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# Business Case In The Context of SACIS

## - A case study at Volvo IT.

**Abstract**

This Master Thesis provides both theoretical and empirical knowledge of the fruitfulness of Business Case in the context of SACIS. The contribution of our work is given in terms of SACIS. SACIS is solely a model for supporting the mutual understanding of stakeholders about the crucial and ever changing issues and interests that related with a coordinated and proactive enterprise development. Firstly, whereas the current use of Business Case is associated mostly with financial issues SACIS provide a sound platform for socio-cultural, functional, info-logical, structural issues etc. Secondly, whereas current use of Business Case is context free, SACIS provides a proactive social context where a coordinated enterprise development takes place. Finally, whereas the current use of Business Case is project oriented, SACIS relates use of Business Case in the context of business concepts, i.e. root definition of a business enterprise, and business models, i.e. information based business-wide architecture. The primary aim of our inquiry was to provide understanding of the following query: *How can Business Case be used to evaluate the attractiveness of a strategy?* To investigate this query the material has been collected through both literature study and an empirical study consisting of six interviews. Our systematic and empirical investigation provides the following answers: current techniques and models of Business Case are still in formative phase, strategy evaluation is based on the following logic: strategy agrees with vision (business concept), Business Case agrees with strategy (business model), Business Case agrees with vision, and finally strategy formulation and strategy evaluation is not enough.

**Keywords:** business case, business concept, business model, proactive enterprise development, holistic

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# 1 Introduction

Today most customers feel they are not getting full value from their information technology investments (Reimus 1997, Hatten and Hatten 1997, Zachman 1977). According to Reimus (1997) the following four technology blind spots are key reasons for those poor returns:

- Inadequate vision and leadership
- No business accountability
- Slow implementation
- Insufficient funding for IT

**Problems today**
*Inadequate vision and leadership.* The vision is not something that can be delegated (or outsourced). Vision has to be shared by the company's managers, believed in, and acted on. Furthermore, it should be shared and provide benefits to all involved stakeholders – satisfied customers give satisfied shareholders that give satisfied employees Mackenzie (1984), Checkland (1985), Smith (1999).

*No business accountability.* A CIO[1], working solo, could not possibly, for instance, make a computer-aided system successful with agents and customers. Only business managers who are held responsible for delivering business results can do that.

*Slow implementation.* Both Mackenzie (1984) and Reimus (1997) argue the importance of a swift implementation. This because the new designs can be out of date if the design process takes to long. According to Reimus, applications that directly affect revenues and competitive position should be built in a year or less. Taking longer increases the risk that the company will not get full value for its investment. Managers cannot act as if they have all time in the world to develop systems for their business. In a world where competitors move swiftly and the needs of customers change rapidly, it does not make sense to spend years developing a system before it is even rolled out to the field. Worse is that in that case the company has nothing of strategic value to show for its efforts.

*Insufficient funding for IT.* In several industries today, the introduction of new technology to improve relationships between customers or to develop new products is accelerating so rapidly that it becomes more and more difficult for companies to expect to be able to come from behind. However, care must be taken to continually strive to keep the ratio of benefits to costs as great as possible Mackenzie (1984).

[1] CIO: Chief Information Officer

**Recommended solutions**

Reimus (1997) proposes a few things to keep in mind to avoid these blind spots. The first thing to do is to step into the vision vacuum. Technology plays a major role in the company's ability to compete and therefore it is crucial to have a shared vision of technology's role in the business. This is in agreement with Mackenzie (1984), Checkland (1985), and Smith (1999). It is important that managers understand that they are responsible for using technology to deliver value. In addition to establishing vision and accountability it is important to take steps to speed up the delivery of systems. Any problem analysis process takes time. All problems can change over time. Therefore it is important to have a design process that is as swift as possible (Mackenzie, 1984).

Companies today must be proactive in finding out what their competition is up to and what customers need, and they must be able to act on that information quickly. In other words, they must be able to sense and respond. More than that, they must sense and respond on a continual basis and, increasingly, be able to make their decisions in real time, i.e. in the pace of computers and telecommunication. (Reimus, 1997)

The traditional, slow pace management team's "cycle speed" for decision-making is the annual budget. That is, managers decide on an issue once, establish goals, and then set out to accomplish those goals. What they should do, according to Reimus (1997) and in agreement with Hedberg (1980) Mackenzie (1984), Checkland (1985), and Smith (1999), is to continually and dynamically re-evaluate decisions. Systems that through continual re-evaluation are better turned to deliver the desired value to the company.

Today systems can be more tightly linked to the company's strategy (Reimus 1997, Hatten and Hatten 1997). This if, according to Reimus (1997), CIOs take responsibility for the result of IT investments, in partnership with senior management. Together they monitor the real-time systems they are putting into place and make changes as necessary. Even some IT-outsourcing agreements reflect such partnerships. In these agreements, the outsourcing vendor takes an equity stake in the customer's business. That is the ultimate incentive and reward for delivering IT systems that yield strategic business results. Together, determine how technology will be used to further the strategic goals of the business, which means taking responsibility for the business results of systems investments.

The aim should be to create an environment in which technology-based change programs can be successfully implemented Hedberg (1980) Mackenzie (1984), Checkland (1985) and Reimus (1997). Reimus (1997) suggests a few warning signals if this might not be the case. For instance, lack of understanding how technology could further the business goals, organizing a team to set the vision for the project, but never secure the commitment of the sales, marketing, and field operations. Hedberg (1980) Mackenzie (1984), and Checkland (1985) all agree with this and promote a coordinated learning to reach mutual understanding among all involved. Active leadership can be critical for successfully implementing a massive change initiative. Further warning signs according to Reimus (1997) are, lack of a product strategy and a clear business purpose that is well grounded in corporate strategy. It is not

possible to provide a technology vision in absence of a product/marketing/sales vision, no control over the scope[2] of the project and how to manage expectations.

Furthermore, Reimus (1997) argues that big projects work best when:

- There is a passionate business sponsor
- The business purpose is clear
- The users are an integral part of the concept and design phases
- Managers rigorously apply the 80/20 rule[3] to control project scope and adequately assess time to market
- Teams build prototypes and adjust them before rolling out completed systems
- The technical staff has the skills and motivation to deliver

With all this in mind, Reimus (1997) states that when pushing for a new system, it is important to first sell it to the business-line executive who could make it work. It is vital to, for any new system:

- Clearly identify which business executive will be held accountable for the new system
- For how and when money will be spent
- For how results will be achieved
- For how success will be measured

Furthermore, according to Reimus (1997) pushing for a new system could be done in the form of a Business Case. However, from this study a contradiction can also be understood and that is, that Reimus at one point states that it is crucial to have a shared vision of technology's role in the business and that this cannot be separate from the business vision, but at the same time also state that the IT side should "sell" new solutions to business-line executives. However, according to Checkland (1985), Mackenzie (1984), and Hedberg (1980) the business is suppose to come up with which systems they need, systems should not be pushed on to the business from the IT department. Business Case is then according to Reimus simply a tool to "sell" new systems, but if Business Case has a value, according to what Reimus (1997) stated earlier, it has to be associated with a sound platform of socio-cultural, functional, info-logical, structural issues etc Checkland (1985), Mackenzie (1984), and Hedberg (1980). In this sense it is interesting to see how Business Case can be used to evaluate the attractiveness of a strategy. However, today the concept of Business Case and its context is vague and need clarification. Furthermore, the understanding of the relationship between enterprise vision i.e. business concept and business strategy i.e. business model is something that is not always understood, neither how the concept of Business Case relates to this context.

[2] Scope: A clear statement of the areas of impact and boundaries of the project. The scope of a project includes the target outcomes, customers, outputs, work and resources (both financial and human) (http://www.projectmanagement.tas.gov.au/guidelines/pm5_14appx1.htm#S, 2004-04-26).

[3] 80/20 rule: Vilfredo Pareto, an Italian economist, "discovered" this principle in 1897. The 80/20 rule states that the relationship between input and output is rarely, if ever, balanced. When applied to work, it means that approximately 20 percent of your efforts produce 80 percent of the results. (http://management.about.com/cs/generalmanagement/a/Pareto081202.htm, 2004-04-26)

## 1.1 Background

The efforts of Volvo IT in showing business value to their customers is something that is increasing and will continue. As Volvo IT strives to become a global company with an increased competition it is important in an early stage to be able to give the customers the basic data for decision-making that shows the "real" value and consequences of a potential change or decision.

At the end of 2003 reorganization within the Consulting Services at Volvo IT was done and a new group, business consultants, emerged. A framework has been developed, "Business consultants framework" (figure 1 p. 4, chap 1) to show which services the business consultants should provide to the customers of Volvo IT. Business Case is one of these services.

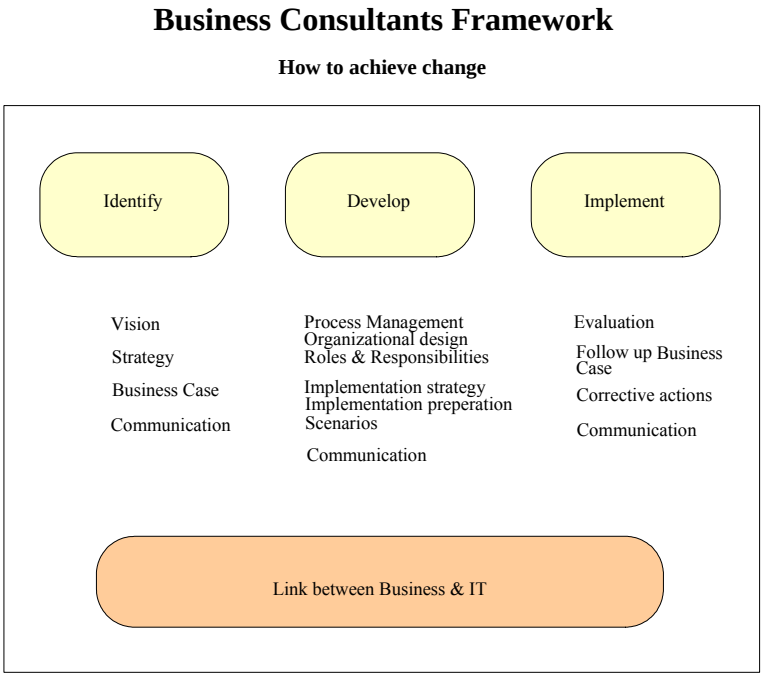



Figure 1: *Business Consultants Framework (Volvo IT, 2003)*

The framework is an effort to help the business consultants in showing business value to their customers, but it is yet not fully developed and many conceptions, steps and tools are unclear. For the business consultants to be able to provide Business Case as a service it first has to be formalized in regard to when and how it can be used, approach, tools, methods, etc. Questions regarding Business Case started to appear both internal at Volvo IT and external from customers to both the Consulting Services and Application Development Techniques (ADT)[4]. In connection to this, Consulting Services and ADT got in contact with each other and saw a mutual need for clarification of the concept Business Case both at Volvo IT and other companies within AB Volvo group.

[4] See Application Development Techniques, pp. 61 – 62, chap. 5

The understanding of what a Business Case is and its use varies within the AB Volvo group in general and in the business consultants' team in particular. They do not have a common understanding of the concept Business Case and its use. This has led to an uncertainty experienced among the business consultants when creating and using Business Case.

The situation at Volvo IT together with what was expressed in the introduction shows that the concept and use of Business Case still is very cloudy and needs to be clarified. Today the perception of Business Case varies and many different opinions exist. Since it exist divided opinions of the concept of Business Case the primary question is not to see what a Business Case "really" is i.e. establish one definition, but rather to show where and how in the development process Business Case can be used. This to furthermore see what a Business Case contribution is, how Business Cases can increase meaningfulness, awareness, over-view and understanding of the value technology yield. According to well-articulated and sound theories of proactive enterprise development existing today, Checkland (1980), (1985), (1989), (1990), (1999), Mackenzie (1984), Hedberg (1980), Reimus (1997), all these things are important to obtain the best result, and to show the customer the true business value of a change in a holistic[5] manner.

## *1.2 Purpose*

The purpose of our work is to improve the consultants and their surroundings understanding of the relationship between enterprise vision i.e. business concept[6] and business strategy i.e. business model[7]. Accordingly, the focus of our study is to determine how good or bad a particular business strategy is. Due to the fact that the same business concept can be implemented with a variety of alternative strategies it became necessary to clarify which strategy is more adequate for that purpose. Just in this context the concept of Business Case became actual, relevant and fruitful.

Thus, Business Case is expected to provide the positive and negative consequences that follow the strategy.

Furthermore, our study focuses firstly on the relationship between the consultants and their customers. Accordingly, the role of consultants is expected to be the absorption of customers' uncertainties with respect to the implementation of the selected strategy.

[5] Holistic: An overall picture of something, nothing acts isolated everything is connected (Magoulas & Pessi, 1998)
[6] Business concept: is all stakeholders' expectations for continuing support of a business. See Appendix 1 SACIS's Theoretical Framework pp. 24 – 25
[7] Business model: is the architectural design of the business concept. See Appendix 1SACIS's Theoretical Framework p. 8

## 1.3 Problem Statement

In order to achieve the above-mentioned purpose we have chosen to delineate our work with the following question:

***How can Business Case be used to evaluate the attractiveness of a strategy?***

Preliminary, the concept of Business Case can be stated in terms of techniques, models, or decision rules. In any case, our interest is to provide knowledge about their proper context as well as their contribution in the absorption of uncertainty in critical change decisions.

## 1.4 Approach

According to Ackoff (2002), there are two kinds of consultants. The first category consists of gurus that usually provide fixed solutions to organizational development. The second category consists of consultants that promote learning and mutual understanding to crucial issues and critical developmental decisions. In our work we agree with the second category of consultants who pay attention to the whole view of stakeholders and who promote their mutual understanding.

Accordingly, our process of inquiry follows the logic below:

- Studying available models to improve our understanding of Business Case and enterprise development.
- Creating an adequate model for coordinated and proactive enterprise development.
- Using the above model and inventing the crucial developmental issues. Thus, the focus here is on the relationship between the consultants and their customers. Accordingly, the role of consultants is expected to be the absorption of customers' uncertainties with respect to the implementation of the selected strategy.
- Relating Business Case with the above context.
- Inventing the experiences of consultants with respect to the motives, techniques, development and use of Business Cases.
- Evaluating the contribution of Business Cases in terms of improving just the mutual understanding of all involved participants.

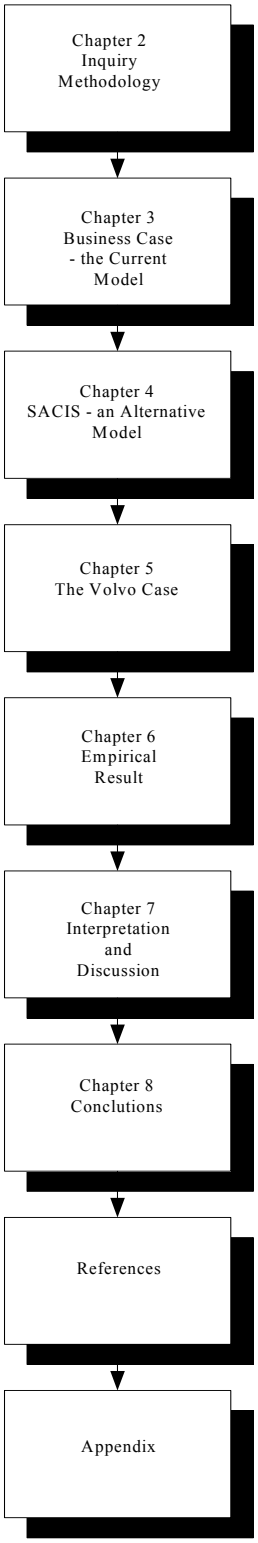
## 1.5 Delimitation

The work is firstly delimitated to the initial stages of the development process, i.e. Situation Analysis, Architectural Design, Change Management[8], and the set up of Business Case. The study will not give an in-depth discussion of the Implementation stage. In other words, it will be left out of the empirical study and only be described in the chapter where we introduce our alternative model of Business Case, this to illustrate and give the reader the whole picture of the model. Secondly, the work is limited to development work concerning large, complex problem situations. Finally, the thesis is delimited to solely give an inventory of available methods, techniques and tools to support the creation of a Business Case in the Change Management stage. Evaluation and recommendation of methods, techniques and tools are out of scope for this Master Thesis.

[8] For an in-dept description of Situation Analysis, Architectural Design, Change Management in SACIS, see Stages in SACIS, pp. 41 - 45, chap. 4

## 1.6 Disposition

The Master Thesis has the following disposition:




**Chapter 2** covers the method used. It gives an overview of the scientific standpoint, and describes how the study was performed. Furthermore, this chapter contains critical observations and self-criticism.

**Chapter 3** covers the current model of Business Case. Furthermore it contains our key points of the interpretation and conclusions that can be drawn.

**Chapter 4** is where we introduce the new alternative model SACIS. In this chapter we will also adjust the model through our interpretation of Dahlboms/Magoulas conceptual framework. Furthermore in this section, we will put Business Case in context. Finally, we will present the design of inquiry questions.

**Chapter 5** gives a presentation to AB Volvo in general and Volvo IT in particular where our case study is conducted.

**Chapter 6** presents the empirical results from the semi-structured interviews.

**Chapter 7** contains interpretation and discussion concerning the current model of Business Case, SACIS and the Volvo Case.

**Chapter 8** is where the conclusions are drawn and the question for this Master Thesis answered. Furthermore, this chapter contains suggestions for further research.

The Master Thesis completes with references and appendix.

# 2 Inquiry Methodology

Our research assignment is to investigate how Business Case can be used to evaluate the attractiveness of a strategy. Preliminary, the concept of Business Case can be stated in terms of techniques, models, or decision rules. In any case, our interest is to provide knowledge about their proper context as well as their contribution in the absorption of uncertainty in critical change decisions. Below we will give a short introduction of our scientific standpoint and furthermore give a detailed account of how we have preformed this Master Thesis to answer the problem statement.

## *2.1 Our Scientific Standpoint*

The purpose with a detailed description of an inquiry methodology is partly for replication and partly for evaluation. *Replication* means that the method should be possible for someone else to repeat under identical circumstances. Thus, the results should be possible to control for an outsider. *Evaluation* means an appraisal of the empirical procedure, i.e. to have viewpoints on the choice of methodology, but also its correspondents with the problem statement and it supporting capacity for the conclusions and interpretations. (Backman, 1998)

### 2.1.1 Knowledge Creation Theory

The creation and knowledge can be carried out in two ways, either deduction or induction. *Deduction* means that the researcher comes to a certain conclusion on the basis of general principles and existing theories. The information that needs to be collected depends on the theories. *Induction* means that the researcher studies phenomenon without first gain approval for the investigation in earlier theories. On the basis of the collected data the researcher formulates a theory. (Backman, 1998)

Our approach is deductive, since a large part of our Master Thesis work has been to construct an adequate model for coordinated and proactive enterprise development on the basis of general principles and existing sound theories. The first weeks our focus was to study literature to find different existing models for coordinated and proactive enterprise development. We have presented a hypothesis based on the different existing theories found in literature and came to a certain conclusion on the basis of the hypothesis and by performing a case study at Volvo IT.

### 2.1.2 Research Approach

Among the first thing a researcher should do when a study begins, is whether the study will be a quantitative or qualitative study. According to Trost (1993) if the study uses figures it is a *quantitative study*, whereas if the problem is to understand or find patterns it is a *qualitative study*. Kvale (1997) also does a similar division: quantitative aims to how much, how big, a quantity of something but quality aims at the types, the nature of something. Starrin and Renck (1996) maintain that qualitative interviews aim to discover or identify not well-known or unsatisfactory well-known occurrences, properties or significances. Qualitative interviews are thus a method to find out, discover, understand, characters or properties by something. Quantitative interviews have their starting point in defined occurrence, properties or significances. These occurrences formulate as questions with defined question alternatives. The aim is to discover how these are divided in population (Starrin, B. & Renck, B., 1996). The aim with the study is conclusive for the choice of method.

The two methods we chose between for this study were quantitative or qualitative. Since the concept of Business Case is unsatisfactory well-known and we felt that we needed more information from the investigation than just percentage points and percentage shares we thought that a qualitative method was best suited for this investigation.

## *2.2 Our Work Process*

Checkland's (1981, 1985, 1989, 1990, 1999) Soft Systems Methodology model, SSM[9], has been used to structure and perform our work of the Master Thesis. SSM is a method suitable for analyzing social activities, and it is based on learning and does not regard goal seeking, which differ from other methods. The learning is about a complex problematical human situation, and leads to taking purposeful action in the situation aimed at improvement, an action that seems sensible to those concerned. SSM uses system models to understand and intervene in real-world complexity. In other words, the method is very flexible and allows iterations on several levels. This result is that knowledge allows to mature in every situation before continue and stages that are not thoroughly worked out can be reconstructed.

Below illustrates our work process for this Master Thesis (figure 2 p. 11, chap 2). The different stages in the process have not always occurred in sequence. It has been an iterative process, and some stages have occurred continuously during the whole study.

[9] SSM is described in Appendix 1 SACIS's Theoretical Framework pp. 7 - 9

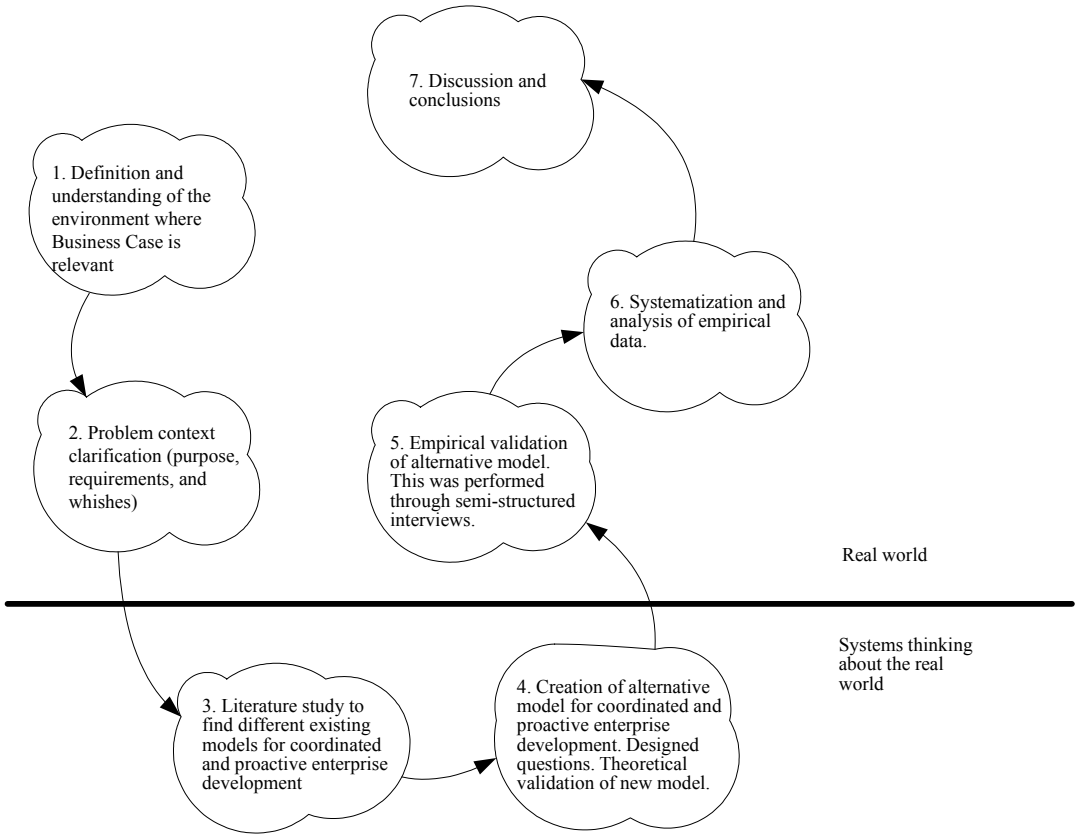



Figure 2: *Our work process with the Master Thesis (Checkland's SSM 1981, 1985, 1989, 1990, 1999)*

As the figure (figure 2 p. 11, chap 2) above illustrates, the method process has been divided into seven stages. In the next seven sections a more in-depth discussion of the stages content and how they where performed is presented.

### 2.2.1 Definition and Understanding of Environment

*Definition and understanding of the environment where Business Case is relevant*: We had a few meetings where we with various people within the department of Volvo IT discussed their work and current situation to gain an overview of the present situation.

### 2.2.2 Problem Context Clarification

*Clarify the problem context (purpose, requirements and wishes)*: Through continues meetings with our contacts at Volvo IT and the supervisor and others at the department of Informatics, Göteborgs University, the purpose, requirements and wishes of this Master Thesis emerged. The meetings have been performed in a manner of open discussions. Some of the meetings at

Volvo IT were formed as interviews to further clarify the purpose, requirements and wishes of this Master Thesis work.

### 2.2.3 Literature Study

Our main work during the first weeks was *studying of literature to find different existing models for coordinated and proactive enterprise development*: According to Backman (1998) before starting a study of any kind, it is important to be well-read on the subject, thus it is important to take part of what have already been done and written in the chosen field. This helps to get started with the work. That is why we have chosen to read both published literature and earlier Master Thesis that touch upon the subject. From the literature we have studied three major theories. These have been chosen since we believe that they all address the problem area of this Master Thesis. When we started to look into the concept of Business Case we discovered that very little literature was available and hardly any earlier research in the field had been done. The only source to begin with was sites on Internet. We thought they where not reliable and validated enough. Therefore Volvo IT offered to purchase some available literature from abroad. The studying of literature occurred continuously during the whole process of this Master Thesis work.

### 2.2.4 Creation of Alternative Model

We did not find that any of the existing theories gave a complete answer to our question. Therefore we c*reated an alternative model* of our own (for coordinated and proactive enterprise development) to combine significant features from existing theories and thereby theoretically validate the new model, SACIS. The model could be viewed as an alternative hypothesis to the main models that characterize both the theory and the practice. At this stage we also designed questions later used in the interviews based on the existing theories, literature concerning Business Case, and the new alternative model.

Based on our model we designed questions[10]. The questions were a complement to the model. The purpose of the questions was to invent the experiences of consultants with respect to the motives, techniques, development and use of Business Cases. Furthermore, validate and supplement the content of our model. The questions were derived from literature on Business Case and from the different phases described in the model. As we prepared the questions we tried to start with easy-to-answer, non-threatening questions, followed by broad questions on Business Case and our model.

[10] See Appendix 2 Inquiry Questions, pp. 26 - 38.

### 2.2.5 Empirical Validation of Alternative Model

*Empirical validation of new model was performed through semi-structured interviews at Volvo IT*: Interviews concern what people think and how they understand what they do. The respondent has a possibility to describe what he or she does and how he or she reflects on that. Easterby-Smith et al (2002) point out several times, in theirs book Management Research, do not underestimate the complexity of interviewing people and analysing the material. Through open interviews based on half structured questions is the respondent allowed to float, this to find out more information of the respondent. Semi-structured interviews consist of both open and closed questions. The strength with closed questions is that they are quick to complete and analyse. The weakness is that the data obtained may be very superficial. Open questions allow the possibility of asking deeper questions and obtaining unanticipated perspectives on an issue, but the corresponding weakness is that completion and analysis can be difficult and time consuming (Easterby-Smith et al, 2002).

We chose a semi-structured approach for the interviews and the reason was because the concept of Business Case is new and it is hard to find people who have a complete understanding of the concept. We wanted to be able to follow all interesting tracks the interview could take, therefore the semi-structured approach.

The purpose of the semi-structured interviews was to provide our theoretical model with substance and show its relevance and to validate the model and supplement its content.

As mentioned above we chose to use semi-structured interviews starting with us asking the respondent open in-depth questions concerning Business Case and our model, and followed up with closed questions of a more quantitative nature to make sure we understood what the respondent wished to express and during a limited time capture as much relevant data as possible. The reasons for this approach was if the time had run out, the respondent could bring the closed question with him or her, fill them in and return them later. We believed this was the best way to secure as much relevant data as possible. We further believed that by first introducing the respondent to the concept through the open questions he or she could relate much easier to the closed questions. The interviews were conducted and recorded in Swedish and later documented and translated into English. We met every respondent at one occasion and each interview took about one to two hours.

Our wish at the beginning was to perform two workshops before we performed the semi-structured interviews to introduce the concept Business Case. This because the understanding and knowledge of what Business Case is and its use varies in literature, within the business consultants' team and AB Volvo, and it is hard to find people who have a complete understanding of the concept. We believe the workshops further would have helped us notice relationship between enterprise vision i.e. business concept and business strategy i.e. business model and emphasis consequences of a "quick and dirty philosophy"[11]. Even though, we believe that the chosen approach gave a satisfactory result.

[11] A fragmental non-holistic approach, T. Magoulas (personal communication, the 5th of April, 2004)

### 2.2.6 Systematization and Analysis of Empirical Data

*Systematization and analysis of different experiences from semi-structured interviews:* In qualitative research unlike quantitative research the structure used for the analysis must first be taken out of the data, and that means systematic analysis to find themes, patterns, and categories. (Easterby-Smith et al., 2002) We followed Easterby-Smith et al. stages when we analyzed and interpreted the data we collected from semi-structured interviews:

- *Familiarization:* We started our analysis in late May 2004 by listening to the recorded interviews and transcribing, translating and studying the material. We read the transcripts several times and brainstormed to find interesting and relevant aspects.

- *Reflection:* The material was extensive so it was necessary to categorize the data from the semi-structured interviews to make it easier to handle.

- *Conceptualization:* Since we designed our questions with our model as a basis the concepts were already set. To secure its relevance we went back to the transcripts where the answers from the interviews were written to make sure nothing was missed.

- *Cataloguing concepts:* We gave the concepts name and marked the respondents who answered the question.

- *Recording:* Subsequently we had to go back to the transcripts were everything was written and furthermore study what had been said and noticed.

- *Linking:* In order to get a more holistic perspective we linked together all the identified variables and mapped the result from the empirical study with the chosen theories.

- *Re-evaluation:* Finally we gave one draft to our supervisor Maria Bergenstjerna and one to fil. Dr Thanos Magoulas at the department of Informatics for comments and input.

It was an iterative process and many of the stages were undertaken several times and not necessarily in the order as described above.

### 2.2.7 Discussion and Conclusions

*Discussion and conclusions:* Using the theories and the results from the semi-structured interviews, we presented a discussion. We found answers to our problem statement and furthermore draw conclusions. Finally, we presented further research that could be performed in the field.

## 2.3 Coordination and Presentation Meetings

During the whole work process we have had continuous meetings with our supervisors at Volvo IT but also other meetings to either coordinate our work with other projects that was performed at AB Volvo concerning the same area or meetings to solely inform different groups within Volvo IT of the purpose, expected result, approach etc. of our work. We have chosen to call them coordination and presentation meetings.

- **Coordination meetings:** The purposes with these coordination meetings were to discuss how we all could coordinate our works to become more efficient and to avoid doing the same work. We had two meetings with a student from Lyon in France who also wrote a Master Thesis regarding Business Case. As mentioned above our investigation was to see how Business Case could be used to evaluate the attractiveness of a strategy. We also invented the experiences of consultants with respect to the motives, techniques, development and use of Business Cases. Whereas the student in France used our work as input and continued to evaluate the methods, techniques, and tools to later give a recommendation. During this period we have had continues mail contact with the student in France.

  We have also had a meeting with people at Volvo IT and a person who are doing her fil Dr thesis regarding business values, to see if one could in some how support the other and make sure the different works did not conflict.

- **Presentation meetings:** At three occasions we presented our work regarding Business Case at Volvo IT. Once at a network meeting, once at a meeting with ADT, and once at a global ADT meeting with participants from Sweden, USA and France.

## 2.4 Respondents

With the help and knowledge of our supervisors at Volvo IT we did a selection of relevant respondents with different positions, background and duties. They can be represented in the following three groups:

- Business consultants at Volvo IT
- People that work with IS/IT strategy at Volvo IT
- Customer to Volvo IT (3P)

In the tables (tables 1 – 3, pp. 16 – 17, chap. 2) we describe each respondent.

| Position | Sex | Duties | Background |
|---|---|---|---|
| **Business consultant** (BC1) | Male | Management consulting and strategy consulting | Master in both economic and system development. Worked with strategy at Accenture both in London and in Stockholm. Helped to start three to four companies in USA. |
| **Business consultant** (BC2) | Male | Performs Business development projects mainly within AB Volvo group | Have had several employments working with management consulting, project management, method development, etc. Had his own company for a while working with requirement specification. Works for Volvo IT since spring 2004. |
| **Business consultant** (BC3) | Male | Describes, analyzes and comes to a proposal and a measure etc. | Worked 37 years for Volvo, among other things with IT and organization development, introducing SAP strategies, IT-chief of construction and product development, substituted as a production technical chief. Works partly for Volvo IT, but as an external Business Management Consultant. Has two companies working with business management consulting and change work. |

Table 1: *Information on Business Consultants*

| Position | Sex | Duties | Background |
|---|---|---|---|
| **IS/IT-strategic** (IS/ITS1) | Male | Works with measurements like process capability (how good are we in all projects) and productivity (function points). Works with Rational Unified Process. | Has over 25 years of experience in the software industry in the areas of software process methodologies and project management. Worked at Volvo IT since 1996. |
| **IS/IT-strategic** (IS/ITS2) | Male | Works with strategies and other kind of things within industrial solution, Volvo IT | 25 years at Volvo PV.<br>Long experience of counting on Business Case |

Table 2: *Information on IS/IT-strategic.*

| Position | Sex | Duties | Background |
|---|---|---|---|
| **Customer** (C) | Male | Works at 3P's IS/IT-department. Owner of one of the systems in the department. Since nine months also one of the owners of the IS-GDP model[12]. | Concern accounts, management reports and KPI (Score cards). Has also worked as a controller in projects. |

Table 3: *Information on customer.*

## 2.5 Reliability and Validity

Easterby-Smith et al., (2002) say that reliability and validity are important when gathering data. "*Reliability* is primarily a matter of stability: if an instrument is administered to the same individual on two different occasions, will it yield the same result? The main problem with testing this in practice is that no one can be sure that the individual, and other factors, have not changed between the two occasions" (Easterby-Smith et al., 2002). "Validity is a question of how sure we can be that a test or instrument measures the attribute it is suppose to measure" (Easterby-Smith et al., 2002).

We are aware that it is difficult to actually know if reliability and validity occur. However, we tried to stay objective and as open minded as possible in the contact with our respondents. We were both always present at the interviews. Both were responsible for asking questions and making notes and one also handled the tape recorder. Since both were free to ask any question to follow up if something was unclear, we believe that we gave a fair representation of the respondents view. In this kind of research there are always a risk for bias since it depends on the researchers interpretation of the reality. We were aware of this and tried to not ask leading questions. We believe that we managed to do this fairly well and that if any other researcher

[12] IS-GDP model: A decision model (Volvo IT, 3P, 2004-04-27)

had done the same at this time would have reached the same result. Furthermore, even if the number of respondents in the case study was limited, this because of the limited time for this work, we still believes the reliability is fairly high. With help from our supervisors Ulrika Johansson and Leif Carlsson at Volvo IT we could be very selective of whom to interview and managed to get a satisfactory number of people within different areas touched by Business Case.

We assured a high validation of our model SACIS by constructing it from earlier and well-articulated existing theories of prominent researchers such as Checkland (1985, 1999), Hedberg (1980) and Mackenzie (1984) among others within the same problem area and the latest available literature on Business Case. The empirical material collected was used to see which support the model would get. Even if the empirical support is weak that does not naturally mean that the model is wrong but rather that more research should be done. Therefore the reliability can be considered high. This is supported by the methodological standpoint developed by Hedberg and Jönsson (1974).

The knowledge and experience regarding Business Case vary between the participants. We are aware that if the workshops had been performed as anticipated from the beginning the result from the semi-structured interviews perhaps would have been different. This because starting with the workshops would have given the participants more knowledge regarding Business Case and as a result it had perhaps been easier for the participants to answer the questions in the semi-structures interviews. We tried to help this off by writing an introduction in the questionnaire for every participant to introduce them to the subject and to have the open questions first. If the period for the Master Thesis had been longer perhaps we would have been able to perform the workshops and several more interviews to furthermore secure the models empirical validity.

## 2.6 Further Critical Observations and Self Criticism

- Since it exist little knowledge about what Business Case is and that every discipline and every book has in principle its specific concepts, language, principals, and techniques the study has been difficult to perform and the risk for misinterpretations immediate. However, we managed to see a few common issues. Furthermore, the research has not noticed the problem, which made it difficult to get hold on independent literature on Business Case. This was something we were aware of when we studied the literature.

- The understanding and experiences of Business Case varied between the respondents and made it difficult for some to answer our questions. We tried as much a possible to explain and exemplify our use of concepts, like Change Management for instant. Furthermore, we also wrote down an introduction on the first page in the section for the closed questions to secure that the respondents knew what we were talking about before the interviews were performed and in case they had to fill in their answers after the actual interview was over.

- The time for the interviews was restricted. Repeated interviews over a longer period might have given different results. The fact that the interviews were performed in Swedish and later translated into English could have had the effect that some of the nuances in the respondents' answers did not appear in the thesis. However, we tried to read and review the material as thoroughly as possible to make sure nothing essential was missed. We are further aware of the fact that this is a subjective study, due to its qualitative character. Therefore the result will be somewhat coloured by our opinions and interpretations, no matter how objective we tried to stay.

- We are aware that, if more customers to Volvo IT had been available for interviews, perhaps we would have managed to obtain a better representation of the customers' views.

- Finally, we are aware that the document of the Master Thesis is very long and extensive, this due to a lot of material and the fact that there are no common knowledge base on Business Case. However, we considered it important, to be able to create our model and reduce the uncertainty surrounding Business Case, to present as much relevant information as possible. To not further weight down the thesis we chose to lift out the theoretical foundation of our model to appendix[13].

[13] See Appendix 1 SACIS's Theoretical Framework pp. 1-25

# 3 Business Case - the Current Model

In this chapter we will try to clarify the current model of Business Case. Firstly we will give an inventory of different definitions of Business Case stated in the available literature on Business Case. Secondly, the study tries to focus on the following topics:

- The relation between Business Case and Business
- The relation between Business Case and Business Process
- The relation between Business Case and Project Management[14]

Finally, in this section, our key points of our interpretation of the current model of Business Case are presented.

## *3.1 Business Case definitions*

It is hard to define what a Business Case really is. This because Business Case has many different application areas and it covers in principle the whole development process. With consideration to the delimitation of this thesis we have found four ways to express the definition in the available literature and from websites. We have found the following four main definitions of Business Case:

- Business Case is the crucial material to decision makers (Reifer, 2001).
- Business Case is a decision and planning tool, i.e. technique (Schmidt, 2002).
- Business Case is a comprehensible view of a project (Prosci learning centre, 2004).
- Business Case is a matrix of inter-dependent factors: those of sustainability and those of success.[15] (Sustainability online, 2004)

Furthermore, we can also establish the following definitions:

- Business Case is simply a financial document (Prosci learning centre, 2004).
- Business Case is a decision rule in the form of What – If (Schmidt, 2002).
- Business Case is both a financial and non-financial document (Stonehaven group, 2004).
- Business Case is a process (Reifer, 2001).

[14] Project Management is a formalised and structured method of managing change in a rigorous manner. It focuses on achieving specifically defined outputs that are to be achieved by a certain time, to a defined quality and with a given level of resources so that planned outcomes are achieved. (http://www.projectmanagement.tas.gov.au/guidelines/pm5_14appx1.htm#P, 2004-03-12)
[15] http://www.matrixresourses.com, 2004-05-24

## 3.2 The Distinction Between Business Case and Business Model

There are often, even among those with a strong background in analysis or business planning, confusion about what the difference is between a Business Case and a business model. The table (table 4 p. 21, chap 3) below summarizes some of the differences between Business Case and business model.

| | A **Business Case**… | A **Business Model**… |
|---|---|---|
| Is organized around… | A single action. | An organization and the whole enterprise. |
| Predicts… | Results and important impacts that follow from the action. | Business performance of the organization. |
| Is based on… | - A cost model and a benefit rational.<br>- Designs for the case.<br>- One or more action scenarios. | Business requirements for the organization and expected trends. |

Table 4: *Important distinctions between a Business Case and a Business Model (Schmidt, 2002).*

Business Case focuses on what follows from a single action, or decision alternative, while the business model focuses on the organization or the whole enterprise. Both tools can play a role in decision support or business planning, and one kind of tool can support the other. (Schmidt, 2002)

## 3.3 Relation Between Business Case and Business

Business Cases – especially those that deal with IT, communications, and infrastructures changes are integral to almost every function area and IT actions have financial consequences that cross boundaries off all kinds (Schmidt, 2002):

- Organizational boundaries
- Management levels
- Functional distinctions
- Budgetary categories (for instance, operating vs. capital).

Accordingly, contributions to Business Case content will have to be drawn selectively from all involved entities.

Furthermore Schmidt (2002) states that defining Business Case subject does not completely determines which cost and benefit line items should be included. Cost and benefit models for this purpose will need to be constructed specifically for the scenario at hand.

According to Jessup and Valacich (2003), business professional will be called on to make Business Case for systems and other capital investments. Finance, accounting, marketing, or management professionals, all are likely to be involved in this process and will need to know how to make Business Case for a system effectively, as well as understand the relevant organizational issues involved. It will be in the organizations best interest to search out systems that are not adding value.

Furthermore, Jessup and Valacich (2003) mention that "making a Business Case," means that people in business have to build a strong, integrated set of arguments and evidence to prove a change, action, or decision adds value to the organization or its constituents. Schmidt (2002) agrees that finding the "best business decision" depends on having all the important benefits in the case, especially if the IT action contributes to strategic business objectives. Furthermore Schmidt (2002) argues that if you assign no finical value to an agreed benefit, that benefit contributes exactly nothing to the financial analysis. However, he further states that this often is not appropriate since the company may invest in technology in order to improve its professional image, improve customer satisfaction, or create a more professional work environment.

Accordingly Schmidt (2002) argues that a good IT Business Case needs all true benefits of both kinds i.e. qualitative and quantitative, but often the large strategic benefits fall to criticism and get left out. Top-level management may be reluctant to credit IT for reaching strategic objectives, probably because IT alone may not guarantee the objective. To exemplify Schmidt (2002) mentions that strategic objectives (like increase market share, increase revenues etc. for example for a large bank) often refer to very large cash flow streams. If an IT investment improves performance in any, even by just a few percent, the benefit of the IT investment can be massive. A few percent of a very large number is a large number. Jessup and Valacich (2003) also emphasise that Business Case may very well have to deal with non-quantifiable as well as quantifiable cost and benefit impacts. The scenario in view may anticipate important contributions to business goals, which cannot be satisfactorily assigned in money.

## 3.4 Relation Between Business Case and Business Process

According to Prosci learning centre (2004), the BPR[16] Business Case is the one place where all relevant facts are documented and linked together into a cohesive story. This story tells people about what, when, where, how and why the reengineering effort:

- Why is the reengineering effort needed (issues & opportunities)?
- How will the effort solve the issues or opportunities facing the organization?
- What is the recommended solution(s)?
- How does the solution address the issues or opportunities (benefits)?
- What will happen to the business if the BPR effort is not undertaken (the do nothing scenario)?
- When will the solutions be deployed?
- How much money, people, and time will be needed to deliver the solution and realize the benefits?

A BPR methodology typically provides some break points where a Business Case should be completed. BPR projects following: concept → definition → design → development → implementation model should write Business Case at the completion of the *concept* phase and the *design* phase. The first forms the foundation for the second. Every milestone in the activity of the team should result in a contribution to Business Case. For example, at the conclusion of the needs analysis phase all of the issues that have been uncovered should be documented in Business Case. Appendices can be created to hold the detail of the analysis – like a customer satisfaction surveys for example. (Prosci learning centre, 2004)

[16] BPR: Business Process Reengineering (http://www.Prosci.com/, 2004-09-08)

## 3.5 Relation Between Business Case and Project Management

Business Case is a model that documents and presents a comprehensive view of the project and provides, among other things, a foundation for the projects financial justification. It is a critical component of the project. The Business Case "makes the case" for change and provides the financial basis for a project. Business Case can be used to communicate the project to others, establish a method for measuring success and receive funding approval for the project. The Business Case tells the project story in a straight forward, easy-to-understand language. If done correctly, the Business Case will provide compelling justification for a change by outlining (at a high level) what is broken and describing (at a level) the solution and its possible impacts. (Prosci learning centre, 2004)

The Business Case answers questions like (Prosci learning centre, 2004):

- Why are we doing this project?
- What is the project about?
- What is our solution to the business problem?
- How does this solution address the key business issues?
- How much will it cost?
- How long will it take?
- Will we suffer a productivity loss during the transition?
- How will the business benefit?
- What is the return on investment and pay back period?
- What are the risks of doing the project?
- What are the risks of not doing the project?
- How will we measure success?
- What alternatives do we have?

## 3.6 Reasons for Creating Business Cases

According to Reifer (2001) one reason for creating Business Case is to show decision makers that the idea under consideration is a good one and that the numbers that surround it makes financial sense. Furthermore, that the focus is primarily on the numbers.

Schmidt (2002) states that another reason is to predict the results of a business decision, in terms that are clear, concrete, and credible. Furthermore, that this is a mission that today is becoming increasingly critical in organizations of all kinds.

Prosci learning centre (2004) identify the most obvious reason for putting together Business Case as to justify the resources necessary to bring a reengineering effort to fruition. However they also add that this implies that Business Case is simply a financial document. While all Business Cases should include financial justification, it should not be the only purpose of the document. Stonehaven group (2004) agree with Prosci learning centre that financial aspects are not the only reason why making a Business Case, but also in Business Case include many non-financial factors. The Stonehaven group (2004) emphasize the people side of project

planning such as doing an organizational impact analysis and a project team member analysis. These activities all contribute to yielding greater non-financial returns such as improved teamwork, better communication, and higher morale. Furthermore, that these factors are difficult to quantify, they are generally acknowledged to lead to greater efficiency and more profits for the company in the medium and long term.

Furthermore Prosci learning centre (2004) argues that three major reasons for creating Business Case can be described in three important roles:

1. The Business Case serves as a wake up call to the team to cause them to *capture the knowledge they have developed about how the business will function both with and without the BPR project*. This is by far the most valuable role Business Case can play in the BPR effort.

2. The second most important role of Business Case is to *verify that the solution substantiates or meets the needs of the business*. It provides a vehicle for the team to step back and subjectively review their facts and assumptions.
3. The final, important role that Business Case plays is to *provide a consistent message* to many different audiences. It is a high level view of the entire project and enables all organizations affected by the effort (customers, management, operations, research & development, service, sales, accounting, finance, etc.) to be cognizant and knowledgeable about the effort/project.

Jessup and Valacich (2003) pronounce that before people in an organization are willing to spend money to build a new system or spending money on an existing system, they want to be convinced that this will be a good investment. Will the system provide automating, learning, and/or strategic benefits? For a proposed system Business Case will be used to determine whether the new system is a "go" or a "no go". For an existing system, Business Case determines whether the company will continue to fund the system. Furthermore, that "making Business Case" is as important for proposed systems as for existing systems. Whether a new system or an existing one is being considered, the goal is to make sure that the system adds value, that it helps the business to achieve its strategy and competitive advantage over its rivals, and that money is being spent wisely.

## 3.7 Why Business Cases Fail

Schmidt (2002) states that Business Case scenarios often fail in two ways. All above theories on Business Case supports this: Reifer (2001), Prosci learning centre (2004), Jessup and Valacich (2003), and Stonehaven group (2004). Either the Business Cases are met with scepticism or a cold shoulder from management and fail to achieve the immediate objective – for instance obtaining funding. Or, they fail when the proposal or plan is implemented and the real costs and benefits turn out to be very different from Business Case estimates.

Schmidt (2002) calls the first cause "*lack of history*". He states that many organizations do not save and use the experiences of previous Business Case exercises to improve current efforts. The problem is that Business Case in a complex setting probably requires arbitrary and

subjective judgements (when allocating costs, or valuing benefits, for instance); it may require new data and information that do not exist in current budgets, business plans, or financial statements: it will very likely need cost and benefits models tailored to fit the action or acquisition under consideration (to determined what belongs in the analysis and what does not). These requirements can be very hard to meet adequately on a "first pass" Business Case, even if the best methods and expertise are used without reference to earlier cases. However Schmidt (2002) suggests how this can be overcome. He states that all these requirements improve when validated and fine-tuned over and over again, through cycles of Business Case analysis and implementation. The data and results will change from Business Case to Business Case but the methodology should be consistent and improved continually. This is the single most effective way to improve Business Case accuracy. Furthermore, that this is also the single most effective way to counter scepticism and improve credibility.

A second major reason that Business Case fail, according to Schmidt (2002), has to do with *the special nature of the financial Business Case*, compared to familiar tools like budgets, accounting reports, and business plans. The latter have much better "text book" definitions and are much easier to approach with prescribed templates and content. Many business people fail to understand, however, just how undefined the term "Business Case" is. A request for a Business Case is similar in some ways to a request for the case builders personal resume: the case builder have a lot of freedom to design the structure and select content; whether or not result is effective depends on the case builders ability to tell a convincing story with compelling logic and facts. This puts high responsibility that often is under-appreciated.

## *3.8 Key points of Business Case - the Current Model*

Below our key points of the interpretation of the current models of Business Case are presented.

### 3.8.1 Benefits of Business Case

In summery Reifer (2001), Prosci learning centre (2004), Schmidt (2002), Jessup and Valacich (2003), and Stonehaven group (2004) declare that to get the best result the builder of a Business Case should take into consideration at least all in this section (figure 3 p. 27, chap 3):

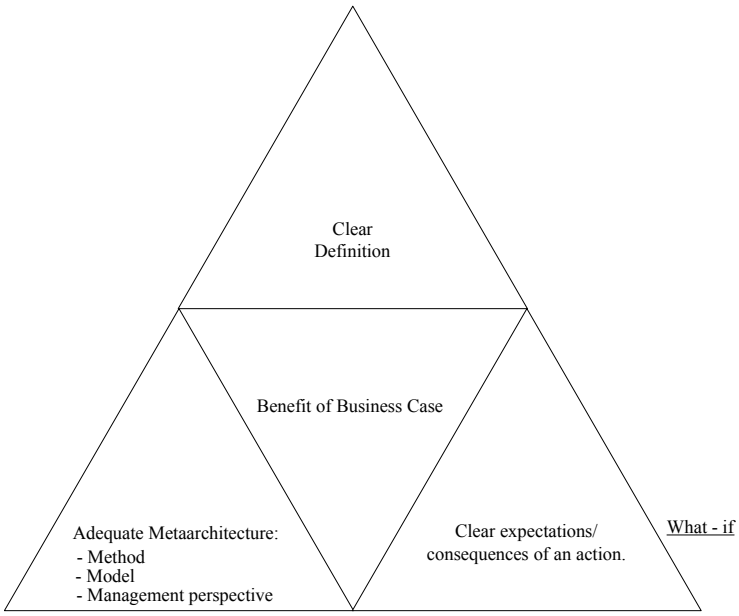



Figure 3: *Benefits of Business Case.*

**Clear definition**
It is important that the case builder and case reader from the outset know what Business Case is about, and whose costs and whose benefits are included, and over what time period. This should show in a clear definition of the case.

- Subject
- Purpose
- Scope

In a Business Case it is important to include all benefits/costs impacts (even those that cannot be defined in financial terms) and include critical success factors (CSF)[17] that must be managed in order to bring predicted results.

**Adequate metaarchitecture**
A sufficient battery of methods, techniques, and tools are crucial elements for creating a good Business Case. These methods, techniques, and tools should help the case builder to:

- Identify benefits (both qualitative and quantitative)
- Estimate costs

To achieve the benefits of a Business Case it needs to show the assumptions and the methods behind the case to ensure the highest possible validity and credibility.

[17] Critical Success Factors (CSF): Success factors for the business. The concept "critical" mean "something essential". The decision on the critical success factors is based on a complicated process that is carried out by leading persons in the business. (Magoulas and Pessi, 1998)

**Clear expectations/consequences of an action**
When using a Business Case as a support for a decision it is essential that it describe the following:

- The time based planning of activities.
- The cash flow related with these activities.
- The identification and measuring of risks.

The Business Case should describe who needs to do what, by when, in order for the expected result to appear. The readers of the case also need to know how to assess the risks underlying predicted results.

### 3.8.2 Business Case From a Management Perspective

It can be derived from Reifer's (2001) example[18] of a Business Case that Business Case agrees with strategy. Strategy is a theory about how the organization does business. This theory is defined in two dimensions, i.e. market and product, whereas a richer theory also consists of "Know How", (figure 4 p. 29 chap 3). A change process normally starts with an initial analysis into the present situation (as is), i.e. the present strategy for the business to reach its goals. Thus, supply the stakeholders' expectations on the business. The change process is nourished through people's dreams and visions for the future (to be), i.e. the strategy to supply the future vision for the business. The change process eventually ends in a change decision reflecting the feasibility of business information and competence requirements. From a consultants perspective it is desirable to present all these aspects in a structured way to the customer.

[18] See Appendix 3 Reifer's Example, pp. 39 - 40

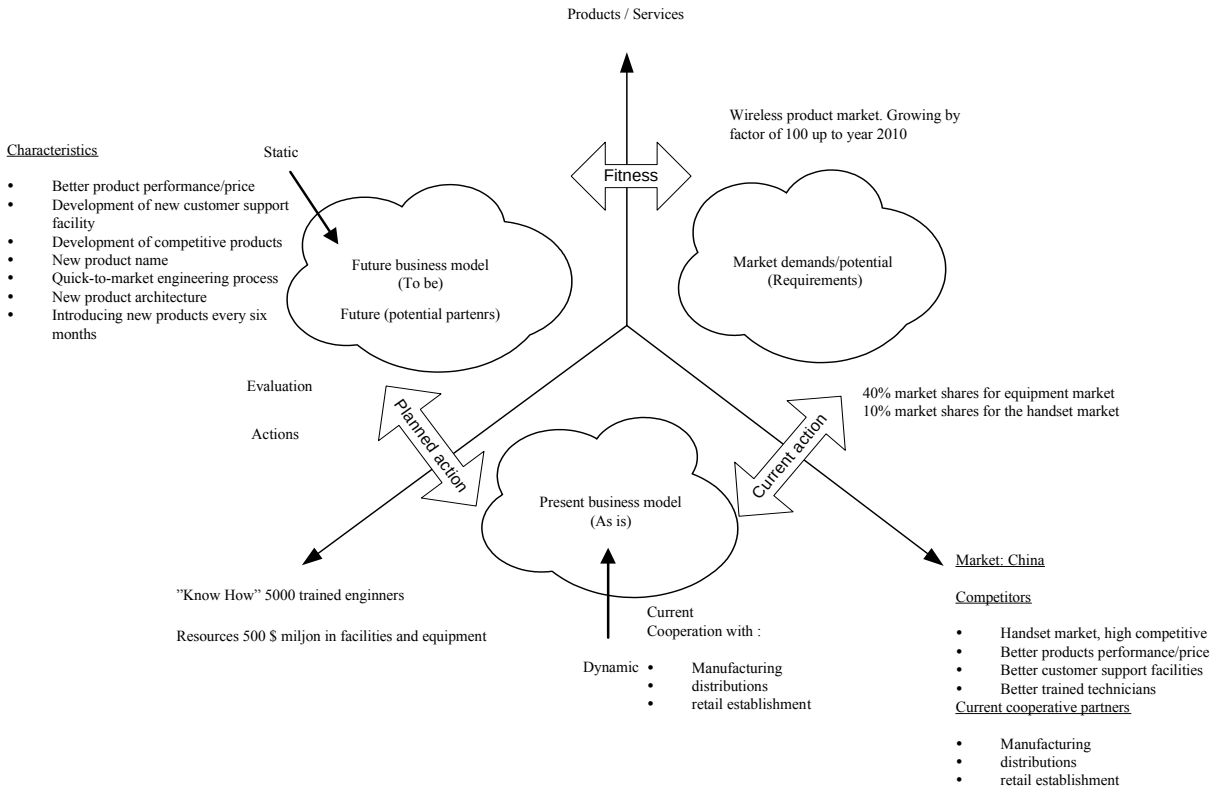



Figure 4: *Management perspective.*

### 3.8.3 Business Case From a Methodological Perspective

As the figure illustrates (figure 5 p. 30 chap 3), the techniques are sprinkled throughout the Business Case development process along with guidance on how to apply them in practice to reinforce the nine principles as developing Business Cases, do trade offs, and perform financial analysis. Business Cases are prepared throughout the software development process to stimulate pursuit of good ideas and improvements. The business planning process emphasizes use of Business Cases for justifying major expenditures on new initiatives to management. Software engineers use Business Cases as part of the tradeoff analysis they conduct throughout the life cycle.

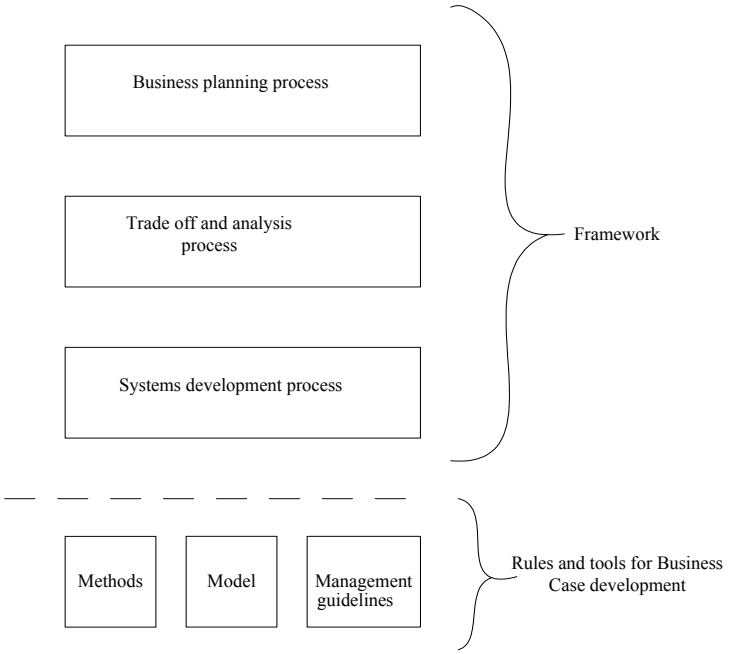



Figure 5: *The Business Cases process, Reifer (2001).*

**Management (guidelines)**
According to Reifer (2001) several principles or fundamental truths can be applied, when developing Business Case. These principles are based on decision theory. The nine principles provide the foundation for the techniques described below, i.e. the Business Case formulation.

The nine principles below talk about the future to determine the impact of alternatives under consideration. It says it is more interesting looking in costs at completion than cost to date. In other words, influence the future with decisions, not the past. Reifer (2001)

The nine principles:

1. Decisions presuppose realistic alternatives.
2. Money is the common denominator. When making decisions, the prospective consequences of each of the alternatives need to be expressed in common monetary units.
3. Time is money. Money has a value that increases over time due to inflation.
4. Distinct decisions⟶ distinct criteria. Separate decisions should be considered separately.
5. Decisions concern both quantitative and qualitative factors.
6. Risks must be quantifiable
7. Timing for decisions is critical (avoid delays)
8. Actuality is presupposed. (Current state rather than past)
9. Decision processes should be periodically assessed

**Methods/Techniques**

There exist a number of different methods/techniques that contributes to Business Cases. According to Reifer (2001) the methods aim to support, quantify the costs/benefits of alternatives, and develop recommendations that make sense for the organization.

The methods, techniques and tools we have invented are described in the table below. There might be more methods/techniques with the same aim but the methods/techniques described are an inventory of Schmidt's (2002), Prosci learning center (2004) and Reifer's (2001) examples that combined develop the numbers etc. that makes up the Business Case. Furthermore, Prosci learning center (2004) argues that the choice of methods is dependent on the nature and scope of the individual case.

| Methods/Techniques | Aim | Situation |
|---|---|---|
| Breakeven analysis | To identify the breakeven point. | Benefits equal costs. |
| Cause-and-Effect analysis | To explore solutions to problems. | Display all possible causes of a problem, event etc. |
| Cost/Benefit analysis | To avoid costs or save costs. | Future organizations avoidance of costs. |
| Value chain analysis | To evaluate alternatives. | Assessing the impacts of each alternative. |
| Investment of opportunity analysis | To evaluate the attractiveness of alternatives. | |
| Pareto analysis (80/20) | To evaluate the "pareto" of alternatives. | Vital few (20%)<br>Trivial many (80%) |
| Payback analysis | To determine the number of periods required recovering once investment. | |
| Sensitivity analysis | To determine how the result change as small changes are made to parametric values. | For example, when the price is sensitive to the order quantity. |
| Risk analysis | To show how firm the foundation built on assumptions is. | When the case result heavily depend on assumptions. |
| Trends analysis | To understand how prices vary with season. | |

| Methods/Techniques | Aim | Situation |
|---|---|---|
| Return on investment (ROI) | To determine the income an investment provides. | |
| Total value of opportunity (TVO) | To determine the overall business value expected by an IT-enabled business initiative. | |
| Discount cash flow (DCF) | To adjust the value of future cash flows. | When evaluating financial events that extend across more than one year into the future. |
| Net present value (NVP) | To compare the value of money today versus the value of that same money in the future. | When taking inflation and returns into account. |
| Internal rate of return (IRR) | To show the return that can be earned on the capital invested in the project. | When the Business Case subject is competing for funding with other alternatives. |
| **Methods/Techniques** | **Aim** | **Situation** |
| Payback period | Assess the amount of time taken to break even on an investment. | Since this method ignores the time value of money and cash flow after the payback period, it can provide only a partial picture of whether the investment is worthwhile. |
| Total cost of ownership (TCO) | Assess how much it actually costs to own for example a PC. | When assessing the original costs of for example a PC including the computer and software, hardware and software upgrades, maintenance, technical support, and training. |
| Cost per transaction, cost per employee, cost per customer | | |
| Activity based costing (ABC) | Justifying the impact of changes in a business. | When quantifying benefits based on work performed or activities rather then headcount. |
| SWOT | To show the prospects for a project's success. | Testing the feasibility of a project objective. |

Table 5: *Examples of methods/techniques, their aim, and situation Reifer (2001). Schmidt (2002), Prosci (2004), Stonehaven Group (2004)*

**Models**
The tools used in conjunction with the techniques/methods, to perform Business Case analysis are: Reifer (2001)

1. Spreadsheets
2. Financial calculators
3. Cost models (COCOMO)

*Spreadsheets* are used because they are considered simple, easy to use, and allow alternatives to be compared. The *financial calculator* can be used to compute the present value and discount rates. *Cost models* on the other hand are more sophisticated tools. The models can be used to perform Business Case analysis (quantify and compare costs of options, and so on). One of the most popular of these models, according to Reifer (2001), is the COCOMO model. However, any of the models on the market today can be used for this purpose.

Prosci learning centre (2004) argues that the most common tool is Excel. Furthermore he says that Excel can be used for the calculation of NVP[19] and IRR[20].

### 3.8.4 The Structure of Business Case

According to Schmidt (2002) "*designing the Business Case is a project in its own*". The outline of the case building project (action) is also an outline for the case report. The finished Business Case report may use different headings, but no matter what labels and titles are used, a solid case addresses the purpose of each section and questions below.

**Definition**

- What the case is about (subject)?
- Why it is being built (purpose)?
- What is the business objectives addressed by the subject of the case?

**Design**

Delimiting the case through fixing the design elements.

- Whose costs are examined?
- Whose benefits are examined?
- Over what time period?
- Which rules should be used for deciding what belongs in the case and what does not?
- Which important assumptions is the base of the case?

[19] NPV: Net Present Value. An approach used in capital budgeting where the present value of cash inflow is subtracted from the present value of cash outflows. (www.investopedia.com, 2004-09-09)
[20] IRR: Internal Rate of Return Often used in capital budgeting, it is the interest rate that makes net present value of all cash flow equal zero.( www.investopedia.com, 2004-09-09)

**Impacts/Consequences**

- Which results (financial/ non-financial) are expected?
- How the expected results depend on important assumptions?
- What specific action should be recommended?

The result of the structure should be, when reading the Business Case, a clear understanding of the rational for including or excluding items, the quality of the data, implications of the financial result, the likelihood of achieving predicted results, and practical recommendations for achieving projected results. In other words, understanding and credibility comes from a logical structure that is built in stages. Schmidt (2002)

### 3.8.5 Weaknesses With Business Case

Today Business Cases struggles with three major weaknesses: (1) design, (2) validity, and (3) time lines. Reifer (2001), Prosci learning centre (2004), Schmidt (2002), Jessup and Valacich (2003), and Stonehaven group (2004)

- Business Cases lack design; costs and benefits depend on design.
- Business Cases lack time lines; managers need to know when costs and benefits are expected in order to manage them.
- Business Cases do not have self-evident validity, because it does not reveal its methods.

Another weakness with the concept of Business Case is that it focuses too much on the financial aspects of the design. To get a good description of the consequences it is important to take all things into consideration like FA/SIMM[21] for instance and not solely the financial aspects.

[21] FA/SIMM: is a method for business, problem, goal and strength analysis. (http://www.vits.org/misc/trampolin.asp, 2004-08-30)

### 3.8.6 A Strategy for Bridging Weaknesses in Business Case

Business Case is just a model for answering some selective questions with respect to consequences of a single project (action). For instance (Schmidt, 2002):

- Which cost items should be included in the case?
- What kinds of benefits belong in the case?
- How should these impacts be assigned financial value?
- What should be done with the business impacts that cannot be estimated in monetary terms?

However, these issues lack reference to reality because they refer to the evaluation of something that is "invisible", therefore business modeling. Business modeling is a necessary precondition in defining the scope and delimitation of a Business Case. However, Business Case is an unclear concept, for instance:

1. Reifer (2001) refers to a business model rather than to a Business Case, whereas Schmidt (2002) sees a clear distinction between a Business Case and a business model.

2. Business Cases concern financial and technical issues rather than business issues. That it, in this sense, is related to the implementation planning rather than to the understanding of how a business idea converts into alternative business models (strategies).

3. Business Cases (scenarios) can lead to a business environment defined in terms of information islands on information labyrinths because the whole concept is based on an incremental rather than a holistic business philosophy.

However, according to Schmidt (2002) Business Cases can be useful in the implementation of a business model.

### 3.8.7 Criticism of Business Case – the Current Model

Below follows our criticism of the current model of Business Case:

- According to Schmidt (2002) a Business Case is a decision model, which answer the question: *What are the likely financial and other business consequences if we take this or that action (or decision)?* However, if Business Case is used only in this manner we believe that the consequence will be loss of good overview, and by that management.

- The lack of understanding on the definition of what a Business Case really is and its use is one reason why so many cases fails, i.e. they are not believed or they do not predict what actually happens.

- All the available literature points at that the validity of the answers that Business Cases give is unreliable.

- The current use of Business Cases is context free.

- A solely financial orientation. The ones who fail with the implementation of techniques are the ones that carry out too many economic calculations and by doing so prevent the technique. This is something Gerstein (1987) also emphasize.

- In the example in Prosci learning centre (2004), they do not put the scope in relation to the rest of the business. They do not illustrate where in the business the process is, and how other processes and parts of the organization get affected. It is important not only to show the sub-process but also to show the sub-process relationship to the whole business in a holistic matter. This to be able to localize responsibility.
- Short term rather than long term time horizon.

- Focusing on operation rather than strategic evaluation (effectiveness, efficiency, efficacy, ethicality and elegance).

## 3.9 Conclusions

We have met many different perceptions on what the current model of Business Case is. We can establish:

- To begin with, there is not one uniform interpretation on what a Business Case is. Therefore it is impossible to establish one definition of what a Business Case "really" is. It exist confusion in regard to (1) terminology for example, a Business Case can be the result of a process or the process itself, (2) delimitation, (3) basis available to create Business Case, (4) the result Business Case should produce/contain. For example, Reifer (2001) refers to a business model rather than to a Business Case, whereas Schmidt (2002) sees a clear distinction between Business Case and business model.

- Secondly, every discipline (economists, marketers, engineers, system analysts, purchasers, logistics, quality inspectors etc.) uses their specific way and language to create Business Cases.

- The common denominator in all these new Business Case approaches are thus to make some kind of consequence analysis or an assessment of effects of a change on the basis of quality, costs, time, risks, etc.

Our efforts present a rough taxonomy of Business Case, based on theories in terms of grade of structure that is decided in terms of functions and matrices. On the basis of the above it exist these three different types of Business Case: (1) Unstructured, (2) Structured and (3) Semi-structured.

**Unstructured**: gives direction but lack functional formalization (how you proceed) and/or matrix formalization. Furthermore, it exists no clarity on delimitation, content, scope, form etc. Unstructured Business Cases are fragmental, i.e. not holistic.

| Reifer | Schmidt | Prosci learning centre | Sustainability Online |
|---|---|---|---|
| *"Materials prepared for decision makers to show that the business idea under consideration is a good one and that the numbers make financial as well as technical sense for the organization*." | *"A decision and planning tool that project the likely financial results and other business consequences of an action or decision."* | *"A model that documents and presents a comprehensive view of the project and provides, among other things, a foundation for the projects financial justification."* | *"Business Case is suppose to assess the harmony between the sustainability factors, critical business success factors*" |

Table 6: *Four unstructured Business Cases.*

**Structured**: gives direction and clarity in the shape of function that is in principle represented of a "what-if" decision situation. This structure is very fragmental and it leaves many unanswered questions like for example questions on delimitation (what do we exactly mean by projects to improve quality, or usability, or IT security?) Normally it is not possible to have delimitation if it exist strong mutual dependencies between different factors.

| | |
|---|---|
| If - then | If A then C's are expected |
| What - if | What C's are expected if A is implemented? |
| If not -then | If not A then C's are expected |

C's = Consequences
- Financial
- Business
- etc.

Figure 6: *An example of Schmidt's definition of a structured Business Case.*

**Semi-structured:** exist in terms of matrices that help us to have a good orientation and delimitation of business areas and problem areas that will be affected by the choice of Business Case. With that the rest is similar to the unstructured situation that was described above. The structured part of Business Case exists in shape of a matrix on the basis of the stakeholders' expectations and support of the critical success factors of the business, from which we can identify different problem areas (knowledge area, business area, etc. for example rationalization of business process on the basis of the customer service that should be provided. In other words how will the quality of the customer service be affected if we perform A, B, or C to reduce the costs with 10%?).

Semi-structured Business Cases can either be in a holistic manner or a holistic with a focus. W in the figure (figure 7, p. 38, chap. 3) below stands for Weltanschauung[22].

*Holistic*

| BUSINESS CASE | | SUPPORT FACTORS | | | |
|---|---|---|---|---|---|
| | | (W) Client | (W) Actor | (W) Owner | (W) Environment |
| BUSINESS SUCCESS FACTORS | Activity 1 | | | | |
| | Activity 2 | | | | |
| | Activity 3 | | | | |
| | Activity 4 | | | | |

Figure 7: *A semi-structured definition of a holistic Business Case*[23]

[22] Weltanschauung is described in Appendix 1 SACIS's Theoretical Framework p. 8
[23] http://www.matrixresourses.com, 2004-05-24, http://www.sustainability.com, 2004-05-24

*Holistic with a focus*

| BUSINESS CASE | | SUPPORT FACTORS | | | |
|---|---|---|---|---|---|
| | | (W) Client | (W) Actor | (W) Owner | (W) Environment |
| BUSINESS SUCCESS FACTORS | Activity 1 | | | | |
| | Activity 2 | | | | |
| | Activity 3 | | | | |
| | Activity 4 | | | | |

Figure 8: *A semi-structured definition of a holistic Business Case with a focus*[24]

The literature talks about the learning, evolving process when creating Business Cases, but the practice and their examples show the more traditional, three-stage model, approach (figure 9 p. 39, chap 3), (Bowman, Davis et al. 1981, Bowman, Wetherbe et al. 1983, Brancheau and Wetherbe 1986, Wetherbe 1988, and Magoulas and Pessi 1998)

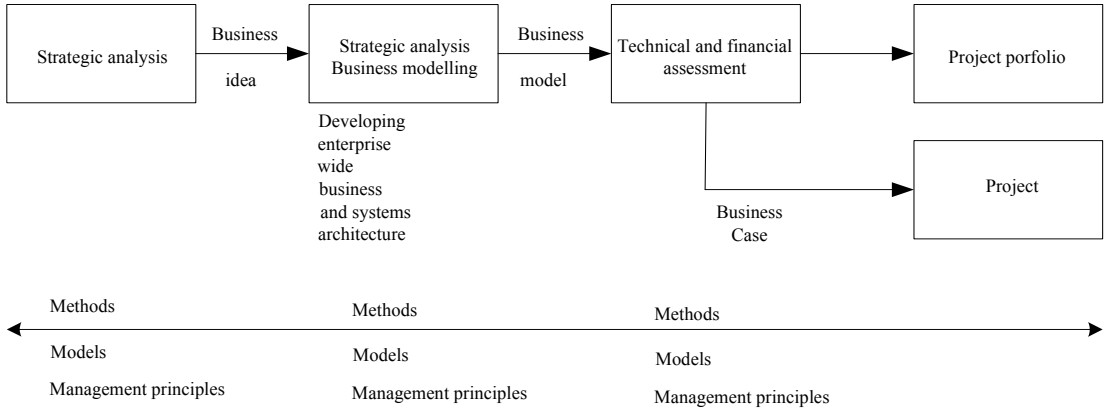



Figure 9: *Three-stage model, Davis (1981).*

Today the traditional approach i.e. three-stage model is a common model used in the business development process. This approach is sequential and focus on fixed goals. Furthermore, the approach presupposes clear defined problems and allows very little iteration between the stages. This can lead to that the "real" problems are not understood, and mistakes done in earlier stages can not be corrected, this because the stages in the traditional approach do not allow to mature in every situation before continue, and stages that are not thoroughly worked out ca not be reconstructed. The consequence of this can be that if the business concept is incorrect, the business model will not illustrate what the stakeholders really want, that results in weak Business Cases. To create a strong Business Case it is important to have correct/relevant data otherwise the Business Case probably will fail because the wrong subject, scope, benefits, costs and consequences etc. will be included in the Business Case.

[24] http://www.matrixresourses.com, 2004-05-24, http://www.sustainability.com, 2004-05-24

In today's businesses, problems are often blurry and undefined, business objectives obscure, and multiple legitimate viewpoints often exist. Faced with this, we believe that the traditional approach is inadequate. Therefore we have chosen to create an alternative model, SACIS[25]. This model allows every stage to mature in every situation before continuing, and stages that are not thoroughly worked out can be reconstructed. It also supports a comparison between the business model (as is) and the business model (to be), which the traditional approach does not mention. This leads to a thoroughly worked business model(s) that later is the basis for creating Business Cases that are strong and show the customer the attractiveness of a change in a holistic manner.

As we have mention several times before Business Cases mean different things to different stakeholders. Evaluation yes, but in who's the language of? In principle, every expert has his or her own Business Cases with respect to the domain they represent. Marketing officers, manufacturing officers, purchase officers; logistic officers, financial officers etc. all have their specific and unique Business Cases. However, there are no communication between their cases because of their differences in concept languages and values. Therefore the best solution according our interpretation is to relate these to a global holistic business model.

[25] See SACIS – an Alternative Model, pp. 41 – 57, chap 4.

# 4 SACIS - an Alternative Model

With Checkland (1981, 1985, 1989, 1990, 1999), Mackenzie (1984), and Hedberg (1980) [26] as a basis, we have created inductively an adequate model for coordinated and proactive enterprise development. Firstly, we will introduce SACIS. Secondly, we will present the design of inquiry questions, i.e. invent the experiences of consultants with respect to the motives, techniques, development and use of Business Cases.

## *4.1 Introduction to SACIS*

This section presents our model[27], its stages etc. Accordingly, SACIS is just a model for supporting the mutual understanding of stakeholders about the crucial and ever changing issues and interests that relates with a coordinated and proactive enterprise development. Using this model, we will invent the crucial developmental issues i.e. adjusts the model through our interpretation of Dahlboms/Magoulas conceptual framework about business as a social organization. Furthermore in this section, we will put Business Case in context to the above and relate use of Business Case in the context of business concepts, i.e. root definition of a business enterprise, and business models, i.e. information based business-wide architecture and finally give a summery of SACIS in structure of a matrix etc.

### 4.1.1 Stages in SACIS

On the next page follows a description of each stage in SACIS (figure 10, p. 42, chap. 4): (1) Situation Analysis, (2) Architectural Design, (3) Change Management, and (4) Implementation.

[26] See Appendix 1 SACIS's Theoretical Framework pp. 1-25

[27] SACIS: *Situation Analysis, Architectural Design, Change Management, Implementation, Situation Analysis*

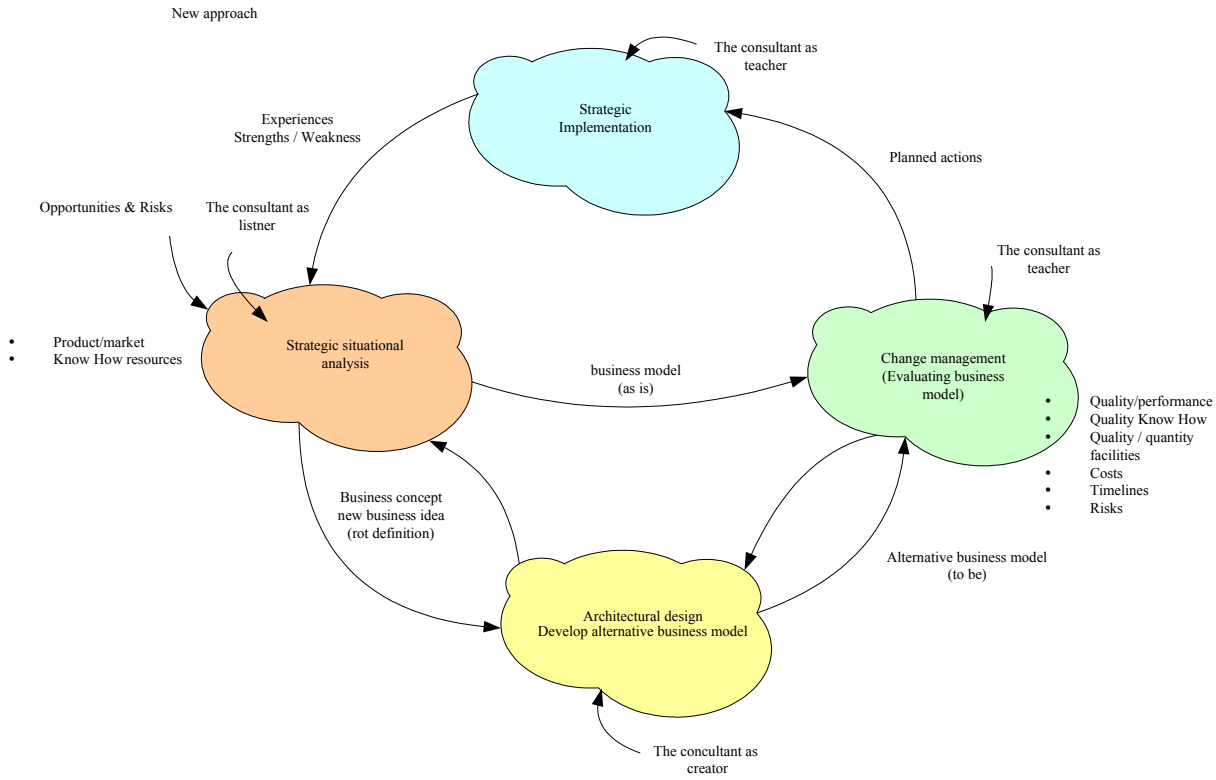



Figure 10: *SACIS basis.*

## Situation Analysis

In the Situation Analysis, according to Checkland (1985), the role of the consultant is more of a listener. In this stage it is important to formulate a situational assessment. The present situation is the details regarding the problem or opportunities facing the organization. It is a statement about what is happening in the organization today. It is vital that the consultants investigate which recourses that already exist, which the existing systems are and how earlier decision-making was done (Checkland, 1985, Mackenzie, 1984, Hedberg, 1980). To be able to depict and evaluate the effects of the current situation or present business model, it is important to identify the stakeholders and that all stakeholders participate in the process (Checkland, 1985).

Furthermore in this stage, the objective of the reengineering effort is described. To get an understanding of the overall objective for the project there should be an initial discussion with the stakeholders. When redefining the business concept (vision/mission) everybody's expectations and individual goals on all levels must be realized to get a "win-win" situation. (Hedberg 1980, Checkland 1999, Mackenzie 1984, Magoulas and Pessi 1998, Smith 1999)

Mackenzie (1984) argues that a strategy is necessary when developing a theory and a technology to design an organization. Depending on the nature and the scope of the project a decision on strategy (top-down[28] or bottom-up[29]) is also taken at this stage.

[28] Top-down: A strategy that begins with a look at the overall picture and then narrows it down. (http://www.advfn.com/money-words_term_5001_top_down.html, 2004-08-31)

The output from the Situation Analysis is a business concept (root definition) and a business model representing the present situation (as is). A business concept (root definition) is a description of a new business idea for the future. In other words, the business concept is the stakeholders' dreams and business requirements (Checkland, 1985, Smith, 1999). The business model (as is) is a description of the present situation i.e. the current strategy.

**Architectural Design**

In the Architectural Design stage, the role of the consultant is a creator. Input in this stage is a business concept (root definition), which is the basis for creating a new/alternative business model(s). If the business concept is unclear the SACIS - model emphasize iteration between Situation Analysis and Architectural Design. The new/alternative business model is an architectural design of the business concept. Strategy assumes architecture. In other words, the business model is based on the stakeholders' dreams and business requirements for the organization. (Checkland, 1985, Mackenzie, 1984, Hedberg, 1980)

The same business concept can lead to one or several new/alternative business models (Checkland, 1985). People that are independent from the organization should perform the design process. Members within the organization can have a hard time being objective because they have their own interests in the process. (Mackenzie, 1984)

The design issues changes over time. A problem can therefore adopt a new shape and be out of date if the design takes to long. Therefore it is crucial to strive for swiftness in the architectural design process. (Mackenzie, 1984)

According to Mackenzie (1984) clarity about the new design makes it easier to implement and it becomes more stable. He further argues that a design that is specific about details and assumptions is to prefer, in other words, a clear specification increases the understanding among the members in the organization, which leads to an acceptance of the new design.

Accordingly, the output from the Architectural Design stage is a new/alternative business model(s). Checkland (1985), Mackenzie (1984), Hedberg (1980)

[29] Bottom-up: A strategy that begins with a look at the "low level" procedures and then moves up towards a more overall picture. (http://www.cs.bham.ac.uk/research/poplog/primer/node25.html, 2004-08-31)

**Change Management**
In this stage where the role of the consultant is a teacher, changes are defined together with all involved stakeholders through:

- Comparative analysis between current and future business models. (Checkland, 1985)
- Evaluation with respect to (Schmidt, 2002), (Reifer, 2001) Prosci learning centre (2004):
    - Quality improvement
    - Costs
    - Benefits
    - Timelines
    - Risks
    - Opportunities

    To evaluate each particular change, action or decision alternative, Business Case can be used to answer the question: "*What are the likely financial and other business consequences if we take this or that action (or decision)?*" (Schmidt, 2002)

Checkland (1985) mention that the purpose of this stage is to create a debate among all stakeholders about conceivable changes that meet two criteria: systemically and culturally feasible in the particular situation in question. He further argues that do the models not meet all the stakeholders' requirements, one have to go back to the stage of Architectural Design or Situation Analysis. In addition Hedberg (1980) states the importance to take all perspectives and knowledge (technology, people, organizations, power, rewards, and values) into consideration for sound decision making.

There are many political factors that need to be taken into consideration, for example owner relations and labour union etc. If these factors are not noticed in the evaluation it could inhibit the next stage, implementation. (Mackenzie, 1984)

In Change Management appropriate changes are also identified. Definition of desirable and feasible changes given a new problem situation and decide how these changes will be implement. The output from the Change management stage is planned actions (action plan). (Checkland, 1985)

**Implementation**
In the Implementation stage, where the consultant role also is a teacher, a plan for action (implementation) is defined in terms of projects i.e. a project portfolio (Checkland, 1985). A project portfolio is an organized series of projects, to keep track on running projects (Melissa Solomon, 2004).

When some changes accepted as "desirable" and "feasible" (Checkland, 1985) have been identified together with all involved stakeholders in Change Management, implementing these changes almost completes the cycle of SACIS. There is now a somewhat more structured problems situation, and addressing it (that is, implementing the changes) can itself be tackled by using SACIS in further cycles.

The output from the Implementation stage is experienced strengths and weaknesses with the new solution.

### 4.1.2 Interpretation of Conceptual Framework

We have further developed Magoulas interpretation of Dahlboms conceptual framework[30] to be able to use it in our model, SACIS (figure 11, p. 45, chap. 4). All these parts (social structure, goal, processes, stakeholders and existing and planned systems) are important to take into consideration when developing an understanding of the users environment, and to reinforce and improve the knowledge about the social environment (the business).

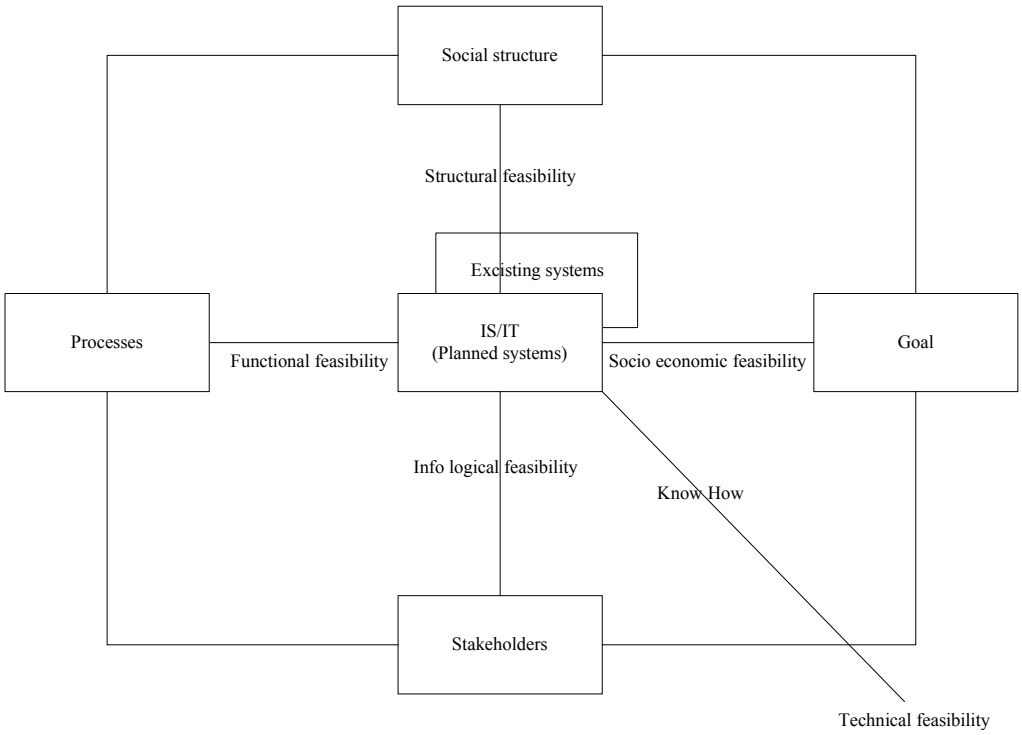



Figure 11: *A further development of Magoulas interpretation of Dahlboms conceptual framework.*

[30] See Appendix 1 SACIS's Theoretical Framework pp. 1 - 2

#### 4.1.2.1 Business Parts in a Conceptual Framework

Below follows a description of every business part and their feasibility to IS/IT in the conceptual framework above

**Social Structure:** The social structure defines how the stakeholders relate to one another. In other words, the structure defines the critical and sensitive relationship between the organizations and its stakeholders. The social structure is decided on which expectations there are on values, norms, roles the stakeholders have, and how these are coordinated contiguous to give a current picture of the organization as a whole. The social structure can, according to our model, be divided into an organizational and cultural structure:

- *The organizational structure* could be viewed as an idealized picture of how the cooperation should function between humans and organizations (Blixt & Svärdström, 2002). Checkland (1985) consider the "reality" to be human architecture systems that are connected. This could be viewed as the organizational structure.

- *The cultural structure c*ould be considered as the organizations, thus the stakeholders, common values, expectations, knowledge, traditions and norms etc. (Low Sui [Reference to Pheng] and Christopher H. Y. [Reference to Leong], 2000).

Our model takes all this into consideration and the stakeholders' relationship to one another.

**Processes:** Processes describe the activities that exist in a business. In best case, the processes are a result from a common vision. Further, Liu & Yu (2004) mean that by taking the standpoint in the vision one can examine alternative business processes.

Processes transform "input" to "output" and can be divided in to two major groups, structured and unstructured. In a structured process there is an already known procedure. While in an unstructured process one have to try ones way forward. Semi-structured processes are a mix of the two types above.

Processes can also be divided into value-creating respective value-supporting processes with consideration to the stakeholders' expectations. Examples of value-creating processes are purchase, operations, logistics etc. and examples of value-supporting processes are product development, competence development etc. (Porter 1980)

When carrying out a change our wish is to, in our model, mirror the holistic view of business. A change to one or more of these processes will affect the whole business or organization.

**Stakeholders:** The stakeholders are the individuals that participate or affect the organizations business. Thus, they can affect or be affected by how well the organization succeeds with its business. With this in mind we agree with Anderson and Olsson's (2003) interpretation of

Bolman and Deal (1997) when they mention that with the stakeholders' motivation together with their sense of involvement leads to an increased acceptance to change.

The stakeholders can be divided into direct and indirect stakeholders. The direct stakeholders are customers, employees (actors), and owners (Checkland, 1985). The indirect are authorities, consultants, competitors, banks, etc (environment). Further, it is important that the developer, in an initial state, create an understanding of the social and political relationships to clarify which the stakeholders are (Checkland, 1985, Blixt & Svärdström, 2002, Magoulas and Pessi, 1998, Hedberg, 1980 and Mackenzie, 1984).

**Goal (vision/mission):** There are many important factors why management, project management, and stakeholders should have a clear understanding of the common vision in connection to all types of projects.

One of the most fundamental elements in a business improvement, according to Mitchell & Zmud (1995), is to have a clearly defined vision/mission, and a formulated strategy that will function as a plan to achieve a successful organization (Al-Mashari et al., 2003).

The goals control the design of the organization and should be established through negotiations with all involved stakeholders. This because a clearly defined goal increase motivation and the feeling of participation, that should lead to a better goal fulfillment and a better social climate in the business. To secure the stakeholders the goal shall not only represent the present stakeholders but also the future stakeholders. (Checkland 1999, Mackenzie 1984, Hedberg 1980, Smith 1999)

Our model focus on, in cooperated and proactive enterprise development, that all people in the entire organization have a clear vision of how the business should work. All the stakeholders' expectations should be satisfied. Creation of a common vision is vital to reach acceptation of change Al-Mashari et al. (2003). Furthermore, Al-Mashari et al. (2003) emphasize that if the organization does not establish a clear vision and an understanding of the business proposal the integration of the new proposal could swiftly become a disaster.

**IS/IT:** To achieve the broader interests of the organization it is important that the IS/IT connect all parts (social structure, processes, stakeholders, goals, existing and planned systems) and support them with relevant information. IS/IT should support and take into consideration the following functions:

1. Goal achieving
2. Needs and interests of the stakeholders
3. Processes that hopefully are results of the goals
4. The social structure

**Existing and Planned Systems:** The existing systems are the ones that already exist within the business. These can be updated, further developed, or terminated. It could be IT or IS systems or a combination of both. The planned systems could, apart from updated, further developed, or terminated, also be built from scratch. This is also IT or IS systems or a combination of both.

#### 4.1.2.2 Feasibility in the Conceptual Framework

Below follows an in-dept description of the feasibilities in the conceptual framework (figure 11, p. 45, chap. 4).

**Structural Feasibility:** The structural feasibility expresses the sound relationship between the social structures and IS/IT. It refers to the interaction between stakeholders and organization and their interplay with IS/IT. This feasibility depends largely on responsibility and ownership. It is important that the stakeholders feel involved and accept changes within the structure and business. If the development should have a positive impact all stakeholders must approve of the change. If people feel they do not have a personal responsibility, this lead to difficulties cooperating or in worst-case sabotage. Another structural issue is openness. It is important to clarify different individuals authorities.

Projects express a collection of activities that should be coordinated. Thus, who are responsible for this coordination? The situation gets even worse if many projects are running at the same time and more complicated if the projects must take existing systems into consideration. Thus, this means that the project management is always subordinated to the social structure, i.e. the stakeholders. Every form of deviation from this rule will according to us with support from Hedberg (1980), Langefors (1975), Magoulas & Pessi (1998), leads to failure. Our empirical support is directly derived from the empirical study of Maria Bergenstjerna et al. (1999).

**Socio-economic Feasibility:** The socio-economical feasibility express the relationship that exists between IS, in general, and IS-projects in particular, and the goals of the organization. This means that IS should be the means for realization of the goals. The feasibility gives an expression of social equality between the stakeholders. Every form of priority of a group's goal in relation to the others will fail. The theoretical support we use for this statement comes directly from Hedberg (1980) and Langefors (1975), while the empirical support emerge very clear in Maria Bergenstjerna et al. (1999) thesis.

The present society development is characterized by a "win-win" relationship. This can be understood in annual reports that organizations presents. Concrete, this means that the socio-economical feasibility emphasize that maximization of profit should be in harmony with maximization of the employees' possibility to grow and involvement in decision making, or the customers influence on the business design as a whole.

**Info-logical Feasibility:** The info-logical feasibility defines the relationship that exists between the knowledge base and ability of the stakeholders and IS (planned as well as existing). In other words, the stakeholders' part of and participation in defining and planning IS, and the stakeholders' ability to use it. In many cases, the part of the process that is converted to an IT-based activity constitutes a part of the individuals' responsibility and authority. Therefore IS in principle should, be in harmony with the individuals cognitive ability, communicational styles, problem solving, and social-communicational relationships etc. This is in agreement with Langefors (1975) as well as Ackoff (1980).

**Functional Feasibility:** The functional feasibility defines IS in relation to the business value-creating or value-supporting processes. In many cases the value supporting processes are regarded to be able to be left out to outsourcing. IS performs several of the activities that are included in the processes. Therefore we illustrate (figure 11, p. 45, chap. 4) that IS and processes are independent of each other. Furthermore, every IT-project is a process that converts parts of the business value-creating processes into IT-based processes. This means that IT-projects deal with inseparable parts of the business, i.e. transference of process activities to an IT environment demands knowledge of business processes. The business processes logic is unique for every business (Know How). The feasibility is high if IS in general and IT in particular do not change the business processes business logic (Know How) unconditionally. A project that unconditionally changes the processes will lead to chaos and a waist of resources, and not to a social harmony. We collect our theoretical support from Hedberg (1989), Ackoff (1980), and Langefors (1975).

In principal, the social structure reflects the process structure as a result of the goal structure Langefors (1975). Today day many vital processes have become IT-based and offer, "do it yourself" services, for example bank transactions. This means advantages as well as disadvantages (risks). Advantages when it gives the customers continues 24 hour open service, but at the same time it demands that the customer have the knowledge to handle these services on his or her own. This leads to a society that discriminate people in knowledgeable and ignorant groups, i.e. go against the social or business goal. In other words, there is no problem to convert value-creating activities into IT-based activities. The problems lie in the knowledge to use these services. Furthermore this leads to, the simpler and attractive these activities become the harder it becomes for the IT to fulfill these needs.

**Technical Feasibility:** The technical feasibility proves if the concept is technically feasible. The technical feasibility provides knowledge about the product or processes' design, performance, production requirements, and preliminary costs.[31] It touches rules, patters, and structure that concern systematization of informatics and knowledge.

[31] http://www.kccatalyst.com/model2.cfm, 2004-06-03

#### 4.1.2.3 Other Critical View Points

The contradiction to feasibility could be expressed as disharmony and conflicts. This can be expressed in terms of structural conflicts, info-logical conflicts, social conflicts, and real conflicts.

Leadership constitutes a blurred concept, but in relation to our model the role of leadership could become a lot clearer. Within the stakeholder group (figure 11, p. 45, chap. 4) different forms of leadership exist:

*The leader as teacher*: In this role the leaders task is to create preconditions for all stakeholders to gain the same view of the business and its development. This is not an easy task. Among other things it is very time consuming, but necessary because without understanding there is no possibility of undertaking from the stakeholders. Without undertaking there will not be a successful development (Hedberg 1980, Magoulas and Pessi 1998).

*The leader as mediator:* The task is to try to create a feeling of winning between the stakeholders (but there are no theories to support how these interests can be improved without any others interests get deteriorated). Thus, the role of the leader is to keep the different interests in balance and not keep the traditional schools principles and prioritize the interests. The leader's task is not to make decisions, but create an environment for strategic decisions where all stakeholders negotiate which goals apply for a certain time period. This period sets the ground for learning. To secure the stakeholders continues support the goal should not only represent the present stakeholders but also the future stakeholders.

*The leader as architect:* One of the premier tasks for the leader is to design the business on the basis of goal, IS, processes, structures, and competence. The goal with this architecture is to create an overview (Langefors (1975), Magoulas and Pessi (1998). Situations that create a non-overview include, for example, over patching responsibilities, authorities, and relations that are bigger than touched objects Langefors (1975).

*The consultant and his or her role in the development:* From the standpoint of the suggested model, we are critical to development of IS/IT-systems that are independently defined from the context of the business. At the same time the old theories and methods are not experienced as untenable, so, according to us, the roles of the consultant get blurry. Furthermore, it can be read, on the basis of our model, that any change to the network of IS/IT will result in unwanted effects on other parts, i.e. the social structure, goal, stakeholders, and processes. The dream of the IS/IT consultant is to see IS/IT disconnected from the business, but today more and more integration is demanded.

## 4.2 Business Case According to SACIS

Since it exist divided opinions of the concept of Business Case the primary question is not to see what a Business Case really is i.e. establish one definition, but rather to put Business Case in a context and show where in the development process Business Case can be used to evaluate the attractiveness of a strategy (business model).

The common denominator in all these new Business Case approaches are thus to make some kind of consequence analysis or an assessment of effects of a change on the basis of quality, costs, time, risks, etc. i.e. evaluate attractiveness of a change. Thus, according to SACIS Business Case should assess the harmony between the response the business gives the stakeholders (business model, CSF, the business ability to satisfy expectations) and the social surroundings judgment of continuing support (business concept) (figure 12, p. 51, chap. 4) i.e. evaluate the attractiveness of a strategy on the basis of quality, costs, time, risks, etc. This corresponds to the semi-structured Business Case[32].

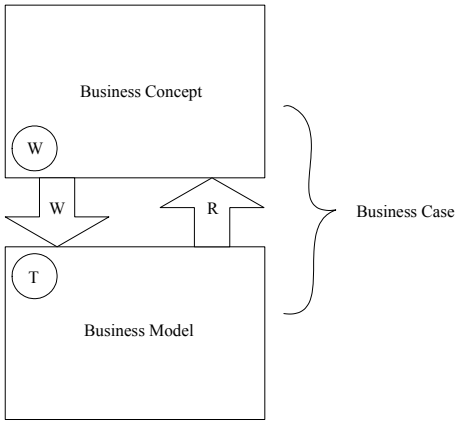



Figure 12: *Harmony between Business Concept and Business Model.*

As the conceptual framework (figure 11, p. 45, chap 4) illustrates, it exist mutual dependencies between all parts that make up a business. Normally it is not possible to have delimitation if it exist strong mutual dependencies between different factors. To get a holistic perspective of an enterprise development it is necessary to conduct an investigation into all parts of the conceptual framework above. When evaluating the attractiveness of a change, in this case a new business model(s) i.e. strategy, consequences etc. on all parts in the framework must be treated in the Business Case even if it is just a change of an IS/IT system.

A business vision (business concept) cannot solely be defined in financial terms but should focus on expected result, and core businesses as goals. Accordingly, the business concept should provide benefits to all involved stakeholders – satisfied customers give satisfied shareholders that give satisfied employees Smith (1999), Checkland (1985). This provides a metrics to measure against, and Business Case assumes a metrics. Therefore an evaluation of a strategy's attractiveness cannot solely be given in quantifiable "hard" factors but also should

[32] See Conclusions, pp. 37 – 40, chap 3

include qualitative "soft" factors since a business concept cannot solely be given in financial terms.

Business Case is used in the Change Management stage (figure 13, p. 53, chap 4) where a comparison analysis between conceptual models (business model as is and business model to be) and evaluation to identify conceivable changes on the basis of for example, information quality, decision quality, product/service quality etc. are conducted. This evaluation can be done with the help of Business Case to provide an understanding of costs, consequences, benefits, risks etc. that are connected to a change i.e. the attractiveness of the proposed strategy. All techniques, methods, and theories have only one purpose and that is to promote a coordinated learning, mutual understanding among all stakeholders (Checkland 1985, Mackenzie 1984, Hedberg 1980). If Business Case has a meaningful value, then even Business Case has to promote learning. Accordingly, Business Case should support the consultant in his or her role as a teacher at this stage to help communicate and help reach mutual understanding and awareness of the attractiveness of a strategy (business model).

Business Case can then be used in the Situation Analysis as part of the basis of the evaluation of "what we got" to promote learning.

## *4.3 SACIS– the Natural Context for Business Case*

In the available literature on Business Case we can see that Business Case lack context. However, there is one interpretation that agrees with SACIS in that sense that strategy (business model) and business concept (support factors) is the correspondence to Business Case[33] but it still lack complete context. Business Case connected to business model helps to give a delimitation of business areas or problem areas that will be affected by the choice of Business Case.

The above agrees with the well-articulated and broad accepted models that have been proposed by: (1) Checkland, (2) Mackenzie, (3) Hedberg and (4) Smith[34]. These models underline the SACIS concept and define Business Case in terms of:

- Cultural feasibility
- Systemic desirability (rational feasibility)
- Social feasibility.

In this sense, SACIS become the natural context for Business Cases. However, social issues lack fixed solutions because the impossibility to absorb the amount of ignorance that is associated with change decisions that forms the future destiny of business. Therefore, it is expected that management should take away undesired states of affairs but at the same time create new ones because of our ignorance. Accordingly, one aspect of SACIS is just its periodization.

[33] See Conclusions pp. 37 - 40, chap 3
[34] See Appendix 1 SACIS's Theoretical Framework pp. 1 - 25

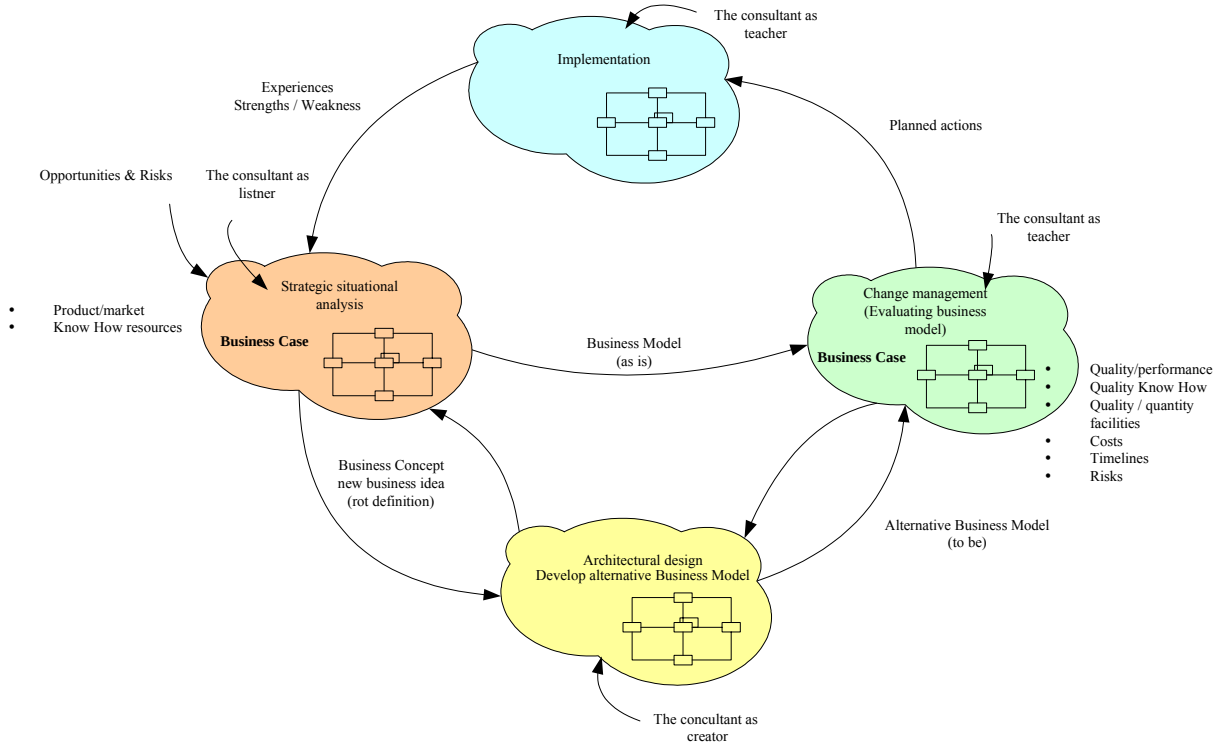



Figure 13: *SACIS, the alternative model*

### 4.3.1 Summery of SACIS

This section summarize our alternative model SACIS. Firstly, in the shape of a matrix that illustrates the different stages and the correspondent participants, product, structure, process, and methods (figure 14, p. 54, chap. 4). Secondly, recapitulate the activities in each stage of SACIS.

## SACIS Matrix

| | S | A | C | I | S |
|---|---|---|---|---|---|
| PARTICIPANTS (WHO?) | • Owner<br>• Client<br>• Actor | • Designer | • Owner<br>• Client<br>• Actorr | | • Owner<br>• Client<br>• Actor |
| PRODUCT (WHAT?) | • Business Concept<br>• Mapping of business architecture | • Business architecture<br>(Business Model to be)<br>(Prototype) | • Decided or proposed changes<br>• **”Business Case”** | Implementation of changes | ”What we got”<br>Basis for evaluation<br>Mapping of the business<br>Experiences of<br>Business Concept &<br>**Business Case** |
| STRUCTURE (WHO’S RESPONSIBLE FOR WHAT?) | • Stakeholders<br>• Consultant (as a listner) | • Designer (as an architect) | Who does what? (experts within respective knowledge domain) | • Stakeholders<br>• Consultant (as a techer) | • Owner<br>• Client<br>• Actor |
| PROCESS (HOW?) | • Description of Business Concept<br>• Description of present business | • Architectural design<br>• Prototyping | • Costs<br>• Risks<br>• Benefits<br>• Timelines<br>• ... | | Evaluation of realized expectations<br>• Satisfied owner<br>• Satisfied client<br>• Satisfied actor |
| METHODS SUGGESTIONS | CATWOE<br>SWOT<br>CSF<br>PEST<br>FA/SIMM | Prototyping:<br>VBS-approach<br>IRM-approach<br>MIS-approach<br>IOS-approach<br>Architectural paradigm for:<br>Process design<br>System-design<br>Resource-design<br>Network-design<br>Object oriented - design | CSF<br>FA/SIMM<br>**Business Case**: Unstructured, Semi structured, Structured<br>(Breakeven analysis, Cause and effect analysis, Cost/benefit analysis/, Pareto, Spread sheets, Cost models, Financial Calculators etc.) | RUP | |

Figure 14: *SACIS matrix.*

Next the activities are recapitulated (table 6 – 9, pp 54 – 55, chap. 4).

## Activities in SACIS

The table below summarizes the activities in the Situation Analysis stage.

| | Activities |
|---|---|
| **Situation Analysis** | • Identify stakeholders.<br>• Describe present business (as is): processes, structures, knowledge, IS, operative goals (service goals, product goals, quality goals, etc.), present restrictions etc.<br>• Define the stakeholders goal/vision, expectations for the whole business (Business Concept)<br>• Decide the scope in room and time. Increase the scope in room and time to identify additional stakeholders.<br>• Discuss and establish strategy or logic (What is it we have to do?)<br>• Identify the business core activities. |

Table 7: *Summary of activities in Situation Analysis*

The table below summarizes the activities in the Architectural Design stage.

| | Activities |
|---|---|
| **Architectural Design** | • Convert Business Concept into an architectural design, conceptual model of the whole business (to be): processes, structures, operative goals etc.<br>• Validate the goodness of the architectural design on the basis of overview, meaningfulness and awareness. |

Table 8: *Summary of activities in Architectural Design.*

The table below summarizes the activities in the Change Management stage.

| | **Activities** |
|---|---|
| **Change Management** | • Comparison analysis between conceptual models (Business Model as is and Business Model to be) and evaluation to identify conceivable changes on the basis of for example: information quality, decision quality, and product/service quality etc.<br>• Handle possible conflicts (structural, functional, info-logical etc. or real interest conflicts).<br>• Evaluate conceivable changes with the help of Business Case:<br>- Quality<br>- Costs<br>- Timelines<br>- Risks<br>- Benefits<br>- …etc. |

Table 9: *Summary of activities in Change Management*

The table below summarizes the activities in the Implementation stage.

| | **Activities** |
|---|---|
| **Implementation** | • Define a plan for action (implementation): in terms of projects (project portfolio).<br>• In house coding or purchase.<br>• Realization: Installation, adjustment, testing.<br>• Transition: Take out the old and bring in the new.<br>• Operation: Ongoing efforts. |

Table 10: *Summary of activities in Implementation*

## 4.4 Design of Inquiry Questions

We designed questions[35] taking our model SACIS as a basis. The questions are a complement to the model and the basis for the empirical work. The purpose of the questions is to validate the model and supplement its content. The model can be seen as a framework, and the questions as what validate and gives it content.

The questions are derived from the three major theories of this Master Thesis: Checkland, Mackenzie, and Hedberg[36], and questions focusing more on Business Case are derived from available literature on Business Case: Prosci learning centre, Reifer, Stonehaven Group, and Schmidt.[37]

### 4.4.1 General Questions on Business Case

The following questions concerning our model in general and Business Case in particular are derived from Checkland (1981,1985, 1989, 1999), Mackenzie (1984) and Hedberg (1980), but some questions are also more focused on Business Case and are collected from Prosci learning centre (2004). Reifer (2002), Stonehaven Group (2004), Jessup and Valacich (2003) and Schmidt (2002).

### 4.4.2 Situation Analysis

The questions investigate if and how Business Case can absorb the uncertainty on the important issues to take into consideration and to focus on in Situation Analysis. Checkland (1981,1985, 1989, 1999), Mackenzie (1984), Hedberg (1980), all emphasize issues on this.

### 4.4.3 Architectural Design

The questions focus on if and how Business Case can absorb the uncertainty on the important issues to take into consideration and to focus on in Architectural Design. Checkland (1981, 1985, 1989, 1999), Mackenzie (1984), Hedberg (1980), all emphasize issues on this.

### 4.4.4 Change Management

The questions focus on if and how Business Case can absorb the uncertainty on the important issues to take into consideration and to focus on in Change Management. Checkland (1981, 1985, 1989, 1999), Mackenzie (1984), Hedberg (1980), all emphasize issues on this.

[35] See Appendix 2 Inquiry Questions pp. 26 - 38
[36] See Appendix 1 SACIS's Theoretical Framework, pp. 1 - 25
[37] See Business Case – the Current Model, pp. 20 – 40, chap 3

# 5 The Volvo Case

In this chapter we will present the organization where the case study has been performed. We will do this by first describing the Volvo Group and more specific Volvo IT. Furthermore, the two functions ADT and Consulting Services at Volvo IT will be presented, where the problem statement for this Master Thesis work first came up. The material for this presentation has been collected from the Volvo Group's Intranet and their public homepage.

## *5.1 Volvo Group*

The Volvo Group[38] is one of the world's leading manufacturers of trucks, buses and construction equipment, drive systems for marine and industrial applications, aerospace components and services. The Group also provides complete solutions for financing and service.

Founded in 1927, Volvo today has approx 76,000 employees, production in 25 countries and operates on more than 130 markets. The Volvo Group's net sales 2003 amounted to EUR M 19,151.

Since 1999, the Volvo Group has focused exclusively on transport equipment for commercial use, which creates conditions for increased synergies and improved competitiveness.

The Volvo Groups business areas are – Mack Trucks, Renault Trucks, Volvo Trucks, Volvo Buses, Volvo Construction Equipment (CE), Volvo Penta, Volvo Aero and Volvo Financial Services. Further, several business units provide additional manufacturing development or logistical support to the business areas above and external customers. The largest business units are: Volvo 3P, Volvo Powertrain, Volvo Parts, Volvo Logistics and Volvo IT. (figure 15, p. 59, chap. 5)

[38] http://www.volvo.com, 2004-06-02

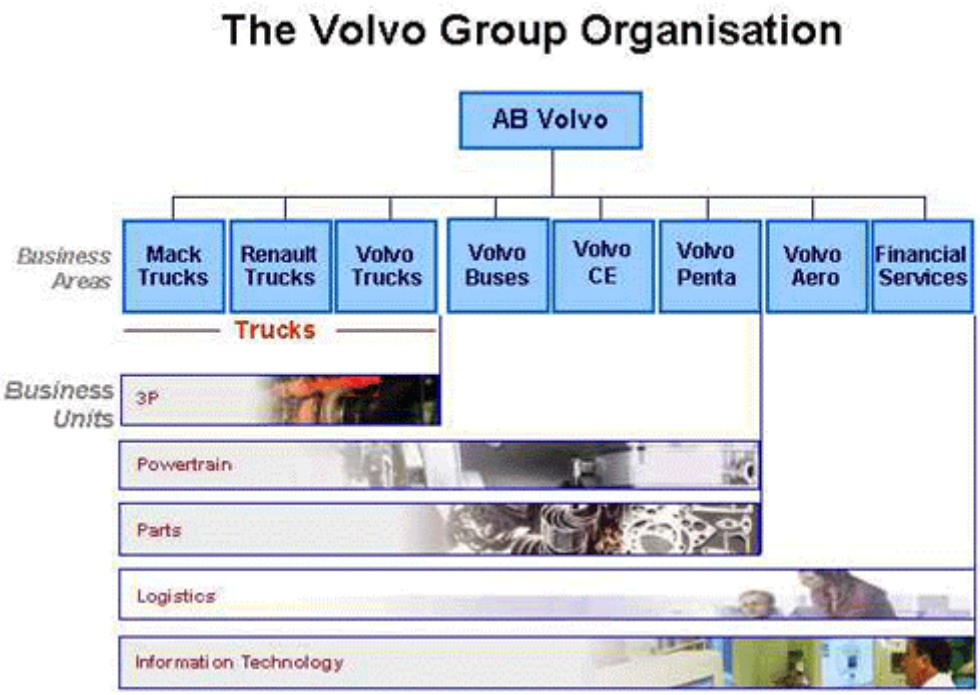



Figure 15: *The Volvo Group Organisation*[39]

Volvo IT AB is a wholly owned subsidiary of AB Volvo. Customers include the Volvo Group, Ford-owned Volvo Car Corporation, and other major industrial companies.

## 5.2 Volvo IT

Below follows a short presentation of Volvo IT and the two departments ADT and Consulting Services that we cooperated with.

### 5.2.1 History

Back at the end of the 1920s, punched card machines paved the way for what was to become modern computerized information processing at Volvo. The first computers at Volvo went into operation in 1961. Developments have since continued at an enormous pace.[40]

- In 1967, the Volvo Group gathered its IT operations together in a separate company for the first time.
- In 1998, the current global Volvo Information Technology was created.
- In 2001, the IT staffs at Renault Trucks and Mack Trucks was integrated with Volvo IT.

[39] http://violin.volvo.se, 2004-06-02
[40] http://www.volvo.com, 2004-06-02

Today Volvo IT has a matrix organization (figure 16, p. 60, chap. 5).

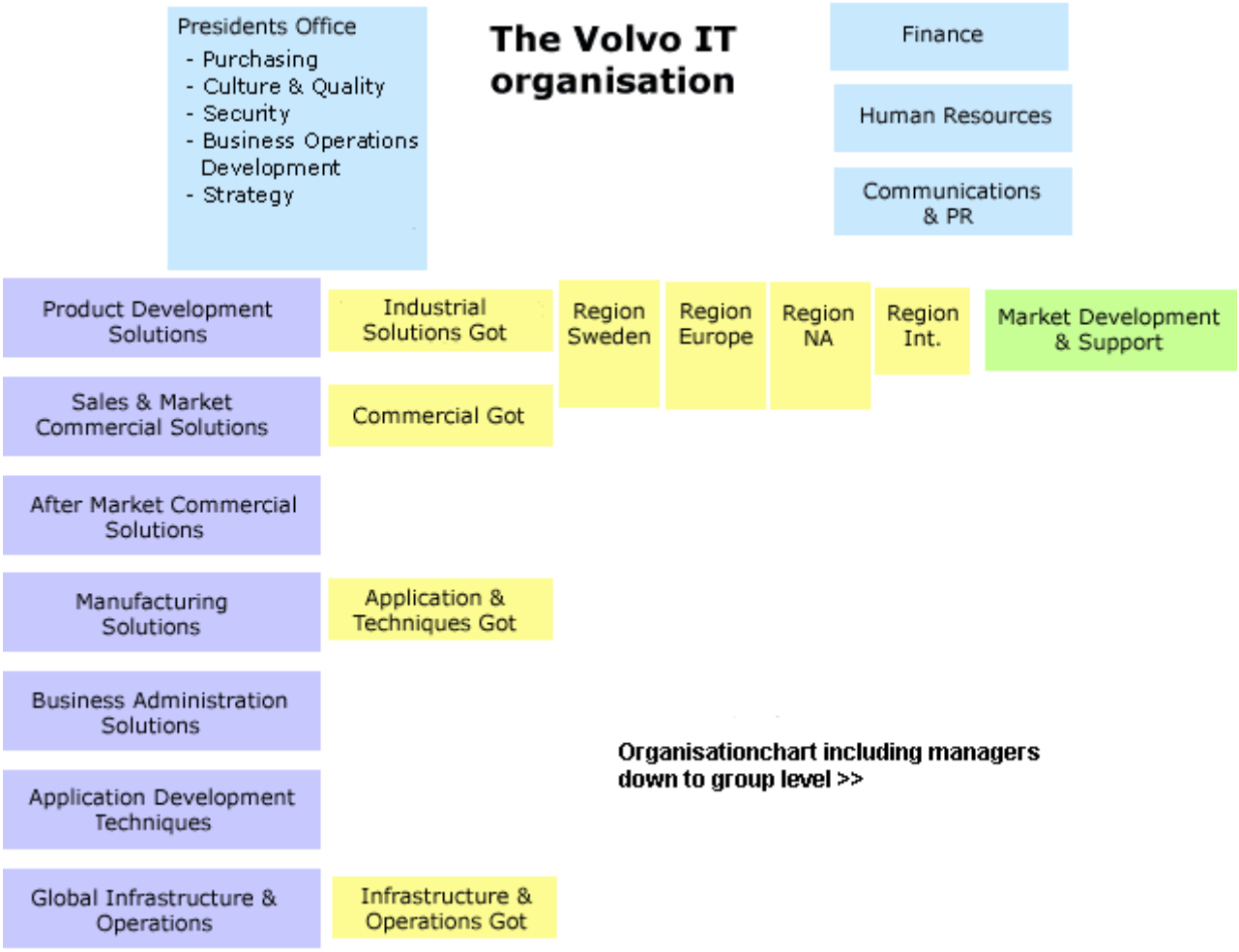



Figure 16: *The Volvo IT organization*[41]

[41] http://oldviews.volvo.se, 2004-05-23

### 5.2.2 Facts and Figures

The business concept of Volvo IT is to keep complex IT systems running. Volvo IT provides IT solutions and services for the entire industrial process, from product development to manufacture, sales, aftermarket and administration, including IT operations and IT infrastructure. The range of services includes Product Lifecycle Management (PLM) and SAP solutions.[42]

- Volvo Information Technology AB is a wholly owned subsidiary of AB Volvo.
- Headquarters are located in Göteborg, Sweden.
- Offices in Europe, North and South America and Asia.
- In 2003, Volvo IT had 4,700 employees around the world, including external consultants.
- Global sales in 2003 were about EUR 633 million.
- Customers include AB Volvo and Ford-owned Volvo Cars, but also Elof Hansson AB, Gambro, Kongsberg Automotive, Nobel Biocare, SCA and Södra Skogsägarna.

### 5.2.3 Application Development Techniques

The Application Development Techniques (ADT)[43] department has a responsibility to develop and maintain processes, methods, tools and environments for application development and maintenance. The ADT department in Göteborg is sharing this responsibility with ADT teams in other regions.

ADT relates to Volvo IT services that support the following areas of their customers´ businesses:

- Management Processes (PCM, RUP, MCM)
- Business Engineering
- Requirements/Analysis
- System Development Environments
- Integration Services
- Configuration management and Test
- e-business tools
- EDI
- Project leaders (only skills)
- IT architects (only skills)

[42] http://www.volvo.com, 2004-06-02
[43] http://oldviews.volvo.se, 2004-06-02

ADT consists of two groups:

- **Application Development Environments and Tools**
  ADT is one of two groups in the department. They provide AD Environments and Tools on the operating system platforms: mainframe, iSeries, Java, .NET and VMS. In addition to AD Tools they also offer support and consulting in Database Administration for the most commonly used databases at Volvo IT and methods for communication between applications like VCOM, FTP etc.

- **Application Development Processes**
  Develop and maintain processes and methods for application development and maintenance. The AD Processes department in Göteborg is sharing this responsibility with ADT teams in other regions.

  Their products and services cover:

  - Business Engineering & Requirements
  - Project Management
  - Application Development
  - Maintenance Management

Their services include information, training, coaching and support, workshops and reviews. The Service Portfolio is based on demands from project and maintenance teams as well as on feedback from the field.

### 5.2.4 Consulting Services

Consulting Services[44] consists of the following consulting groups:

- Business management
- Project Management
- System Development
- IT Architecture

The business consultants of Volvo IT possess hands-on-experience in specialised IT areas. They analyse and implement strategies to suit existing IT operations, and plan new projects and future initiatives. Consulting services are available within:

- Strategic IT
- IT Quality
- Project Management
- Contingency Planning

[44] http://violinhotel.volvo.net, 2004-06-02

# 6 Empirical Result

Our study comprises a study of the current Business Case model, literature study of theories that all address the problem area of this thesis, and six semi-structured interviews. Below follows the result from the interviews, conducted mostly with people at Volvo IT but also one from 3P, with both open and closed questions. The six respondents[45] that we interviewed had varying knowledge about Business Case. Their varying backgrounds, experiences and profiles contributed to the rich picture we got of Business Case. The collected data has its standpoint in the use of Business Case for the evaluation of a strategy and the different organizational aspects identified in our model introduced in chapter four. With the model as a basis we have structured the data collected through the interviews, both the closed and open questions. Because of the different interpretations of Business Case we have chosen to present all material from the interviews to give a complete overview. We will follow the same structure as in the "Design of Inquire Questions,"[46] presenting together the empirical data concerning our model in general and Business Case in particular and continue with presenting the gathered material for each stage in SACIS. Furthermore, we will present each open question together with the gathered material and use one or several quotations to underline similarities or deviations. The closed questions are structured in tables and the averages (mean value) to the particular question are shown as well. Comments made concerning the closed questions, or if the respondents have filled in another option then the fixed alternatives are presented directly under the table with the question in mind.

## *6.1 Systemization of Interviews*

The closed questions are designed with answer alternatives on a scale of one to five where one could be considered as a negative answer and five as a positive answer. This helps draw conclusions about the respondents' different answers. If all respondents answer five on a question that indicates a successful result in that area the question belong. On the other hand, if the answers have great variations between the respondents that indicate an unsuccessful area. Since all the respondents work for AB Volvo Group and most at Volvo IT we have chosen to present the respondents as individuals. The reason for this is to show if variations exist within and/or between the three stakeholder groups. We have chosen the following abbreviations:

- BC = Business Consultant at Volvo IT
- IS/IT S = People that work with IS/IT strategy at Volvo IT
- C = Customer to Volvo IT

The interviews were conducted during May and June 2004.

[45] See Respondents, pp. 16 – 17, chap. 2
[46] See Appendix 2 Inquire Questions, pp. 26 - 38

## 6.2 Views Regarding Business Case

**1. Where in the process of enterprise development can Business Case be used? What is expected to be the contribution of Business Case?**

Business Case can be used in an initial stage, before the pre-study, where a discussion is conducted on why a change is needed and a decision will be taken.

> *"In the stage where we discuss why we are doing this change. Why should we do this change? Well, because... etc."*
>
> **(BC2)**

Furthermore, one of the business consultant's express that Business Case comes into the process after the problem analysis and design. He says.

> *"Business Case is an effect of problem analysis and design."*
>
> **(BC3)**

The expected contribution of Business Case is an improved basis for decisions. This will be achieved since you get an estimation and understanding of consequences, a description of effects, knowledge about the changes, a means for communication, and a summery (overview) of the whole picture. One business consultants argues:

> *"According to me Business Case contribution is really the descriptions of effects. Furthermore, the means to communicate what you wish to do. That is the contribution. It is a means for communication, it is a coherent description of something that will be done."*
>
> **(BC3)**

**2. In what situations in the process of enterprise development do You consider that Business Case is necessary?**

All the respondents seem to agree that the situation when Business Case is necessary is before and when a decision, big or small, will be taken. However, there should be some limit to how small the investment can be so that administration does not cost more than the actual investment will give. It can be situations where a decision on an investment or to follow a certain path must be taken. It can be situations when decision makers have to be influenced, or when it is complex communicate the same picture to reach an agreement. One business consultant says:

> *"Business Case is necessary to communicate the same picture what it is all about, when it is complex, and when it is so extensive that you need to describe it… Business Case for me is describing to be able to communicate and achieve consensus at the same view.*"
>
> **(BC3)**

One of the respondents says that Business Case will give everybody the same opportunity to present and get their ideas of change assessed, and that Business Case can help in a situation where people compete to get funding for a project. He says:

> *"Sometimes it is a question of who can shout the loudest to get his or her idea through while someone more quiet with perhaps a better idea cannot get through, then a Business Case can help.*"
>
> **(IS/IT S1)**

The customer also wants to emphasize the importance of Business Case for evaluation after the project has been implemented. He argues:

> *"Above all when you start projects, and when you draw experiences after the project is finished. This to learn from the project and to further lead experiences and knowledge to new projects. In other words, in the beginning and at the end.*"
>
> **(C)**

**3. Which methods, techniques and tools do You consider support the creation and use of Business Case, both to qualify and quantify benefits/values?**

Most of the respondents seem to agree that it would be difficult to have a method that is too structured when creating and using Business Case. Furthermore, they say that it is not the financial methods or techniques that are the big issue here, because the situation totally governs which method you choose. They also seem to agree that some kind of framework (principles) with perhaps some headings, sub-headings, and instructions could help with the work. Today much of the work is done on the basis of common sense. Two of the respondents state:

> *"I do not know exactly. In my world it is much about common sense. That you think through what the consequences of this will be. I am not sure if you need any advanced methods for this. Maybe some guiding principles that helps you by saying that you need this and that when creating a Business Case. That you need to take the financial consequences into consideration, that you need all other quantifiable effects, and that you need the more soft ones that you perhaps cannot put money on. Then how you do this and if you use present value calculation or pay-off and other economic methods is less important to me."*
>
> **(BC2)**

> *"Business Case is never the same from case to case, they vary. Of course you can structure this work and think, but my experience is that you have to take one Business Case at a time and try to find rows to the Excel sheet."*
>
> **(IS/IT S2)**

When it comes to tools they all seems to agree that Word and Excel are the two major ones. One of the consultants also argues that statistic modeling could be an alternative to real values and that is very important to keep track of assumptions and do a sensitivity analysis. He says:

> *"… first of all, I believe, it is very important to keep track of any assumption you make… Further methods? Well, that you somewhere do a sensitivity analysis… further you shall, according to me even if it is more complicated, use type division, statistic division, instead of real value. It is even better if you use statistic modelling, because if you use this all the way and with correct and well grounded such, you will get an expected Business Case instead. You will get a confidence interval that you will end up between instead of just one figure."*
>
> **(BC1)**

Another businesses consultant expresses that he is the method, and you always need a methodology in what you do to avoid getting unexpected effects. It is important to have a holistic approach rather than a fragmental, but you have to choose a method depending on the situation, this shows that management has to do with Business Case. He also wants to point out that method and system development is one area and that he is talking about change strategies. He says, in general it is important to describe and analyze on the basis of what the business want to achieve in the future. If it exists a political unity an expert can be sent to do the job, if not a project group with representatives from different stakeholders is needed. He further says, that a third method and technique is that he goes in and transfers analytic knowledge to the people that are going to change their behaviors:

> *"I once told my manager that I am the method. You always need a methodology in what you do. Thus, something that keeps you from getting unexpected effects, but you must choose the method on the basis of the situation you are in, where the problem is, where the company is, where the individual is…*
>
> *…It is important to have a holistic approach and not a fragmental. This shows that management has to with Business Case. What you manage are resources and there you have people, organization, technology, you have work-tasks, and knowledge. All this, all these types, the method regardless of which has to manage…"*
>
> *"…In general you have to describe and analyze on the basis of what you want to achieve in the future. Who does this? We then are talking to some extent about strategy and method. I mean if it is clear to everyone and you have a political unity, you can send in an expert to do the job. If the problem is a little more extensive, you have to form a project group with representatives from different stakeholders to find all interests…"*
>
> *…A third method and technique is that I go in and transfer analytic knowledge to the people that are going to change their behaviors. Thus, when there are things that will affect people, something that is in the heart and stomach and not just in the head, it is really that simple if people get the same facts and conditions to find help they will come to the same conclusion. They can like or dislike it, but they draw the same conclusion, this is something we have to do, and that is important because then you do not hurt people. The technique and method are to give the people the opportunity to use techniques."*
>
> **(BC3)**

The customer also says, except that a framework could help, that it is important to define, within the Volvo group how they count home savings, how they quantify saving. He also says that perhaps it could be good to collect examples of old Business Cases within the Volvo group and put it on a web site. IRR, he says, is a model that some of the companies use today, but it is not standardizes within the Volvo group and it can be risky to make Business Case on IRR since it depends to much on estimations and the figures are not trustworthy. He also presents important values as an alternative that they use within product development to weigh in strategic benefits:

> *"… define how we actually count on savings. How we count on costs should be rather similar within the company, but how you quantify savings is very difficult…If the available literature do not give any examples, have a framework that shows which parameters you can include, and perhaps gather examples within Volvo on a web-site or something that shows, this is what we came up with and this is how we did it and learn through that. IRR calculation is a cost model that is used by some of the companies today, but this model is not standardized within Volvo and even that model is risky to do it on. It depends completely on what kind of estimations you make. My experience is that you can almost guess on any figures you like and then you have within product development something called "important values". You take a number of factors and in some way weigh together what the strategic benefit of this is, then you also talk about soft factors that you estimate."*
>
> **(C)**

The following nineteen questions in this section we have structured and presented together with a mean value in the tables below.

| **4. Why Business Case?** | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | | | | | MV[47] |
| | BC1 | BC2 | BC3 | IS/IT S1 | IS/IT S2 | C | |
| - Improve teamwork | 2 | 1 | 5 | 1 | 2 | 1 | **2** |
| - Improve the relationship with the customer | 3 | 4 | 5 | 1 | 4 | 1 | **3** |
| - Improve communication & understanding | 4 | 4 | 5 | 5 | 4 | 1 | **3,8** |
| - Improve morale | 3 | 3 | 5 | 1 | 2 | 1 | **2,5** |
| - Improve control | 4 | 4 | 5 | 1 | 3 | 4 | **3,5** |
| - Improve decisions | 5 | 4 | 5 | 5 | 5 | 5 | **4,8** |
| - Improve project evaluation | 5 | 4 | 5 | 5 | 4 | 1 | **4** |
| - Avoid the financing of risky projects | 5 | 4 | 5 | 1 | 4 | 2 | **3,5** |
| - Other | | | | | | | |

| **5. What could be treated as Business Case without being wrong?** | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | | | | | MV |
| | BC1 | BC2 | BC3 | IS/IT S1 | IS/IT S2 | C | |
| - A Cost/benefits analysis | 5 | 4 | 1 | 1 | 4 | 5 | **3,3** |
| - A Cost/benefits analysis + risk analysis | 5 | 5 | 1 | 1 | 4 | 5 | **3,5** |
| - A sound understanding of consequences | 1 | 3 | 5 | 1 | 2 | 5 | **2,8** |
| - Risk analysis | 1 | 2 | 3 | 1 | 2 | 3 | **1,7** |
| - CSF/Support factors | 1 | 1 | 5 | 1 | 1 | | **1,5** |
| - Other | | | | | | | |

**Comment:**
C: "*Need more specifications on what it refers to.*"

| **6. To what extent do You consider that the ultimate purpose for using Business Case is to improve the quality of the information and information systems?** | | | | | | |
|---|---|---|---|---|---|---|
| | | | | | | MV |
| BC1 | BC2 | BC3 | IS/IT S1 | IS/IT S2 | C | |
| 1 | 5 | 4 | 1 | 3 | 5 | **3,2** |

[47] MV: Mean value

| **7. To what extent do You consider that Business Case increases comprehensibility and understandability of the "real value" (how the Business Case respond to business objective/s) of investments in information technology?** | | | | | | |
|---|---|---|---|---|---|---|
| | | | | | | MV |
| BC1 | BC2 | BC3 | IS/IT S1 | IS/IT S2 | C | |
| 5 | 4 | 5 | 5 | 5 | 5 | **4,8** |

| **8. To what extent do You consider that Business Case increase awareness and meaningfulness of investments in information technology?** | | | | | | |
|---|---|---|---|---|---|---|
| | | | | | | MV |
| BC1 | BC2 | BC3 | IS/IT S1 | IS/IT S2 | C | |
| 5 | 4 | 5 | 5 | 5 | 2 | **4,3** |

| **9. To what extent do You consider that the following issues are reasons for the failure of many Business Cases?** | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | | | | | MV |
| | BC1 | BC2 | BC3 | IS/IT S1 | IS/IT S2 | C | |
| - Lack of history | 4 | | 4 | 1 | 2 | 1 | **2** |
| - The special nature of the financial Business Case | 4 | | 4 | 1 | 4 | 1 | **2,3** |
| - Other | 5 | 4 | | | | | |

**Other:**
BC1: Insufficient quality of assumptions
BC2: Lack of relevant information

| **10. To what extent do You consider that the structure of the Business Case document addresses the purpose of each question below?** | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | | | | | MV |
| | BC1 | BC2 | BC3 | IS/IT S1 | IS/IT S2 | C | |
| **Definition** | | | | | | | |
| - What the case is about (subject)? | 5 | 5 | 5 | 5 | 4 | | **4** |
| - Why it is being built (purpose)? | 5 | 4 | 5 | 5 | 4 | | **3,8** |
| - What is the business objectives addressed by the subject of the case | 5 | 4 | 5 | 5 | 4 | | **3,8** |
| **Design** | | | | | | | |
| - Whose costs are examined? | 5 | 5 | 4 | 5 | 4 | | **3,8** |
| - Whose benefits are examined? | 5 | 5 | 4 | 5 | 4 | | **3,8** |
| - Over what time period? | 5 | 5 | 4 | 5 | 4 | | **3,8** |
| - Which rules should be used for deciding what belongs in the case and what does not? | 5 | 4 | 4 | 5 | 3 | | **3,5** |
| - Which important assumptions is the base of the case? | 5 | 5 | 4 | 5 | 4 | | **3,8** |
| **Impacts/Consequences** | | | | | | | |
| - Which results (financial/ non-financial) are expected? | 2[48] 5[49] | 5 | 5 | 5 | 5 | | **4,2** |
| - How the expected results depend on important assumptions? | 5 | 5 | 5 | 5 | 4 | | **4** |
| - What specific action should be recommended? | 2 | 5 | 5 | 5 | 4 | | **3,5** |
| - Other | | | | | | | |

**Comment:**
C: "*What Business Case document? The one we use or one theoretically perfect?*"

[48] BC1: 2 for which non-financial results are expected.
[49] BC1: 5 for which financial results are expected

| **11. To what extent do You consider that Business Case can absorb the uncertainty for the customer organization on the following issues?** | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | | | | | MV |
| | BC1 | BC2 | BC3 | IS/IT S1 | IS/IT S2 | C | |
| - The scoop of the engagement. | 2 | 4 | 5 | 3 | 4 | 4 | **3,7** |
| - Description of the development stages. | 2 | 3 | 5 | 1 | 4 | 1 | **2,5** |
| - Administrative and logistical support. | 2 | 2 | 5 | 1 | 2 | 1 | **2,2** |
| - Reviewing and periodic progress reports. | 4 | 5 | 5 | 1 | 2 | 1 | **2,2** |
| - Which of the decision maker(s) is to work with the designers at each stage. | 4 | 2 | 5 | 1 | 3 | 1 | **2,7** |
| - Expected implementation procedures. | 4 | 1 | 5 | 1 | 4 | 1 | **2,7** |
| - Other | | | | | | | |

**Comments:**
IS/IT S1: *"One Business Case can lead to several projects or assignments."*
C: "*If our definition is used. Not the theoretical.*"

| **12. To what extent do You consider that Business Case absorb the uncertainty that characterizes the following perspectives?** | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | | | | | MV |
| | BC1 | BC2 | BC3 | IS/IT S1 | IS/IT S2 | C | |
| - Information technological perspective | 2 | 4 | 4 | 1 | 3 | 1 | **2,5** |
| - Business perspective | 5 | 5 | 5 | 3 | 5 | 3 | **4,3** |
| - Managerial perspectives | 4 | 5 | 5 | 1 | 4 | 3 | **3,7** |
| - Employee perspectives | 2 | 2 | 4 | 1 | 4 | 1 | **2,3** |
| - Stakeholders perspective | 5 | 5 | 4 | 1 | 4 | 1 | **3,3** |
| - Social perspective | 2 | 1 | 4 | 1 | 3 | 1 | **2** |
| - Other | | | | | | | |

| **13. To what extent do You consider that Business Case absorb the uncertainty and help gain knowledge about the following issues?** | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | | | | | MV |
| | BC1 | BC2 | BC3 | IS/IT S1 | IS/IT S2 | C | |
| - Technology | 4 | 2 | 4 | 1 | 2 | 3 | **2,7** |
| - People | 4 | 2 | 5 | 1 | 3 | 3 | **3** |
| - Organization | 4 | 2 | 5 | 1 | 4 | 3 | **3,2** |
| - Power | 4 | 2 | 5 | 1 | 3 | 1 | **2,7** |
| - Rewards | 4 | 2 | 4 | 1 | 2 | 1 | **2,3** |
| - Values | 4 | 2 | 5 | 1 | 3 | 1 | **2,7** |
| - Other | | | | | | | |

| **14. To what extent do You consider it is important that Business Case consists of the following key elements?** | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | | | | | MV |
| | BC1 | BC2 | BC3 | IS/IT S1 | IS/IT S2 | C | |
| - Executive Summary | 5 | 5 | 5 | 3 | 5 | 2 | **4,2** |
| - Situational Assessment and problem Statement | 5 | 5 | 5 | 5 | 4 | 5 | **4,8** |
| - Project Description | 3 | 5 | 5 | 1 | 2 | 5 | **3,5** |
| - Solution Overview | 5 | 5 | 5 | 5 | 5 | 5 | **5** |
| - Solution Detail | 5 | 4 | 3 | 1 | 2 | 3 | **3** |
| - Solution Alternatives | 5 | 5 | 4 | 3 | 5 | 5 | **4,5** |
| - Costs | 5 | 5 | 4 | 5 | 5 | 5 | **4,8** |
| - Benefits | 5 | 5 | 5 | 5 | 5 | 5 | **5** |
| - Implementation Timeline | 5 | 5 | 5 | 5 | 4 | 5 | **4,8** |
| - Critical Assumptions and Risk Assessment | 5 | 5 | 5 | 5 | 5 | 4 | **4,8** |
| - SWOT Analysis | 3 | 2 | 5 | 1 | 4 | 1 | **2,7** |
| - Conclusions and Recommendations | 3 5 | 5 | 5 | 5 | 5 | 5 | **5** |
| - Other | | | | | | | |

**Comments:**
BC1: "3 for recommendation and 5 for conclusions."

| **15. To what extent do You consider that Business Case absorb the uncertainty in the following actions in the development process?** | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | | | | | MV |
| | BC1 | BC2 | BC3 | IS/IT S1 | IS/IT S2 | C | |
| - Find out about the problem situation. | 3 | 2 | 4 | 1 | 4 | 5 | **3,2** |
| - Express the problem situation. | 3 | 5 | 5 | 3 | 4 | 4 | **4** |
| - Formulate business concept of relevant systems of purposeful activity. | 3 | 2 | 4 | 3 | 3 | | **2,5** |
| - Build conceptual business models from the business concept issue. | 4 | 2 | 4 | 1 | 3 | 1 | **2,5** |
| - Compare the business models with the real world. | 4 | 5 | 4 | 1 | 4 | 1 | **3,2** |
| - Define possible changes, which are both desirable and feasible. | 5 | 4 | 5 | 1 | 5 | 5 | **4,2** |
| - Take action to improve the problem situation. | 5 | 3 | 5 | 1 | 4 | 3 | **3,5** |
| - Other | | | | | | | |

| **16. Which of the following roles do You think Business Case should play?** | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | | | | | MV |
| | BC1 | BC2 | BC3 | IS/IT S1 | IS/IT S2 | C | |
| - *Role of knowledge:* To capture the knowledge they have developed about how the business will function both with and without the BPR project. | 2 | 4 | 4 | 1 | 5 | | **2,7** |
| - *Role of quality:* To verify that the solution substantiates or meets the needs of the business. | 2 | 5 | 4 | 3 | 5 | 5 | **4** |
| - *Role of communication:* To provide a consistent message to many different audiences. | 4 | 5 | 5 | 5 | 3 | 3 | **4,2** |
| - Other | 5 | | | | | | |

**Other:**
BC1: Basis for decisions

| **17. To what extent do You consider that Business Case absorb the uncertainty of the following issues in an enterprise development process?** | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | | | | | MV |
| | BC1 | BC2 | BC3 | IS/IT S1 | IS/IT S2 | C | |
| - Agreement on process to be followed | 4 | 2 | 5 | 1 | 3 | | **2,5** |
| - Completeness of analysis | 4 | 5 | 4 | 1 | 5 | | **3,2** |
| - The result of architectural design | 4 | 3 | 5 | 1 | 3 | | **2,7** |
| - Cost effectiveness | 5 | 4 | 4 | 1 | 5 | | **3,2** |
| - Designer objectiveness | 3 | 3 | 4 | 1 | 4 | | **2,5** |
| - Swiftness of development process | 1 | 3 | 4 | 1 | 3 | | **2** |
| - Other | | | | | | | |

**Comment:**
C: "*Can not answer without a definition on what Business Case covers.*"

| **18. To what extent do You consider it is important that Business Case walk through the following aspects of the designed solution?** | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | | | | | MV |
| | BC1 | BC2 | BC3 | IS/IT S1 | IS/IT S2 | C | |
| - Changes to organization (people, culture, training, etc.) | 5 | 5 | 5 | 3 | 5 | 5 | **4,7** |
| - Changes to processes | 5 | 5 | 5 | 3 | 5 | 5 | **4,7** |
| - Changes to support systems | 5 | 5 | 5 | 3 | 5 | 5 | **4,7** |
| - Other | | | | | | | |

| **19. To what extent do You consider it is important that Business Case have a thorough analysis of the following associated with the implementation of the proposed solution?** | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | | | | | MV |
| | BC1 | BC2 | BC3 | IS/IT S1 | IS/IT S2 | C | |
| - Management of consequences | 5 | 5 | 5 | 1 | 5 | 3 | **4** |
| - Management of costs | 5 | 5 | 5 | 1 | 3 | 5 | **4** |
| - Management of financial benefits | 5 | 5 | 5 | 1 | 4 | 3 | **3,8** |
| - Management of non-financial benefits | 1 | 5 | 5 | 1 | 4 | 3 | **3,2** |
| - Management of risks | 5 | 5 | 5 | 1 | 4 | 3 | **3,8** |
| - Other | | | | | | | |

| **20. To what extent do You consider it is important that Business Case provide an estimate for the following anticipated costs of a project?** | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | | | | | MV |
| | BC1 | BC2 | BC3 | IS/IT S1 | IS/IT S2 | C | |
| - Costs for the team | 5 | 5 | 5 | 1 | 5 | 5 | **4,3** |
| - Development costs | 5 | 5 | 5 | 1 | 5 | 5 | **4,3** |
| - Quality assurance costs | 5 | 5 | 5 | 1 | 4 | 5 | **4,2** |
| - Cost for testing the solution | 5 | 5 | 5 | 1 | 5 | 5 | **4,3** |
| - Cost for parallel operations during transition | 5 | 5 | 3 | 1 | 5 | 5 | **4** |
| - Costs for implementation of solution | 5 | 5 | 4 | 1 | 5 | 5 | **4,2** |
| - Other | | | | 5 | | | |

**Other:**
IS/IT S1: Rough estimate of total cost.

| **21. To what extent do You consider it is important that Business Case support the treatment of following major elements that are important to successful implementation?** | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | | | | | MV |
| | BC1 | BC2 | BC3 | IS/IT S1 | IS/IT S2 | C | |
| - Implementation components | 1 | 4 | 4 | 1 | 5 | 5 | **3,3** |
| - Implementation timeline | 1 | 5 | 4 | 1 | 4 | 5 | **3,3** |
| - Major milestones | 1 | 5 | 4 | 3 | 4 | 5 | **3,7** |
| - Major dependencies | 1 | 5 | 4 | 3 | 3 | 5 | **3,5** |
| - Political factors | 1 | 3 | 4 | 3 | 2 | 1 | **2,3** |
| - Other | | | | | | | |

| **22. To what extent do You consider it is important that Business Case take the following types of benefits into consideration?** | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | | | | | MV |
| | BC1 | BC2 | BC3 | IS/IT S1 | IS/IT S2 | C | |
| - Qualitative (Better team work etc.) | 5 | 5 | 5 | 5 | 2 | 4 | **4,3** |
| - Quantitative (ROI etc.) | 5 | 5 | 5 | 5 | 5 | 3 | **4,7** |
| - Other | | | | | | | |

**Comment:**
BC1: "*Qualitative benefits, 5 if they can be quantified.*"

**23. What criteria do You employ in order to determine the quality of Business Case?**

On this question most of the respondents express that it is difficult to say or that it do not exist any really good criteria. Some general themes are if the framework have been followed, experiences, knowledge, common sense, and if the assumptions and assessments are rigours and well founded. Two of the respondents say:

> "*To begin with, experience from the business, experience of Business Case and how rigorous the assumptions are. That is A and O. Then of course, walk through it, how it is built and also the sensitivity analysis I told you about in the beginning.*"
>
> **(BC1)**

> "*…the quality depends on the knowledge and experience they, the ones that use the frame, posses. How good the idea is to start with, how well you succeed with describing the ideas benefits, positive effects and also in a fair way describe the costs and what difficulties you can meet along the way.*"
>
> **(IS/IT S1)**

One of the business consultants also emphasize that quality to begin with is the peoples' perceptions of what quality is, that you have management, you have the people that get touched by the change in some way, and you have the specialists that carry out the whole thing. If the descriptions in the Business Case are considered good and useful to all these groups the quality is good. That is one criterion but he also says it is difficult to employ because often people are afraid of exposing their own uncertainty. He further says that another criteria could be that all stakeholders have a realistic chance to understand the Business Case and what is described, and that it is communicated, discussed with all stakeholders etc. Finally he believes that a criterion could be if the Business Case is alive through the whole development process. He argues:

> "*Quality, if I start there. At the end quality is really peoples' perception of what quality is. You always have different categories. You have the representatives from the company, management, you have, a little oversimplified, the people touched by the change in some way and then you have the third group, the specialists that carry out the whole thing. If the descriptions in the Business Case are considered good and useful to all these groups thus, it fills its purpose, then the quality is good. If they do not think it is good then the quality is not high enough. That is the criteria for me. However it is not easy to say. A problem you can have is that people tend to if we take for example high-level managers almost never dare to expose their own uncertainty...*
>
> *...Another criteria is if the Business Case is described, formulated and presented so that all stakeholders have a realistic chance to understand...*
>
> *… I actually believe that one criterion is if you refer to the Business Case during one or several projects. If it is alive through the whole process, analysis, design, manufacturing and implementation...*"
>
> **(BC3)**

Other criterions are a second opinion, how good the idea is, and feelings:

> "*Perhaps, you could have a second opinion on it or maybe on the calculations you have done of the change. That you would have a person who is independent and not involved in the project and not effected by the values and norms and all those unspoken ideas and forces that exist in a project to listen to a presentation of the Businesses Case. For me that could be some kind of quality evaluation.*"
>
> **(BC2)**
>
> "*On the whole, decision-making is much more based on feelings, experiences and common sense than facts and a consequent methodology for all projects.*"
>
> **(C)**

## 6.3 Views Regarding Situation Analysis

**24. Does Business Case absorb the inherent uncertainty that characterizes the so-called Situation Analysis (problem analysis, strategy formulation, strategy evaluation, etc)?**

All respondents except one agree that Business Case can absorb the uncertainty in Situation Analysis, but there were many different views how Business Case can absorb the uncertainty. One view among others was that Business Case could be used to absorb the uncertainty since it is an iterative process:

> "*Yes, because it is an iterative process, but it always comes after the conceptual formulation and strategy formulation. On the other hand, Business Case could go back in iterations if you come to a point where you realize that this will not work. If Business Case could absorb the uncertainty? Well, that would be that you would see if it would not work. That you go back. If the costs become three times as big as the revenues, then you have definitely absorbed the uncertainty even if you have just done a rough estimation.*"
>
> **(BC1)**

Another view is that Business Case cannot absorb the uncertainty if only calculations on the "as is " state are performed, but if Business Case is used when counting on the "as is" state in relation to one or several "to be" states it can absorb the uncertainty:

> *"Is it a description of the present state, is it just an "as is" description, then it is as I see it not interesting with Business Case in Situation Analysis. It is really the "to be" that is interesting to count on. As I see it Business Case is a calculation on a change and a pure "as is" description is not a change but a present state and I believe it would be difficult to count on. If you have a "to be" state, you count on that, then you count on the "to be" state in relation to the "as is" state, how things are today. Is not "to be" profitable in relation to "as is", well then you known that you should not do anything. If you a little simplified say that Business Case is a structured estimation of what a change means I would see it as difficult to just count on an "as is" state."*
>
> **(BC2)**

A third respondent says that Business Case absorb the uncertainty since it is in the Situation Analysis the decisions will be taken. It is important to have an intention, goal or a perspective otherwise you cannot do a description or analyze the "as is" state.

> *"…Yes it absorbs since it is there you make the big decisions… Then you have already founded if this will be successful or less successful. Then it is important that you maintain your Business Case. Thus, when you move on and expand your scope again, you have to shrink it, and expand it, and shrink it, and keep on doing this within the frames of the Business Case…*
>
> *…You have to have a perspective, thus goals or problems to be able to describe. Then you can describe. When you have such a description you can refine again and say; how does it look in relation to the goal, because goals and problems are the same. Problems are just a deviation from the goal, and the goals are the required state. Once you have that cleared out, you can start analyzing the present state and from that derive what you need to do and there you need your whole goal hierarchy. The output is a business concept in the sense that it is a suggestion of change to the present state. What needs to be done to change the present state? Then, for me, it is also how you do these changes, where do you reach the new state, through what?"*
>
> (**BC3)**

This respondent further says that Business Case can absorb the uncertainty since it clarifies the change work in several dimensions, partly as a means for communication and it is Business Case that describe both what you want to achieve, how you will do it, and which resources will you allow yourself to use.

Another respondent says that Business Case absorbs the uncertainty since all the people who writes Business Case documents and develop their ideas get support of a common structure like a template and can follow a sort of a checklist. The respondent further says a Business Case absorbs the uncertainty if it can help to find other approaches and other aspects that increase possibilities to get attention for an idea, and on the other hand help find difficulties that are otherwise easily missed. It should also absorb the uncertainty since it shows fairly soon that a business idea is built on an incorrect foundation or that you only see one part of a problem.

> *"Business Case can absorb the uncertainty if the people who are writing such documents and try to develop their ideas get support of a common structure, a sort of a checklist…it can perhaps help me to find other approaches and other aspects that increase the possibility to get attention for this idea, and on the other hand help me to find some difficulty that I have not thought about. I hope that people are happy to discover this in a early stage, I mean, if I have a good idea I really want to develop it, but if the idea is built on an incorrect foundation or that I only see a part of a problem, I would like to know it fairly soon. I therefore hope that such a template would contribute to increase the quality in the Business Case…All Business Cases will not look similar, but it can be a help to think about other aspects than those you see."*
>
> (**IS/IT S1)**

Business Case can also absorb the uncertainty since it helps prioritizing what to do or not to do. Furthermore, Business Case can help out in prioritizing how the work will proceed. One respondent says:

> *"Yes, Business Case can help you in the priority of things to do and to not do. I mean in the pre-study in such a change project a lot of ideas turn up and not all ideas lead to business value. So Business Case is a help in prioritizing on how you move on and continue the work."*
>
> (**IS/IT S2)**

The customer says that there is still a lot of work to do within the Volvo group concerning strategic decisions, but emphasized that it is important that Business Case support how you come to strategic decisions and what kind of benefits the decisions will give, this to reach an awareness and acceptance between the different companies:

> *"Today there are not so many strategic decisions like, you should choose a certain supplier or a certain technical platform etc. However, if we now take a few more of these direction decisions it is very important to support how you come to these decisions, if people do not know why it is taken and what kind of benefits it will give, since there are so many independent companies in the Volvo group, it will be very difficult for the different Volvo companies to accept this strategy. They do not have the same core process, and therefore the system requirements vary."*
>
> **(C)**

The last four questions in this section we have structured in the tables below.

| **25. To what extent to you consider that Business Case helps the consultant in his/her role as a "listener"?** | | | | | | |
|---|---|---|---|---|---|---|
| | | | | | | MV |
| BC1 | BC2 | BC3 | IS/IT S1 | IS/IT S2 | C | |
| | 2 | 5 | 3 | 4 | 1 | **2,5** |

| **26. To what extent do You consider that Business Case absorb the uncertainty when identifying the following?** | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | | | | | MV |
| | BC1 | BC2 | BC3 | IS/IT S1 | IS/IT S2 | C | |
| - Involved stakeholders | 1 | 3 | 5 | 3 | 4 | 4 | **3,3** |
| - Social structures (organizational and cultural structures) | 1 | 2 | 5 | 1 | 3 | 1 | **2,2** |
| - Physical structures (location, layout of buildings, technology etc.) | 1 | 4 | 4 | 1 | 3 | 1 | **2,3** |
| - Identification of business processes | 1 | 5 | 5 | 3 | 4 | 5 | **3,8** |
| - Goals/vision | 3 | 5 | 5 | 3 | 5 | 5 | **4,3** |
| - Scope (Delimitation) | 4 | 5 | 5 | 3 | 4 | 3 | **4** |
| - Reuse of existing IS/IT systems | 5 | 4 | 4 | 1 | 4 | 5 | **3,8** |
| - Investment in new IS/IT systems | 5 | 5 | 4 | 1 | 5 | 5 | **4,2** |
| - Strategy formulation | 5 | 4 | 5 | 1 | 4 | 5 | **4** |
| - Other | | | | | | | |

| **27. To what extent do You consider that Business Case can help the involved stakeholders to obtain a common understanding about the problem situation?** | | | | | | |
|---|---|---|---|---|---|---|
| | | | | | | MV |
| BC1 | BC2 | BC3 | IS/IT S1 | IS/IT S2 | C | |
| | | | | | | |
| 4 | 5 | 5 | 5 | 4 | 5 | **4,7** |

| **28. To what extent do You consider that business Case can support the absorption of the following issues?** | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | | | | | MV |
| | BC1 | BC2 | BC3 | IS/IT S1 | IS/IT S2 | C | |
| - Goals and strategies formulation (A) | 3 | 4 | 5 | 1 | 3 | 5 | **3,5** |
| - The design premises, organizational logic, organizational architecture, and the actual organization (B) | 1 | 3 | 4 | 1 | 4 | 4 | **2,8** |
| - The result of implementation (C) | 5 | 5 | 4 | 1 | 5 | 5 | **4,2** |
| - Nature of the environment (E) | 1 | 3 | 4 | 1 | 3 | | **2** |
| - The transitions between the issues stated above (A, B, C, and E). | 1 | 3 | 5 | 1 | 4 | | **2,3** |
| - Other | | | | | | | |

**Comment:**
C: "*Definition?*"

## *6.4 Views Regarding Architectural Design*

**29. Could Business Case be used in Architectural Design, and in that case why?**

Most of the respondents are uncertain whether Business Case could be used in Architectural Design or not. Those respondents that thought Business Case could be used in Architectural Design say it can be used, but within a limited number of situations and when evaluating a number of alternative "to be" situations. Furthermore they say that Business Case could be used in Architectural Design to test the model:

> *"I guess you could test your model to see if the benefits you expect really will come out of it and in what way it comes out. Perhaps you can use it to estimate the risks that benefits will not appear. I guess you perhaps could see that on the model."*
>
> **(IS/IT2)**

One of the respondents says that Business Case governs the Architectural Design, and use Business Case on a comprehensive level and then develop the solutions:

> *"In my world, Business Case completely governs this. You have Business Case, and then you have to, on a comprehensive level, develop the solutions. We then almost talk about what I call the city plan etc. What you can put into architecture, that is the city plan. You find your plots, roads etc. you then move to the next level, houses and buildings etc. According to me it is then we really are talking about architecture, but it can be the above as well. All this has to be within the frames of the Business Case. If you cannot, and it is here it is a big gap, bring everything you do back to the Business Case, that it is straight lines between the Business Case and the architecture, that you call the Architectural Design, something is wrong…*
>
> *…So through iterations between requirements and possibilities you can develop a good solution. Business Case governs this development of the architecture, so that you later on can go back to what we call a scientific approach and break it down in a different way."*
>
> **(BC3)**

The customer mentions that a Business Case can be used in Architectural Design to see what effect the change will provide in the business, but it depends on the definition of Business Case:

> *"Of course, in that context that you find out what influences this will have. If you use that definition, then Business Case should be used in every phase, but it depends on the definition of Business Case. It is perhaps easier if you have a narrow definition of Business Case. If the definition is very wide, it is difficult to say if you need Business Case in Architectural Design. Business Case is rather early because you expose what you expect of this project really early and after that it is not so much alive, but it is always there."*
>
> **(C)**

Those respondents, who say that Business Case cannot be used in Architectural Design, rather say that the Architectural Design is a basis when you create Business Case:

> "*I doubt it. Rather that you have it as a basis when you create a Business Case."*
>
> **(BC1)**

A second respondent further says that Business Case cannot be used in Architectural Design when inventing the "to be" model, but that Business Case can be used when evaluating a number of alternative "to be" situations:

> *"I believe that in the creative process of inventing the "to be", in that I do not think Business Case can be used. However, when evaluating a number of alternative "to be" situations then I am sure Business Case can be used to count on a number of different alternative scenarios for the future.*"
>
> **(BC2)**

Another respondent articulates that a Business Case should not be so in detail, otherwise it loses its readability. The respondent further says that if we talk about Architectural Design then it can exist on many levels, and if the architecture is on a high level we are then talking about classes of information that are included. The respondent believes more information is needed to be able to work with these kinds of things than what Business Case ought to have. It will otherwise become a counterweight. The respondent argues the importance to keep Business Case fairly short and with a plain structure.

> *"I do not think a Business Case should be so in detail…*
>
> **(IS/IT S1)**

**30. What kinds of uncertainty exist in the Architectural Design?**

Several kinds of uncertainties emerge from the respondents varying answers. However, common themes in the answers are that the uncertainty has to do with the influence, effects, and consequences of the architecture. We chose to illustrate this through a quotation from one of the business consultants, who also emphasize the major uncertainty regarding handling and managing of changes:

> "*To begin with, regardless if it is processes or organization, you almost never know exactly how things will turn out. If we talk about business development and not system, it depends a lot on the design regardless what it is from the beginning. However, the biggest uncertainty does not really lies in that, but in the handling and managing of changes. Thus, do you succeed to get the organization to change etc. Can you break the patterns? Can you establish the change? This is where I see the biggest uncertainty.*"
>
> **(BC1)**

One respondent with a long experience of Business Case and change work further says:

> *"One uncertainty that I have experienced several times is that it is not only one project going on at the time, several projects are running simultaneously and can indirect affect the same business. This indifference between different projects, how it affects the model and the Business Case is something that has happened to us several times. That is something I believe is very important because so much happens in a company during the time this is going on. It will not look the same as it did when the Business Case was created.*"
>
> **(IS/IT S2)**

A third respondent says that the purpose of Business Case is to absorb the uncertainty. The biggest uncertainty is in different situation where you have to make a choice, and it is in these situations a Business Case can be used. The respondent explained a situation where a Business Case can be used to absorb the uncertainty:

> *"… that can be in any kind of business routine and area really, if we are talking about distribution if we should distribute directly from the factory to final customer, or if we should have a central storage somewhere in Europe and distribute from there, or if we should have small local storages. All these are things that you can count on to absorb the uncertainty and come to the most suitable alternative."*
>
> **(BC2)**

Another answer regarding what kind of uncertainty that exist in Architectural Design is that the connections between what is defined and what is suppose to be achieved cannot be seen straight away. Furthermore, an uncertainty is that you have not grasped the complexity and nature of the problem, and that you do not have an overview of all the consequences. Therefore the technique might not be enough because the problem is too complex. Another big uncertainty is when you see the consequences in different time intervals:

> *"You have equivalent things where the technique is not enough if the problem is to complex. That is an uncertainty. Thus, that you have not grasped the complexity and nature of the problem. We have another uncertainty and that is when you go into a business and intervenes in the social systems etc. You then see the consequences in different time intervals, the consequences, how it affects people and organization etc., which you can see pretty much straightaway within a year, those you can fix. The consequences you see after five to six years could be on society level or those you can fix with political decisions. However those consequences you see first after 20 to 25 years are to late to fix."*
>
> **(BC3)**

Furthermore, this respondent says another uncertainty that exist is the use of models that oversimplify the reality, and he argues:

> *"Another thing is that you always work with your models. You oversimplify the reality. That is another type of uncertainty. Sometimes, and this has been done by IT, you have approached problems that are too complex for the available technique and then you will fall down."*
>
> **(BC3)**

One of the respondent answers it is not correct to talk about architecture in this stage. This because Business Case has to be held clean and readable on a high level, and not used in a stage like architecture, which is on a low level with a lot of details. The respondent says it is not easy to give a technical architecture for every idea:

> *"No, I do not think it is right to talk about architecture in this stage…I am not sure if this should go into the Business Case in such an early stage, thoughts about different solutions that will give the same effects, because you have nothing that says that an advanced IT-solution gives the best result. A Business Case perspective should rather be in terms like how much process, how much technique and how much change to the organization? However, I am not sure if these factors would fit in a Business Case template either. These are factors you should think about in the development work that is initiated by a Business Case. I do not believe, when you go further into the project and start looking at the architecture, that this fit in a Business Case. A Business Case has to be held very clean."*
>
> **(IS/IT S1)**

One of the respondents does not think he is the right person to answer this question and therefore he has nothing to say on this issue.

**31. How does Business Case absorb the uncertainty in the Architectural Design?**

Some of the respondents do not believe that a Business Case can absorb the uncertainty in this stage, because they do not see the use for Business Case in Architectural Design:

> *"I doubt it. I do not believe that is where you do it. That is not where the challenge lies. All these concepts are so wide. It depends on what you put into it. However, if architectural design, as I understand it, includes both processes and organizational changes, in that case no."*
>
> **(BC1)**

One of the two respondents who believe Businesses Case can be used in Architectural Design and thereby absorb the uncertainty says:

> *"Well, it is in somewhat the quality of the Business Case. Thus, the quality of your descriptions and the reflections you do. The only thing I can think of, if we talk about a holistic approach, is that you involve several competences to see through the Business Case. That together can reflect over it. "*
>
> **(BC3)**

The other respondent believe Business Case absorbs the uncertainty in the sense that it forces people involved to sharpen up, and answers:

> *"You have to work with the Business Case, I mean both the customer and supplier sharpens up. I know when I worked at Volvo Cars I had a financial director who once said: If I had got rid of all men you promised me throughout the years we would not be anyone left. That has not happened, so we have a problem. We tried to explain it by saying that the product had become more complex, and that the output is bigger, then you are out on slippery roads."*
>
> **(IS/IT S2)**

The customer again has difficulties to take a standpoint since he believes Business Case is such a wide concept. He believes it would be easier to answer this question if he had a definition of Business Case.

The last question in this section we have structured in the table below.

| **32. To what extent do you consider that Business Case helps the consultant to better understand his/her task?** | | | | | | |
|---|---|---|---|---|---|---|
| | | | | | | MV |
| BC1 | BC2 | BC3 | IS/IT S1 | IS/IT S2 | C | |
| 4 | 2 | 5 | 3 | 4 | 3 | **3,5** |

## 6.5 Views Regarding Change Management

**33. Could Business Case be used in Change Management, and in that case why?**

Most of the respondents believe Business Case can be used in this stage to communicate and help people involved in the decision to get an understanding. Many of the respondents' talk in terms like:

> *"Business Case is often used there. I mean the world is ruled by money and budgets and it is the last row that counts. I can spend this money and do this change, but I can also do something funnier with it. So the decision maker has to be secure that the change will give benefits to the company.*"
>
> **(IS/IT S2)**

However, they vary in opinion on what kind of understanding they should get through Business Case. They all pretty much say that it is used as a basis for decisions with both financial and other consequences described, but one of the business consultants mean that the understanding you get is strictly financial.

> "*Yes of course, since it helps to gain an understanding of how big the costs involved are.*"
>
> **(BC1)**

Another business consultant also sees a Business Case as a means to communicate after a decision have been made to make people aware of what type of changes that will be done. Furthermore, that a Business Case is an input to Change Management and the analyzing of how the business should work and be organized in the future.

> "*Yes, it has to do with what I said earlier that Business Case should be used as a means for communication and get people to understand that we are now talking about this and we have a decision that theses types of changes will be done etc…*
>
> *…naturally Business Case here is also an input to it. The descriptions are input for analysing and discussions; how shall we work? How shall we organize?"*
>
> **(BC3)**

A third business consultant further says that it is important at this stage that you have something to compare with. He argues:

> "*You always have to compare between different alternatives on the basis of risks etc. As I see it, you always have to compare intended change with as it is today. You cannot autonomously count on something separated from how it is today.*"
>
> **(BC2)**

Sometimes the decisions are made more on a feeling than facts and then Business Case can be skipped. One of the respondents says:

> "*Then you have a couple of other so-called religious decisions that is if you believe in something, and then you skip Business Case. It is a feeling. You cannot take to many decisions like that…*"
>
> **(IS/IT S2)**

Two of the respondents have another definition of Change Management than us and therefore do not see the use of Business Case here. However, one of the respondents believes that perhaps a Business Case can be used after the "to be" state is set to review if the initial Business Case still stands. He also emphasize that members in the project should make the decision here.

**34. What kinds of uncertainty exist in Change Management?**

The biggest uncertainty among all the respondents seems to be the difficulties to assess and estimate what will happen in the future:

> *"Ignorance of the future."*
>
> **(BC1)**

However, other uncertainties are that you have difficulties to quantify in financial terms, things that still perhaps are quantifiable and to see the soft factors, and therefore leave them out of the Business Case. One business consultant and the customer also say that it is hard to say what kind of uncertainties that exist here because it can be anything.

> *"…you have these much softer factors to, how people look at the change. Do they want this at all? The work quality, work environment, and psychosocial aspects etc. You have several of these that are in no way unimportant. On the contrary, they are really important. However it is often that you count on what you can count on, and then you do not spend a lot of time on these things that perhaps are the really big issues…*
>
> *…Where I come from changes can be of any character at all, it can be any change at all so it is really hard to point out what kinds of uncertainties it can be because it can be anything. It can be profitability, it can be uncertainties regarding costs, market shares etc."*
>
> **(BC2)**

Furthermore one of the business consultants emphasizes the uncertainty of not having enough competencies and that you separate business and IT:

> *"…you have to see it in different dimensions. You must be able to see what the human, the information theory, and the information technology are. The uncertainty is then that you from the beginning is to narrow and say that this is an IT-project and then involve only IT-people, engineers. Then they will not see the things that lie beside. So the biggest uncertainty for me here in the change work would be that you do not have enough of different competencies with you in this work. That is the big uncertainty; thereby you will not understand what it is all about that will lead to systems nobody use or use the wrong way. Then you will get time plans that will not hold and you will not reach the goals and results etc."*
>
> **(BC3)**

Another uncertainty that one of the respondents talks about is the decision structure. Perhaps the ones doing the investment will not bee the ones getting the savings. He argues:

> *"I have been involved in many cases were you save in an early stage, or save in a later stage, but it is the ones in the early stage that will do the investment. I mean we will then have a problem with the decision structure, and that is not easy. Sometimes you have to move up on company level, the highest level to make a decision. Perhaps a director for 300-400 people will not get the entire saving."*
>
> **(IS/IT S2)**

## 35. How does Business Case absorb the uncertainty in Change Management?

On this question the answers from the respondents varies. The respondents believe that Business Case can absorb the uncertainty but how and which uncertainty varies. Therefore we will present quotations below from each and everyone, this to give a complete overview of what was said on this issue.

> *"Business Case puts a price tag on what you have identified. It absorbs the uncertainty concerning how big the investment will be. Perhaps it absorbs the uncertainty until the next phase where you implement, because you have already flagged that it will be expensive etc. However, with this I do not mean that it absorbs the uncertainty in identifying what needs to be done in the next phase. It does not absorb the uncertainty in decision-making and not on which changes you should do either. It absorbs the uncertainty up to when you flag that this will be expensive…"*
>
> **(BC1)**

> *"A Business Case can absolutely absorb the uncertainty regarding what I mentioned before. I also think Business Case can absorb the uncertainty regarding "soft" factors, not in a way where you so much count on it, but rather that you have a structured way to estimate projects. Is this a good thing to do or is it a bad thing to do? … That we include the financial quantifiable factors and the quantifiable but not financial quantifiable factors and soft factors and also what every project should do."*
>
> **(BC2)**

*"Well, what I mean by a Business Case, because it is descriptions of both what it is you will achieve and how you will achieve it. However this presupposes that the Business Case is understandable, that it communicates…*

*…the ones who will change their behaviours or their way of being, or they who are involved, that they do not understand, or had the opportunity to really understand, what the Business Case is, what you are looking for, what should be achieved…*

*…All dimensions should be enlightened in the Business Case. You have goals for a business. For example, Volvo IT's goal is to have happy co-workers, satisfied staff, and so on and so on. You have to handle all these dimensions you have goals in within the Business Case, and look at these parts in a holistic manner…*

*…help from the Business Case to understand that this is necessary when the business shall reach its goals."*

**(BC3)**

*"I think it is important to think about what the purpose was. What the contribution of such a documents would be. I believe a Business Case can contribute with overview and summery."*

**(IS/IT S1)**

*"Yes Business Case can absorb the uncertainty if it is well-done…*

*…only include reliable posts, because the others will only be debated and you will lose focus. Not too many assumptions…*

*… it has to be reliable money in the calculations…*

*… distinguish between, real money and monopoly money, money that just moves within the company…"*

**(IS/IT S2)**

*"I think a Business Case can absorb the uncertainty if we start several pre-studies to really see which of the projects that are most profitable. You will do a pre-study and then create a Business Case and then make a decision about which of the project we will venture on…*

*… It will be easier to answer this question if we have a definition of the Business Case concept."*

**(C)**

The last three questions we have structured in tables below.

| **36. To what extent do you consider that Business Case helps the consultant in his/her role as a "teacher?"** | | | | | | |
|---|---|---|---|---|---|---|
| | | | | | | MV |
| BC1 | BC2 | BC3 | IS/IT S1 | IS/IT S2 | C | |
| 4 | 3 | 5 | 3 | 4 | 1 | **3,3** |

| **37. To what extent do You consider that Business Case absorb the stakeholders uncertainty in the decision that concerns the final future solution?** | | | | | | |
|---|---|---|---|---|---|---|
| | | | | | | MV |
| BC1 | BC2 | BC3 | IS/IT S1 | IS/IT S2 | C | |
| 4 | 5 | 5 | 3 | 5 | 4 | **4,3** |

| **38. Given two alternative organizational designs, to what extent do You consider that Business Case absorb the uncertainty of the following issues when choosing one over the other?** | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | | | | | MV |
| | BC1 | BC2 | BC3 | IS/IT S1 | IS/IT S2 | C | |
| - Parsimony (Involves few position changes) | 1 | 5 | 4 | 1 | 1 | | **2** |
| - Simplicity of solution | 1 | 4 | 4 | 1 | 2 | 1 | **2,2** |
| - Specificity of solution | 1 | 4 | | 1 | 5 | | **1,8** |
| - Robustness of solution | 1 | 2 | 3 | 1 | 5 | 1 | **2,2** |
| - Implementability of solution | 1 | 4 | 4 | 1 | 4 | 1 | **2,5** |
| - Other | | | | | | | |

# 7 Analysis and Discussion

In this chapter we will try to connect the theory and the empirical result to see if and in that case how the model SACIS receives support or not i.e. evaluating the contribution of Business Cases in terms of improving just the mutual understanding of all involved participants. The mean value for the closed questions, questions with designated answer alternatives[50] are not representative since our selection of respondents was limited. Instead we have chosen to bring up what we call "strong answers", i.e. where a great unanimity exist between all the respondents and/or the three groups. We will also to some extent bring up "weak answers" i.e., answers where either unanimity exists if all respondents graded low alternatives, or answers where disharmony exist i.e., where both high and low grading exist or differences in the answers. We will use the same primary structure as we have done earlier in this thesis and start analyse and discuss issues concerning SACIS in general and Business Case in particular and finally the different steps in SACIS, Situation Analysis, Architectural Design, and Change Management in more detail. Furthermore we will divide the Business Case section into the current model of Business Case and Business Case according to SACIS.

The perception of Business Case in literature and businesses today varies and many different opinions exist. It exists divided opinions of the concept Business Case and its definition, and therefore it is problematic to refer to one common basis for the Business Case concept. Accordingly, the purpose is to improve our understanding of the relationship between enterprise vision i.e. business concept and business strategy i.e. business model. We will not establish what a Business Case really is i.e. establish one definition, but rather show where in the development process a Business Case can be used and more specific, how Business Case can be used to evaluate the attractiveness of a strategy.

[50] See Appendix 2 Inquiry Questions, pp. 26 - 38

## 7.1 Business Case - the Current Model

During our study we have met many different perceptions on what Business Case is. We can establish the following:

- To begin with, there is not one uniform interpretation on what Business Case is. It exists confusion in regard to (1) terminology, for example Business Case can be the result of a process or the process itself, (2) delimitation, (3) basis available to create Business Case, (4) the result Business Case should produce/contain, for example Reifer (2001) refers to a business model rather than to a Business Case, whereas Schmidt (2002) sees a clear distinction between Business Case and business model, (5) context, the current use of Business Case is context free.

- Secondly, every discipline (economists, marketing, engineers, system analysts, purchasers, logistics, quality inspectors etc.) uses their specific way and language to create Business Case. Evaluation yes, but in the language who?

- The common denominator in all these new Business Case approaches are thus to make some kind of consequence analysis or an assessment of effects of a change on the basis of quality, costs, time, risks, etc.

At the same time it exists unclear arguments of how fruitful and believable a Business Case is since there exist no “real” criterion to do this appraisal. Which furthermore is supported by our empirical study.

### 7.1.1 Interpretations

From both theory and the empirical result we can establish that most of the work today regarding Business Case is performed on an intuitional basis, and that every consultant and every book has in principle its specific concepts, language, principals, and techniques. Intuition is good but inadequate if not coordinated with others (Checkland 1985, 1999, Mackenzie (1984), Hedberg 1980). If knowledge means that people agree about things, then in this case it exists a big dissonance on what Business Case is and thereby little knowledge. The research has not noticed the problem and therefore it does not exist a systemized study that offers some form of taxonomy (classification) to understand Business Case, thus scope and content. However, our effort present a rough taxonomy of Business Case, based on theories in terms of grade of structure that is decided in terms of functions and matrices. On this basis it exists three types of Business Case, (1) unstructured, (2) structured, and (3) semi-structured.

Some interpretations of Business Case focus on operation rather than strategic evaluation (effectiveness, efficiency, efficacy, ethicality and elegance). In this sense it is related to the implementation planning rather than to the understanding of how a business concept converts into alternative business models. In this sense Business Case refers to projects. Projects have an undefined definition. Projects can comprise a project for the whole business strategy to a project that only looks at which colours an interface should have. A project can have several

smaller projects within itself and/or several phases[51]. The objective for the project might be unclear and/or the consequences of the project. What do we exactly mean by projects that should improve quality, usability or IT security?

Another interpretation that exist in both theories and the empirical result is that Business Case is founded on an "either or" logic. Invest or do not invest? ISAC was the first systematical approach for "either or" investments. This was received in the whole world, and was good when the focus was on business improvements that could not be estimated and quantified.

Furthermore, Business Case has been compared with cost/benefit analysis. However, cost/benefit analysis has been regarded as fruitless because it over focus on economical aspects and prevent development. The current model of Business Case primary focus is on quantifiable, financial "hard" factors but the ones who fails with the implementation of techniques are the ones that carry out to many economical calculations and by doing so prevent the technique.

According to us, we believe on reason why a lot of Business Cases fail is because of all the different interpretations. Today the theories talk a lot about why so many Business Cases fail. Schmidt (2002) has summarized it in two expressions, "*lack of history*", and " *the special nature of the financial Business Case*". On this issue the empirical data was divide and other factors like, "*insufficient quality of assumptions*" and "*lack of relevant information*" was mentioned. We believe that these factors or reasons why Business Case fails is pretty much in unanimity to the theories, and that perhaps the question was vague and that the expressions were not exemplified enough. However, all above illustrate that a lot has to do with, the weak theories i.e. differences in interpretation, the understanding of what the use and contribution of Business Case is, not having the required data, and finally the financial nature of Business Cases. We like to emphasize that if the feasibility of a Business Case is judged in terms of the Business Case itself actually achieving financial support, then the feasibility is extremely low. If feasibility is judged in terms of laying a sound foundation for continued development, then the prospects are good.

### 7.1.2 Understanding

Today Business Cases are solely financial oriented. However, all respondents but one, who makes a remark that qualitative benefits should only be taken into consideration if they can be quantified, believe that a Business Case should take both qualitative and quantitative benefits into consideration. From our empirical study we can see a wish for an understanding of consequences, a description of effects and knowledge about the changes. A strictly financial Business Case will never help the understanding in general and the understanding in particular. The more we know the more secure we can move forward. Accordingly, economical estimations no matter how good they might be are at the end not good because they cannot catch non-quantifiable benefits. Strictly financial arguments will never increase the understanding since the value from a business today cannot only be described in

[51] A section or 'chunk' of work in a project for which there are no measurable outcomes at the end although some outputs may be produced (http://www.projectmanagement.tas.gov.au/guidelines/pm5_14appx1.htm#phase, 2004-05-05)

economical terms Smith (1999) Checkland (1985). Therefore, we like to empathize the importance of including ´"soft" non-quantifiable factors in a Business Case as well as the "hard" quantifiable factors.

### 7.1.3 Overview

In an example on Business Case given by Prosci learning centre (2004), they do not position the scope of the Business Case in relation to the rest of the business. They do not illustrate where in the business the process is, and how other processes get affected. While Schmidt (2002) argues the importance that the content to Business Case will have to be drawn from all involved parts of an organization. Furthermore, this is supported from the empirical study where the respondents state that Business Case should present a summery of the whole picture. It is important not only to show the sub-process but also to show the sub-process relationship to the entire business, this to for example enables localization of responsibility. Otherwise there will be a loss of overview and management. The result is isolated information islands, lack of design, vague timelines, and a low formal quality (validity), and that the business will not reach their goals. This illustrates a fragmental rather than a holistic approach.

All these statements in this section can be derived from both the current model of Business Case and our empirical study. Accordingly, we can establish that the current model of Business Case is still in a formative phase and that both its validity and reliability is problematic since there exist no agreement in either literature or the empirical findings.

## *7.2 Business Case According to SACIS*

According to us, Business Case is either a model or a method to create a model to assess the harmony between a business concept and a business model. However, the focus here is not to establish one definition common to all of what Business Case "really" is, since there exist many different interpretations, therefore this will not be discussed any further.

One interpretation of Business Case we have exposed, one that SACIS agree with, is that Business Case should assess the harmony between the response the business gives the stakeholders (CSF, business model) and the social surroundings judgment of continuing support (business concept), and that these are the correspondence to Business Case. Furthermore, this is supported by the empirical study. Altogether this supports our alternative model of Business Case, SACIS.

The respondents are unanimous that a Business Case increases awareness and meaningfulness of investments in information technology. To do this the investment must provide benefits to all stakeholders to keep their support. Thus, a meaningful business has to give substantial response to keep the support of the stakeholders and the business cannot receive without giving. In other words, the stakeholders give support if they get response. According to Hedberg (1980), Checkland (1985), and Smith (1999) then a business will succeed. Another way to succeed is with good teamwork between the stakeholders and the business, learn how

to meet and effectively communicate the needs of the stakeholders, in these aspects a business concept is necessary (Checkland 1985, Smith, 1999). To have a meaningful business the business concept[52] (root-definition) must provide benefits to all involved stakeholders and therefore cannot solely be defined in financial terms. In other words, the evaluation of a strategy's attractiveness cannot solely be given in quantifiable "hard" factors, but also should include qualitative "soft" factors. Most of the respondents agree to this.

Furthermore, the empirical findings demonstrate that a Business Case should increase comprehensibility and understandability and respond to the business concept i.e. the expectations of the stakeholders. The overview is secured if the Business Case is linked to the total business model i.e. the business concept converted into an architectural design. Business modeling is a necessary precondition for defining the scope and delimitation of a Business Case. If not, you will loose the overview and management and the result will be isolated information islands, lack of design, vague timelines, and a low formal quality (validity), and the business will not reach its goals. SACIS agree with this and states that it is important to take into consideration the necessary factors that characterize the entire world today for example, to create better communication with all citizens (blind, old, young etc.) do not for example, view Internet as the only alternative for this. Support and facilitate for everyone.

We can establish from the theories that Business Case is used where change decisions are made. Furthermore, the respondents are unanimous and say that Business Cases can be used in an initial stage in an enterprise development process where a discussion is performed on why a change is needed and a decision will be taken. SACIS agree with this but like to add, with support by Hedberg (1980), this assumes knowledge and enough "real" relevant data to make a sound decision. When it comes to necessary/essential investments it is not Business Case that will be produced but only instinct.

To a great extent the theories and the empirical result agree that the expected contribution of Business Case, when the situation is complex, is an improved basis for decisions, an estimation and understanding of consequences, a description of effects, knowledge about the change, a means for communication, and a summery of the whole picture. The literature on Business Case and the empirical findings also agree that it is important that Business Case takes into consideration aspects like; changes to organization, changes to processes and changes to support systems of the designed solution. These theoretical and empirical views further support SACIS that emphasise a holistic approach. The traditional three-stage model approach[53] equals IT while SACIS equals a mix of IT and organization. A sound model takes everything into consideration (Checkland, 1985, Mackenzie, 1984, Hedberg, 1980). If Business Case can help increase the understanding, then it is good. All techniques, methods, and theories have only one purpose and that is to promote a coordinated learning, mutual understanding (Hedberg, 1980, Mackenzie, 1984, Checkland, 1985). If Business Case has a meaningful value, then even Business Case has to promote learning.

Generally different opinions exist among the respondents on the issue if Business Case absorbs the uncertainty in an enterprise development process. They are most unanimous that Business Case absorbs the uncertainty on the scoop of the engagement. According to the

[52] See Appendix 1 SACIS's Theoretical Framework, pp. 24 - 25
[53] See Conclusions, pp. 37 - 40, chap 3

theories and SACIS that presuppose that the Business Case is linked to a business model that helps to give a delimitation of business areas or problem areas that will be affected by the choice of Business Case. Usually it is not possible to have a final delimitation if it exist strong mutual dependencies between different factors. Therefore a holistic approach is needed, SACIS. Science of system analysis and information systems, and IS/IT management struggles for a holistic development. An overall/holistic picture promotes meaningfulness. With support from both theory and the empirical findings we claim that with this, the understanding of the attractiveness of a new strategy and thereby that a change is good increases. SACIS is holistic, however from our empirical study we can establish that there are situations that demand a more or less holistic view.

The theories give fixed structures and proposals of methods, techniques and tools for the realization of Business Case. However, from the empirical study we can see that a Business Case structure, methods, techniques and tools depend much on the situation. We believe this could be supported through SACIS that leads to taking purposeful action in the situation aimed at improvement, an action that seems sensible to those concerned.

## *7.3 SACIS the Natural Context for Business Case*

SACIS is solely a model for supporting the mutual understanding of stakeholders about the crucial and ever changing issues and interests that related with a coordinated and proactive enterprise development. Whereas the current use of Business Case is associated mostly with financial issues SACIS provide a sound platform for socio-cultural, functional, info-logical, structural issues etc. Furthermore, the current use of Business Case is context free whereas SACIS provides a proactive social context where a coordinated enterprise development takes place. Finally, whereas the current use of Business Case is project oriented, SACIS relates use of Business Case in the context of business concepts, i.e. root definition of a business enterprise, and business models, i.e. information based business-wide architecture.

Today many companies are stuck in a paradigm of less effective, less convenient, more expensive applications that are justified by increasingly erroneous, redundant and illogical Business Cases. According to SACIS the first thing to do about this is to look at the real reason for a change, get information from the stakeholders in meetings. The role of the consultants is to listen to all involves stakeholders. Furthermore, not look too closely at the figures and be sure that the Business Case includes only realistic costs and benefits, research other people's Business Cases to discover the nonsense that they put in as justification, and be careful of the projects that has no real Business Cases. Finally, go back to the people who want the Business Case and get them to give their justifications. The Business Case should be a means for communication between the customer and the supplier. The strategy is SACIS, a model of the entire organisation.

We mean that SACIS can help to improve our understanding of the relationship between enterprise vision i.e. business concept and business strategy i.e. business model and achieve an articulated and accepted strategy that will help the consultants to overcome some of the uncertainty experienced when creating and using Business Case.

### 7.3.1 Situation Analysis

It exists divided opinions among the respondents whether Business Case absorbs the uncertainty in the Situation Analyses or not. It also exists different opinions between the theories and the empirical findings. The empirical findings do not support SACIS and our belief since SACIS does not see the use of Business Case in Situation Analysis in the sense that it helps absorb the uncertainty when a problem analysis etc. is done, but rather after the implementation when coming back to Situation Analysis for evaluation. However, as one of the respondents points out it is an iterative process, and perhaps it absorbs the uncertainty if it helps to reach an understanding that a business model is not in harmony with the business concept and that you then go back to learn more. Another respondent said that a Business Case is an effect of problem analysis and design, and the design is Architectural Design since strategy assumes architecture. Perhaps because of the iterations between Situation Analysis, Architectural Design and Change Management it is hard to keep them apart and that they easily get mixed up, and therefore they believe Business Case is used in Situation Analysis. However, Jessup and Valacich (2003) claim that you can and should use Business Case to evaluate existing strategies. Then Business Case is used in Situation Analysis but we like to argue that this would not be fruitful since there will be nothing to compare with.

Furthermore, the respondents mean that a Business Case can help involved stakeholders to get a common understanding of the problem situation. SACIS agree with the respondents that Business Case should help all involved stakeholders to obtain a common understanding of the problem situation, but Business Case should also give an understanding of the solution to the problem and how it will meet the stakeholders' expectations on the business etc. in a holistic matter. Business Case do not help solve the "right " problem or grasp the opportunity, but rather give an evaluation of the attractiveness of a strategy i.e., how to respond too the business need. All this will not be understood in Situation Analysis according to SACIS.

In Situation Analysis you have to create a business concept that reflect all stakeholders' expectations in opposite to Business Case (Checkland, 1985, Smith, 1999). Through this you will obtain a metrics to measure against, and Business Case assumes that you have metrics. If the goals are based on expected results or expectations, this will also facilitate the work to evaluate and control that the goals have been reached (Smith, 1999).

### 7.3.2 Architectural Design

Several kinds of uncertainties in the Architectural Design stage emerged from the respondents' answers, but also that Business Case cannot absorb them. Therefore the empirical finding and the theories agree that Business Case is not used in Architectural Design. Design talks about solutions not problems. Among those respondents who said that it perhaps could be used in a limited number of situations talked about situations where you test the model or evaluate a number of alternative "to be" scenarios. We agree with this, but do not believe it is in this stage, where the business concept is converted into one or several architectural designs etc., the evaluation of alternatives comes in, rather in the next stage, Change Management, where according to SACIS, analysis and evaluation of different business model(s) begin.

We do not believe that Business Case can support the consultant in his or her role as a creator at this stage, but that it is rather the business concept that the Architectural Design should be based on. In other words, the Architectural Design should be based on critical support factors (the social surroundings judgment of continuing support, the business concept) and that the architectural design is the response the business gives the stakeholders, i.e. the business model or strategy.

### 7.3.3 Change Management

We are aware of the fact that our definition of Change Management varies with most of the respondents' definition, but at the interviews we tried to explain and clarify our view on the concept as much as possible to avoid misinterpretations.

Here we can see a big unanimity between both the empirical findings and the theories that a Business Case is used in Change Management. It is in this stage a comparison analysis between conceptual models (business model "as is" and business model "to be") and evaluation to identify conceivable changes on the basis of for example, information quality, decision quality, product/service quality etc., are preformed. This evaluation can be done with the help of Business Case to provide an understanding of the attractiveness of a change i.e. the associated costs, consequences, benefits, risks etc. of a new strategy.

The biggest uncertainties that exist in this stage are according to the respondents' ignorance of the future and the difficulties to quantify cost and benefits in financial terms. How the Business Case can absorb this uncertainty varies in the respondents' answers and they had difficulties to give a standpoint on this issue. With support from the theories (Checkland 1985, Mackenzie 1984, Hedberg 1980) we can only emphasize that it is not possible to get a complete and representative view of the requirements. Even if that were possible the consequences a change could generate would be impossible to foresee. Therefore development is hard to plan and estimate, but creates conditions for learning. Furthermore, knowledge is necessary for sound decisions (Hedberg, 1980). Even where Business Case would contribute with something sensible it would not be enough. SACIS is used in a learning process and learning is about a complex problematical human situation, which means that not only reality is an object of change, but also the people's view of this reality.

One uncertainty that one of the respondents like to highlight is uncertainty of not having enough competencies in this work. Our model, SACIS, rectifies this by stressing that all stakeholders are involved in the decision making in this stage.

All points at the fact that the validity of the answers that Business Case gives is unreliable since it refers to non-reality. However, Business Case can at least absorb the uncertainty if it helps improve the communication between organizations and their surrounding stakeholders. Accordantly, the purpose with development is to improve communication between organizations and their surrounding stakeholders, and that they are involved in the decision making process (Checkland 1985, Mackenzie 1984, Hedberg 1980). Our model SACIS, is based on learning, allows iterations on several levels, allows maturity in every situation before continue, and that stages that are not thoroughly worked out can be reconstructed.

Through SACIS, we believe that Business Case used in the manner described above can support the consultant in his or her role as a teacher at this stage to help communicate and help reach understanding and awareness of the attractiveness of a strategy.

Opposite to the current model of Business Case, that lack both a solid and sound ground theory and reliability, SACIS has both high validity and high reliability (figure 17, p. 103, chap. 7). It is validated through sound well-articulated models proposed by Checkland, Mackenzie, and Hedberg and furthermore through existing interpretations of Business Case that agree with SACIS. The reliability is also high since much of the empirical data also support SACIS and notices the connection between business concept, business model/strategy, and Business Case. Even if the empirical support is weak to some extent only mean that further research in the area should be carried out.

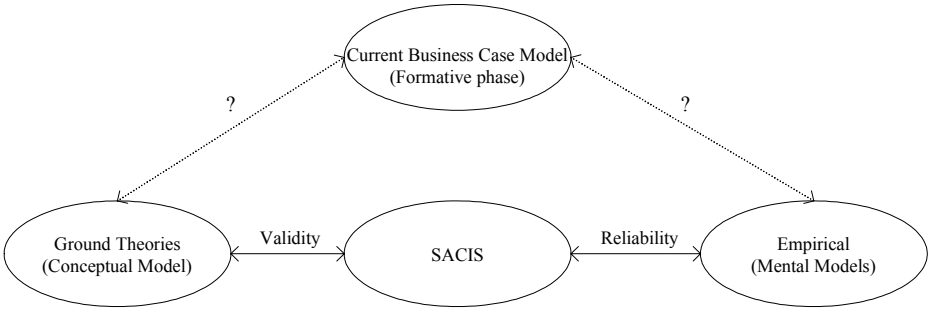



Figure 17: *Validity and reliability of SACIS and current Business Case model.*

The Implementation stage in SACIS has been left out of this thesis, but during the interviews we could establish that perhaps Business Case could be used as a frame to refer to under the construction of a solution. According to SACIS, the issues of implementation cannot be treated separately because they are parts of the same cycle of business development and any sound use of Business Case should cover a complete cycle of business development. Therefore, strategy formulation and strategy evaluation is not enough for a sound and complete evaluation. Perhaps this could be a topic for further reach.

# 8. Conclusions

The purpose of our work is to improve our understanding of the relationship between enterprise vision i.e. business concept and business strategy i.e. business model. Accordingly, the focus of our study is to determine how good or bad a particular business strategy is. Because the same business concept can be implemented with a variety of alternative strategies it became necessary to clarify which strategy is more adequate for that purpose. Just in this context the concept of Business Case became actual, relevant and fruitful.

Thus Business Case is expected to provide the positive and negative consequences that follow the strategy.

Furthermore our study focuses firstly, on the relationship between the consultants and their customers. Accordingly, the role of consultants is expected to be the absorption of customers' uncertainties with respect to the implementation of the selected strategy.

Nonetheless, the primary aim of our inquiry was delineated to provide understanding of the following query:

***How can Business Case be used to evaluate the attractiveness of a strategy?***

To this query through a systematic and empirical investigation we have provided the following answers:

1. Current techniques and models of Business Case are still in formative phase. In this sense they neither support mutual understanding nor secure broad acceptance of a strategy.

   The reasons underlying their limited support can be given in the following terms:

   - Solely financial orientation
   - Short term rather than long term time horizon
   - Focusing on operation rather than strategic evaluation (effectiveness, efficiency, efficacy, ethicality and elegance)
   - Fragmental approach rather the holistic
   - Lack design
   - Have no self-evident validity
   - Context free
   - Varying definitions

   This is verified in both the available theories and from our empirical investigation. For the above reasons we have rejected the current model of Business Case. Many inquiries of the most scientific and professional information basis support our argumentation.

2. According to our investigation strategy evaluation is based on the following logic:

   - Strategy agrees with vision (business concept).
   - Business Case agrees with strategy (business model).
   - Business Case agrees with vision.

   The above logic agrees with the logic of well-articulated and broad accepted models that have been proposed by:

   - Checkland
   - Mackenzie
   - Hedberg
   - Smith

   These models underline the SACIS concept and define Business Case in terms of:

   - Cultural feasibility
   - Systemic desirability (rational feasibility)
   - Social feasibility

   However, social issues lack fixed solutions because the impossibility to absorb the amount of ignorance that is associated with change decisions that forms the future destiny of business.

   Therefore, it is expected that management should take away undesired states of affairs but at the same time create new ones because of our ignorance. Accordingly, one aspect of SACIS is just its periodization.

   This reasoning is partially supported by our empirical investigation where most of the respondents also see this logic. Perhaps an investigation where SACIS is put in practical use could further support this conclusion.

3. Strategy formulation and strategy evaluation is not enough for a sound and complete evaluation. According to SACIS the issues of implementation cannot be treated separately because they are parts of the same cycle of business development.

   However, our study has been delineated to focus only on the issues of strategy evaluation. Therefore the efforts of communication do not function. This can be said even with support from Grundy (1997). Today there is not yet a “rock solid” case but this thesis is probably as good as it currently gets. Hence the Master Thesis does not cover the entire body of knowledge on sustainable enterprise development since the Implementation stage has been left out of the study.

In summary, any sound use of Business Case should cover a complete cycle of business development. Furthermore, the soundness of use should be defined in the terms of SACIS because the ultimate goal of SAICS is the improvement of the mutual understanding of stakeholders. Finally we have many arguments to indicate that the traditional use of Business Case focusing just on the financial evaluation of strategy is an necessary but not a sufficient precondition for the acceptance of a sound and attractive strategy.

## *8.1 Further Research*

- One area of further research could be how SACIS can be used in practice, ("in reality") when creating and using Business Case.

- The Implementation stage in SACIS has been left out of this thesis but during the interviews we saw that perhaps Business Case could be used as a frame to refer to under the construction of a solution, and maybe this could be a topic for further research, see figure below.

- Another research area could be evaluation and recommendation of methods, techniques and tools since this is out of scope for this Master Thesis. As we said in the chapter inquiry methodology, there is a student in France who has used this Master Thesis as input and continued to evaluate the inventoried methods, techniques, and tools to further give recommendations.

The figure (figure 18, p. 107, chap. 8) illustrates the areas of further research

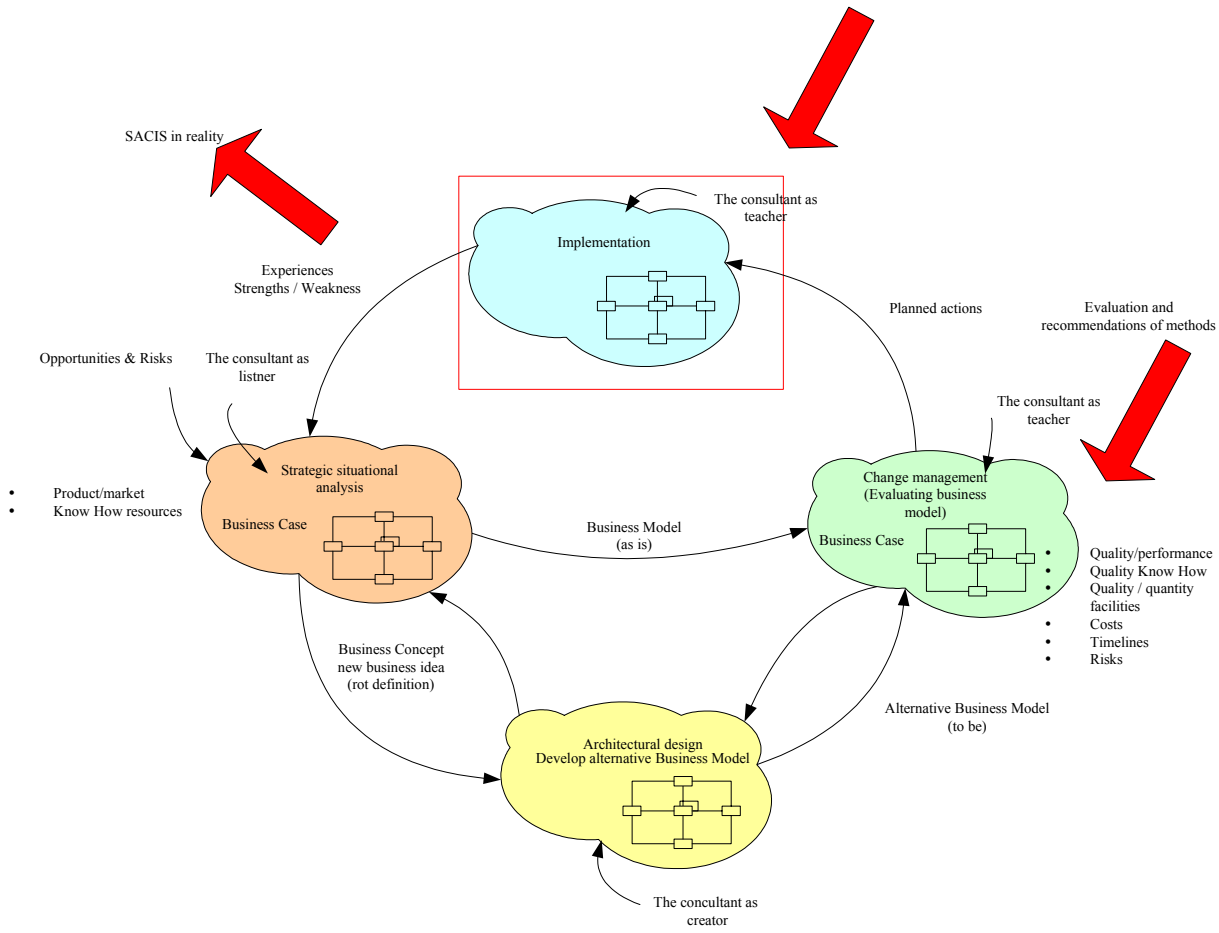



Figure 18: *Areas of further research.*

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**References of figures**

Figures without reference are products of our work. Otherwise we indicate in the caption from where the figure is collected. The author is in the references above.

# Appendix 1 SACIS's Theoretical Framework

This chapter will present Magoulas interpretation of Dahlboms conceptual framework since these theories concerning the business/social organization are all part of the basis for our model. Furthermore, this chapter will also present three main theories that we have chosen since we think that they all address the problem area of this thesis and to get a basis for our model. The model can be viewed as an alternative hypothesis to the main models that characterize both the theory and the practice. In next chapter, we will combine different parts of these theories into our model that we believe give an alternative way for supporting the mutual understanding of stakeholders about the crucial and ever changing issues and interests that related with a coordinated and proactive enterprise development. The three theories that will be used are written by:

- Peter B Checkland
- Kenneth D Mackenzie
- Bo Hedberg

## *The Concept of Business as a Social Organization*

The conceptual framework, (figure 1, p.1), is fil dr Magoulas interpretation of Dahlboms framework of the business/social organization. The framework consists of five integrated parts: social structures, processes, stakeholders, goal, and information systems. These parts are described below (Magoulas, personal communication, 5th of March 2004):

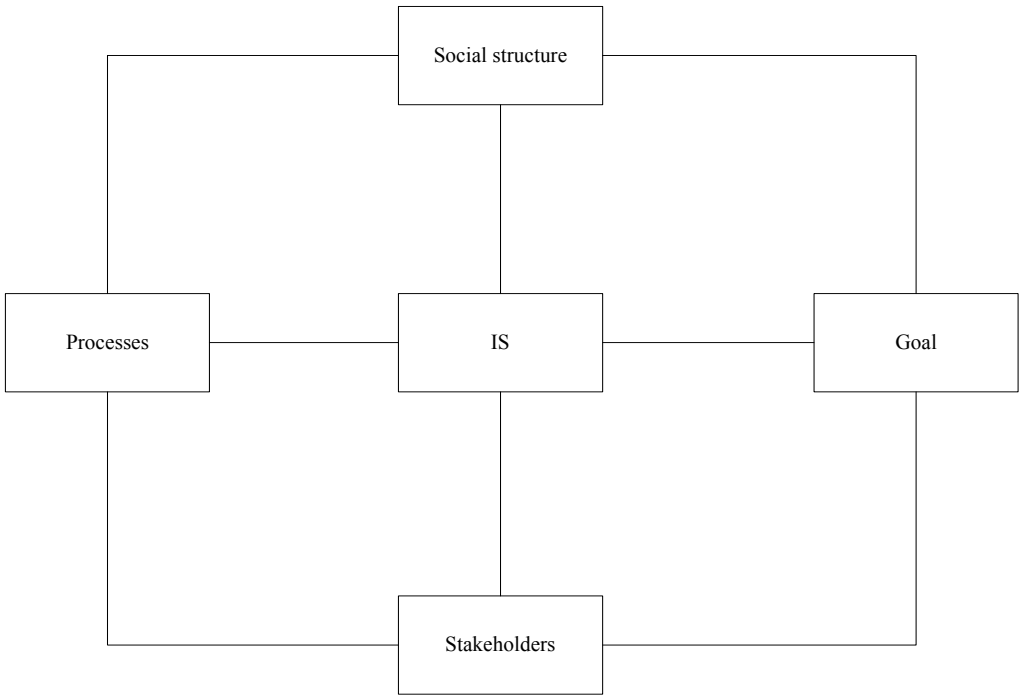


Figure 1: *Magoulas interpretation of Dahlboms conceptual framework.*

**Social structure**
This structure describes how the stakeholders should interact with one another. The social structure is decided on the basis of values, norms, and the roles of the stakeholders, and which expectations there are on their values, norms and roles.

**Processes**
Processes describe the activities that exist in the business. The processes are, in best case, a result from a common goal. Processes transform input to output and can be divided into two major groups, structured and unstructured. In a structured process the course of action is known, while in an unstructured process the course of action is unknown. A semi-structured process consists of elements from both types.

**Stakeholders**
The stakeholders are the individuals that participate in an organizations business. Thus, they can influence and be influenced by how well the organization succeeds with its business.

**Goal**
Express an expected condition. The goals steer the design of the organization and should be established through negotiations with all stakeholders. This since a well-grounded goal increases the participants' motivation and feeling of involvement, and this leads to a better goal fulfillment and a better social climate in the business.

**Information systems**
The information system fills the following functions:

- Support the road to goal fulfillment.
- Support the stakeholders' need for information.
- Support the processes that, hopefully, are a result of the goal.
- Support and strengthen the social structure.

The information system is the hub. It connects the different dimensions (social structure, stakeholders, goal, and processes) and supports them with relevant information. For example, the information system could be used to spread the goal efficiently, and if needed remind the stakeholders of the goal.

## *Three Views of Organizational Development*

According to Magoulas and Pessi (1998), an organization is utmost an agreement between all parts that it should exist. Therefore everybody in an organization should be allowed to participate in a change process. Participants and equality in decision-making cause faith between all parties. Checkland (1985), Mackenzie (1984), Hedberg (1980), Magoulas and Pessi (1998) and all argue that everybody's expectations and individual goals must be realized to get a "win-win" situation.

### Common Views in the Three Theories

Blixt & Svärdström (2002) summarize the three scientists models by mentioning that they all view the organization as an overall picture and that an organization always is in a state of change and in a contiguous learning process. Furthermore, the three theories consider that a goal of the organization is social and under constant development. In other words, the organization activity should aim to realize the stakeholders varying and changing goals, this to keep the stakeholders together. All three models are based on learning and assumes from "the law of ignorance ", i.e. no one can control all consequences, in some cases it exists better control due to experience, but it is not enough. The organization has to develop and improve constantly all the time therefore the organization has to be in a condition of constantly learning (Magoulas, personal communication, 5th of March, 2004).

### Differences in the Three Theories

There are some differences between the models (Blixt & Svärdström, 2002):

- SSM (Soft System Methodology)
  Checkland focuses more on the socio cultural school. The model leads to actors changing their way to think before they change the business by viewing both present and future concepts.

- RSM (Rational System Methodology)
  Mackenzie belongs in more of a rational school where the focus is more on how changes to the organization should be performed to get an efficient result both during implementation and the ongoing maintenance of the change.

- SPM (Social Political Methodology)
  Hedberg focuses on the socio-political school, where employees and leaders should have equal gain from an organization development.

We agree with Blixt and Svärdström (2002) when they state that these theories may seem like a utopia, but the purpose is more to help people to change their ways to think about how a change/development could be carried out, rather than to seem like the norm for this process.

Below, follows a description of the different theories we have based our model on.

## Soft Systems Methodology

According to Checkland (1985) SSM is best understood in relation to its origins. Therefore we have chose to walk through all the steps from when the idea of SSM first was born to how SSM can be applied.

### History of the Socio Cultural Model

Thirty years ago Checkland examined if Systems Engineering (SE), which was successful to technical problems, applied to the more complex problems, which involve social system within organizations. An immediate use of SE with hard system thinking was not possible, but with a combination of SE and systems thinking strongly linked to real world practice Checkland and his collaborators developed an alternative approach - SSM that gave better results. This work gave a distinction between the “hard” system thinking, where parts of the world are taken to be systems, which can be engineered, and the “soft” system thinking, where the focus is on making sure the process of inquiry into real-world complexity is itself a system for learning. (Checkland, 1999)

### Hard Systems Thinking

Hard Systems promote a sequential, staged approach to change. The Hard Systems methodology is based on the search of goals and used where the degree of clarity and stability is high and the problem is clearly defined. The first step in SE starts by defining the need to be met and the objective of the system, which will meet them. SE entails a search for the best means to achieve an end defined as desirable. The engineer works back from the purpose, or objective, and creates an object or system, which will achieve that objective. The whole design realization process is driven by the discipline of having to meet a declared objective. The hard system thinking talks the language of problems and solutions, which eliminate problems. (Checkland, 1985)

### Soft System Thinking

Whereas SE is a system concerned with achieving objectives, SSM-concept, or the soft system thinking, is based on learning. The learning is about a complex problematical human situation, and leads to taking purposeful action in the situation aimed at improvement, action that seems sensible to those concerned. SSM uses system models to understand and intervene in real-world complexity. (Checkland, 1985)

The soft tradition does not regard goal seeking as an adequate model for much of what goes on in human affairs; it does not assume that the rich complexity of the world can be captured in systemic models. This tradition talks the language of issues and accommodations rather than solutions (Checkland, 1985). SSM focus on the problematic of vague and ”messy” problems in the real world (Lewis, 1994). Checkland (1985) states that SSM has a problem solution philosophy opposite to goal seeking. Furthermore, Checkland argues that problems

are based on experiences, while goals represent dreams about the future. He also mentions that the organizations lack goals whereas the stakeholders have goals. Thus, the problem picture constitutes a starting point to clarify what concerns constrain the individual's success.

Furthermore, in situations where problems are complex and of a social/organizational nature, and many different perspectives need to illuminate, this because people view and interpret things in different ways, prioritize different etc., soft system thinking is used to design mental models and communicate descriptions of these. Thus, the soft systems thinking clarify "what" the system is designed for and not what the system is doing. (Checkland, 1985)

According to Checkland (1999) SSM can be viewed as a method for business developing and therefore comprise activities that are related to development issues. He argues that it is not possible to get a complete and representative view of the requirements. Even if it was possible, the consequences a change could generate would be impossible to foresee. Therefore SSM is used in a learning process, which means that not only reality is an object of change, but also the peoples' view of this reality.

SSM regards "reality" as a social construction of collaborate systems. It is an ideal picture of how people and organizations should cooperate with each other to achieve effects that normally could not be achieved. The thing about SSM is that the stakeholders themselves decide on the end state. SSM takes the stakeholders' different views and different aspects of what the problem is on a situation into consideration. (Checkland, 1999) This calls soft pluralism. Soft pluralism means that there are many and conflicting goals in a business, and it does not work to solve soft problems with a "hard thinking" (Magoulas and Pessi, 1998).

## Differences Between the Two Approaches

The differences between the "hard systems thinking" and the "soft systems thinking" are illustrated in table 1 below, which also lists the obvious advantages and disadvantages of each approach (Checkland, 1985).

| **The hard system thinking** | **The soft system thinking** |
|---|---|
| Oriented to goal seeking.<br>Assumes that the world contains systems, which can be engineered. | Oriented to learning.<br>Assumes that the world is problematical but can be explored by using system models. |
| Assumes systems models to be models of the world (ontologies).<br>Talks the language of "problems" and "solutions". | Assumes system models to be intellectual constructs (epistemologies).<br>Talks the language of "issues" and "accommodations". |
| **Advantages** | **Advantages** |
| Allows the use of powerful techniques | Is available to both problem owners and professional practitioners; keeps in touch with the human content of problem situations. |
| **Disadvantages** | **Disadvantages** |
| May need professional practitioners.<br>May lose touch with aspects beyond the logic of the problem situation. | Does not produce final answers.<br>Accepts that inquiry is never-ending. |

Table 1: *The "hard" and "soft" thinking compared*

## The Emergence of SSM

Checkland at Lancaster University developed SSM. This methodology arose out of attempts to apply systems engineering principles ("hard" systems theory) to business problems. SSM emerged from action research (Lewis, 1994). Action research is a research method that expects to lead to change. SSM was developed because the methodology of SE, based on defining goals or objectives, simply did not work when applied to "messy", ill-structured, real-world problems. Such an approach was inadequate when faced with obscure objectives and multiple legitimate viewpoints. The alternative, SSM, which emerged, is the approach developed from SE to cope with the full complexity of management problems. SSM enclose the special case of goal seeking in the more general case of learning one's way to what is (systematically) desirable and (culturally) feasible. (Checkland, 1985, 1989)

## The Stages of Soft Systems Methodology

Checkland (1985) describes SSM as an iterative process and it consists of seven stages: (figure 2, p. 7)

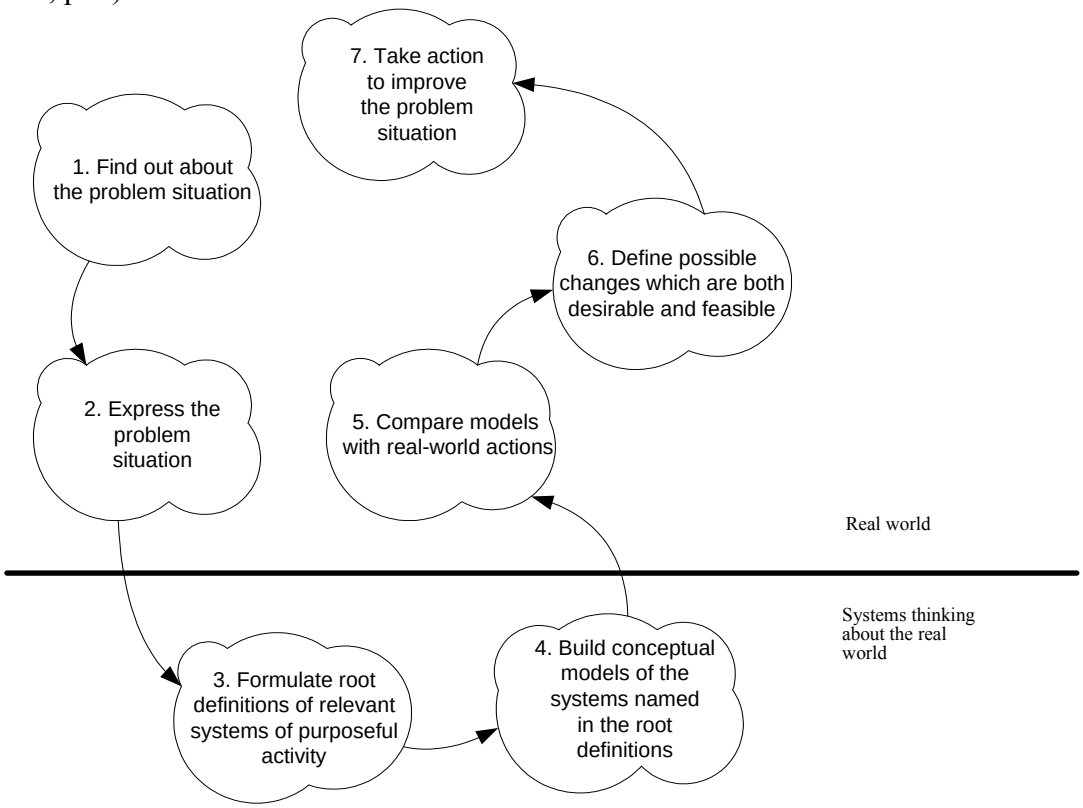


Figure 2: *The learning cycle of Soft Systems Methodology, Checkland (1985).*

### The analyze phase

*1. Find out about the problem situation.*
In the first stage of SSM, the SSM user has to find out what the problem really is. To get an understanding of the social and political relationship, the SSM user must clarify the stakeholders. Furthermore, to get an overview of the problem the SSM user can identify different structures within the organization. They can be both social and physical structures. Physical structures are the location, and layout of buildings and equipment and technology might also be considered. Social structures are for example how the organizations are divided into departments, different job-roles and reporting procedures might be necessary to identify.

Other areas for study might be different processes. Transformation processes needs to be identified. It can also be of interest who performs which task and what the realization between the tasks is. It is important to understand that there is seldom or never only one view of the problem that is shared between the roles and stakeholders described above. The SSM user has to take all the different views in to consideration and describe the problem in a way that can be accepted by all involved parties. (Lewis, 1994, Checkland 1989)

*2. Express the problem situation.*
In this phase the problem situation is expressed through using "rich pictures" etc., this to help the SSM user to get an understanding of the problem. "Rich pictures" are used to assist the stakeholders to form a common understanding about the problem situation.

## Design phase

*3. Formulate root definitions of relevant systems of purposeful activity*.
Before creating a model it is important to construct "root definitions." Root definitions" are descriptions of what a system is, what the systems task is and also the systems realizations to the world around it. SSM then gives a list of which criteria ought to be fulfilled in a "root definitions, so-called CATWOE.

| | | |
|---|---|---|
| C | Customers | Who would be victims or beneficiaries of the system? |
| A | Actors | Who would carry out the activities of the system? |
| T | Transformation process | What input is transformed into what output by the system? |
| W | Weltanschauung | What image of the world makes the system meaningful? |
| O | Owner | Who could abolish the system? |
| E | Environment | What external constraints does the system take as given? |

Table 2: *Checkland's CATWOE*

*4. Build conceptual models from the root definitions.*
In this stage the role of the consultant is a designer and conceptual models of systems are built. They are models of purposeful activity considered relevant debate and argument about the problem situation. They are not at this stage thought of as designs. All the activities that need to transform input to output will be shown in the models. The models will be inspected against earlier formal descriptions of the system. The models need to be evaluated and if necessary furthermore developed. Criteria for evaluating and developing conceptual systems models are encapsulated in the five E's: (Checkland 1999, Checkland and Scholes 1990)

• Efficacy - will it work at all?
• Efficiency - will it work with minimum resources?
• Effectiveness –will the transformation meet long-term objectives?
• Ethicality –is the transformation morally acceptable?
• Elegance - is it beautiful?

## Change analysis

*5. Compare the models with the real world.*
The conceptual models are then used for comparison with the real world. The aim is to create a debate among all involved stakeholders together with the designer about conceivable changes that meet two criteria: systemically and culturally feasible in the particular situation in questions like what is stopping us do things the "ideal" way? Why do we do things the way we do them? How do we measure up to the five E's criteria? Did the results confirm our intuition? Using the knowledge gained there, to map the effects of the proposed changes on

stakeholders. If the models do not up fill the requirements, one has to go back to the phase of analysis.

*6. Define possible changes, which are both desirable and feasible.*

Identify appropriate changes from the starting point in stage five. Definition of desirable and feasible changes given a new problem situation and decide how these changes will be implement.

**Implementation phase**

*7. Take action to improve the problem situation.*

When some changes accepted as "desirable" and "feasible" have been identified in change analysis, stage six, implementing these changes completes the cycle of SSM. There is now a somewhat more structured problems situation, and addressing it (that is, implementing the changes) can itself be tackled by using SSM in furthermore cycles.

## How to Apply SSM

SSM is designed to be general; i.e. SSM is situation independent, that means the method can be used on many different problems and is not dependent on a certain situation. The methodology can therefore be applied in many different fields. The methodology can be thought of as a learning process or cycle, in principle a never-ending sequence of stages. The SSM user decides which stages in SSM to use, and in which order the stages will follow (Blixt & Svärdström, 2002). The user of SSM does not necessarily have to plod through from stage 1 to stage 7 (Checkland, 1989). The SSM user can adjust the method depending on the scope and complexity of the problem.

It is uncertain when the transition from step one and two to step three and four occur, see figure (figure 2, p. 7) above, but Checkland (Lewis, 1994) states that it is not crucial to have this control. This when the SSM user has a basic understanding of the problem context, the SSM user has enough knowledge to produce a model description that is not so deep in detail, but serves it is purpose as a start point for the continuing work. During this phase three main descriptions needs to be completed to be able to continue the process; it is revolutionized or conservative modelling, system definitions with the help of CATWOE and activity models where the users are deeply involved.

### Risks in SSM

We agree with Blixt and Svärdström (2002) interpretation of the identified risks with system development in Checkland's SSM:

- If the user does not take part in the mapping of the problems the possible result will only be characterized by the view of management. The feasibility study will become narrow-mined and will mirror a need that not always solves real issues. The user must be able to influence their own work situation, thus all parties in the business will achieve a "win-win" relationship.

- What will happen if the stakeholders, owners, actors, customers etc. do not want to get involved in the discussions? Who will then carry out the change? The risk is then immediate that the one doing the analyses is driven by self-fulfilling needs and the risk for sub optimization is pronounced.

### Conclusion of Checkland's model

The methodology can be thought of as a learning process or cycle. The learning is about a complex problematical human situation. Furthermore, the model is used to define a complex social/organizational problem situation, where many different perspectives need to illuminate. When applying SSM people working together to achieve something. The model emphasizes a holistic picture of a change process on the basis of experiences.

## The "Rational" model

According to Mackenzie (1984) an "organizational design" is the continuing cycle of adapting goals and strategies, arranging and maintaining the organizational technology to implement them, and producing desired results in the face of changing environments while the organization continues to function". Organizational design usually rearranges power and those affected have resources, knowledge, experience, and legal rights, which are not irrelevant.

### A Strategy for Organizational Design

A strategy is needed for developing a theory and technology for designing organizations, and there is a need for desiderata[54] for judging the theory and technology from the viewpoint of the customer organization. Because the process of organizational design means changing structures and task processes, knowledge of structural change is the core of any theory of group structures. Mackenzie (1984)

[54] Desiderata: Something that is wished for, or fundamental (http://www.geocities.com/lswote/desiderata.html, 2004-03-12).

The basic structure is to view every organizational design project as an investigation. The strategy has five parts:

1. Develop the conceptual framework
2. Develop methods for application to actual organizations
3. Apply these methods to the design of real organizations
4. Analyze the results and the processes in each application
5. Identify needs for improving the conceptual framework and methods

The figure (figure 3, p. 11) below illustrates this strategy and the linkages among its five components.

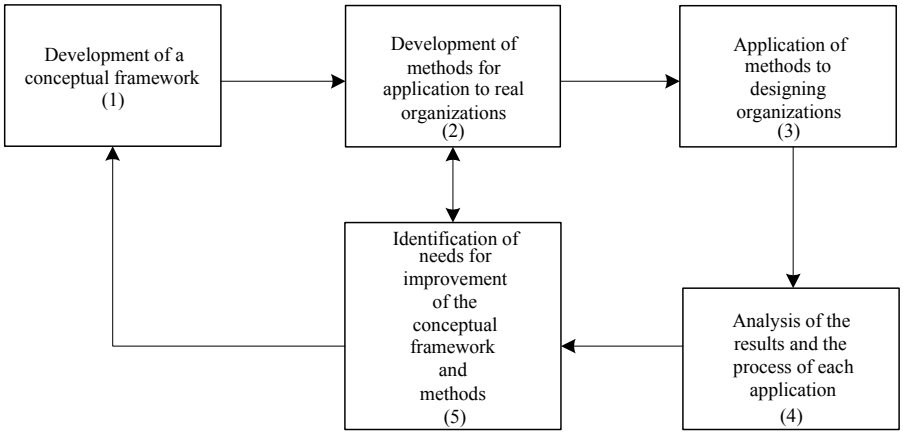


Figure 3: *A strategy for development of a technology for organizational design, Mackenzie (1984).*

Organizational design involves the ethical and intellectual commitments that are implicitly woven into the methods and concerns of the designer. The customer's interests should supersede those of the designer. These include three classes of desirable criteria for judging the organizational design methods. These include desiderata for the *design process*, for *choosing among competing designs*, and for *follow through*. These desiderata are explained and applied later in this chapter.

New methods are important for improving ones ability to give professional advice, but in no case should the customer be used as a "subject". The customer should have access to any scientific data underlying the methods used by the designer.

## Desiderata for Organizational Design and the ABCE Model

The strategy proposed by Mackenzie (1984) for developing a technology for organizational design has the purpose of improving a theory of group structure. In this section, thirteen desiderata proposed by Mackenzie is presented, whose purpose is to serve the customer organization.

The basic idea is that any organization resides in a large environment, E, and that what happens to the environment affects the organization. The organization has goals and

strategies, which serve to influence the section of an environment and the path taken to take advantage of it. Box A labels goals and strategies in figure (figure 4, p.12) below. In order to implement these goals and strategies, the organization evolves its organizational technology, labeled box B. The organizational technology has four parts; (1) the design premises; (2) the organizational logic; (3) the organizational architecture; and (4) the actual organization. The organizational technology represents the means by which the designers organize to implement the strategies in order to produce results, labeled by box C. The results in turn are fed into the box A on a never-ending cycle from A → B → C → A. The idea of organizational congruency is to achieve a fit or consistency among these elements. This is what Mackenzie calls the ABCE model. Mackenzie (1984)

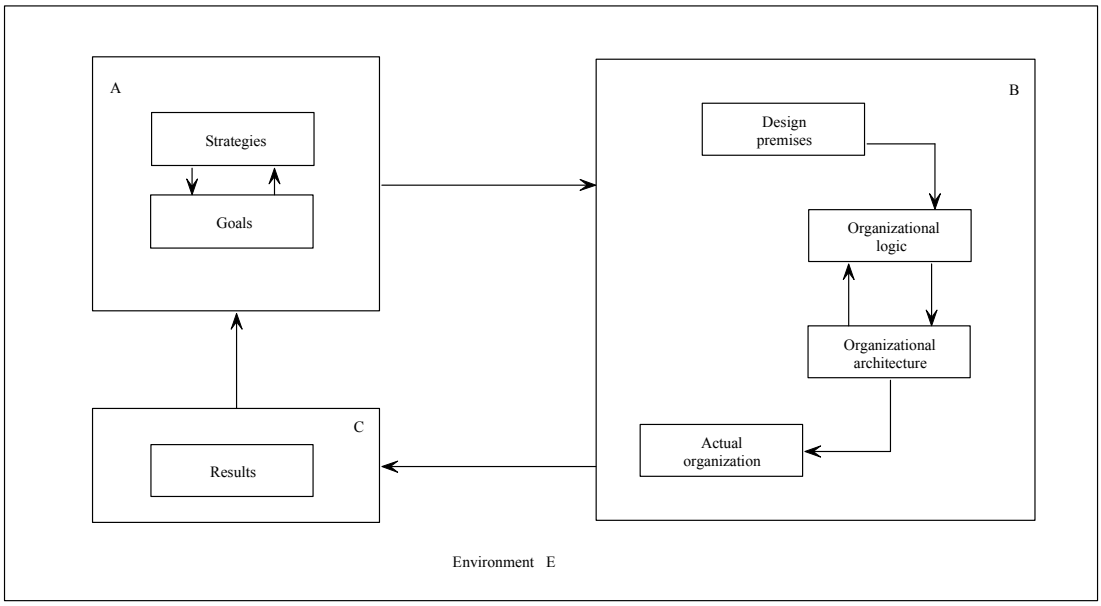


Figure 4: *The ABCE model, Mackenzie (1984).*

Organizational design, by its very nature, must involve equilibrate of power-relationships as well as the structures of the organization. Consequently, there are high emotional, financial, and professional stakes. Furthermore, Mackenzie states that an organizational designer who offers vague solutions (for example, those based on mere correlations, static typologies, and rosy beliefs about man and trendy clichés) will probably fail.

The field of organizational design can, according to Mackenzie, study the past, relevant literatures from social sciences, and think of new ideas and methods for improving the processes involved. In order to sort out the many possible processes and to improve the processes of organizational design, one should consider different desiderata for organizational design. Mackenzie (1984)

The desiderata of an organizational design process fall into three broad categories: Mackenzie (1984)

1. Desiderata for the design process itself.
2. Desiderata for the resulting design.
3. Desiderata for implementation.

The desiderata for the design process itself include the following:

D1: *Agreement on process to be followed rather than results.*
In most cases, the customer organization is unclear and even incorrect about what it wants as the final design at the beginning of an engagement. It is preferable to discuss the steps by which the design process is to be carried out and reach agreement on the process to be followed, rather than starting with a conclusion. This agreement should include, according to Mackenzie, the scoop of the engagement, description of the stages, agreement on administrative and logistical support, agreement on reviewing and periodic progress reports, agreement about which of the decision maker, or makers, is to work with the designers at each stage, and agreement on expected implementation procedures.

D2: *Completeness of analysis.*
Mackenzie argues that, ideally, the organizational design process should consider:

- Goals and strategies (A)
- The design premises, organizational logic, organizational architecture, and the actual organization (B).
- The results (C).
- The environment (E).
- The transitions from A → B, A → C, C → A, C → B, E → A, E → B, and E → C.

An organizational design that is derived out of the full consideration of A, B, C and E, in the ABCE model, is preferable to a partial analysis.

D3: *Cost effective.*
The organizational design process should be cost effective. It is costly in both direct costs and in the cost of the time of personnel. Care must be taken to continually strive to keep the ratio of benefits to costs as great as possible.

D4: *Objective.*
The organizational design process should be objective. The individual interests of the current organizational members often according to Mackenzie, conflict with those of the whole organization. Therefore Mackenzie argues that the design process, in principle, should be conducted by those who are independent of the customer organization, because they can afford to be more objective and can more comfortably maintain the role of attempting to design the organization with the overall best interest of the organization in mind.

D5: *Swiftness.*
The organizational design process should be swift. Any problem analysis process takes time. Problem analysis includes identifying the problem and formulating, solving, and implementing a solution. Any problem can change over time. It is therefore important to have a design process that is as swift as possible, or the problem may have changed when the problem analysis is done.

In most cases, more than one organizational design is possible to solve the same problem. This problem gives rise to additional desiderata.

D6: *Parsimony.*
Given two alternative organizational designs, the one involving the fewer position changes is preferred. The fewer the changes, the easier the implementation and less the political problems associated with the changes and the organization can continue operating even though there may be a design change.

D7: *Simplicity.*
Given two alternative organizational designs, the simpler one is preferred. Complexities can cause confusion and conflict. To improve the comprehension of the new design, Mackenzie recommends to keeping it simple and straightforward. A simple design reduces the total interdependency among the task processes and members of the organization. It improves clarity, is easier to implement, and is more likely to remain stable.

D8: *Specificity.*
Given two alternative organizational designs, the one that is more specific about the details and assumptions[55] is preferred. Any organizational design involves rearrangements of power and task relationships and can cause conflict and confusion. Lack of clarification will retard the ease of implementation and maintenance. Specificity and simplicity, together, improve the ability of the organization members to understand and accept the new design.

D9: *Robustness.*
Given two alternative organizational designs, the more robust is preferred. The concept of organizational robustness of an organizational design is a key consideration for developing stable design. A organizational design that take many different factors, like environment, goals, and strategies, in to consideration and how changes to any of these affect the others will improve the adaptability of the organizational design to respond with minimum effort to changing environmental conditions.

D10: *Implementability.*
Given two alternative organizational designs, the one that is expected to be easier to implement is preferred. The purpose of conducting an organizational design process is to develop an implemental organizational design. There are real political issues that must be dealt with such as ownership, union, creditors etc., when ignored can hamper the ability of the organization to implement the new design. Implementation is enhanced if the resulting organizational design is economical, simple, specific, and robust. Implementation is improved if desiderata D1 – D5 are met. Furthermore,

[55] Assumptions are factors that, for planning purposes, will be considered to be true, real or certain. Assumptions generally involve a degree of risk (http://www.projectmanagement.tas.gov.au/guidelines/pm5_14appx1.htm, 2004-03-12).

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implementation processes begin at the start of the design project and are considered at each stage.

Finally, there are desiderata of an organizational design process that are part of the "follow-up" process. Care should be taken to reduce the dependency of the organization on the presence of the designer. These considerations are summarized in the following desiderata.

D11: *Manageability.*
The organizational design should, according to Mackenzie, leave provision for maintenance and updating. Changes will occur and the new organizational design will require maintenance and updating. The organization design will be more manageable if provision is made to assist the organization in ensuring that this is done. Experience has demonstrated that this maintenance process is one of management.

D12: *Leverage.*
Mackenzie argues that, the result of an organizational design should provide the basis for numerous ancillary services like, position description, training, manpower planning, strategic planning etc. A good organizational technology makes provision for them. A desideratum for an organizational design is to provide for such ancillary services as a natural follow-up that can be accomplished at a low marginal cost to the organization.

D13: *Reduce dependency.*
The organizational designer is analogous to the architect where the customer organization is owner and occupant. In designing an organization the designer must bear in mind that it is not his or her organization. He or she just assists in the design. The customer should be able to make it work in his or her absence. Reducing the dependence of the customer on the organizational designer is seen as beneficial.

This list of thirteen desiderata is not complete but nevertheless serves to point out the types of concerns that drive the strategy of organizational design. Implied in these desiderata is a need for the designer to place the customer organizations interests ahead of his or her own. Also implied is the need for a strategy of organizational design that continually strives to improve its theory and methods, as illustrated in figure (figure 4, p. 12) above (Mackenzie, 1984).

## Conclusion of Mackenzie's Model

Mackenzie's model views every project as an investigation (learning cycle) in the ongoing organizational development. It comprises the relationship that exists between goals, processes and structures, but only touches culture and knowledge on the surface. It gives the design team clear principles for planning, designing and implementing new organizational designs. Furthermore, Mackenzie emphasizes that all organizational designs involve high emotional, financial, and professional stakes, and that an organizational designer (consultant) who offers vague solutions will probably fail. Mackenzie (1984)

## Social Political Methodology

Hedberg (1980) present participative design of computer systems with respect to three themes:

1. The need to understand how information systems and related technologies affect people and organizations

2. How such understanding can be put to work to control changes in social systems and to support organizational learning and decision-making.

3. The future roles of system designers and computer department. How will these roles change?

The three themes express that human factors must be recognized, socio-technical designs should be strived for, and new demands will be laid on designers. It brings up the concept of power and the issue of values. It questions the designers mission and their ability to design. It argues that socio-technical design, on its own, is a dead end. Hedberg (1980)

### How Knowledge Leads to Better Designs and New Design Roles

The history of technology development shows how those who exploit new technologies move from naive applications to more sophisticated ones as they learn and as their technologies mature. Knowledge about how technology affects people enriches the model and leads to improved design. Computers, and information technologies as a whole, is going through a similar cycle. Hedberg identify and label some maturity phases of information systems (IS) design see the table (table 3, p. 16).

| | **Mission:** | **Purpose:** | **Organizational Design:** | **Designers:** |
|---|---|---|---|---|
| ***Phase I*** | Design IS | .. to exploit new technology | By surprise | Pioneers |
| ***Phase II*** | Design IS carefully | .. to minimize social implications | By mistake (not intended to change) | Tailors |
| ***Phase III*** | Design IS deliberately | .. to change organizations | By purpose | Change agents |
| ***Phase IV*** | Design IS participatively | .. to create learning organizations | Self-designing, evolutionary | Gone |

Table 3: *Hedberg's maturity phases of information systems design.*

Initially were computer specialists mainly concerned with exploiting the new possibilities that information technology brought (phase I). The technology variables (time sharing, virtual memory and terminals etc.) set the pace. Designers were pioneers. Organizations were designed by surprise. Social implications began to appear. Hedberg (1980)

Learning from implementation difficulties and design surprises designers began to reconsider their accomplishments and to develop the role of the "informed and considerate tailor" (phase II). The designers study the organization they design for, describe its goals and decision procedures, interview people, and select terminals, reports, chairs, and workplaces that fit humans. They attempt to tailor information systems to existing social organizations. Project teams, representing both technical and organizational expertise, and use participation in designing represent attempts to widen the knowledge base and to come to grips with systems implementation. Hedberg (1980)

When system tailors found that "organizational bodies" often changed as a result of getting new "computer suits" and stared to comprehend the complexity of the full design task, the more humble role of change agent bean to emerge (phase III). Also, systems designing was increasingly seen as a means to set organizations in motion. Change processes, organizational development, and learning organization became slogans for the new movement. Hedberg (1980)

According to Hedberg, if these three maturity phases describe reality, it demonstrates that increasing knowledge about technological impacts can lead to more responsible designs, widened perspectives and new roles for systems designers and computer departments. (1980)

Hedberg claims that he lacks empirical support when he argues that the profession of systems design is in the middle of transfer from phase I to phase II. He also point out that the debate has often moved into phase III, but that practise (as always) lags behind. (1980)

Phase IV is more of a speculation from Hedberg. It shows a possible future. The design of IS will be conducted participatively. The purpose of the design is to create learning organizations. The organizations will be self-designing and evolutionary. And the downright designer will be gone. Hedberg (1980)

## Conclusion of Hedberg's Theory

Computerization has up till now mainly been a naive response to vaguely formulated problems of efficiency and motivation in organizations. Symptoms, such as personnel turnover, absenteeism, and wage demands, have been "cured" by rationalization. Instead of taking away the causes of social problems, one has attempted to take away people. Degradation of work has continued. The new work organizations and job contents be equal to, or worse, than the ones that initially cause problems, so furthermore computerization has been called for. A management perspective and specialist designs have characterized this negative development cycle, see figure (figure 5, p. 18). Hedberg (1980)

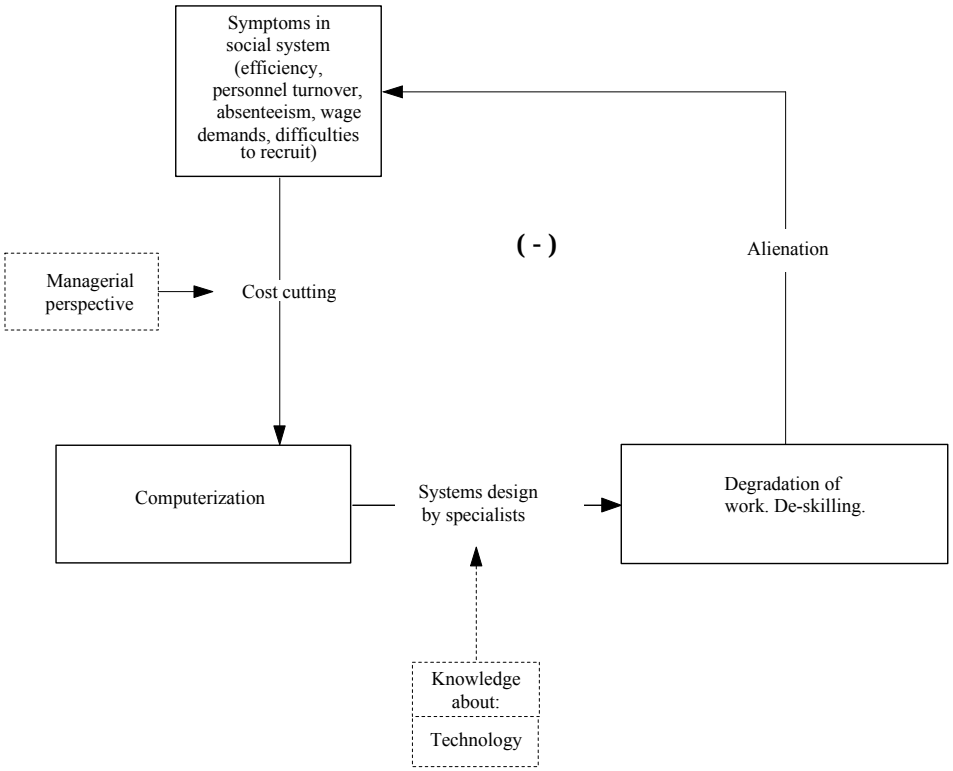


Figure 5: *Systems design – naive managerial perspective, Hedberg (1980).*

Attempts have been done to change this negative cycle by entering more knowledge about man and organizations into the design process. The managerial perspective remains, see the figure below (figure 6, p. 19). Hedberg (1980)

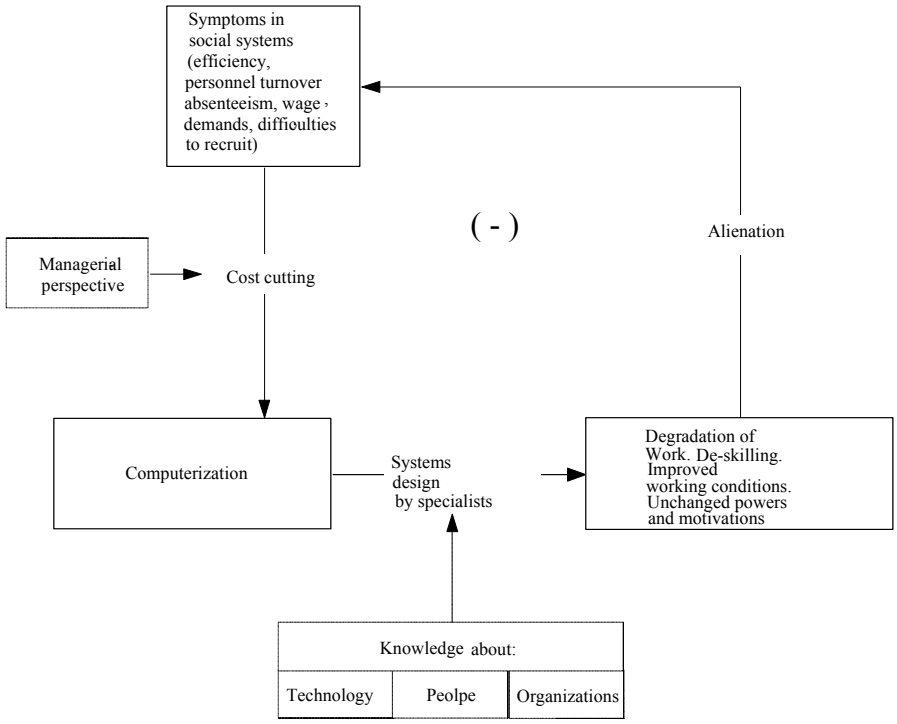


Figure 6: *Systems design – widened managerial perspective, Hedberg (1980).*

Hedberg (1980) argues that neither of these approaches creates positive cycles where people in organizations learn and develop as their organizations grow increasingly democratic and efficient. Both these approaches diminish man and, eventually, replace people by technology. Both these approaches are based on, managerial problem definitions and designs by experts.

Systems design cannot remain unaffected by changing values and power balances in society at large. Unless new computer systems manage to improve organizations also from the employees point of view and to redistribute power in accordance with democratic values these negative cycle will remain. This requires that managerial perspectives are matched with workers perspectives and that systems are designed in joint efforts between workers and management. Consciousness about power, values, and reward systems has to be added to knowledge about technology, people and organizations, see the figure (figure 7, p. 20). Hedberg (1980)

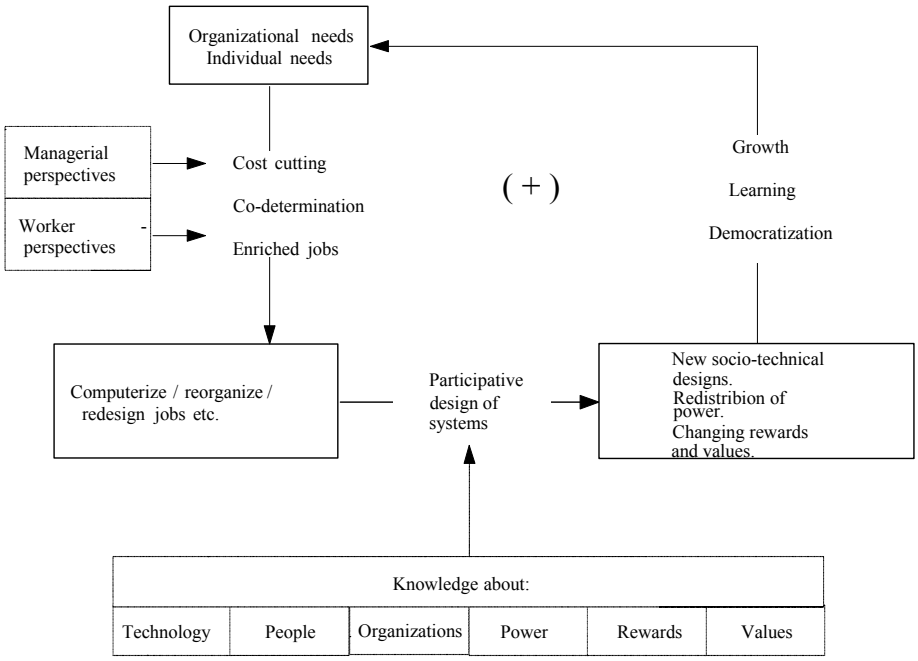


Figure 7: *Systems design – widened managerial perspective, Hedberg (1980).*

This model concludes Hedberg's theory about system design. He also summarize his article (1980) as follows:

1. Computerized systems can be used to design better organizations and jobs.

2. Knowledge about how computers affect people, jobs, and organizations is a necessary (but not sufficient) basis for better design.

3. As long as managerial perspectives dominate problem formulations, design tasks, and reward systems, resulting systems will at best improve organizations from a managerial point of view.

4. Managerial perspectives must therefore be confronted with worker perspectives, and systems must be designed participatively.

5. Participative designing will raise questions of power, rewards, and values, in addition to traditionally recognized needs.

6. Socio-technical designs are not enough. Lasting improvements must also involve changing values, rewards, and power structures.

7. System designers are fortunately, not able to control changes in social systems. The future will not make them more able to do so, but they will, hopefully, be more aware of their inability and help organizations to learn and develop from within.

8. If there is a role for systems designers and computer departments in the future, that role is as a catalyst, facilitator, and collaborator for change.

We agree with Blixt and Svärdström's (2002) summarization that complement and explain Hedberg's model (1980).

- Intuition is not enough when pursuing development work.
- It is not enough to use technique to rationalize work tasks.
- Incomplete organizational view is not enough. Complete organizational view does not solve the problem with motivation. To achieve motivation participatively is needed.
- The start point for systems development must be organizations and individuals needs.
- IT-systems render centralization as well as decentralization. Decentralization of responsibility to a work force can be matched with a centralization of the final control to the management.
- The problem that the hypothetical system shall support alternatively eliminate must be defined both from management perspective and worker perspective.
- A participatively design of systems have to replace systems development by experts.
- Designers that understand the effects by the technology and that deliberately develop social systems together with management and workers can improve the business for modern organizations.
- Awareness of power, values and rewards must complement knowledge of techniques, people and organizations when IS/IT systems are designed.
- Requirements and expectations on the future IS/IT system should be negotiated in so called "workshops" that consist of representatives from all departments and authorities. The wish is that through these workshops clarify what changes the new system will involve for the organization and for the employees. Many problems that traditionally are related to information regarding education, implementation, and motivation for the new system can be slowed in these workshops.
- Everybody that comes in contact with the future system in the organization should be informed and perhaps educated.

By pointing out the fact that, it does not matter how much knowledge the designer has about technology, people, organization, power, rewards, and values without participative development only produce negative effects, could summarize Hedberg's model. This means it is vital to take both managerial and worker perspective into consideration. Furthermore, the model emphasize all critical aspects that should be integrated to IS/IT systems, i.e. processes, structures, cultures, capability etc (Blixt and Svärdström, 2002). The article written 1980 by Hedberg may be an old one, but we believe its subject still is very interesting and relevant today.

## A Summery of the Content and Direction of Three Views of Organizational Development

The three figures (figure 8, 9, 10, pp. 22 – 23) below summarize the Soft System Methodology, Rational System Methodology and Social Political Methodology by Checkland, Mackenzie, and Hedberg. To illustrate how all three theories are related to learning the authors chose to use an abstraction of Checkland's (1985) SSM model.

## Checkland's Soft System Methodology

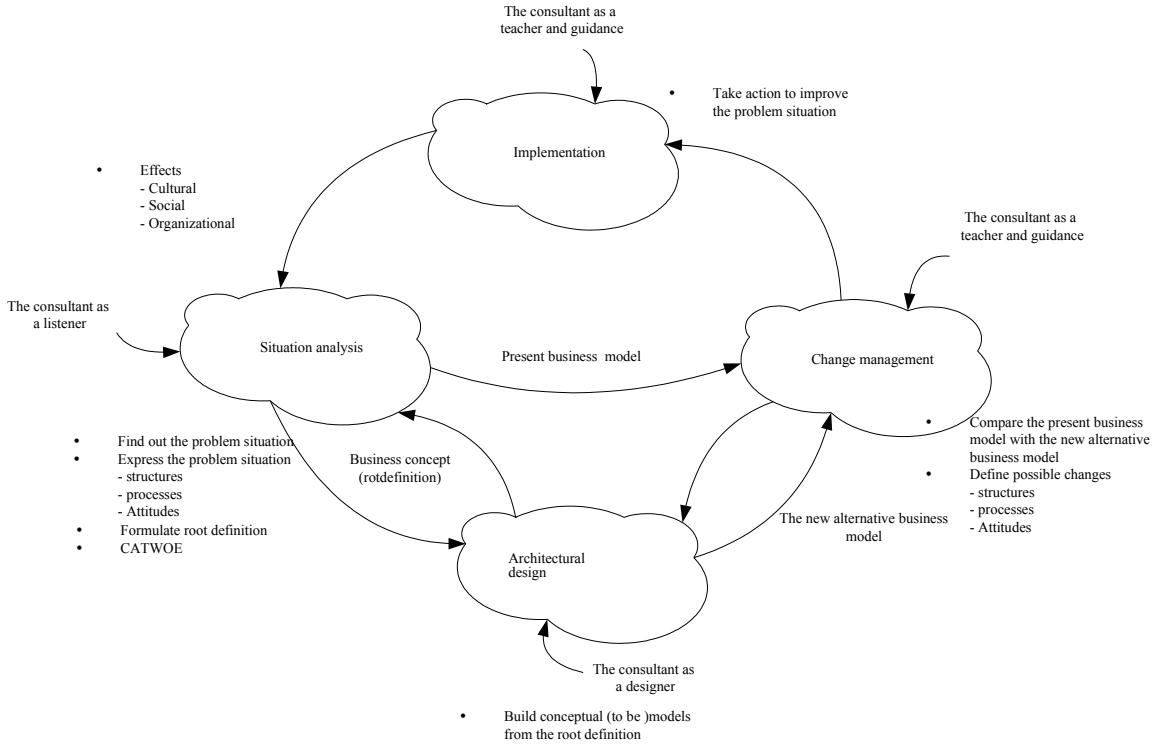


Figure 8: *A summery of the Soft System Methodology Checkland (1985).*

## Mackenzie's Rational System Methodology

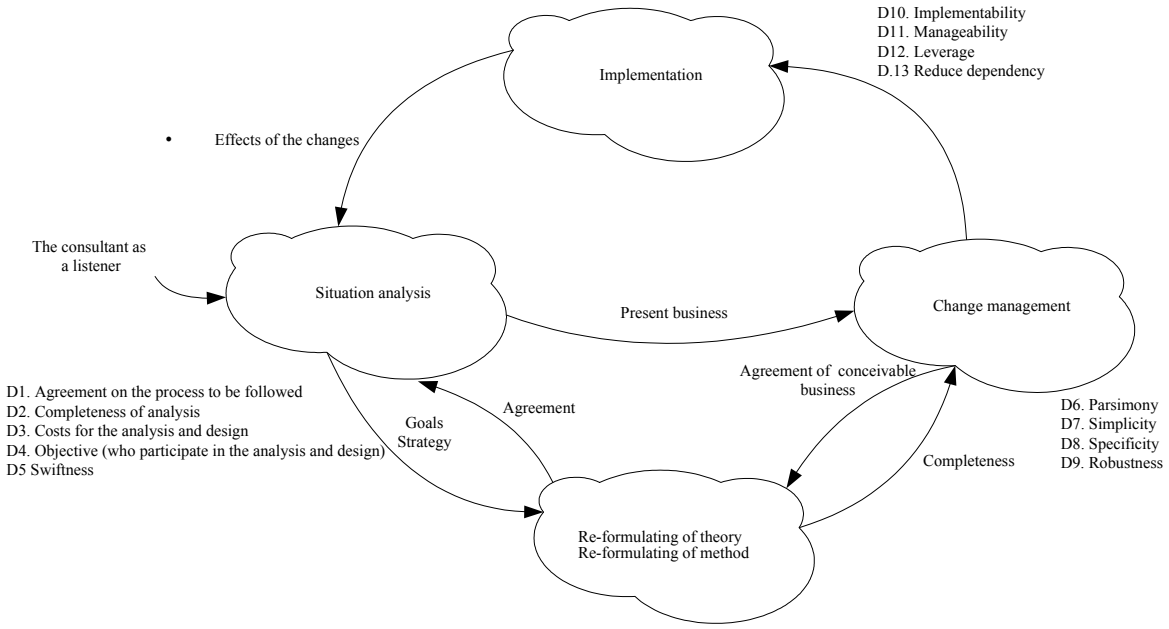


Figure 9: *A summery of the Rational System Methodology.*

## Hedberg's Social Political Methodology

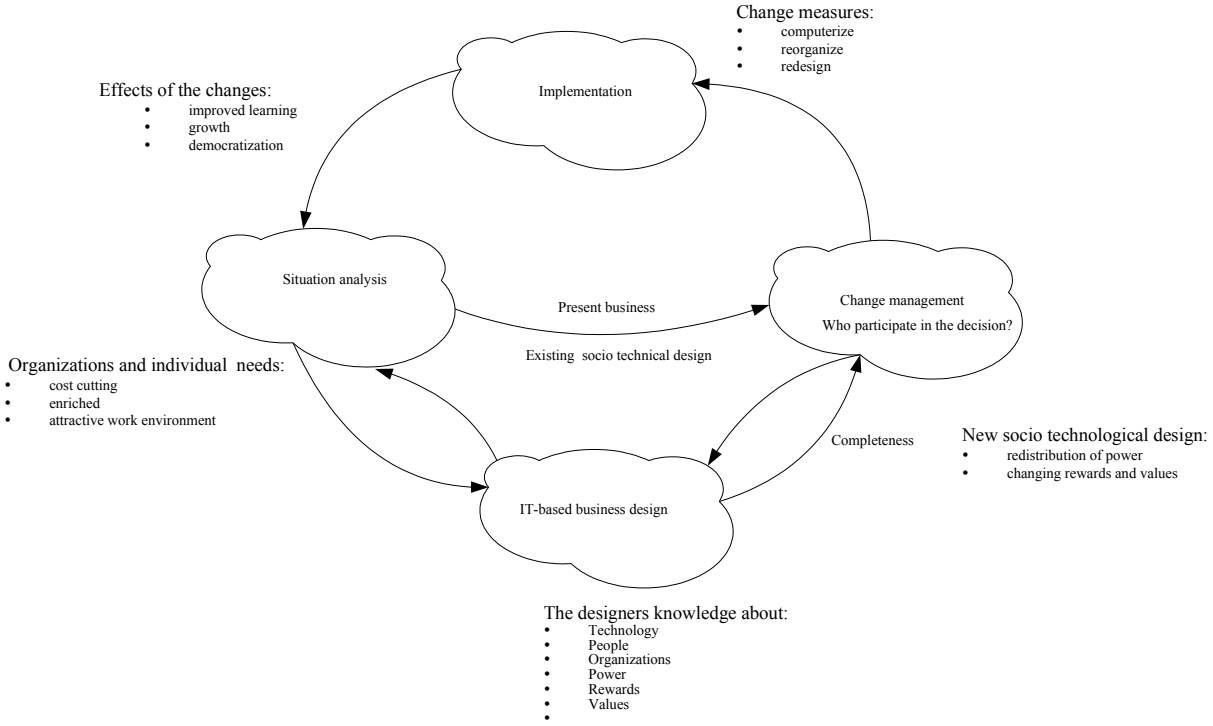


Figure 10: *A summery of the Social Political Methodology.*

The similarity between the three methodologies is that they are based on learning, but there are some differences between them. Checkland's SSM assumes a method to create alternative business models that will be a basis to decide change measures. Furthermore, SSM focus on design and modelling. Mackenzie's RSM on the other hand assumes that it exists a business model that demands a method to implement the change measures. RSM focus mainly on the implementing. Hedberg's SPM takes knowledge and other factors into consideration when performing a development process and change measures. SPM also focus on who participate in the decisions. To sum up, the three theories on their own do not manage coordinated development, but the three methodologies complement each other and together they can manage coordinated development.

## *Business Concept*

We will below present a theory by Smith (1999) on business concept.

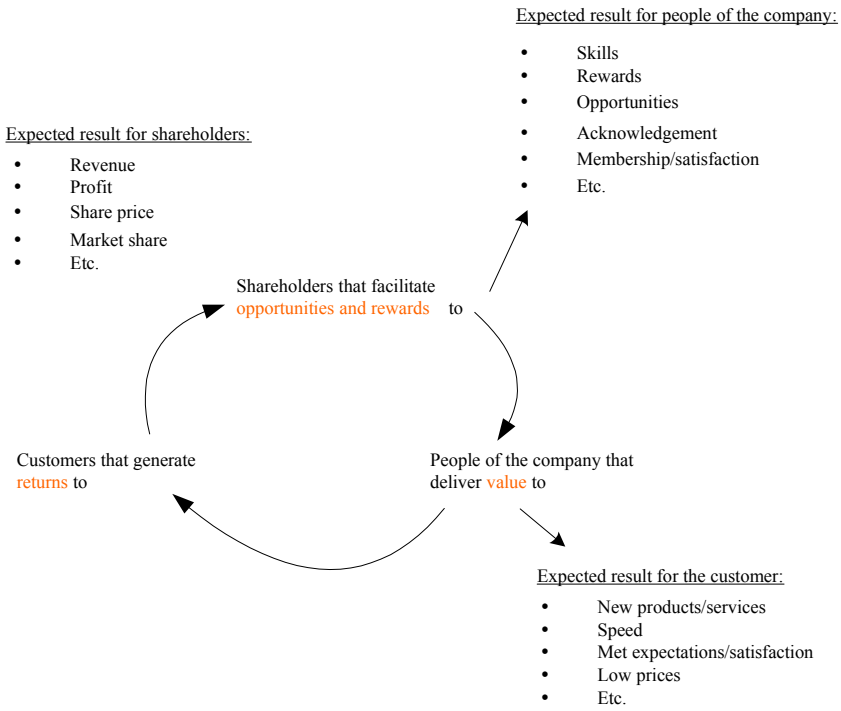


Figure 11: *Example of rot definition (business concept), Smith (1999).*

The figure (figure 11, p. 24) above, describes a rot definition (business concept) that focus on expected result, and core businesses as goals. According to Smith (1999) and in agreement with Checkland (1985), it should provide benefits to all involved stakeholders – satisfied customers give satisfied shareholders that give satisfied employees.

- What is it the shareholders expect to continue to support a business?
- What is it the customers expect to continue to support a business?
- What is it the employees expect to continue to support a business?

If the customers do not exist then the shareholders will not exist and then the employees will not exist.

Smith (1999) continues by arguing that according to many today economical approaches alone is not enough, and that even several leading economists regard that an approach that are strictly economical for an organizations achievements is self-defeating. He points out three pitfalls with a strictly economic approach:

1. **Untenable**: To much focus on economical indicators will eventually lead to that these indicators are destroyed. A strict financial perspective ignores or underestimates the other elements. This delimited view will result in lacking customer service, products and unhappy/unsatisfied people in the company and other sickly phenomena. All that eventually will show in bad numbers. Financial indicators are material, i.e. they are the effects caused by other leading indicators as customer satisfaction and peoples' skills and competencies.

2. **Lack of motivation**: Financial goals inspirer only a few stakeholders instead of most/all people in the company. It does and should motivate top management, but it could have the opposite affect if people believe that management only see to their own benefit instead of providing value to the customers and create growth and opportunities to all.

3. **Confusion**: Only financial goals will block the translation of overall financial goals to sub-goals that people in the business can strive for with confidence. When top-managements overall financial goals is not viewed as meaningful contributions people get confused about how and why their contribution make a difference.

Smith also emphasize that if you have goals that are based on expected results it will make the work with the evaluation and control if the goals have been reached easier.

# Appendix 2 Inquiry Questions


School of Economics and Commercial law
GÖTEBORGS UNIVERSITY
Department of Informatics

## Business Case – concept and methods

***Master Thesis***

A business change process normally starts with an initial analysis into the present situation (as is). The process is nourished through people's dreams and visions for the future (to be). The change process eventually ends in a change decision reflecting the feasibility of business information and competence requirements. From a consultants perspective it's desirable to present all these aspects in a structured way to the client. Today the concept of Business Case seems interesting in this aspect but there is yet not enough knowledge to put this into practice as a consultant tool.

The **purpose** of the Master Thesis, conducted in cooperation with ADT (9670) and Consultants Services (9610) at Volvo IT, reduce the experienced uncertainty through the use of Business Case. Further, to provide an understanding of how Business Case is related to all decisions in general and IT decisions in particular together with an investigation into what available methods, techniques and tools there are to support the creation of a Business Case. The work will include both theoretical and empirical/practical views regarding these aspects. The **expected result** is a model for creation and use of Business Case, and an inventory of available methods, techniques and tools to support the use of Business Case. The empirical data will be gathered through semi-structured interviews, and two workshops. For the empirical work participants with a special interest and knowledge regarding the issue of Business Case are invited. For us to be able to present the best result, we want You to participate and contribute to this important work.

The purpose of the **semi-structured interviews** are to unfold what Business Case contribution to the development process is and what needs to be taken into consideration when creating and using Business Case. In other words, the interview should provide the students theoretical model with substance and show its relevance.

***Thanks for your participation and time!***

Best regards,
Eleonor Johansson & Jerk Perés

Your name & title:
Date:

# Business Case – concept and methods

1. **Where in the process of enterprise development can Business Case be used? What's expected to be the contribution of Business Case?**

2. **In what situations in the process of enterprise development do You consider that a Business Case is necessary?**

3. **Which methods, techniques and tools do You consider support the creation and use of Business Case, both to qualify and quantify benefits/values?**

**4. Why Business Case?**

| | Low extent 1 | 2 | 3 | 4 | High extent 5 |
|---|---|---|---|---|---|
| • Improve teamwork | ☐ | ☐ | ☐ | ☐ | ☐ |
| • Improve the relationship with the clients | ☐ | ☐ | ☐ | ☐ | ☐ |
| • Improve communication & understanding | ☐ | ☐ | ☐ | ☐ | ☐ |
| • Improve morale | ☐ | ☐ | ☐ | ☐ | ☐ |
| • Improve control | ☐ | ☐ | ☐ | ☐ | ☐ |
| • Improve decisions | ☐ | ☐ | ☐ | ☐ | ☐ |
| • Improve project evaluation | ☐ | ☐ | ☐ | ☐ | ☐ |
| • Avoid the financing of risky projects | ☐ | ☐ | ☐ | ☐ | ☐ |
| *Other:* _____ | ☐ | ☐ | ☐ | ☐ | ☐ |

**5. What could be treated as a Business Case without being wrong?**

| | Low extent 1 | 2 | 3 | 4 | High extent 5 |
|---|---|---|---|---|---|
| • A Cost/benefits analysis | ☐ | ☐ | ☐ | ☐ | ☐ |
| • A Cost/benefits analysis + risk analysis | ☐ | ☐ | ☐ | ☐ | ☐ |
| • A sound understanding of consequences | ☐ | ☐ | ☐ | ☐ | ☐ |
| • Risk analysis | ☐ | ☐ | ☐ | ☐ | ☐ |
| • CSF[56]/Support factors[57] | ☐ | ☐ | ☐ | ☐ | ☐ |
| *Other:* _____ | ☐ | ☐ | ☐ | ☐ | ☐ |

[56] CSF: The business ability to provide for the expectations.
[57] Support factors: The social surroundings judgment of continues support.

**6. To what extent do You consider that the ultimate purpose for using Business Case is to improve the quality of the information and information systems?**

| Low extent | | | | High extent |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |
| ☐ | ☐ | ☐ | ☐ | ☐ |

**7. To what extent do You consider that Business Case increases comprehensibility and understandability of the "real value" (how the Business Case respond to business objective/s) of investments in information technology?**

| Low extent | | | | High extent |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |
| ☐ | ☐ | ☐ | ☐ | ☐ |

**8. To what extent do You consider that Business Case increase awareness and meaningfulness of investments in information technology?**

| Low extent | | | | High extent |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |
| ☐ | ☐ | ☐ | ☐ | ☐ |

**9. To what extent do You consider that the following issues are reasons for the failure of many Business Cases?**

| | Low extent | | | | High extent |
|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 |
| • Lack of history | ☐ | ☐ | ☐ | ☐ | ☐ |
| • The special nature of the financial Business Case | ☐ | ☐ | ☐ | ☐ | ☐ |
| *Other:* | | | | | |
| _____ | ☐ | ☐ | ☐ | ☐ | ☐ |

**10. To what extent do You consider that the structure of the Business Case document addresses the purpose of each question below?**

| | Low extent | | | | High extent |
|---|---|---|---|---|---|
| **Definition** | 1 | 2 | 3 | 4 | 5 |
| • What the case is about (subject)? | ☐ | ☐ | ☐ | ☐ | ☐ |
| • Why it is being built (purpose)? | ☐ | ☐ | ☐ | ☐ | ☐ |
| • What is the business objectives addressed by the subject of the case | ☐ | ☐ | ☐ | ☐ | ☐ |
| **Design** | | | | | |
| • Whose costs are examined? | ☐ | ☐ | ☐ | ☐ | ☐ |
| • Whose benefits are examined? | ☐ | ☐ | ☐ | ☐ | ☐ |
| • Over what time period? | ☐ | ☐ | ☐ | ☐ | ☐ |
| • Which rules should be used for deciding what belongs in the case and what does not? | ☐ | ☐ | ☐ | ☐ | ☐ |
| • Which important assumptions is the base of the case? | ☐ | ☐ | ☐ | ☐ | ☐ |
| **Impacts/Consequences** | | | | | |
| • Which results (financial/ non-financial) are expected? | ☐ | ☐ | ☐ | ☐ | ☐ |
| • How the expected results depend on important assumptions? | ☐ | ☐ | ☐ | ☐ | ☐ |
| • What specific action should be recommended? | ☐ | ☐ | ☐ | ☐ | ☐ |
| *Other:* | | | | | |
| _____ | ☐ | ☐ | ☐ | ☐ | ☐ |

**11. To what extent do You consider that Business Case can absorb the uncertainty for the client organization on the following issues?**

| | Low extent 1 | 2 | 3 | 4 | High extent 5 |
|---|---|---|---|---|---|
| • The scoop of the engagement. | ☐ | ☐ | ☐ | ☐ | ☐ |
| • Description of the development stages. | ☐ | ☐ | ☐ | ☐ | ☐ |
| • Administrative and logistical support. | ☐ | ☐ | ☐ | ☐ | ☐ |
| • Reviewing and periodic progress reports. | ☐ | ☐ | ☐ | ☐ | ☐ |
| • Which of the decision maker(s) is to work with the designers at each stage. | ☐ | ☐ | ☐ | ☐ | ☐ |
| • Expected implementation procedures. | ☐ | ☐ | ☐ | ☐ | ☐ |
| *Other:* _____ | ☐ | ☐ | ☐ | ☐ | ☐ |

**12. To what extent do You consider that Business Case absorb the uncertainty that characterizes the following perspectives?**

| | Low extent 1 | 2 | 3 | 4 | High extent 5 |
|---|---|---|---|---|---|
| • Information technological perspective | ☐ | ☐ | ☐ | ☐ | ☐ |
| • Business perspective | ☐ | ☐ | ☐ | ☐ | ☐ |
| • Managerial perspectives | ☐ | ☐ | ☐ | ☐ | ☐ |
| • Employee perspectives | ☐ | ☐ | ☐ | ☐ | ☐ |
| • Stakeholders perspective | ☐ | ☐ | ☐ | ☐ | ☐ |
| • Social perspective | ☐ | ☐ | ☐ | ☐ | ☐ |
| *Other:* _____ | ☐ | ☐ | ☐ | ☐ | ☐ |

**13. To what extent do You consider that Business Case absorb the uncertainty and help gain knowledge about the following issues?**

| | Low extent | | | | High extent |
|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 |
| • Technology | ☐ | ☐ | ☐ | ☐ | ☐ |
| • People | ☐ | ☐ | ☐ | ☐ | ☐ |
| • Organization | ☐ | ☐ | ☐ | ☐ | ☐ |
| • Power | ☐ | ☐ | ☐ | ☐ | ☐ |
| • Rewards | ☐ | ☐ | ☐ | ☐ | ☐ |
| • Values | ☐ | ☐ | ☐ | ☐ | ☐ |
| *Other:* | | | | | |
| _____ | ☐ | ☐ | ☐ | ☐ | ☐ |

**14. To what extent do You consider it is important that Business Case consists of the following key elements?**

| | Low extent | | | | High extent |
|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 |
| • Executive Summary | ☐ | ☐ | ☐ | ☐ | ☐ |
| • Situational Assessment and problem Statement | ☐ | ☐ | ☐ | ☐ | ☐ |
| • Project Description | ☐ | ☐ | ☐ | ☐ | ☐ |
| • Solution Overview | ☐ | ☐ | ☐ | ☐ | ☐ |
| • Solution Detail | ☐ | ☐ | ☐ | ☐ | ☐ |
| • Solution Alternatives | ☐ | ☐ | ☐ | ☐ | ☐ |
| • Costs | ☐ | ☐ | ☐ | ☐ | ☐ |
| • Benefits | ☐ | ☐ | ☐ | ☐ | ☐ |
| • Implementation Timeline | ☐ | ☐ | ☐ | ☐ | ☐ |
| • Critical Assumptions and Risk Assessment | ☐ | ☐ | ☐ | ☐ | ☐ |
| • SWOT Analysis | ☐ | ☐ | ☐ | ☐ | ☐ |
| • Conclusions and Recommendations | ☐ | ☐ | ☐ | ☐ | ☐ |
| *Other:* | | | | | |
| _____ | ☐ | ☐ | ☐ | ☐ | ☐ |

**15. To what extent do You consider that Business Case absorb the uncertainty in the following actions in the development process?**

| | Low extent 1 | 2 | 3 | 4 | High extent 5 |
|---|---|---|---|---|---|
| • Find out about the problem situation. | ☐ | ☐ | ☐ | ☐ | ☐ |
| • Express the problem situation. | ☐ | ☐ | ☐ | ☐ | ☐ |
| • Formulate business concept of relevant systems of purposeful activity. | ☐ | ☐ | ☐ | ☐ | ☐ |
| • Build conceptual business models from the business concept issue. | ☐ | ☐ | ☐ | ☐ | ☐ |
| • Compare the business models with the real world. | ☐ | ☐ | ☐ | ☐ | ☐ |
| • Define possible changes, which are both desirable and feasible. | ☐ | ☐ | ☐ | ☐ | ☐ |
| • Take action to improve the problem situation. | ☐ | ☐ | ☐ | ☐ | ☐ |

*Other:*

_____

**16. Which of the following roles do You think a Business Case should play?**

| | Low extent 1 | 2 | 3 | 4 | High extent 5 |
|---|---|---|---|---|---|
| • *Role of knowledge:* To capture the knowledge they've developed about how the business will function both with and without the BPR project. | ☐ | ☐ | ☐ | ☐ | ☐ |
| • *Role of quality:* To verify that the solution substantiates or meets the needs of the business. | ☐ | ☐ | ☐ | ☐ | ☐ |
| • *Role of communication:* To provide a consistent message to many different audiences. | ☐ | ☐ | ☐ | ☐ | ☐ |

*Other:*

_____ ☐ ☐ ☐ ☐ ☐

**17. To what extent do You consider that Business Case absorb the uncertainty of the following issues in an enterprise development process?**

| | Low extent | | | | High extent |
|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 |
| • Agreement on process to be followed | ☐ | ☐ | ☐ | ☐ | ☐ |
| • Completeness of analysis | ☐ | ☐ | ☐ | ☐ | ☐ |
| • The result of architectural design | ☐ | ☐ | ☐ | ☐ | ☐ |
| • Cost effectiveness | ☐ | ☐ | ☐ | ☐ | ☐ |
| • Designer objectiveness | ☐ | ☐ | ☐ | ☐ | ☐ |
| • Swiftness of development process | ☐ | ☐ | ☐ | ☐ | ☐ |
| *Other* | | | | | |
| _____ | ☐ | ☐ | ☐ | ☐ | ☐ |

**18. To what extent do You consider it is important that Business Case walk through the following aspects of the designed solution?**

| | Low extent | | | | High extent |
|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 |
| • Changes to organization (people, culture, training, etc.) | ☐ | ☐ | ☐ | ☐ | ☐ |
| • Changes to processes | ☐ | ☐ | ☐ | ☐ | ☐ |
| • Changes to support systems | ☐ | ☐ | ☐ | ☐ | ☐ |
| *Other:* | | | | | |
| _____ | ☐ | ☐ | ☐ | ☐ | ☐ |

**19. To what extent do You consider it is important that Business Case have a thorough analysis of the following associated with the implementation of the proposed solution?**

| | Low extent | | | | High extent |
|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 |
| • Management of consequences | ☐ | ☐ | ☐ | ☐ | ☐ |
| • Management of costs | ☐ | ☐ | ☐ | ☐ | ☐ |
| • Management of financial benefits | ☐ | ☐ | ☐ | ☐ | ☐ |
| • Management of non-financial benefits | ☐ | ☐ | ☐ | ☐ | ☐ |
| • Management of risks | ☐ | ☐ | ☐ | ☐ | ☐ |
| *Other:* _____ | ☐ | ☐ | ☐ | ☐ | ☐ |

**20. To what extent do You consider it is important that Business Case provide an estimate for the following anticipated costs of a project?**

| | Low extent | | | | High extent |
|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 |
| • Costs for the team | ☐ | ☐ | ☐ | ☐ | ☐ |
| • Development costs | ☐ | ☐ | ☐ | ☐ | ☐ |
| • Quality assurance costs | ☐ | ☐ | ☐ | ☐ | ☐ |
| • Cost for testing the solution | ☐ | ☐ | ☐ | ☐ | ☐ |
| • Cost for parallel operations during transition | ☐ | ☐ | ☐ | ☐ | ☐ |
| • Costs for implementation of solution | ☐ | ☐ | ☐ | ☐ | ☐ |
| *Other:* _____ | ☐ | ☐ | ☐ | ☐ | ☐ |

**21. To what extent do You consider it is important that Business Case support the treatment of following major elements that are important to successful implementation?**

| | Low extent | | | | High extent |
|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 |
| • Implementation components | ☐ | ☐ | ☐ | ☐ | ☐ |
| • Implementation timeline | ☐ | ☐ | ☐ | ☐ | ☐ |
| • Major milestones | ☐ | ☐ | ☐ | ☐ | ☐ |
| • Major dependencies | ☐ | ☐ | ☐ | ☐ | ☐ |
| • Political factors | ☐ | ☐ | ☐ | ☐ | ☐ |
| *Other:* | | | | | |
| _____ | ☐ | ☐ | ☐ | ☐ | ☐ |

**22. To what extent do You consider it is important that Business Case take the following types of benefits into consideration?**

| | Low extent | | | | High extent |
|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 |
| • Qualitative (Better team work etc.) | ☐ | ☐ | ☐ | ☐ | ☐ |
| • Quantitative (ROI etc.) | ☐ | ☐ | ☐ | ☐ | ☐ |
| *Other:* | | | | | |
| _____ | ☐ | ☐ | ☐ | ☐ | ☐ |

**23. What criteria do You employ in order to determine the quality of a Business Case?**

## Situation Analysis

**24. Does Business Case absorb the inherent uncertainty that characterizes the so-called Situation Analysis (Problem analysis, strategy formulation, strategy evaluation, etc)?**

**25. To what extent to you consider that Business Case helps the consultant in his/her role as a "listener"?**

| | Low extent | | | | High extent |
|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 |
| | ☐ | ☐ | ☐ | ☐ | ☐ |

**26. To what extent do You consider that Business Case absorb the uncertainty when identifying the following?**

| | Low extent | | | | High extent |
|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 |
| • Involved stakeholders | ☐ | ☐ | ☐ | ☐ | ☐ |
| • Social structures (organizational and cultural structures) | ☐ | ☐ | ☐ | ☐ | ☐ |
| • Physical structures (location, layout of buildings, technology etc.) | ☐ | ☐ | ☐ | ☐ | ☐ |
| • Identification of business processes | ☐ | ☐ | ☐ | ☐ | ☐ |
| • Goals/vision | ☐ | ☐ | ☐ | ☐ | ☐ |
| • Scope (Delimitation) | ☐ | ☐ | ☐ | ☐ | ☐ |
| • Reuse of existing IS/IT systems | ☐ | ☐ | ☐ | ☐ | ☐ |
| • Investment in new IS/IT systems | ☐ | ☐ | ☐ | ☐ | ☐ |
| • Strategy formulation | ☐ | ☐ | ☐ | ☐ | ☐ |
| O*ther:* _____ | ☐ | ☐ | ☐ | ☐ | ☐ |

**27. To what extent do You consider that Business Case can help the involved stakeholders to obtain a common understanding about the problem situation?**

| | Low extent | | | | High extent |
|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 |
| | ☐ | ☐ | ☐ | ☐ | ☐ |

**28. To what extent do You consider that Business Case can support the absorption of the following issues?**

| | Low extent 1 | 2 | 3 | 4 | High extent 5 |
|---|---|---|---|---|---|
| • Goals and strategies formulation (A) | ☐ | ☐ | ☐ | ☐ | ☐ |
| • The design premises, organizational logic, organizational architecture, and the actual organization (B) | ☐ | ☐ | ☐ | ☐ | ☐ |
| • The result of implementation (C) | ☐ | ☐ | ☐ | ☐ | ☐ |
| • Nature of the environment (E) | ☐ | ☐ | ☐ | ☐ | ☐ |
| • The transitions between the issues stated above (A,B,C, and E). | ☐ | ☐ | ☐ | ☐ | ☐ |
| *Other:* | | | | | |
| _____ | ☐ | ☐ | ☐ | ☐ | ☐ |

## Architectural Design

**29. Could Business Case be used in the Architectural Design, and in that case why?**

**30. What kinds of uncertainty exist in the Architectural Design?**

**31. How does Business Case absorb the uncertainty in the Architectural Design?**

**32. To what extent do you consider that Business Case helps the consultant to better understand his/her task?**

| Low extent 1 | 2 | 3 | 4 | High extent 5 |
|---|---|---|---|---|
| ☐ | ☐ | ☐ | ☐ | ☐ |

## Change Management

**33. Could Business Case be used in Change Management, and in that case why?**

**34. What kinds of uncertainty exist in Change Management?**

**35. How does Business Case absorb the uncertainty in Change Management?**

**36. To what extent do you consider that Business Case helps the consultant in his/her role as a "teacher?"**

| Low extent | | | | High extent |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |
| ☐ | ☐ | ☐ | ☐ | ☐ |

**37. To what extent do You consider that Business Case absorb the stakeholders uncertainty in the decision that concerns the final future solution?**

| Low extent | | | | High extent |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |
| ☐ | ☐ | ☐ | ☐ | ☐ |

**38. Given two alternative organizational designs, to what extent do You consider that Business Case absorb the uncertainty of the following issues when choosing one over the other?**

| | Low extent | | | | High extent |
|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 |
| • Parsimony (Involves few position changes) | ☐ | ☐ | ☐ | ☐ | ☐ |
| • Simplicity of solution | ☐ | ☐ | ☐ | ☐ | ☐ |
| • Specificity of solution | ☐ | ☐ | ☐ | ☐ | ☐ |
| • Robustness of solution | ☐ | ☐ | ☐ | ☐ | ☐ |
| • Implementability of solution | ☐ | ☐ | ☐ | ☐ | ☐ |
| *Other:* _____ | ☐ | ☐ | ☐ | ☐ | ☐ |



# Appendix 3 Reifer's Example

## Reifer's example, Business Case in the business plan/model executive summary

**The market**

The acknowledged largest growing market in the world for wireless products is the People's Republic of China. Current projections indicate that this market will grow by a factor of 100 within the next decade. If projections hold true, this market will account for one of every two new sales of wireless products in the year 2010.

**Current situation**

We have successfully penetrated this market by teaming with several leading Chinese telecommunications manufacturers, distributors, and retail establishments. We have invested over $500 million in facilities and equipment and have trained over 5,000 Chinese workers in modern engineering and manufacturing techniques. This strategy has enabled us to capture 40 percent of the market for equipment. However, we have late to the handset market and command only 10 present of the marketplace.

**The competition**

The market for handsets is extremely competitive. Our two chief rivals have recently teamed with Chinese companies and have offered products with better price/performance than ours. They have brought new products to market more rapidly than we have and are encroaching on our market share. Their customer support facilities are also more extensive than ours, and their technicians seem better trained to handle problems endemic to China.

**The opportunity**

We can bring products to market quicker with improved price/performance for the Chinese and Asian marketplaces by setting up a software development and customer support facility within the new economic development zone the government has created outside Beijing. Besides having tax advantages in China, the facility will bring us closer to the marketplace. It will also enable us to create software for new low-end products that we can sell in volume through local distributors with better price/performance than our competitors.

**Solution**

We can develop competitive products by adapting our new [code name] handset architecture and our quick-to-market engineering process to the Chinese and Asian marketplaces. The architecture would enable us to rapidly replace software in our new low-end handset offerings for new markets. This quick turnaround would permit us to capture between 40 and 50 percent of the market for these products during the next five years. The process would enable us to introduce these new products every six months instead of on an annual basis.

**The numbers**

We estimate that it will take an investment of $50 million to put this plan into action. Based on our sales forecasts, we believe the breakeven point for this investment would occur in less than two years. The present value of the benefits that will accrue over our five-year planning horizon is estimated at between $100 and $150 million based on a very conservative income steam. The after-tax effective rate of return for this investment within the United States exceeds 48% per year based on these projections.

**Your action**

We would like to approach potential partners and the Chinese government to determine whether the climate for pursuit of this initiative is timely. We have developed a four-phase plan of attack to minimize the risk associated with this investment. The first phase of this plan requires an investment of $3 million to assess feasibility of using the Chinese to develop our software. We solicit your approval of this funding to pursue this potentially rewarding opportunity.