcom will need to develop their current relationships into becoming new industry relationships. This means building relationships between new people in both organizations since every relationship between two companies consists of many individual relationships. There have been some indications that having fewer relationships is seen as beneficial for the actors in the network, which could create an incentive in this aspect.

Fixcom also has close relationships with software developers developing complementary software to their current products. One of these currently develops software for the kinds of systems Fixcom is getting into. These could be valuable partnerships to leverage in the new industry. Internally there have been some concerns to the degree to which the partners with existing business would be willing to cooperate, discussed in the next section. If they do not support the new platform another concern is how they will react in reference to the current business. It is possible that they perceive the move as aggressive from Fixcom side and move towards the new industry.

All these relationships have all been centered on IP technology diffusion in the current industry. Thus the actors involved have all gained from pushing IP technology against the actors gaining from the analog technology. This means that a clear battle between the value network of actors pushing IP and the value network fighting to keep analog systems competitive. This battle has in itself fostered incentives for collaborative relationships. In the new industry the battle will not be in favor of IP since the technology is already largely diffused. Instead it could be seen as a fight for open standards again proprietary lock in strategies.

Fixcom has strong established partners in the new industry which is one of their greatest assets for getting established. Established industry actors often are very skeptical towards new players. The industry will likely give Fixcom the benefit of doubt given its strong track record in the current industry. If however Fixcom does not live up to its expectations trust will quickly erode and the commitment to the platform initiative disappear.

Bringing in new players may be a big thing when it comes to transform the industry since these players have everything to win in the new industry and are not bounded by existing relations and industry structures. As noted by Håkansson & Ford (2002) it is often easier, although still hard, to influence and move a firm's existing network rather than building new relationships. The new players will likely increase competition with potential of having profound impact on how business is made.

5.5 OPEN PLATFORM

The new product has no utility without necessary complements. Complements are all the products around the product that add value to the system and constitute a major part of the value (Schilling, 2010). The product is always installed as a part of a larger system. The product will be compatible with the industry standard complements. However, there is one complement that the product will not support, namely; existing software. This is because industry vendors actively have tried to close the interface between their software and hardware.

There are two ways to provide complementary products for a company's product, either the company produce them or the company relies on other actors to supply them (Cusumano & Cawer, 2002). Depending on what the company decides the strategy will either facilitate the development of external software or make facilitation harder. Fixcom has chosen a combination of the two approaches, with a long term emphasis on external software suppliers.

As described above Fixcom wants to break up this structure of proprietary systems and in this effort Fixcom needs to gain support of software developers to develop software for their product. As noted by Adner (2012) relying on external actors to co-innovate creates a new set of challenges and risks. This situation can be described as creating a platform, which is connected to challenges of accomplishing positive and increasing returns to adoption (Cusumano & Cawer, 2002). There are two important distinctions in the types of actors that could provide this software. First if they are partners today relating to synergies in relationships. Secondly if current vendors provide the software, which would require them to open up their software to be compatible with Fixcom's platform, if not, new companies would need to enter. Figure 9 illustrates this issue.
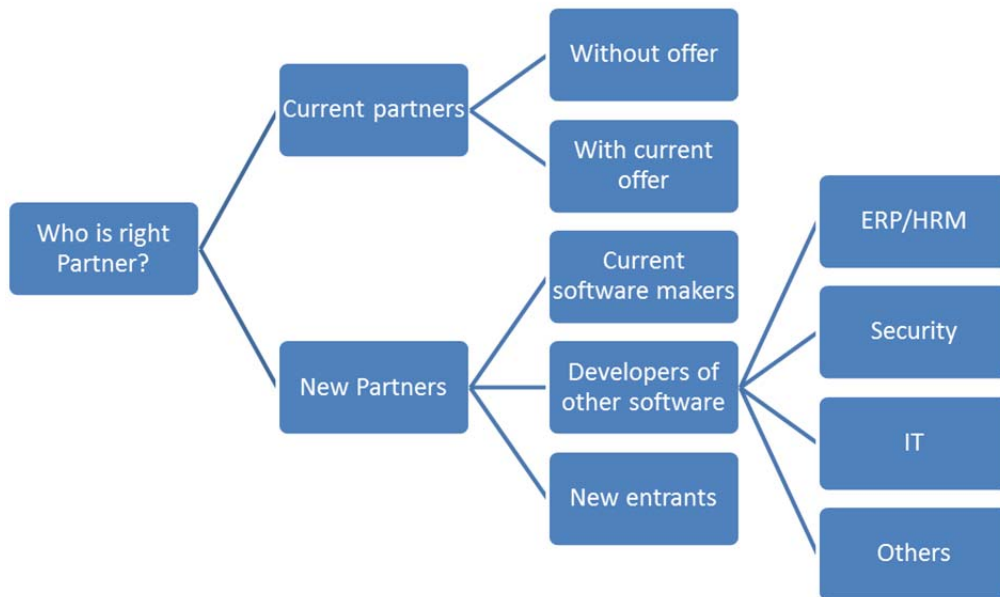
Trying to get incumbents to start developing might be a first step that towards phasing out their hardware revenues and start focusing on developing software. This would mean that they would open up the market for add-ons to existing installations for competition. Also when product modularity increases, through standard interfaces, barriers to entry decrease with the risk for incumbents is that competition would increase significantly. For small and medium actors the incentives would be the possibility to get larger market share in software by supporting a new hardware platform. However, before the platform has gained widespread adoption these actors' incentives are likely to be limited.

The other situation would be one where new entrants would take the role of developing software. This role could either be taken by actors who currently make related software. Related software, which is commonly integrated with are human resource management, safety, building automation, and IT systems among others (Founder, 2012).

Fixcom has initially approached their current gold SDP partners. These consist almost exclusively on companies making current product software and among these only one is currently offering a solution in the new industry. This initial cooperation has been based on partner loyalty and on investments made in partner development. Because of Fixcom current business and relationships they are highlighting integration with current products. However, the synergies between many of the other types of systems were found to be strong as well.

The co-innovation risk associated with current SDPs' incentives to innovate is that the amount of resources needed and strategic risk balanced with the gains and chances of succeeding. Fixcom should encourage relations between SIs and SDPs the topic of functionality and integration in order to lower the perceived risks involved. If the most significant SIs for each SDPs developer could show commitment and communicate specifications of what they would need, the perceived risk could be lowered. Initiating these relationships is within Fixcom direct interest.

If Fixcom manages to be the driver behind creating an open platform and defining a communication standard between hardware and software it opens up for major changes in the industry. The move will commoditize the product bringing in new players both on the hardware and software side. It also provides a boost in the change of the rigid architecture that exists in the industry today and could lead to modular convergence. Bringing in new players may be a big thing when it comes to transform the industry since these players have everything to win in the new industry and are not bounded by existing relations and industry structures. The new players will increase competition with potential of having profound impact on how business is made.

6 CONCLUDING DISCUSSION

This chapter constitutes a condensed discussion of what has been brought up in the analysis chapter. The aim of the chapter is to conclude Fixcom's position for getting established in the new industry. In what way they may disrupt and transform the new industry similarly to what they have done in the current industry and what risks and challenges Fixcom may face due to this endeavor. The concluding discussion forms the basis for the recommendations on how Fixcom should act when entering the industry, which is presented in next chapter.

Based on the findings of in this study it is believed that Fixcom has good chances of getting established in the new industry. The company has resources and capabilities that will directly applicable and valuable in the new industry. The main ones are concluded to be their strong brand name and reputation of being innovative and loyal to their partners; the patented installation function; their knowledge in IP technology and API development and their strong skills in network management and technology commercialization. Fixcom current business model will fit in the new industry and the target customer for each product offer can be reached through already established channel partners. In connection to this they have established relationships with several key players in the industry and their large sales organization provides a substantial advantage in market reach compared to what most new entrants would have.

From a technology and offer perspective Fixcom will not be radically different from what is available on the market today. They will develop the software for the standalone offer in-house and the functionality will not be sufficiently differentiated against competing systems apart from the possibility to integrate with Fixcom's most basic software within their core products. In order for the standalone system to be adopted it needs to be offered at a price point that is in level with competing systems.

The hosted offer is perceived as very attractive as it open up for new business opportunities for SIs whereas the market for cloud services is predicted to grow significantly. The combination of Fixcom's strong brand, an easy and cost efficient to installation system and the possibility to integrate with current hosted offer places Fixcom in a position to take leading role in the growth of the cloud based services market.

The SDP solution is highly wanted by most channel partners and this is especially the case for the distributors as they currently are cut out from a big part of the enterprise installations. Fixcom's SDP offer stands out from competition as software and hardware are developed and bought independently. This open platform architecture is attractive for both channel partners and end customer as it breaks the lock-in effects and dependency that is connected with the proprietary systems of today. Yet it will not be adopted if it cannot meet the functional demands of the enterprise customers. In this sense it is a problem that Fixcom only has one SDP that is currently active in the industry and it is unclear how well the SDP solution stand compared to competing enterprise systems. What is believed to be a differentiating factor for this offer is integration with current industry systems which is likely to be competitive due to the SDPs experience from developing current software.

Even if it is concluded that Fixcom has a good chance to get established as a new vendor they face several challenges. To begin with they will in the long run be very dependent on getting support from software developers in order to fully be able to utilize their business

model and meet the expectations of their channel partners. Furthermore, competition is fierce in all segments of the market except for hosted services and all channel partners have established relations with other vendors. Since switching vendor takes time and cost money the channel partners will not adopt Fixcom's offers if it is not better or at least in level to what they already have. In connection to the possible problems on getting adopted in the distribution channel it should be mentioned that channel partners have high expectations on what Fixcom will deliver in terms of product functionality, support and training, which is a result of Fixcom's good reputation from the current industry.

Not managing and meeting the expectations of the partners might hurt Fixcom's credibility as a new industry player and furthermore generally hurt Fixcom's brand and reputation. Therefore, the communication with partners need to be handled with care and in order to manage partners expectations Fixcom either needs to keep them low or make sure that the system is meeting their expectations. Fixcom will also face internal challenges in spreading knowledge about the new product and the different offers in the organization as well as establish currently non-existing support and education functions. Simultaneously they need to find a balance between keeping focus on the profitable core business and allocate resources for the new venture to grow.

Fixcom will not disrupt the industry solely by driving the diffusion of IP technology in the new industry even if they might be able to speed up the diffusion in the low end segment of the market. Rather, Fixcom's chance to disrupt the industry from a technological perspective is by utilizing the technological potential that is enabled by IP, in more precise terms by creating an open platform and changing the fundamental architecture of systems. Fixcom may also become the driving force behind the development of hosted systems, which even if it is already available in the market has not yet taken off. All these factors have the possibility to change the way systems are developed, sold and managed with a possibility of forcing incumbents to conform to the new industry setting. A setting where Fixcom is allowed to focus their R&D and keep up the speed and flexibility in innovation that has been so important in the current industry and were they will stand strong against competition.

In order for Fixcom to create this industry setting Fixcom needs to get external actors to join their open platform which is kind of a "chicken or the egg"-problem. It will be hard to gain support both in the channel and among developers before a critical mass is established on both sides. It is not likely that Fixcom will get support from current system vendors. Instead they will need to rely on bringing in new actors into the industry. Fixcom's current relationships are with SDPs that develops software for their core products. There is a good chance that these will be convinced to make their software compatible with the new product. However, the issue of convincing them to develop a full-featured enterprise solution with seamless integration will be more challenging. Fixcom cannot motivate them without an installed base of their products.

Apart from getting the SDPs onboard there are two major challenges connected to the dependency Fixcom has towards the SDPs. First is the question of their capabilities and knowledge in the new industry, i.e. there is no guarantee that the system they develop will be good enough to become adopted in the distributions channel. Second developing the software will take time which raises concerns if there will be any software available at the time of launch. If Fixcom manages to deliver an SDP solution in level with competing

system's functionality based on their open platform Fixcom will have a favorable position for transforming the industry.

7 RECOMMENDATIONS

This chapter aims at giving clear recommendations on how Fixcom should act when entering the new industry and thereby answer the main research question of this thesis project "How should Fixcom act in order to get established in the new industry and at the same time transform the current industry structure?".

A schematic picture of how Fixcom is suggested to act when entering the new industry is presented in Figure 10, which should be seen as a support to the paragraphs that follows. As an initial step Fixcom should share their new plans including initial offers, time line and vision of the future. This is a first step in managing the channel partners' expectations on what Fixcom will deliver at the time of launch and avoiding the risk of negative impacts on brand and credibility by not meeting the expectations of stakeholders. Simultaneously Fixcom should start pushing their hosted solution towards SIs by pin-pointing the new business opportunities that this solution brings, how easy it is to learn and install and the possible synergies in sales with the hosted offer for current products.

Fixcom should also aim to price the standalone offer in level with the competing systems in the small basic installation segment, in order to qualify for adoption. The standalone offer should then be pushed towards distributors and SIs with the selling arguments of ease of use and installations, integration and sales synergies with the basic current product software, scalability of system and possibility to change software and offer as customers' needs change. I.e. the possibility to have a stronger offer since they always will be able to offer what the customer needs.
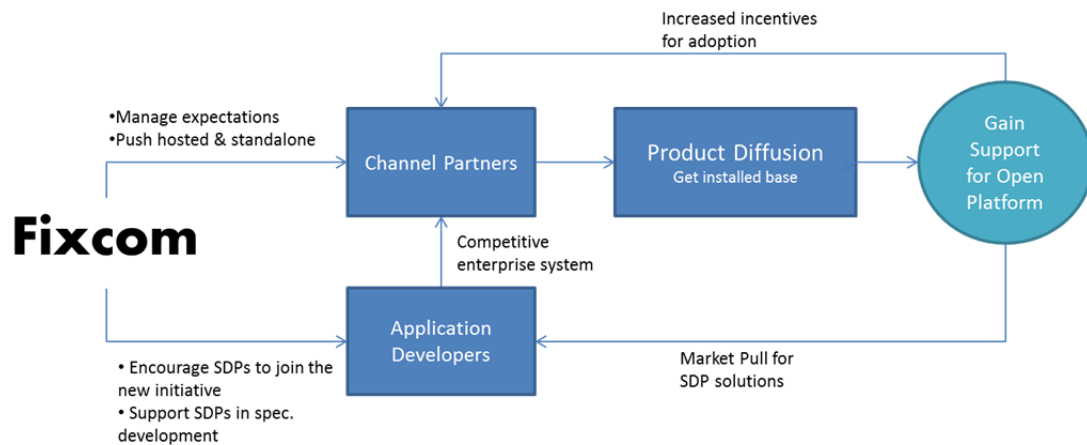

Figure 10 - Schematic Action Map

Fixcom should also start to engage existing SDPs in developing software for the SDP solution offer. Since most of them have little experience Fixcom need to support them in what functionality the market demands from such a system and furthermore ensure that the systems' integration is of high quality. By having more than one full feature software for the enterprise segment based on the open platform Fixcom has created through the product and the API they will heavily increase their chances of transforming the industry in the way that has been previously discussed, but as said before it is in of a chicken and egg problem. Therefore Fixcom should aim at having this readily available at the time of launch.

It is believed that if Fixcom initially focuses on pushing the hosted and standalone offers they will have an easier way into getting an installed base of the product. These systems alone will not change the industry towards the open standard and business model Fixcom is after, but by building an installed base Fixcom can prove their credibility as a new industry vendor and greatly increase the incentives both for channel partners and SDPs to join the open standard. The rationale behind this is that if Fixcom can prove that there is a market for their product it greatly lowers the barriers of adoption for channel partners and also the markets demand for SDP software as end customers and SIs are going to want to utilize the customizability enabled by the open platform. As visualized in Figure 10 this would create positive feedback loops as more actors join the open standard and drive the industry transformation while further strengthen Fixcom's position in the new industry. By working acting according to this model it is believed that Fixcom will have a good chance to get established in the industry and transform the new industry towards were they way proven to be strong in their current industry.

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Appendix 1: Model of Installation Size Breakdown

Based on the estimations on the frequency of different installation types from all interviewed SIs a statistical model was created to illustrate how the market could look, a cumulative distribution function is shown in Figure 11 below. It uses a log-normal distribution with parameters $\sigma=1$ and $\mu=1,5$ giving a mean of 7,39 and a standard deviation of 9,69. In the same model is presented in a pie chart and together with a derived estimated market share of each installation based on the assumption of a fixed price per unit. There are two points to be made from these results. First, small installations are by far the most common, 90% of the installations are under 16 units and half between one and four units. Second, this dominance is less if look at the market size since one has to consider the amount of products sold. Of the total market size only 50%
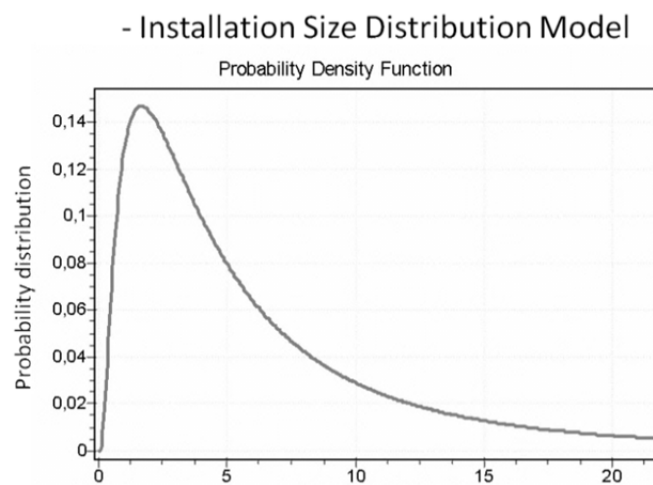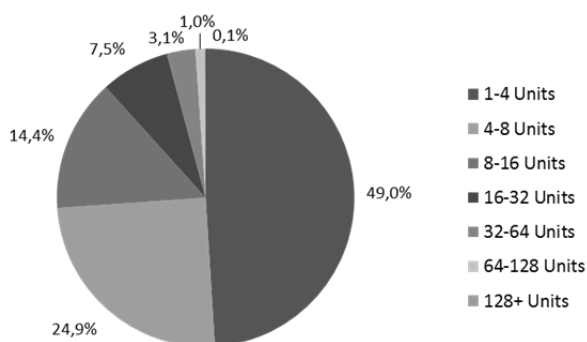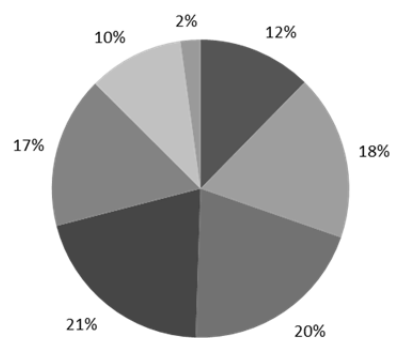

Figure 11 - The Market – Installation size distribution model

A couple of comments have to be made regarding the model presented here. First, the results correspond well to market estimations from other sources (E.g. (IMS Reserch, 2009) . Second, the estimates are likely to underestimate the size of the tail which would mean that large installations is a bit more common due to the choice of statistical model and the fact that SIs are sometimes by-passed in large orders. Finally, the model does not take into account that some of the small installations are in reality on large installation spread over many sites, for example a national retail firm. This would once again show as a larger number of large installations. (Managing Director North America, 2012; Director Strategy Technology, 2012)

APPENDIX 2: LIST OF INTERVIEWS

Internal

1. New Business Developer, Fixcom
   a. 2012-01-25
   b. 2012-02-01
   c. 2012-03-21
2. Programs & Partner Marketing, Fixcom
   a. 2012-02-09
3. Director New Business, Fixcom
   a. 2012-02-14
4. Consultant Manager, Fixcom USA (Industry Expert)
   a. 2012-02-21
5. Project Manager, Fixcom
   a. 2012-02-23
6. Product and Segment Marketing, Fixcom
   a. 2012-02-29
7. Director Global Partners, Fixcom
   a. 2012-01-31
8. Facility Manager, Fixcom
   a. 2012-02-08
9. Software Developer Program, Fixcom
   a. 2012-03-14
10. Product and Segment Marketing, Fixcom
    a. 2012-01-27
11. Director Global Partners and Business Development, Fixcom
    a. 2012-01-31
12. Application Platforms, Fixcom
    a. 2012-02-16
13. Product Specialist Hosted Solutions, Fixcom
    a. 2012-02-01
14. Product Specialist New System, Fixcom
    a. 2012-03-14
15. Competitive Intelligence, Fixcom
    a. 2012-03-01
16. Software Partners Manager, Fixcom
    a. 2012-03-22
17. Firmware and Platform Test, Fixcom
    a. 2012-03-29

External

System Integrators

1. Consultant & Founder, System Integrator (Industry Expert)
   a. 2012-02-29
2. Technician, non-partner SI 1 (USA)
   a. 2012-03-06
3. General Manager, non-partner SI 2, USA

a. 2012-03-07
4. Non-partner SI 3, USA
    a. 2012-03-07
5. Non-partner SI 4, Ltd. USA
    a. 2012-03-07
6. Vice President, non-partner SI 5 USA
    a. 2012-03-09
7. Non-partner SI 6, Texas, USA
    a. 2012-03-07
8. Product Manager, System Integrator 1
    a. 2012-03-19
9. Director of Emerging Technology, System Integrator 2
    a. 2012-03-21
10. Director Technology Strategy, System Integrator 3
    a. 2012-04-19

Distributors

1. Products Manager, Distributor 1
    a. 2012-03-16
2. VP Sales Product Category, Distributor 2
    a. 2012-03-22

Customers

1. End Customer 1
    a. 2012-02-20
2. End Customer 2
    a. 2012-03-14
3. End Customer 3
    a. 2012-03-14
4. End Customer 4
    a. 2012-03-14
5. End Customer 5
    a. 2012-03-14
6. End Customer 6
    a. 2012-03-14
7. End Customer 7
    a. 2012-03-14