

BRINGING THE INTERACTION MODEL INTO THE 21ST CENTURY

— Applying and Developing the Interaction Model for the Service Industry

Abstract

Drawing upon research conducted in the 1960's and 1970's, the IMP group 1982 created the Interaction Model, which has had a pivotal effect on how academic scholars and practitioners alike think about relationships. The development of the Interaction Model was, and still is, important since it constitutes the very foundations on which the network perspective lies and as such also affects much of the academic research that is currently being conducted around the world. While it has been immensely influential it was primarily developed for large industrial companies. Therefore its applicability on today's corporate landscape may be questioned.

The authors apply the Interaction Model on the relationship between Amadeus IT Group and Finnair with the two-folded purpose of presenting a comprehensive picture of the relationship itself and developing the Interaction Model. Through the use of qualitative interviews, a comprehensive picture of the relationship is drawn up and analyzed by using the model while keeping complementary similar theories in mind.

It is suggested that: (i) certain aspects of the Interaction Model need special attention and alterations in this type of relationship; (ii) individuals should play a larger role in the Interaction Model; and (iii) the Interaction Model needs to incorporate dynamic aspects of the relationship as well as of the environment.

Key words: *markets-as-networks, network perspective, relationships, Interaction Model, Amadeus*

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1. INTRODUCTION

“ Later that day I got to thinking about relationships. There are those that open you up to something new and exotic, those that are old and familiar, those that bring up lots of questions, those that bring you somewhere unexpected, those that bring you started, and those that bring you back. (“Carrie Bradshaw”, HBO TV series *Sex and the City*) ”

1.1 Background

The hectic lives of four women in New York and their search for love in the HBO TV series “Sex and the City” and the contributions to questions about society developed by early philosophers such as Plato might seem opposing, but are in fact two sides of the same coin – the fascination for social interaction and social relationships. One of the oldest evidence of this interest is Ibn Khaldun’s *Muqaddimah*, or “Introduction”, which the Tunisian historian sociologist, and philosopher wrote in the 14th century (Mowlana, 2001, in Wikipedia). Considering the long history of sociology it is surprising that the analysis of human interaction is relatively new in certain academic fields such as industrial, or business-to-business, marketing. To us, an organization in its simplest form is a social arrangement. Hence, in order to understand how buying and selling firms work one must analyze the interaction between those two social arrangements – the relationship. But, as TV character Carrie Bradshaw points out, relationships between two individuals are complex and multi-faceted. Since an organization is made up of a large number of individuals, one can only imagine what a relationship between two organizations, not to mention a network of organizations, is like. It is a complex task to understand how firms interact, yet it is crucial both from an academic’s and from a practitioner’s point-of-view. Anderson and Narus (2004, p. 4) even state that one of four “/.../guiding principles of business market management” is to “accentuate working relationships and business networks”. Clearly, business relationships and interactions are important, albeit a remarkably uninvestigated area.

For the vast majority of firms, business relationships are crucial for their future existence. One such firm is Amadeus IT Group (hereinafter: Amadeus), a leading Global Distribution System (hereinafter: GDS) operator in the travel and tourism industry. In fact, the business model of Amadeus rests on its relationships since it is dependent on other firms, such as airlines, to publish inventory and prices in its central reservation system.

1.2 Problem Area

There is a need to adapt the Interaction Model, which was developed by Håkansson (ed., 1982), to better cater for the analysis of relationships between firms in the service industry. The corporate service industry has grown from four percent to eleven percent of the Swedish GDP between 1980 and 2006 according to Braunerhjelm (2008). Despite this growth, there is a lack of studies on interaction between service firms. The Interaction Model, which has become one of the most prominent analytical tools to decipher inter-firm relationships, has to our knowledge not been tested to any greater extent on service firms. The underlying assumption of this model is that markets are significantly influenced by technology. However, it was developed in a time when technology referred to means of producing physical goods, rather than information technology; it was developed from empirics of production firms, rather than service firms. Consequently, it is time to adapt it to the 21st century.

1.3 Purpose

Our purpose with this thesis is two-folded; it consists of an empirical purpose and a theoretical purpose, namely:

1. to present a comprehensive picture of a business relationship between two firms in the travel and tourism industry; and
2. to develop the Interaction Model as a tool for analyzing and understanding business relationships in the service industry.

1.4 Delimitations

The research is delimited to cover the relationship between a division of Amadeus called Airline Direct Channel (hereinafter: ADC) and Finnair – an airline customer of Amadeus. This delimitation is necessary due to practical reasons, such as getting the permission to talk to other customers, and to the limited scope of the thesis. During the course of constructing The Interaction Model four groups of variables called Interacting Parties, Interaction Processes, The Environment and Atmosphere were identified. These groups were then further developed into four separate “themes” in which certain participating researchers have contributed with more detailed research. We looked at all themes, but finally chose to delimit this study to only consider the so-called Environment Theme. The reasons for this choice are: (i) our limitation in scope, (ii) the appropriateness of the theme given our case, and (iii) our personal interest in how the surroundings affect a business relationship.

1.5 Definitions

The word *company* sometimes implies the legal form of a corporation with a going concern. Therefore, we instead choose to consistently use the word *firm* when we in general terms discuss an organization, or group of individuals looking for economic gain, regardless of their legal form (e.g. partnership or corporation). When referring to for example Amadeus and Finnair we use the words company and firm interchangeably, since they both are corporations.

Amadeus should be considered a service company, because it does not manufacture physical goods. The solutions offered to customers sometimes include both a product element such as a software application, and a service element such as access to information. In fact, airline tickets are in academic research sometimes referred to as an information good, because “they can be managed from a centralized source such as a reservation system without concern for their physical location”. (Boyd and Bilegan, 2003, p. 1363) Going forward, we will refer to the solutions that Amadeus offers as products, services or solutions interchangeably.

Inspired by Håkansson (ed., 1982) we choose to define a *relationship* as the result of several institutionalized interaction episodes between two firms.

2. THEORETICAL FRAMEWORK

2.1 Overview

This chapter is structured as a thematic discussion, which introduces theories and concepts vital to understanding the Interaction Model as well as complementary perspectives. The chapter starts with a brief explanation of other “rivaling” ways of thinking about inter-firm interaction and then shortly explains the network perspective in which the Interaction Model plays a vital part. Lastly, the model itself is presented and explained.

2.2 Questioning Traditional Economic Exchange Theory

Up until the early 1980’s much research in marketing stemmed from the market management school and consumer behavior research. Spearheaded by authors like Kotler (1967) this approach assumed that firms act on atomistic markets; it assumed free movement in and out of the market and buyers will always choose the supplier from which the best terms of exchange are obtained. (Håkansson, ed., 1982) Buyers are viewed as passive anonymous actors, responding to marketing mix stimuli and sellers are expected to constantly compete, not only with other firms fulfilling the same customer needs but with their suppliers in order to improve their bargaining position. (Möller and Wilson, 1995; Porter, 1979) Researchers of this line of thought considered the firm’s fit to its environment as a determinant of success and that firms would be able to surpass its competitors by adapting to the environment (Venkatraman and Camilius, 1984). In short, there were three key assumptions (Håkansson and Snehota, 1990): First, the environment is beyond the control of the firm, i.e. the firm has to adapt to its environment and exploit existing opportunities; second, the efficiency of a firm is determined by its relative efficiency in combining its internal resources; third, the environment changes constantly, forcing constant adaptations of the firm.

During the 1970’s, a number of research reports began to indicate that previous assumptions of exchange relationships were flawed. Relationships turned out to be more stable and complex than conventional theory presumed and even strong and powerful firms seemed to seek cooperation rather than conflict in their relationships. (Turnbull, Ford and Cunningham, 1996) This started a new tradition of research focused on how firms interact and relate to each other, which became known as the network perspective of business markets. The stream of

new research was to a large extent led by the Industrial Marketing and Purchasing group, the IMP Group. (Håkansson and Snehota, 2000)

From 1976 to 1982, the IMP Group conducted basic research about relationship interaction. Håkansson (ed., 1982) and the IMP Group challenged the traditional way of examining industrial marketing. Firstly, they emphasize the relationship between two parties rather than a single transaction. Secondly, they argue that the previous assumption of passive buyers reacting to marketing mix stimuli is a too generalized view of the market. Instead, they focus on the interaction between the individual buyer and seller. Thirdly, they challenge the atomistic market structure. Instead, they view industrial market structures as stable and with actors who know each other well. Fourthly, they emphasize the similarity of the process of industrial purchasing and marketing, rather than the traditional separation of the two.

When the IMP Group rejected the atomistic structure, they rejected the previous assumption of no transaction costs. In traditional economic theory, focus is put on production costs and sellers are “simply represented by a production function” (Håkansson, ed., 1982, p. 2). The key problem in the marketing mix model according to Håkansson (ed., 1982) is then to allocate resources to different elements and to design them optimally given the firm’s resource constraints. However, empirical studies show that relationships are more strongly characterized by stability rather than change. In one first attempt to examine the loyalty of industrial buyers, Blois (1972) used the financial problems of Rolls-Royce Ltd. in the 1970’s as an example of how buyers and sellers are inter-related and dependent upon each other, although they are separate legal entities. Blois (1972, p. 269) also found that “/.../there is some evidence that many suppliers in a variety of industries are finding it very difficult to maintain their managerial independence from large customers”, referred to as vertical quasi-integration.

2.3 The Network Perspective

2.3.1 The essence of the Network Perspective

The focus of the network perspective is on what happens past any strict borders of the firm, rather than simply taking an internal view of the firm. Anderson and Narus (2004) draw attention to the fact that relationships exist both within the firm and between firms on multiple levels, such as between functional units, but refer to the term business network only when analyzing relationships between firms under consideration of the wider context in which they

occur. Håkansson and Johansson (1992 in Axelsson and Easton, ed., 1992) and other researchers view the actors on a market as more or less entwined by different types of relationships, and use the network perspective to explain how interaction forms relationships, forges adaptations, creates interdependencies and impacts the behaviors of firms. Advocates of the network perspective claim that relationships are connected to each other and that these connections impact the firm's ability to conduct business. (see e.g. Håkansson and Johanson, 1992, in Axelsson and Easton, ed., 1992; Håkansson and Ford, 2000, in Ford, 2002) Håkansson and Ford (2000, in Ford, 2002) argue that consequently no interaction can be fully understood without understanding the context of which it is a part. They argue that firms are interconnected, meaning that any one change in one relationship will affect all connected relationships to a higher or lesser extent (Håkansson and Ford 2000, in Ford, 2002).

When applying the network perspective, focus is on the relationships that constitute the fundamental building blocks of the network. Developing an understanding of the specific relationship then enables further analysis of the functions of the relationship for the individual firm, the buyer-seller relationship (the "dyad") and the overall network (Håkansson and Snehota 1992). Relationships are viewed as having two main components: mutual orientation (directing attention to each other) and commitment (a desire to maintain the relationship) (Håkansson and Snehota, 1992; Blois, 1998 in Ford, 2002). Relationships are assumed to be created gradually through interaction and developed over time (Ford, Håkansson and Johansson 1986; Håkansson and Snehota, 1992; Johansson and Mattson, 1992).

Axelsson (1995, in Möller and Wilson, 1995) states that heterogeneity in demand, supply and resources are the primary drivers of relationship development. Because products are multidimensional the final outcome of the economic exchange depends on how the buyer combines the acquired resource with its own, which creates interdependencies across different entities (Axelsson, 1995, in Möller and Wilson, 1995; Håkansson and Snehota, 1992). According to Ford (1980) a firm will develop close relationships when it can obtain benefits through cost reduction or increased revenues. This is achieved by making relationship-specific investments, thereby adapting to the other party. Because each relationship is unique, this also indicates commitment to the relationship. Similarly, Easton (1992, in Axelsson and Easton, eds., 1992) explains the rationale for building relationships by identifying two instrumental motives: exploiting complementarities in order to increase revenues or decrease costs and gaining advantages by getting access to new resources through the relationship.

Developing relationships requires investments in time, money and other resources. Therefore they tend to become both a resource and a burden. Håkansson and Snehota (1998, in Ford 2002) discuss the consequences of this duality in relationships and how different aspects of a relationship might be beneficial in certain circumstances and constitute problems in others. Initiating a relationship can for example limit flexibility for change through the sunk costs that the relationship has incurred on the firm or because of resistance of the counterparty.

2.3.2 Relationships and Relationship Marketing

Sometimes one business term is used for describing different things, which is why we want to clarify the use of the word network. Network is used in relationship marketing to describe an organizational set from the focal firm's point of view. This is a management oriented way of using the word. The network perspective, however, deals with structures and defines the network from other criteria such as interdependencies. (Mattsson, 1997) As described earlier, the network perspective deals with both individual relationships and how they are connected or, as Granovetter (1985) writes, embedded. This is an important difference and strength compared with other similar research areas such as relationship marketing. As Mattsson (1997) points out, relationship marketing has major problems because it fails to consider the embedded nature of individual relationships and interconnected actors. "To put an individual dyad or a focal net in a 'market' rather than a 'markets-as-networks' macro context means that a firm is regarded as pursuing a relationship marketing strategy without considering that also the other actors are involved in similar relationship strategies." (Mattson, 1997, p. 453)

2.4 An Interaction Approach

2.4.1 Background

About the Study

In 1982, the IMP Group developed a theoretical framework based on empirical data from more than 800 customer-supplier relationships. The study is focused on social exchange, interaction, and variation of content and duration of relationships in different kinds of firms. (Håkansson, ed., 1982) Apart from yielding an increased understanding of business relationships this study also led to the creation of the Interaction Model, which is used for analyzing single episodes and long-term business relationships between two firms (Håkansson, ed., 1982; Håkansson and Snehota, 2000; Easton, 1992, in Axelsson and Easton, eds., 1992). The IMP Group was mainly influenced by inter-organizational theory and the

new institutionalism (Håkanson, ed., 1982). These underlying discourses are important for understanding their implicit assumptions, which is why we discuss them in the next two paragraphs.

Inter-organizational theory

In the 1950's and 1960's there was a growing sociological literature of empirical and conceptual research on the interaction between organizations – inter-organizational theory. One early example is Simpson and Gulley (1962) who conducted an empirical study to show which external factors had influence on an organization. Another example is Thompson and McEwen (1958) who emphasized the interdependence of organizations within the larger society and the necessity to interact with other organizations in order to assess their relationships. In short, inter-organizational theory is, as Warren (1967, p. 397) concludes, “/.../ based on the observation that the interaction between two organizations is affected, in part at least, by the nature of the organizational pattern or network within which they find themselves.” In contrast to intra-organizational behavior, inter-organizational analysis is concerned with ‘(1) the operation of social behavior under conditions of partial conflict and (2) the stress on factors which derive equally from all units of interaction rather than being differentially weighted by authority structure’ (Litwak and Hylton, 1962, p. 398). This field of research pored over to the business field and served as one of two main influences for the IMP Group when developing the Interaction Model.

New institutionalism

Apart from inter-organizational theory, the IMP Group was also influenced by a discourse referred to as the new institutionalism (Håkansson, ed., 1982), which has mainly been developed by organizational researchers. Apart from an emphasis on organizational myths, one of the most obvious new directions taken in the new institutionalism field is the focus on legitimacy, which DiMaggio and Powell (1991) express as organizations’ tendency to look at, and get influenced by, other actors in the market that they perceive as better or more legitimate. Moreover, the new institutionalism points out that people cope with uncertainty caused by their bounded rationality by relying on routines and rituals. As Selznick (1996) points out, the underlying continuities of ‘old’ and ‘new’ institutionalism are strong and the differences in the two fields of theory are sometimes hard to indicate. He gets support for his questioning of the notion of new institutionalism by for example Abbot (1991). But regardless

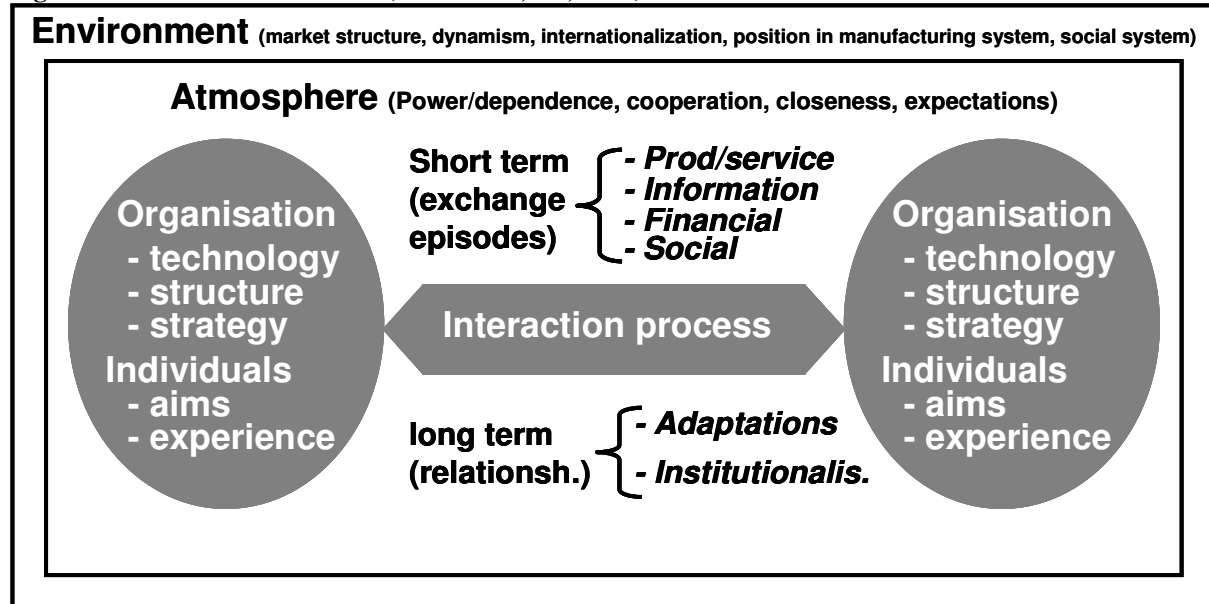
of whether one chooses to call it ‘new’ institutionalism or not, this discourse serves as the second great influence to the IMP Group’s work on interaction between firms.

2.4.2 The Interaction Model

Overview

The IMP Group discovered four groups of variables that characterize a relationship (illustrated in Figure 1): the interaction processes, the interacting parties, the interaction environment and the atmosphere (Håkansson, ed., 1982). While the three first groups describe the different features of the relationship, the last group seems to have a mediating effect and is labeled as intervening variables which “are seen as the result of previous interaction as well as the starting point for future interaction.” (Håkansson, ed., 1982, p. 277)

Figure 1: The Interaction Model (Håkansson, ed., 1982).



The Interaction Process

The interaction process takes place in individual episodes, for example a specific transaction, which over time develops into a long-term relationship. When analyzing an episode, four types of exchange between the parties are analyzed: product or service exchange, information exchange, financial exchange and social exchange. As these exchanges become routine, the parties get clearer expectations of each other and “eventually these expectations become institutionalized” Håkansson (ed., 1982, p. 17). Moreover, firms develop certain contact patterns, which interlock them. Finally, relationships are analyzed in terms of adaptations, which can lead to benefits such as cost reduction and increased revenues.

Håkansson (ed., 1982) found that processes could be divided into four types, as illustrated in Figure 2, depending on their characteristics and that certain characteristics were associated with particular problems. The main difference between limited and extensive relationships is that the episodes in an extensive relationship must be seen as a part of the whole relationship and cannot be handled in an isolated fashion. The main difference between simple and complex episodes is that when there are situations that need to be resolved within a single episode, different problem solving capabilities are required from both parties.

Figure 2: Classification of interaction processes. (Håkansson, 1982, p. 287)

		Relationships	
		Limited	Extensive
Episodes	Simple	1	3
	Complex	2	4

In the first situation, cell number one, the buyer is quite free in its choice of seller. There are various sellers delivering similar products and they have a limited scope for marketing. “The purchasing and selling can be handled in a manner characterized as a straight forward market exchange” (Håkansson, ed., 1982, p. 279). The second type of interaction process is typical when two firms interact for the first time and the good is important, for example when buying capital equipment. Because the relationship is limited, there are no routines and a limited amount of trust which further complicates the interaction. Håkansson (ed., 1982) claims that simple episodes and extensive relationship, as illustrated by the third cell, is a very common situation since one of the reasons for developing close relationships is to simplify episodes. The relationship becomes an insurance that guarantees that currently unresolved issues and problems can be solved in the future and trust has become a vital part of the interaction processes. The fourth situation arises when there is a crisis or need for change in the relationship. This might arise when the customer has the need for product development or when other network actors have “undertaken some activity of greater importance” (Håkansson, ed., 1982, p. 280). Both sides first typically search for solutions within the relationship and are because of their investment in it motivated to keep the relationship strong.

The Interacting Parties

The second group of variables in the Interaction Model focuses on the characteristics of the parties involved including technical issues, organizational size, structure and strategy, organizational experience and individuals. According to Håkansson (ed., 1982) the actors' behavior is influenced by their perception of one another. In addition, the behavior is also influenced by how the actor perceives that it is being perceived by the counterparty. Two variables are mentioned as important in the relation from one party to another: the amount of knowledge since it determines whether a learning process is necessary, and fit in terms of social and technical attributes since for example substantial technical differences can hinder integration and interaction between the firms. Differences between the firms in this structural dimension mean that more resources are necessary for each interaction. Håkansson (ed., 1982) claims that the Interacting Parties group of variables is related to the information exchange between the parties. The more complex tasks the bigger the need for knowledge. The four combinations between mutual knowledge and structural are illustrated in Figure 3.

Figure 3: Classification of the interacting parties. (Håkansson, ed., 1982, p. 280)

		Mutual Knowledge	
		Unfamiliar	Familiar
Structural Fit	Not Matching	1	3
	Matching	2	4

In the first situation, cell number one, the parties are getting to know each other and are starting to realize that there are difficulties for them to develop the relationship. In order for the relationship to become close, the parties have to adapt to one another. However, if the differences are too big they might be better off searching for alternatives. In the second situation, there is a good fit and both parties realize that there are substantial benefits of having a close relationship. The difficulty here is to find such a counterparty. Identifying firms with good fit is crucial from a strategic perspective. The third situation consists of firms who know each other well but do not match. Unless certain changes are made, the relationship will not develop into a close one. The last situation, cell number four, is characterized by the absence of structural and knowledge obstacles. Because the firms have dealt with each other multiple times, adaptations further facilitate the interaction. According to Håkansson (ed., 1982) the firms must still be aware of what happens inside and outside of the relationship.

The Interaction Environment

The interaction environment variables are concerned with market structure, the degree of dynamism, market internationalization, the position of an individual relationship in the manufacturing channel and the social system, which includes general influences as well as more narrow social variables that can be specific to one particular industry.

Håkansson (ed., 1982) claims that all interaction is a part of a larger social system and that features of the environment color the interaction in different ways. In the classification scheme illustrated in Figure 4, Håkansson (ed., 1982) refers to market stability as the nature of supply and demand. Further, market homogeneity is chosen as a label for the extent to which buyers and sellers are similar and can be substituted.

Figure 4: Classification of the environment. (Håkansson, ed., 1982, p. 283)

		Market	
		Stability or Dynamism	
		Stable	Dynamic
Market Homogeneity	Homo-geneous	1	3
	Hetero-geneous	2	4

In a stable and homogenous environment, cell number one, relationships are easy to handle since they are easy to compare. Håkansson (ed., 1982) claims it is hard to find good examples of this type of situation. In the second type of environment firms are different and act on a stable market. The difference between firms makes it difficult to evaluate and choose counterparties. Also, managers must carefully evaluate the relationship periodically so that other alternatives are continuously evaluated. In the third type of situation, market dynamism tends to make timing a vital aspect of the relationship. Håkansson (ed., 1982) mentions the raw materials market as a typical example. Firms acting in such an environment are advised to either decrease the dynamism by developing close relationships, or play the market by developing several relationships to get the best conditions for each deal. The fourth situation means that it is difficult and costly to change exchange partner. The firm might then either invest considerably in the relationship or prepare to change its partner.

As explained in the introduction, the IMP Group developed the groups of variables into four separate “themes”. We chose to delimit our study to only consider the Environment theme,

which could be viewed as an extension of what we have already described above. In this theme, Cunningham (1982, in Håkansson, ed., 1982, p. 358) states that “Inter organizational relationships are complex, variegated, multi-level and dynamic phenomena.” Interaction takes place between firms in different states of economic and technological development, but also between individuals performing different roles and having changing objectives. Organizations will interact if their counterparty is important. The more important the counterparty is, the more frequent the interaction will be. The perceived need for interaction has to overcome barriers of high costs and resource limitations that inhibit interaction from taking place. Barriers can arise in terms of technical or organizational incompatibilities, social distance in language, culture and style of approach. Sometimes personal contacts can help resolving such barriers. (Cunningham, 1982, in Håkansson, ed., 1982)

Cunningham (1982, in Håkansson, ed., 1982) lists several different types of barriers. Environmental barriers are those that arise due to differences in total economic and market environment. These can be for example currency fluctuations and unofficial market protectionism. Market structure barriers constitute barriers to industry change because of the ties created from close cooperation between firms in the market. These become especially significant when there are high costs associated with changing suppliers and customers.

Cunningham (1982, in Håkansson, ed., 1982) further mentions cost-benefit considerations as important inhibitors of interaction, saying that interaction is unlikely to take place if there are doubts whether the costs will be off-set by potential revenues. This is also related to resource management where firms with several different relationships face constraints in the number of high involvement relationships it can effectively manage. The consequence of instituting portfolio management policies is that it creates barriers to extensive and effective interaction.

Social and cultural variables are also important for interaction according to Cunningham. “Social exchange and inter-organizational communication is related to the transfer of values, attitudes and knowledge.” (Cunningham 1982, in Håkansson, ed., 1982, p. 363) Social and cultural barriers can be related to different styles of corporate and individual behavior, ethical and moral values and language barriers, and are especially linked to the risks in interacting with a foreign firm. Interaction can continue between buyers and sellers without liking and satisfaction, for example because of a considerable cost or technological advantage, but often the relationship might not lead to optimal performance.

3. METHODOLOGY

3.1 Overview

In this chapter we introduce the methodology used in structuring and writing this thesis and discuss the implications that our choices might have had on our results. In short, given our two-folded purpose of presenting a comprehensive picture of a business relationship and to develop the Interaction Model, we found a qualitative perspective and an abductive approach to be most appropriate. We conducted a pilot study and a descriptive non-experimental main study on the focal relationship between Amadeus ADC and Finnair through qualitative interviews mainly in person, but also on the phone.

3.1.1 A qualitative perspective

Most, or all, problem areas can be researched by using two research designs, a quantitative or a qualitative, (Eneroth, 1984; Olsson and Sörensen, 2007) or a combination of the two through a triangulation method (Olsson and Sörensen, 2007). In order to choose the research design, we must be clear on what we want to achieve. Eneroth (1984) describes quantitative research as measuring a quantity of something or correlations between different phenomena. This requires knowledge of which areas to measure. According to Eneroth (1984), qualitative research aims to reveal qualities that separate one phenomenon from another – in other words it tries to identify qualities which are typical for a certain phenomenon. Consequently there is no need for previous knowledge of which areas to measure since the whole purpose with a qualitative approach is to reveal these qualities. Moreover, a qualitative method is preferable when studying complex phenomenon and subjects which are context-specific (Olsson and Sörensen, 2007). According to Olsson and Sörensen (2007), the qualitative research design requires an inside approach, i.e. the researchers are subjective, work closely to the phenomenon and need to take part of the data collection personally and then interpret and describe the information.

A qualitative research design seems most appropriate for this thesis, mainly for two reasons. Firstly, our purpose is to reveal qualitative aspects of the case relationship and the model. We are not interested in measuring the number of relationships a firm has, or how often they interact with each other. Instead, we are interested in the firms' impression of each other, how

they interact and what they feel about one another. Secondly, relationships are complex and context-specific which makes them difficult to structure in a way which would make quantitative research possible.

It would have been interesting to use a triangulation research design, i.e. using both qualitative and quantitative data. This could have been accomplished either by including existing quantitative data, or by conducting a quantitative study of our own. Existing quantitative data consisted of one previous study conducted by EDHEC Business School (2007), in which airlines rated the solutions offered by Amadeus ADC and its competitors. However, we chose not to include this study because: (i) we assessed its statistical significance as too low due to a small sample; (ii) it only covered certain aspects of the relationships, such as functionality and price; (iii) the case company would have had to be anonymous had we included the data. Our second option for a triangulation research design was to conduct our own quantitative study. However, this was not feasible because of: (i) our resource constraints; (ii) the low statistical significance we would achieve given the limited number of possible respondents to survey (as shown in the EDHEC Business School study).

3.1.2 An abductive approach

An abductive approach is most suitable for this thesis since we want to, as Olsson and Sörensen (2007) puts it, switch between making conclusions inductively and deductively. An inductive approach helps in drawing up the picture of the phenomenon (Olsson and Sörensen, 2007) and is therefore suitable for our first purpose. A deductive approach helps in increasing the awareness through existing theory (Olsson and Sörensen, 2007) and is therefore suitable for our second purpose. Hence our choice of the third way – the abductive approach.

The abductive approach has its roots in the empirical study without rejecting theoretical preconceptions (Alvesson and Sköldberg, 2008). Findings can be illustrated by the authors' interpretation of the stories told in the empiric material. Wordings are seen as an indication of a hidden undergirding pattern and because the abductive process is not certain from a logical perspective it has to be controlled against several cases. For the method to be successful it also requires the researcher to alternate between empiric data and theory. Therefore the researcher has to go through the empirics step by step aided by theoretical preconceptions while at the same time developing that theory. The main differences between abduction, deduction and induction can be summarized in a schematic model, as illustrated in Table 1.

Table 1: Comparison of deduction, abduction and induction. (Charniak and McDermott 1985, in Alvesson and Sköldberg, 2008, p. 60)

	<i>Theoretic assumption</i>	<i>Finding</i>	<i>Conclusion</i>
Deduction	<i>if a then b</i>	<i>a</i>	<i>thus b</i>
Abduction	<i>b</i>	<i>if a then b</i>	<i>thus a</i>
Induction	<i>P(a), P(b)...</i>	<i>P(x) has the quality P</i>	<i>thus for all x P(x) holds</i>

In the abductive approach, (b) is the surprising fact that is to be explained and (a) is the pattern that if true explains the fact (b). (Alvesson and Sköldberg, 2008, p. 60)

3.1.3 Pilot study and descriptive non-experimental main study

In addition to dividing research with regards to the approach, Olsson and Sörensen (2007) classify research based on its purpose: pilot study, formative research, explorative research, descriptive research and hypothesis testing. They describe a pilot study as preparatory with the aim of testing research instruments, e.g. an interview guide. From a qualitative perspective, formative research has the purpose of investigating a new problem area in order to formulate hypotheses. Explorative research aims at explaining consequences and relations between different phenomena. This type of research can be either qualitative or quantitative. Quantitative explorative research can be subdivided into experimental and non-experimental research. Descriptive research is partially based on a certain amount of established knowledge, which means that one focuses on those aspects of the phenomenon in which one has an interest. Finally, Olsson and Sörensen (2007) describe hypothesis testing as an approach that is used when both the amount of knowledge and theories are well-developed. Previous to conducting the research for this thesis we had written an essay at Stockholm School of Economics on the Interaction Model and applied it to Amadeus (Ahlstrand *et al.*, 2006). We used this previous work as a pilot study: it served as background information on the case company, indicated the need for a thorough review of the Interaction Model and served as a test of the interview guide. Given our purposes, the main study is more of a descriptive one.

Merriam (1994) argues that the most important distinction of methods is the one between experimental and non-experimental. The experimental method requires that the researcher can control and manipulate the variables of interest. Merriam (1994) chooses a different terminology from Olsson and Sörensen (2007) by using non-experimental research and descriptive research as synonyms. Merriam (1994) continues by saying that descriptive research is suitable when the researcher wants to study a specific phenomenon in order to gain

insight, discover or interpret it. Thus, a descriptive non-experimental study seems to be most relevant for our purpose, regardless of whether one chooses to follow Olsson and Sörensen's (2007) or Merriam's (1994) terminology and argumentation.

3.2 Choice of Case

There are three main reasons for our choice of case. First, to our knowledge, no other case studies (apart from our own) have been conducted using the Interaction Model in a modern technological service industry such as the one chosen. When the model was developed, more than 800 firms were studied with the aim of providing a general model for business-to-business relationships. Although the authors based the results on an impressive amount of data, all of the firms were in traditional manufacturing industries. Second, a prerequisite for the Interaction Model is to analyze a firm where its customer base consists of other firms. This is valid for Amadeus ADC, for which the customers are airlines. In order to develop the Interaction Model, we found it interesting to study a firm that acts in a complex network setting, preferably a relatively large firm that had a history (i.e. not new) and had undergone strategic changes. In addition, we assumed that the time and change aspects could help us in identifying and verifying dynamic variables in the model as well as causality in the relation between variables. Third, the authors' experience and contacts: As mentioned earlier, personal experience is beneficial when conducting a qualitative study since it helps the researcher to analyze the information gained. One of us worked at Amadeus for ten months in 2004 to 2005 and still has a good relationship with his previous manager, Katerina Iliadis, who has helped in arranging the interviews. Without this contact, the case study would most certainly not have been as extensive empirically. In 2006, we were in contact with Amadeus and used its division of car rental booking applications as a case study to test the Interaction Model. Our results indicated that the Interaction Model is somewhat incomplete. The fact that we had previously studied Amadeus also meant that we had a certain pre-understanding, which enabled a deepened understanding given the time constraint compared with choosing a previously unknown firm.

The choice of the focal relationship between Amadeus and Finnair was to a certain extent not our own but one of Amadeus. The reason for this was that our work required a contact on a fairly high hierarchical level at the customer side and that approval from Amadeus was a necessary ethical prerequisite for a cooperative data collection process. The choice of sample

was discussed at Amadeus between Katerina Iliadis, Monica Frontini and Peter McAneny.¹ Initially, they suggested that we should approach “small” as well as “large” airline customers. As for small airlines, Wideroe, Finnair and Icelandair were considered. As for large airlines, BMI, Air France and QF were considered. These suggestions were based on the potential of Amadeus to arrange for interviews with senior customer representatives. To our understanding, asking for one hour of time is a somewhat sensitive subject, which is why the suggested interview sample consisted of customers with which there is a close relationship. Two of the mentioned airlines, Finnair and BMI, accepted the request, but BMI later canceled the interview. Thus the customer-side of the relationship is represented by only one interview with Finnair. On one hand, this is a possible pit-fall in the sense that it might not be representative for all Amadeus’s relationships and certainly is not for all relationships in the industry. On the other hand, Amadeus is in focus and in addition the interview with Finnair was the last one to be conducted and we found that a great deal of the information that we had already gathered was confirmed.

3.3 Data Gathering

3.3.1 Planning and sample

Patton (1984 in Merriam 1994) claims that interviews are necessary when researchers want to get information that they cannot observe with their own senses. Such data include feelings, thoughts and intentions. Patton (1984 in Merriam 1994) also suggests that interviews are the most suitable technique when the purpose is to study individuals in a limited time frame. Other researchers (e.g. Lind and Strömsten, 2006; Håkansson and Lind, 2004) who studied technology providers in a network context also used interviews as data collection method. Consequently, qualitative interviews in person are most useful given our purpose and case.

Data gathering should be done in a way that allows the researcher to capture as much as possible of the different qualities and aspects. In order to make this possible the sample should not be randomized but picked in a “strategic” fashion so that the researcher maximizes the probability to encounter as many, and hopefully contradictory, qualities as possible (Eneroth, 1984). When planning our data collection, we tried to structure it so that we would gain access to as many parts of the case as possible. A project proposal draft, including request of interviews was sent to Katerina Iliadis on November 2, 2007. It was reviewed and

¹ Refer to Interview List for information on these employees.

discussed over the phone. Iliadis then met with Monica Frontini, Head of Product Marketing, who acted on behalf of Philippe Der Arslanien, Director of ADC. Certain minor changes were made in the project proposal and the final proposal was sent on November 23, 2007. Initially, Iliadis suggested that we should talk to representatives from account management, product management and sales. After discussions, we asked to interview people from corporate strategy, account management, development, marketing, product management, sales and the Airline IT Department. The list was approved by Der Arslanien, which allowed us to get legitimacy for our project. The individual informants were then chosen by Iliadis, based on their seniority and availability. In the end, we managed to have a wide range of people and positions incorporated in the sample, which is one of the main strengths of our research. The complete list of conducted interviews in the pilot study and the main study can be found in Table 2 and Table 3, respectively.

Table 2: List of interviewees, pilot study.

PILOT STUDY			
Interviewee	Title & Position	Background	Location & Time
Peter Altman	Unit Manager, Amadeus Cars, Amadeus	Previous GDS Manager at Europcar, and joined Amadeus as head of its car rental unit in July 2006.	Telephone interview 5 Dec. 2006 at unknown time
Katerina Iliadis	At the time: Product Manager, Amadeus Common Distribution Platform, Amadeus	Iliadis had previously been Product Manager and Senior Product Manager for Amadeus Cars and had at the time moved on to Common Distribution Platform product management.	Telephone interview 2 Dec. and 3 Dec. 2006 at unknown time
Daniel Vestergren	(Previous) Assistant Product Manager, Amadeus Cars	Stockholm School of Economics graduate who had an internship at Amadeus in Jul. 2005 to Aug. 2006.	SSE, Stockholm, Sweden, 3 Dec. 2006 at unknown time

Table 3: List of interviewees, main study.

MAIN STUDY			
Interviewee	Title & Position	Background	Location & Time
Denix Lacroix	VP, Development, Sales and E-commerce Platforms, Amadeus	Engineering school graduate who started his career as software engineer at IBM and Digital Equipment. Lacroix joined Amadeus as a software architect in 1989, and continued as project manager, Director and now VP.	Lacroix's office, Sophia-Antipolis, France 13 Dec. 2007 at 09:00-10:00.
Blaise Fiedler	Head of Marketing and Strategic Commercial Services, Airline Direct Channel, Amadeus	MBA from INSEAD previously employed by British Airways. He started his Amadeus career in 2001 in the corporate strategy team.	Fiedler's office, Sophia-Antipolis, France 13 Dec. 2007 at 10:15-10:45
Marie-Pierre Courpon (& Katerina Iliadis)	Strategic Airlines Product Coordinator, Airline Direct Channel, Amadeus	Courpon has a Master's Degree in Business Management, specializing in finance and law. She was previously employed by Lux Air for seven years, where she was in charge of business intelligence and e-commerce. Courpon joined the account management team at Amadeus in 2005 before moving on to the product management team.	Meeting room, Sophia-Antipolis, France 13 Dec. 2007 at 11:00-12:00
Joel Soyris	Senior Director, Airline Business Group – Strategic Airline & Partners, Solution Design & Airline Strategy, Amadeus	Engineering graduate from École Polytechnique in Paris and later MBA. Soyris quit his previous work at Air France for Amadeus, when the Sophia Antipolis office opened in 1987. He is currently in charge of strategy for airline IT and development of new products.	Soyris's office, Sophia-Antipolis, France 13 Dec. 2007 at 14:00-15:00
Jean-Philippe Mesure	Director, Airline Business Group – Airline IT Services, Amadeus	With an engineering degree and experience of several positions in the airline industry. Mesure joined Amadeus in 1987 after 7 years at Air France.	Mesure's office, Sophia-Antipolis, France 13 Dec. 2007 at 15:00-16:00
Francois Weissert	Vice President, Development Global Core, Amadeus	Engineering graduate with experience from various departments in Amadeus including Airline IT, Marketing and HR	Weissert's office, Sophia-Antipolis, France 13 Dec. 2007 at 16:15-16:45
Olivier Preve	Business Controller, Delivery Management & Programs, Amadeus	Preve has a financial background as an auditor at Ernst & Young. He joined Amadeus in 2003 and has since then worked as internal auditor and controller. Currently working with aligning marketing and sales processes in Amadeus Commercial Organizations.	Meeting room, Sophia-Antipolis, France 13 Dec. 2007 at 17:15-18:15
Philippe Der Arslanien	Director, Airline Business Group, Amadeus	MBA graduate who has worked for Capgemini and various American startup firms. Der Arslanien started to work for Amadeus 1999 at the strategy department and then was appointed head Airline Direct Channel.	Der Arslanien's office, Sophia-Antipolis, France 14 Dec. 2007 at 08:15-09:00
Peter McAneny	Head of Account Management, Airlines Business Group – Airline Direct Channel, Amadeus	Honors Degree in computer science and experience from a number of companies e.g. IBM and British Petroleum. He began working for Amadeus in 1993 and has since then worked with service management and computer support until being appointed his current position.	Meeting room, Sophia-Antipolis, France 14 Dec. 2007 at 09:30-10:00 and 12:00-12:30
Monica Frontini	Head of Product Marketing, Airline Business Group – Airline Direct Channel, Amadeus	Frontini is a Computer Science graduate and before she joined Amadeus she used to work for Hewlett-Packard. She joined Amadeus in 1999 and has since then worked in product management. She is currently head of product management for Airline Direct Channel.	Frontini's office, Sophia-Antipolis, France 14 Dec. 2007 at 11:00-12:00
Katerina Iliadis	Product Coordinator, Airline Business Group, Amadeus	Previous Product Manager, and then Senior Product Manager, for Amadeus Cars, followed by Product Manager for Amadeus Common Distribution Platform. She joined the Airline Business Group in July 2006.	Meeting room, Sophia-Antipolis, France 14 Dec. 2007 at 14:15- circa 16:15
Timir Bhose	Director, E-commerce and CRM development Finnair PLC	After graduating in Computer Science, Bhose has been working in different positions at Finnair for 20 years.	Telephone interview, 9 Jan. 2008 at 14:00-15:00

3.3.2 Collecting the empirical data

The most important objective conducting the data collection is to gather as much data as possible, using as many of the senses as possible (Eneroth, 1984). While conducting our study, we visited Amadeus development headquarters in Sophia Antipolis, outside of Nice, France. The visit enabled us to gather data about the appearance and structure of the site as well as data from the actual interviews. This was important since it deepened our understanding of how the firm works and how this influences the employees and their actions. Apart from the formally scheduled interviews, we also had three informal meetings – an informal dinner on the town with Iliadis where the interview questions were reviewed, and the issue was discussed informally, a lunch with Iliadis on the site and a night on the town with two junior developers working in Amadeus ADC. These informal meetings enabled us to get insight into current issues that could be further investigated in our formal interviews.

There is a wide spectrum according to which interviews can be conducted (Merriam, 1994). In structured interviews the interviewer decides which questions to ask in which order before the interview – a technique that is closely related to survey research. In most cases, however, interviews are less structured and more open. The purpose with these interviews is to understand the interviewee's way of seeing things. A partly structured interview allows the researcher to be more flexible in the data gathering, getting the needed information while at the same time being responsive to situations that might occur in the process. An unstructured study is exploratory in nature and is most suited when the interviewer does not know enough about a phenomenon to ask relevant questions. When it comes to asking specific questions in an interview, Merriam (1994) further states that it is important for the researcher to ensure that the interviewee fully comprehends the questions asked. It is important that the interviewer avoids asking questions that might be perceived as leading or "Yes or No" questions. In order to decrease the risk of misunderstandings, we discussed the questions with Iliadis before conducting our interviews. This enabled us to rework some questions that could be perceived as ambiguous. The interviews were recorded and transcribed word by word, a method which Merriam (1994) claims to be the ideal foundation for a successful analysis.

Before traveling to Nice to perform our interviews, we consulted various books on academic research and methodology. As we realized that we needed to get certain information in order to successfully analyze the case using the Interaction Model, we decided to use a partly

structured method. Our aim was to commit roughly half of the interview to model specific questions and then exploit the remainder of the time to further explore interesting subjects encountered earlier. This method also allowed us to slightly adapt our focus in each individual interview. In addition to asking questions related to the Interaction Model and the network perspective, we asked personal questions on education and work experience. These questions were asked in the beginning of each interview to better understand each individual in the sample and to create a trusting atmosphere. All interviews were conducted in English.

3.3.3 Structuring the empirical data

We have chosen not to structure the data by any specific model. One could argue that a logical choice would have been to structure the empirical data according to the groups of variables in the Interaction Model. However, in our opinion this would have restrained us from thinking outside the box, and discovering possible weaknesses of the model. Instead we have structured it around themes that we found while conducting our study, thereby staying as open-minded as possible in our abductive approach. At the end of each theme we give a short explanation to why the information is valuable to the reader and necessary for developing our analysis. While these summaries and insights are not a part of the empirical data per se, they serve as guidance to establishing a fact base on which to build the remainder of the thesis.

3.4 Previous Studies

3.4.1 Previous studies on the Interaction Model

While our study aims to achieve somewhat different goals than the original study of buyer-seller relationships by Håkansson (ed., 1982), we followed a methodology that lies close to that of the original study. This assures that our findings of potential shortcomings of the model are not due to the use of a different research method, thus increasing comparability. When conducting the first IMP-project, Håkansson (ed., 1982) studied over 800 relationships by conducting semi-structured interviews with a predetermined sequence of topics, ranging from general questions on the business to specific questions on the relationships. Similarly, we planned our questions to accommodate the need for both model-specific information and information that reflect the state of the firm such as threats, challenges and overall market conditions. Håkansson (ed., 1982) states that the aim of the project was to investigate how variations in three different dimensions – country of origin, production technology of the customer and type of product exchanged – affect the relationship. In addition, the authors

wanted to delimit their work to relationships of importance for both the buyer and the seller. Importance was ensured by choosing relationships where the product was important because of its high technology, high unit price, high volume or its sensitive role in the production process. Their work was structured according to the choice matrix illustrated in Figure 6. Cell 6 is considered redundant since components do not form part in process manufacturing.

Figure 6: Classification of relationships by technology.

		Customer's Production Technology		
Supplier's Product Technology		Unit Production	Batch & Mass Production	Process Manufacture
	Raw & Processed Materials	1	2	3
	Components & Parts	4	5	6
	Equipment	7	8	9

We have deliberately varied as few of the variables as possible. Amadeus ADC is located in France, thus sharing the same origin as approximately 25% of the 800 researched firms in the original study. The product is arguably important for the buyer since the ability to communicate with customers and survey inventory is critical in the airline industry. Our work does, however, differ in type of product and production technology of the customer. The customers of Amadeus are predominantly travel service providers, and can therefore not be classified as either unit, batch/mass or process manufacturers. Furthermore, the product is different since Amadeus does not supply any physical products but rather the service of efficiently providing and distributing information to its customers and the end consumer.

3.5 Research Quality

3.5.1 Reliability and degree of dependence

Merriam (1994) claims reliability is best described as the extent to which the same results can be achieved again, and that this is problematic in social sciences since human behavior is not static. Thus it becomes difficult to find reference points against which we can judge the reliability. Instead the author argues that one should be more concerned with internal validity since it is a driver of reliability. We believe that reliability is an inherent weakness in the

qualitative method and that dependence as defined below might be a more fruitful descriptor of the quality of our research.

Merriam (1994) also mentions the degree of dependence as a possible replacement of reliability in qualitative research. Goetz and Lecompte (1984 in Merriam, 1994) list three techniques to ensure dependence of the data: (i) to clearly explain assumptions and theories that might affect the data, (ii) to use several data gathering tools such as surveys, (iii) to use interviews which might triangulate the information and to allow others to follow in the tracks of the researchers by carefully describing all the decisions and steps in the research process. During the course of writing this thesis we have tried to explain what concepts have influenced us the most in order for the reader to get a clear picture of our process. Most notably the data gathering has been affected by our theoretical perspective. As the aim of our work has been to apply, test and develop the Interaction Model for the service industry it is also plausible that we have become myopic in our way of gathering and compiling data. While our intentions have been to remain neutral and objective, the strong focus on one model might have led us to see patterns to fit our purpose. We realize that this is an Achilles' heel, but our awareness of it while conducting the research has enabled us to minimize the negative effects to a reasonable level.

3.5.2 Internal validity

Internal validity is, according to Merriam (1994), to what extent research results are correlated to reality. In qualitative studies the results do not necessarily reflect an objective view of reality but the interviewees' mental construct of reality. The qualitative researchers' duty is to present this construct in an honest and correct manner. Furthermore, the researcher shall display the complexities of human behavior and present a holistic interpretation of data. Like Söderlund (2005), Merriam (1994) mentions member checks as a good strategy to ensure high internal validity.

Even though all interviewees have seemingly good knowledge in English, and all have English as their working language, we recognize that both our own and the interviewees' English speaking abilities might have impacted the outcome of our analysis. This potential problem area was partly remedied by our effort to be as clear as possible when formulating and asking our questions to ensure that the interviewees understood.

We have included several direct quotes in order to further strengthen our internal validity. In some cases the answers have been edited to satisfy the guidelines set for the thesis. These changes have been clearly marked in order not to mislead the reader. Our overall impression is that the empirical material presented is a clear representation of reality and that the internal validity of our work is high.

3.5.3 External validity

Merriam (1994) states that external validity is an indication of how and if the results from a research process can be applied to other situations. Internal validity is a prerequisite for external validity since it makes no sense to try to generalize meaningless results. Many researchers have raised the question of whether it is possible to generalize any data from a case study. It has been suggested that this inherent problem can be remedied by using multiple cases. Merriam (1994) concludes that it might be possible to generalize by letting the readers themselves decide whether or not to generalize the data and apply it on their own specific situation. A researcher can increase the usefulness of the study by using different techniques such as making the research as dense as possible so that the reader can judge the results correctly, or establishing the typicality of the results so that other researchers can compare the results with their own.

As previously mentioned, we have strived to present our material and results in an objective fashion. Furthermore, we thoroughly reviewed our empirical material and tried to present as much of it as possible given the restraints of the thesis format. Although it is possible that we have left out parts that are interesting to certain readers, we believe that we have been successful in supplying the crucial information. In terms of typicality of Amadeus, our opinion is that certain features are more important than others. Firstly, Amadeus is the market leader in the researched industry. Secondly, it supplies a service that is crucial to its customers' operations. Thirdly, Amadeus is in the IT sector meaning that its market is constantly affected by exogenous variables such as technological development. These three aspects of the case, individually or together, assure typicality, which according to Merriam (1994) can be used for the reader to judge external validity.

4. EMPIRICAL DATA

4.1 Overview

This chapter is dedicated to presenting the data that we have collected for our study. As mentioned in the methodology chapter, we structured the data around themes that we found while conducting our study.

In the following two sections we will aim to give a brief background on Amadeus's operations as well as on the global GDS industry. In addition we will give you a quick introduction to Finnair. Recalling the purpose of the thesis, we aim to describe the complexities of the relationship. In order to do so we believe that it is necessary to first gain an understanding of both the airline and the GDS industry.

4.2 The Industry

4.2.1 Distribution in the travel and tourism industry

The airline industry is one of the oldest examples of e-commerce, in which the use of central reservation systems has enabled “travel and hospitality companies [to] manage the sale of their inventory” for some thirty years (Boyd and Bilegan, 2003, p. 1363). Originally, these systems were used simply for sales of physical inventory but have since then been developed to include for example price management, inventory control, demand forecasting and yield management. Although functionality has evolved over time, the original central reservation systems have never been fully replaced by new technology. (Boyd and Bilegan, 2003)

Amadeus, and its traditional competitors Galileo, Sabre and Worldspan, are GDSs linked to the central reservation systems of airlines and other travel providers. They store the inventory and availability at one location, representing “/.../the single largest distribution channel through which airlines sell their inventory/.../” (Boyd and Bilegan, 2003, p. 1364). When these companies were founded, they “leveraged themselves into a role as sales intermediary by actively courting travel agents, supplying them with desktop computer access in an era when this was not common” (Boyd and Bilegan, 2003, p. 1364). One of our respondents, Iliadis, explains that the original business model was built on service fees charged to airlines and commission fees paid to the travel agents both by the GDS (for using their system) and by the airline (for booking one of their products). Today, airlines use several different

distribution channels. The “internet revolution” enabled airlines to get their own websites and/or sell via so-called third-party agencies (also called online travel agencies) such as Expedia and Orbitz. Own websites sometimes enables the airlines to by-pass any intermediary, thus avoiding both commissions and fees, whereas third-party agencies often charge competitive fees and exclude travel agent commission. In addition there are websites like Opodo, which to the end-customer might appear like any other online travel agency. However, this is only a web front-end of a GDS, since Opodo is owned and operated by Amadeus (Boyd and Bilegan, 2003; Amadeus, 2008a).

Lacroix, VP Development, Sales and E-Commerce Platforms, explains that Amadeus chooses to split the types of distribution channels into direct and indirect channels. A direct distribution channel is for example an airline’s website (i.e. the airline sells directly to the end-customer), whereas an indirect distribution channel is for example a front office application developed for a travel agency (i.e. the end-customer visits either an online or an offline travel agency who makes the reservation). As mentioned earlier, the focus of this thesis is on the group at Amadeus that deals with airlines direct channels.

4.2.2 Recent changes

In recent years, the GDSs have faced a changing environment. Although lock-up agreements used to exist between the GDSs and airlines, most of them expired in the end of 2005. In addition, the 2004 deregulation of the GDSs in the U.S. brought several trend shifts with it. American GDS network airline bookings went down to 56% versus 71% in 2001 (Harteveldt *et al.*, 2004a, p. 1). Along with the deregulation, Amadeus and other GDSs feared that suppliers would start turning to alternative forms of distribution, including direct-connect systems or so-called business-to-business portals, where the GDSs are by-passed. Apart from the deregulation of the market, another interesting change concerns the next generation of online travelers, who “will influence massive changes in how travel is marketed, distributed and sold” (Harteveldt *et al.*, 2004b, p. 1). In 2000 Northern Europe, which is one of the most important market for Amadeus according to Iliadis, showed a greater and “faster adoption of PCs, the Internet and online activities” (Reitsma *et al.*, 2005, p. 2). In 2005, every second adult in the EU-5 area (France, Germany, Italy, UK and Spain) went online regularly, and researching holiday destinations was, with around 45% of the European online consumers, the second most popular activity after sending emails (Reitsma *et al.*, 2005). According to Harteveldt *et al.* (2004b) the next generation of online travelers is more optimistic about

technology and turn to the Internet for several aspects of their lives. They are used to doing their own research and planning and are therefore less likely to use traditional offline sales channels, such as travel agencies. The majority of people in this group use web-based travel agencies (52%), travel supplier's websites (37%) and/or consolidator websites (36%) when researching. (Harteveldt *et al.*, 2004b) When booking their travel, most of them turn to the same channels (34%, 22% and 18% respectively) (Harteveldt *et al.*, 2004b).

4.3 Introduction to Amadeus

4.3.1 Background

Location

Founded in 1987 by Air France, Iberia, Lufthansa and SAS, (TravelMole, 2007; Amadeus, 2008a) Amadeus is today a global company with central sites in Madrid (headquarters and marketing), Nice (development), and Erding (data processing) (Amadeus, 2008a). In addition, there are three regional offices in Miami, Buenos Aires and Bangkok, and 65 local Amadeus Commercial Organizations covering activities in 215 markets (Amadeus, 2008a).

Customers and solutions (the whole section is based on Amadeus, 2008a)

With the mission "to be the leading provider of IT solutions that enable success in the travel and tourism industry", Amadeus today serves three main customer segments:

- travel providers (e.g. airlines, hotels and car rental firms);
- travel sellers (e.g. business-, leisure- and online travel agencies); and
- travel buyers (e.g. corporations, and end-customers via its web front-end).

Today, 94,162 travel agency offices and 32,582 airline sales offices representing 183 airlines use Amadeus. In addition, 764 airlines store their schedules in Amadeus and 502 of these are available for booking. Half of the top 50 member airlines of The International Air Transport Association (IATA) have selected the technology and services of Amadeus for their websites, and 20 of these have outsourced it completely. The Amadeus product suite consists of:

- Distribution and Content (e.g. aggregation of content, which is distributed via Amadeus's point-of-sale network);
- Sales and E-commerce (e.g. accessing, marketing and selling content);
- Business Management (e.g. optimization of business operations); and
- Services and Consulting.

The airline e-commerce solutions, Amadeus e-Travel Airline suite, won a total of 18 awards in 2007. It is used by 75 airlines to power over 250 websites in more than 80 markets and consists of three solutions: Amadeus e-Merchandise Solution (pre-sales faring and shopping), Amadeus e-Retail Solution (booking), and Amadeus e-Service Solution (post-sales).

4.3.2 Human Resources

Amadeus employs over 8,300 people from 95 countries (Amadeus, 2008a). This diversity in nationalities does not only seem to be a consequence of the representation in different markets but also a result of the ability to attract people from a variety of countries to the site in Nice.

The last time we had a business dinner /.../ we had I think 50 people around the table and 20 different nationalities. (Fiedler)

However, although the total workforce in Nice might be multicultural, there seems to be a biased number of French employees in development functions.

There is a strong drive now to recruit more and more international people in the development teams – in technical teams – but it's true it is a very French organization as far as pure development is concerned. (Fiedler)

Since the majority of developers are French, they can often communicate in French internally. However, there are higher expectations on English speaking skills from those employees working in client-facing positions.

Let's say that, there is [*sic.*] a lot of people that are never confronted with the customer in the development side. As such I speak mostly of people that work in programming. And a lot of these meetings take place in French and then the team leader or the unit manager is the interface with the customer. And he generally has a very good level of English so for the time being I think it works. It works very well. (Fiedler)

Regarding recruitment, Iliadis recognizes that there are problems associated with prioritizations in the organization but also explains that there are underlying reasons that in many ways might be hard to control and change.

There is a problem of requirement of resources as far as I can see. Specifically in development it is very hard to get resources /.../ So even if we decide today to set up this team the question is when will you have it? /.../ Apparently the skill sets that are asked don't exist and it is hard to find good people. (Iliadis)

4.3.3 Recent strategic moves

Change in ownership

In 2005, Amadeus and its subsidiaries went through a leveraged-buy-out, LBO, by Cinven Ltd. and BC Partners Ltd. for EUR 4.34 billion, (Amadeus, 2005) representing one of the largest LBOs in Europe that year (JP Morgan, 2005) and the largest LBO in Spain to date (BC Partners, 2008). Ownership is now shared between the two investors (52.59%), Air France (23.07%), Lufthansa (11.53%), Iberia (11.53%), and management (1.28%) (Amadeus, 2008a).

Repositioning the Company

In 2005, Amadeus launched a re-branding campaign. There were two main reasons for this according to Lacroix: the need to diversify and reposition the company, and to change the financial market's perception of the company.

*.../the GDS was potentially threatened or we thought a few years back that we were really threatened
.../ Therefore there was a need to look for other business. (Lacroix)*

At the same time, the new owners had their own objective:

They chose to grow the company but also reposition the company in the eyes of the financial community so that we would be able to get a higher EBITDA multiple .../ The idea was actually to reposition Amadeus so that when they would be exiting the LBO we would get a higher multiple. If people think that well Amadeus is not a GDS anymore .../it's not that 'legacy business', Amadeus is cool, therefore I can give a higher multiple. (Lacroix)

4.3.4 Organizational structure

Overall structure

Amadeus is split into product areas, such as airline distribution, airline IT etc. With a history of structure by product, the trend according to Lacroix is now "to organize people around function". A top manager is responsible for each product. But in fact, many of the products are based on the same central system. He uses Peugeot-Citroën as an analogy:

.../two brands, different products, [and] different marketing strategy. But if you go in the east part of France and visit the factory, out on the assembly line you will see a Peugeot, a Citroën, a Peugeot, a Citroën, and if you open the hoods you will say 'oh, this is the same engine' (Lacroix)

The Airline Business Group (ABG)

Fiedler explains that the ABG consists of five divisions: (i) ADC (direct sales), (ii) Distribution (indirect sales), (iii) Low-cost carriers, (iv) Travel intelligence, and (v) IT. Frontini further explains that in the ADC subgroup, product management is divided into

functional teams. The overall responsibility of the department is to define a roadmap for the e-commerce product suite. Frontini's department consists of product managers who are responsible for product development and definition of product features, a team responsible for the airline advisory board, a team responsible for future platform development and a team responsible for training and documentation for product roll-outs. On the account management side of the organization, the organization is slightly different. McAneny, Head of Account Management, says that his department is structured around two teams. One team of three people takes care of roughly 80% of the customers. The other team is responsible for the remaining 20% of the customers – those customers who generate the bulk of the revenues. In addition two more people are dedicated to serving the needs of the top customers.

The Airline Business Group – Airline IT

Soyris explains that the airline IT marketing department has its own product management team that covers those products not covered under reservation and GDS, as well as separate teams in marketing communications, implementation, sales and account management.

4.3.5 Research and development (R&D)

Shortly after the LBO in 2005, President and CEO of Amadeus, José Antonio Tazón, announced that Amadeus planned to invest EUR 1 billion in technology over the following three years of which 59% was earmarked for the distribution business (Amadeus, 2005). In fact, Amadeus has been ranked the first European travel company in R&D investment since 2003 (the earliest report we have been able to find), as shown in Appendix 2. Figures from fiscal year 2006 and forward are not publicly available due to the LBO. However, if using the figures from the preceding year, Amadeus still keeps its position as number one R&D investor in its industry. In 2006, investment in technology (R&D investment and CapEx) was EUR 300 million (Amadeus, 2007).

The central technology site of Amadeus, located in Erding, Germany, is a concrete sign of the large emphasis put on research and development. It is one of the largest civilian data processing centers in Europe and one of the largest worldwide dedicated to travel. "It manages more than 480+ million transactions a day and processes more than 3 million+ net bookings per day[.] In the Amadeus System, more than 75 million passenger name records (PNRs) can be active at any one time /.../ Over 8,700 end-user requests run through the

system every second during peak hours/.../ The Amadeus central system averages a 0.3 seconds response time /.../ The System boasts in average 99.98% uptime” (Amadeus 2008a).

4.4 Introduction to Finnair

4.4.1 Background

Finnair is one of the oldest airlines in the world with its business concentrated to northern Europe and Asia. It has extensive operations within leisure travel and air cargo and had a record year in 2007 by surpassing nine million passengers (Finnair, 2008). In 2000, Finnair outsourced almost all IT functions, and these are today hosted by IBM, InData and Amadeus. Today, all non-core airline services are outsourced according to Bhose, who is Director in E-commerce and CRM Development at Finnair. Bhose explains that at first IBM took care of most systems, but after a while Finnair was in a situation with several various in-house-built or IBM-built applications, based on legacy main-frame technology. Finnair then chose to go through a renewal program in which it implemented a communal technology platform. Bhose thinks that this is a general trend:

I think it's more that you're going to more or less like ASP type of models that you're only buying services of a shop having a dedicated team. So more or less you're having a community product or ready-made packaged deal, then you're doing some customization and hand out those applications and the services and you pay those from a transaction-based or some kind of fee. (Bhose)

Bhose is the manager of a team of around 35 people responsible for all internet services at Finnair. Internally, interaction often takes place face-to-face, since all IT and development functions are placed on the same floor, but externally Finnair also uses different tools for interaction, for example a document share application.

In the past three sections we have presented some background data on Amadeus and a brief description of Finnair. These sections will likely be important when trying to understand the Atmosphere and Environment elements in the model.

Next, we will describe ADC (the focal division of our study) and its current strategy. This section will give a detailed description of the division, thereby enabling the reader to understand the granularities and drivers of the relationship between Amadeus and Finnair.

4.5 Amadeus Airline Direct Channel (ADC)

4.5.1 Background

Location

Over 400 people in the development, sales and e-commerce platforms divisions are located in two separate buildings in Sophia-Antipolis, with about ten minutes walking distance between them. In addition, about 40 developers work in Germany, and in the U.S. according to Lacroix. Lacroix says he needs “to be closer to business, more than developers”, referring to the “business guys” as in “the product management team, the sales team and so on”. Yet, all developers are in one building and product management is in a different one. Around half of the people in Sophia-Antipolis are, as Lacroix puts it, “non-development” and half are in development. The head of the Sophia Antipolis site is Jean Paul Armand, who is also head of development. However, his role is mainly a legal matter; he is not head of operations.

When he speaks to the commercial people in Nice /.../ he has no authority over them. (Lacroix)

Instead, employees in commercial functions such as sales and product management report to their top manager in Madrid. According to Lacroix, this geographical distance is irrelevant since managers from Madrid come to Sophia-Antipolis every week and vice versa.

Customers and solutions

Amadeus ADCs’ offer consists of a so called core platform, which is delivered to all airline customers with some smaller customization.

If there is something that needs to be customized beyond the customization capabilities of the platform you’re into trouble because you need to go through a change request. That change request needs to be suitable to the whole community, that is 75 airlines using the same platform, so it needs to go through some kind of process, roadmap, scoping and then it is delivered to all customers and this whole exercise can take around a year’s time, so it’s not something that is trivial so it’s a substantial process. On the one side the community platform allows us to deliver an operation ready solution really quick/.../ It is a technological choice we took early on in order to leverage our investments across a large number of airlines. The downside of that is that we are in a situation where we are not as flexible as someone that would start with from the begging. (Fiedler)

The main problem in IT according to Soyris is the large amount of investment needed to integrate disparate solutions for each customer. This is also illustrated by the situation of Finnair prior to implementing a communal technology platform. Therefore, Amadeus ADC has made the strategic choice to offer a more or less off-the-shelf product, a pre-integrated solution that enables Amadeus to build upon previous successful sales.

.../when we go to the customer we can sell a much broader range of solutions avoiding for the customers to pay all of these integration efforts .../ and on top of that we can provide them with more entwined services on board this solution so that they have not to bother with making partners dealing together. (Soyris)

However, certain airlines want customization beyond the capabilities included in the standard offer. For this reason, Fiedler explains, Amadeus has started a web design services team, which allows for quicker, yet more expensive, adaptations. Today, 15% to 20% of the airline customers have chosen to use these services. The problem for customers choosing this option, as we understand from Fiedler, is that once they start using a tailored solution they are out of the community and all product enhancements then need to be carried out by the web design services team, and is billed to the customer on a “man day” basis for each enhancement project.

4.5.2 Internal workflow

The product managers in the ADC team are viewed as “internal customers” by the development division, says Lacroix. Lacroix’s division deals with a front-end application, and therefore gets requirements from all different product management teams, such as airline, rental cars, hotels etc. Requests are channeled through product management in each product area to the development division. Each request is assigned a number and can be traced in a system. Every week, or every other week, there is a meeting between product management and development to review all requests. In the end, the prioritization of these requirements is made on a top management level as part of the budgeting process. (Lacroix)

Each of the project managers is fighting to get its money within margins for the next year. At the end of the day, probably next week, there will be ok that is what you get. (Lacroix)

4.5.3 Development process

The top airline customers of Amadeus ADC are part of a group called the Airline Advisory Board (AAB). One person at Amadeus ADC, the Strategic Airlines Product Coordinator, is dedicated to assuring that these customers’ requirements are met.

.../when we come to the AAB meeting we make presentations of the changes we think we should implement for our customers and we go through that with them and then they vote for this. Sometimes they bring in their specific requirements but generally it is always based on a discussion where we come up with some proposed items and features, enhancements, developments whatever, and they vote on those. .../ Our commitment is to implement the top three votes into the product per month. (Courpon)

Courpon explains that new development can be implemented either as private development (airline specific) or community development (implemented for the standard solution). The Strategic Airlines Product Coordinator interacts with the project managers...

/.../ to make sure to follow up these kind of developments, see if they can make sense for the community and if they do we try to implement them for the community. And in that case the airline does not pay for it but we pay for it within development. (Courpon)

Courpon explains that if an airline wants a certain feature that the other airlines do not want, then it is dealt with as a project run by a project manager and paid for by the individual airline. If it is something that could benefit others as well, it is proposed to the AAB. Then the members vote and if it is one of the top three votes it will be developed as a community functionality run by a product manager who prepares an Initial Product Concept (IPC) document, which is then reviewed by the members. Iliadis confirms that there are extensive processes that were created to aid the development of new solutions. The implementation of new concepts requires substantial involvement from the customer side. Therefore, Amadeus uses this step of the development process to getting the customers committed to using the products and to have the resources necessary ready at product launch. One example of this, given by Courpon, is that Amadeus tries to have two AAB members drive the process for each new feature that is developed for the community product.

A driver is basically the one who is going to implement this feature before all the other ones. And it gives them a little more influence on the specifications and the feature itself. /.../ they pay the same but they get the feature before all the others. /.../ They commit to reviewing the documents to make sure that every source is available at the same time as us so that we would work closely and coordinate closely before the launch date. (Courpon)

Frontini also spontaneously mentions the use of drivers as an important ingredient in the development process, and further explains the benefits:

*On their side there is a fair amount of work but what they get is that they are going to be the first ones to deploy /.../ But in addition with [*sic.*] that, it allows us to strengthen the partnership, it is not just an Amadeus product, it is your product. Because you have been working with us to come to that product. (Frontini)*

In fact, without being hinted by the concept of drivers, Bhose at Finnair mentions pilot projects as the area in which cooperation is the strongest and something that he has not experienced with any other.

I think [it is] really a good way for Amadeus to get its concrete business input for the new products and for us... we get, we get some new functionality, some new applications before other airlines. So I think that it's a win-win situation. (Bhose)

After the IPC has been reviewed, a more detailed Statement of Requirements (SOR) including feedback on the IPC is prepared. Finally, detailed functional specifications are written by the development team before it is developed, tested, and launched. (Courpon)

4.5.4 Development process problems

Since responsibility is tied to the type of development, problems sometimes occur regarding who is responsible at Amadeus, and who will pay for the development.

/.../they [the product managers] open CRs [change requests] for the community product so anything, any new features that we are going to add to the community product /.../ And then /.../ we have private development and those are not included in the community product. And those are managed by the project managers because they are airline specific. /.../ There are difficulties in that because where does a CR start? You know, sometimes it starts as a private development and project management CR and shifts to product management and then we don't know who is responsible. And I see that every day, I work very closely with the Qantas project manager and we sometimes overlap /.../ Is it community or is it paid by Qantas? (Courpon)

The challenges mainly occur in private development projects, i.e. when one airline wants a certain feature only for them. Each request needs to be evaluated to see whether it should be developed privately or communally. An example, Qantas, is given to illustrate how it works:

This is really specific for Qantas so it is not going to benefit the other airlines within the community so it stays within private development. /.../the project manager opens a CR /.../and this is sent to development. /.../then I evaluate if this CR is really specific to Qantas or maybe other airlines can benefit from it /.../making sure that we don't have a whole bunch of private development everywhere that could actually be good for the community. (Courpon)

At the same time, too many or too large private developments imply that the product becomes different among customers – it is not communal anymore.

I mean some private developments are not so far away from the community /.../what shocks me is that we do some major developments for an airline and, right, that is where there is a risk that when we move to another release and this massive development has to be fitted into this new release. That can be challenging. (Courpon)

There are also challenges in the development of communal products. The involvement of the customer in writing the IPC allows for Amadeus to be very customer focused, but Iliadis thinks it also creates problems when the airlines are unsure of what they want. She thinks that Amadeus would benefit from offering more potential solutions to their clients and come with

suggestions. However, this is hard because the employees at Amadeus have little end-user knowledge and do not perform any consumer behavioral research.

4.5.5 The business model of Amadeus ADC

The standard business model for Amadeus ADC is to get paid by transaction.

Ultimately what we try to do is to make our customers' websites successful to help our customers sell more online. That is our key factor. (Courpon)

The way that Amadeus ADC prospers from implementing new functionality can differ, but is mostly focused on increasing transaction volume.

Sometimes it is totally new business models /.../ Sometimes it is just enhancements and it goes /.../ into the maintenance fee that we charge so we don't charge for each feature. /.../ Generally the way we benefit from our development is that ultimately it is going to generate more volume from the airline, online volume, and that is where we benefit. (Courpon)

According to Iliadis the main pricing unit used at Amadeus is the Passenger Name Record (PNR), which holds information of flight path and other vital passenger information. Mesure further explains the business model used in the IT Services segment:

Rather than selling licenses of software to different companies for them to run that software in-house, /.../we are selling IT services. What does that mean? It means that we operate that software internally, we get customers connected to our platforms and we sell our services like a utility and we get the customers to pay per use. So airlines for the passenger platform, the pricing unit is per passenger boarded/.../The beauty with the ASP model is that it gives you a long term visibility for your revenue, you sign long term contracts with customers, typically 10 years, so quite predictable[for Amadeus]. The other nice thing about it is that it is a scale one. The more customers you have the more revenue, almost linear with the volumes, but the costs are not. (Mesure)

However, there are problems in explaining the pricing model for the customers:

Our pricing is very complicated because it apparently takes into account many options and it becomes so complicated so that not even the customer understands it. We don't understand it and the customer doesn't understand it either. (Iliadis)

While all carriers use the same system and services, Iliadis claims that the complexity of the pricing is further increased by the price discrimination that Amadeus apply on its relationships. Both McAneny and Frontini confirm Iliadis's statements and add that customers really dislike that they cannot forecast the cost due to the variable part of the pricing model.

Weissert believes that the reason why price becomes an issue is that the employees of Amadeus have a hard time explaining the value and the complexity of the products. While

using a direct channel might seem as a simpler solution than using intermediaries such as travel agencies, Weissert explains that it in fact is much more complex and requires more transactions. Weissert thinks that rather than lowering the prices of ADC products, they should be increased to better match the true value of the products.

Frontini believes that the business model of Amadeus is going to change so that online and offline channels are working closer together. She motivates this statement by explaining that people in the company are aware of the desire among airlines to decrease their costs by cutting down on offline sales activities like call-centers. According to Frontini's vision, the offline activities will become more and more limited and aimed only at frequent flyers.

The IT Services segment measures its market share in number of passengers boarded per year. Mesure estimates that the market is about 2.2 billion passengers boarded per year, of which 1.8 billion are in the so-called full service carrier segment (i.e. not low-cost carriers). Amadeus Altéa is a product suite consisting of reservation and ticketing, inventory management, and departure control. Currently, the airlines committed to implementing this platform corresponds to about 500 million passengers boarded, according to Mesure. He says it is expected that all these will be implemented within four years.

4.6 Amadeus's Strategy

4.6.1 Thoughts on business partnership

The 2005 re-branding campaign can be viewed as a strategic response to a changing environment, but internal interpretations of the reasons behind it differ.

The repositioning was really on the marketing side. Oh, they will kill me if I say that. It was really a re-branding exercise but in terms of what we were doing, it was not as if we woke up one morning and said 'wow, now we are your technology partner'. It was a gradual shift. And then we just changed the name and the brand to better reflect what we had become. /.../ It was important to get the message across that 'ok guys it has happened and it's a good thing that is what we want'. (Lacroix)

After the repositioning, Amadeus's new tagline is "your technology partner" (Amadeus, 2008a). The employees were asked what this means to them:

I think what has changed a lot is the way in which Amadeus approaches the business. We really moved from being a GDS, a global distribution solution, to being more of a technology provider. (Fiedler)

Now, partner is probably to reflect and also anchorage the relationship that Amadeus has to its partners, which is a little bit more easy-going than you might think it should be /.../ Like anyone doing IT we have problems in our projects./.../ We tend to work those problems out, in a true partnership way. We try to find a good way out, that's [what] the partnership means. (Lacroix)

One of the values with Amadeus should I say frankly is that we try very much to establish partnerships with our customers and this is why the short term profitability really did not, is not, the key driver. We are looking for a sustained relationship with our customers. So we try to work together and try to understand them, and they try to understand what our platform is capable of, and we work together in the long term. (DerArslanien)

Iliadis interprets “partner” as a company that they feel confident with and with which Amadeus can share a future. She mentions Qantas as a good example of a partner and describes its representatives as being positive, helpful and liking Amadeus’s solution. Bhose at Finnair has a similar understanding, saying that the difference between a partner and a regular buyer-seller relationship is that:

our partners is something that we are not planning to let’s say... replace in the future. /.../ And also the partner is something that we share our let’s say business plan [with]. (Bhose)

Frontini’s definition of partner resembles Iliadis’s but she elaborates more on the importance of mutual understanding and adaptations and also mentions the AAB.

/.../once a year or twice a year, we get them around the table and they have a session we call a pens-down session, where nobody can take notes and where they are going to tell us what their business direction is for the following year and the impact. (Frontini)

Bhose says that Finnair views Amadeus as a service partner rather than a technology partner. Courpon questions the true meaning of the repositioning:

I think that we still need to be a GDS although we don’t want to be called a GDS anymore. /.../we are not an IT partner yet, we are trying to get there. We call it technology partner instead but I don’t believe that we are an IT partner yet. /.../the services that we provide /.../are still too closely linked to our central system. /.../ Maybe we are an IT partner in the way we work /.../but in terms of technology we are still too close to the central system and our core business which is to distribute airline information to the travel agencies. (Courpon)

4.6.2 Amadeus’s strategy today

Fiedler says the corporate strategy is “becoming the leading travel provider” and that the company is moving into many different areas.

In line with Courpon’s thoughts, the traditional business model is still partly present in the heads of the senior strategic decision makers as well as the customers:

We want to defend as much and for as long as possible our current position in the distribution in the indirect distribution in the GDS business, resisting as much as we can to the go down trend of price decreases in the GDS business, while increasing our market share as much as possible. (Soyris)

I think it’s still going to be for a long time in the GDS and the distribution business. (Bhose)

At the same time, the environmental challenges have called for a strategy renewal.

/.../[Amadeus is] trying to diversify as much as possible on other IT initiatives so that we can compensate and even grow the total Amadeus business and even grow in the case that the GDS business will get into bigger trouble than we can expect. (Soyris)

It is to continue to try to reduce the portion of our revenue that comes from distribution, because it is too dangerous to be reliant on the revenues that come from one line of business. (Lacroix)

The position that we want to bring Amadeus towards is a positioning where we are an IT provider, an IT company that serves at least for now a specific segment, which is the travel industry, but in a very broad sense. So beyond the GDS we have got into airline IT starting with ALTEA – the passenger platform for full service carriers. We have extended our portfolio with a platform for low-cost carriers, which we call Pioneer. And our ambition is to extend that portfolio of solutions of airlines to, you know, other solutions that an airline requires, such as revenue management or revenue accounting, potentially flight operation system or crew management systems and so forth. (Mesure)

Others have no answer to what the corporate strategy is.

No idea. (Courpon)

On a business level, Amadeus's strategy is interpreted as...

/.../Up-sell existing features to existing customers, up-sell new features to existing customers and up-sell new and existing features to prospects. (Courpon)

When it comes to the repositioning of Amadeus away from being simply a GDS, it is a dual question of whether Amadeus and its customers are ready:

/.../ we know that there are certain features that could work on websites. But I don't know if we are really ready to do that, in terms of strategy, but also again of what our customers expect from us. /.../ the feedback that we got from our AAB members is that they expect us to do what we have always been doing and to keep doing it well. (Courpon)

So how does Amadeus differ from its competitors?

We are a little bit less aggressive than I think your typical IT company. You do a big project with IBM and something goes really bad. It gets really, really tense very quickly. Amadeus can be a little more flexible I think when there is a problem. (Lacroix)

4.6.3 Looking forward

When asked if Lacroix thinks that people will go to travel agencies in ten years, he says:

They will go to different kinds of travel agencies. Not the once that are on the street, they will go on the internet. /.../ If in Stockholm you used to go to an agency and now you are going online, guess what? We are behind in both cases so for us it does not make any difference. (Lacroix)

Others confirm that online travel booking, which was previously viewed as a threat to the business model, has in fact not changed Amadeus's position as the market leader.

SAS in terms of online penetration has peaked many years ago. /.../ Some airlines 5% of their sales are online, others have 60, some have 100%, the radicals, EasyJet and so on, but for the core Amadeus customer base like SAS and Lufthansa they tend to saturate that channel at 40% to 60% and we serve them when they do that. And the rest goes through the GDS business. (Lacroix)

Although there have been changes in the way people make travel reservations, there are still opportunities in the travel agency segment.

/.../by getting closer to the airline, most of the time, it happens that even if the total pie is reduced, we can get a bigger share of the total pie. I mean that by working closely to an airline we know that we can offer to the travel agency world our core business, much better work, much better service than we are used to do when we don't work closely with this airline. And therefore the benefit of the connection with the airline helps us in getting more travel agency business. (Soyris)

However, the GDS market is mature and diversification is used as a strategic tool.

We have gone through five very difficult years /.../ from 2000 to 2005 [and] now we are in a booming face. But we know that after the booming face there will be a decline, so therefore we need to manage and to be strong enough in order to prepare [for] the next declining face./.../ I mean that we need to have enough time in order to grow enough in those areas so that we can balance the risk of the two. We are today too much exposed to the GDS business. (Soyris)

But the diversification efforts of Amadeus also generate concerns amongst its customers.

We have been afraid that when Amadeus is entering the new areas... airline IT business and having really made big new customers /.../ more airlines are worried about how much they can still have influence for IT development and can they have resources, can they have projects? Those are main concerns. /.../ I'm worried about their resources. (Bhose)

Mesure claims that Amadeus needs to be vigilant in terms of future competition. Firms in other industries can become competitors by entering into the travel industry via a customer. For example, in the run for a contract with American Airlines, Amadeus is bidding against EDF – an IT company, which is not a travel company.

Currently we are bidding for a request for proposal of a second U.S. carrier which is called American Airlines, the winner of this RFP [Request for Proposal] if it is not us will become a competitor. Will become a significant competitor. (Mesure)

The description of ADC and its strategy above will give the reader a grasp of potential drivers of interaction at Amadeus. It is thus primarily linked to the Interacting Parties and Interaction Processes elements of the Interaction Model.

Below, we will present three sections related to how people within Amadeus interact with others, both internally and externally. These three sections should be helpful in creating an understanding of the efficiency and effectiveness in which Amadeus's employees handles their relationships. This understanding should be useful in the analysis of the Atmosphere and Interaction Processes elements.

4.7 *Innovation*

While innovation is seen as an important lever for future growth, there is an internal debate on the subject. Some feel that Amadeus is starting to lag behind.

I think that there is a lack of resource, either budget, or time or human resources. I'm not sure which, but I am sure that if we spend less time enhancing current features or fixing maybe current features we will have more possibilities in terms of innovation. It is actually what our AAB members told us on the last meeting because we were talking about what we could do in terms of innovation in the incoming year. But these things we are implementing next year and our airlines are happy to implement. I mean they voted for these features, it is still catching up. It is not the real new, innovating ideas, like Amadeus is going to launch the premier like Flexprice. Flexprice was really an innovation from the base. And actually our director Philippe is always pushing us, and always questioning us, like 'why can't we come up with the new flex price? What's the new flex price?'/.../I am not sure that there is a bottleneck in one department. /.../ I think we just have too much catching up to do. (Courpon)

There are a number of innovative potential competitors, such as ITA and Datalex. Although substantially smaller than Amadeus as a whole, they can be a potential threat in the e-commerce segment.

In terms of a business unit /.../ they are very, very strong particularly in North America where we are trying to penetrate the market. /.../ These companies offer tailored solutions and /.../ nothing out of the box like we have. (Fiedler)

However, the comparison with smaller firms is perhaps not fair.

We are not a garage shop. A garage shop with one guy can sometimes go faster in some specific area but, again, there are good parts and drawbacks to being in this situation. When you speak about the core platform, you are speaking about a huge platform very complex. /.../ you are speaking about the platform, in which we have invested thousands of man years to develop it. And of course in such an environment, the speed is not exactly the same. (Mesure)

Frontini argues that there is a lack of follow-up on how the features and products are used among the customers. Amadeus has, however, realized that this is a problem and is now in the process of trying to resolve the situation. According to Frontini the first step in this process has been to ensure that features are being used and then to assess if the transaction volume meets reasonable targets. However, the primary results from this new initiative have not been promising.

/.../ unfortunately we realized that the adoption rate is quite low, meaning that we deliver features and it takes ages before the customer adopts it. (Frontini)

Frontini thinks this is related to the budget cuts and the choices made in the development phase. Taking away certain features narrows the scope of the product and makes it less attractive to adopt from the customers' point of view. In addition Frontini mentions a lack of

push activities from account management and different maturity between the customers. Some customers, often the most dominating and advanced ones, might be ready to develop and adopt new products. Others are several years behind.

4.8 The Customers' Perception of Amadeus

Fiedler says it has been validated by studies that the customers of Amadeus appreciate the support and reactivity to requests.

/.../they perceive us as a clear leader and technology provider of very first choice. (Fiedler)

In comparison to its relationship with IBM, Finnair finds that Amadeus has a better understanding of the industry.

I think [the relationship] is more business-oriented, because Amadeus knows really well the airline business so I think it's more to do with let's say business problem-solving than the IT problem-solving and also we have a long history with Amadeus so we are really familiar with the individual people in their organization. (Bhose)

However, there is a concern that the customers are not satisfied with the level of innovation.

Where I think there is a gap in the perception /.../is on the evolution front where we could be even more innovative than we are. /.../we are seen as a relatively slow-moving company as far as putting up new things in the marketplace is concerned. (Fiedler)

Leader in terms of innovation you mean? No. /.../ I don't think that it is a problem yet /.../but it could be a problem one day. (Courpon)

Bhose at Finnair gives an example of an area of conflict.

In some cases Amadeus's projects is something really difficult to then influence, and having products that they are not seeing as their main market or so. (Bhose)

In addition, Fiedler is worried over the short-term reactivity – that requests are not handled as quickly as the clients want. He thinks this is 20% a communication problem (i.e. changing their perception with marketing communication) and 80% reality.

McAneny claims that Amadeus is the quality leader, whereas one of its closest competitor, Datalex, is going for the cost leadership position of the market.

They [Datalex] have quite a strong product but low cost, so not the really cheap and nasty thing, only the plastic. /.../ We are very high quality very high price, so we are the quality leaders and they are the cost leaders. (McAneny)

Preve agrees with McAneny and mentions that certain customers such as Lufthansa have migrated from their own developments to Amadeus because of its reputation of having high quality solutions. Weissert also mentions Lufthansa as a firm with problems and claims that it should be used as an argument when talking to customers in order to explain the value of Amadeus's products and convince them to share it by agreeing to higher prices.

4.9 Interaction Processes

4.9.1 Internal interaction processes

An internal IT system is used for opening and monitoring requests. These are reviewed by product management and development every one or two weeks, says Lacroix. On management level, the VP of development, sales and e-commerce platforms meets with his equivalent from the central system team. On a daily basis, there is interaction across business lines, "tracking the dependencies that we have as part of a project" (Lacroix). On certain occasions, off-site meetings are arranged across business lines with the aim of for example brainstorming on new challenges.

Courpon explains that she, as Strategic Airlines Product Coordinator, interacts with the central product management and with development teams as well as with the product management team, account management team and consulting team in ADC. She also coordinates the airlines' roadmap with the project managers. In addition, new features and roadmaps are coordinated with the development team.

Der Arslanien describes how alignment is accomplished within Amadeus ADC. It has a steer committee that consists of cross functional teams who discuss the usefulness of a certain function or application. These ideas are also discussed with a number of clients in order to get their input. By working together, Amadeus tries both to align customer expectations with their business and to spread information internally so that everyone at Amadeus has an understanding of where the company is going.

Frontini seems to be unhappy with the interaction patterns within Amadeus. When asked what departments the product management team interacts with she answers "too many".

4.9.2 External interaction processes

The Strategic Airlines Product Coordinator interacts with either the e-commerce VP or direct distribution VP of at least one of the airlines every day. Bhose at Finnair explains that he

interacts with Amadeus on an ongoing basis with weekly project status conferences, via document sharing tools, in certain status phone calls once a month, status reports from all areas, phone calls with their flight manager or account manager at Amadeus and in bilateral meetings a couple of times a year where road maps and future developments are discussed.

Iliadis says that marketing communication is one of the challenges in the interaction with the customers. According to her, the marketing department has shown little interest in learning about the products, which leads to confusion and errors in the marketing communication.

Soyris also sees challenges with explaining the value:

We are not selling a product which is material, which someone can see, like a car or like a plane, something that can be felt. It is more perception of a solution with some functionality, some processes and a perception of our service. This is not obvious to sell. (Soyris)

Trying to make them [the customers] understand the benefits that our product can bring so that they are willing to buy. Our solution used to be somewhat more expensive than what the competition provided and therefore we need to sell to the customer, to the airline, the value that they get by working with Amadeus compared to [*sic.*] what they would get with their current solution or when dealing with another provider.” (Soyris)

Iliadis seems unsure when it comes to explaining how new products are justified in terms of benefits. When asked to explain how customer value is evaluated, Iliadis says that she does not know of any real tests assessing the monetary value of the benefits. She goes on by saying that it is very hard to evaluate which features add value in every release and that it might not be worth the effort considering the amount of resources that is needed to make the assessment. Frontini, however, claims there have been efforts made to quantify the value by having the marketing department surveyed a sample of customers to clarify potential time savings. Frontini also believes a clear understanding of the value of the product is critical, especially for Amadeus since it is generally more expensive than its competitors.

Soyris explains that close interaction is necessary in order to establish a mutual understanding between Amadeus and its customers. According to Soyris the airlines often have very different and ingrained ways of working, which can create a lot of tension when they are migrating to Amadeus’s solutions. In order to make the integration successful, Soyris believes that it is crucial to identify the key stakeholders and demonstrate the value of the new solution so that the customers feel that the “painful transition” is worthwhile.

/.../we try to, with the help of the airline management, to find out the key stakeholders, find out what are the specialists in each stakeholder division which we are going to work with, and try to familiarize them with our solution (Soyris)

The sales process of getting a new airline customer is both a long and costly. As an example, Soyris tells about how American Airlines requested Amadeus to give a proposal four years ago. Amadeus is now in a final stage of the sales process, competing with only one other firm.

We have probably spent €2 million on this one. This one is the biggest that we can expect on this kind of market. /.../ British Airways probably has cost us half of that. (Soyris)

Soyris explains that once the choice stands between Amadeus and a competitor, the process starts to become more interactive with the customer. A team from Amadeus is put together to meet with the customer to discuss their vision and what they want to achieve. In this phase Amadeus takes on more of a consulting role, with the aim of explaining how the relationship will develop and how the airline can work in order to make the system migration as smooth as possible. Moreover, this phase includes drafting a contract proposal for the relationship reaching ten to fifteen years into the future. In the case of American Airlines this phase alone has taken over a year.

When you have long term contracts nothing prevents a customer to come back renegotiation before the end of the contract so you never know how it is going to be and you just have to be prepared for that. /.../ The best thing about long term contract is that they create long term relationships, and long term relationships create opportunities to up-sell of course. (Mesure)

Although customer interaction can be cumbersome, relationships are also viewed as a resource. Soyris says that it is very seldom that customers are unsatisfied with the Amadeus's solutions. Soyris also believes extensive interaction builds a good foundation on which the relationship can grow and prosper. Furthermore, well functioning relationships can increase the success rate with new customers.

If we take the British Airways case: during 15 years of Amadeus in the UK we have grown our market share to 5% while working to try to penetrate the UK market. Since we got BA [British Airways] onboard 5 years ago now we have 30% market share. So out of the 50 million travels that are booked by travel agents we grew from 5% to 30%. /.../a close relationship with an airline on its local market definitely boosts the penetration on this market. (Soyris)

The extended negotiations with new customers might, as mentioned, be a challenge. In addition, governmental regulators require attention since airline traffic is viewed as strategic to a nation's economy. Mesure mentions the U.S. as a place where Amadeus currently struggles with political considerations because Amadeus does not have a data center there. According to Mesure this becomes an issue since the airline industry is still considered strategic and sensitive for the development of a country's economy.

McAneny claims that the technological readiness of the customers varies greatly and that that impacts how and with whom Amadeus can interact with. According to McAneny, another decisive factor is the organizational power of the IT department on the customer side. If the IT department is strong and controls the purchases related to Amadeus's services, then Amadeus has to get involved with the customers' IT people. However, McAneny prefers dealing with customers who he describes as forward-looking, where the airline's sales people handle the procurement of web applications. In reality, the interacting party on the customer side varies from a regular IT person to a Distribution Manager (comparable to Sales VP) depending on how advanced it is in terms of online sales.

While the past sections have described the parties' strategies and current interaction patterns be it internal or external, the following sections will describe the consequences of these patterns. Hence the sections below will primarily help in understanding the Atmosphere in the relationship but will also give insights into the processes themselves.

4.10 Cooperation

4.10.1 Internal cooperation

The product managers across business lines are supposed to collaborate, but...

/.../they do not always do this very successfully (Lacroix)

Development has the impression that they are the ones to solve this problem.

Very often, it's really up to us [the development division]. When we get, you know, two air requests coming in from two different product areas, we actually have to say 'ok, well not quite the same thing but almost, ok let's do it that way'. Because in most cases the product manager guys are not going to interact and come with a joint request. They will all fight for their own product, which is good. With a lot of empathy for their own product, they are not always able to compromise their requirements to have a more harmonized request. (Lacroix)

Lacroix explains that Amadeus has set up a new group that is working on improving internal cooperation between ADC and other sub-business groups.

4.10.2 External cooperation

In collaboration with its potential customers, Amadeus gains an understanding of what is missing in the offer and can then develop it further.

/.../when we got the British Airline deal, it was part of the deal with BA that they will help us defining the other components which were missing in our offer /.../so we have worked solely with them for a relatively long period in order to understand what were their process, their requirements, to build up the pieces that we were missing. (Soyris)

Soyris mentions that Amadeus then can leverage the new offer developed with one customer to reach out to both existing and new customers – a strategy which seems successful.

/.../as an airline we have extended our portfolio to provide new types of services, like hotels and packages and insurance, so we have been again able to get those from Amadeus. And maybe more important that Amadeus has entered to airline IT, providing services there that we have been able to replace our old inventory system and check-in system. (Bhose)

When talking about competition with Amadeus representatives, it is usually viewed from a Porter perspective.

Everything we can do to prevent the entry of a competitor, without compromising the essential, for example our intellectual property is one thing which is very essential. (Mesure)

4.11 Change

Major change (such as the recent merger of two business groups) at Amadeus takes place by consensus building on a high hierarchical level – among the top 20-25 people in the company – according to Lacroix.

There needs to be consensus before a change takes place. So it isn't so much that people would need time to change, but the company genes are such that if there is not a very well shared consensus as to what the change should be, nothing will happen. And what actually takes time is the consensus building. (Lacroix)

Iliadis confirms that change takes time. As mentioned, her opinion is that there are certain problems with the pricing, but changing it is complicated and time consuming, even though there is a function designed for dealing with the pricing mechanism.

When selling a solution, Amadeus needs to make the customer understand that change is needed, and support the customer in this change process:

/.../you need to show and bring the understanding to make them understand how they will go from the situation of today to the situation of tomorrow, without putting the airline on the ground and without any catastrophic change in the process. (Soyris)

Often, the change process involves the customer's employees, and can be costly:

/.../the impact is almost 100% the people which are going to be affected by this kind of change, like the check-in system without having to train all the staff of an airline, which is often a very, very big change process, and costly process. /.../ If it happen that we do American Airlines, I mean one hundred thousand people would have to go for training, which is a bit hard to manage with the logistics, and that is implied very often it is not only the training on the keyboard but training for complete business process changes and complete ways of doing business. Sometimes overnight. (Soyris)

4.12 Challenges

4.12.1 Too close relationship

Iliadis explains that the relationship to Qantas has deepened to a point where tension has arisen within Qantas, with employees questioning the relationship to Amadeus. Iliadis also questions herself the soundness of such a close cooperation with Qantas. She believes that it is problematic to focus too much on a single customer and expresses a fear that it might create nearsightedness within Amadeus. She continues by stressing the importance of challenging Qantas's opinion and come up with own ideas.

I have the feeling that people are so fixed in their head that Qantas, Qantas, Qantas – whatever they say is like God, and if they don't say something then it is not going to happen and it is never going to happen. It is not true. /.../ I would say that in the long run it is not justified to only look on them. Because the others really evolve and they will be our future customers and the future potential lies in those airlines. (Iliadis)

Frontini, however, argues that close relationships and a high involvement of the customers in the product development process is a good way to strengthen the partnership and create a sense of ownership of the product among the customers. But the close relationship with for example Finnair seems to incur vulnerability on the customer's side.

If Amadeus is changing let's say the commercial rules or something, then it's not easy for us to change service provider. But that's what we're trying to minimize by having long agreements with Amadeus so that we now make several years how the price is going and so on. /.../It's really let's say huge step for us to change service provider, because of the long history, because of many... it's not only the one product and it's integrated service with all the back-office functions and payments and many other... frequent flyer program and so on. It's a big effort. (Bhose)

4.12.2 Distribution of resources

Frontini feels that the needs of the customers and the internal distribution of resources are decoupled.

The challenge is to be able to deliver both the business needs within the budget we have. The budget we have is not enough to deliver what the business needs, and as such we have to do priorities and having to drop some key elements sometimes and the challenge is to be able to minimize the risk of problems /.../. (Frontini)

The product management team strives for a balance when choosing what features to develop.

/.../How much a feature will bring to us or to our customers /.../ and how much is the request of the market at that point and time. Based on these /.../ criteria we will decide the features that has [*sic.*] to stay and the features that we have to drop. (Frontini)

Frontini also states that the choice of dropping or delaying certain features sometimes leads to another unwanted consequence.

By the time we take the requirement to the time we deliver the business requirement, the customer requirement has changed; their business requirement has changed and is no longer priority for them. (Frontini)

McAneny mentions two challenges in his job, namely “helping Amadeus understand that the internet is not a threat but an opportunity” and managing the company’s success. Although the first has become less of an issue, it remains an important variable. The second challenge comes from the fact that Amadeus ADC has grown from having 35 to having over 80 customers during his career. The growth in number of customers has, however, not been offset in a proportional growth in number of employees. Therefore, balancing the effort spent on different customers while keeping a high service level is a challenge to him.

/.../we absolutely have to look after all of our customers with as much enthusiasm and respect as we do with the biggest guys and as we did with the first guys who signed up. (McAneny)

The biggest challenge in accounting and controlling is ensuring that the firm is optimizing its billable activities, according to Preve. He mentions that although Amadeus is very good at creating and delivering profitable technical solutions, it has been less successful in fully exploiting opportunities within the service sector, such as consulting services and special projects, despite the fact that margins are significantly higher there than in most other areas. Preve describes how even small projects that only requires ten man days might take up to three years to complete due to lack of resources. Much like Frontini, Preve believes this is the result of a too strict budget policy and also says that some customers are:

/.../really pissed off because they are requesting very simple things that they can’t just understand why we don’t have the resources to do that. (Preve)

His view is not shared by Der Arslanien who claims not to know of any lost business as a result of lack of funds. But yet, Amadeus’s resources are also a customer concern.

I think they need to be sure that they have enough resources and not growing and taking new customers... without let’s say risking their quality and capability. (Bhose)

5. ANALYSIS

5.1 Overview

With regard to our empirical purpose, this chapter is devoted to applying the Interaction Model to the relationship between Amadeus ADC and Finnair, with a special focus on the Environment group of variables. With regard to our theoretical purpose, this chapter also contains an analysis of the model itself in order to give an idea of how it can be further developed to better suit the service sector.

5.2 Applying the Interaction Model

5.2.1 The Interaction Process

From our pilot study, we had an idea of that Amadeus's relationships with its customers tended to be extensive rather than limited, which is why we early on decided to focus on the relationship as a whole, rather than looking at one specific episode. This approach appeared to be useful, as our empirics showed that the interaction processes in individual episodes are significantly tied together. While it could be argued that each transaction in the GDS is an episode, the nature of the product/service minimizes any social interaction between individuals of the firms in a short term perspective. One could also view each contact between the two parties as separate episodes. In this case the interaction mainly gets influenced by a number of variables. Many of our interviewees, such as Iliadis, McAneny and Weissert, mention price discussions apart from product development as being a recurring discussion subject. Difficulties with forecasting costs and understanding the value of the products have become issues that tend to irritate the customers. This in turn could affect the social exchange negatively – if customers believe there is an unfair allocation of value, they might start viewing their relationship with Amadeus as distributive rather than integrative.

We believe that this case is especially interesting when studying how the vast number of episodes (in terms of transactions) affects the long term relationship. It seems as if there are three main variables affecting the institutionalization and adaptations in this relationship. Firstly, the large number of transactions that Amadeus handles for Finnair and its other customers makes Amadeus an important determinant of the airlines' success. Consequently, the customers are vigilant of any changes in the way that Amadeus conducts its business.

Secondly, the type of information that Amadeus handles for Finnair is sensitive both from a legal and a corporate perspective. If the services start to malfunction, it will potentially have severe economic and legal consequences. Lastly, the technological complexity of the product makes it necessary for the parties to devote a great deal of time to adaptations and interaction.

The current interaction processes between Amadeus and its airline customers seem to have been developed over time, as a result of individual episodes. From the empirics, we can distinguish between two sets of interaction processes: intra-organizational processes, and inter-organizational processes. These two seem to affect each other. Information exchange has been institutionalized internally, for example with IT systems tracking customer requests. These systems have over time been opened up to the customers as well so that they can put in requests, which are then handled internally. The institutionalized way of dealing with product development can be seen as a risk-reducing process both from Amadeus's and from its customers' perspectives; Amadeus ensures that it will deliver products that are in demand while its customers get the opportunity to closely follow how a crucial part of their operations will evolve. However, in light of Frontini's statements on low adoption rates of new applications, it seems as if this concept has yet to be perfected. In fact, as indicated by Iliadis, the strong focus on the wishes of top customers might inhibit Amadeus's success as it somewhat ignores customers that may grow and become more important in the future.

All our informants agree that Amadeus's strategy is to offer a community platform, which indicates creation of intentional distance to its customers. At the same time, however, Amadeus allows for individually adapted solutions. This two-folded strategy seems to cause problems in the allocation of resources throughout Amadeus, which in turn becomes a concern for both its employees and customers. Even though top managers like Der Arslainen does not recognize this to be a problem, Preve and Frontini claim to know of occasions where Amadeus is forgoing revenue streams because of underfunding in private development.

Classifying Amadeus in the Interaction Process Matrix

Amadeus initiates more or less extensive relationships with all of its customers. Changes in direction of the relationship cannot be identified during one single episode but rather in a sequence of episodes due to the complexity of the solution that Amadeus supplies and its vital part in the customers' operations. Any new project is subject to an extensive set of interactions during which its exact composition is decided as described by for example

Courpon. This also seems to be the reason for why we do not find a clear use of the vertical dimension of the matrix. Whilst one might argue that the interaction can be seen as “simple” because of the extensive rules and regulations that control and direct it, it might as well be seen as “complex” since issues seldom are resolved within one single episode. In our opinion, Amadeus has both “extensive” and “complex” interaction processes while not getting the repercussions that Håkansson (ed., 1982) predicts in the model. This could be related to the fact that there are very few alternatives to Amadeus’s services and that a migration is difficult given the investments both parties have to make in order for the relationship to become successful. A discontinuation of the relationship is not an option, which is why any possible drive to search for new suppliers is redirected toward searching for ways of improving the current relationship, thus strengthening it and creating a lock-in effect as mentioned by Bhose.

What information is shared, and how it is exchanged, varies between customers. One of the most extensive information-exchange institutions is the “pens down” session, during which competing airlines share their business plans with each other and with Amadeus in order to develop better common distribution products. The amount of information exchanged seems to be linked to the perceived importance of the customer. We can also distinguish between when the information exchange takes place in episodes. In Amadeus’s case it seems as if most of the information exchange takes place prior to, and during, the development process, but there is a lack of communication after a new functionality or product has been fully implemented.

5.2.2 The Interacting Parties

Technology

It is seemingly clear that technology plays a vital role in Amadeus’s relationships. For example, the interviewees mention how the technology tradition in Amadeus affects other market oriented departments and how customers choose Amadeus because of its technological superiority. Drawing on the statements made by Weissert and Preve regarding Lufthansa, Amadeus seems to be able to deliver a value beyond its competitors. However, there seem to be inherent problems with the chosen business model.

As illustrated by Amadeus’s extensive discussions with American Airlines, and the political issues involved, Amadeus’s solutions support an industry that is considered to be of strategic importance to the wider economy. Consequently any changes or new releases must not malfunction the existing system, or else the result could be a failure with serious chain effects.

Imagine the effects of one day without any airplane taking off in Europe! Therefore Amadeus must plan its new developments ahead, and ask its clients to share their future business strategies well in advance. It seems as if often this ends up in guessing business needs that lie several years ahead, which might create indecisiveness amongst the clients and also affect the adoption rates as testified by Iliadis and Frontini. Moreover, there seem to be several empiric pieces of evidence indicating that the long planning horizon makes Amadeus less responsive to changes in its customers' business environments. For example Courpon mentions that most of the development is directed towards catching up rather than innovating and Fiedler says that even though Amadeus takes care of the customer requests, it is not done fast enough. This might become a problem in the future since, as for example Soyris mentions, having a large product portfolio is one of the reasons why Amadeus is successful in acquiring new business.

Technology can also be seen as an interesting component when analyzing Amadeus's new vision – to become the technology partner of its customers. Internally this is interpreted as providing a wider range of products, building long term relationships and resolving any issues that might arise as promptly as possible. Although some of the employees like Courpon and Lacroix argue that Amadeus has a long way to go, most recognize that it is a shift in direction aimed at anchoring the relationships and promote mutual understanding between the company and its customers. The move has perhaps not been fully understood by, or communicated to, the customers since Bhose sees Amadeus as a service provider still very much dominated by the GDS business. However, Der Arslanien's description of a partner as someone who fully understands its customers' business is shared by Bhose. This indicates that Amadeus has been able to build up trust in the relationship. With that said it seems as if the customers are not all happy about the change. Bhose is concerned over about Amadeus's broadened business scope could impact Finnair's influence on future technological development. It seems as if this shift in many ways could worsen Amadeus's relationship to smaller carriers such as Finnair since Amadeus's resources will become more dispersed. Overcoming this trust obstacle is imperative if Amadeus wants to keep its relationship with Finnair strong.

Organizational size, structure and strategy

As many of our interviews have shown, Amadeus is the dominating player in its industry. It is certainly the clear market leader within the airline direct channel segment to the extent that there is no real alternative for many of the airline customers. This creates an enormous power advantage over small and medium sized customers like Finnair who wants to have as little in-

house IT production and development as possible. This power advantage is also illustrated in the disappointed comments by Bhose regarding Finnair's limited ability to impact product development. In terms of power balance, there seems to be a duality since Amadeus on the one side focuses a great deal of attention on its large customers but on the other hand strives to become a partner of all its customers. This problem is also illustrated by McAneny's claim that it is a challenge to make his staff treat all customers with the same respect and attention.

Organizational experience

When studying the organizational experience of Amadeus compared with that of its competitors it soon becomes evident that the company's background leads to a substantial advantage. Founded by some of the largest European airlines, and with employees who used to work in the airline industry, Amadeus has, as Bhose mentions, a superior knowledge of the travel industry and the industry actors. This knowledge comprises not only the industry and business needs, but also knowledge of different customers' cultures and employees. This knowledge enables Amadeus to develop technical solutions that correspond to its customers' business needs, more so than for example IBM which has a long tradition of working on large scale IT projects in general, but not necessarily in the travel industry. Moreover, Amadeus can leverage on its extensive knowledge when entering into new areas, such as Airline IT. The value of organizational experience to Amadeus ADC is also manifested in the wake of Amadeus's British Airways deal as mentioned by Soyris. By signing the largest carrier in the UK and making an agreement to get its assistance in completing the offer, Amadeus has been able to increase its market share from 5% to 30% in only five years.

Amadeus's pilot projects seem to have many potential benefits for both relationship parties. By working closely with a "driver", Amadeus strengthens the mutual understanding and knowledge. As explained by Courpon and Frontini, a driver ensures that Amadeus gets the airline's perspective and increases the customer involvedness by letting them take part in the development process. In addition, by working closely with one customer, the relationship is strengthened and future cooperation is enhanced. It is also beneficial for the driving customer. According to Bhose, the driving airline gains a relatively higher influence on the product design and gets to implement it before its competitors, which can be considered a reward for the dedication of the driving customer. By being the first airline to get access to a new product, a temporary partial monopoly is created and the driver's competitiveness is

temporarily strengthened. Accordingly, a driver has strong incentives to share as much information with Amadeus as possible throughout the development process.

Classifying Amadeus in the Interacting Parties Matrix

Our findings support Håkansson view on the positive correlation between the complexity of a task and the need for mutual knowledge. This is illustrated by the extended negotiations process, during which the parties go through a learning process and gradually get to know each other as explained by Soyris and Mesure. During this process the parties both gain knowledge and remove structural boundaries for interaction, such as changing systems and training their staff. Considering that Amadeus has spent four years and an estimated two million Euros on the sales process of American Airlines, this is an extensive effort.

The relationship between Amadeus and Finnair seems to be most appropriately placed in the forth cell of the Interacting Parties Matrix. The two parties have removed most structural and knowledge obstacles that inhibit interaction. However, the relationship does not seem to be static, as Amadeus's recent strategic moves clearly affect the relationship. By expanding its customer portfolio and broadening the scope of its business activities without any significant increase in resources, Amadeus will have less ability to focus on its smaller customers. If the fears of Finnair are realized, there is a risk of social tension, which could create structural barriers. In the matrix, this would be illustrated by a movement toward the third cell. In certain aspects, just the fear of losing influence over the development process might deteriorate the customer's faith in the relationship. Consequently, Amadeus would have to dedicate more resources to reestablish the close relationship. The somewhat dynamic position of Amadeus's relationships might be related to the position in the industry lifecycle. In Håkansson's study, the firms were mostly in mature industries with modest advances in products and production technology. Amadeus, however, acts in an industry that has recently gone through rapid changes including deregulation and increased penetration of the internet.

5.2.3 The Environment

As Cunningham (1982, in Håkansson, ed., 1982) points out, Amadeus seems to interact more frequently with customers that are perceived as important – the AAB being one example. However, it seems as if interaction patterns are often determined on an individual level, i.e. Amadeus's employees will seek contact with individuals they feel comfortable with and whom they perceive as being easy to cooperate with. This could be viewed as a way of individuals trying to overcome recourse limitations. Let us say an Amadeus employee needs

the opinion of the customer. He or she is then likely to seek interaction with a customer contact that he or she knows will cooperate, e.g. Finnair, rather than those customers whose opinions might be more important to Amadeus – the larger ones, which due to their own resource limitations might not have time to answer to the enquiries.

In terms of interaction barriers, we see that there are not only inter-organizational barriers but also intra-organizational barriers. One example is the physical barrier (different buildings) between the development team and the product management team. Another one is the social barrier – sales representatives not being able to communicate the benefits of technological products and services. There is a possibility that intra-organizational barriers to interaction like these ones could negatively affect the relationship, for example if customer requirements are not fed through from client facing teams to non-client facing teams.

Market structure barriers are significant due to the high costs when switching suppliers. From Amadeus's perspective, these structure barriers have a positive impact on its relationships in Europe, where it has a leading position. On the American market, however, it is clear that these barriers lead to high costs when approaching American Airlines. Another difference between Amadeus's relationships with Finnair and American Airlines is the risk barrier in buying from a foreign supplier. Whereas this does not seem to be of concern for Finnair, American Airlines clearly views it as a big risk having the IT processing center in Europe.

There seems to be evidence of Amadeus not being able to effectively manage the current number of high involvement relationships. With plans on expanding into the U.S., customers like Finnair fear that Amadeus will not have enough resources to meet its requirements. Also, prioritization of customers sometimes seems to be carried out on an ad hoc basis – i.e. there is no clear direction on which relationships should be prioritized. Amadeus strives to become the partner of its customers, but the question is whether they are capable of keeping the promise of having such close relationships with all customers.

According to the Interaction Model, interaction barriers can occur if the buyer makes excessive demands on the supplier's expertise so that the supplier withdraws from interaction. However, our findings show that also the opposite can be true. In many cases it is the airlines' technology that is not up to date, and the interviewees complain that the customers do not always understand the value of their offers.

When looking at the classification of the environment, our view is that there is no single objective classification of the relationship. Instead, it seems as if the interacting parties act in different environments, which can overlap each other to a greater or lesser extent. On one hand, the travel and tourism industry has gone through several changes over the past ten years especially with regard to distribution channels, which is a sign of market dynamism. On the other hand, changes appear slowly due to long development processes. When it comes to market homogeneity, it seems as if the airlines are fairly homogeneous, which is proven by the fact that Amadeus manages to standardize a great deal of its products. Although our empirics are limited on supplier alternatives, they seem to be somewhat more heterogeneous – for example when comparing Amadeus, which has a clear travel industry focus, with IBM, which is broader and based on billing per hour, or with a “garage IT developer” with innovative ideas but limited resources and penetration. Consequently, from Amadeus’s perspective the environment is dynamic and homogeneous, whereas from Finnair’s perspective it is dynamic and heterogeneous.

5.2.4 The Atmosphere

Power-Dependence

At a first glance, Amadeus and Finnair are companies of roughly the same size measured as number of employees or revenues. There are, however, also signs pointing in the opposite direction. While Finnair managed to reach a new record level of nine million passengers during 2007, Amadeus dwarfs its customer by handling up to three million bookings a day. Thus it seems as if Finnair’s dependence on Amadeus is larger, due to Amadeus’s dominant position in Europe. Much of our research does, however, indicate Finnair is able to partially mitigate this dependence by being an innovative and cooperative partner to work with. Amadeus representatives, such as McAneny, claim to prefer to work with forward looking airlines, which seems to be a suitable description of Finnair. In this sense, there are also economic incentives for having a close relationship with Finnair – working with an innovative partner decreases Amadeus’s risk of missing out on new potential profitable solutions and ensures Amadeus can remain competitive by offering the right set of products.

There are also reasons to believe that Amadeus has a power advantage in terms of the market structure barriers in Europe (described in the Environment section), in which it holds a dominant position. Finnair enjoys certain advantages from having a close relationship with Amadeus, compared with what it might get from solutions developed in-house. For example,

using Amadeus's standardized solutions makes it easier for Finnair to interact with its end-customers.

From Amadeus's perspective, other customers such as British Airways and American Airlines seem to be more important because of their size. The power of these customers is illustrated in the amount of resources that Amadeus has dedicated to bringing them onboard as customers and by the sizable growth that Amadeus has been able to achieve since becoming a supplier to British Airways.

Conflict and Cooperation

There appears to be a clash between the old and new businesses in Amadeus, which impacts the relationship with Finnair and presumably other customers. On the one hand both Amadeus and Finnair are in agreement that they both benefit from having a close cooperation. Bhose says the advantage of working with Amadeus is its industry knowledge and its ability to supply a wide array of services. On the other hand there is a resistance towards Amadeus's expansion plans since more customers and new business areas are interpreted as a threat against the present relationship. Finnair fears Amadeus will devote fewer resources to its relationship. This fear can become troublesome for Amadeus since, as Frontini, Der Arslanien and other employees at Amadeus indicate, the partnership approach and the driver projects are very important for the competitiveness of the company. By not anchoring its new strategic moves internally and reassuring its current customers, Amadeus runs the risk of experiencing a more hostile environment. This in turn is problematic, since Amadeus depends on its partners' willingness to mobilize considerable resources in order to develop new products.

Overall distance and closeness

There is clear evidence that Amadeus has a close relationship with most of its customers. This appears to be the effect of large economic benefits related to cooperation and good personal relations. It is also evident that Amadeus has a need for customer input when developing its products. This need stems from the complexity of its products but also from the fact that Amadeus has little end-user knowledge. The lack of consumer research means that input from the airlines becomes a necessity in order to develop useful solutions.

While the close relationships give the benefits of risk sharing and supposedly ensures that customers get what they want, it also creates problems for Amadeus. Firstly, Amadeus becomes reliant on its customers to give them information about what their business needs are

and what the end customers are asking for. The problem with this is that the airlines themselves do not always know what they want. Bhose, for example, indicates he would prefer to get constructive suggestions from Amadeus on how Finnair can evolve. In line with this, Iliadis argues that the airlines often seem indecisive when asked for input. This is perhaps one reason why Amadeus has low adoption rates in general on its new products. Secondly, reliance also becomes a potential obstacle for future growth. By relying on its customers' resources, Amadeus becomes restricted in its decision making. Thus, having a too close relationship with their customers implies the risk of getting stuck in the current strategic position.

6. CONCLUSIONS

6.1 Overview

This chapter summarizes the main findings of our work. In the first section, Empirical Conclusions, we present our findings on the relationship (the empiric purpose), structured along the variable groups of the Interaction Model. In the second section, Theoretical Conclusions, we present our findings on the Interaction Model itself (the theoretical purpose) in three parts: (i) various aspects of the model that we found needed special attention, or alterations, when analyzing the case; (ii) the importance of individuals, and (iii) the current lack of dynamics in the model, and how this could be improved.

6.2 Empirical Conclusions

The nature of our empirical purpose implies that the description of the relationship in the Analysis chapter in itself partly fulfils the purpose. Nonetheless, we like to recapitulate some of our main conclusions on the relationship.

The Interacting Processes

The interaction processes are extensive rather than limited, and any change in the extensiveness cannot be identified during one single episode but rather in a sequence of episodes due to the complexity of the solution. The interaction processes have been developed over time, and can be split into two sets of interaction processes that affect each other: intra-organizational and inter-organizational interaction processes.

In terms of the classification matrix, the interaction processes between Amadeus and Finnair is most suited for the fourth cell – extensive and complex. According to Håkansson (ed., 1982), this is a sign of a relationship in crisis. We, however, do not reach the same conclusion. Instead, we suggest this is a necessity for Amadeus given the environment in which it operates. Because Amadeus's products are complex and critical to the customers operations, there is a need for extensive and complex processes. The potential repercussions for the customers are simply so large that it becomes less attractive to make hasty decisions. Furthermore, whenever an alteration is made to the product, Amadeus must consider the interests of other clients – not only the one making the request. This of course slows down the

process. The extensive work with customer advisory boards and change requests are processes that have been put into place to prevent negative changes to the product but also serve as speed bumps in the development process, further increasing the complexity of the customer relationships.

There are mainly three variables that positively affect the institutionalization of episodes into a relationship: the large number of episodes, the type of information, and the technological complexity.

When analyzing information exchange, we can conclude that the nature of the information and the amount of information shared are linked to the perceived importance of the counterparty. In Amadeus's case it seems as if most of the information exchange takes place prior to, and during, the development process.

The Interacting Parties

When applying the Interacting Parties Matrix, it seemed as if the relationship between Amadeus and Finnair was best described as being *on the border* of the third and fourth cells. Even though the companies are familiar with each other, certain structural boundaries are emerging between them. These are likely to be a consequence of differences in opinion regarding Amadeus's expansion plans. Our findings seem to support Håkansson's (ed., 1982) findings on the positive correlation between the complexity of a task and the need for mutual knowledge.

The Interaction Environment

As illustrated in our analysis, there seems to be a gap in how the parties perceive their mutual environment. Amadeus might perceive its environment as dynamic and homogenous, while Finnair might perceive it as dynamic and heterogeneous since there are other suppliers that offer more tailored solutions that could be used by the airline. This difference in perceptions is important because it might lead to differing expectations of the relationship and a less cooperative environment. If Amadeus believes that the environment is homogenous while in fact it is perceived as heterogeneous by its customers, Amadeus runs the risk of becoming complacent and in the long run create what may well be a good standardized solution but one lacking competitive edge vis-à-vis its competitors. Hence, while it is important to establish what the current status of the environment is, it seems equally important to investigate what variables the two parties in the relationship use in order to establish their perceptions of it.

The Atmosphere

Amadeus's strategy includes having customer partnerships and offering a communal product. When analyzing this strategy with the Interaction Model, it appears as if the relationships' atmosphere is two-folded in that it is characterized by both closeness and distance.

Technology and the history of Amadeus and its employees are two variables that seem to play an overall vital role in Amadeus's relationships. The former serves as a competitive advantage to Amadeus. At the same time, the complex technology in combination with the industry's importance in society makes it crucial for Amadeus to plan well ahead, which makes the firm less responsive to changes in the environment. The latter, the background of Amadeus and its employees, leads to a substantial advantage and enables the company to develop technical solutions that correspond to its customers' business needs.

Our analysis of the atmosphere also shows that Amadeus and Finnair have removed most structural and knowledge obstacles that inhibit interaction. However, the relationship is not static; Amadeus's recent strategic moves clearly affect its relationship with Finnair.

6.3 *Theoretical Conclusions*

6.3.1 Important considerations in this type of relationship

We do not find a clear use of the vertical dimension ("simple" versus "complex" processes) in the Interaction Processes Matrix. In fact, Amadeus has both "extensive" and "complex" interaction processes while not getting the repercussions that Håkansson (ed., 1982) predicts in the model. One reason for this is that discontinuation of the relationship is not considered an option. When analyzing information exchange, one should distinguish between when the information exchange takes place.

Our classification of the environment showed that there is a need to distinguish between the seller's perspective and the buyer's perspective, as the two parties might consider themselves part of different environments. The closer the two perceptions of the environment are, the greater the understanding between the interacting parties.

In terms of interaction barriers, we see that there are not only inter-organizational barriers but also intra-organizational barriers. According to the Interaction Model, interaction barriers can occur if the buyer makes excessive demands on the supplier's expertise so that the supplier withdraws from interaction. However, our findings show that also the opposite can be true.

6.3.2 The importance of individuals

While the motives and experience of employees in the two companies are somewhat addressed in Håkansson's (ed., 1982) original work on the Interaction Model, we believe it is an underestimated driver of cooperation. In the study of Amadeus, it has become evident that even though certain customers might be less important to the overall economic performance of the company, they might play a significant role in the shaping of its direction through interaction patterns on an individual level.

Finnair is considered a small player in the business and its representative expresses the company's concerns for the expansion and diversification of Amadeus. Yet, it seems as if the risk of losing impact on the community platform is mitigated through the personal relationships that have formed between employees at Amadeus and Finnair as well as through the general perception at Amadeus of Finnair as an innovative partner. Because of the personal relationships, Finnair gets an economically unjustifiable impact on Amadeus's products. Finnair also avoids losing influence even though other new and larger customers claim a larger share of Amadeus's formal resources. We believe that this phenomenon can be classified as an informal resource that can be used by either party in order to reap benefits from the relationship. Since personal relationships seem to be able to shift power-dependence it might be a very important lever in a relationship, especially for a party that is perceived as the weaker one.

6.3.3 Relationship dynamics

The analysis of extensive relationships should focus on the dynamic aspects of the relationship as a whole rather than on any single episode; It should focus on how individual episodes of the focal relationships as well as of non-focal relationships are tied together, and how they shape and reshape the focal relationship. One example of the importance of this is the recurring references to American Airlines, and how that affects Amadeus's other relationships.

One should also focus on the dynamics of the environment – how *change* in the environment affects, and is affected by, all the variable groups in the Interaction Model. For example, the increased adoption rate of internet bookings has reshaped Amadeus's business model, which in turn has implications on its customer relationships. By changing its product offerings, and becoming a partner also for direct channel reservations, Amadeus also impacts the surrounding environment for its competitors.

These dynamic aspects are currently poorly covered in the Interaction Model, but have to a greater extent been covered in more recent theoretical frameworks, referring to concepts like interconnectedness. Nonetheless, these recent theoretical developments are part of other frameworks, not the Interaction Model per se. By incorporating a dynamism aspect into the existing model, it could be greatly improved. To give a concrete example of how dynamism could practically be incorporated into the existing Interaction Model, we suggest a first step is to use unbounded grids (as illustrated in Figure 7) when applying the interaction variable groups. The advantages are the following:

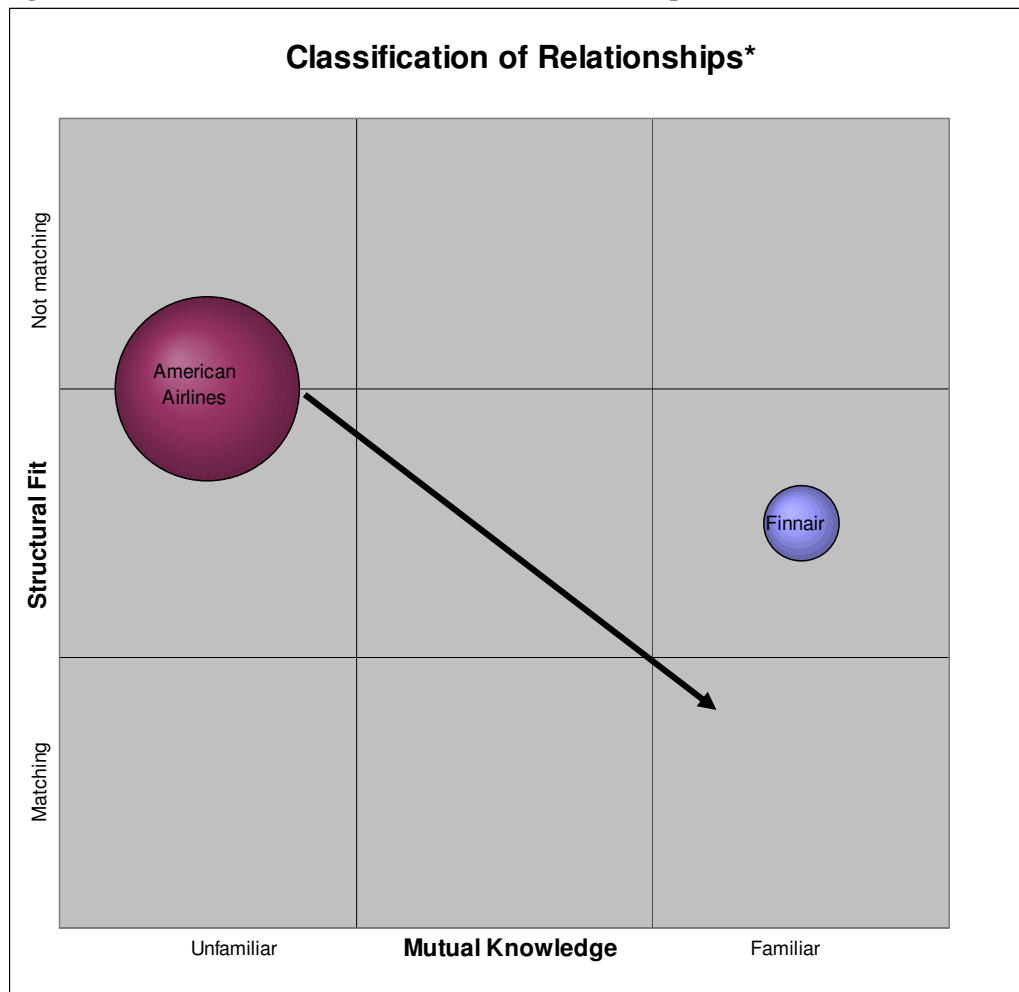
1. It gives a more nuanced illustration of the relationship by distinguishing between different degrees of for example Mutual Knowledge and Structural Fit;
2. It illustrates how dynamism inside and outside of the relationship may alter its nature; and
3. It can be used as a tool in client portfolio management.

Firstly, the suggested matrix proved a simplified classification, because it allows the analyst to indicate whether a relationship is clearly in one box or on the edge to another one.

Secondly, arrows could illustrate where a relationship is heading, for example in illustrating how a suggested strategic action might alter the nature of one or more relationships.

Thirdly, it could be used as a tool in client portfolio management, similar to the widely used BCG Growth/Share Matrix. There are costs involved in keeping a high degree of knowledge of the other party as well as assuring a structural fit. The question of what level of knowledge and fit is necessary, and who should bear the costs involved, is a strategic one. For example, at the moment there are relatively large structural discrepancies in the relationship between Amadeus and its potential future customer American Airlines. The size of American Airlines makes it necessary for Amadeus to make structural adjustments, which involves significant costs. However, since this relationship is likely to open up a new market to Amadeus, the costs of “moving” the relationship towards the bottom right of the matrix are worth taking on. At the same time, Amadeus’s resources are limited. Therefore, decisions need to be taken on where resources should be taken from. The mutual knowledge between Amadeus and Finnair is already very strong and is not likely to deteriorate in the short-term if Amadeus decides to divest some of the time spent on the relationship. In terms of structural fit, it might be argued from Amadeus’s perspective that Finnair should bear the costs of further adaptations.

Figure 7: Modified Matrix for Classification of Relationships.²



² The size of the bubbles could illustrate the relative importance of the customers in terms of generated revenues, or alternatively the size of the customers.

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APPENDIX 1 – INTERVIEW GUIDE

Questions to Amadeus

Background Questions

- Education
- Previous work experience?
- For how many years have you worked at Amadeus?
- What positions have you had at Amadeus?
- What is your nationality?
- How long have you lived in France?
- Which languages do you speak?
- What is your work-language in the day-to-day work?

Questions on the internal structure

- In your own free words, please describe how your team/department contributes to your company's performance.
- What is the formal role of your team at your company?
- How is your team structured?
- How many people work in your team/department?
- What is the most challenging part of your job?
- How does your department interact with other functions in your company?
- How often?
- How does this work?
- Where is your department physically located?

General

- Some people argue that there are a lot of political challenges involved in making changes at Amadeus. What is your opinion?
- What does the process of change look like?
- What affects the process?
- Amadeus's slogan is "Your technology partner". What does that mean for you and your department?
- In your opinion, what is Amadeus's strategy (at the corporate and business levels)?
- How do you interact with the customers today? Directly/indirectly?
- What would be the ideal way to interact with customers in your opinion?

Other questions

- Background ADC: When was the product first marketed?
- What does Amadeus really sell?
- What does the revenue model look like? (not information on pricing just the model)
- Does Amadeus do all the development or is some parts of the product co-developed with the customer? (co-sourcing)
- Who are the main competitors in the market?
- What is the biggest threat against Amadeus?
- In terms of market conditions, what are the trends? Is the GDS share of the pie increasing or decreasing?

Questions to Finnair

Background Questions

- Education
- Previous work experience?
- For how many years have you worked at Finnair?
- What positions have you had at Finnair?
- What is your nationality?
- Which languages do you speak?
- What is your work-language in the day-to-day work?

Questions on the internal structure

- In your own free words, please describe how your team/department contributes to your company's performance.
- What is the formal role of your team at your company?
- How is your team structured?
- How many people work in your team/department?
- What is the most challenging part of your job?
- How does your department interact with other functions in your company?
- How often?
- How does this work?
- Where is your department physically located?

Questions on outsourcing/insourcing in general

- What functions have you outsourced today?
- Does this vary depending on the country/market?
- Are there any examples of functions that used to be outsourced but are now done in-house?
- If yes, what is the reason for this?
- What is the future trend in outsourcing and insourcing in the airlines industry?
- What companies are you buying products and services from today?
- What does the relationship with these companies look like?

Questions on the relationship with Amadeus

- How do you interact with Amadeus today? (directly/indirectly?)
- Is there any difference between your relationship with Amadeus and your relationship with other companies?
- What would be the ideal way to interact with Amadeus in your opinion?
- What is the main challenge in your relationship with Amadeus?
- Do you perceive any risk, created when cooperating so closely with Amadeus?
- In what way do you think Amadeus exercise power over your company?
- Are there any specific areas in which there is more conflict?
- Are there any areas in which cooperation is stronger than others?
- Is Amadeus engaging in any interlocking activities to tie Finnair closer as a customer?
- Are there any uncertainties faced by your company today, with regards to your relationship with Amadeus?
- How do you work in order to reduce these uncertainties?
- Are there any conflicting roles in the interaction with Amadeus? (for example that you are both paying for their products, but at the same time supplying them with information that is essential for their other products)

- How do you handle the fact that you are interacting with both Amadeus and Amadeus' direct competitors?
- Which of your relationships has the highest prioritization? If you are prioritizing Amadeus, how does this affect your relationship to other companies?
- What does the process of change look like?
- What affects the process?
- Some people argue that there are a lot of political challenges involved in making changes at Amadeus - what is your opinion?

Questions on Amadeus's offer

- What does Amadeus really sell?
- How does Amadeus contribute to the performance of your company?
- How do they communicate the value of their offer?
- Do you evaluate the value that new offers could bring to your business? If yes, how do you evaluate the value?
- Do you evaluate whether a product you have bought is delivering the value you expected? If yes, how is this done?
- How do you view the partnership with Amadeus in the long run?

Questions on Amadeus's strategy

- In your opinion, what is Amadeus strategy? (at the corporate level and at the business level)
- Amadeus's tagline is "Your technology partner". What does this mean to you and your department?
- What is your opinion on Amadeus's shift in focus from being a GDS to offering other airline products/services?
- What is the biggest threat against Amadeus?
- If you worked at Amadeus, would you try to change their strategy, and in that case how?

APPENDIX 2 – AMADEUS KEY FIGURES

Source: European Commission (2004, 2005, 2006 and 2007) if nothing else stated.

Fiscal year	2001	2002	2003	2004	2005	2006	2007	2008
Total R&D rank in Europe			96	89	87	92		
Travel & Leisure ³ rank			1	1	1	1		
Employees		4 088	5 130	5 760	6 715			8 315 ⁴
Change			25.5%	12.3%	16.6%			
Net sales (€m)	1 785	1 856	1 929	2 057	2 411	2 667 ⁵		
Change	14.1%	4.0%	3.9%	6.6%	17.2%			
Oper. profit (% of net sales)			15.6%	16.3%	17.3%			
R&D Investment (€m)	129.6	125.6	145.0	153.2	182.2			
Change	135%	-3.1%	15.5%	5.7%	18.9%			
per employee (€K)		30.7	28.3	26.6	27.1			
R&D/Net sales ratio		6.8%	7.5%	7.4%	7.6%			
CapEx (€m)			72	79	89			
CapEx. (% of net sales)			3.7%	3.8%	3.7%			
Inv. in technology (€m)			217 ⁶	232 ⁷	271 ⁸	300 ⁹		
(% of net sales)			11.3%	11.3%	11.2%	11.3% ¹⁰		
Market Cap. (€K)		3 363	3 012	4 354				
Change			-10.4%	44.6%				
Training (hours per year)								80 000 ¹¹
per employee								10

³ The industry sector is based on the ICB Industry Classification System. In 2003, the industry was named “Leisure & hotels”.

⁴ Amadeus (2008a and 2008b).

⁵ Based on our approximation of what share of net sales that investment in technology accounts for, we can estimate net sales in 2006 to this figure. According to Amadeus (2008a), net sales amounted to €1.3 billion in the first half of 2006.

⁶ Own calculation based on Amadeus’s definition of investment in technology (R&D investment plus capital expenditures).

⁷ Based on our approximation of what share of net sales that investment in technology accounts for, we can estimate net sales in 2006 to this figure. According to Amadeus (2008a), net sales amounted to €1.3 billion in the first half of 2006.

⁸ Based on our approximation of what share of net sales that investment in technology accounts for, we can estimate net sales in 2006 to this figure. According to Amadeus (2008a), net sales amounted to €1.3 billion in the first half of 2006.

⁹ Amadeus (2008a).

¹⁰ Own approximation, based on data from previous years.

¹¹ Amadeus (2008c).