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Change Processes:
Heading in the right direction?

A Power Perspective on Progress Measurement

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Abstract

This thesis deals with how the use of power in organizations influences how progress measurement is conducted and how the results from the evaluation are used by the organization. Progress measurement in this context is evaluations conducted during a strategic change process with the aim of achieving feedback and control of the process while it is taking place. Progress measurement is extensively studied in the strategy literature and in the classics of organizational theory, where it is claimed that in order to implement changes successfully organizations must establish strategic control during the process. However, it is argued in this thesis that the literature on progress measurement is prescriptive in nature and lacks empirical tests of the conceptual frameworks. Understanding *how* organizations measure progress and probing *why* they choose a particular way to measure progress will give insight on whether or not firms have different requirements to a measurement system, and whether or not those requirements match existing prescriptive literature.

A strategic change processes is studied over a four year period while it is implemented throughout an organization. Three business units within this corporation are studied in-depth with multiple data sources providing a picture on how evaluations are conducted in the context of the business unit. Findings indicate that there is a gap between the literatures' normative description of evaluation methods and how organizations actually conduct evaluations. Not one evaluation is similar to each other, both compared to evaluations conducted within a business unit or across the business units. Based on characteristics such as content and purpose of the evaluation, three typologies of evaluations are developed: *seeking the path*, *assessing the consequences*, and *seeking the truth*. In this thesis it is argued that use of power during the implementation process will influence how evaluations are conducted and whether and how the results are used. The evaluations are not primarily used as a mean to get feedback on the change process, but rather as a mean to control what is evaluated and how, in order to control the outcome of the evaluations. Power is thus used to ensure the outcome sought for in advance of the evaluation and based on this finding, three approaches to progress measurement are developed; *the rational approach, the political approach*, and *the learning approach*. Each of these approaches have different characteristics and based on these characteristics propositions as to under which circumstances an approach is likely to be used and the likely outcome of the evaluation are presented. The most prevailing assumption in these propositions is that power will be used irrespective of the timing of the evaluation and irrespective of who initiates the evaluation (corporate, business unit, or employees). Finally, findings indicate that organizations will not use results from progress measurement as prescribed in the literature, but rather the organization will either influence the character of the outcome or control how the results will be used in the implementation process.

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1. Introduction

This thesis explores the phenomenon of *progress measurement*, which is an evaluation undertaken by organizations during change processes. Measuring progress during implementation gives the organization feedback on how the process evolves with respect to defined goals for different time-periods. In the literature one will find that research points to the necessity of measuring progress during a change process (Eccles, 1991; Goold & Quinn, 1990; Kaplan & Norton, 1992; Moon & Fitzgerald, 1996; Vitale et al, 1994) and that it is in fact crucial for the outcome of the process. Based on this assumption, the aim in this thesis is to probe on how organizations actually measure progress during a strategic change process and through this gain an understanding on what influences how they go about this task as well as use the outcome results. Empirical results reveal that organizations undertake different approaches to progress measurement and the use of outcome results is related to several factors such as; who initiates the evaluation, who conducts the evaluation, the purpose of the evaluation, and the timing of when in the process the evaluation is conducted. This thesis draws on the perspective of use of power in organizations in order to understand and explain the findings in this study.

In order to attain a successful implementation; companies must establish some form of strategic control process (Stacey, 1996; Simons, 2000). Strategic control implies to concentrate on targets that measure strategic progress during implementation, just as budgetary control focuses on annual profit targets. Measuring progress during the change process is assumed to reduce uncertainty, address ambiguity, and finally enhance organizational effectiveness and equity. It is thus assumed that measuring progress during an implementation process will have a positive effect on the outcome of the implemented strategy, which again will be positive for the overall firm outcome. In this study Statoil, a multinational corporation, undertaking a major strategic change has been studied over time to explore if progress measurement was conducted, how it was conducted, what influenced the way it was conducted and finally, if and how the results from the evaluations were used as feedback in the process.

Strategic change refers to large-scale changes in an organization that implies changes to the organizational structure, the change process spans over several years and where the

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aim is to enhance the competitiveness of the firm. Change programs of this nature often have severe implications for the people in the organization as well as for the organization itself. The processes are very challenging to the firm and the employees are under enormous pressure with respect to new challenges or even downsizing. Implementing these changes becomes extremely challenging due to the complexity of the strategy and the time span, and most likely, changes in both plans and goals will occur. Designing and using an evaluation system in a highly dynamic environment may thus be of a major challenge to organizations.

Research on progress measurement has resulted in practical literature directed at management and organizations (see for example Kaplan & Norton, 1992). This literature describes how organizations step by step should design and create a measurement system that focuses on the change process. A limitation however, to the research on progress measurement is that it is mostly prescriptive in nature and foremost does not have a sound theoretical foundation for the proposed conceptual models or prescriptions for success. As a result, there is a lack of empirical research that has focused on how measurement of progress is *actually conducted* during change processes in organizations and how the results of the evaluations are used. Understanding *how* organizations measure progress and probing *why* they choose a particular way to measure progress will give us insight on whether or not firms have different requirements to a measurement system, and whether or not those requirements match existing prescriptive performance measurement models.

In this thesis, measurement of progress during a strategic change processes undertaken in Statoil has been studied over a four year period. The change program in Statoil involved both major organizational changes as well as the implementation of a new IT platform; an enterprise resource planning system. Relevant literature that focuses on progress measurement in a dynamic setting was consulted in order to get an overview of what is known on what influences how organizations measure progress and whether and how they use the results; (1) *Strategic Change,* (2) *Information System Implementation* and (3) *Program Evaluation.* Strategic change literature is relevant because it focuses on how to measure progress during translation of strategy into action as opposed to measuring end results. The information system implementation literature is also relevant for the purpose of this thesis as it focuses on how and when to assess progress during

implementation. Finally, the literature on program evaluation is probed as a supplement to the two former streams of literature. This stream of literature has a long tradition for research on evaluation of programs in the public sector. Issues and findings from this research are also highly relevant and applicable for studying progress measurement in private organizations.

These streams of literature were used in this thesis as a point of departure in order to understand issues and perspectives on progress measurement. However, as the literature review revealed, these streams of literatures were found to have major limitations and was thus further criticized for being; overly rational, using weak measurement variables, producing irrelevant results, and producing results not used by the organization. In order to probe and answer the research questions of this thesis, research within organizational theory was consulted. Literature on progress measurement was in particular criticized for being overly rational as well as prescriptive in nature. Here actors' decisions were assumed to be based on "rational choice" that assumes actors know their preferences, and they know all potential alternatives and their associated costs (March, 1994). As pointed out by several researchers (Guba & Lincoln, 1989; Levinthal & March, 1993; Worthen et al, 1997), individuals or organizational groups cannot be treated as to behave in this rational manner, as their actions will be influenced by the context one operates in, as well as by how they make sense of the reality. Progress measurement is to be used as feedback to ongoing change activities and results may be used to do corrective actions (Goold & Quinn, 1990). In accordance to Huber (1991) organizations have learned if necessary actions or changes to the strategy are applied. However, the data analysis in this thesis pointed to the fact that organizations did not use results from evaluations for mere corrections. In particular it was found that theory on use of power in organizations supplemented a cognitive and learning perspective on use of progress measurement. Hardy (1994) claims that change is a political act, which needs power to make it happen. Pettigrew (1973) argues that organizations are resource-sharing systems and when there is a scarcity of those resources, political behaviour will occur. Theory on use of power in organizations was thus found to be the most suitable perspective in order to understand what influences how organizations evaluate progress during change processes.

The findings of this exploratory study on what influences how organizations measure progress starts with an analysis of how organizations conducted evaluations during change processes. Three typologies of progress measurement are presented; seeking the path, assessing the consequences, seeking the truth. The typologies are used as a means to cluster all the evaluations in the empirical data in accordance with the purpose of the evaluation. Following this classification on how progress measurement is conducted, an analysis is presented of major reasons why progress measurement is conducted, and whether and how the results are used. This study contributes by suggesting a new theoretical framework for understanding and studying evaluation processes during change programs. Further, based on this perspective and empirical findings, three approaches to progress measurement is deduced; rational approach, political approach, and learning approach. The different approaches to evaluation have each a set of characteristics, and based on these characteristics one or the other approach will be most applicable to understand how the evaluations are conducted and how the outcome results will be used. Use of power is present in all three approaches, but how power is used will vary between the different approaches and thus influence the evaluation process and use of results differently.

Through applying theory on power, this thesis contributes to the limited empirical work on progress measurement during strategic change processes. A major limitation to research on progress measurement is the lack of empirical studies of evaluations while the actual change is taking place. This thesis contributes with new insight on what influences how organizations measure progress through studying a change process over a long time period in its dynamic context. As illustrated in this thesis, theory on use of power in organizations is also extremely relevant for understanding the whole implementation process. Thus, this thesis furthermore contributes to the limited work on implementation issues in general and more specifically to evaluation research within the frame of a political perspective. Use of power in organizations is a theme that there has not been much emphasis on in organizational development literature (Hardy, 1994).

This thesis is organized as follows: chapter two will give the background for the choice of topic for this thesis through a discussion of the phenomenon, then central concepts will be defined, and finally the research question of this thesis will be presented. In the first part of chapter three a review of the literature on measurement of progress from

three research streams are presented; strategic change, information system implementation and program evaluation. The second part of chapter three assesses and presents major critiques to the literature on progress measurement. Chapter four introduces theory on use of power in organizations, which forms the basis for a tentative research model. Chapter five presents research design and methodology for this study. In chapter six there is a description of how the three different business units within Statoil evaluated progress during the implementation process. Based on various different evaluation methods used, three typologies of evaluation methods are developed. These are defined and exemplified with empirical examples. Chapter seven describes the three business units with respect to whether there are conditions present for power to be used during progress measurement. First the context of each unit is described and discussed with respect to the conditions for use of power. Then the content of the strategy is described with the focus on the goals of the strategy. Here it shown that the BRA project, management and the employees have different goals that also change over time. Chapter eight describes and analyses the sources of power, how power is used within the three business units and how this affects progress measurement during the implementation process. Chapter nine draws on the findings from the previous chapters and a new theoretical perspective on progress measurement is presented. Based on this new perspective and the empirical findings, three approaches to progress measurement are deduced. Propositions predicting when these approaches will be applicable and how progress measurement is conducted as well as whether and how the outcome results are used, are developed. Finally, chapter ten concludes by discussing contributions, limitations, practical and theoretical implications of the findings in this thesis.

2. Measurement of Progress in Strategic Change Processes

This chapter starts with a discussion of the phenomenon of this thesis, namely *progress measurement in strategic change processes*, which gives the *background for choice of topic* and research questions of interest in this thesis. The aim related to conducting progress measurement is to evaluate progress during the implementation of a strategy. The focus during the evaluation is to measure progress of the process against a given set of goals related to the strategy, as apposed to measuring general firm performance. In this thesis the aim is to study evaluations taking place during strategic change processes. Change processes of concern here is when several components of the organization are changed, and the change program spans over several years. Evaluating progress in change processes is often for the purpose of being in control of the process or receiving feedback on the development of the change process, which again allows one to conduct corrective actions during the process. As we will see from the discussion of research on performance measurement as well as from the literature review in chapter three, there is a tremendous amount of research on this topic. However, as pointed out in chapter three, there is a lack of empirical research on how organizations actually measure progress during change processes, if and how they use the results of the evaluation, and finally what influences organizations on how this is conducted. In the literature one points to the necessity of evaluating progress as vital in order to acquire ones goals, and that the results are used to do corrective actions. The question raised in this thesis is whether organizations act in this straightforward and rationalistic manner in complex processes. The research questions of concern in this thesis are thus; (1) how do organizations measure progress and use the results during strategic change processes and (2) what factors influence how this is conducted.

The aim of this chapter is further, to define central concepts in this thesis and to give a general *theoretical background* of the research on measurement of progress in organizations. The focus is to discuss how prior research has defined performance as well as how the concept is used in these studies. In this chapter, there will be a discussion of why it may be confusing and problematic to use the concept performance in this thesis, which is the most common concept in evaluation literature, and thus argue that for the purpose of this thesis it is more appropriate to use the term *progress*. In the evaluation literature performance or other concepts such as effectiveness is used

interchangeably. In some line of research the focus in performance studies is firm performance in terms of financial results, while other studies focus on financial and qualitative outcomes in order to acquire organizational control. Hence, the focus in the discussion of research on performance measurement is to position the aim of this thesis both theoretically and conceptually. Finally, the positioning of this thesis will give guidance to relevant literature on performance measurement, which will be reviewed in chapter three.

2.1. The Phenomenon: Progress Measurement in Strategic Change Processes

Most organizations are continuously striving to improve or maintain their overall firm performance, and more often one sees that organizations try to accomplish this through strategic change processes. The objective of strategic changes is usually to enhance the organizations' competitive ability. However, the organizations' competitive ability can not increase unless the changes are implemented successfully. There are several aspects that management must consider regarding how to implement strategic changes. Strategic changes generally involve changing a number of organizational components and this can be done in several ways. Strategic change is a complex and dynamic process that often takes several years to accomplish (Nadler & Tushman, 1989). It is complex because it can involve structural changes to the organization, adaptation of new technology and/or entry into new products and markets. This often requires that the organization dedicate resources to this process. However, the process will vary with regards to workload and intensity over time as the changes evolve. It is thus a dynamic process that occurs over time (Pettigrew, 1997).

More and more often, one sees that the strategy processes become even more complex as this also involves the adaptation of new information technology, and implementing a strategy successfully is then more difficult. It is widely acknowledged that IT has great impacts on organizations. The potential to transform organizations has been a consistent theme in management literature since computers were first introduced commercially in the 1950s. Using and applying IT in organizations involves large potentials for reducing costs as well as increasing competitive ability. As a consequence, the competitive arena within industries is changing quickly.

Information technology includes computers and other electronic equipment as well as information systems. Through application of IT, the organizations can attain new ways of performing business, which also includes new ways of acquiring information, as well as new ways in communicating both externally and internally. More specifically, IT opens up for IT-networks within the organization or with other firms in the same industry, which can lead to (1) more efficient information processing, (2) increased informal contact in form of discussion and exchange of views, (3) more formal cooperation through simultaneous participation in working-processes. Such IT-networks include for example both the Internet and Intranet, and other more closed systems such as enterprise resource planning (ERP) systems. ERP systems are fully integrated sets of modules that allow companies to manage multiple operations such as manufacturing, human resources, finance, and logistics. These systems also imply fundamental organizational changes where whole organizational divisions must be retrained, jobs redefined, and procedures discarded or built from scratch, ultimately transforming core processes (Boudreau & Robey, 1999).

There is extensive research on how to apply IT in organizations (Weill, 1992; Soh & Markus, 1995; DeLone et al, 1992; Lucas, 1993; Seddon, 1997; Venkatraman, 1994) as well as numerous concepts on how to develop and use progress measurement in a strategic change process (Eccles, 1991; Goold & Quinn, 1990; Kaplan & Norton, 1992; Moon & Fitzgerald, 1996; Vitale et al, 1994, Stacey, 1996; Simons, 2000). However, one sees that too often the change processes have not been successful or met the expectations (Robey, 1995; Venkatraman, 1994). For example, today we see that organizations invest heavily in information technology systems (IT). Within the larger companies we find that they invest more and more in enterprise systems, which also often implies large restructurations of the organization. These investments and changes are in many cases important both with respect to the companies' own productivity and not at least to its competitive abilities. But at the same time, one finds that many of the companies over-invest in IT. This means that the investment neither becomes an asset for the company nor do they manage to increase their performance. There may be several reasons for this. A major cause, which is often highlighted by researchers, is that the investment proves to be a failure because the company does not implement IT efficiently so that one utilizes its full potential (Davenport, 1993; Mooney et al., 1996; Soh and Markus, 1995).

Strategic changes as defined in this thesis with the simultaneous adaptation of new IT-systems are in the literature known as Business Process Reengineering (BPR) (Hammer & Champy, 1993). BPR is complex in nature as it implies both radical changes to the organization and use of new IT-systems. BPR has the potential to provide dramatic gains in productivity and profits for companies if the companies plan and implement these processes in accordance to the companies' stated goals. However, neglecting a careful process evaluation can lead to disastrous outcome for the company.

It is thus pointed out by many researchers (Goold & Quinn, 1990; Eccles, 1991; Kaplan & Norton, 1992; Simons, 2000) that it is necessary to measure progress during translation of strategy into action. The traditional way has been to measure the results of the strategy after it has been implemented (Reed & Buckley, 1988; Eccles, 1991; Barney, 1997), which then evaluates the overall performance of an organization on an aggregated level (March & Sutton, 1997). In order to focus on progress during the implementation process, measurement has to be conducted on a disaggregated level. Focusing on this level will enable organizations to get more specific information, for example the costs of producing a certain product (March & Sutton, 1997). Measurement of progress during the strategic change process typically comprises systematic methods of setting business goals together with periodic feedback reports that indicate progress towards those goals. Based on this information, management has the opportunity to do corrective actions during implementation. In research it is even pointed out that measuring progress that monitors the activities in a strategic change process is vital for the success of the project. Research also shows that measuring progress at a disaggregated level will lead to positive outcomes on the overall firm performance (Kaplan & Norton, 1992; Stacey, 1996; Simons, 2000).

There is much knowledge with regards to measurement of progress from both experiences in industries and research. This knowledge is widely available to organizations in form of research, or perhaps more accessible, organizations can choose between an endless number of textbooks, attend seminars on this topic, and there are numerous consultants who claim to be experts on progress measurement. An example of a system that measures progress, which is well known within both academia and business, is the Balanced Scorecard (Kaplan & Norton, 1992). However, a limitation to this literature is that it is mostly prescriptive in nature where it points to criteria for

designing a successful progress measurement system. The literature does not focus on how organizations use these different measurement models or probe what factors may influence how organizations measure progress during change processes. This is the focus of the research questions in this thesis, which will be presented in part 2.3.

Before the research questions are presented there will be a discussion of the research on performance measurement in organizations. Here the focus will be on the difficulties of reaching a consensus on a definition of performance. Therefore, this part ends with an argument of why the concept *progress* is introduced and used in this thesis as a substitute for the concept performance. Here a definition of strategic change progress will be given, as well as a specification of the level and phases of analysis this thesis is focused at.

2.2. Research on Performance Measurement in Organizations

This thesis addresses the issue of performance as applied to organizations. A definition of performance that is often used is "the three E's" – economy, efficiency and effectiveness and it is used in terms of assessing firm performance (Eccles, 1991). Holloway et al (1995) define performance to reflect the overall status of an organization in relation to its competitors, or against its own or external standards, and assessing performance is reflected across a profile of measures. Barney (1997) develops a conceptual definition of organizational performance that compares the value that an organization creates using its productive assets with the value that owners of these assets expect to obtain. The relationships between expected value and actual value are presented in a three-way classification of performance (Barney, p.32): normal performance, below-normal performance, and above-normal performance. This is illustrated in table 2.1.

Table 2-1   The relationship between the expected value of a firm's resources, their actual value, and firm performance (Barney, 1997).

Normal performance	A firm generates with its resources value *equal to* what owners of those resources expect
Below-normal performance	A firm generates with its resources value *less than* what owners of those resources expect
Above-normal performance	A firm generates with its resources value *greater than* what owners of those resources expect

Performance and effectiveness are used interchangeably in the literature, and the problems of defining, measuring and explaining the two terms are virtually identical (March & Sutton, 1997). Explaining variation in performance is one of the more enduring themes in the study of organizations. *"It is manifested most distinctively in studies with a focus on "management" but extends to a wide range of research that seeks to understand competitive survival and to construct interpretations of organizational histories that emphasize the adaptation of organizations to feedback from their environments"* (March & Sutton, 1997).

Performance is thus claimed to be a fundamental concept within several research areas, as in e.g. strategic change and information system implementation. However, there is no coherent body of theory on performance measurement (e.g. Holloway, Lewis and Mallory, 1995). There are numerous definitions of organizational performance (Barney, 1997), but there is little agreement about which definitions are the most suitable, let alone agreement on the criteria for measuring performance (Cameron, 1986; Meyer & Gupta, 1994; March & Sutton, 1997; Perrin, 1998). *"...confusion and ambiguity still characterize scholarly writings... Problems of definition, circumscription, and criteria identification plague most work"* (Cameron, 1986). Although, the literature does not use one definition of performance, there appear to be elements that are common as well as elements for which there still lack agreement upon (Cameron, 1986). Cameron (1986) summarizes the themes that there is agreement upon as well as the themes that still lack consensus in the following way:

Table 2-2   *Themes of agreement and areas of conflict (Cameron, 1986)*

Themes of agreement:	Areas of conflict:
1. Organizational performance is central in organizational research.	1. Evaluators of effectiveness often select models and criteria arbitrarily in their assessments, relying primarily on convenience.
2. Because no conceptualization of an organization is comprehensive, no conceptualization of an effective organization is comprehensive.	2. Indicators of effectiveness selected by researchers are often too narrowly or too broadly defined, or they do not relate to organizational performance.
3. Consensus regarding the best, or sufficient, indicators of effectiveness is impossible to obtain.	3. Outcomes are the dominant type of criteria used to assess effectiveness by researchers, whereas effects are used in policy decisions and by the public.
4. Different models of effectiveness are useful for research in different circumstances.	
5. Organizational effectiveness is mainly a problem-driven construct rather that a theory-driven construct.	

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These conclusions about the consensus and conflict that surround performance show that flexibility, discretion, and appropriateness to context must characterize the selection of criteria. The remaining conflicts regarding performance mainly center on the incompatibility and inappropriateness of commonly selected criteria (Cameron, 1986).

Organizational performance has been used for understanding firm survival, but also as a mechanism for acquiring organizational control. In the management control system (MCS) literature, performance measurement is looked upon as a mechanism or tool to be used by organizations in order to gain organizational control. More broadly, performance measurement may be employed in order to reduce uncertainty, address ambiguity, and enhance organizational effectiveness, equity and legitimacy in the longer run by organizational learning. Lastly, management use performance measurement in their internal competition for scarce resources (Johnsen, 1999).

The need for a mechanism for internal control is self-evident (Dent & Ezzamel, 1987). Organizational control may be interpreted as the problem of ensuring some consistency in organizational activities. Effective control implies having sensitivity to changing patterns of demand, technology, and economic and social expectations. On the other hand, organizational control is complex and multifaceted. This is due to; individuals having divergent demands that evolve over time, information been unevenly distributed, and/or the operating characteristics changing over time (Dent & Ezzamel, 1987).

Achieving organizational control is the main focus in management control systems (MCS), where performance is a central concept (Ouchi, 1979; Argyris, 1990; Langfield-Smith, 1997). MCS provide a means for gaining cooperation among collectives of individuals or organizational units, and channeling those efforts toward a specified set of organizational goals (Ouchi, 1979). Thus, management control as defined by Otley et al (1995) "*is a general management function concerned with the achievement of overall organizational aims and objectives*". In this respect, Otley et al distinguishes between management control and financial control. Financial control is concerned with the management of the finance function within organizations. In management control, however, financial information is used as a means to acquire organizational control. Financial measures are often used as a surrogate measure for other aspects of organizational performance. Organizational control is also often discussed in terms of

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formal control and informal control (Langfield-Smith, 1997). Formal controls include rules, standard operating procedures and budgeting systems. These are the more visible, objective components of the control system, but the effectiveness of formal controls may be dependent on the nature of the informal controls. The informal control systems are not consciously designed, and they include unwritten policies of the organization that often derive from the organizational culture.

Traditional accounting systems have dominated much of the MCS research. However researchers have now realized that this is not an adequate approach in order to accommodate the changed business conditions of the 1990s. It is also insufficient for capturing managerial performance (Langfield-Smith, 1997). Hopwood (1972) points to a number of problems with using accounting data as an important dimension for assessing managerial performance: (1) not all the relevant dimensions of managerial performance are included in accounting reports since comprehensive measures are not defined, (2) an organization's economic cost function is rarely known with precision and an accounting system can only attempt to approximately represent its complexity, (3) accounting data primarily represents outcomes, while managerial activity is concerned with the detailed process giving rise to the final outcomes, and (4) the main emphasis of accounting reports is on short-term performance indexes while the evaluation of managerial performance is often concerned with more long-term consideration.

Given the limitations of traditional research on MCS, it is found that a more modern approach is needed for acquiring effective control (Langfield-Smith, 1997). Since the 1980s there has been a growing interest in the relationship between MCS and strategy. The definition of MCS (management is concerned with achievement of organizational aims and objectives) is very similar to objectives of the definition of a strategy as given by Barney (1997); *"Strategy is a pattern of resource allocation that enables firms to maintain or improve their performance"*. Goold and Quinn (1990) suggest that the MCS should be tailored to support the strategy of the business, where monitoring of performance against strategic goals is a key issue. In this system, non-financial performance measures are used as short-term indicators that are explicitly linked to achievement of long-term strategic goals.

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Indicators, Levels and Phases of Performance Measurement in Organization

Indicators

Performance is reflected across a profile of measures (Holloway et al, 1995). There are a wide variety of techniques for measuring firm performance but all of the techniques have limitations (Barney, 1997). The most common approaches to the measurement of performance are to distinguish between financial and operational performance (non-financial) indicators (Venkatraman & Ramanujam, 1986). Use of financial indicators on performance is the most common approach, but also the narrowest conception of performance. Typical of this approach would be to examine such indicators as sales growth, profitability, earnings per share, and so forth (Hopwood, 1972; Venkatraman & Ramanujam, 1986; Barney, 1997). However, since the 1980s it has become more common to assess firm performance in terms of both financial and operational indicators. Operational indicators would typically be e.g. market-share, product quality, marketing effectiveness, customer satisfaction, and other measures of efficiency.

Levels

In addition to using different indicators on performance, performance can be measured at different levels of analysis (Bakos, 1987). The typical focus is on one of the following levels; (1) an individual performing a task, (2) a work group including many individuals, (3) an organization consisting of several groups, (4) an industry with a number of firms, and (5) the entire economy, or society as a whole. March & Sutton (1997) comprises these five levels more or less into the following two levels:

- Aggregated level as in for example accounting, sales, or financial reports, in stories of organizational history, or in both socially constructed evaluations of overall organizational effectiveness.
- Disaggregated level as in studies of the direct costs of producing a particular product using a specific technology or efficiency in performing a particular task.

In this thesis the interest is to study measurement of progress at the disaggregated level as defined above. The focus is to study how organizations measure progress during a change process that here can be referred to as implementing different tasks at different phases and each task is then evaluated. Thus, the focus in this thesis is not to study overall firm performance.

Phases

Assessing performance of a strategic change can be on either one or both of the phases: (1) during the change process, and/or (2) after the change has been implemented. Since the focus of this thesis is on progress measurement in strategic change processes the first phase: measurement *during* the change process is the phase that this thesis will be focused on. Here progress indicators are monitored against internal standards and goals of the change program. Strategic management is the process through which managers ensure the long-term adaptation of their firm to its environment. Useful measures of strategic performance are those that help assess the quality of a firm's adaptation (Chakravarthy, 1986). Thus, performance improvement is at the heart of strategic management (Venkatraman & Ramanujam. 1986). A strategic change process is therefore suitable in order to evaluate if and how performance is conducted during implementation.

In the rest of this part there will be a definition of the following two constructs: *strategic change* and *performance*. It is necessary to give a definition of these constructs since constructs will always have a different meaning to different people and are used in different contexts to designate various things (Nachmias & Nachmias, 1992). An argument to use a new concept for performance, namely progress, will also be given.

Definition of Strategic change

A strategic change is managed *"through a process where strategies are chosen and implemented"* (Barney, 1997). A strategic change process is thus as defined by Pettigrew (1987):

> "... *alteration in, for example, the culture, structure, product market and geographical positioning of the firm, recognizing the second-order effects, or multiple consequences, of any such changes and, of course, the transparent linkages between firms and their sectoral, market and economic contexts".*

The substance of change refers to the core elements of particular work processes that are to be changed. There are four main dimensions with respect to change that have to be considered (Dawson, 1999):

1. the scale and scope of change (incremental vs. radical)
2. defining characteristics of the change program
3. timeframe
4. perceived centrality of the change to the survival of the organization

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The scale and scope of change may range along a continuum from small-scale discrete change to a more "radical" large-scale transformation (Dawson, 1999). Organization and strategy literature distinguishes between radical (revolutionary, frame-breaking) change and incremental (evolutionary) change (Tushman & Romanelli, 1985). Radical organizational changes are often conducted for the purpose of changing an organization's alignment to its environment and thereby increase the organization's competitive abilities (Reve & Grønhaug, 1991). This thesis will have an emphasis on changes that are *radical in scale and scope*.

Defining characteristics of the change program refers to the actual content of the change in question (Dawson, 1999). The concern here should be on the internal alignment between components undergoing change and the other organizational components. The systems view (Van de Ven & Drazin, 1985) assumes that, in order to generate organizational performance from organizational changes, consistency between the different organizational components is needed. Consequently, changing one component often requires changing other components as well.

The time frame of change can vary. For example, change programs may evolve incrementally over a number of years after which they are followed by a short implementation phase (Dawson, 1999). Nadler & Tushman (1989) describe radical change processes as characterized by several transitions, incomplete transition, uncertain future states, and long time periods (often taking between three to seven years). From Cyert & March's (1963) research, we are familiar with how complex problems can be dealt with by decomposing the problem into a number of tactical, sequential decisions. Breaking a complex and uncertain problem into smaller and more manageable elements allows for learning to occur at each step and it creates an awareness of opportunities for action which affect the next step (Cyert & March, 1963). The focus in this thesis will be on a change process that involves changes in *several components* and that spans over a *long time-period*.

The final dimension to the change in question relates to the perceived centrality of the change to the survival of the organization. "*If the transition is viewed as central to the continual operation and competitive position of the company, then it can have major implications for the time-scale, resource support and overall employee commitment to*

change" (Dawson, 1999). Although the strategic change program put in place was perceived as important and even crucial for the competitive ability of the organization, this understanding, at least in the organization, will not remain static throughout the duration of the program. Rather there will be a change in the assumed importance of the program and the attention it receives will change overtime and overlap with contextual and political elements (Dawson, 1999).

In sum, the definition of a strategic change process used in this thesis is that the change is a *radical large-scale transformation*, which involves change in *several components* and spans over a *time-period of three to seven years*. Finally, the strategic change program is by management *perceived as central* to the organizations competitive ability.

Definition of performance

As we have seen in the discussion on performance measurement in organizations, there are difficulties within research to agree upon a definition of performance. The major aspects of performance measurement discussed were; (1) there is not consensus upon a definition of performance measurement, (2) performance is either used as a mechanism to acquire control or as an indicator of firm success, (3) performance is measured at different levels, and (4) performance is measured at different times during or after the process. The fact that there are different aims related to measurement of performance and that the measurement level in focus varies, results in different definitions of the performance measurement concept. For example, one can ask if there is a causal relationship between increased performance in specific activities part of a change process and increased overall firm performance. Given that one uses the term performance at different levels and for different purposes it can result in misunderstandings as to what one is measuring.

Therefore, in this thesis a new concept is introduced, namely measurement of progress. Progress and performance is by definition quite similar. In the dictionary *progress* is defined as "*movement towards a goal*" whereas *performance* is defined as "*to begin and carry through to completion*". Both concepts could probably be argued to be suitable for the intention of this thesis. However since the aim is to measure during the implementation process and to monitor if one is on the right track in order to fulfill ones

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goals, the concept progress is found the most suitable to use. As the definition states, measurement of progress indicate if the organization is doing the right things in order to reach ones goals, whereas performance is more concerned with the final result. A definition of measurement of progress as used in this thesis is as following:

Measurement of progress is here meant as the activity managers do in order to measure progress during a strategic change process.

The purpose of measuring progress during change processes is to get feedback on whether the process is moving towards the goals, and this again enables managers to be in control of the process where the indicators on progress are used to monitor the process.

2.3. Research Questions

Although there are a number of ways for organizations to acquire knowledge on how to measure progress, it is also a fact that there is a large demand for help from consulting companies on this matter. Media often print stories on companies that fail to reach their performance goals related to large strategic projects (ref. Trygdeetaten). Reasonable questions to ask then are: (1) do these organizations have difficulties with measuring progress, (2) if so, are there fundamental aspects to measurement procedures that inhibit their successful application in an organization? If this is the case, it is further reasonable to ask (3) if there are aspects with regards to measurement per se, or if there are characteristics of the organizations that hinder efficient measurement?

These questions lead to the aim of this thesis, which is to understand how organizations measure progress during strategic change processes. Based on this as well as on the discussion of the phenomenon, the research questions can be framed. The research questions in this thesis are as following:

1. *Do organizations measure progress during organizational change processes?*
2. *If so, how do they measure progress and how do they use the results?*
3. *Which factors influence how organizations measure progress and use the results?*

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To answer these questions, literature on performance measurement is probed in order to examine theoretical approaches and underlying assumptions. Theoretical basis will facilitate the empirical study of how organizations measure progress, and it is expected to point to possible explanations for different practices with regards to measurement of progress. The focus is if actual measurement of progress diverges from how measurement intentionally is to be performed; as presented in the literature. Finally, this thesis will not be engaged in measuring the effect on overall firm performance as it is assumed that measuring progress will have a positive effect on outcome.

The studies on measurement of progress in strategic change process can either be described as normative and prescriptive (Goold & Quinn, 1990; Eccles, 1991; Soh and Markus, 1995; Venkatraman, 1994, Mooney et al; 1996), or based on empirical work and experience from working with such systems (Harris & Katz, 1991, Weill, 1992; Guha et al, 1997;). However, the majority of the studies are conceptual work that either present prescriptions on criteria to progress measurement systems or they present conceptual models that can be used actively in a strategic change process. Research that questions how organizations actually use measurement of progress in change processes, and whether or not the systems are used efficiently so as to acquire ones goals, is rarely found. By focusing on measurement of progress during implementation, it is hoped that this thesis will generate knowledge on which aspects affect progress measurement during change processes. This knowledge will hopefully serve as a contribution to the research on progress measurement in strategic change processes.

To find variables that explain the phenomena of this thesis and more precisely; give answers to the research questions, several requirements must be fulfilled. First of all, the literature on progress measurement has to be reviewed. The literatures of choice here are studies on strategic change, information system implementation and program evaluation. Secondly, these two streams of research will be evaluated and critiqued with respect to the research questions. This will be the content of chapter three.

2.4. Summary

In this chapter, the background for choice of topic was given with a discussion of the phenomenon of this thesis, namely *measurement of progress in strategic change processes*. Then research on performance in organizations was presented. The focus in

this discussion was on how performance is defined in the literature, and a discussion of the different indicators, levels and phases of performance measurement in organizations. This discussion led this thesis to introduce a new concept, which is *measurement of progress,* and it is a replacement of performance, which is used to distinguish measurement activities *during the change process* from measurement on *overall performance.* The final part in this chapter presented the research questions of interest in this thesis.

In the discussion of research on organizational performance it was found that, although performance is found to be a central concept in organizational theory, there is no commonly accepted definition of performance. Research on performance has had different focuses. Here research on performance was discussed in terms of (1) understanding firm survival, (2) as a mechanism for acquiring organizational control, and (3) measurement at different levels in the organization.

In this thesis the aim is to study progress measurement during a change process. In order to evaluate how organizations perform this activity, there has to be a clarification of the concepts in use. A major problem with the literature on performance is that there are different levels of measurement, and these levels need to be specified so as to clarify if it is overall performance or sub-activities that are measured. Another problem with the literature is that there are different goals associated with using performance measurement. It is either used as a mechanism to acquire control by measuring during implementation or it used to measure performance after the implementation process.

Given these problems, this chapter introduced a new concept that replaces performance measurement when referred to as a control mechanism in change processes. The new concept was measurement of progress. The phase in focus in this thesis is made clear by stating that here one is only interested in measuring activities during the change process. Thus, one is not concerned with measuring overall firm performance after the change has been implemented.

3. Literature on Progress Measurement

The phenomenon of this thesis is *Measurement of Progress* during change processes and the context of this research program involves both major changes to the organization as well as the implementation of a new IT platform. The focus in this literature review will therefore be reviewing three chosen literatures that all focus to various degrees on progress measurement: (1) strategic change, (2) information system implementation (IS literature) and (3) program evaluation. These streams of literature are chosen for the following reason; first of all, the strategic change literature will be reviewed since the purpose of this study is to explore how organizations measure progress during strategic change process. However, there exists a vast amount of literature within strategic change and it is thus necessary to limit this review to literature on strategic change that specifically is concerned with measurement of performance and/or progress. This line of literature is concerned with enhancing organizational efficiency and effectiveness, which is also looked upon as the ultimate goal of a strategic change process. Thus progress measurement is a central aspect in this line of literature. The second stream of literature, information system implementation, was chosen because the adaptation of a new IT-system is very central and a large part of the change project being studied in this thesis. Another reason for choosing the IS literature has to do with the fact that investments in IT either forces or leads organizations to do structural changes within the organization. Thus the IS literature is concerned with how to change efficiently while adapting a new IT-system. Much focus here is thus on performance and/or progress measurement. Lastly, the third research area here being reviewed is program evaluation. This discipline has it's tradition for research on evaluations of programs in the public sector. It is a well-established discipline where the focus has been to develop complex models for evaluations of impacts of programs implemented in the public sector. Lately there has also been a focus on extending this theory to amend social aspects and contextual factors that has implications for the measurement per se as well as the use of the outcome results. Although the focus in this research area is the public sector, the theory may well be relevant for and adaptable to the private sector. Therefore, because of its' long tradition, program evaluation will be probed in order to guide this research.

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3.1.   Literature review

In this chapter the aim is to assess these three different streams of literature with respect to their focus on progress measurement. It is important to note that three concepts related to measurement; performance, progress and evaluation, may be used throughout this chapter. This is because the concepts vary as to the meaning of them and they cannot therefore fully be a substitute for each other. However, through the discussion it will be made clear when the literature is engaged in measurement of progress as the concept is defined in this thesis. A critical assessment of the literatures will follow after the review, where the focus is to point to weaknesses and areas of limitations that can be used as points of departure to develop a tentative research perspective. The three streams will now be reviewed successively.

3.1.1.   Strategic Change and Progress Measurement

The focus on performance is traditionally at the aggregate level in the strategy literature. In this respect, there are a number of techniques for measuring firm performance. Barney (1997) reviews four major approaches that are all based on budgetary data and points out limitations to all these approaches. It is claimed that the traditional financial performance measures as illustrated by Barney (1997) worked well for the industrial era, but are out-dated with the skills and competencies required today (Reed & Buckley, 1988; Kaplan & Norton, 1992; Vital et al, 1994; Moon & Fitzgerald, 1996; Smith & Kofron, 1996; Cravens, 1998). As a tool for implementing deliberate strategies, the budgeting system has limitations. The main measures used are dollar-based although some physical activity measures may also be evident, e.g. output levels or efficiency levels in production. Further, in budget setting there is a status attached to size of budgets. There may exist power struggles, strong incentives to manipulate with the budget numbers, and finally income-based financial figures are better at measuring the consequences of yesterday's decisions than they are at indicating tomorrow's performance (Eccles, 1991). In accordance to Reed and Buckley (1988), output criteria with regards to budgets contain minimal performance-related information. A profit report may be an overall indication of the success or failure of a selected strategy or, on the other hand, it may be the result of certain contextual variables that are out of the realm of control of individual managers or even the organization.

In order to improve strategic decision-making and its implementation, there is a need for better performance measurement and evaluation (Eccles, 1991). Financial performance indicators are both too simplistic and too backwardly focused to be sufficient for modern, competitive organizations. It has been recognized that it is necessary with a shift from treating financial figures as the foundation for performance measures to treating them as one among a broader set of measures, i.e. quality measures, customer satisfaction, and competitive benchmarking. As Eccles points out *"it is hardly anything new with this, but giving them equal (or even greater) status in determining strategy, promotions, bonuses, and other rewards is another story"*.

In this line of research one has come to acknowledge that traditional financial performance measures have limitations when one is to evaluate the success of a strategy. Research thus points to the necessity of adapting non-financial measures, which will give better data for evaluation. However, the traditional literature on performance measurement has not focused on when (timing) in the process, and at what level in the organization measurement should be conducted. In other words, measurement of progress has not been in focus.

Most organizations use the financial budgets as their principal in control systems. The budget is a short-term instrument and mainly reports financial figures *"that are better at measuring the consequences of yesterday's decisions than they are at indicating tomorrow's performance"* (Eccles, 1991). Thus, the financial budget is a short-term instrument and does not reflect a firm's strategic progress. In the process of implementation of a strategy, a financial budget is therefore not sufficient in order to have strategic control. Strategic control should concentrate on targets that measure strategic progress over time; just as budgetary control focuses on annual profit targets (Goold and Quinn, 1990). Strategic control requires more data from more sources; particularly external sources, and the data must be oriented to a longer-term future (Stacey, 1996). A strategic performance measurement system (SPM) assists managers in tracking the implementation of business strategy by comparing actual results with strategic goals and objectives. A SPM system typically comprises systematic methods of setting business goals together with periodic feedback reports that indicate progress towards those goals (Simons, 2000).

In the process of both communication and implementation of the strategy the organization should focus on the process of goal setting. In goal setting the organization identifies factors that are vital to successful strategy implementation and the managers should see their performance in these terms where the critical success factors are associated with strategy implementation. Translating organizational strategies into specific and concrete goals is a difficult process. There exists relative little guidance pertaining both to an effective way to accomplish this and to predetermine processes for managers who wish to change their measurement system (Reed & Buckley, 1988; Eccles, 1991). However, Eccles identifies five areas of activity that sooner or later need to be addressed:

1. Developing information architecture: an umbrella term for the categories of information needed to manage a company's businesses, the methods the company uses to generate this information, and the rules regulating its flows.
2. Putting the technology in place to support this architecture.
3. Aligning incentives with the new system.
4. Drawing on outside resources.
5. Designing a process to ensure that the other four activities occur.

A well-known model for performance measurement, which complies very much with the above activities, is the Balanced Scorecard that emerged from a study by Kaplan and Norton (1992). The Balanced Scorecard is a comprehensive set of progress measures that provides the framework for a strategic measurement and management system. Kaplan and Norton introduced a generic model consisting of four perspectives, where the purpose is to identify ones goals and specific measures within each perspective (see table 3.1). The balanced scorecard includes both financial and operational measures. Both are linked to performance measures and subsequently, encompass the company's critical success factors.

The aim of the scorecard is to enable companies to track financial results while simultaneously monitoring progress in building the capabilities and acquiring the intangible assets that they need for future growth. Using the balanced scorecard, top managers can measure how effective their business units are in creating value for current and future customers, building and enhancing internal capabilities, and investing in people, systems, and procedures necessary to improve future performance. Using the balanced scorecard should increase the companies "*ability to link a company's long-*

term strategy with its short term action" (Kaplan & Norton, 1996). Through focusing on what is critical for the company, management gets a more relevant control system, and at the same time, it makes it easier to communicate these issues to the organization. Balanced scorecard measures should be used to articulate the strategy of the business, to communicate this strategy to employees, and to help align individual, organizational, and cross-departmental initiatives to achieve common goals.

Table 3-1   *The Balanced Score Card (Kaplan and Norton, 1992)*

Perspective	Description
Financial	To succeed financially, how should we appear to our shareholders?
Customer	To achieve our vision, how should we appear to our customers?
Internal Business Process	To satisfy our shareholders and customers, what business processes must we excel at?
Learning and Growth	To achieve our vision, how will we sustain our ability to change and improve?

"The objective to any measurement system should be to motivate all mangers and employees to implement successfully the business unit's strategy" (Kaplan and Norton, p. 147). The authors point to three principles that enable an organization's Balanced Scorecard to be linked to its strategy:

1. *Cause-and-effect relationships*: The measurement system should make the relationships among objectives and measures in the various perspectives explicit so that they can be managed and validated.

2. *Performance drivers*: A good balanced scorecard should have a mix of outcome measures and performance drivers (critical input and process measures). Outcome measures without performance drivers do not communicate how the outcomes are to be achieved. They also do not provide early warning about whether the strategy is being implemented successfully. The evaluation needs a good mix of both outcome measures and performance drivers. In this way, the scorecard translates the business unit's strategy into a linked set of measures that define the long-term strategic objectives, as well as the mechanisms for achieving those objectives.

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3. *Linkage to financials*: Ultimately, causal paths from all the measures on a scorecard should be linked to financial objectives. Failing to link, such as total quality management, cycle time reduction, reengineering, and employee empowerment, to outcomes that directly influence customers and that deliver future financial performance, will inevitably result in such organizations eventually becoming disillusioned about the lack of tangible payoffs from their change programs.

A final aspect with regards to the balanced scorecard is how to achieve strategic alignment in the organization, from top to bottom. The alignment of an organization to a shared vision and common direction is an extended and complex process. Three distinct mechanisms are used (Kaplan and Norton, p. 200):

1. Communication and education programs
2. Linking the balanced scorecard to team and personal goals
3. Linking the balanced scorecard to reward systems

The elements in a strategic performance measurement system are, however, not tailored to fit all companies but should be a building block for each company to construct their own tailored strategic management system (Vitale et al, 1994). There are problems associated with implementation of strategic measurement systems, and these problems differ from company to company depending on several factors, such as a firm's history, culture, and experience. There is a broad agreement among researchers that there is no general model that conveys a precise constitution of such a system, which is partly due to a "imperfect" world and contingent or contextual variables that are matched with each case's circumstances (Moon and Fitzgerald, 1996). However, Otley (1978) suggests that common for all systems is the need to answer the three following questions, which can be viewed as forming the basic building blocks of a performance measurement system:

- What *dimensions* of performance to measure?
- How to set *standards* for those measures (ownership, achievability and equity)?
- What *rewards* are to be associated with the achievement of those standards (clarity, motivation and controllability)?

Performance measurement and control systems are essential tools used by all effective managers in achieving their desired profit goals and strategies (Simons, 2000). These systems allow managers to balance the tensions between; profit, growth, and control; short-term versus long-term performance; expectations of different constituencies; opportunities and attention; and the different motives of human behavior. Stacey (1996) defines management control as *"the process of ensuring that all resources – physical, human, and technological – are allocated so as to realize the strategy. The process of control involves setting standards or targets for performance, or expected outcomes of a sequence of actions, then comparing actual performance or outcomes against standards, targets or expectations, and finally taking corrective action to remove any deviations from standard, target or expectations"*. Information on a firm's performance level is part of a control system, and organizations' control systems are basically procedures, rules and regulations governing (Stacey, 1996):

- what information about the performance of an organization should flow to whom and when;
- who is required to respond to that information and how they are authorized to respond, in particular what authority they have to deploy the resources of their organization?

The research on performance measurement within the strategy field recognizes that it is necessary to adopt new methods of performance measurement and adopt performance measurement during translation of strategy into action instead of trying to measure the results of the strategy put in place. However, Goold and Quinn (1990) show that very few companies have strategic control processes, which are as formal and comprehensive as their budgetary control system. Research that was carried out in over 50 companies in the UK, USA, Europe and Japan *"...convinced us that, for strategic planning to be worthwhile, companies must establish some form of strategic control process. Strategic control should concentrate on targets that measure strategic progress, just as budgetary control focuses on annual profit targets"* (p.7). According to Goold and Quinn, the strategic control process should include the following aspects:

- agreement on strategic targets and *means of monitoring* achievements against them
- provide *incentives* for business managers who achieve their targets
- prompt *central intervention* where necessary to close gaps between planned and actual results

In their research, Goold and Quinn found that strategic control is much more difficult to establish than budgetary control. They point to three particular problems that must be addressed by the organization:

1. *Identifying the right performance measures*: this is not a straightforward process as it is in financial control systems, and must therefore be defined separately for each business. The variables to be measured and data available are softer and more subjective, and strategy often focuses on long-term goals and consequently long-term goals need to be translated into short-term milestones that provide measures of progress towards eventual goals.

2. *Determining suitable target achievement levels*: complicated trade-offs between current financial performance and longer-term competitive position must be recognized.

3. *Deciding how to react to missed targets*: management needs to determine whether a missed strategic milestone should lead to a review of the strategy or to pressure for better implementation.

3.1.2.   *Information System Implementation and Progress Measurement*

Given the importance of IT to companies and to today's society in general, one finds that research has had an increased emphasis on IT with regard to the consequences on performance. Within this research area, there exist two separate "schools" of thought (Christensen, Haueng, Ulset, 1999):

1. *"Productivity research"* – this research analyses links between investment in IT and increased value with regards to increased profits or productivity, but has no emphasis on progress measurement during the implementation process.

2. *"Process research"* – describes and analyzes how IT can be used in order to change the organization and its production system. Focus is on appropriate use and achieving higher performance.

With regards to *"productivity research"* economists have mainly been engaged in trying to prove the relationship between investment in IT and output (productivity). Although there are a large and increasing activity in IT investments, problems with proving that the investments had an effect on firm productivity have existed for a long time. In fact,

this research has resulted in mixed and to some extent negative results with regards to the effect of IT on productivity. This has led to the productivity paradox (Brynjolfsson, 1993). There are several explanations for these mixed findings (Hitt and Brynjolfsson, 1996). The disappointing results may on the one hand be due to firms' problems with utilizing the IT efficiently. On the other hand it is pointed out that the research has relied on incomplete definitions and operationalization, imperfect measurements or wrong level of analysis, and finally the definition of productivity has been too narrow. Research by Hitt and Brynjolfsson (1996) is however, more optimistic. They prove that the investments in IT actually have a significant effect on the firms' productivity, but not with regards to output or surplus, which was actually negative in many cases. Rather they find that the effect of IT was positive for the customers. The results may imply that the investments in IT contribute to maintain, rather than improve firms' productivity. On the other hand, there are several exceptions and some companies have attained impressive results from their investments in IT, both in form of higher productivity and increased profits.

To an increasing degree, researchers within the Information System field are trying to describe and analyze *how* IT can efficiently be implemented and used in order to gain higher productivity and increased performance. During the past years, the focus has therefore been moved from the questioning *if* IT creates value, to the questioning *how*, *when* and *where* value is created or is not created (Harris and Katz, 1991; DeLone and McLean, 1992; Weill, 1992; Lucas, 1993; McKeen and Smith, 1993; Venkatraman, 1994; Soh and Markus, 1995; Mooney et al, 1996; Guha et al, 1997; Seddon, 1997; Willcocks and Lester, 1997; Kanellis et al, 1998; Ballentine et al, 1998; McKeen et al, 1999). In this thesis this stream of research is categorized as "*process research*". A process is defined as "*a specific ordering of work activities across time and place, with a beginning, an end, and clearly identified inputs and outputs: a structure for action*" (Davenport 1993, p. 5). A process-oriented focus will therefore provide the possibilities to not only understand how the technology creates value for the firm, but also how complementary resources and processes contribute to this. "*As IT continues to permeate and penetrate the organization, impacting an increasing number of processes at a deeper level, the potential business value of IT increases. This potential is further enhanced by redesigning business processes where the associated modifications result in new organizational forms that enhance the productivity and business value potential*

of IT" (Mooney et al, 1996). Researchers within this field also claim that in order to increase performance through IT investments, there must be an organizational transformation. This is labeled as Business Process Reengineering (BPR). BPR is defined as a fundamental and radical change of business processes in order to gain dramatic improvements on critical performance criteria such as costs, quality, service and lead time (Hammer & Champy, 1993). The main aspect of BPR is to replace the traditional functional organized hierarchy with a process-oriented structure. Adapting a process-oriented structure will make business activities and routines more visible, and thereby make it easier to detect irrational and ineffective processes (Davenport, 1993).

One finds that the researchers use different concepts in order to describe the same phenomena as to how, when and where economic value from investments in IT is created in the organization. Some of the terms used are; *conversion effectiveness* (Weill, 1992), *use* (DeLone and McLean, 1992), *appropriate use* (Lucas, 1993), *IT deployment* (McKeen and Smith, 1993), and *IT governance* (McKeen et al, 1999). The researchers also point to the fact that there are certain criteria that must be accomplished for the investments in IT to lead to increased economic performance (productivity, profits, etc.) for the firms. This is explained by looking at how, when and where productivity occurs (Weill, 1992; Lucas, 1993; McKeen and Smith, 1993; Soh and Markus, 1995; Guha, 1997). Weill (1992) claims that it is not sufficient to just look at the amount invested in IT, but that it is also necessary to look at how efficiently the investments are exploited so as to increase performance. In this line of literature one will often find that the term "*value*" is used instead of "*performance*".

Weill's model (1992) has formed the basis for other models, which have been extended to include other aspects. An example of work that builds on this model is the model by McKeen et al. (1999) called the "synthesized model". According to the authors it is natural that the firms first of all determine how they will organize and govern the technology – "*IT governance*". After the organization has made the investment in IT, the firm should strive towards "*IT conversion effectiveness*". However, McKeen et al (1999) argues that conversion effectiveness is gained by fulfilling two criterions. First of all there has to be "*IT deployment*", which has to do with the choices and priorities that are made with regards to what systems are to be used, who should use them, and in what way, etc. As a second criterion, the authors claim that the IT has to be appropriate

and reasonably *used*. These two criteria provide the foundation for a more or less efficient use of IT – "*IT conversion effectiveness*". A final element in this model, which is also an important aspect in the more simplistic model by Weill (1992), is that efficient use of IT is a required condition for whether or not the organization manages to increase their economic value. In other words, IT conversion effectiveness explains why some firms are more successful than others are in increasing organizational performance.

Another model that builds on previous work is the conceptual framework developed by Soh and Markus (1995). Like the model above, Soh and Markus's model also has a dynamic approach to how value is created. However, in their conceptual model they have developed a process theory that links together three different process models. This gives dynamic explanations for the relationship between investments in IT and organizational performance, where different conditions must be fulfilled over time. These conditions are:

- IT Expenditure; conversion activities
- IT Assets; appropriate use of IT in the organization
- IT Impacts; the competitive position has improved

These conditions are necessary but not sufficient in order to achieve economic value. If the effects occur at a later stage in an organization as compared to its competitors, the effects may be present, but any potential bottom line results may be competed away – "*impacts can only result in improved organizational performance if business conditions are favorable*". Further, in the model Soh and Markus claim that obtaining quality IT assets are not sufficient for IT impacts to occur. It is therefore not sufficient that the IT assets are used, but there has to be "*appropriate use*". Positive effects from investments in IT therefore rely on a conscious and planned use of the systems, something that puts pressure on user competence, management and the organization. The process by which an organization converts IT expenditures ("*IT conversion effectiveness*") into IT assets is described as "IT management". More specifically this is about; (1) formulating a strategy, (2) selecting appropriate organizational structures for executing IT strategy, (3) selecting the right IT projects, and (4) managing IT projects efficiently. However, there are two moderating factors that determine whether the investment in IT will lead to increased business value:

1. Contextual factors: factors that are outside the boundary of management's immediate control, and that create differences in the organizations ability to increase business value from its investments in IT.

2. Internal management processes: factors that are directly controlled by management and can be managed in a good or poor manner.

In line with this last moderating factor, McKeen and Smith (1993) claim that it is not possible to look at the effects of investments in IT without being at the same time conscious of the role human resources have in the exploitation of the technology. They present a resource-based perspective on IT investments. Two companies investing in the same IT system can choose to have a different distribution/division of labor between IT and employees, which will result in different effects on economic value for the respective firms. McKeen and Smith use the term "*IT deployment*", and by this they mean that the management must at all time make conscious appraisals of the optimal division of labor between IT and human resources.

There seems to be a consensus in the research field that investments in IT can contribute to creating business value in the form of increased productivity, increased profits, etc. (Harris and Katz, 1991; Weill, 1992; DeLone and McLean, 1992; Guha, 1997; Seddon, 1997; Willcocks and Lester, 1997; Ballentine et al, 1998). But at the same time the researchers claim there are no direct or automatic causal relationships in the respect that more investments in IT will lead to increased organizational efficiency. The researchers point to the fact that there are several conditions that must be fulfilled in order to gain increased performance from investment in IT. The most common assumptions are:

- The IT investment has a purpose and meets the requirements
- The adaptation of IT is a conscious process and driven by predefined goals
- IT is used in a suitable and adequate way by competent users
- The division of work between workers and the IT system is optimal

In addition to these conditions, the researchers point here to the fact that there will also be a certain time lag from the time of investment in IT to the time at which one can expect increased performance. An important aspect of the conceptual models is therefore that there are no causal relationships between these models and immediate effects on performance. A large number of models have been presented in this research

where the emphasis has been on detecting criteria for success. A model presented by DeLone and McLean (1992) has been the basis for many empirical studies as well as being constantly subject to further development. In this model one is engaged in searching for variables that are determinants for successful IT investments. The authors present an integrated view on this phenomenon and in the model they describe six dimensions to IT success: system quality, information quality, use, user satisfaction, individual impact, and organizational impact. It is claimed that these dimensions are interrelated and interdependent, and in order to say what constitutes IT success, one needs to study the interaction of these components of the model. DeLone and McLean's model has been criticized (Seddon, 1997; Ballentine et al, 1998) because it presents a too narrow view on the implications of IT systems. Seddon (1997) especially clarifies the term *use* where he introduces four new variables in his model: expectations, consequences, perceived usefulness and net benefits to society. Ballentine et al (1998) further develops the term *success*, which they divide into three fundamental dimensions: development, usefulness, and delivery. DeLone and McLean are also criticized for not taking into account other factors that interfere with any change process; such as between the different dimensions there exist filters that are related to learning (Ballentine et al 1998). Seddon (1997) along with Ballentine (1998) focuses on the importance of learning, and where expectations are continuously being revised in the light of new experience with the system. This will influence to what degree the firm is able to adapt the system at different levels in the organization. Finally, there is a further challenge in finding appropriate measurement indicators, and how to measure IT success on each dimension as well as in an integrated framework.

The role of IT within organizations has evolved from its predominant focus on efficiency enhancements (automation), to its role as a fundamental enabler in creating and maintaining a flexible business network of interorganizational arrangements (Venkatraman, 1994). The challenge to management is therefore to exploit the potential of the technology, and the key to success is the firm's ability to change and adapt in accordance to these conditions. In other words, the potential economic value is directly linked to the degree of change in an organization's working processes (Venkatraman, 1994; Mooney et al, 1996). The change process can be of two fundamentally different approaches (Venkatraman, 1994): focus on reducing costs through more efficient working process and change the working processes so that the consequences will be

strategic repositioning, redefinition of core competence, etc. Mooney et al (1996) move a step further in their research on when and where value is created as they point to where organizations should measure the effects of IT investments. In their conceptual model the effects of IT investments should be measured and analyzed at the same level as the IT is applied in the organization. This directs focus towards those processes in the organization where value is created by the new IT investment. The IT-investments result in three separate but complementary effects on the organization's business processes (Mooney et al, 1996):

- *Automational Effects* – refer to the efficiency perspective of value deriving from the role of IT as a capital asset being substituted for labor. Within this dimension, value derives primarily from impacts such as productivity improvements, labor savings and cost reductions.

- *Informational Effects* – the effects emerge primarily from IT's capacity to collect, store, process, and disseminate information. Value accrues from improved decision quality, employee empowerment, decreased use of resources, enhanced organizational effectiveness, and better quality.

- *Transformational Effects* – refer to the value deriving from IT's ability to facilitate and support process innovation and transformation. This will be manifested as reduced cycle times, improved responsiveness, downsizing, and service and product enhancement as a result of reengineered processes and redesigned organizational structures.

However, although this framework is more explicit about when and where effects occur and should be measured, one is still presented with the difficulty of assessing the business value of specific IT effects on specific processes. Thus, one is not able to explicitly measure the actual business value of the effects.

A final aspect to when and where value is created is in the evaluation of IT. It is necessary to move from measures where the focus is on the price of the investment in IT, to having focus on the value of the IT investment (Willcocks and Lester, 1997). At the same time there needs to be a change in the measurement system itself; from *less control on figures* to more *focus on increased quality*. An important aspect of this approach, which Willcocks and Lester label the life-cycle approach, is that it aims at

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"improving IT – business relationships over time by sharpening understanding of IT's business value, while not just monitoring but also improving IT's business use" (Willcocks and Lester, 1997).

In the last decade there have been a number of studies that have measured the organizational effects of investments in IT through empirical research. A firm's efficiency as a result of investments in IT is measured against three parameters in a study by Harris and Katz (1991): 1) economy of scale in production, 2) economy of scope in distribution and service, and 3) extent of product and service differentiation. The results from the research by Harris and Katz show that an organization's efficiency is positively correlated with investments in IT. Organizations that had integrated IT and coordinated the working processes through the use of IT were more competitive than competing firms were. However, a limitation of this study is that it did not measure the size of the improvements of increased efficiency from investing in IT.

Another empirical study is the research by Weill (1992), where the investments in IT were perceptually categorized after management objectives such as strategic, informative and transforming, and tested against four measurement indicators on efficiency; turnover, return on assets, and two measurement indicators on workers productivity. IT investments and transforming management objectives were found to have a significant and consistent relationship with good efficiency measures. The results from this research show that early adopters of strategic IT use could have great success, but as soon as the technology becomes accessible to others, the competitive advantage will be lost. Weill concludes this article by pointing to implications for further research on measurement of economic effects:

- One single measurement indicator on efficiency is too extensive and should therefore be broken down to several indicators that are in accordance to the management objectives
- Not all investments in IT will yield large effects
- There is a need for historic and longitudinal data in order to manage the iterative processes between IT investments and economic value.

Guha et al (1997) also looks at approaches to adaptation of IT and point to various antecedents to successful business process change. The general thesis of this work is that *"...The organizational environment, with a ready culture, a willingness to share*

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knowledge, balanced network relationships, and a capacity to learn, should facilitate the implementation of prescribed process management and change management practices". Outcome and performance measurement is one element in the model where it aims at measuring performance at different levels in the organization during the change process. In the change process one can both measure the effects of incremental changes or radical changes where both can be measured with respect to quality, cycle time, costs, and customer satisfaction. According to Guha, more and more organizations have realized the fact that a successful change process relies on employees' engagement. Therefore, a very important additional measurement variable is employee satisfaction; *"engaged and satisfied employees should result in higher productivity and enable them to provide better service to the customers"*.

3.1.3.   *Program Evaluation*

The literatures so far reviewed with respect to progress measurement are mostly prescriptive in nature, and therefore quite limited on understanding how organizations in fact go about measuring progress during change processes and probing what factors influence this activity. Therefore, it was found necessary to look to other disciplines in order to find theories on progress measurement that would help to guide this research. In this the literature on evaluation within the public sector was probed. This research area has a long tradition on evaluations of public programs and has developed numerous well-founded methodologies. However, my concern in this thesis is not the methods of evaluation per se, but as we will see this research also focuses on evaluations in the respect that human, political, social, cultural and contextual elements are involved in an evaluation process and will influence both how the evaluation is carried through as well as how the results are used (Wildawsky, 1973; Guba & Lincoln, 1989, Worthen et al, 1997, Vedung, 2000; Donaldson, 2001). Probing on how these social aspects influence the measurement process and the use of its results will further help us to understand what influences how organizations measure progress.

Evaluation is a concept that has always existed if the focus has been on "examining and judging, to determine value" and the practice of evaluation has long preceded its definition (Worthen et al, 1997). The field of evaluation includes many substantial and well-recognized sub areas such as product evaluation, personnel evaluation, program evaluation, policy evaluation, proposal, and performance evaluation (Scriven, 1991). In

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the late 1960s the field of program evaluation became the focus of a great increase of effort at development amongst social scientists and has since become a widely accepted field of research and investigation (Scriven, 1991; Worthen et al, 1997). One reason for this "boom" in research within this field was the mandate by governments in both The US and Europe to fund evaluations of public programs, which again resulted in the emergence of the field and of practitioners (Schriven, 1991). In the new era of program evaluation, work consisting mainly of proposed models for the field came largely from the educational evaluators within the area of psychology and political sciences where work by Cook and Cambpell (1979), and Cronbach (1982) have been large contributions (Scriven, 1991). Further development of program evaluation has been conducted in the following decades where numerous evaluations models have been introduced (Mohr, 1992; Worthen et al, 1997; Perrin, 1998). However, in spite of the ongoing research within this discipline and the considerable progress made, there is still not anything that deals with evaluation in general (Scriven, 1991; Perrin, 1998; Donaldson, 2001). Scriven (1991) claims that there is not a "general theory, general logic, general studies of the psychology and utilization of evaluation, and a general metatheory - the tasks of the core discipline".

Program evaluation is seen as one applied field in a general discipline of evaluation, and program evaluation is an area that uses many investigative techniques from the social sciences as well as from other disciplines in order to strengthen its theory on evaluation (Scriven, 1991). Chen (1990) states that program evaluation must emphasize and develop its own unique, systematic, and theoretically based body of knowledge, and methods should be considered to be the means for facilitating the development of knowledge. "Evaluation is often referred to as a practical science, but both as a practice and as a science it requires theory" (Bickman, 1987 cited in Chen 1990, p. 30). There has been a movement towards theory-driven evaluations (Chen, 1990; Berk & Rossi, 1990; Rossi et al, 1999). There is an abundance of both qualitative and quantitative methods within program evaluation, and there is recognition that concentration on methods alone may not be sufficient to further advance the field (Chen, 1990).

In addition to the many categorizations of evaluation in sub areas there also exists a wide range of definitions of evaluation. A commonality to the definitions on evaluation

is that they more or less view evaluation as an activity that plays a practical role in decision-making. Scriven (1991) defines evaluation as a *"process of determining the merit, worth, or value of things - or to the result of that process"*. Said more expansively by Worthen et al (1997); *"evaluation is the identification, clarification, and application of defensible criteria to determine an evaluation object's value (worth or merit), quality, utility, effectiveness, or significance in relation to those criteria"*. Vedung (1997) also highlights evaluation as a practical and instrumental activity; *"careful retrospective assessment of the merit, worth, and value of administration, output, and outcome of government interventions, which is intended to play a role in future, practical action situations"*. However, evaluation is not the mere accumulation and summarizing of data that is clearly relevant for decision-making, but it also involves evaluating the premises or standards that clarify and verify relevant values and standards of what is being evaluated; *"Determining which facts are relevant and which standards are appropriate is often very hard"* (Scriven, 1991). Scriven identifies a list of tasks involved in clarifying the values side of evaluation, which involves identifying and removing (a) inconsistencies in individual sets of values, (b) misunderstanding and misrepresentations of values, and (c) false factual assumptions underlying them, (d) distinguishing between wants and needs, (e) ensuring that all relevant dimensions of merit has been identified, (f) finding appropriate measures for them, (g) weighting these dimensions so that they reflect the intentions, and (h) validating the results. In contrast to the definitions given above, but also in line with the former tasks identified by Scriven (1991); Guba and Lincoln (1989) cannot give a definition of evaluation as they argue that *"there is no right way to define evaluation, a way that, if it could be found, would forever put an end to argumentation about how evaluation is to proceed and what its purposes are"*.

Formative and summative evaluations

There are numerous different approaches to evaluations and just as many models of evaluation developed since the 1960s. In accordance to Worthen et al (1997) more that 60 different proposals for how evaluations should be conducted have been developed and circulated. All of these approaches have built-in assumptions on evaluation with respect to the purpose and how each should be done, and are therefore not applicable to any situation and not easy for others to follow. There are a multitude of methodological approaches to program evaluation, which includes one of the following or combinations

of; conventional hard-data via statistical methods, field experiments, and qualitative approaches (Scriven, 1991; Mohr, 1992; Worthen et al, 1997). It is beyond the scope of this thesis to discuss the different models that have been developed within the program evaluation discipline. The aim here is rather to get an overview of the focus within this discipline and to use aspects of this literature that could be a supplement to the normative literature reviewed earlier in this chapter. However, I will rather describe the two major distinctions of program evaluation.

In spite of the numerous models of evaluation, there are two distinct types that program evaluation can be divided into; the *summative* and the *formative* evaluations (Scriven, 1991). *Summative evaluations* yield information only on bare simple impacts (Mohr, 1992). Evaluations of this character are conducted after the completion of a program or after the stabilization of ongoing programs, and the evaluation is for the benefit of some external audience or decision-maker (Scriven, 1991; Mohr, 1992; Worthen et al, 1997). Summative evaluations are to provide decision makers with judgements about programs worth or merit in relation to important criteria, such as program goals where statistical studies are more frequently used (Scriven, 1991; Worthen et al, 1997). In accordance to Scriven (1991) summative evaluation is not to be confused with outcome evaluation; which is an evaluation focused on outcomes rather than the process. Summative evaluation can be both, but the distinction between summative and outcome evaluation is that the former reports on a program to stakeholders during or after a program completion. Summative evaluations do not report to the program itself - this is formative evaluation.

In contrast to summative evaluation, *formative evaluation* is conducted in order to provide information to the program staff that is useful in improving the program (Scriven, 1991; Mohr, 1992; Worthen et al, 1997). The formative evaluation seeks to answer questions to *why*; for example to probe into why the results given in the summative evaluation were negative/positive. This is accomplished by studying sub-objectives and activities as well as the outcome of interest, and the evaluations rely to a large extent on qualitative data (Scriven, 1991; Mohr, 1992; Worthen et al, 1997). In accordance to Scriven (1991) formative evaluation is *"typically conducted during the development or improvement of a program or product and it is conducted, often more than once, for the in-house staff of the program with the intent to improve"*. Those who

will use the results from the formative versus the summative evaluations are different. In formative evaluation the users are those who work directly with the programs, for example those responsible for implementing a strategy, whilst the recipients of the results are funding agencies or program personnel (Worthen et al, 1997). It is claimed that both summative and formative evaluations are essential, as feedback of both characters is needed during the program in order to be able to make decisions that will improve and strengthen it as well as to judge its final worth (Scriven, 1991; Worthen et al, 1997).

The fourth generation evaluation

From the definitions of evaluation it should be clear that the purpose of conducting an evaluation is to *"render judgements about the value of what is being evaluated"* (Worthen et al, 1997). Evaluation involves the production of knowledge of the relative merit of new ways to do things, such as different ways of teaching, or change in production. In addition to this, the purpose of evaluations is also to assist decision makers responsible for deciding policy, and to serve a political function (Talmage, 1982, cited in Worthen et al, 1997). However these two last issues are termed as uses of outcomes of evaluations where Worthen et al (1997) go as far as to claim that evaluation is both a scientific and political activity; *"It draws on the methods of the sciences, while at the same time being used to serve a variety of political functions"*. Guba and Lincoln (1989) describe evaluation as more than scientific process; *"because it is our conviction that to approach evaluation scientifically is to miss completely its fundamentally social, political, and value-oriented character"*. This means to include the human, political, social, cultural and contextual elements that are involved in an evaluation process and will influence both how the evaluation is carried through as well as how the results are used (Wildawsky, 1973; Guba & Lincoln, 1989, Worthen et al, 1997, Vedung, 2000; Donaldson, 2001). To include these aspects in the evaluations is by Guba and Lincoln (1989) defined as the *"fourth generation evaluation"*. They go beyond the mere focus on measurements and descriptions on how to carry out evaluations, to also include factors that will influence these activities in numerous ways as well as in different ways each time a new evaluation is conducted. The main difference in the fourth generation evaluation is that the judge of validity is not the scientific community, but the people involved in the program (Finne et al, 1995). Lincoln (1994) sees the fourth generation evaluation as following; *"...a model of*

research and evaluation which is more, rather than less, activist-oriented, more stakeholder oriented than we ever imagined..." Some of the properties of the fourth generation evaluation are listed bellow (Guba & Lincoln, 1989):

1. Evaluation outcome is not a true state of affairs, but represent *meaningful constructions* that *individual actors or groups form* to make sense of the situations.

2. The constructions developed by making sense of the situation are shaped by the *values* of the constructors.

3. The constructions are linked to the particular *physical, psychological, social, and cultural contexts* within which they are formed and to which they refer.

4. Evaluations can be shaped through *political actions* from various groups such as stakeholders, evaluators or other involved parties.

These properties are issues that should be embedded in an evaluation model (Guba & Lincoln, 1989, Worthen et al, 1997). The implication here is that there is no general or universal model for program evaluation, which is then also true for performance measurement in private organizations. Taking into account that *individuals* are involved in the process of setting the criteria for the evaluation, carrying out the evaluation and using the results will influence as well as set the conditions for these different aspects of an evaluation. Further, this has to be seen in light of the political activity that will occur in such a process where individuals or groups are involved, which all have different views on matters and thus influence the activities in varying ways. Finally, this is context specific, where all the formal as well as the informal activities that take place in an evaluation are only valid to that specific context (Guba & Lincoln, 1989; Worthen et al, 1997; Vedung; 2000; Donaldson, 2001).

Chelimsky (1995a cited in Worthen et al, 1997) claims that evaluators are often subject to political activity by those being evaluated, which may or may not allow the evaluator to be truthful about the merits of the program being evaluated. However, the policy of evaluation are taken further as to encompass that whole process of evaluation including all parties involved (evaluators, implementers and stakeholders) is a political activity (Wildawsky, 1973; Guba & Lincoln, 1989; Weiss, 1993; Finne et al, 1995; Worthen et

al, 1997; Vedung; 2000). According to Weiss (1993 cited in Worthen et al, 1997) political factors "intrude" upon evaluations in three ways:

1. The evaluated policies and programs are themselves products of political decisions.

2. Evaluation reports become political documents as these are used in decision-making.

3. Evaluation, by its nature, makes implicit political statements (such as those challenging the legitimacy of certain program goals or implementation strategies).

3.1.4.   Summary of literature

In this chapter three research streams with respect to progress measurement have been reviewed; these were respectively strategic change, information system implementation, and program evaluation. The contribution from the strategy literature to the understanding of the phenomenon of progress measurement can be shortly summarized as follows: (1) a move away from just looking at budgetary and financial figures to also including non-financial data in progress measurement, and (2) a shift to measuring progress during the implementation phase as opposed to measuring end results. Both of these aspects are important contributions to the research on progress measurement. As to the first aspect, it has been recognized that it is necessary to shift focus from treating financial figures as the foundation for progress measures to treating them as one among a broader set of measures; quality measures, customer satisfaction, and competitive benchmarking. As to the latter aspect, by relying solely on a profit report, the management looses the option of doing corrective actions during the implementation phase that could be crucial for a successful outcome of the project. Measurement of progress typically comprises systematic methods of setting business goals together with periodic feedback reports that indicate progress against those goals. In order for evaluation to be effective in its expanding domain – to be of use during implementation – it must be aimed at generating data that can be used to improve the implementation process. A strategic performance measurement system typically comprises systematic methods of setting business goals together with periodic feedback reports that indicate progress against those goals. This complies with the definition of progress measurement given in this thesis.

The contribution of the information system literature to the understanding of the phenomenon of progress measurement can be shortly summarized as follows; (1) the authors more or less focus on the importance of changing or improving the business processes so that these are in line with the IT investment, and (2) the ultimate goal for this research is the focus on increased business value. Thus, these studies more or less take a process-oriented view where the critical factor is the ability to change the business processes in order to make the IT investment profitable. Comparing the two research streams, Information System research and the strategic change literature with regards to progress measurement, the research within the Information System field seems to be more engaged in developing conceptual models that can guide organizations on how to implement IT investments in order to improve business value. The research within the Strategy field was criticized for listing criteria for successful implementation and thus did not have much emphasis on developing conceptual models as is found in the Information System field. A common aspect to these studies is that they all more or less take a process oriented view where the critical factor is the ability to change the business processes in order to make the IT investment profitable. The aim of many of these studies is to develop a holistic model, which encompasses the major and most critical variables in the implementation process in order to gain increased business value. Thus, the similarities amongst the literature reviewed here is first of all that the authors focus on the importance of changing or improving the business processes so that these are in line with the IT investment. Second, the ultimate goal of this research is the focus on increased business value. Some studies presented conceptual models on change in business process, and to various extents, included measurement of progress, while others presented empirical work where a few chosen variables were measured.

The third stream of literature reviewed in this chapter was program evaluation. The aim was to give a brief overview of the focus within the area of evaluation research as well as to highlight the major issues of concern in this stream of research. Program evaluation is an area that has developed since the late 1960s where the focus has been on the one side to develop sophisticated models for evaluation of programs in the public sector. Here the focus has been on developing quantitative statistical approaches to evaluation of the outcome of the program and where the results of the evaluation are reported back to the stakeholders of the program. The other line of research was

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identified as *the fourth generation evaluation* (Guba & Lincoln, 1989). This line of research is more focused on incorporating social aspects; human, political, social, cultural and contextual elements, into the evaluation methodology as well as into the use of the results. Here both formative and summative evaluations can be used. Summative evaluations can be compared with impact evaluations but are also used in stable periods during implementation of a program, and the results are reported back to stakeholders. Formative evaluations use more qualitative approaches to evaluation and the focus is on getting feedback on the program during implementation, where the results are reported to those involved with the implementation. In this respect there is the possibility of direct learning simultaneously as the changes are taking place. Realising these as important aspects that should be encompassed in an evaluation, further points to the fact that there is no theoretical model of evaluation that can be applied to any organization without making major adjustments to the model. One will also conduct the evaluation in different ways depending on these above aspects, as they are context specific for that concrete organization or program being evaluated.

Although there are important contributions from the literatures here reviewed, there are also some major limitations. One limitation to these studies is that they lack operationalization of their conceptual models. Without empirical tests of the conceptual frameworks or models one does not know if they will prove to be valid in an organization. There seems to be a difficulty in developing a general model for progress measurement, the identification of which variables to measure, and finally how to successfully apply such a model during change processes. A further limitation is that the researchers seem to assume that the measurement systems can be applied in organizations without problems. In general one is left with the impression that this research stream more or less assumes that the organizations are rational entities that can easily adapt these perfectly rational models. However, there are authors who point to the necessity of adapting models of progress measurement to its context of where it is intended used. In addition the program evaluation literature points to the necessity of adapting social aspects to both the measurement models as well as in the use of the outcome results. A limitation though is that there are no models that adapt these conditions and empirical research that shows how this affects the outcome results as well as the use of the results. Further, although several authors point to the necessity of aligning incentives with performance results, there is not much emphasis in the

literature on how to use the data once it has been produced nor how to overcome potential hinders for using the data efficiently. Table 3.2 presents a summary of the three streams of literatures reviewed in this chapter with regards to measurement of progress.

Table 3-2   *Summary of literature*

	Focus	Limitations
Strategic change	• Listing of elements and criteria • Measurement during translation of strategy into action as opposed to measuring end results • Move from financial figures to operational indicators • Procedures or models that describe how to design a progress measurement system	• The literature is normative and prescriptive – lack of operationalization • Little focus on problems organizations may encounter during application of progress measurement • Little emphasis on how to use evaluation reports actively in the organization
IS literature	• Process-oriented • Change or improve business processes so that these are adapted to the IT-investments • The goal is increased business value • Conceptual models on: either how to implement IT or how to assess progress during implementation	• Do not identify which variables to measure • Little focus on how to measure progress during implementation • No contribution that focus on both the implementation process and simultaneously progress measurement • Little focus on problems organizations may encounter during application of progress measurement • Lack of empirical studies
Program evaluation	• Sophisticated models for program evaluation • Distinguish between evaluations that reports to a) stakeholders and b) program implementers • The fourth generation theory focus on incorporating into program evaluation social aspects; human, political, social, cultural and contextual elements	• No general model for program evaluation has been developed • The fourth generation theory on program evaluation has not been applied in the models

The three streams of literature (1) Strategic Change, (2) Information System implementation and (3) Program Evaluation will further be assessed in the next part. The focus is to point to major weaknesses to the research on measurement of progress.

The aim here is to draw on the critiques in order to shed light on how to further develop a perspective on progress measurement.

3.2. A Critical Assessment of Literature

"In spite of the increasing importance of organizational accounting and control systems and in spite of the increasing sophistication of the decision-making and information technology embedded in them, the record for successfully implementing these systems has been modest at best" (Markus and Pfeffer, 1983).

In this part there will be a critical assessment of the two streams of literature on measurement of progress reviewed in this chapter. The objective of this assessment is to find explanations to why the above statement of Markus and Pfeffer may hold to be true. The chapter then continues with a specification of the most profound critiques discussed in the organization literature. These critiques are the following: the assumption of rationality, weak methodology, irrelevance, and underutilization.

Explaining variation on performance or effectiveness is one of the more enduring themes in the study of organizations (March & Sutton, 1997). Meyer and Gupta (1994) discuss in their article that measurement variables tend to increase in number and are going through major changes, which will result in a set of variables that over time will be less correlated. This will make it hard to measure and compare the results over time, and therefore the information value from these measurement variables will also decrease. Another important issue is to make sure that one measures what one set out to measure. One must be able to isolate the effects from other matters such as contextual factors, which may also have implications on the performance for the organizations. For example, the effects from investments in IT will be more and more difficult to isolate with increase in time from the implementation to the actual measurement. On the other hand, organizations will necessarily use some time from the implementation to the phase where they actually will manage to utilize the IT to its full potential. Paradoxically, time is an important factor for organizations going through a strategic change process, but with elapsed time the complexity of progress measurement will increase.

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A main problem, as pointed out in the literature review, is the development of a general model for measurement of progress, and the identification of which variables to measure. As we could see from the literature review in chapter three, there were numerous lists of contributors to how one could measure progress, and some researchers even identified which variables one should measure. The models presented in this literature review were either conceptual or based on empirical data, and the lists of variables were partly overlapping and partly complementary. A viable reflection to draw from this review is that the perfect progress measurement model has not yet been developed. However, a fair question to ask is if such a model exists?

Most studies of organizational performance or progress define performance as a dependent variable and seek to identify variables that produce variations in performance (March & Sutton, 1997). Researchers who study organizational performance in this way typically devote little time on, for example, why performance advantage is competitively unstable, the causal complexity surrounding performance, and the limitations of using data based on retrospective recall of informants. Many standard specifications do not deal effectively with causal relations involving mutual effects among the variables, particularly between the "dependent" variables and one or more "independent" variables. As a result, simple unidirectional interpretations of performance are common in a world in which effects are interrelated in a rich system of probable feedback loops. Given the complexity of organizations and the difficulty of isolating events or effects from other happenings in the organization, Meyer and Gupta (1994) claim that one has now reached a point in the endeavor of performance measuring where the issue should no longer be to measure performance per se. Focus should instead be aimed at developing measurement models that focus on the dynamics in the change processes in organizations. Implications for the organizations are that they should concentrate on "doing the right things" and use a measurement system that indicates whether or not one is moving in the right direction with regards to the stated goals so as to get feedback and learn how to do the right things during the implementation process. In other words, organizations should measure progress during implementation.

Another focus pointed out in the program evaluation literature is to incorporate social aspects in the evaluation models (Guba & Lincoln, 1989; Worthen et al, 1997). It is

important to realize that there are humans conducting the evaluations as well as using the results, which will influence how these activities are carried out. The studies on progress measurement within strategic change, IS literature and program evaluation will here be further described as being quite prescriptive in nature. The literatures presume individuals act in a systematic, analytic and rational procedure in its use of progress measurement. Thus, the first assessment of the progress measurement literature will argue that it is overly rational. Following, the literature will further be criticized for weak methodology, irrelevant measurement variables, and underutilized measurement results.

3.2.1. Overly Rational Assumption

The sophistication of progress measurement systems as well as accounting systems has grown, and these systems are widely used by firms along with advanced information technology. As an example, the Balanced Scorecard (Kaplan & Norton, 1992) has had enormous success with regards to adoption rate by companies. Helping organizations implement these systems has also been a prosperous activity for consultant firms (Feldman & March, 1988). However, common implicit assumptions underlying these performance systems have been that; relevant information will be gathered and analyzed prior to decision-making, more detailed information is preferred to less detailed, more timely information is preferred to less timely, quantitative information is preferred over quality and information that is irrelevant to a decision will not be gathered (Markus and Pfeffer, 1983; Feldman & March, 1988; Levinthal & March, 1993).

The literature on progress measurement assumes that organizations are rational entities and therefore act rationally. The literature has been founded on the assumption that firms and individuals are rational organizations or actors that will, regardless of the organizational context in which these systems are used, implement and utilize these models. "*The failure to consider contextual factors, such as power distribution and organizational cultures and paradigms, has hindered the practice of designing and implementing systems and limited the research perspectives on these systems*" (Markus and Pfeffer, 1983). In this part there will be an illustration of arguments on how the literature is overly rational, as well as arguments for how this is not a realistic view on how processes evolve in organizations.

In spite of all the performance indicators that are produced by using such a system as the Balanced Scorecard, a viable question to ask is whether the management uses the endless numbers of performance indicators in order to improve the company's performance. One can even ask if the organizations in fact get as far as implementing such a system. Another common aspect to these progress measurement systems as pointed out by Palumbo and Nachmias (cited in Pressman & Wildavsky 1984, p. 183) is that the evaluators assume that decision makers (a) *analyze* the situation first; identify goals, specify alternative ways of getting there, assess the alternatives against a standard such as costs and benefits, and then select the best alternative, and (b) then *act*. This is a rational model, which is defined by Allison (1971) as; *"the rigorous model of rational action maintains that rational choice consists of value-maximizing adaptation within the context of a given payoff function, fixed alternatives, and consequences that are known"*. Under the norms of rationality, the assumption frequently made about organizations is that organizations maximize or seek to maximize profits (Thompson, 1967). Applying a model or assumption of rationality will, according to Walker (cited in Pressman & Wildavsky, p. 184), probably lead to the likelihood of evaluators missing the mark, because organizations are not looking for the best way or most efficient alternative for solving a problem. The decision-makers in the organization are instead looking for support for action already taken, and for support that serves the interest of the chosen strategies. Feldman and March (1988) claim that organizations have strategic and symbolic incentives for gathering information, and that this influences how the information is gathered and used. In addition, opportunistic behavior where individuals are concerned about their own preferences (Pfeffer, 1997) as well as political or power structures in the organizations may influence the process of progress measurement.

3.2.2. Weak methodology

In this part the focus is on weak methodology on measurement of progress in organizations. Here the critiques are mainly focused at describing how the literature on progress measurement does not take into account complex phenomena that exist in organizations.

Validity and credibility are endangered by problems of proper procedure, and simple models of complex worlds ignore important effects in the organization - *"most interpretations of organizational performance are built on elementary causal*

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conceptions, sometimes encased in multiple regression or analysis of variance models, *at other times embedded in less formal historical speculations*" (March & Sutton, 1997, p. 700). The critique of the methodology used in evaluation of progress is mainly aimed at the causal relationship between the dependent and independent variables. This is particularly the case when various variables are observed at the same time. It is then often difficult to detect the causal relationship. The problem with models constructed by researchers is that they tend to ignore important mutual effects that one will find in organizations. By this, March and Sutton (1997) means that the measurement models we see today do not sufficiently take into account important organizational aspects and leave out a variety of feedback loops that are likely to be important. By ignoring these aspects one will not get measurement models that give the right picture of the organizations.

The organizational aspects that are ignored in measurement models are many, and they differ from model to model. This again shows that one has not yet found a model that will not encounter this type of critique. Three organizational aspects mentioned in this respect by March and Sutton (1997) are:

1. First of all, past performance levels in an organization will influence the subsequent performance level. This is explained by the cognitive and affective factors that seem to influence performance, which again are likely to be influenced by prior performance. For example, good performance in the past can lead to self-assurance and positive experiences in the organization, which will contribute to future positive experiences.

2. A second organizational aspect is that success or failure in organizational performance "*creates countervailing tendencies*" (Cyert & March 1963 and March 1988 cited in March and Sutton, 1997). On the one hand, it is found that performance below aspiration levels (failure) triggers increases in search, decreases organizational slack, and decreases aspirations, which again increases the likelihood of subsequent success. On the other hand, one also finds the opposite: where performance is above aspiration levels (success) this increases aspirations or decreases search and increases slack, which leads to subsequent failure.

3. A third aspect is that short run effects are likely to be different from long run effects. It is found that subsequent success from decreases in organizational slack, and

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decreases in aspirations, in the long run can pose complications for performance. Conversely, increases in slack and decreases in search in response to success tend to reduce organizational performance in the short run but facilitate experimentation and risk taking that can yield long run returns (March 1991 cited in March and Sutton, 1997). For example, putting too much restriction on an organization will increase performance in the short run, but in the long run too much restriction can, for example, restrict experimentation and thereby create hinders for prosperous innovation.

These three examples are meant to illustrate the complexity of organizations and point to relevant complications that researchers of progress measurement do not presently incorporate into their models. The aim of March and Sutton (1997) by illustrating these examples is to suggest why simple causal interpretations of organizational performance are likely to fail. As these examples illustrate, there are causal relations involving mutual effects among variables, particularly between the "dependent" variable and one or more "independent" variables, which many measurement models do not deal effectively with.

Another critical issue in the design of measurement systems, is the question of what is to be measured? In terms of this issue Markus and Pfeffer (1983) discuss three aspects; (1) the organizations give attention to the elements that are measured, and tend to ignore elements that are not measured, (2) many criteria can be measured in several ways, each yielding different numbers, and (3) information that is readily available, because of its accessibility in the processes or perception, memory, or construction from imagination will be used more in decision making and judgment regardless of its applicability or validity. These aspects point to the complexity of measurement of progress that provides the right information, which is needed in the organization in order to focus on the elements that increase performance.

Another important issue in these studies is to make sure that one measures what one set out to measure. One must be able to isolate the effects from other matters such as contextual factors, which may also have implications on the progress in organizations. The effects from for example, investments in IT, will be more and more difficult to isolate with increase in time from the implementation to the actual measurement. On the

other hand, organizations necessarily use some time from the implementation to the phase where they actually manage to utilize its potential, and this makes progress measurement more complex with the increase of elapsed time.

A final weakness in relation to the methodology used, which is also pointed out by March and Sutton (1997), "*is the hazards of using cross-sectional and retrospective data and informants' interpretations to identify the possible causes of organizational performance*". In most studies of progress measurement, where either qualitative or quantitative methods are applied, one finds that the variables used to explain performance are sometimes assessed long after the informants know the performance results. Assessing the results after some time gives room for "after-rationalization" where the informants try to explain the results with their subjective memories, perceptions, and weighting of possible causes. Thus, the information the researchers gather from the informants is likely to be biased. Progress measurement models that do not take into account the way people adapt to performance constraints will encounter serious difficulties (Meyer & Gupta, 1994).

3.2.3. Irrelevance

This third critique, irrelevance, focuses on how measurement results are not relevant in organizations. As the discussion will show, the literature on progress measurement is criticized on several aspects that concern irrelevance. By using the term irrelevance with respect to progress measurement models it is here meant that the research findings or evaluation results either lack timeliness or will not make a difference in decision making (Pressman & Wildavsky, 1984).

An issue that may give support to the thought of irrelevance is the requirement of comparability and validity of the progress measures. "*Measurement variables tend to increase in number and are going through major changes, which will result in a set of variables that through time will be less correlated. This will make it hard to measure and compare the results over time, and therefore the information value from these measurement variables will also decrease*" (Meyer & Gupta 1994). Meyer and Gupta (p. 310) claim that progress measures require comparability and variability in order to discriminate good from bad performance; comparability is the extent to which a

measure is valid across several settings, while variability is a measure's capacity to capture a range of progress outcomes.

However, as a result of the changes of the measurement variables one will see a loss of both variability and comparability between the former and the new measures. One reason for the changes of measurement variables, as Meyer and Gupta point to, is the "running down" of progress measures. Over time the progress measures will become obsolete, where old measurement indicators are exchanged with newer and more relevant indicators. But these new measures will often be very different from, and therefore weakly correlated with, those currently in place. Thus, loss of variability and comparability in existing measures gives very unreliable information and hence is less relevant to decision making.

3.2.4. Underutilization

The final critique, underutilization, to the literature on progress measurement focuses on how these literatures in little degree consider aspects for why measurement results may not be used by organizations.

Progress measurement results are underutilized when the resulting information is not disseminated or not used (Pressman & Wildavsky, 1984). Managers are often engaged in the evaluation process and the purpose of the measurement program should be "*to build a shared understanding and, if possible, to achieve consensus on evaluation requirements and strategies to maximize the applicability of results and increase the likelihood of program improvement*" (Freeman & Solomon cited in Pressman & Wildavsky, 1984). However, this is argued to be a rationalistic view on the decision making process. This is too simplistic a view as one has found that the organizations fail to utilize the results from the evaluation process. In fact, Wildavsky (1972 cited in Pressman & Wildavsky, p. 183) claimed that program managers who were the evaluators themselves had a greater temptation to influence the results. Palumbo & Nachmias (cited in Pressman & Wildavsky, p. 183) claim that it is not possible for evaluators to be independent of the results and they will even reject negative results. The lack of utilization of progress measurement results has led to the argument in favor of a "political model" where evaluators lead the evidence in favor of the programs they are evaluating (Pressman & Wildavsky, p. 183). It thus becomes a matter of personal

self-interest as well as personal well being for individuals to try to control the nature of the information collected and the measure variables designed in the measurement systems (Markus & Pfeffer, 1983). The impact of progress measurement can therefore be dependent on the interests of those who have control over measurement in organizations.

Furthermore, often the objectives of investments and use of progress measurement is to both facilitate the decision-making process and facilitate the downward transmission of information in the organization where the intention is empowered employees and flatter organizational structures. However, it is found that these objectives are not necessarily fulfilled, and in any case the latter objective will not necessarily affect progress favourably. In fact, research has shown that sophisticated progress measurement systems facilitated upward communication, but had no effect on the downward transmission of information (Markus & Pfeffer, 1983).

3.3. Summary and Conclusion

In this chapter the literature on progress measurement has been evaluated and four profound critiques to this literature have been discussed. These critiques were; (1) overly rational, (2) weak methodology, (3) irrelevant measurement variables, and (4) underutilized measurement results. A summary of these critiques is given in table 3.3.

A main problem within this field of research is the development of a general model for progress measurement, and the identification of which variables to measure. A question, thus asked in this chapter, is if a general model of progress measurement can be developed? An evaluation of the literature shows that the measurement variables tend to increase in number and are going through major changes, which will result in a set of variables that through time will be less correlated. This makes it hard to measure and compare the results over time and therefore the information value of these measurement variables also decreases. Another important issue is to make sure that one measures what one set out to measure. One must be able to isolate the effects from other matters such as contextual factors, which may also have implications on the progress of the organizations.

Table 3-3   ***Summary of critiques***

	Focus of critiques	**Critiques**
Overly rational	• More detailed information is preferred to less detailed, • More timely information is preferred to less timely • Quantitative information is preferred over quality • Analyze the situation first, then act	1. Do not consider organizational context 2. Organizations are not using the best way for solving a problem 3. Organizations are seeking support for action already taken 4. Opportunistic behavior....
Weak methodology	• Cognitive and affective factors seem to influence performance (good performance in past will contribute to good performance in future) • Organizations give attention to elements measured, and ignore elements not measured • Criteria can be measured in several ways, each yielding different numbers • Information that is readily available will be used more in decision making and judgement regardless of its applicability or validity • Isolate effects for other matters such as contextual factors	1. Causal effects between variables that the models do not take into account 2. What is to be measured? 3. Measure what one set out to measure – isolate effects from other matters 4. Assessing results after some time give room for after-rationalization
Irrelevance	• Measurement variables will over time be less correlated • Information value from measurement variables will decrease when they go through major changes • Old measurement variables are less relevant than newer indicators	1. Results lack timeliness and will not make a difference in decision making 2. Hard to measure and compare results over time 3. New measures weakly correlated with former measures
Underutilization	• Managers being evaluators have grater temptation to influence results • Evaluators cannot be independent of results and may reject negative results	1. Organizations fail to utilize the results 2. The impact of progress measurement is dependent on the interest of evaluators 3. Personal self-interest as well as personal well-being for individuals to control information collected and measure variables designed in measurement systems

The aim of this thesis is to point to relevant issues regarding the organizational aspects that affect the use and application of progress measurement. As stated in the research question, this thesis is especially concerned with detecting aspects or reasons for why these measurements systems are difficult to implement or to use by the organization, either by decision-makers and/or by employees. Further, the main emphasis is to

analyze the use of progress measurement during a strategic implementation process. It has been argued that there are many performance measures where the most commonly used measures tend to be uncorrelated with one another, and the performance measures tend to change dramatically over time (Meyer & Gupta, 1994). This phenomenon can also be expected to hold true in a strategic implementation process. In order for progress measurement to be effective during implementation, it must be aimed at generating data that can be used to improve the implementation process (Brown & Wildavsky cited in Pressman & Wildavsky, 1984). The consequence of fulfilling this is that the measurement variables will naturally change as the change process evolves and requires attention to different issues. Other aspects that may result in change of progress measures is the change in objectives of the stakeholders or management as the project evolves, and/or contextual issues may influence the objectives of the projects (Guba & Lincoln, 1989; Worthen et al. 1997).

A viable question to ask then is if effective management is possible where the progress measures change as the objectives change or the implementation process evolves? Effective management is possible, but only if there is an ongoing reconsideration of progress measures where existing measures are not taken for granted or restricted to formally predetermined goals (Brown & Wildavsky cited in Pressman & Wildavsky, 1984; Meyer and Gupta, 1994). The implementation process is about learning from evaluation, and implementers and evaluators engage in complementary relations through their production and consumption of information. "*Evaluation is concerned with the causes of outcomes and implementation with utilizing causal knowledge to alter outcomes*" (Brown & Wildavsky cited in Pressman & Wildavsky, 1984).

A final aspect to the research on progress measurement is that many of the key independent variables in organizational performance studies are not observed directly. Where the variables are observed directly, they normally are not observed over time (March & Sutton, 1997). A challenge for further research is to identify critical progress indicators that are observed over time. These indicators will give the company continuous feedback with regards to the implementation process, and where one, with this information, can do corrective actions. In the next chapter a tentative research perspective will be presented. Explanatory factors as to how organizations measure progress will be deduced from the critiques of the literature reviewed in this chapter.

4. A Tentative Research Perspective

In this chapter a tentative research perspective on progress measurement will be presented. This research perspective is a presentation of the research questions of interest in this thesis, and the perspective is deduced from literature reviewed in this thesis as well as on the critiques towards this line of literature. At present the research model is highly deductive and based on primarily theoretical work. However, the perspective will serve as guidance during data collection as well as during the analysis of the empirical findings. Before the research perspective is presented, there will first of all be a discussion of relevant theoretical perspectives which can be used as a foundation for analyzing the empirical data presented later in this thesis. In this discussion it will be argued that it is not sufficient to build models that have a rational approach to decision-making. An assumption underlying evaluations during change processes is to get feedback on the progress of the program, and if this feedback is used to do corrective actions, learning in the organization has taken place. The learning perspective will be briefly discussed as a relevant perspective for analyzing the data. However, as the discussion will prove, for the purpose of this thesis as well as from preliminary analysis of the data, a political perspective is found to be the most suitable perspective in order to understand what influences how organizations measure progress and use the results.

4.1.   Theoretical Perspectives on Progress Measurement

Opposed to a rational view taken on progress measurement in the models reviewed in chapter three, the critiques towards this stream of literature as well as the focus in the fourth generation evaluation emphasize that one has to take into account the limitations one will encounter based on the fact that there are individuals or groups who conduct these tasks. The individuals or organizational groups cannot be treated as rational entities; rather one has to be aware that the actions of individuals will be influenced by the context one operates, as well as by how they make sense of the reality (Guba & Lincoln, 1989; Levinthal & March, 1993; Worthen et al, 1997).

The major goal related to progress measurement is for organizations to use the outcome measures as a means to provide feedback to the implementation managers. When results from the evaluation are used as feedback to the organization and necessary corrective

actions are made, organizational learning has taken place. Learning is to acquire meaningful information and effectively apply the information for more efficient management during implementation processes. Applied effectively, outcome measures are tools that facilitate learning where the feedback is used as a means to do corrective actions if necessary. In this respect the organization has learned if necessary actions or changes to the strategy are applied (Huber, 1991). The organizational learning literature has defined progress measurement (i.e. monitoring) as both focused and wide-ranging sensing of the organization's effectiveness in fulfilling its own pre-established goals or the requirements of stakeholders (Huber, 1991; Levinthal & March, 1993). In the literature on progress measurement, there is very much focus on this aspect where they specifically emphasize the fact that measurement during an implementation process should be used as a means to do corrective actions to the strategy (Stacey, 1996; Simons, 2000). However, the literature does not treat this very important aspect to progress measurement any further; the literature does not focus on factors that inhibit organizational learning nor the structures or processes that enable or accelerate the learning processes.

The definitions of organizational learning are many and they emphasize different aspects of what characterizes organizational learning. As an overview Tsang (1997) classified the literature on organizational learning into three perspectives; change in cognition, change in potential behavior, and change in actual behavior. Argyris and Schon (1978) claim that organizational effectiveness must be enhanced in order to claim that organizational learning has occurred. Huber (1991) argues that this is a narrow definition of organizational learning as learning does not always increase the learner's effectiveness or even potential effectiveness. Nor does learning need to be a conscious or intentional process. A broader definition of organizational learning is thus presented from a behavioral perspective: "*an entity learns if, through its processing of information, the range of its potential behaviors is changed*" (Huber, 1991). Levitt and March (1988) also define organizational learning through a behavioral as well as a cognitive lens; "*organizations are seen as learning by encoding inferences from history into routines that guide behavior*". All learning takes place inside individual human heads and organizations learn in two ways: (1) through learning of its members or (2) through new members who have knowledge the organization did not previously have (Simon, 1991).

There is learning at different levels and in this respect the levels are not at different levels within organizations, but rather the level of learning that is being adapted by an organization. For example Argyris and Schon (1978) distinguish between *single loop* and *double loop* learning. Single loop learning is, for example, the information acquired from monitoring a change program where the information is of a character that gives the variance between the achieved goals and the original objectives. Double loop learning on the other hand is when additional information is acquired as to why there was a variance between the objectives and the actual results. In this respect the underlying program is questioned. Double loop learning is therefore more comprehensive where current operating assumptions are questioned, and often results in a change in existing norms and practices. Here it is implied that it is from double loop learning one can expect higher adaptive potentials. March (1991) distinguishes between *exploration* and *exploitation* in organizational learning. Exploitation includes amongst a list of activities aspects such as refinement, production, efficiency, and implementation. These are activities that are efficiency driven and cost related and designed to take advantage of the existing bundles of skill and knowledge (Pettigrew, 1999). Exploration involves risk-taking search for novelty, experimentation and innovation (March, 1991). It also combines unrelated strategies and knowledge with the aim to deliver superior outcomes (Pettigrew, 1999). Levinthal and March (1993) argue that the returns associated with exploration are distant in time and highly volatile, while the gains from exploitation are likely to be proximal in time and more certain. March (1991) claims that there has to be a balance between times used in both exploration and exploitation in order for firm survival and prosperity. Another classification of organizational learning is the distinction between *incremental* and *radical learning* (Miner & Mezias, 1996). These are concepts that are very much in line with the above concepts of single loop and double loop learning. However, as opposed to Argyris and Schon (1978), Miner & Mezias (1996) claim that both learning types can enhance survival and prosperity under some conditions, but the opposite can occur under other conditions. Incremenatal learning or single loop learning changes one's behavior, while radical learning is a result of significant cognitive changes where, for example, one has adapted a new frame of reference (Leroy & Ramanantsoa, 1997).

Organizational learning is claimed to be a powerful tool in increasing a firm's capabilities and thus strengthening its strategic position (Argyris & Schon, 1978; Senge,

1990; March, 1991; Levinthal & March, 1993; Miner & Mezias, 1996). However, there are limits to learning and not taking these into account; one encounters the same problems as when designing organizations with the presumption that they are rational entities (Levinthal & March, 1993; Miner & Mezias, 1996). Learning involves the inference of information and according to Feldman and March (1981), the use of information is embedded in social norms that make it highly symbolic. The authors identify several phenomena about use of information: the information gathered has little decision relevance, information to justify a decision is collected after decision-making, and more information is requested regardless of information already available. Learning also involves the pooling of personal experience with knowledge gained from others. The cognitive limitations of humans hinder both the effective use of information as described in a rational process as well as the ability to make inferences from its knowledgebase (Levinthal & March, 1993). It becomes a matter of personal self-interest as well as personal well being for individuals to try to control the nature of the information collected, and the measure variables designed in the measurement systems (Markus & Pfeffer, 1983). The impact of progress measurement can therefore be dependent on the interests of those who have control over measurement in organizations. Most likely, in an organization one will find that there are several groups which may have different interests, different perceptions, or different meaning on how to evaluate or even on how to use the results from the evaluations. This difference may lead to conflict amongst different groups in the organization, which may subsequently result in use of power amongst these groups.

An important aspect found lacking in the progress measurement literature is the *use of power in organizations*. This is, in the literature on program evaluation, pointed to as a phenomenon that very much influences both the evaluation process as well as the use of the results (Wildawsky, 1973; Guba & Lincoln, 1989; Weiss, 1993; Worthen et al, 1997; Vedung; 2000). In fact, the evaluation process must be viewed as a political activity. It has been argued that in order to understand how organizations go about evaluating progress, and what mechanisms or factors influence this process; it is necessary to probe into other literature areas. In the critiques of the streams if literatures reviewed in this thesis, it was pointed out that there might be political or power structures in the organization that influence the evaluation process (Pressman & Wildavsky, 1984; Markus & Pfeffer, 1983; Pettigrew, 1973; Pfeffer, 1997). This

chapter will therefore focus on the theory on power in organizations, in order to find explanations as to what influences how organizations evaluate progress during change processes. Power in organizations is believed to be a relevant theory to use in order to explain how evaluations on progress are conducted, and the focus here will be on how this perspective can be applied in the analysis of the empirical findings in this thesis. In the next part the perspective on use of power in organizations is presented. Finally, this will be followed by a presentation of a tentative research perspective on progress measurement that incorporates the critiques as well as the perspective on use of power in organizations.

4.2. Use of power in organizations

Power and politics in organizations are issues that have received relatively little attention in the strategy and management literature and thus have neither been encompassed in the numerous prescriptions on how to conduct evaluations. *"The failures to question the assumptions that underpin a managerial perspective, coupled with the neglect of power and politics, have contributed to the inability to find effective ways of realizing large-scale, strategic change"* (Hardy, 1995). Power in organizations has also been a theme that there has not been much emphasis on in organizational development literature (Hardy, 1994). Pfeffer (1981) asks why there has been such an absence of both organizational politics and organizational power in management and organization literature. Pfeffer (p.2, 1981) points to several reasons as to why power has been neglected in the literature; first it is a problematic concept, second, there are competing perspectives on how to understand organizational phenomenon which conform more to socially held values of rationality and effectiveness, and third, the concept of power is troublesome to the socialization of managers and the practice of management because of its implications and connotations. Another important reason as to why there are so few empirical studies on power in organizations, is the difficulty in getting access to research sites where one can study processes in real-time and longitudinally (Pettigrew, 1997).

Although power in organizations has been a difficult subject to study, it is nevertheless important to study how organizations use power in order to find explanations as to what influences how organizations evaluate progress. Successful change programs or effective and efficient use of program evaluations involve more than having a good

strategy and clear goals as well as the will and the determination of a particular individual or group:

> "Change is a political act which needs power to make it happen. It involves restructuring, redistribution of resources, new reporting relationships, and, sometimes, new value systems. As a result, some organizational members may have a lot to lose and their vested interest in the status quo can hamper any change effort. Change agents who rely on only humanistic ideals and rational-analytical models, and ignore the political implications of change, are unlikely to be successful" (Hardy, 1994).

Pettigrew (1985) noted that failure in OD interventions in ICI was linked to the highly normative, exclusive and over-zealous rhetoric of the OD consultants who failed to link their programs to local business needs and political interests. Change programs focusing solely on a rationalistic approach to implementing the changes, have thus a greater chance of failing. Realizing that organizations have different groups with uncommon interests is vital in order to understand the behavior of the organizations in their pursuit of reaching goals or interests. Thus, also when studying the evaluation process of organizations, it is vital to be aware of the fact that factors such as power in organizations will influence how organizations measure progress, as well as how they use the outcome results during the change program.

In the evaluation theory Chen (p18, 1990) claims that "a black box evaluation is usually not sensitive to the political and organizational contexts of input and output, and it neglects issues such as the relationship between the delivered treatments and the planned treatment, between official goals and operative goals, or between intended and unintended effects". In organizations, and certainly in change programs of this magnitude as the cases in this thesis represent, there are different interest groups that directly or indirectly influence the change process and how progress measurement is conducted. We will also find that there is interdependency between these different parties as the change program affects all levels in the organization. Power in organizations exists when there are different sub-units within the organization and when there is interdependency amongst these groups (Pettigrew, 1973; Pfeffer, 1981). The main objective to the change program is to increase profits and thus there is a scarcity for resources. "As long as organizations continue as resource sharing systems where there is an inevitable scarcity of those resources, political behavior will occur"

(Pettigrew, 1973). Therefore, in order to understand and explain why organizations use different methods or not clear-cut methods of progress measurement during change processes, I will here draw on theory on use of power in organizations in order to analyze and explain the empirical findings in this study.

This chapter will start with a definition of the concept use of power in organizations. Then there will be a discussion on the *sources* of power in organizations and *conditions* for when it is likely that power will be used in an organization.

Definition of power

There is vast literature on the subject of power and the concept has not been unproblematic within research both with respect to defining power and measuring power (Pettigrew, 1973; Grønhaug, 1979; Hardy & Clegg, 1996; March & Sutton, 1997). Power is a classical and fundamental concept in the social sciences; it is considered to be a basic concept in political science, and it is central to the understanding of social relationships as expressed in the fields of sociology, organization theory, and social psychology (Grønhaug, 1979). Due to the vast literature on power, the concept is still ambiguous and the definitions of power have a number of different aspects and dimensions to them. Some of the most common definitions of power can be classified under the following two categories; (1) the critical perspective and (2) the managerialist approach to power (Hardy, 1995; Hardy & Clegg, 1996).

Power has typically been seen as the ability to get others to do what you want them to or to get them to do something they otherwise would not, and this is by Hardy and Clegg (1996) referred to as the *critical perspective*. Most definitions of power include an element indicating that power is the *capability* of one social actor to overcome resistance in achieving a desired objective or result (Pfeffer, 1981). In the wording of Weber (1947) "... *power is the probability that one actor within a social relationship will be in a position to carry out his own will despite resistance, regardless of the basis on which this probability rests*". Power may also be looked upon as *control*. Dahl (1957) defines power as "...*the ability of one individual or group to prompt another unit to do what it would not have otherwise done...*" In this respect, one actor or interest group uses the available power resources to try to ensure that they are successful. Emerson (1962) had a quite similar definition of power: "*The power of actor A over*

actor B is the amount of resistance on the part of B which can be potentially overcome
by A". This perspective of power has adopted a critical look at processes where power
was legitimated in the form organizational structures; power was *domination* and
actions taken to challenge it constituted *resistance* to domination (Hardy & Clegg,
1996).

The second perspective on power in organizations is the managerial approach to power
(Hardy, 1995; Hardy & Clegg, 1996). In this approach the mainstream management
work saw power as structures of formal, legitimate, and functional authority. Power in
organizations concerns the hierarchical structure and has been treated as "normal" and
"inevitable" following from the formal design of the organization. Those undertaking
the managerial perspective assume that managers use power responsibly to achieve
organizational objectives; while other groups use it irresponsibly to resist those
objectives (Hardy, 1995). This has been treated as "illegitimate" power where power is
exercised outside formal hierarchical structures and is viewed as dysfunctional for the
organization; power is a useful resource which is "good" when used by managers and
"bad" when used against them (Hardy & Clegg, 1996).

According to Hardy (1995) the two approaches to how power has been studied; the
critical perspective and the managerial approach, embody quite different perspectives.
The managerial approach takes a quite pragmatic approach towards power, which has
resulted in focus on power that is embedded in the formal structures in an organization
and thereby ignoring the hidden aspects of power (Hardy, 1995). The critical approach
has viewed power "*as a means of domination and resistance to it as an emancipatory
tool*" (Hardy & Clegg, 1996). The critical approach has developed a more complex view
on power where it embodies ethical issues, which are not accounted for in the former
approach. On the other hand the critical approach is highly theoretical and is distant
from the pragmatic aspects of power (Hardy, 1995; Hardy & Clegg, 1996).

In this thesis, I will not strive to make yet another definition of power. Rather I will
draw on the definitions and work presented in this vast research in order to understand
and analyze the data in my three cases. Hardy (1995) argues that there has been too
much focus on trying to define power in a concise manner, and thus used a broad
definition of power; "*power is conceived as the ability to affect the behavior of othesr in*

a conscious and deliberate way. It encompasses terms such as coercion, manipulation, authority, persuasion and influence as these are, in fact, various forms of power". When analyzing the data, I will adapt a quite broad and general term of power. A more general, neutral and broader term of defining power is given by Hardy (1995) and is a definition that will be used in this thesis:

"Power is a force that affects outcomes; politics is simply the use of power."

Pettigrew (1973) argues that it is not necessary that an individual possesses power but power can also be held by groups in an organization. Further the hierarchical level as to those who hold power is not necessarily in a top-down manner where the superiors have more power over subordinates. Power stimulates conflicts between those who want power, and those who have it regardless of hierarchical position. Thus in this thesis, power will be used both to analyze situations between individuals, as well as between groups in organizations and across all levels in the organization.

In the remainder of this part I will go on to (a) discuss dimension of power and the underlying sources to power and (b) discuss the conditions for power to exist in organizations.

Sources to power

There are numerous sources to power for both individuals and organizational subunits (Yukle, 1989; Brass & Burkhardt, 1993; Pfeffer, 1997). The sources to power stem both from the structural position a person has in an organization, and from behavioral or personal aspects. Power comes from the control over resources, from the ties or relations one has to powerful others in the organization, and from the formal authority one obtains because of one's position in the hierarchy (Brass & Burhardt, 1993; Hardy, 1995; Pfeffer, 1997). Research on power in organizations has either been conducted from a macro perspective, or from a micro level in the organization (Brass & Burhardt, 1993). Research on power from a macro perspective focus on sources and bases of power, and micro researchers investigate bargaining techniques and political tactics. However, recent research focuses on the fact that sources to power are both a structural phenomenon and due to behavioral or personal characteristics. The distribution of

power in an organization is jointly and simultaneously determined by the interaction of structure and behavior (Brass & Burhardt, 1993; Pfeffer, 1997).

The list of sources to power is infinite because different phenomena become sources to power in different contexts; "...*they might be anything, under the appropriate circumstances*" (Hardy & Clegg, 1996). Power is embedded in organizational structures, cultures, values, and technology (Hardy, 1995; Petteigrew & McNulty, 1998)). These contextual aspects can also be used by senior members of 'the organization as sources to power (Hardy, 1985). An empirical study by Brass & Burhardt (1993) suggests that there are two kinds of structural position that serve as bases for power and constraints on behavior in organizations. The results show that both the formal position in a hierarchy as well as the informal or network position in an organization is sources to power. Power stemming from formal authority is sometimes called legitimate power (Yukle, 1989). Authority in an organization is when there is a perceived right of one position e.g. a manager in an organization to influence others with respect to their behavior and actions. According to Fiole et al (2001) people tend to base their understanding of another individual's or group's power on general contextual factors such as structural position and network position, rather than on the characteristics of that individual or group. Pettigrew and McNulty (1998) claim that it is important to recognize that power is highly situational, dynamic and unstable and must therefore be understood in its historical context.

The **organizational context** is by Hardy (1995) characterized as one dimension that influences how power is used in a specific context. Three other dimensions of power are resources, processes and meaning. Power in organizations can be used both as means to defeat declared and identifiable opponents, and to prevent resistance (Pfeffer, 1981; Hardy, 1985). Hardy (1985) finds that sources to power either stem from overt power or unobtrusive power. Overt power refers to "*the ability to secure preferred outcomes in the face of competition and conflict among declared opponents*". Here power is exercised to produce favorable decisions; *resource dimension* to power, or to control the issues that are on the agenda; *process dimension* to power (Hardy, 1995). The **resource dimension** to power is grounded in unequal access amongst groups or individuals to *resources* of material or structural character. Power involves the possession of strategic resources on which others depend (Hardy 1985). Resources can be used by those who

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posses and control them to influence directly the behavior of others. Types of resources are e.g. information, expertise, sanctions, political access, and credibility. Those in control of resources are able to control the agenda, and because the resources are scarce, others will depend on those who possess the resources. Power through control over resources may appear at different levels in an organization. Management possesses power through their hierarchical position and the control over rewards and punishment. Employees on the other hand, may acquire power through their access to information, know-how, and other colleagues. However, it is not enough simply to possess these resources, political actors must also be aware of them, and able to control and tactically use them if they are to be successful (Pettigrew, 1973). *"The powerful or "winners" will be the actor(s) who mobilize their power resources most effectively"* (Hardy, 1985). Transfer of power across organizational levels can occur when a relatively less powerful group gains power because of the presence of a powerful new member (Fiol et al, 2001). Management has by virtue more power than subordinates both through structural position in the organization and access to resources. Thus, for mobilization of power by less powerful subunits, skilful political activity may be required to overcome a lack of power sources (Pettigrew & McNulty, 1998).

Exercising power through the *process dimension* keeps opposition from surfacing by restricting access to formal decision-making arenas and agendas (Hardy, 1994). Power through organizational processes incorporates procedures and routines that can be invoked by dominant groups, working behind the scenes, to prevent subordinates from fully participating in the decision-making process (Hardy, 1995). While resource power is the control of powerful resources, process power is the control of organizational processes. Process power can for example be used to suppress conflict by restricting access to decisions making. On the other hand the mobilization of process power may occur when one opens up for participation in such processes.

A last dimension of power lies in the ability to avoid opposition and conflict altogether through the management of *meaning* (Hardy, 1995). This is also referred to as unobtrusive power, which is the ability to secure preferred outcomes by preventing conflict from arising (Hardy, 1985). Sources of unobtrusive power are group's or individual's ability to institutionalize their existing power in structures and cultures to protect their power and change of power positions; *"So, the very nature of the*

organization acts as a source of power for some groups, as a mechanism by which some groups are controlled, unknowingly, and directed towards the objectives of others" (Hardy, 1985). Use of power through how one behaves can also have a large impact on activities in organizations. Here groups in organizations attempt to create legitimacy and justification for one's plans, actions/beliefs and results, so that they are never questioned. Sources of unobtrusive power are also referred to as behavioral tactics, and a number of such tactics are; assertiveness, rationality, appeal, and coalition formation (Brass & Burhardt, 1993). Research from the behavioral perspective on power is frequent in the micro organizational literature and thus researchers studying power at this level must ultimately study behaviors. Brass & Burhardt (1993) claim that structural sources to power must be seen in relation to behavioral aspects of power, and they find that a lack in resources can be compensated for skillful use of behavioral tactics in order to acquire power. Table 4.1 illustrates the four dimensions of power here discussed, as well as examples of sources to power. The sources of power are illustrations only, since sources to power are dependent on the context of the organization as discussed above.

Table 4-1   Dimensions of Power and Examples of Sources to Power

Dimensions of power	Context	Resources	Processes	Meaning
Sources of power	▪ Structure ▪ Culture ▪ Values ▪ Technology	▪ Formal authority ▪ Control over resources ▪ Control over rewards and punishment ▪ Information ▪ Access to colleagues ▪ Equipment	▪ Control of organizational processes ▪ Charisma	▪ Manipulation of symbol, structure, values, rituals ▪ Assertiveness ▪ Rationality ▪ Appeal ▪ Coalition formation

Conditions for power to exist

In this part I will discuss the conditions for when it is likely that power will be used in organizations. Not everything we see in organizations can be explained by using the concept of power and as March and Sutton (1997) pointed out, too many times researchers explain empirical findings as to the existence of power without being specific as to the use of the term and how it can be measured. In this thesis I will not

measure power, but rather draw on theoretical work in order to see how power affects the evaluation process in change programs. Thus, in order to assess whether organizations use power during progress measurement, it is first of all necessary to understand when power may exist in organizations.

"*Power is not employed when there are no differences on perspective, or when no conflict exists*" (Pfeffer, 1992). Power in organizations is used under several circumstances, but only when these have large impacts on organizations or subunits. Such events could be when major decisions have to be made due to; reorganization, or the allocation of scarce resources such as money, status or jobs. For understanding when and why power and politics occur in organizations, there are certain *conditions* or elements that must be present in order for power to be employed; "*the conditions produce conflict and the use of power or political activity in organizations*" (Pfeffer, 1981). There has to be some kind of disagreement or incompatible interests present in the organization in order for power to be used. Different sub-units in organizations develop interests based on specialized functions and responsibilities. Conflict is likely to ensue when there is interdependency amongst units and these units make claims to scarce resources or have disagreement on goals (Pettigrew, 1973). In a model Pfeffer (p. 69, 1981) presents several elements that must be present in order for power and politics to be used in organizational decision-making. Two of these conditions of the use of power are (1) *interdependence* and (2) *disagreement on goals*.

The former is a situation that occurs when different entities or actors in organizations affect what happens to others by what they do. Power is used more frequently when moderate interdependency exists (too much interdependency means that one would most certainly have the same goals, while the absence of interdependency creates little need for cooperation and thus no need to use power). A critical factor for affecting the degree of interdependency is the scarcity of resources (Pfeffer, 1992). Sufficient resources reduce the degree of interdependence while scarcity increases interdependency. The ability to get things done requires development of power and the capacity to influence the other party on whom one depends (Pfeffer, 1992). Pfeffer defined interdependency as follows:

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"Interdependence is the reason why nothing comes out quite the way one wants it to...interdependence exists whenever one actor does not entirely control all of the conditions necessary for the achievement of an action or for obtaining the outcome desired from the action" (p. 38, 1992). ,

In the analysis of the cases we will see that there was a strong interdependency between different units in the organization due to the fact that the management in the company viewed the change program as vital for increasing profits. However, the interdependency between different levels in the organization changed over time as the program was going through different phases. This will be described and analyzed further in the case analysis.

The second criterion of conditions for power to exist in organizations is the existence of *disagreement on goals*. Disagreement on goals is when different entities have goals that are inconsistent with each other. Thus, for power to occur in organizations there must be conflicts between different subunits as to the objectives of a strategy. In the following parts of this chapter we will see in the analysis how the goals varied between different levels and groups in the organization, and also how these goals changed over time.

Lastly, Pfeffer (1981) points to three other conditions that must be present for power to occur in organizations. These conditions are (3) *Scarcity of resources*, (4) *the importance of the decision* and (5) *distribution of power*. The greater the scarcity of resources as compared to the demand, the greater the power and the effort that will be expended in resolving the decision. Resources can here be several forms such as financial resources, human resources or the know-how or expertise of working processes.

In situations where decisions may be perceived as less critical, power and politics may not be employed to resolve the decision because the issue is too trivial to merit the investment of political resources and effort. In other words, the decision has to have a certain degree of importance. The decision must also be important to several groups in the organization, as it is not sufficient for power to occur where only one group looks upon the decision as vital for the organization and the rest is indifferent. However, this does not necessarily imply that all groups find the decision vital for the company, but the decision must create some degree of involvement from several parties for power to

be used in organizations. Finally, Pfeffer (1981) points to the fact that political activity, bargaining, and coalition formation occur primarily when power is dispersed. When power is highly centralized, the centralized authority makes decisions using its own rules and values. It is when power is dispersed, that groups or individuals can use their different knowledge, values and norms to influence processes or decision-making.

Summary

In this part the concept of power has been introduced and discussed briefly. A definition of the concept was given based on the vast research within this field. It was here argued that in order to understand the mechanisms in a change process one needs to probe the literature on power in organizations to find explanations to my empirical findings. Using the concept of power will help us to find explanatory factors that influence how organizations measure progress. In order to understand how organizations use power, the sources of power were here identified. Then finally this was followed by a discussion on the conditions for when power is likely to be used in the organization. In the following part a tentative research perspective will be presented based on the assessment of the literatures reviewed in chapter three and on theory on power in organizations.

4.3. A Tentative Research Perspective

In this part there will be a presentation of a tentative research perspective that illustrates the research questions. A research model is a representation of reality where the model delineates certain aspects of the real world as being relevant to the research question (Nachmias & Nachmias, 1992). The research model presented in this chapter is based on the definitions of the constructs used in this thesis, the streams of literature reviewed, and finally on the evaluation and critique of the literature on progress measurement.

Taking into consideration the assessments and critiques of the literature on progress measurement can help to explain why some organizations neglect to use measurement systems while other organizations use them to a varying degree. The aim of this research project is therefore to (1) explore if and how organizations measure progress, (2) identify explanatory factors that influence how organizations measure progress in strategic change processes, (3) use these explanatory factors to guide further research aiming at developing a general model for progress measurement, and (4) give guidelines

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as to how progress measurement can be successfully applied by organizations.
However, at this stage in the research project, this thesis will suggest explanatory factors, which are theoretically founded as to why there may be various degrees of measurement of progress in organizations.

Based on the research questions defined in chapter two; *do organizations measure progress during organizational change processes, and if so, how and which factors influence how organizations measure progress and use the results,* a tentative research perspective is developed. The purpose of this tentative research perspective is to illustrate how the research questions of interest in this thesis guide this research as well as the analysis of the empirical findings. At this stage in the research process the model is based on theoretical work and is therefore a preliminary model, which is highly deductive. The model that will appear after the data collection will therefore rely on a combination of deductive and inductive research. The research perspective is illustrated in figure 4.1.

Figure 4-1   A Tentative Research Perspective
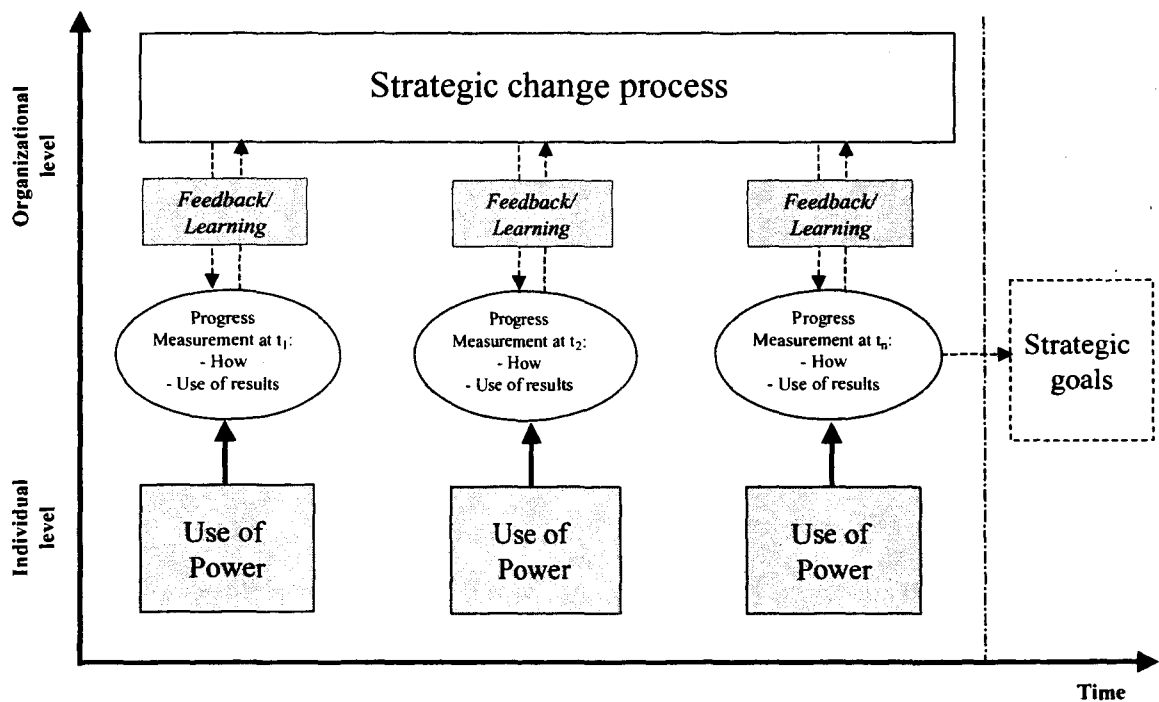
The literature reviewed in chapter three was concerned with progress measurement in strategic change processes at different stages or at different levels in the organization. Here there was an emphasis on two different approaches as to what level in the

organization one should evaluate the outcome of the change process. One approach is to evaluate the effect of the changes in the organization on overall economic output. However, evaluating the overall economic results will make it difficult to isolate the exact effects the change process has had on the results, as there are many other activities, both internal and external, that will influence a firm's economic result. Hence, evaluation of outcome is not part of this research program and the vertical dotted line in figure 4.1 illustrates this. The second approach is to evaluate the effects as the implementation process evolves. The indicators for success can be benchmarked against expectations and actual performance, which ultimately leads to bottom-line indicators such as profitability and market share improvement (Guha et al, 1997). Goold & Quinn (1990) suggest that during the implementation process one should concentrate on targets that measure strategic progress. A progress measurement system can thus assist managers in tracking the implementation of business strategy by comparing actual results against strategic goals and objectives. Therefore, first of all the aim of this thesis is to understand *how* organizations use progress measurement during change processes. This is illustrated in the model in figure 4.1 where the organization conducts progress measurement at different times during the implementation process. Secondly, the aim of progress measurement is to seek information or feedback on the status of the process at designated time periods in order to assess whether or not one is on track in accordance with the goals. The *feedback* is used to *learn* about the process and this information may be used in order to do corrective actions during the implementation process. Thus the aim of this thesis is also to understand how organizations *use* the outcome results.

Thirdly, the aim in this thesis is to identify *explanatory factors* that are expected to influence the process of progress measurement. The number of various explanatory factors presented here and the depth of the discussion of these variables is guided by the fact that this is an explorative study. Since, at this point in the research project, the thesis is theoretically based, there is no empirical work that supports the explanatory factors presented here. In an explorative study it is impossible to know prior to the investigation what the salient problems will be or what theoretical concepts will emerge (Strauss & Corbin, 1998). Therefore, "*the researcher should not want to be so steeped in the literature that he or she is constrained and even stifled by it*" (Strauss & Corbin, p. 49). The explanatory factors discussed in this part should thus not be treated as a true

explanation to how progress measurement is conducted during change processes and how the outcome results are used.

The explanatory factor presented and discussed here is deduced from the assessment and critiques towards the literature on performance measurement as discussed in chapter three. One of the first major critiques to the literature on progress measurement is the assumption that organizations are rational entities. However, there are several aspects that in fact claim that the organizations do not act rationally towards progress measurement. The literature on progress measurement is especially criticized for presenting rational conceptual models with step-by-step descriptions of what activities to perform in what way and in what order. It is also assumed here that detailed information is preferable, it must be on time, and the information is quantitative. In the literature it is assumed that the firm will first analyze the situation, they identify goals, specify alternative approaches and assess these, and then select the best alternative. However, in accordance to the critique towards this view the organizations will not necessarily choose the "best" alternative strategy, or analyze the situation first, or even define clear strategic goals. Pressman & Wildavsky (1984) go as far as to claim that organizations are not looking for the best way or most efficient alternative strategy. There are other factors that can influence the organization and on how individuals act during a change process. These may for example be cognitive processes that will influence the organization and how individuals therefore intentionally or unintentionally solve problems.

The literature on progress measurement especially focuses on how organizations can learn from conducting evaluations during a change process. However, the progress measurement literature for example does not consider the effects or problems that occur when the information on progress is neither disseminated nor used. This has implications for the ongoing change process, as the evaluation that could have been used to do corrective actions is not utilized. There may be several reasons as to why information is not used. The impact of progress measurement is dependent on the interest of those who have control over measurement in organizations. It is claimed that the evaluators cannot be independent of the results produced, and it becomes a matter of self-interest to try to control the nature of the information collected. Peoples' behavior is consequential for the design of performance measurements systems, and efforts to

measure performance without taking account of the way people adapt to performance constraints will encounter serious difficulties (Meyer & Gupta, 1994). The usefulness of organizational politics as a theoretical perspective on management and organizations has been well established since the early 1980s (Robey, 1995). It is possible to view these strategic choices as being minified and challenged collectively by the workforce, or by individual and groups of mangers that are responsible for the implementation of corporate strategy. An understanding of organizational politics should be central to any approach that seeks to explain change management (Dawson, 1999). Hence, the perspective on *use of power in organizations* as a source for understanding how organizations measure progress during change processes and use the results will be used in this thesis for the analysis of the empirical data. How power is used may vary from time to time with each evaluation process, and thus different sources to power may be present at different phases in the change process. Who possesses the sources to power in the different time phases may also vary throughout the change process and the ability to use these resources will result in mobilization of political processes. Due to the fact that both sources to power as well as who processes these sources may change during the implementation process and thus influence how progress measurement is conducted and how the results are used, implies that the tentative research perspective here presented is a dynamic approach to studying the process of progress measurements.

4.4. Summary and Conclusion

The aim of this thesis is to point to relevant issues regarding the organizational aspects that affect the use and application of progress measurement. As stated in the research question, this thesis is especially concerned with detecting aspects or reasons for why these measurements systems are difficult to implement or to use by the organization, either by decision-makers and/or by employees. Further, the main emphasis is to analyze the use of progress measurement during a strategic implementation process. In order for progress measurement to be effective during implementation, it must be aimed at generating data that can be used to improve the implementation process (Brown & Wildavsky cited in Pressman & Wildavsky, 1984). The consequence of fulfilling this is that the measurement variables will naturally change as the change process evolves and requires attention to different issues. Other aspects that may influence progress measurement are that the objectives of the stakeholders or management may change as the project evolves, and/or contextual issues may influence the goals of the projects.

A viable question to ask is if effective management is possible where the progress measures change as the objectives change or the implementation process evolves? Effective management is possible, but only if there is an ongoing reconsideration of progress measures where existing measures are not taken for granted or restricted to formally predetermined goals (Brown & Wildavsky cited in Pressman & Wildavsky, 1984; Meyer and Gupta, 1994). The implementation process is about learning from evaluation, and implementers and evaluators engage in complementary relations through their production and consumption of information. *"Evaluation is concerned with the causes of outcomes and implementation with utilizing causal knowledge to alter outcomes"* (Brown & Wildavsky cited in Pressman & Wildavsky, 1984).

Thus as a departure point, a tentative research perspective was presented. The focus in this model was how use of power in organizations can explain how organizations measure progress and use the results during change processes. This is a dynamic model where each measurement sequence will have feedback loops to the explanatory factors. This allows for organizational learning, but the case can also be that the feedback is not used for this intention. The results could be used in a more political manner where different parties are seeking to fulfill their personal agenda. This further implies that not all explanatory factors are the same in all processes of measurement, but where they can be valid or explain phenomena in different phases of the change process.

In the description and analysis of the empirical findings from the change process in Statoil, I will draw on the theory on power in organizations in order to find explanations to what influences how organizations measure progress as well as how they use the outcome results. The focus here is to understand what influences how Statoil chooses to conduct evaluations during the change process. This will be the theme of chapter eight. Preceding this discussion there will be a description in chapter six on how the business units that represents the cases of this thesis respectively measured progress. This will be followed by a discussion in chapter seven on whether or not there are conditions present in the respective business units for power to exist in the organization. Here the focus will be on whether it is likely that power will be used in the organization during the change process. However, before we proceed to the case descriptions and analysis, the research method applied in this study will be discussed.

5. Research Method

In this chapter the research methodology underlying the empirical part of my study is discussed. This includes the research design, research setting, data collection, and data analysis. This chapter begins with a discussion of the research design. The research design is the result of the requirements, which are given by the nature of the research questions in this thesis. Based on the research design – a longitudinal case study – a suitable sample is chosen, and the most prevailing measurement issues are discussed. Finally, the process of data collection and data analysis will be discussed with respect to procedures and challenges in gathering and analyzing data.

5.1. Research Design

The research questions of this thesis are concerned with *how* measurement of progress is conducted during change processes and reasons to *why* organizations measure progress in certain ways. The aim in this thesis is thus to understand (1) how progress measurement is actually used during an implementation process as a tool for achieving strategic goals, and (2) what influences how this activity is conducted. To gain insight into these issues there are certain requirements that the research design must fulfill.

Criteria for Design

This thesis will study progress measurement during a change process. Here process is defined as "*a sequence of individuals and collective events, actions, and activities unfolding over time in context*" (Pettigrew, 1997). Because change processes do not occur in a static state, but rather it is a dynamic process, the aim in the processual analysis is to capture the changes when they occur. This will give the researcher information and understanding of the process as it evolves over time. Hence, in order to get insight into the research questions of interest in this study, a research design that fulfils the following requirements is needed: (a) access to an implementation process of a strategic change program because in order to capture the evolving process one must be near the actual process, (b) access to evaluation processes (c) information on the goals of the project, (d) exploration of which factors that influence progress measurement, and (e) the process must be studied over a long time-period. Each of these requirements will be discussed successively.

In order to address research questions of this nature, access to a research setting is fundamental. It has been emphasized in this thesis that in order to capture what influences the organization in how they conduct evaluations, this has to be studied as the process takes place. The evaluation processes has to be studied in its natural settings in order to understand and detect factors that will determine or influence how the organization measure progress. Access to an organization was given when the work with this thesis started. However, since the implementation of the strategic changes was going to be conducted in the different business units within the organization, access to these units is also required. After negotiating with the units we were able to gain access and they would receive periodic reports as a compensation for allowing us to collect data on the implementation process.

Given the access to an organization, it is also required in a study such as this, that one has access to the evaluation process itself. In order to capture both how organizations measure progress as well as understand what influences this process, it is necessary to study the processes of evaluations while they are actually taking place. Although information on how organizations plan to evaluate the process as well as how they have actually evaluated the process might be found in documents, it is nevertheless most importantly to study the evaluation as well as the implementation process in real time in order to capture what influences the actual conduction of evaluation.

A third requirement that the research question poses is to get information on the goals of the change project, both the overall goals as well as sub-goals for different time periods. While goals of a change project are often explicitly stated in project documents and readily available, these are often broken down to lower levels in the organization. Therefore information on goals must be collected from different levels in the organization. It may prove difficult to find sub-goals written in formal documents. In order to get information on this issue it is found necessary to gather additional data through interviews that could extend or clarify the written information. Thus in order to fulfill this third requirement of information on goals, both primary data, especially from interviews, is needed together with secondary data, such as strategic plans.

Exploring which factors influence progress measurement can either be done through collecting real-time data or through getting retrospective information. Gathering

information for this research project is best conducted through collecting *real-time data*. This will give insight into reasons why certain procedures are followed as the actual change process is taking place. Real-time data will thus include data on the actual procedures, the conditions under which these procedures are followed, and the context that influences the choice of procedures. Through the analysis of real-time data, one will get information on causes to why certain procedures to progress measurement are chosen.

An important aspect to strategic change projects is that goals may change over time as the process evolves. In order to capture the pattern of change over time, *longitudinal data* can be collected which allows the present state be explored in relation to the past and the emerging future. Choosing one time period to study progress would not be sufficient as one would not capture how progress evolves over time, how measurement is conducted from time to time, and nor how the organization acquire progress. Therefore, in order to capture progress measurement over time our agreement with the units ensured us access to data over a *long time-period*.

The major requirements to the research questions of this thesis have now been discussed. These requirements give further guidelines as to what research design is the most appropriate for this study. The objective of this study is to gain understanding and explore *how* organizations measure progress and *which* factors influence this process. These research questions are interesting to study, as there is limited a-priori knowledge on the phenomenon in this thesis. Thus in order to get answers to these research questions, I will here study the actual process as it is taking place.

Choice of Design

In processual analysis one is preoccupied with describing, analyzing and explaining the *"what"*, *"why"* and *"how"* of some *sequence of events* in the change process (Pettigrew, 1997). This theoretical structure of the research design is referred to as *process theories* (Markus & Robey, 1988; Pettigrew, 1997). Process theory is concerned with explaining how outcomes unfold over time (Markus & Robey, 1988). The other theoretical structure is variance theory, which is concerned with predicting levels of outcome from levels of predictor variables that occur simultaneously in time. The objective of this thesis is to study how processes unfold over time. An *explorative* study is thus the most

appropriate for answering the research questions of interest here. As there is little a-priori knowledge in existing literature on how organizations measure progress as well as what influences how this is conducted, a research design that gives detailed and in-depth information, such as through explorative studies, is required. An explorative approach will further capture the changes as they occur over time and are the most appropriate for answering unstructured research questions, as is the case in this thesis.

As there is limited research on progress measurement where one is focused on how organizations actually deal with this process during implementation, this study will explore the process as it evolves. This implies to gather real-time data over a long time period, and incorporate contextual factors that may influence the process. Finally the objective of this study is to incorporate existing knowledge on progress measurement with the findings in this study, which may bring research on this phenomenon further. This study will therefore rely on previous research with regards to measurement of progress in organizations. This will serve as a platform for the research being conducted. However, as there is little a-priori research on the specific phenomenon of interest in this thesis, a *longitudinal case study* is therefore the preferred research approach here. Case studies can be useful when "how" and "why" questions are being posed; the focus is on a contemporary phenomenon within real-life context; the process in question is not yet thoroughly researched; and the history of past or current phenomenon is needed (Eisenhardt, 1989; Leonard-Barton, 1990; Yin, 1994).

5.2. Research setting

This study is conducted as part of a large research program in Statoil; "BRA Følgeprogram" who also funds this dissertation. The research will focus on a strategic change program, which Statoil has implemented over a four-year period. This program is named BRA – Better and faster administrative system (see appendix A for a glossary). Being part of the research program gives me access to study the implementation process of BRA in Statoil. BRA is a corporate wide program that included both extensive investments in new IT software and organizational changes. The BRA program represents a deliberate strategic change program with defined organizational goals.

The decision to implement SAP as well as undertake major organizational changes was made in 1996. It was believed that BRA would enhance Statoil's competitive position within the industry sector. Performance goals were calculated and the benefits from BRA would be realized through cutting costs, which would imply an estimated cost benefit of 1.2-1.5 billion NOK per year. BRA would affect and involve the whole organization, especially the administrative functions within all business areas, which would then subsequently lead to the estimated benefits.

Further in this part the corporation Statoil will briefly be presented. Then the BRA strategy will be described followed by a description of the implementation process and how this was organized. Finally, a presentation of the three business units that represents the cases in this thesis will be given.

The Company Staoil

Statoil was founded in 1972 as a public company through a common decision made by the Government at that time. The company has for more than 30 years developed according with the ambitions to become a fully integrated oil company, operating worldwide. In 2002 Statoil had business operations in 25 countries with a total of 17 115 employees. Statoil is the largest operator on the Norwegian continental shelf, and production of oil and natural gas is the backbone of their business. Statoil ranks as one of the world's largest crude oil traders on a net basis, selling roughly two million barrels of crude and condensate (light oil) every day. In addition they are a major supplier of natural gas to the European market. In Scandinavia, Ireland, Poland and the Baltic States Statoil is a leading retailer of petrol and oil products through its network of petrol stations. The Company's own refining capacity also makes the group a big trader with refined oil products. Statoil's ambitions is to be an international leading energy company: "*We will be the industry's best production operator, a leading gas supplier in Europe and a front runner in technology development*" (Annual Report, 2002). On Statoil's WebPages the ambitions are more specifically outlined:

- Being the first choice among customers
- Being a leading gas supplier in Europe
- Being the most efficient oil and gas operator
- Being a driver in terms of applying new technology
- Value creation through productivity and growth

Since Statoil was founded, it has been a period of growth both nationally and internationally. In the first two decades after the foundation of Statoil, the period can be characterized as an era of growth. There was high activity on the Norwegian continental shelf with discovery of oil new fields. In the last decade, Statoil has also increased their activities in other countries and built up considerable petroleum reserves amid stiff international competition. However, at this time one also experienced stagnation in growth in the home market. Discoveries and exploitation of new oil fields has slowed down, which also in a way has forced Statoil to look more into international markets. Based on the slower market nationally as well as the internationalisation of the company, Statoil become more focused on costs. Statoil's efficiency and thereby costs proved to be considerably higher than their international competitors. Another important event that has forced Statoil to become more cost efficient is that in 2001 Statoil went public on the stock market.

Since this study started Statoil has changed its organizational structure. From having 15 divisions under the CEO, Statoil operations today is concentrated around the following six business areas:

1. Exploration and Production Norway, UPN
2. International Exploration and Production
3. Natural Gas
4. Manufacturing and Marketing
5. Technology
6. Corporate Services

The business area Exploration and Production Norway ((UPN) comprises the operations on the Norwegian shelf where they are the operator of 10 oil and gas fields. UPN is further divided into three main geographical areas, and each area includes several business units. The three geographical areas including the respective business units are the following:

Halten/Nordland: Åsgard, Norne, Heidrun

Troll/Sleipner: Troll Gas, Sleipner, Veslefrikk, Huldra, Glitne

Tampen: Statfjord, Gullfaks

Three business units within Statoil represent the cases in this study. Two of these cases were selected from UPN and the third case is a business unit within Manufacturing and Marketing. This business area includes sales and distribution, refining, energy, and retail. The business unit representing the third case has its line of business within refining. The three business units will be further presented after the presentation of the BRA strategy.

The BRA strategy

The organizational development program in Statoil, which is named BRA (better and faster administration), started fall 1996. The objective of BRA was to implement seven work group processes in the following areas; accounting, finance, human resources, procurement and supply, operations and maintenance, sales and distribution, and project management. Based on the principle that *"identical activities should be managed identically"*, Statoil aimed to reduce its administration costs through the use of standard work forms. In order to make the administrative processes more efficient and at the same time make information more available throughout the organization, the company implemented an Enterprise Resource Planning system (ERP). One of the larger producers of ERP systems is SAP AG with its system SAP R/3. SAP stands for Systems-Application-Products and the SAP R/3 version is especially designed to support processes. The enterprise system is software packages that allows for integration of all processes within an enterprise. Entities within an enterprise can share the information entered into the system where, for example, data on stock can be retrieved by operations and maintenance in order to either check for availability or even to order the item. In this respect, it is no longer necessary to register the data more than once and hence, a lot of routine work can be automated. The effects of standardization of common work processes are believed to be considerable. Statoil, amongst several other oil companies, has implemented SAP R/3. In fact, one finds that this system is near to become an industry standard within the offshore industry. Statoil has through the BRA project started a very extensive implementation of SAP and the former director of SAP in Norway said; *"the Statoil project is maybe the largest project in the world in regards to an extensive implementation"*.

The philosophy of BRA is based on the following recommendations (document):

"Simplified work processes supported by modern information systems can provide an important contribution to value creation and cost reductions in Statoil. The project shows that the co-ordination of work processes across organizational and geographical boundaries, the reduction of bureaucratic administrative procedures and collaboration with external vendors and partners, can give annual gains in excess of NOK 1 billion. The most important prerequisite for this is that we can share and exchange high quality information in a simple and effective way."

Based on this the BRA strategy are shortly summarized in the following aspects:

- Standardizing and simplification of administrative processes and use of a common IT platform for the whole organization
- Development and training of the organization in order to obtain efficient working processes that is also adjusted for the future through advanced use of information technology
- Contribute to continuous change and adaptation of the organization that is performed in a standardized matter

The issue of defining goals and success factors is especially complicated in a change program such as BRA. There are several other activities that can also influence the result of the organization, and the actual goals may also be subject to change throughout the duration of the program. However, Statoil expressed clear objectives and goals related to the BRA program, which are the following (document):

- Statoil shall realize profits of NOK 1.4 to 1.8 billions pr. year after the implementation of BRA
- Employees that are no longer needed in their jobs shall through increased competencies qualify for more value added activities
- Simplification, increased efficiency, and standardization of working processes that are common for the whole organization with the simultaneous implementation of SAP that creates a common administrative IT-platform
- BRA shall develop competencies and train the organization to take in use efficient and future oriented working processes based on IT, as well as contributes to the standardization of change work.
- BRA shall develop administrative solutions in order to support Statoils international ambitions

The implementation of BRA along with the IT system SAP is estimated to cost Statoil a total of NOK 1.3 billion. From this investment it is expected that the company will save an equal amount each year for a period of four years due to a more effective and efficient organization. Statoil expected to realize cost reductions both from the organizational changes as well as from the investment in new IT system. Officially, it was calculated a 50 percent reduction in administrative costs due to the implementation

of BRA. However, most of the benefits were expected to come from the organizational changes, and in fact 90 percent of costs savings would be as a result of the organizational changes (see appendix B for further details). Furthermore, 600-900 employees would become redundant as a result of increased efficiency in work processes. These people would as in accordance to Statoils goals "be transferred to more value added activities" (document).

The new organizational structure, enabled through the implementation of BRA, was illustrated as a "*house with a common ground based on coordination and similar solutions*". The overall idea of the BRA project was to abandon the traditional functional organizational structure and to adopt a process oriented organization. The aim was to implement a standardization of work processes throughout the organization. More effective work processes was the dominant part of the potential gains as a result of implementing BRA, and the system solutions were supported and built into SAP. Traditionally, Statoil had been organized in separate divisions where employees would work within their business units and strive at maximizing profits for its own unit. With the process organization the aim was to abandon this traditional organizational structure and adopt a more holistic organization. Employees throughout the organization would work according to similar work process that were standardized and coordinated across business units. The idea was to appoint one person as a "*process owner*" for every seven processes. The role of the process owner was to ensure that similar work would be carried out in a similar manner across the business units. On the other hand, the process owner would not have any formal authority towards the business units in how the tasks were conducted. By making the processes streamlined, Statoil aimed at reducing the time it took to perform each task within the process and that the interface between each task would become as efficient as possible. The goal was to secure optimal use of resources through increased efficiency.

The standardization of work processes as described in BRA was dependent on the establishment of a foundation of corporate management principles. Within each process area a set of management principles were prepared, and the most important management principles were:

➤ Identical activities should be managed identically

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- Responsibility and authority at the lowest level.
- Information access based on the principle "what has to be protected".
- Trust-based authority concept.
- Integrated teams with responsibility for operations and maintenance.
- From budget to goal establishment and monitoring.
- From source to task management.

One important goal in the BRA strategy was to acquire a flatter organization through appointing responsibility and authority at the lowest level. Middle managers layers were to become redundant, as the authority would be transferred to self-managed teems at the operating level. By eliminating unnecessary control functions, *integrated teams* were to replace functional teams. The integrated teams were given the necessary authority needed to perform tasks within operations and maintenance. The teams would consist of persons from different disciplines, such as mechanics, electricians, welding, and so forth. One person within each team would be given the overall responsibility for the tasks appointed to his team, but that person would not have any personnel responsibility. This new structure was meant to replace the traditional teams where people within each discipline were in the same team. The new team structure with appointed responsibility and authority was to result in a flatter organization. The motivational factor for the workers was the possibilities of working across disciplines, which would mean that they would increase their overall competencies of operations and maintenance.

Finally, the BRA strategy would involve the implementation of new governing principles. The aim was to focus on achieving common governing principles across the organization. This principle would replace the traditional control through budgets, to a focus on monitoring achievements of goals.

The implementation process

The implementation of the BRA strategy was lead by a corporate BRA project, "*The BRA Program*", appointed by the corporation. The BRA program was first of all given the responsibility on developing the content of the strategy. Later the BRA program would be in charge of the implementation process in each unit. Statiol planned to implement BRA over a five-year time period in a rollout manner. This means that implementation would occur sequentially in one division after the other. The last phase would be a combined development and implementation of the BRA strategy, as the

project group would acquire experience with each implementation that would enable them to make necessary adjustments in order to improve for the upcoming implementations.

Never before had Statoil spent this amount of money on a change project, or even planned for an organizational change project of such a magnitude. At the most the project had a staff of 300 Statoil employees and 80 external consultants. The BRA Program was organized under the corporate management who also were representatives in a BRA Steering Committee. The BRA Program director reported to the Steering Committee. Tasks within the BRA Program were further dived into the following sections: Skill Center, Staff, Work Processes and Implementation. Within the BRA Skill Center the main ideas concerning the BRA strategy were developed along with the development of SAP and the training provided to the organization. The BRA implementation section had the responsibility of planning for the implementation of the respective business units. They would also decide whether or not the division had completed the necessary preparations in order to start with the implementation of BRA. The organization of the BRA Program is illustrated in figure 5.1.

Figure 5-1   **Organization of the BRA Program**

- Bra Basis
- SAP
  Technology
- Training &
  Documentation
- Implementation
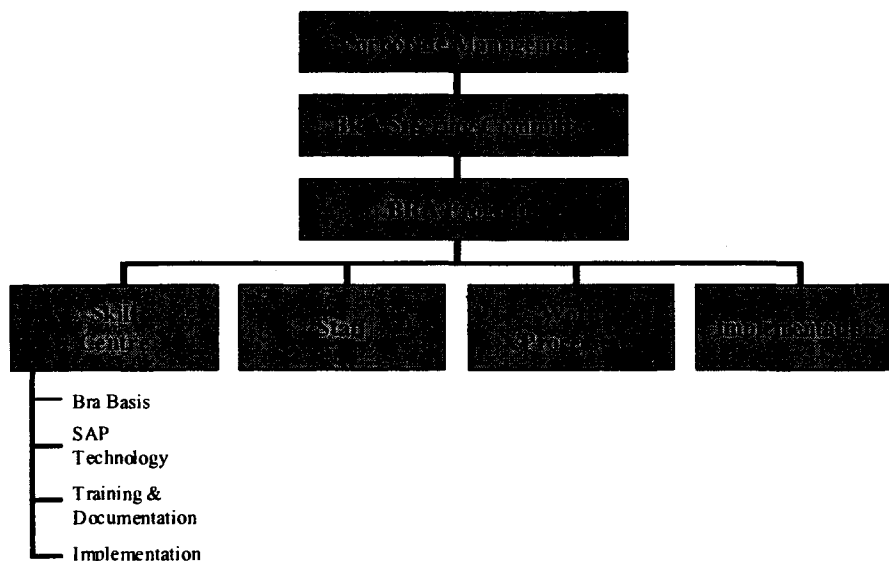
The BRA program was concerned with how one should go about implementing the BRA strategy in the organization. The implementation of BRA throughout the Statoil organization would altogether take four years. The implementation would occur

subsequently in one division after the other in a rollout manner (see appendix C for, implementation plan). The appendix illustrates that BRA was to be implemented worldwide including the total of 33 business areas. Although there was to be a rollout implementation, some of the business units were to overlap in time.

The BRA Program aimed to build up sufficient competence to develop, introduce, operate and further develop the BRA/SAP solution. This they would do on a continuous basis as they gained experience from the implementation of BRA in one division after the other. The implementing units were responsible for acquiring competence about both BRA and SAP, and ensuring that the organization would also develop the competence within this area. The business units themselves would decide upon how much help and resources they would ask for from the BRA Program. The BRA Program on the other hand would offer their help to the organizations regarding both the IT system as well as change management. In addition to planning the implementation, The BRA Program would also follow-up, control and get feedback from the respective processes. The BRA Program was to manage the project through the following tools:

- A rolling strategic agenda
- Plans and total budgets broken down into annual budgets
- Risk management
- Time/milestones to secure the implementation plan
- Formal monthly reports to the steering committee and corporate management
- Weekly managerial meetings

It was the BRA Program's responsibility to plan for the overall implementation process as well as to determine which business units were next in line to implement BRA and if they were "ready" as an organization to go ahead with the change process. However, the business units were responsible for implementing the changes itself in their respective divisions. This was underlined as a prerequisite where local ownership was essential in order to achieve real changes, which again would be necessary for the success of the implementation processes. "It was therefore vital that there was a good understanding of the BRA principles and the solutions in the units, whilst at the same time the BRA project had to have a good knowledge of the units' commercial and operational everyday work" (Document).

The Cases

As described above, the implementation process occurred in a rollout manner in one division after the other. In order to seek answers to the research questions of interest in this thesis, we would concentrate on data collection from one division at a time only. In this study three divisions were chosen as the basis for the empirical data. Following, there will be a brief introduction of the respective cases. See appendix D for an overview of the main activities during the implementation process in the respective cases. The criteria for the choice of these three business units will be given in the following part 5.3.

Case A

The first business unit that I studied is an oil refinery near Bergen in western Norway. This business unit is here referred to as Case A. The refinery was built in the early 1970s and was further expanded in 1989 with new facilities for upgrading and further processing. The business unit has an annual capacity of 10 million tons oil per year, which is owned in turn 79 per cent by Statoil and 21 per cent by Shell. Statoil also owns and operates a crude oil terminal at the refinery with a storage capacity of 9.5 million barrels. Case A is Norway's largest port in tonnage terms and the second largest oil port in Europe after Rotterdam, with more than 2,000 ship calls every year. Case A's principal products are petrol, diesel oil, jet fuel and other light petroleum products. Case A was for our purposes a very interesting case. It is both an old organization and relatively large in size, and thus we expected that the implementation of BRA in Case A would provide rich data in order to probe our research questions.

The time period for the implementation process in Case A, the main events in these periods, evaluations conducted as well as main participants are outlined in appendix D. The first phase was a preparation phase as well as the implementation of SAP. Phase two was a planning phase for the new organizational structure while phase three was a reorientation phase. A new plan was developed where the focus was on what areas of the organization had the highest potentials for rationalization in the business unit. All of the three phases involved different participants and the relationship to the BRA project as well as the business unit's focus on the BRA strategy changed throughout the time-periods.

Case B

The second business unit in this study, Case B, produces gas from two fields in the Norwegian North Sea. These fields were declared commercial in 1984 and in 1993 the Eastern field was the first of these gas and condensate fields to come on stream, with the Western field following in August 1996. The West field is tied back to the East platform, and the two fields are operated by a single operations organization situated in Stavanger. The production capacity at the East platform is for gas export 22.6 million cubic metres and for condensate it is 90,000 barrels per day. The production capacity at the West platform is for gas export 20.7 million cubic meters and for stabilized condensate it is 60,000 barrels per day. The partners on these fields here are Statoil that has 49.6 per cent, Exxon Mobil 30.4, Norsk Hydro 10.0 and TotalFinaElf 10.0. Their condensate (light oil) output is piped to Statoil's Kårstø treatment plant north of Stavanger, while their gas has been sold under the Troll gas sales agreements. Gas from the field is piped through the Statpipe, Zeepipe and Europipe pipelines to Emden in Germany and Zeebrugge in Belgium. We chose this business unit as one of our cases because of the fact that they are one of Statoil's divisions within the up-stream business area. Having studied the process in a refinery, which was a down stream business area; we wanted to see if the process of implementing BRA evolved differently in an up-stream division. We expected that it might do so because of the fact that up-stream environment generated the largest income for Statoil.

The characteristics, time-period, main events and main participants in the implementation of BRA in case B are summarized in appendix D. Throughout the implementation process in Case B there were different methods used in order to evaluate the progress of the implementation of BRA. The various evaluations conducted throughout the implementation process vary with respect to what was being evaluated, the method used, who were responsible for the evaluation, who conducted the evaluation, and finally how the results were used.

Case C

This business unit is one of ten upstream divisions in Statoil producing crude oil and gas. The reserves in Case C's field include 2.1 billion barrels of oil and 13 billion cubic meters of gas. The main field lies in block 34/10 in the northern part of the Norwegian North Sea and 175 kilometers from the Norwegian main land. Block 34/10 was awarded

in 1978 to three Norwegian companies: Statoil (operator), Norsk Hydro and the former Saga Petroleum. This was the first time a purely domestic consortium had been awarded an offshore license. Interest in this acreage was very high, and it had been nicknamed the Golden Block before being awarded. Case C has been developed with three large concrete production platforms; the A platform began production on 22 December 1986, with B following on 29 February 1988 and the C platform on 4 November 1989. Oil is loaded directly into shuttle tankers on the field, while associated gas is piped to Statoil's Kårstø gas treatment plant north of Stavanger and then on to continental Europe.

The time periods, main events, evaluations, and main participants throughout the implementation process in Case C are outlined in three main time phases as described in appendix D. The implementation process as well as the evaluations in all three cases will be discussed and analyzed in more detail in the following chapters.

5.3. Data Collection

A case study needs multiple sources of data and these studies typically combine data collection methods such as archives, interviews, questionnaires, and observation (Eisenhardt, 1989). Eisenhardt (1989) claims that the triangulation of data made possible by multiple data collection methods provides stronger substantiation of constructs and hypotheses. The sources of data here listed are not an exhaustive list as different means found suitable to the researcher may be employed. In this study the aim is to collect qualitative data that will give answers to the issues of progress measurement as formulated in the research questions. Data collection should therefore (1) ensure a close relationship with the organization being studied, (2) use both primary and secondary data in the study, (3) use longitudinal data were the change process is followed over a long time period, and (4) use real-time data where information is collected as the actual process is taking place. Thus, the sources of data in this thesis were collected through the following means:

1. Interviews
2. Observation
3. Participation
4. Survey
5. Archives

Following will be a discussion of the different sources of data and how the data was collected.

Primary data

The primary data in this research is from interviews with *key-informants* representing *different levels* in the organization, and the interviews were *semi-structured*. The main focus in the collection of primary data was to get insight on how organizations measure progress as well as what influences how this is conducted. Archival data would be used in order to see what plans they had for evaluations as well as how they planned to conduct them. However, this would not be sufficient in order to probe into the third research question of this thesis. In order to find answers to this question it was found necessary to talk to people in the organization on how evaluations were actually conducted and ask them about what they thought would be reasons to this. Further, it was also found necessary to enquire about the implementation process as a whole as this was also found to give valuable insight on what influenced how the business units conducted the evaluations as well as how they used the results of the evaluations.

Data has been collected from different levels in the organization; corporate project management, management in the business units, implementation leaders, and employees (see table 5.1). The implementation of the BRA strategy would effect the whole organization and it was therefore found necessary to interview people that represented different levels of the organization. In fact, it was found that people would have different views and opinions on the overall implementation process. This has contributed to more thorough findings as to what influenced how the business units conducted their evaluations. The main focus has been to interview key people within the business units, as this has been the main level of analysis. But it has also been necessary to conduct interviews of respondents who represented the BRA Program in order to get an understanding as well as insight into how the strategy was planned implemented. The respondents in this study have been; management in the business unions, project leaders of the change process in the respective business units, key informers amongst middle management and employees, different interest or union groups, and respondents from the BRA Program. Covering such a diverse group of respondents should ensure that different opinions as well as experiences with the change process are brought forward.

The interviews were conducted in a semi-structured manner with duration of approximately one and a half-hour. The interviews were semi-structured as they allow the researcher to be open to other issues not covered in the interview guide. These would be issues either pointed out by the respondents or occur as the "conversation" would take other directions that could not have been foreseen in advance of the interview. This again allowed me to bring in other questions in the interview guide used in following interviews. See appendix E for an example of an interview guide used in this study.

Observations in the form of participating in meetings, work shops and in tasks groups were other important sources for primary data in this study. Here observations were made in project group meetings, gatherings or meetings amongst employees, work shops involving representatives both from the business units as well as the BRA program, and task groups within the business units that worked particularly on issues concerning evaluations or other issues concerning the implementation of the BRA strategy. This source of data enabled me to observe what was being said or done in meetings, and it also gave me ample opportunities to observe the more informal ongoing activities. Such activities could be due to special relations within the organization or how people react amongst each other. Although the observations would mainly be conducted without interfering in the process, sometimes we were asked by the organizations to take a more active role. When *participating* in the process one must here be aware of how the organization may be influenced by this participation. I was by one of the business units asked to take part in a task group that where to work on the guidelines for that unit's major evaluation during the implementation process. This gave me hands on experience on how the organization planned to conduct the evaluation as well as what influenced how the evaluation was to be conducted and how the results would be used. However, the negative effect of the participation was the chance of becoming too involved by "going native". This could disrupt the analysis of the data. The threat of becoming too involved in the process was something we would discuss from time to time during data collection where we were asked to take an active role in meetings. Being aware of this issue helped us to be as objective in the analysis as possible.

During collection of data we were two researchers collaborating on data collection. In accordance to Eisenhardt (1989) the use of multiple investigators has two key advantages; first they enhance the creativity potential of the study, and second the consequence of observations of multiple investigators enhances confidence in the findings. With some expectations, we were always together during interviews or observations. The interviews had duration of 1 1/2 hours and being two researchers allowed us to share the work amongst us (see appendix E for example of interview guide). While one of us would be taking notes the other researcher could concentrate fully on the questions in the interview guide and in addition pose more elaborate questions or total new questions if the interview took unpredicted directions. Being two researchers opened up for a more explorative as well as open-ended interviews. With every new interview we would change roles in order to ensure that both researchers would be in the position to pose questions.

Another advantage of being two researchers was that it allowed us to discuss our interpretations and analysis of the data with each other. After each interview or observation we would have intensive discussions where we shared our interpretations of the interview or observation that had just been accomplished. These discussions enabled us to look upon the findings from different point of views, which in the end helped us to make more sound analysis. Occasionally it would happen that only one of us could conduct an interview or to observe some events. In these occasions the researcher collecting the data would report on the findings as well as supply the second researcher with extensive notes. All data collection would ensure that the research questions of both researchers would be explored. So, in instances where I was not able to attend an interview, my colleague would also cover the questions concerning my research problem.

Sharing the data as well as concentrating data collection of both of our research areas enabled joint analysis. This allowed us to both check our analysis with each other as well as test ideas as to how the data could be interpreted. These processes of joint analysis opened up for greater creativity than what would have been possible if one was conducting the research alone. Discussing our data together pushed our thinking and creativity. Through sharing our thoughts, ideas would either be rejected due to agreement on lack of support for such an analysis or an analysis would jointly be found

valid. The experience from collaborating closely with another researcher in a project such as this has opened up for more extensive interpretations and analysis of the data. Having only been one researcher, I claim that it would have been a greater challenge and more difficult to make the extensive analysis.

Secondary data

Secondary data is also an important source for collecting data in these case studies. This data was made available to by giving us access to databases, records of documents and copies of documents of matters concerning the BRA program. In the BRA Program we found that there was an abundant amount of written plans, assessments, purpose documents, activity plans and organizational development plans. Documents were produced both by the BRA Program and the respective business units. We found written information about the plans for the process as well as reports on how the processes had evolved. The BRA Program had also databases that contained plans on how to implement the BRA strategy as well as documents that described experiences from change process that had been carried through.

Through secondary data I was able to study how the business units planed to measure progress and how the evaluations were carried through. But this source gave little insight on explanations to why progress measurement was conducted in certain ways. Thus, documentary data must be accompanied with interviews and observations. Here the primary data can be checked against the secondary data and vice versa in addition to bringing forward new and supplementing information.

Longitudinal data

As mentioned above, data in this thesis was collected through interviews, observations, surveys, participation and archives. Data regarding progress measurement has been found either directly or indirectly through all of these sources. Data on overall strategic goals as well as evaluations towards these goals is to some extent found through archives. However, information on which factors influence how organizations measure progress is not found through looking in archives. Rather in order to explore this question, interviews with people in the organization were needed. The interviews, observations and archival data collected at the corporate level were mainly from the BRA project. Extensive relevant data has not been found separately in each data source,

but rather by combining different data sources. The different data sources are therefore complementary as well as overlapping. In table 5.6 the different sources of data are presented. This table also illustrates the number of data collected through each source at the corporate level and for each business unit. The time period for when the data was collected for the different cases is also illustrated in the table.

The interviews and observations were conducted throughout the data collection period. Most of the interviews and observations conducted through the time periods illustrated in table 5.6 represent real time data. Some of the data is however retrospective in time. Leonard-Barton (1990) posits that a significant limitation of wholly retrospective research is the difficulty of determining cause and effect from reconstructed events. A study on change processes has to be able to reveal the temporal patterns, causes, and movements from continuity to change (Pettigrew, 1990). In this study we have therefore chosen to collect mostly real time data, as this would give a greater insight in the causes of how organizations measure progress in its real time setting.

At the beginning of this study, we first of all started to collect data at the corporate level, which was here mainly the BRA Program. The first period of our study we aimed at acquiring knowledge about the strategy as to it's content as well as how it was planned implemented. Observations in meetings were plans were discussed and formed as well interviews of key project members were therefore conducted. As we started the data collection in the respective cases we also found it necessary from time to time to continue data collection at the corporate level. One of the main issues would be to enquire about aspects that concerned the business unit we were presently studying. In such a case, retrospective information was needed in order to explore present events with how those events were discussed or planned for in the past. However, with the pass of time we had less and less contact with the BRA Program as their activities towards planning and strategizing had reached an end, more or less at the time we were gathering data in Case B. Our contact person in the BRA Program became later the manger of the Change Management Group (ELT/EST) at the corporate level. Contact with this group was based on informal meetings and workshops discussing the implementation process in the organization.

Table 5-1   *Sources of Data*

	Interview	Survey	Obser- vation	Partici- pation	Archival data	Time-period
Corporate level	6		7		10	Sept.1997-Dec.2001
Total in Case A	26		22		11	Contact established fall 1998.
Top managers, key actors	9					Intensive data collection from Jan.1999-Sept.1999
Middle managers and employees	17					Follow-up interviews until Dec.2001
Total in Case B	38		5	2	12	Contact established early 2000
Top managers, key actors	12					Intensive data collection from May.2000-Dec.2000
Middle managers and employees	26					Follow-up interviews until summer 2001
Total in Case C	14		5	·	10	Contact established fall 2000
Top managers, key actors	11					Intensive data collection from Jan.2001-May.2001
Middle managers and employees	3	95				Follow-up interviews until Jan.2002
SUM	84	95	39	2	43	

Although Statoil funds this study and we were part of the BRA "Følgeprogram" (following the BRA process), we needed to acquire local access to the respective business units. We would first of all contacted the management in the business units in order to introduce ourselves and ask permission to study the implementation of the BRA strategy while it was taking place. A compromise made with the management was that in return for given access, and to even in Case A become a member of the implementation team, we would give the management a report on our findings regarding the implementation process in the respective business units. This access has proved to be invaluable to his study. We were not merely given access to perform some interviews, but given the opportunity to spend time in the organization and in addition to interviews and observations, we would have informal meetings over lunches, by chance in the corridors or in people's offices. As researchers we were very much felt welcome at every level in the organization. The implementation group as well as the management had expectations to our assessments of the implementation process. To the employees we were researchers from a prestigious business school whom they felt they

could trust, and they were very cooperative in sharing their thoughts regarding the change process.

Our point of contact within the organization was formally with the local implementation leader. The implementation leader together with the human resource manger would normally provide us with a list of potential interviewees. The list would contain names on employees representing different levels in the business unit and different work categories. We would decide who to contact in order to schedule the interviews as well as how many interviews to conduct. In addition we would also ask people whom we interviewed or other people we would meet, for recommendations on other potential interviewees. Through this selection method we tried to ensure that the management, something that would maybe only have given us one side of the story, did not handpick the respondents. We would conduct the interviews at the respondents' work places, and in Case B we conducted most of the interviews offshore on the oilrig. The CEO and the implementation leader were interviewed several times during our study of the respective cases. Mixing the order between talking to management and employees enabled us to check information across informants as well as across organizational levels, and thus providing us with different sides to the story. During the interviews we would both ask for information on present events, but especially during the interviews of the management, retrospective information was also needed in order to understand how the process had evolved as well as how the decisions were made.

Criteria for choice of cases

Since the aim of this study was to explore how organizations measured progress during a change process, it was necessary to capture events occurring in the organization. Miles and Huberman (1994) define a case as phenomenon of some sort occurring in a bounded context, and the case is the unit of analysis. The case study is then according to Eisenhardt (1989) a research strategy that focuses on understanding the dynamics present within single settings. In a qualitative study one or multiple cases and numerous levels of analysis may be chosen as a basis for the empirical data. Yin (1994) points out that a case may have sub cases embedded within them. Selection of cases is an important aspect of building theory from case studies (Eisenhardt, 1989). Therefore, in order to increase the likelihood of capturing several explanatory factors, three cases was chosen as the basis for this study. A single case study is subject to limits in

generalizability and several potential biases, such as misjudging the representativeness of a single event (Leonard-Barton, 1990).

In this thesis, evaluation processes have been studied. An evaluation process itself may be defined as a case, and in the following chapter six, sixteen evaluations were identified across the three cases. These evaluations are used as a point of departure in the further analysis of what influences how these evaluations are conducted. However, these evaluations are not treated as sixteen individual cases in the analysis. A reason for this is that the evaluations have to be analyzed in its context, which was here the implementation of BRA. In order to understand what influenced how the business units measured progress during this change process, events occurring during the change process had to be captured. Another reason to study the business unit as a level of analysis was that prior evaluations could influence the future evaluations. Thus, longitudinal data from the overall change process including the evaluations themselves constitutes the data in this thesis.

As mentioned above, three cases were studied in this thesis. The selection of cases can occur in different ways. Cases may be chosen randomly, but random selection is neither necessary nor even preferable (Eisenhardt, 1989). Randomly selection of cases may not ensure that the research questions of interest are present in the cases. Case studies rely on theoretical sampling where cases are chosen for theoretical reasons and not statistical issues (Glaser & Strauss, 1967). The goal of theoretical sampling is to choose cases that are likely to replicate or extend the emergent theory (Eisenhardt, 1989). Pettigrew (1990) noted that in longitudinal studies normally a limited number of cases could be studied. A strategy then for selecting cases is to choose cases that are *"transparently observable"*, where the researcher can select polar types of cases or cases that represents extreme situations (Pettigrew, 1990). Another factor that may influence the process of choosing cases is the mere fact of getting access to a case. As mentioned above, access to the cases in this study was negotiated with each business unit.

Three cases within the same corporation, Statoil, have been studied in this thesis. Choosing cases from within the same corporation, one will find that the cases are subject to a number of common factors that will influence the implementation process. Some of these factors are corporate culture, governance system, and incentive system.

However, the business units (cases) also vary on a number of different issues. Each division is subject to different contextual and historical factors that will influence the implementation process in the divisions in different ways. Therefore, through exploring the implementation process in three divisions represents a unique opportunity to study how organizations measure progress during an implementation process across several different settings. This has provided insight on aspects to progress measurement that is both similar and different across several cases.

As mentioned above, the three cases were not studied simultaneously and they were neither selected at the same time. The first case in this study was chosen because it represented a fairly large business unit within the corporation, it had a long and interesting history where focus on costs was central to the management, it was the first business unit to implement BRA, and opportunistically, this business unit was close to the business school which made it possible for us to spend much time at the sight. This case is a division within the business area Manufacturing & Marketing, and while gathering data here we were from time to time given the impression that this business unit did not "belong'" to Statoils core activities and had therefore little influence on the development of the BRA strategy. It was in fact proclaimed that the business units within Exploration and Production had the power in the organization, and were therefore in the position to influence the corporate strategy. Our next research site was therefore chosen on the basis of these statements. The second case is thus a business unit within Exploration and Production. This business unit was scheduled to implement BRA halfway through the rollout of the strategy. As opposed to both the first and the last business units in this study, this second case represented a fairly young organization. They were looked upon as one of the most efficient business units in the organization and they had the image of being quite adaptable to changes. This gave us then the opportunity to study a case that supposedly would be quite different from the first case and therefore provide findings that should both replicate previous findings, but also give new insight to the issues of interest here. The final case was chosen while we were still gathering data from the second case. During data collection in Case B we learned that Case C, which was also a business unit within the business area Exploration and Production, had chosen to implement the BRA strategy differently from how it was intended by corporate. In this respect, this case represented then a polar type to both the former two cases. In addition this last case had a very different history as well as culture

although it was within the same business area as the second case in this study. In contrast to Case A, Case C was one of the last divisions in Statoil to implement the BRA strategy. Finally, the data from the cases was then compared in order to detect similarities or differences in how progress measurement was conducted during implementation of BRA in the respective business units. This will be further discussed in the following part.

5.4. Data Analysis

Data analysis in qualitative research is the process of bringing order, structure, and meaning to the mass of collected data (Marshall & Rossman, 1989). To make sense of the enormous amount of data from an explorative study that spans over several years, interpretation of the data is necessary so as to be able to abstract findings that have implications to theory. The *analysis* of case studies is, in accordance to Yin (1994), the least developed and most difficult aspect of doing such studies. Data analysis does not proceed in a linear process, but rather it is an iterative process between using theory and analyzing data in order to find answers to the research problem (Pettigrew, 1990). Langley (1999) discusses several characteristics amongst process data collected in real organizational contexts that make them difficult to analyze and manipulate. The characteristics of process data discussed by Langley (1999) are; (1) they deal mainly with events, (2) they often involve multiple levels and units of analysis whose boundaries are ambiguous, (3) their temporal embeddedness often varies in terms of precision, duration, and relevance, and (4) they tend to be eclectic, drawing on phenomena such as changing relationships, thoughts, feelings, and interpretations.

Although a theoretical tentative research model presented in the former chapter guided the data collection, the analysis of the data has not been a straightforward process. In order to capture the events, complexity, and multilevel of the data, an iterative process was necessary. The data analysis was far from orderly, and actually understanding as well as detecting explanatory factors to the research problem has been a messy process. In order to assess the findings in the data, theory was probed. Thus, the analysis of the data itself has been an inductive process. It was not given in advance which theory to base the study on, as this was an explorative study were there was little a priori knowledge of the research problem in question here. The theoretical framework was

used as guidance in the analysis, but as this framework did not give further insight on the problem at hand, new theory had to be probed in order to give meaning to the data. Theory on rational behavior, organizational learning and use of power in organizations was thus applied in the analysis. The aim in this part is to describe the data analysis process, which was far from as orderly as how the write up of the analysis and the findings given in the following chapters.

Since the 1960s the use of computers for basic content analysis of text has become popular in the humanities (Silverman, 2000). By using computers the writings can be reported more objectively and the analysis can be based on more rigorously evidence. However, these models do not capture the complexity in the data and the non-linear order of events in organizations. Researchers are realizing that the presence of multi layered and changing contexts, multi directional causalities, and feedback loops often disturb linear models (Langley, 1999). However, there are a number of software programs for organizing qualitative data, and one such program is NUD*IST, which has been used in this study. There are a number of advantages to using such a program; it can handle large volumes of data, search for similar constructs or phenomena, development of coding schemes, and develop an overview of the results. In this study, I have registered all relevant collected data in NUDIST. Here interviews and observations are written in text-files and most relevant documents are also found on text files. Loading this information in NUDIST allowed me to handle great amounts of data more easily. The program organizes the data so that it is readily available and sorted under constructs that were developed based on the research problem. The large amounts of data were then coded directly in NUDIST and were handled under the defined categories. By using this program in the research process, enabled me to get a better overview of the data and the analysis of the data is more rigorous, which thus provide a greater reliability.

In the following sections I will discuss how data was analyzed as well as the write up of the cases. The analysis of the data has involved (a) preliminary analysis during data collection, (b) establishing a chronology of events where data has been organized in three phases, (c) coding the data according to themes, and (d) comparing the cases and analyzing the findings through applying theory.

Analysis during data collection

In accordance to Miles and Huberman (1994), preliminary data analysis is important in a longitudinal study; "*It enables the researcher of collecting new data to fill in gaps, and to test new hypothesis that emerge during analysis*". Postponing the data analysis to after the collection had been completed would have made it quite hard to organize the data, and even to remember all the important issues that came up during interviews or observations. In a longitudinal study such as this where we spent four years on collecting data, it would have been very hard or maybe impossible to backtrack all the events occurring in the organization. Most surely some important issues or events could have easily been forgotten or hard to spot if all the analysis was left to after the four-year period.

As mentioned above, we collected data from one case at a time and as a tradeoff for given access to the respective business units, the management was promised an evaluation or report on our findings (see appendix F for content in internal reports). This encouraged us to do the analysis of the data while we were still collecting data at the respective research site. But, also the fact that we were two researchers collaborating on data collection where the implementation process of BRA was a central theme to both our research questions, it was natural to discuss and analysis the data as the process was taking place. This was an advantage of being two researchers, as we found it quite hard not to discuss our findings continuously. Based on these analysis we would both get insight on our research topics, but also just as importantly, it pointed us in directions of issues that we had not thought of before the data collection commenced. This further allowed us to include other aspects in our interview guides or even events that we would try to observe during the following meetings at the research site. Although we both had a tentative research model that guided the data collection, the data analysis process was inductive as new insight on our research areas was continuously being acquired.

During data collection we produced a report for the respective business units on the implementation process of BRA. Our tentative research models guided us in the data collection, but as mentioned above this was both a deductive as well as inductive process. The data collection was an iterative process between data and theory, and therefore the themes in the reports produced towards the end of our fieldwork in the respective cases emerged while data was collected and analyzed for this purpose. The

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focus in the reports also changed due to the fact that the implementation processes were quite different across the three cases. The content of the three reports are given in appendix D.

Within case analysis

The central problem in longitudinal field research is how to deal with the complexity of the data; capturing the complexities of the real world, and then making sense of it (Pettigrew, 1990). In this part I will try to describe how the data in this study, first of all, was categorized and secondly, the within case analysis, which was the first step in the analysis.

With the vast amount of data that had been gathered over a period of four years, there was a necessity to organize this data. Some of this work had been already accomplished during the preliminary analysis, but the categorization of data according to my research problem was more or less prepared after the data-gathering period. Eisenhardt (1989) notes that the overall idea with the within-analysis is to become intimately familiar with each case as a stand-alone entity, which allows unique patterns of each case emerge before investigators generalize across cases.

The first step in the within case analysis was to write the "story" of each business unit. The story was written according to predefined categories developed on the basis of the tentative research model. The tentative research model was used as guidance for making central themes or categories in order to organize the data, but throughout the analysis this categorization was either changed or other categories were added to the "tree". The categorization was made in NUD*IST and data was amended to the appropriate category. So that en the end when all data had been analyzed, each category would contain statements form numerous interviews or documents. In this write-up more or less the whole implementation process was described including formal as well as informal activities. This descriptive as well as analytical write-up ended in a 50-page summary of each case. Langley (1999) refers to this preliminary analysis as a narrative strategy that involves construction of a detailed story from the raw data, which is a form of organization that also can serve as a validation tool. Based on the information given on the construction of the data as well as the information entered onto the categories in NUD*IST, other researchers should be able to replicate the analysis in this study.

The second step of the within case analysis was then to establish a chronology of events where data was organized in time periods. Langley (1999) refers to this as visual mapping of process data, which allows the simultaneous representation of a large number of dimensions, and they can easily be used to show precedence, parallel processes, and the passage of time. Through visual mapping, I was able to get an overall overview of the implementation process in each case. They allowed the presentation of events in a chronological manner, as for example, in accordance to when they took place as well as at what level in the organization the event took place, who were responsible for the event as well as how it affected the organization or implementation process. From this procedure, it occurred that the implementation process could be divided into time phases. This is referred to as a temporal bracketing strategy (Langley, 1999), where there is certain continuity in the activities within each period and there are certain discontinuities at its frontiers. The implementation process within each case was divided into three phases, and each phase represents themes that are characteristic for the business unit at that respective phase. Dividing the process study into phases allowed for comparing the description of the respective evaluations with how this was either affected by the implementation process or how the evaluations affected the implementation process it self. These phases are here only used as a mean to categorize the evaluations and were used later in the analysis of how the evaluations were conducted, which was the next step in the analysis.

The research model guided the type of questions asked during data collection, and soon it became evident that respondents had no direct answer to my research problem. Although a research model had been used in the guidance in data collection, the model was of explorative nature and had to be modified in order to grasp the true findings in the data regarding the research problem. The set of key variables in the tentative model had been useful in searching for understanding how organizations measure progress as well as explanations to what influenced this. Similar questions were asked at different levels of the organization, and the data reveals that the respondents did not have a clear or true knowledge of what influenced how they conducted the evaluations. However, the respondents did have either quite substantive knowledge or thoughts about the implementation process in general. The data revealed clear discrepancies in how the employees or management viewed the implementation process. We found that we could classify the organization in three levels; the corporate level, which included the BRA

Program, the management level in the business unit, and the middle management and employees in the business unit. The perspective of the change process would depend on which level the respondents represented and thereby giving different views on how, for example, the evaluation process was planned or how it was conducted. Thus, at this stage I had information from different levels in the organization regarding the evaluations specifically as well as the implementation process in general.

The next step in the data analysis was then to try to make more sense of the information at hand and use the data in order to probe the research problem. In order answer the research questions, new theory had to be applied in order to understand what influences how organizations measure progress. An across-case analysis was then conducted.

Across Case Analysis

The results from the within case analysis indicated that events in the change process itself influenced how the organizations measured progress during the implementation process. In addition, depending on the level in the organization, respondents had different views on the change process and how the process evolved, and also different views on how the evaluations were carried through. In order to facilitate comparison across cases as well as to be able to interpret the processes that had evolved during the evaluations and the implementation of the changes, a new theoretical framework was developed. The new perspective on progress measurement was developed both from data and through consulting new theory. Based on the critiques to the literature on progress measurement reviewed in this thesis as well as key issues that emerged from the data, three theoretical perspectives were used as the foundation for the across case analysis; rational approach, organizational learning approach, and political approach.

The literature on progress measurement reviewed in this study was criticized for being overly rational where it is assumed that organizations are rational entities and therefore act rationally. Theory on organizational behavior focuses on how individuals and thus organizations do not act in a rational manner. They do not seek to use the information provided through rational models as prescribed in the evaluation model, to make rational decisions where information is used as input to analyze the situation and then act in accordance to predefined goals (Pressman & Wildavsky, 1984). This theoretical perspective is concerned with organizational cognition and gives insight in how

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individuals' perception, opportunistic behavior or organizational context influences how information is processed and used. The results from the within case analysis revealed that the organization did not evaluate progress in a rational manner. Therefore this theoretical perspective was used as a point of departure for understanding what influenced the organizations on how they conducted evaluations.

One of the overall assumptions in the literature on progress measurement is that organizations should use the results from evaluations as feedback in order to do necessary corrections to the change process. The theoretical perspective on organizational learning focuses on factors that inhibit organizational learning and organizational processes that enables or accelerates the learning process. These are factors that are not taken into consideration in the evaluation literature. The analysis of the cases revealed that the organizations did not always use the evaluations as feedback to the ongoing change process. The within case analysis revealed that the organizations chose to interpret and use the outcome of the evaluations as how it fitted with their goals. Hence, the organizational learning perspective was also used as a point of departure to get further insight on how organizations act and how this will influence how they conduct evaluations.

The last and most prevailing perspective used in the across case analysis, use of power in organizations, focuses on how use of power and mobilization of power enables actors to overcome resistance and thus achieving desired goals. Power is the ability to get others to do what you want them to do (Hardy & Clegg, 1996) or the capability of overcoming resistance (Pfeffer, 1981). Both within case analysis and especially in the across case analysis, it became evident that use of power during the change process influenced how the business units conducted the evaluations as well as whether and how they used the outcome results. The within case analysis revealed how groups mobilized their sources of power in order to influence the evaluation process. In the across case analysis the perspective on use of power was applied in order to abstract different approaches to progress measurement where each approach was based on use of power during the evaluation processes. Thus, theory on use of power in organizations was found to be the most appropriate as well as elaborate perspective to explain what influences how organizations measure progress during change processes. This theoretical perspective was also broad enough in its explanations so as to incorporate

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organizational behavior and learning process in organizations. Thus, this perspective explained why organizations do not act rationally in evaluation processes and do not use information as feedback for learning.

Langley (1999) refers to the use of several alternative interpretations of the same events based on different but internally coherent sets of a priori theoretical premises as the alternate template strategy. In the analysis of the data all three perspectives were used, but however they were not used separately in order to explain the data from three separate lenses. Thus the analysis did not provide alternative explanations depending on which theoretical perspective was applied. This is a somewhat different approach to how Langley (1999) defines alternate template strategy. Rather the theoretical perspectives have supplemented each other; where one perspective lacks to explain the data, another theoretical perspective was consulted.

In the further across case analysis, visual mapping was once again applied in order to compare key themes and issues found in the three cases. Themes and issues were based on findings and interpretations of the data, and the across case analysis was aided by the application of relevant theory. Based on the findings from the across case analysis through applying new theory, an integrated model and propositions were developed. Propositions were formulated by comparing the findings from the cases according to categories of interest. The propositions were further discussed with respect to existing literature, which according to Eisenhardt (1989) elevates the conceptual level of the findings and further enhances internal validity.

The within case as well as the across case analysis are presented in chapters six through nine. Each chapter describes as well as analyses the findings. I have chosen not to present a descriptive presentation of each case as there is a lot if information in the data and one could easily get lost in the information overload, without really being able to understand what the data is telling us. Therefore, I chose to adapt a "tell and show, show and tell" style (Golden-Biddle, 1997), which is a combination of case descriptions supported by citations and analysis of the data. The analysis was both inductive as well as deductive, and thus an iterative process between data and theory.

5.5. Validity and Reliability

The case study research is an iterative process between data collection and theory, which also may lead to a redefinition of the research questions during the research process. The case study is about capturing the complexities of the real world, and then making sense of it (Pettigrew, 1990); it involves converging on construct definitions, measures, and a framework for structuring the findings, which all are intimately tied with empirical evidence (Eisenhardt, 1989). The interpretations made from the empirical data should be testable and readily available for others to judge. It is vital for the study that one can show the readers the procedures used to ensure that methods are relative and that the conclusions are valid (Silverman, 2000). "*A qualitative study can be evaluated accurately only if its procedures are sufficiently explicit so that readers of the resulting publication can assess their appropriateness*" (Strauss & Corbin, 1990). In this respect there are a set of criteria for evaluating case studies, and the same criteria has been used as a guideline to overcome potential weaknesses of this longitudinal case study. The following criteria used for assessing the trustworthiness and authenticity of this research are: objectivity, construct validity, internal validity, external validity, and reliability.

"Objectivity"

Objectivity is that the researcher has relative neutrality and reasonable freedom from unacknowledged researcher biases (Miles & Huberman, 1994). In a real-time longitudinal study the researcher may loose objectivity by becoming too involved in the organization. The inherent limitation of case studies is the vulnerability of the data to subjective interpretation and the difficulties of compiling own evidence about relationships among variables (Leonard-Barton, 1990). In case studies, where interpretations of a researcher are necessary, it is not viable to claim total objectivity. However, it is nevertheless important to strive at objectivity, and in this study, these issues have been dealt with through striving to ensure both descriptive and interpretive validity. Descriptive validity refers to the factual accuracy of the data and whether or not enough description has been provided to adequately understand the setting, while interpretive validity is whether or not the researcher has credibility in the eyes of the respondents (Maxwell, 1992). In order to acquire descriptive validity there are certain steps one can follow: (1) describe the methods and procedures explicitly and in detail, (2) the actual sequence of data collection and data analysis should be traceable, (3)

conclusions should be explicitly linked with exhibits of condensed data, and (4) provide a detailed record of methods and procedures (Miles & Huberman, 1994).

In this study all information gathered through interviews, observations and documents were logged for each separate case together with data gathered from corporate level. The interviews were transcribed and coded through using the software system NUD*IST and electronic documents were put in files as well as used in the coding. The data is thus organized so that the analysis in this study is traceable. In addition, the data as well as the analysis of the data were mostly conducted together with a second researcher. Through triangulation, by using several sources for data, as well as being two researchers collecting the same data increased the objectivity of the data analysis. Finally, the data was also checked and verified through organizational members as well as through the preliminary analysis presented in case reports to the business units (interpretive validity). The aim was to clarify if factual information used in our analysis were correct. However, the organizational members did not necessarily consent to our analysis, which was also here linked to theory. But this was, form our point of view, not the goal. In fact, our findings revealed that there were different views and opinions on what influenced the evaluation as well as the change process, and this finding is used in the data analysis as well as in the conclusions of this study.

Construct validity and internal validity

Other requirements to studies such as this, is that the interpretations made of the phenomenon of interest are coherent and analytically sound. Ways to evaluate this requirement is through construct validity and internal validity. In accordance to Cook & Campbell (1979) construct validity is to ensure a coherent relationship between the construct and the measurement of the construct. Developing constructs is a two-part process that involves refining the definition of the construct, and building evidence, which measures the construct (Eisenhardt, 1989). In accordance to Eisenhrdt (1989) this occurs in comparison of data from multiple sources with the constructs.

To ensure *construct validity* in this study multiple sources of evidence such as observations, interviews and archives was used. If the same construct can be measured by using several different sources and this gives similar result, then the probability of construct validity increases. For example, evidence from interviews could some times

be backed up with evidence found in documents. Observing how evaluations were conducted combined with statements from interviews and documents supported the conclusions that political processes are in use during evaluations. Finally, this study has applied a longitudinal approach, which gave the opportunity to test sensitivity of construct measures over time.

Internal validity is concerned with the postulated relationships among the concepts. First of all, in a case study this research will be able to thoroughly explore the opinions and understanding of respondents, allowing for crosschecking of data as it is generated. Additionally, a longitudinal, real-time study can increase internal validity by enabling one to track cause and effect, and moreover it can make one become aware of intervening variables that otherwise would have been difficult to detect. A longitudinal study incorporating real-time data can increase internal validity by enabling one to track cause and effect (Leonard-Barton, 1990).

The concern over internal validity in case study research is the problem of making inferences. Some questions the researcher have to ask regarding his/her own research is if the inferences one makes are correct, has other possibilities been considered, and is the evidence convergent (Yin, 1994). This study has tried to meet these requirements through extensive documentation of the change process by using different data sources. Although there are some difficulties in qualitative research of becoming subjective in the analysis of findings, it is at the same time something that is difficult to avoid. An essential part of the research program is to have in-depth interviews with people in the organization. In this process it is difficult not to become biased. However, the threat of loosing objectivity is reduced since this research study has the strength from being two researchers collecting data from the same cases. In this respect, we can crosscheck our findings and analysis.

External validity

External validity is to generalize a study's findings beyond the immediate case study (Yin, 1994). The objective of this research is to generate knowledge on progress measurement that may advance the theory. The rollout of the strategic change program allows this study to compare the cases with each other, which has resulted in a **comparative case study**. In this respect, three cases were explored in real-time over a

long time-period, which provided descriptive and informative knowledge. The findings can then be generalized to theory. As Eisenhardt (1989) points out, there is an important difference with regards to generalizing. This has to do with the aim of the research: whether the goal is theory testing or theory building. Since the aim here is theory building, two to three cases should be sufficient in order to generalize the findings to theory. Important issues in this respect is comparison of findings with existing literature; literature which either supports or is in conflict with the theory building taking place during the research. *"The result is often a theory with stronger internal validity, wider generalizability, and higher conceptual level"* (Eisenhardt, 1989). In this study the aim has been to move from a context specific data to a more general presentation of new insight on what influences organizations on how they measure progress through building on existing theory. Hence, the findings and conclusions from three different organizations in this study, can reasonably be said to apply to other organizations as well.

Reliability

Prevailing issue for ensuring reliability of the study is the ability for a second researcher to replicate the study. However, in a qualitative study this might be difficult as different researchers may focus on different issues, which generates different interpretations and conclusions. Thus, in this study it has rather been the case that in order to ensure high reliability, a cautious description of the data collection as well as the data analysis has been specified. Reliability is whether the process of the study is consistent, reasonably stable over time and across researchers and methods (Miles & Huberman, 1994; Silverman, 2000).

The procedures in data collection and analysis described above, enables other researchers to trace this study. Further, longitudinal data was collected, which provided data that was collected across the full range of appropriate settings, times and respondents. Data was also verified by consulting organizational members, and on a continuous basis the data was checked with the second researcher on this research project. Almost all data was jointly gathered, and findings as well as analysis were discussed throughout the study. Coding of data was thus checked and verified across the study and in particular in the preliminary analysis of the cases. For the analysis of the

data related to the specific research problem, additional coding was made and checked on an informal basis with my co-researcher, thereby ensuring inter-coder reliability.

5.6. Summary

The aim of this thesis is to study how organizations measure progress and why they conduct this activity in certain manners during strategic change processes. The research questions posed specific requirements to the research design. In this study they were identified to be; (1) access to an implementation process of a strategic change program because in order to capture the evolving process one must be near the actual process, (2) information of the goals of the project, (3) exploration of which factors that influence progress measurement, and (4) the process must be studied over a long time-period. This study was guided by research questions of an explorative nature, and by a deductively developed theoretical research perspective. The data collected was thus collected quite open-mindedly and not tied to a rigged interview guide. This allowed me to capture emergent issues brought forward during data collection either by the respondents or through observations. These were issues not foreseen by my, and thus are findings that would not have been captures if this had been a rigid study. The aim was to build theory and thus new insight to the research problem was needed.

An explorative study was found to be the most appropriate based on the requirements to the research questions. As there is limited a-priori research on the specific phenomenon of interest in this thesis, a *longitudinal case study* was therefore the most salient research approach here. This research has studied the implementation process of BRA in Statoil and in three separate business units. The company was implementing the strategic change program subsequently in one division after the other. The unit of analysis in this research program was the implementation process in the respective divisions. Hence, three cases have been explored in real-time over a long time-period.

Data from the cases have been collected in numerous ways such as from interviews, observations, and archives. The data was also gathered from different levels in the organization. The coding of the data was conducted by using the software program NUD*IST. This program can handle great amount of data, and it is here easier as well as timesaving to organize and code data. Different methods of analysis of the data were

also in this chapter described. Preliminary, within case and across case analysis were conducted by using analysis methods such as visual mapping, temporal bracketing, and alternate templates. Finally, the validity and reliability of this study was discussed.

The aim of this chapter has been to present the data collection and data analysis in a chronological manner. A description of different sources of data was given together with a step-by-step description of how the data was analyzed. The next three chapters will present the findings in this thesis. The findings will be presented in accordance to the research problems of this thesis. Thus, the findings will be described and analyzed iteratively throughout chapter six to eight. In chapter nine the findings are abstracted to higher level where a new research perspective on progress measurement is presented.

6. Evaluations during change processes

In this chapter the focus is to describe how Statoil actually conducted evaluations during the implementation of BRA in the respective business units. The purpose of evaluation is to produce timely and relevant feedback information for decision-making, and evaluation should also provide information on the progress of implementing a strategy (Kaplan & Norton, 1992; Worthen et al, 1997; Simons, 2000). Evaluation must emphasize and develop its own unique, systematic, and theoretically based body of knowledge on the progress of what is being evaluated (Chen, 1990). In this chapter the main focus will be on how each business unit conducted the evaluations and how they used their results.

This chapter starts with a description of guidelines given by the corporation with respect to how to conduct progress measurement during the implementation of BRA. Each business unit will then be described respectively as to how they conducted evaluations during the implementation of BRA. The description of how each business unit measured progress shows that there is a large variation as to different methods used both within each case and across the cases. In the final part of this chapter, these different evaluation methods used within the business units are then comprised into more precise categories. These categories are referred to as typologies of evaluation methods, and three typologies are here presented: *seeking the path*, *assessing the consequences*, and *seeking the truth*. The typologies of evaluation methods are defined and exemplified with empirical examples.

6.1. Corporate Guidelines on Progress Measurement

As illustrated in the description of the BRA program in chapter five, Statoil had clear goals and objectives with respect to implementation of the BRA principles. The goals and objectives of the program were communicated throughout the organization through various means such as documents, workshops, and common meetings (BRA days). In order to measure if Statoil reached these goals, the BRA project aimed at developing a progress measurement system.

The corporate BRA group, referred to as the *BRA project*, provided guidelines to the business units on how to implement the BRA principles. Along with other activities, measurement of progress was given much attention and stressed as an important activity to perform during the change processes. The BRA project strived at developing a measurement system that could be adopted by the implementing entities. And in an early phase of the change program in Statoil before the implementation in each business unit had started to take place, the BRA project was of the opinion that everything could be measured and accounted for in the implementation process.

> *We are going to develop a performance measurement system where one can measure everything. All the activities shall be accounted for and we should be able to know the costs and efficiency of the implementation process while it is taking place and when it has ended (BRA project member, fall 1997).*

However, as the BRA program was implemented in the divisions the BRA project experienced that measuring a change program of this character and magnitude was impossible. The first business unit started the implementation process and asked for guidelines on how to measure progress while the changes were taking place. However, the BRA project had developed a different opinion since the fall of 1997 as to what could be measured in a project such as this.

> *"It is not possible to measure the progress or the economic gains from implementing BRA in the divisions. There are too many factors that we cannot control for, such as for example other projects evolving simultaneously in the company. These activities will also affect the gains for the divisions. Thus isolating how BRA affected the divisions from other activities is impossible".*
> *(BRA project member, fall 1998)*

Hence, when the first business unit started the implementation phase there was nothing readily prepared as to guidelines on how the units should measure performance under or after the implementation of BRA. Although it had proved to be difficult to make an evaluation system, the BRA project developed a form containing a list of factors that should be used in evaluating the performance (document). The making of this list was a result of the demand from the first business unit to implement the BRA principles. This business unit wanted feedback on how well they were proceeding with the implementation. However, the evaluation method supplied by the BRA project would produce feedback that was only to be generated through SAP. The results from these

figures would only show how much the new IT system was used in performing daily tasks. Hence, the guideline had much the character of a "black box" system where easily readable data is processed in an input/output manner (Chen, 1990).

As the implementation of BRA proceeded and was carried through in several more business units, the development of a measurement system became each division's own responsibility. And in the following parts a description of how evaluations in the three business units were conducted is described. The evaluations in the business units were conducted either by the BRA project or by the business unit and they were carried through at different phases throughout the implementation process.

6.2.   First implementer: Case A

Case A was the first business unit in Statoil to implement the BRA program. The business unit wanted to be an early implementer of the new principles as the program was looked upon as an opportunity to rationalize and make the organization more efficient. The implementation team came to the business unit in the fall of 1998 and by January 1999 Case A had implemented SAP that was one of the activities within the BRA program. However, Case A had previously in 1997 commenced the planning of implementing BRA, long before the implementation group arrived. The implementation team consisted of members from the BRA project as well as employees from the business unit. After the implementation of SAP an internal project group - "the improvement team" - took over from the implementation team the further work with the implementation of BRA. The improvement team was given the responsibility to plan the next phase of the implementation of BRA. Here they were to develop strategies and actions on how Case A was to proceed with the implementation of BRA in order to become a BRA organization. The improvement team continued their work until summer 1999. The focus after that time was on how Operations and Maintenance (O&M) could be organized according to the BRA principles. The management in Case A had declared that this business area was the main focus in the OD as it was within this area that the largest potentialities for cost savings were identified. A new team conducted this work and later on representatives from a new venture partner helped them in the further implementation of a modified BRA strategy.

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Description of Evaluation methods in Case A

In phase 1 of the implementation of BRA in Case A there was an evaluation of potential profits, which was by the BRA project named the **profit case**. The profit case was a calculation over the potential gains from implementing the BRA principles. It describes the overall potential gains for the business unit over a four-year period as well as a more detailed description on how and where the cost cuts will create benefits for the business unit. A group consisting of members from the BRA project as well as employees from the business unit developed the profit case. However, it was the BRA project that provided the guidelines for the profit case and due to this fact the profit case did not achieve much support in the business unit. In fact the quality of the profit case was constantly questioned by members of the improvement team as well as by other people in the business unit. One reason for this disbelief in the potential costs savings as described in the profit case was that this analysis was not conducted by people who had enough knowledge of the business area.

They (those who wrote the profit case) sat isolated in a room all by themselves...They had no knowledge of our business and therefore we had no belief in their results. (Improvement team)

The potential gains as illustrated in the profit case are extremely unrealistic and there is no one who believes in these numbers, not even those who constructed it. (Employee)

Another important reason for not taking these calculations seriously was that some of these profits had already been realized through an earlier change program carried through in 1996. Case A claimed that they had already come far in fulfilling the BRA principles due to the organizational changes already made in 1996. Thus, due to these conditions the results from the profit case did not represent the goals for this business unit. As we will see in chapter eight the goals with respect to BRA for case A changed over time during the implementation process.

The improvement team in Case A was, throughout their work in phase 2, focused on how to evaluate progress during the change process. This was an activity that was much debated during meetings and efforts were put into developing an evaluation method. This issue was repeatedly on the agenda during the team meetings and they asked for

help from both the BRA project and a consultant working at Case A at that time (observation).

Guidelines on what to measure during the implementation of BRA were, however, given by the BRA project already in January 1999. The measurement variables as listed below were then to be measured against a baseline year after half a year in the change process and then repeatedly every quarter of a year.

- economic results (profits, costs, downsizing)
- parameters that indicates that change is taking place (these parameters have to do with the use of SAP where one measures increase in use of SAP in procedures)
- training (how many have been trained on SAP, how many SAP support people in the organization)

The improvement team did not find the suggested evaluation variables from the BRA project sufficient. The variables used here were not found to be adequate for the improvement team as to evaluating the progress during a change process. These indicators would only give feedback on the use of SAP as well as general business growth. These are measurement variables that Chen (1990) classifies as the "black box" that do not give much feedback directly related to the OD changes. The BRA project was criticized for not having considered qualitative factors that were more related to, for example, how the employees reacted to the changes. These were also important variables that the improvement group wanted to be a part of the measurement system. (Observation)

The external consultant on the other hand, suggested that Case A should use a Balanced Scorecard approach to measuring progress during the change process. Here he showed examples on how other companies have used the Balanced Scorecard as well as presenting a model where there was a listing of "process indicators" and "result indicators". These were indicators in general, and as the project leader pointed out, these had to be made operational for the business unit's specific needs (observation). Based on the input from these parties, Case A tried to develop their own measurement method that would enable the division to monitor their improvement program over time. However, before a measurement system was developed the management in case A

determined that a new analysis would be undertaken in the business unit with the purpose of developing a new strategic plan. This is the start of phase three, where a new improvement team was established. Case A had now decided to narrow the focus with respect to which business area they would focus on in the implementation of BRA. The focus here was on Operations & Maintenance, and new plans were made on how to improve this area. In this respect a new organizational assessment, which was the *MERIT evaluation*, was carried through. This analysis was supported with an analytical tool provided by the business unit's new partner. This evaluation tool was a systematic method where all sorts of data were collected through surveys, interviews, documents, etc. This was an assessment on how the organization was performing at that stage, which resulted in a list of activities that had to be implemented in order for Case A to become a competitive actor within a highly competitive international business environment.

Table 6.1 gives an overview of the different evaluations in Case A with respect to time and who were responsible for the evaluations. Case A did not conduct more evaluations after the first one during the implementation of the changes. This was more or less due to the fact that they struggled with finding methods on how to actually conduct the evaluation of progress measurement. A more prevailing cause for not evaluating during the implementation was that the business unit decided to revise its focus in the strategy due to external happenings, which led to new assessments of the organization; the MERIT evaluation. This evaluation had the same characteristics to a gap-analysis (as-is-to-be analysis) that the BRA project intended to conduct in the first phase of implementation in Case A. The external partner undertook the MERIT evaluation and because of the major changes in focus of the strategy. This evaluation is not part of this study, as at the time the evaluation was conducted, we were no longer collecting data from this business unit.

Table 6-1   *Evaluations conducted during implementation in case A*

	Phase 1 Sept.1998-Jan.1999	**Phase 2** Jan.1999-May1999	**Phase 3** May 1999-2001
BRA project	Profit case		
Business unit			*(MERIT evaluation)*

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6.3.   Middle implementer: Case B

Case B was scheduled to implement the BRA program when the corporate project was halfway in its rollout schedule. In accordance to the corporate strategy Case B started preparation for the implementation of BRA in spring 1999. New organizational structure was implemented in January 2000 while the SAP system was implemented in April 2000. However, although the new organizational structure was formally implemented before Case B became online with SAP; the organizational changes were only on paper. No major changes had in effect been implemented in the organization. The responsibility for the actual implementation of the BRA principles was handed over to the organization. Because few people in the organization had much knowledge of BRA and even understood the new principles, the phase after the implementation of SAP can be characterized as a chaotic period where most of the middle management and employees were frustrated. The management in Case B thus started a new planning phase where they revised the content of BRA. This resulted in an adjustment of the original organizational development document and hence Case B redefined its business goals, but where they emphasized that their *"overall goal is to be the best operating unit in Statoil"* (document). The remainder of this part describes the evaluations conducted in Case B, as well as how the results were used.

Description of Evaluation methods in Case B

The business unit had no specific plans as to how, when and what they would evaluate during the implementation process of BRA. Except for an evaluation of the process conducted in January 2001, the other evaluations carried through by Case B emerged as the process evolved. The evaluations conducted by the BRA project; *as-is-to-be assessment* and the *profit case*, were however planned for ahead of time of the start-up with BRA. The BRA project required these assessments to be conducted before the implementation of BRA could start. In the as-is to-be analysis (gap analysis) the aim was to map the internal working process in the business unit and assess to what extent these processes departed from the standardized processes as defined in BRA. The profit case was similar to Case A, a calculation of the potential benefits for becoming a BRA organization. These evaluations were used as input to the organizational development (OD) plan developed by the internal project group in Case B.

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The OD plan was, in Case B, referred to as the "bible". The bible describes the necessary details with respect to the transition from the old organizational structure to the new structure comprising integrated teams so that the business unit will become a BRA organization. The work with the Bible was carried through in the period from October 1999 to January 2000 and the document describes the organizational development for the Operations and Maintenance in Case B. It was meant to be used as guidance for the organizational change process, where it describes activities that must be carried through in order to reach the goals

> *The main objective with the work on the Bible has been to work out as many details as possible in order to start up with a new organizational structure. The purpose with the document is to guide the further work on implementing BRA. The Bible describes the decisions, and proposes a list of activities that must be carried through in the months to come. Some of the tasks described are already carried through, some have been started to work with, and the ones not yet attended to must be carried through consecutively (Project member).*

After the introduction of the bible and the implementation of SAP, Case B conducted a quantitative evaluation on the progress of the implementation of BRA. This evaluation was a survey carried out by the business unit with the help from a research group. The focus in this survey was to assess how well the organization understood the new strategy, if they had received enough information on BRA, and if they worked according to the new principles. The results from this survey were presented by the research team in such a format that Case B had problems with understanding the meaning behind the numerical figures. They wanted the results in such a format so that they were able to assess the answers to the questions they were seeking. Thus, the implementation group felt that they could not use the results at this time and asked for a new evaluation that would give them direct feedback on the progress of the implementation of BRA. This time in-depth interviews in evaluations were used as means to assess progress and another research group was given this task.

Two separate evaluations of this character were conducted in phase two of the implementation of BRA in Case B. Here interviews of employees, middle management, management groups and former project members were conducted. The aim was to evaluate how well Case B had succeeded in implementing BRA and how the different levels and parties in the organization viewed this. In this respect the results showed that

there were different opinions about BRA and the implementation process depending on the respondents' position in the organization. The results from these two evaluations were used by the management group as input in their work with defining the further implementation process of BRA. The evaluations together with the survey conducted earlier were also to be used as input to the "one year" evaluation.

Yearly Statoil conducts a working satisfaction evaluation (AMOU). This is a survey sent out to all employees that includes questions on working conditions, satisfaction, motivation, relation to management, security aspects, etc. The results from the survey in year 2000 with respect to Case B were quite low (document). In fact they were so poor that it created concern in the division. However, at the time the results were available to Case B, they had already made plans as to how they would pursue with the change process. It was believed that the poor results were caused by the turmoil that already existed in the organization due to the ongoing change process.

> *We had expected low results, but these are lower than what we could have foreseen. (Interview)*

The *"one year" evaluation* was conducted in what I have defined as phase three of the implementation process in Case B. This evaluation was conducted exactly one year after the Bible had been introduced to the organization, and already at that time, the organization was promised an evaluation on the progress of implementing BRA. A working group broadly representing the organization gave the criteria and method for the evaluation, and they delivered their report one month before a new group actually conducted the evaluation. The result from this evaluation was mainly that the organization was criticized for not having conducted a consequence analysis of the Bible that resulted in a document that reflected *"an implementation process that lacked a unified management group, plans, clear goals and evaluation parameters"* (document). Thus, the one-year evaluation report strongly recommended the development of a new OD plan containing revised goals and plans for implementation.

The evaluation report gave a foundation for the management group in Case B to continue to define the revised organizational structure for the division. An outline to this structure was due in February 2001. At this time it was clear that the teams were to

continue to exist, but two main aspects with regards to the then present definition of teams would be changed: (1) administrative roles should no longer be included in the teams and (2) the responsibility for the resources would be given back to the middle management. The revised organizational model was presented to the company steering committee (BU) the following month. The management in Case B was responsible for the development of this structure. However, before a final decision could be made, the business unit had to do a consequence analysis of the proposed organizational model.

Finally, yet another task group, also broadly representing the organization, were given the task of doing a *consequence analysis* of the new OD document (that proposed a new organizational structure for Case B). The main focus was to identify consequences of the proposed organizational structure, such as pros and cons, as well as possible limitations and risks related with the new structure. Based on this evaluation, minor corrections were made to the OD document that in turn was acknowledged by BU (business unit committee). The new organizational structure was to be implemented shortly afterwards, but by that time we were no longer doing research in this business unit. An outline of the different evaluations conducted throughout the implementation process in Case B is given in table 6.2. This table illustrates at what phase the different evaluations were conducted, as well as who were responsible for the evaluations.

Table 6-2   *Evaluations conducted during implementation in Case B*

	Phase 1 Feb. 1999 – Jan. 2000	Phase 2 Jan. 2000 – Aug. 2000	Phase 3 Sept. 2000 – May 2001
BRA program	As-is-to-be assessment Profit case		
Business unit		Quantitative evaluation	1st Qualitative evaluation 2nd Qualitative evaluation One year Evaluation Consequence analysis

6.4. Late implementer: Case C

Case C was one of the last divisions within Statoil to implement the BRA program, and because of this fact we found it interesting to study a late implementer as we had already studied an early implementer (Case A). Case C started to enquire and learn about BRA as early as fall of 1998. In the fall of 2000 new working principles and SAP were implemented in the business unit. Case C had, in the time before they became online with SAP, used much time and resources to plan and prepare for the organizational consequences due to the BRA implementation. Within Statoil, Case C was known to have strong opinions about the BRA program and it was even known that they planned to not implement the changes in the way as outlined by the BRA program. Case C's ambitions as to how far they would pursue with the organizational changes, were lower than what was the strategy of BRA. Case C was clear and open about their views and plans for BRA, and the division acquired a reputation in Statoil for being extremely conservative.

Case C is walking backwards into the future. (Case B - change agent)

Given this knowledge about Case C made this division interesting as a research site. The rest of this part will describe the evaluations conducted in Case C during the implementation of BRA.

Description of Evaluation methods in Case C

Case C is the business unit in this study that conducted the most evaluations during their implementation process. They conducted a number of different ways of measuring progress during the process, and some of these evaluations were planned for in advance, as one activity amongst others in the implementation plan for BRA in Case C. Like the former two cases, there were evaluations at two different levels in Case C with respect to the implementation of BRA. These were the *as-is-to-be evaluation* and the *profit case*. Representatives from the BRA project conducted the organizational assessment of Case C in the fall of 1999. The organizational assessment was a gap analysis of the readiness of Case C to implement the BRA principles. These are BRA's assessments of Case C, which may not be in conformity with Case C's own evaluation. The purpose with the organizational assessment was to establish a reference frame that indicated the gap between the present organizational structures in Case C compared to the BRA

principles. Potential areas of improvement were presented, since it still remained to do a consequence analysis as well as an economic assessment. The results of the organizational assessment should be input and help in the coming change program in Case C, and the evaluation should indicate how far Case C had left to go before they would reap the benefits as calculated in the *profit case*. The profit case was also in this business unit conducted by representatives from both their own division and the BRA project.

At the same time as the BRA representatives were engaged in the above evaluations, two task groups were established consisting of representatives from Case C. These two groups were; (1) *working processes for operations and maintenance* and (2) *system-and team grouping*. The purpose of the first group was to compare existing working processes in Case C with the defined working processes from BRA. The purpose of this second group was to suggest how the organization of integrated teams fitted into the new working processes from BRA as well as define what system each team would be responsible for. A reflection made here, as will be further discussed in chapter eight, is that the analysis, both those conducted by the BRA project and those carried out by Case C, are quite similar in content.

Based on the two reports from respectively the task group working on common working processes and the group developing integrated team and system division, the BRA project group at Case C was to deliver a report on the implementation plan of BRA in the division. The report for the implementation plan in Case C described a four-step model for implementing BRA in the business unit. Concluding the fourth step would mean that Case C would have implemented fully integrated teams and the middle management would no longer exist. The time used for reaching step four would be relatively short, approximately 2 years, varying to some degree amongst the three platforms.

After the management group approved the first implementation plan, the next step in the process was to do a *consequence analysis* of the implementation plan. The overall goal with the consequence analysis was to get an acceptance for the original implementation plan for BRA at Case C. This would then make Case C ready to start full implementation of BRA. The purpose with the consequence analysis was to detect all

the consequences for Case C from implementing BRA in the organization. The consequence analysis was especially to focus on the consequences the new organizational form would have on security and the working environment. Further the consequence analysis was also to include an assessment of the changes in responsibility for working principles from introducing new steering principles. In this analysis, aspects that were both for and against the new organizational structure were to be discussed.

In the startup of the evaluation it was a group of eight people that were either from the BRA project or from the business unit who were to conduct the analysis. However, as the work with this evaluation proceeded, more and more people got involved and in the end approximately 80 people had been involved through various task groups. In spite of the fact that the group was given a clear mandate where the focus should be on assessing both positive and negative consequences of the changes outlined in the former assessments, on what changes should be carried through in order to become a BRA organization, the group did not follow the guidelines of the mandate. The report contained mostly negative assessments of aspects, and potential economic gains were weighted low. The consequence analysis was a measurement of the temperature in the organization of BRA, and as the result showed, there was an overwhelming majority that had no confidence in the change program. Although the report was negatively focused and did not fulfill the mandate, the management did not find it worthwhile to get the group to do a better job.

> *The quality of the work with the consequence analysis is technically a failure. The group working on this was just concentrated with the negative aspects and uncertainties. (Middle manager)*

> *The consequence analysis was an accumulation of arguments reflecting frustration and personal opinions of those working with the analysis. (Middle manager)*

Based on the results from the consequence analysis in Case C, the management decided not to pursue the first implementation plan. The report from the consequence analysis was discussed in the management group in Case C in June 2000. The result from this meeting was that they recommended that a new revised implementation plan had to be developed. The revised implementation plan was then decided upon in August 2000 in the management group and in BU.

As an attachment to the corporate AMOU survey, which Statoil conducted in the fall of 2000, Case C developed some additional questions that were only of concern to this business unit. The results of this *local AMOU survey* were used as input in the decision making process on how to proceed with the implementation of BRA. The scores from the local AMOU survey were quite good and the management used this result as an argument for not proceeding too quickly with the further implementation process.

In phase three of the implementation process, Case C conducted an evaluation where the purpose was to assess if the organization was qualified to receive wage group H. This wage group represented an increase in wages for offshore workers similar to those described in Case B. The local task group (the IBD group), consisting of union members that represented the employees in Case C, was appointed to evaluate the progress at this point in the change process. IBD was another change program that only affected the upstream environment and promised a pay-raise if the principles in this strategy were implemented by the organizations. The task group was to design an evaluation that would give feedback on whether or not the employees have started to work by the BRA/IBD principles. If the evaluation proved that this was the case, then the offshore workers would receive the pay-raise. Table 6.3 describes this evaluation with respect to the purpose and method as well as the results of the evaluation.

Table 6-3   *Main activities in the March evaluation*

Process
• It was determined early in the process to have two evaluations during the implementation process, where the March evaluation was one of these.
• Case C committed them selves to the central IBD group to carry through with the evaluations.
• Case C appointed a local IBD group that would be responsible for the evaluation.
• Four representatives from the unions were appointed to this group and the group was lead by the project leader for local BRA team.
• The local IBD group designed a questioner that contained questions concerning the IBD principles.
• 100 employees that covered all three platforms responded to the questioner.

Result
• It was only the employees that are eligible to receive wage group H and therefore only they were to respond to the questioner.
• The results were satisfactory and wage group H became effective retrospective in time from June 2000.

The next evaluation carried through in Case C was a *qualitative evaluation* where the aim, as in Case B, was to assess how well the business unit had succeeded in implementing BRA. Here the opinions from people representing different levels in the organization were asked about their opinion on the implementation process as well as the BRA strategy. The results were given to the management group and could be used as input to the ongoing implementation process.

The final evaluation conducted in Case C during our research in the business unit was the *November evaluation*. Here the aim was to do an evaluation of Case C one year after they became online with SAP. This was going to be an extensive evaluation of the process with respect to how well they had implemented BRA in the organization, the costs connected to the implementation, and the organizational consequences. An internal task group was also appointed for this evaluation and the members represented both the management in Case C as well as the employees. In this evaluation the group interviewed members in the organization and used this data together with results from former evaluations such as the March evaluation and the local AMOU evaluation as input in their assessment of progress. The November evaluation on progress of the implementation of BRA was formally the last activity in the implementation process. The results from the evaluation were to be used as guidance in the future organizational development activities, which from now on was the responsibility of each functional area within the business unit.

In addition to the formal measurement activities, Case C has had a number of more informal ways of measuring progress during implementation.

> *We have tried to be flexible and put in extra resources in areas where there have been problems... We have also paid attention to comments from the organization given during the process. (Implementation team)*

Some of the more informal ways of measuring progress during the implementation process is listed in table 6.4.

Table 6-4   *Informal Evaluation methods*

- Listening to the organization
- Management inspections on the platforms twice a year
- Committees on the platforms that reports to BU
- Steering group for BRA
- Management meetings on the platforms where BRA is discussed
- Manages the project through the budget
- Project plan

Table 6.5 shows an overview of the different evaluations of progress that were carried through during the implementation process in Case C. These evaluations are illustrated as to when they were conducted in the implementation process and who was responsible for the respective evaluations.

Table 6-5   *Evaluations conducted during implementation in Case C*

	Phase 1 Dec. 1998 – April 2000	Phase 2 Mai 2000 – Feb. 2001	Phase 3 March 2001- Dec. 2001
BRA project	Profit case As-is-to-be		
Business unit	Working processes System and team grouping	Consequence analysis Local AMOU	March evaluation Qualitative evaluation November evaluation

6.5. Conclusion: Three Typologies of Evaluation

A number of different evaluation methods were, in the previous sections, identified through the description of the three business units. The evaluation methods used varied over time within each business unit and there were also different methods used across these cases. Within the business unit there was variation with respect to the fact that different evaluation methods for assessing progress were more or less used each time. Comparing the evaluation methods used across cases reveals that there was a variation in number of evaluations conducted, the purpose, and how the results were used. However, these are issues that were only briefly mentioned here, but will be more thoroughly discussed in chapter eight.

From the observations and analysis on how Statoil measured progress during the implementation of BRA, similarities amongst the different evaluations were identified. Each evaluation method was treated in a sense as an individual case and this opened up for grouping the methods into categories based on similarities with respect to *purpose of evaluation* and *use of results*. These groups of evaluations are here labeled as the following typologies of progress measurement: *seeking the path*, *assessing the consequences*, and *seeking the truth*. These typologies of evaluation are defined in table 6.6 and illustrated by empirical examples.

Table 6-6   *Typologies of Evaluation*

Type of evaluation	Definition	Empirical example	Phase	Level	Method
Seeking the path	Assessing the status of the organization at present. For then determining where to go and how to get there.	Case B - As-is-to-be	1	Corporate	Work group
		Case B - One year evaluation	3	BU	Work group
		Case C - As-is-to-be	1	Corporate	Work group
		Case C - Working processes	1	BU	Work group
		Case C - S&L	1	BU	Work group
		Case C - March evaluation	3	BU	Survey
		Case C - November evaluation	3	BU	Work group
Assessing the consequences	Assess potential benefits and organizational consequences.	Case A - Profit case	1	Corporate	Work group
		Case B - Profit case	1	Corporate	Work group
		Case B - Consequence analysis	3	BU	Work group
		Case C - Profit case	1	Corporate	Work group
		Case C - Consequence analysis	2	BU	Work group
Seeking the truth	Assessing the employees view and understanding of the implementation process.	Case B - Probing the org.	2	BU	Survey
		Case B - Probing the org.	3	BU	Interview
		Case B - Probing the org.	3	BU	Interview
		Case C - Probing the org.	3	BU	Interview

The first type of evaluation method, *seeking the path*, is a type of evaluation where the organization conducts an assessment of the present status of the organizational structure and through comparing these results with the strategy; tasks necessary to conduct in order to reach the goals of the strategy are then identified. The second type, *assessing the consequences*, refers to evaluation methods where the aim is to calculate potential gains and costs by implementing the strategy or assessing the consequences for the organization in terms of new structures and how this again will affect the employees in terms of new job definitions, redundancies, etc. Finally, the third type, *seeking the*

truth, refers to evaluations that are conducted with the aim to get a true understanding on how the members of the organization view the new strategy, their perception of it, how they adapt to it, and how well the strategy has been implemented by assessing if the organization works according to the new processes as described in the strategy. Table 6.6 shows an overview of the three typologies together with a definition of each type. Empirical examples are then given for each type.

Each type of evaluation in table 6.6 is illustrated with empirical examples from all three cases in this study. Each evaluation can here be looked upon as one case and looking back at table 6.6 a total of 16 evaluations were conducted including all three business units. The numbers of evaluations were more or less equally divided amongst Case B and Case C, as Case A only conducted one of these evaluations. Further, one will see from the table that the evaluations were mainly conducted in the early and later phase of the implementation phase. In table 6.7 an overview of the number of evaluations conducted in each business unit is illustrated.

Table 6-7   *Types and time of evaluation*

	Early phase	Middle phase	Late phase	Total
Case A	Type 2			1
Case B	Type 1 Type 2	Type 3	Type 1 Type 2 2 x Type 3	7
Case C	3 x Type 1 Type 2	Type 2	2 x Type 1 Type 3	8
Total	7	2	7	16

For the first type (T1), seeking the path, there were a total of eight evaluations carried through that is characteristic of this evaluation type. From the table we can see that T1 evaluation will either take place in the early phase of the implementation process, or towards the end of the process. The evaluations are either carried through by the BRA project (corporate) or the business unit (BU), and the evaluations were conducted through surveys or working groups. The working groups in this case gathered the necessary data through different means that were needed as input in order to do the evaluations. For the second type (T2), assessing the consequences, there are a total of

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five evaluations of progress that are characteristic of this type. This type of evaluation is mostly also conducted either early or late in the implementation process. Both the corporation and the business unit conduct this type of evaluation, but as the table illustrates, the corporation is only responsible for evaluations that are conducted in phase 1. This is the case for both T1 and T2 evaluations. The last type of evaluation (T3), seeking the truth, takes place mostly in the last phase of the implementation process. These evaluations are conducted on the business unit level and the means used in T3 evaluations are either surveys or interviews.

These three typologies of evaluation methods will be further discussed in chapter nine. Here the use of the typologies will be further discussed with respect to under which conditions it will be most likely that each method will be used. However, first of all there will be a description of the context and the content of the strategy of the respective business units. The focus in this description will be on whether or not there are circumstances present in order for power to be used during progress measurement in the respective business units.

7. Conditions for Use of Power in Organizations

In the former chapter we saw that an organization during an implementation process used several different approaches to and methods of progress measurement. The methods used varied also within each business unit with respect to content, number of times evaluations took place and who were responsible or involved in the evaluation processes. Finally, the descriptions also illustrated the different use of the evaluation results. The empirical illustrations on how companies actually conduct progress measurement deviates with the prescriptions on how to conduct progress measurement given by the strategy literature (see chapter 3). Hence, in this thesis it is shown that there is a gap in what the literatures prescribe as sound methods of evaluation and methods actually applied by the organizations. Why is this? Why do not organizations use the quite easily accessible information on progress measurement and adapt it to their organization? In order to answer the third research question of this thesis; what factors influence how organizations measure progress and use the results, we need to look into organizational theories in order to help us explain the mechanisms that take place when organizations are going trough major change processes. Pettigrew (1985) found from a study on organizational development that such programs are particularly vulnerable to adversarial political tactics. Hardy (1994) claims that a successful organizational change involves more than the will and determination of a particular individual or group, in fact "*change is a political act which needs power to make it happen*".

Hence, in order to understand the empirical findings on how organizations measure progress during OD program it is necessary to probe the literature on power in organizations. Through applying theory on power in organizations I will be able to understand and explain the mechanisms that take place when organizations measure progress and in that respect detect explanatory factors to why there were such differences in measurement methods as described in the former chapter. Power in organizations will be used in order to understand why we find that organizations do not use one, but in fact several different approaches as well as methods to evaluations during change processes. In chapter 4 a tentative research model was presented and here it was argued that in order to understand how organizations evaluate progress during change programs one have to understand the content, which is the strategy and the goals of the specified program, the context, which is the implementation environment, and

finally the implementation process. Thus, in order to answer the third research question of this thesis, I will in this chapter use the perspective on power in organizations as a mean to detect explanatory factors within the context, content and the process of each business unit. This is a working model, as illustrated in figure 7.1, which will serve strictly as guidance for the outline of presenting the discussions and analysis in this chapter.

Figure 7-1   *Explaining the process of evaluation*

Power in organizations		The change process:
- Conditions for power to exist	→	- The strategy - Implementation environment
- Use of power		- Implementation process - Impact
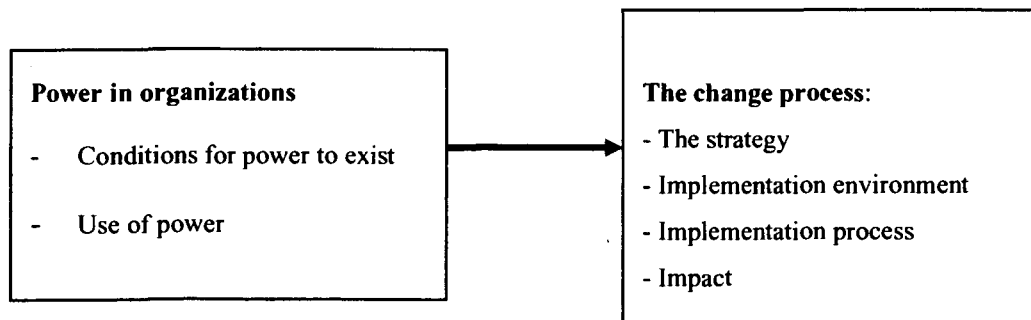
In this chapter, each business unit will be described and analyzed with respect to the environment of the unit (context) and how the respective units defined the strategy (content). In chapter nine, the implementation process within each time phase of the respective units will be analyzed. The <u>focus</u> in this analysis will be on <u>whether and how power was used</u> by the involved parties in this change program; Statoil the corporation, the BRA project, and the business unit (referred to as case A, case B or case C), and how this <u>affected the evaluations</u> conducted during the implementation process. The outline and focus of the analysis of the cases is illustrated in figure 7.2.

Figure 7-2   *The outline and focus of the analysis of the cases*

	Phase 1	Phase 2	Phase 3
Content			
Context	How different groups use power: • Statoil • BRA project • Employees		
Process			

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Context, content, and *process* are factors that are deemed as very important in the research on strategic change, and in fact Pettigrew (1985) states that "*the research on strategic change should involve the continuous interplay among ideas about the context, the process and the content of change, together with skill in regulating the relations among the three*". The contextual factors such as power and politics, and culture are defined as the inner context of the firm in addition to organizational structure, technology, and product or service. In accordance with Pettigrew (1987) there are two aspects of context to consider in change processes: the inner and outer context of the firm. Outer context refers to the economic, business, technological innovations, and political and societal formations in which firms must operate. Drawing on inner and outer context of the firm in the analysis will give a better understanding of what, why, how and when changes occur when seen in relation to these contextual factors. Content is the definition of a strategy and goals related to that strategy. The process of change refers to the actions, reactions and interactions from various interested parties as they are going through the implementation process (Pettigrew, 1987). Thus, the "how" of change can be understood from an analysis of the process.

However, this chapter starts with a discussion on the conditions that must be present in an organization in order to use power. This discussion will be with respect to whether there are conditions for use of power present (1) in the environment of the change program and (2) during the definition of the strategy. In chapter four five conditions that must be present in an organization in order for power to be used were identified: disagreement on goals, interdependency, scarcity of resources, importance of strategy, and distribution of power (Pettigrew, 1973; Pfeffer, 1981). The analysis of the environment of each business unit will be with respect to interdependency, scarcity of resources, importance of strategy, and distribution of power. While the analysis of the strategy of each business unit will be with respect to whether or not there are disagreement on goals within the business units or between the units and the BRA project.

7.1.   Contextual Conditions for use of Power

In this part a description of the organizational environment of all the three business units that represent the cases in this thesis will be given sequentially. The focus will be

on describing and analyzing the environment of each business unit in order to detect conditional factors for power to be present within the respective business units. There are two aspects of the environment that should be considered and these are referred to as the inner and outer contexts of the firm: "*Inner context refers to the structure, corporate culture, and political context within the firm through which ideas for change have to proceed. Outer context refers to the economic, business, political and societal formations in which firms must operate*" (Pettigrew, 1987). Particular emphasis in this part will be on describing how power is present in each case, how power is dispersed within the business units and how this changes over time.

There are several conditions, as discussed in chapter six, for use of power that must be present in an organization in order for power to exist (Pettigrew, 1973; Pfeffer, 1981). The conditions that may be present in a business unit's inner context are: *interdependency, scarcity of resources, importance of strategy*, and *distribution of power*. In all three business units there existed a division of work within the organization, which in accordance to Pettigrew (p.17, 1973) creates sub-units: "*These sub-units develop interests based on specialized functions and responsibilities*". When such sub-units are exposed to changes they may be affected in various and different ways, and this influences how each sub-unit reacts to the changes. In accordance to Buchanan and Budham (1999) to study the enabling and constraining characteristics of the substance and context of change, may provide a useful platform for research into political agendas. People in the organization tend to base their understanding of another individual's or group's power on general contextual factors, such as structural position or network centrality, rather than on characteristics of the unit itself (Fiol et al, 2001). In this part each business unit will be described with respect to the four conditions in order to analyze if power was present in the respective business units and how it was dispersed between different sub-units in the organization.

At the start of the implementation of BRA in the respective three business units the management in each case generally looked upon the BRA project as an *important strategy* that would contribute positively to the performance of each business unit. All the three business units stated that they saw BRA as an opportunity to cut costs, which again would increase overall business profits, as this was their main goal.

We desperately need to cut costs as we historically have had bad results.... BRA will help us to achieve this. (Management, case A)

The business unit has a reputation as being the most efficient unit in the organization The BRA project will help us to cut cost even further and we will take this opportunity to become even better. (Management, case B)

The BRA project will help us in the process of cutting costs and becoming more efficient, but we will only implement the parts of BRA that we find worthwhile. (Management, Case C)

As stated in the above citations, all the three business units looked upon the BRA project as an *important strategy*. The management in the respective cases all expressed that the BRA program would make it possible for their business units to cut costs and become a more efficient organization. This is one condition, present in a business unit, for use of power in organizations that has been fulfilled. However, as we will see in the following parts, the perception of the BRA project changed over time both within the management group and amongst the employees in the business units. A further description of the presence of conditions in each business unit's context will be given in the following parts.

7.1.1.   Contextual Conditions for use of Power in Case A

As described in chapter five, this business unit is a rather old organization within the Statoil Corporation. Historically, Case A has always had focus on costs since their costs had been and still were relatively too high. Due to large investments in the expansion of the refinery in the 1980s, the organization had to take on some major financial losses. The investment became much more expensive than had been estimated and the overdraft received much attention amongst the public. Since this time Case A had always struggled with the business results and their focus was very much on cutting costs. Because of this the business unit wanted to be an early implementer of the new principles as the program was looked upon as an opportunity to rationalize and make the organization more efficient. They were the first business unit in Statoil to implement the BRA program.

We wanted to be the first business unit to implement BRA as we hoped that this would help us to decrease our costs (Management).

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In the first phase of the implementation of BRA in the business unit the BRA strategy was well anchored amongst Case A's management team. The main objective of BRA was to rationalize and cut costs in the organization, which was also the management in the business unit's main concern. In order to improve their competitive position case A needed to focus on their costs. Thus, this created *interdependency* between the business unit and the corporation.

The second phase of implementation of BRA in Case A is characterized as period where the business unit tried to interpret the strategy as well as rewrite the strategy in òrder for it to match with their business context. In this phase the business unit starts to question the content of the BRA strategy. Between the BRA project and the business unit there is a difference in interests on which means to use in order to reach the goals.

> *The BRA project does not have any knowledge of our business environment... So how can they know how we should be organized (Management).*

Sub-units with differential interests make claims on scarce organizational resources (Pettigrew, 1973). In this case, the focus on cost reductions represents the *scarcity of resources*, and due to the conflict of interests on how to most efficiently reorganize the business unit, Case A took control over how they would proceed with the implementation of BRA. The business unit was in the position to do so because at the end of the day it was the management in Case A that would be questioned if the budgeted business results were not fulfilled. Hence, we find that there is a *distribution of power* within Statoil, and Case A used its power by redefining the strategy adapted to their needs as well as taking control of the implementation of BRA in the business unit.

In the last phase of the implementation of BRA in Case A, the business unit went into an alliance with an external business partner. This business venture influenced how Case A chose to proceed with the implementation of BRA and what parts of the strategy they chose to focus on. Although the organization had been involved in developing an organizational development plan for the business unit that encompassed the BRA strategy, the management finally chose do disregard this plan. Instead they went along with the external partner's plans for a new assessment of the organization, which they would base their new strategy on. The result of this new assessment was to focus only

on operations and maintenance (O&M) of the refinery, which only accounts for one of seven areas of the BRA strategy (see chapter five for a description).

It is within (O&M) that the largest potential cist savings exist... therefore we choose to focus our efforts on this area (Management).

7.1.2.   Contextual Conditions for use of Power in Case B

The second case in this study is an offshore business unit that has a relative young organization in terms of Statoil's history. It had approximately 260 employees working offshore and 80 people working onshore. The business unit's operations were supported by a flat organizational structure that consisted of few entities and with short organizational distances between the different entities. The leaders of the entities reported directly to the platform leader, as opposed to other platforms where there was at that time a position between these two levels. The philosophy behind the organizational structure in Case B was to create a *"competent and ambitious organization that seeks challenges and that is engaged in acquiring their goals"* (document). The onshore organization was established in accordance to an operation philosophy *"where everything that can be accomplished on land should be performed by land"* (document). The main purpose with the shadow organization (land organization) was to provide services to the offshore organization. This required that the land organization had thorough knowledge on the platform's organization as well as operations.

Case B was the first offshore organization to require that the employees offshore were multi-disciplinary. Multi-disciplinary includes that the employees had knowledge about other disciplines outside their main area of competence. The employees should be able to diagnose problems and perform simple tasks within different disciplines. This should ensure that all employees had a better and more holistic knowledge and understanding of the production in the business unit. The objective behind a flat organizational structure and multi-disciplined employees was to obtain a more cost-effective organization through less working-orders and fewer employees.

We (the business unit) have a reputation in Statoil for being successful in terms of having an efficient and adaptable organization (Management).

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Young employees who searched for a challenging and innovative working environment applied to come to work for us (Management).

The culture in the business unit could be characterized as an organization that was adaptable to change and eager to maintain its reputation as being the number one business unit within Statoil. It was believed that other business units would look upon them as a pioneer with respect to using new means for becoming more efficient. Thus, the BRA strategy was very positively received in Case B and they were eager to implement the strategy. Their main objective was to fully implement the BRA principles as they looked upon this program as a mean to become an even more efficient organization aiming to achieve good business results. The management in the business unit planed for full implementation of BRA that was to be implemented in a short time period of three months.

BRA was perceived as an *important strategy* to the management in Case B, as it was for Case A. BRA represented a strategy that would help the business unit to pursue their effort in minimizing costs. In the first phase of implementation of BRA the employees had an incentive to go along with the changes, as they would receive a wage rise. Hence, the condition for power to exist in case B is present with respect to *scarcity of resources*. The management's focus was to cut costs while the employees had the motivational factor of potential higher wages. Thus, there was also *interdependency* in this business unit both between the BRA project and the management, and the management and employees in the business unit.

In phase two of the implementation process in Case B, the employees received the promised wage rice. At this stage the strategy was only implemented on paper and one incentive given by the management to the organization no longer existed. The period followed can be characterized as a time where the employees and middle management were frustrated by what the BRA strategy would imply for the working conditions.

The whole offshore organization does not want these changes. They feel pressured into this (Middle manager).

The middle management doesn't say out loud that they are not in support of these changes, but we can sense that they are (Employee).

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People are against the changes. We used to have a good working environment and good results. People feel that the new organizational structure is a setback and therefore we don't see the point. We have problems with getting good arguments to why we are doing this (Middle manager).

From being in control over the implementation of BRA, the management in the business unit found themselves in a position where the organization were restrictive towards the new working processes as described in the strategy. The employees were in a position to directly influence the speed of the implementation of BRA. Hence, the management had lost its control and the power to proceed as planned. As we can see there has been a mobilization of power between the management and the employees, and it is therefore fair to make the conclusion that there was a *distribution of power* within the business unit. Chapter nine will further describe and analyze the use of power in the business unit and how this shifted between the different levels. We will also see that different sources to power were used throughout the implementation process.

7.1.3.   Contextual Conditions for use of Power in Case C

Case C was one of the last divisions within Statoil to implement the BRA program. The business unit was one of the oldest operational divisions in Statoil and had one of the oldest installations on the Norwegian continental shelf. Case C had a total of 900 employees, 800 whom had their work on the platforms. The remaining 100 were situated in the division's main office in Bergen. The average age rate of the employees in this business unit was approximately 40 to 50 years, which was high compared to the other operating divisions in Statoil. The business unit had a well-established organizational culture and classified itself as an autonomous entity within the Statoil Corporation. Case C looked upon them selves as being quite different from other divisions in Statoil. They thought of themselves as a very independent organization and chose therefore to do things in its own way. It was therefore a common belief in the management team that, also because of the size of the division and its long history, other divisions within Statoil look to the business unit to see how they chose to do things.

We are one of the big and important business units in Statoil... it is therefore noticed by others how things are done here (Management).

In 1995 the business unit implemented a flatter organizational structure. The role of the senior in the departments became more important. This is a middle management level that, because of the goal of an even flatter organizational structure, is now becoming redundant. Further in 1997 the focus was on downsizing and closer connection between land and platforms, which resulted in a 20% reduction in number of employees. This project had two goals: (1) establish integrated teams within professions across platforms, and (2) integrated teams across professions within different operations on the platforms. The focus of this project was quite similar to the BRA principles except that it was not a company wide program and in addition it was a bottom-up project driven by initiatives from employees.

The employees had a high standing within the division and the trade unions were their spokesmen. The management in the business unit had good relations as well as cooperation with the unions, and the unions were represented on various committees in the organization. The management in the business unit has had a tradition to include the employees in planning, which was also true for the BRA project.

> *The process evolving in the business unit is based on earlier experiences from cooperation with the employees (Management).*

Although there seemed to be open processes through great involvement of employees in the business unit, it was also commonly acknowledged that there were political activities between management and employees concerning how the process was to evolve within the organization. However, these activities were conducted in the open. From the analysis of the data from this case as well as based on the following citation, there was a *distribution of power* between different levels in the business unit.

> *There are political activities in the business unit, but these are conducted in the open – there is no hidden agenda (Management).*

One of the major goals of Case C was to achieve and maintain good working environment and safe working conditions. Health, environment and safety were ranked as one of the foremost goals in the business unit and in Statoil in general. Case C was skeptical to new organizational structure on the platforms, because it could have a negative effect on safety as well as on operational regularity.

The safety will never be good enough (Management).

No changes should have a negative effect on safety (Management).

The management in the business unit claimed that the employees were not very adaptable to changes. Because of the high average age rate in the division it was believed that the employees in Case C wanted a secure and established working environment. This was believed to have a negative effect on the success of the implementation of BRA in the business unit. There had not been enough recruitment of younger employees, and therefore they had started to look for people from a lower age group that were independent and could take responsibility in their work.

Today's employees do not adapt very well to changes. This will have consequences for the success of the implementation of BRA in the business unit (Management).

On the other hand we find that the business unit was concerned with maintaining the specific skills that had accumulated in the organization.

We will not do any changes that may have a negative effect on this pool of skills (Management)

As in the former two business units, Case C was also focused on cutting costs, which also in this case represents a *scarcity of resource*. The business unit started to enquire and learn about BRA as early as fall of 1998, two years before new working principles and SAP was implemented in the fall of 2000. Case C had, in the time before they became online with SAP, used much time and resources to plan and prepare for the organizational consequences due to the BRA implementation. However, in the spring of 2000 there was a turn in the plans for how fast and what aspects of the BRA strategy would be implemented in the business unit. At this time a new manager was appointed in Case C and was of the opinion that how far one would go with the implementation of BRA one would decide at one step at a time.

We will implement some of the aspects of the BRA strategy this year. Then we will do an evaluation and based on the outcome of this evaluation we will decide on how we will proceed and if we will implement more aspects of the BRA strategy (Director, Case C).

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Within Statoil the business unit was known to have strong opinions about the BRA strategy and it was even known that they planned not to implement the changes in the way as outlined by the BRA project. The business unit's ambitions as to how far they would pursue with the organizational changes were lower than the actual definition of the BRA strategy. Case C was clear and open about their views and plans for BRA and the division acquired a reputation in Statoil for being extremely conservative.

Case C is walking backwards into the future (Management, Case B).

Case C also perceived BRA as an **important strategy** and along with the former two business units, viewed the implementation of BRA as an opportunity to develop a more efficient organization.

> *The purpose with implementing BRA in the business unit is to develop an organization that in the future will be more competitive, increase the value added, and enhance the opportunity for personal development for every employee (Management, Case C).*

However, as will be discussed in the next part, Case C seemed more reluctant to fully embrace the BRA strategy. Although at first there was **interdependency** between all levels involved in the implementation of BRA in the business unit, the dependency on the BRA project decreased during the implementation process. BRA was perceived as a program to help them achieve overall goals, but compared to the first two cases the dependency on the BRA strategy seemed to be slightly less in Case C.

7.1.4. Summary of contextual conditions

In this chapter there has been a discussion on whether or not there are conditions present in the environment in order for power to exist respectively in the three business units within Statoil that are a part of this study. The four conditions that were of main concern here were: *importance of decision, interdependency, scarcity of resources,* and *distribution of power.* It has been shown that all three cases viewed the BRA strategy as an important decision as the aim of the strategy was mainly to contribute to a more efficient organization as well as reduce the overall costs. All three business units were already before the introduction of BRA focused on cost reductions and hence costs were viewed by all three as a scarcity of resource. With respect to the importance of strategy

as well as to whether there was interdependency between different levels in the organization, this varied across cases as well as within the cases with the passing of time during the implementation process. Table 7.1 illustrates how the conditions of importance of decision, interdependency and scarcity of resources are present within the three different business units.

Table 7-1   *Conditions for power to exist present in the context*

	Importance of decision	**Interdependency**	**Scarcity of resources**
Case A	Very important to begin with, but later redefined the goals.	Only in phase one	Focus on cutting costs
Case B	Important strategy for the management. Changed some of the goals in the later phase.	Present at the first two phases of the implementation process, but decreasing in phase two.	Management had focus on cutting costs. The employees were given a wage rise early in the project before BRA was implement-ted. Motivation to continue not as great.
Case C	Important strategy, but were quite conscious of what parts of the strategy would be implemented at given times.	A more cautious relation towards BRA, but at the same time used their expertise on the strategy.	Management had focus on cutting costs. Employees were promised a wage rise if the changes were implemented in the organization.

From table 7.1 we can see that all the three business units had a focus on cutting costs and this was prevailing throughout the implementation process. The three business units also viewed the BRA strategy as an important decision although it turned out that none of the business units intended to fully implement the strategy as defined by the corporation. All the three business units made changes to the strategy as each implementation process proceeded, and with the change in perception as well as opinion of the BRA strategy the dependency on the BRA project somewhat decreased.

In this part it is has also been shown how power was distributed between different levels in the respective business units. This was the fourth condition that must be present in an organization's environment in order for organizational power to exist. The distribution

of power between respectively the BRA project and the management, and the management and employees in the three cases is illustrated in figure 7.3.

Figure 7-3   Distribution of power
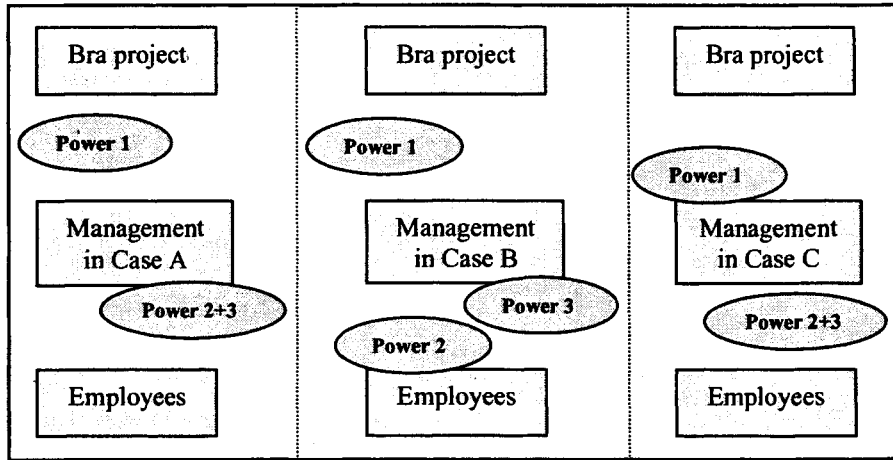
The distribution of power within each business unit is illustrated in figure 7.3 by depicting a power circle near to the level that at a given time holds organizational power. The number in the circles refers to the different phases in the implementation of BRA in the respective business units as described in this part. As for Case A we see that power is more or less distributed equally between the BRA project and the management in the first phase of the implementation process. In the remaining two phases it is more or less the management in this business unit who controls the further implementation of BRA. Hence, there was a mobilization of power in the business unit that resulted in a process where the management was in control of what was being implemented.

In the second business unit, Case B, power was also more or less distributed equally between the BRA project and the management in the first phase of the implementation process. In phase two however there had been a mobilization of power where the employees were now in control of how the implementation process was proceeding. The distribution of power changed yet again in phase three where the management in the business unit mobilized their resources to gain control over the process and the definition of the goals. The last business unit in this study, Case C, was in the early phase of the project much aware of what parts of the BRA strategy they would implement and hence they mobilized power to be in control of the process. The employees were active in the remaining phases of the implementation process and had

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here mobilized some degree of power, but different from Case B, this distribution of power was intently given by the management in Case C.

The further analysis of how power was mobilized and used by the different levels in the respective business units will be given in chapter eight. The focus will be on how the use of power influenced how the business units measured progress and used the results. However, this chapter will proceed with describing whether or not there is *disagreement on goals* between different levels in the respective business units, which is the fifth condition for use of power that must be present in an organization in order for power to exist.

7.2. Conditions for use of Power in formulation of Content

In this second part of the description and analysis of the cases the focus will be on the content of the strategy and detecting whether or not conditions for use of power are present in the respective business units. Here the focus will be on disagreement on goals, which is by Pfeffer (1981) presented as one important issue that should be present in an organization in order for use of power. Each business unit will be analyzed sequentially with respect to this condition and the focus here will be on detecting whether or not we may expect use of power in the respective cases. As discussed in the former part it is vital to prove that power exists before we can move further and analyze how power is used and finally how this affects the evaluation process.

Strategy is the organized activities that are to be imposed in the organization, and is essential in order to generate the desired changes (Pettigrew, 1987). It is important to design the strategy within a structure that will allow for a systematic evaluation of the strategy process and outcomes (Chen, 1992). *"Serious disagreement among people with differing points of view are more likely to emerge in the absence of clear objectives or in the absence of an external threat or competition sufficient to cause subunits to work together"* (Pfeffer, p. 43, 1992).

Defining the goals of a strategy serves many functions in an organization besides stating what changes are to be imposed. According to Chen (p. 90, 1992) the organizations have political agendas when setting the strategic goals. Functions such as (1)

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legitimizing the existence of the program, (2) binding political coalitions, (3) resource acquisition, can be regarded as political functions that takes place in definition of goals. Here there is a political arena where different stakeholders each influence the goals that then become the overall goals for a strategy process.

As described in chapter five, the overall corporate goals regarding the BRA project in Statoil were clearly defined and agreed upon amongst the top management team. These goals were further communicated to the organization and the respective business units. Each unit should implement the changes in accordance to the organizational goals. In the following parts there will be a description on how goals were defined and redefined during the implementation process, which proves that defining goals that everyone agrees to is not a smooth process. This uncertainty in goals as well as the frequent change in goals has also impact on how the organization evaluates progress during implementation.

7.2.1. Conditions for use of Power in formulation of Content in Case A

The preparation of implementing BRA commenced in 1997 and they had in January 1999 become online with the SAP system. The process of defining the strategy of Case A is described in three time phases. In the first phase of the implementation of BRA in case A there were *homogenous goals* between the management and BRA as well as between the management and employees in the business unit. A condition to use power in organizations is that there is disagreement on goals amongst different actors. This is not the case in the first phase of goal setting, but with the passing of time in the implementation of BRA the business unit's goals changes. However, in order to evaluate progress during implementation the first and probably most important condition for doing this is to have well-established goals. The problem in case A was that the goals changed over time and there was also a lack of consensus as to what the goals was. Thus, the fact that there is disagreement on goals triggers use of power in evaluation processes. Amongst whom and which levels in the organization these goals change will be the main focus in the rest of this part.

Phase 1

Although the main goals with respect to BRA was the same between the BRA project and the business unit, Case A had not established or defined the goals on how to achieve

this objective. The business unit's management was in consent with BRA to implement SAP, but was more uncertain on how to define the BRA principles so that they would be understandable with respect to their business context. In order to implement BRA the principles had to be more precisely defined in order to know how to exactly proceed in the implementation. In the preparation for the implementation of BRA in Case A, it was decided that SAP would be implemented prior to the planning and implementation of the BRA principles. An implementation team that consisted of both members from the corporate BRA group as well as employees from the business unit implemented SAP in the designated time period and with great success. Hence, case A had clear goals as to the IT side of the strategy and implemented these successfully.

It went very well with the implementation of SAP...Yes, in every aspect. They got very good marks for their work (Employee).

Case A needed to define the goals regarding BRA that complied with their own strategy and a former organizational restructuring program. Hence, the business unit needed to develop an action plan for the implementation of the organizational development part of BRA and the responsibility for this was given to an internal planning group staffed with employees from the business unit. The business unit wanted to be one of the first divisions to implement BRA and they had put aside the resources in form of liberating a group of employees to work full time on the project for at least one year. This group's main task was to work with the definition of the BRA goals for the business unit as well as preparing for the implementation process.

The local planning group's main task was to translate the corporate BRA goals into goals that were operationalized in terms of what case A needed to do in order to become a BRA organization. Translating the theoretical principles of BRA to practical goals proved to be a difficult task and much time was used on formulating strategies for this business unit. Thus, although their seemed to be a consensus in the organization (see context) that the business needed to cut costs, and SAP and BRA were means that could be implemented in order to achieve this, there was an uncertainty of what the consequences of the BRA principles were.

It has been difficult to get from goals on an overhead presentation to what this means practically and what consequences that changes will have on the organization (Local project-team).

Thoughts and philosophical practices that came from Stavanger (HQ) could have been to a greater extent anchored in the operative environment. Aspects with the solutions show that one works in-house with problems that should have been tested in the operative parts of the organization (Local project-team).

The local improvement group finally delivered a plan for further implementation of the BRA principles. This plan included all aspects with regards to BRA but was modified to comply with case A's former plans and activities. This plan was presented the business unit's management team. However, the management, although they had involved the organization in the development of the strategy (see process), had decided on how they would proceed with the implementation of BRA before the results of this process were given.

At the same time as the organization was working on the new strategy document, the business unit's management was in negotiations with a potential external partner. In order for case A to become more competitive they defined the most crucial place to cut costs would be within the area of operations and maintenance. This business partner, who now owned 20 present of the shares of the business unit, could deliver the right analytical tools (MERIT) as to assess the operations of this part of case A's business. As a result of that analysis they would, together with people from the organization, suggest the right strategy for case A to pursue.

We knew that MERIT would come. This analytical tool would give us the necessary help to focus on what parts of the business we needed to rationalize and cut costs (Management).

Although the management in case A involved many employees in the organization to work on the plans for implementation of BRA, the management completely decided the outcome of that process. The management had more information on what would come out of negotiations with an external partner and this information together with the formal position of the management, decided on the future directions for the business unit. Hence, the management in case A had developed *different goals* compared to the goals of the BRA project. Although the employees had been involved in the

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development of an organizational development plan, which implied changes according to the BRA principles and were let down by the management in the business unit when only a part of this document would be put in effect, the organization seemed to go along with the decision on focusing on O&M.

Conclusion:

In this part we have discussed the conditions for use of power in organizations. In sum, we can conclude with the fact that the two conditions; *interdependency* and *disagreement on goals*, for use of power in Case A are present. With respect to disagreement on goals, it was discussed how the condition of disagreement on goals influences how organizations measure progress. Since there is a lack of consensus in goals and the goals are changing over time, it will necessarily create difficulties when trying to evaluate the progress of the implementation process. Thus the fact that there is disagreement on goals in it self both implies that (1) power is likely to be used during implementation process and (2) that this has a direct effect on how the business unit evaluates progress. How the business unit evaluated progress was discussed in the former chapter. The illustration of how the goals changed over time is given in table 7.2. Here the goals respectively of the BRA project, the management of case A, and the employees in case A are described in three different phases of the implementation of BRA.

As illustrated in table 7.2 we see that the goals change over time as well as differ between the three different levels in this case. In the first phase we find that there is agreement *on goals* between all three parties. A minor exception here is the goals as conceived by the employees. They are clear on the goals with respect to SAP, but have a harder time to understand the implications of BRA. Thus, they are uncertain about what the goals are with respect to BRA. In phase two we find that there is disagreement *on goals* between all three parties. The goals of the BRA project remain the same for all phases, while the management's goals differ now from their original goals. The management goals also differ from those of the employees because the management had narrowed their scope while they at the same time instructed the organization to work on goals for all principles within the BRA program. In phase three the management sticks to their revised goals from phase two and the rest of the organization is scheduled to work towards these goals. Hence, in sum, we see that the goals moved from being

agreement on to disagreement on goals between the management and the BRA project, and from disagreement on to agreement on goals between the management and employees. These finding are illustrated in table 7.3. The findings will also be discussed further in the section of across case analysis.

Table 7-2   Goals over time in Case A

	Phase 1 Original content	Phase 2 Revised content	Phase 3 New analysis
BRA project	Full implementation of BRA principles	Full implementation of BRA principles	Full implementation of BRA principles
Management	Full implementation of BRA principles	Focus on O&M , partly implementation of BRA	Rationalize O&M
Employees	Implement SAP, but what is BRA?	Goals for each BRA principle	Rationalize O&M

Table 7-3   Difference in goals over time in Case A

	Phase 1	Phase 2	Phase 3
Management vs. BRA project	Agreement on goals	*Disagreement on goals*	*Disagreement on goals*
Management vs. employees	Agreement on goals with respect to SAP	*Disagreement on goals*	Agreement on goals

Table 7.3 illustrates when one should expect respectively use or no use of power. In accordance to Pfeffer (1981) one can expect the use of power in organizations when there is disagreement on goals between involved parties. With respect to Case A, we should expect to find that there is use of power during phase 2 and 3. In phase 2 there should be use of power both between the BRA project and the business unit as well as between the management in the business unit and the employees. Regarding the third phase we should only expect to find use of power between the BRA project and the business. How power is used during the implementation process is further discussed in chapter nine.

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From table 7.3 we should also be able to say in which phases one could expect the business unit to evaluate progress. The findings suggest that only in phase one where there were homogenous goals one could expect that the organization evaluated the progress. The other phases would be more difficult to measure as here there mainly disagreement on goals, which makes it difficult to know what to evaluate. As we saw from the outline on how Case A evaluated progress, we saw that this was mainly conducted in phase 1 and 3. Table 7.4 illustrates when the evaluations in Case A took place and a description of whether there were disagreement on or agreement on goals in the respective phases.

Table 7-4   *Evaluations and goals over time in Case A*

	Phase 1	Phase 2	Phase 3
Management vs. BRA project	Profit case Agreement on goals	Disagreement on goals	Disagreement on goals
Management vs. employees	Agreement on goals with respect to SAP	Disagreement on goals	*MERIT* Agreement on goals

7.2.2.   Conditions for use of Power in formulation of Content in Case B

In accordance to the corporate strategy, the second business unit in this study, referred to as Case B, started preparation for the implementation of BRA in spring 1999. New organizational structure was implemented in January 2000 while the SAP system was implemented in April 2000. Although the new organizational structure was formally implemented before Case B became online with SAP, the division had to continue to work with the organizational changes and as will be illustrated in this section, the business unit changed its goals as the process evolved.

Phase 1

When Case B started the implementation of the BRA strategy they first worked with the definition of the content of the BRA/IBD strategy and defined the goals for the business unit. The IBD program (the industries best operator) was only of concern to the up-stream divisions and the implementers of BRA comprised the two into one project. In

Case B the two projects, BRA and IBD, were treated as one project and thus the business unit refered to the BRA strategy as the BRA/IBD project. The main difference between these two programs was that with respect to IBD there was an incentive in terms of a wage raise for the employees if they managed to implement and work by the new working processes. Case B was eager to have a full implementation of the BRA/IBD principles and they thus planed for a full implementation of the strategy. When referring to BRA in this case description the IBD principles are also included.

> *The business unit has through its results been an example for other divisions within Statoil. The business unit's aim is to maintain this role and through achieving the BRA/IBD goals the division wishes once again to lead the way in the corporation. (Document)*

With respect to the management in case B they were reliant on BRA in order to achieve their business goals. At this time there was also a consensus between the management in Case B and the corporation in terms of the goals with respect to BRA. Thus, we find that the management in case B and the corporation has *agreement on goals*. The employees on the other hand were motivated by the incentives of higher wages, which an implementation of BRA would provide for. Thus, we also find that there are agreement on goals between management in case B and the employees.

The process of mobilization of power has not yet started to appear in this first phase of the implementation of BRA in case B. One condition for power to exist in organizations (Pfeffer, 1981) that was not present in this phase was disagreement on goals. In fact we found that in this phase there were homogenous goals between all three levels in the organization (BRA, management, employees) as to the goals of the strategy for case B, which was the same as for Case A in phase 1 of their implementation process.

Hence, in this phase we can conclude with the fact that BRA who represented the resources had both power over the management and employees in the business unit. BRA provided the knowledge of the strategy that the management in case B looked upon as a resource to achieve their business goals, and the employees were eager to implement BRA in order to achieve the wage raises.

Phase 2

In the beginning of this second phase (see case description in methodology chapter for definition of phases) the new organizational structure was implemented in the organization and the next few months were dedicated to the implementation of SAP. However, the new organizational structure was only implemented on paper as the organization was still trying to define how to work by these new principles. This phase was mainly a time period where the organization tried to understand the meaning and the consequences from implementing BRA. The management in case B sticks to the original goals, but employees were frustrated about the implications of BRA when they realized the implications of the strategy. The employees' perception of the goals of BRA is illustrated in the following citations:

> *BRA's goal is to cut costs...it is to simplify things in addition to lay off people working in administration (employee, case B).*

> *Become more efficient and lay off workers...a better administration that should result in a better organization (employee, case B).*

> *Nobody has been able to explain to me what the consequences or the effects of BRA (middle manager, case B).*

Much of the focus in Case B's strategy was on how to improve the working processes in the organization both with respect to the administrative working processes as well as the operational working processes. The citations above shows that the employees had the perception that the strategy had only implications for the administrative functions in the organization, which complies with the definition of BRA; better and faster administration. However, by also implementing the IBD principles the business unit developed a strategy that implied changes to the whole organization. When it became clearer to the employees that the focus was on the reorganization of the working processes in operations and maintenance, they became frustrated as to how the strategy would affect them. Hence, the employees no longer agreed with the management as to the goals of the change program.

Phase 3

Thus, based on the growing frustration amongst employees and middle management in the business unit in addition to an evaluation of the new organization after one year in

effect, the management in Case B decided that adjustments to the organizational structure had to be made. The business unit redefined its business goals but emphasized that their "*overall goal is to be the best operating unit in Statoil*" (document).

> *The management group believes in these new goals, and they express expectations as well as obligations to the ongoing process (manager, case B).*

The main difference in the revised content for the BRA implementation in Case B was the goal of implementing a matrix organization. The aim was to (1) have greater emphasis on resource management within the different disciplines and (2) at the same time develop task management in teams across disciplines. The resource managers would have responsibility for employees and development of their competence. Resource managers were appointed by discipline. In order to strengthen the focus on the tasks and development of teams, a resource manager and a team manager were appointed. These leaders did not have any responsibility for personnel.

> *The main objective at appointing leaders by two different axes is to strengthen the management of the employees' individual needs and development within their own discipline and competence level. In addition the objective is also to further develop each person's ability and chance to cooperate with others in teams in accomplishing tasks. (Document)*

In total the number of leaders in the revised content increased. The relationship between the offshore and on-shore organizations was strengthened through increased management rotations as well as through appointing members from both entities to the same teams. The management group reached these goals through a thorough process and the result of this process was that the management in case B developed *disagreement on goals* as compared to the BRA project.

Summary of strategy in case B

We have also in the description of goal setting in case B seen that the content of the strategy changed over time. With the change of goals, the business unit developed different goals of that of the BRA project in phase three of the implementation process. Already in phase two the employees developed different goals from both the management in the business unit and the BRA project. In phase three the goals of the employees complied with the goals of the management in the business unit. We know

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from the literature on evaluations that in order to evaluate a change program there is a need to have well-established goals. The fact that there also was a difference between the three levels in the organization as to what the goals were further complicates the picture. The change in goals over time so that there was a shift between disagreement on and agreement on goals between the involved parties implies that there were causes for use of power in the organization something that also would affect the evaluation process. The illustration of how the difference in perception of goals changed over time is given in table 7.5. Here the goals respectively of the BRA project, the management of case B, and the employees in case B are described in three different phases of the implementation of BRA.

Table 7-5   *Goal setting in Case B*

	Phase 1 Original content	Phase 2 Original content	Phase 3 Revised content
BRA project	Full implementation of BRA principles	Full implementation of BRA principles	Full implementation of BRA principles
Management	Full implementation of BRA principles	Full implementation of BRA principles	Partly implementation of BRA principles
Employees	Full implementation of BRA principles	Against full implementation of BRA principles	Against full implementation of BRA principles

In the first phase of implementation of BRA we see from table 7.5 that there were homogenous goals with respect to all three parties. In phase two we find that the employees had changed their perception of BRA and thus their goals differentiated from those of both the BRA project and the management in the business unit. The employees changed their conception of BRA from their experience on how the changes influenced them in their work. The changes that were in fact implemented had different implications than what they had expected. Finally, in the latter phase, the management in case B developed their goals to be more in compliance with the employees' goals (discussed in process). Thus, in phase three there are disagreement on goals between the management and the BRA project. These findings are further illustrated in table 7.6.

Table 7-6   *Difference in goals over time in Case B*

	Phase 1	Phase 2	Phase 3
Management vs. BRA project	Agreement on goals	Agreement on goals	*Disagreement on goals*
Management vs. employees	Agreement on goals	*Disagreement on goals*	*Disagreement on goals*

From table 7.5 and 7.6 we have seen how the different levels have perceived the goals in a similar and different manner during the implementation of BRA in case B. It was illustrated how the goals were either agreement on or disagreement on amongst the involved parties. These findings will have consequences for (1) the use of power during implementation and (2) how the business unit evaluates progress during the implementation process. With respect to the first aspect there are reasons to believe that there is use of power in both phase 2 and 3 due to the fact that it is in these phases there were disagreement on goals (Pfeffer, 1981). Finally, the fact that there is disagreement on goals will directly affect how the business unit evaluates the implementation process.

Table 7-7   *Evaluations and goals over time in Case B*

	Phase 1	Phase 2	Phase 3
Management vs. BRA project	As-is-to-be assessment Profit case *Agreement on goals*	Agreement on goals	Disagreement on goals
Management vs. employees	Agreement on goals	Quantitative evaluation *Disagreement on goals*	1st Qualitative evaluation 2nd Qualitative evaluation One year Evaluation Consequence analysis *Disagreement on goals*

As we saw from the outline on how Case B evaluated progress, we saw that this was mainly conducted in all three phases. Table 7.7 illustrates when the evaluations in Case

B took place and a description of whether there were disagreement on or agreement on goals in the respective phases.

7.2.3. *Conditions for use of Power in formulation of Content in Case C*

As in case B, case C also planed for the simultaneous implementation of both BRA and IBD, thereby combining the two sets of principles into one set of activities that were to be implemented in the business unit. In the original implementation plan for BRA in Case C the business unit developed a four-step implementation model. Here the BRA principles would be implemented in phases and eventually after four years of adapting to new structures case C would become a BRA organization. Although the business unit had developed an implementation plan that included all the BRA principles, the management was not certain that it would be suitable for them to fully embrace the whole strategy. They would in fact implement the strategy partly an in a step by step manner and after the first step they would do an assessment to see if it was suitable to proceed wit the remaining plans. Already in the first phase of the implementation process Case C did not comply fully with how BRA planed the implementation process. Hence, we find that there was agreement in goals between the business unit and those of the BRA project in the first phase, but the process on how one would proceed with the implementation differed between the two levels.

> *We will implement BRA step by step and will see in the future if it seems appropriate to implement all the principles (Management, case C).*

The original content and goals for the BRA implementation defined by the business unit was poorly received in the organization. There was a lot of disagreement as to how far one should go as to apply the BRA principles in Case C. The organization did not fully grasp the fact that the strategy would be implemented in a peace-meal manner and therefore they saw the last step in the plan as the goal for the implementation strategy. This resulted in a division between the employees and management where the employees developed different goals to that of the management. The management in the business unit decided that the original decision document would be adjusted. Case C would implement some of the BRA principles, but not in the extent as described by the central BRA program. Therefore a revised plan was made and short-term goals were defined.

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We wish to have a step-by-step implementation of BRA in the business unit where every step is decided upon as the process evolves. In the first round we wish to implement step two as described in the four-step model (Management, case C).

The purpose of the revised document, in phase two of the implementation process, was therefore to describe what one wishes to get support for in step two of the original four-step model for the implementation of BRA in Gullfaks. The main aspect in the revised decision document was that Gullfaks would not implement integrated teams, instead "situation determined teams" would be implemented. This was due to fear of losing the attachment to colleagues within the same trade with the result of losing specific skills. Situation determined teams are teams that appear when a task is to be conducted, while integrated teams are fixed teams that at all times are defined.

In table 7.8 the main differences between the original and the revised goals and content of the BRA program in Case C are outlined. As the table illustrates the goals for the BRA program in the business unit varies considerably from when the division first started to make their plans for implementation and to approximately one and a half-year into the implementation process. Originally Case C had clear intentions of fully implementing the BRA principles. However, this goal was changed as the implementation process evolved within the division. Due to much turmoil and restrictions from management, employees and unions the management decided to lower its ambitions as to how far one would go with the implementation of the BRA principles. The following table describes the main differences between the original content and the revised content.

Table 7-8   Comparisons of Original and Revised Content in Case C

Original Content	Revised Content
Goal: full implementation of BRA • Integrated teams • Flatter structure where the position as senior will disappear • Administrative roles	Goal: Partly implementation of BRA towards 2002 and afterwards Case C was uncertain of the next goal. • Situation determined teams • The senior role will be maintained • No administrative roles divided amongst employees

The content in the decision document shows clear goals with respect to the changes that are to be made in the organization. These goals apparently have support in the

organization amongst management, unions and employees, but there was still resistance to major changes. Although the goals with regards to the BRA project in the business unit were had now been defined, it was only the short-term goals. The short-term goals would be implemented in Case C by the fall of 2001. Case C would then do an evaluation of the changes made to the organization, and thereby decide on how to proceed with the change program.

> *We have acknowledged that we do not know how the business unit will look in three years time. (Management)*

> *We have found that in order to increase our profits, we must not strive for reaching the BRA/IBD goals. It will cost us too much. (Management)*

In Case C it was acknowledged that it would take several years before one would reap the benefits from the BRA project. However, the business unit saw that by enhancing the quality of the working processes the cost in operations and maintenance would be reduced. Reducing costs by increasing the quality in daily activities motivates employees to do things in a better way or in the right way the first time.

> *The profits for us are doing things right the first time. (Management)*

Conclusion:

Case C's goal was to develop a more competitive organization, increase the value added, and enhance the opportunity for personal development for every employee. The differences/similarities in goals between the BRA project, the management in Case C, and the employees are illustrated in table 7.9. From table 7.9 we see that Case C was at first in agreement on goals as compared to the goals of the BRA project, but as described in this part the business unit had different means as to how they would reach their goals. Further on in the implementation process the business unit changes its goals as to the implementation of BRA, which resulted in disagreement between Case C and the BRA project. Within the business unit there is disagreement on goals in all phases. In phase one of the implementation process there was a general opposition towards the BRA strategy. In phase tow and three the opposition has changed to reluctance towards the strategy as planed by the management in the business unit. The differences in goals are further illustrated in the table7.10.

Table 7-9   *Goal setting in Case C*

	Phase 1 Original content	Phase 2 Original content	Phase 3 Revised content
BRA project	Full implementation of BRA principles	Full implementation of BRA principles	Full implementation of BRA principles
Management	Full implementation of BRA principles	Step-by-step implementation of BRA	Step-by-step implementation of BRA
Employees	Against implementation of BRA principles	Reluctant to any changes	Reluctant to any changes

Table 7-10   *Disagreement on goals in Case C*

	Phase 1	Phase 2	Phase 3
Management vs. BRA project	Agreement on goals	*Disagreement on goals*	*Disagreement on goals*
Management vs. employees	*Disagreement on goals*	*Disagreement on goals*	*Disagreement on goals*

From table 7.9 and 7.10 we have seen how the goals between the three different parties involved in the change process changed during the implementation of BRA in Case C. The results illustrated in table 7.10 indicate that there are reasons to believe that there is use of power in all phases due to the fact that there was disagreement on goals between the involved parties. The fact that there is disagreement on goals will directly affect how the business unit evaluates the implementation process, and as we saw from the outline on how Case C evaluated progress, we saw that evaluations were conducted in all three phases. Table 7.11 illustrates when the evaluations in Case C took place and a description of whether there were disagreement on or agreement on goals during these evaluations.

Table 7-11   Evaluations and goals over time in Case C

	Phase 1	Phase 2	Phase 3
Management vs. BRA project	Profit case As-is-to-be *Agreement on goals*	Disagreement on goals	Disagreement on goals
Management vs. employees	Working processes System and team grouping *Disagreement on goals*	Consequence analysis Local AMOU *Disagreement on goals*	March evaluation November evaluation ' *Disagreement on goals*

7.2.4.   Summary of Conditions for use of Power in formulation of Content

In the description and analysis of the three cases with respect to content of the strategy and goals, it has been illustrated in this part that the goals changed over time within each case. Whether or not there was agreement or disagreement on goals across the three different levels (BRA project, management, and employees) changed also in the three different phases as used here to describe major events. In the following two figures, 7.4 and 7.5, it is illustrated how the goals either differed or were the same between respectively (1) the BRA and project the management in the business units (figure 7.4) and (2) the management and the employees (figure 7.5).

Figure 7-4   Goals: BRA   vs.   project management

Disagreement on goals	Case A	Case A
		Case B
	Case C	Case C
	Phase 1	*Phase 2*	*Phase 3*
Agreement on goals	Case A	
	Case B	Case B
	Case C	

Figure 7-5   Goals: management   vs.   employees

Disagreement		Case A	
		Case B	Case B
	Case C	Case C	Case C
	Phase 1	*Phase 2*	*Phase 3*
Agreement on goals	Case A		Case A
	Case B		

From figure 7.4 we see that all cases in phase one has the same goals as the BRA project. Case A and Case C developed different goals from those of the BRA project in

phase two of the implementation process, which was as situation that lasted throughout the project in these respective business units. Case B however only developed different goals to those of the BRA project in phase three of the implementation process. It is when there are differences in goals that one can expect that there will be use of power by the different parties involved in the implementation process. We should expect that power is used in the last two phases of the implementation of BRA, but this varies somewhat across the cases. Figure 7.5 illustrates a difference in goals in Case A and Case B respectively between the management in the business unit and the employees in the first phase of the implementation processes, while there was disagreement between these levels in Case C. However in the later phases it was found to be disagreement on goals between the two parties in all three business units with the exception of Case A where the employees developed the same goals as the management in the final phase. An analysis of how power is used by the different levels throughout the implementation process in the respective cases will be given in the following chapter.

7.3. Summary and conclusion

In this chapter an analysis of the presence of conditions for use of power in the three business units of this study has been given. The conditions that have to be present in an organization in order for power to be used were here either classified as contextual conditions or content conditions for use of power. The contextual conditions for use of power were further classified in the following categories: importance of decision, interdependency, scarcity of resources, and distribution of power. The content condition was here defined as disagreements in goals. In the analysis of the cases it was found that the all the contextual conditions were more or less present during the implementation process in the respective business units. However, how strongly these aspects of the content condition was present at all time varied both within the cases with the elapse of time as well as across cases. For example it was illustrated that the interdependency between the management in Case B and the BRA project was stronger for a longer time period than what proved to be the case for the other two business units of this study. The distribution of power also proved to vary between different levels within the cases over time. The change in power between different levels in the business units also varied across the cases as was illustrated in figure 7.3.

The content condition that had to be present in the business units in order for power to be used in the respective cases was here defined as having disagreements on goals of the strategy. As for the content condition it was also found that there was variation within the cases on how the presence of this condition changed during the implementation process between the different levels in the organization. At the beginning of the implementation process this condition was present in one of the three cases of this study. However, this changed in the later phases of the implementation process, and in phase three all business units were in disagreement as to the goals of the BRA strategy. It was also in this chapter illustrated how the goals differed between the management and the employees in the respective business units. It was in this chapter shown how there at first was agreement between the management and the employees in Case A and Case B. In phase two there was disagreement between the two levels in all three business units. This situation remained in phase three, with the exception of Case A where the employees now shared the goals of the management in the business unit.

Another finding in this chapter from the analysis of the difference in goals between involved parties is that there seems to be no pattern as to when the evaluations take place. In the strategy literature on performance measurement reviewed in chapter three it was here prescribed how one should first define ones goals and then evaluate according to the predefined goals. However, the findings from this study show that evaluations takes place in cases where there is either agreement or disagreement on goals. This is contrary to the theory on evaluation and in the next chapter an analysis of the process of progress measurement may shed light on how organizations can conduct evaluations when one is in disagreement on what the goals are. Thus, in chapter eight an analysis of what factors influenced how the different cases evaluated progress during implementation of BRA and how this also influenced the use of the results will be conducted. More precisely, an analysis of how power was used in the respective business units will be conducted in order to find explanations to how this influences evaluation processes as well as how the results are used.

8. Use of Power during Progress Measurement

In this chapter the implementation process of each case will be described and analyzed. The processes of the respective cases will be analyzed with respect to (1) how power was used during these processes and (2) how this influenced progress measurement. As we will see in the description and analysis of the implementation process each phase has its own major characteristics of how power was used and how the use of power differentiates between different groups over time.

As was discussed in chapter 7, shared agreement of goals implies that there is no likely use of power and politics in organizations. However, agreement upon goals alone is not a reliable index of political activity in a given situation, but "*agreement about how to do it is the key*" (Thompson, 1967; Pfeffer, 1992). There is still often intense political activity with respect to the means of reaching the goals. So, in addition to agreeing on the goals it becomes important to also agree on the process. Goals must also be conveyed and understood by the implementing entities and most often the goals have to be operationalized in order to fit with the respective business unit's strategy. Thus, it is often in the implementation stage that stakeholders begin to recognize problems with the strategic goals (Chen, 1990; Pfeffer 1981). In chapter seven we saw that the problems of understanding what the goals were started to appear for most cases in phase two of the implementation process. Disagreement of cause-effect relations and preferences lead to conflict and, potentially the use of power to resolve the choice (Pettigrew, 1973; Pfeffer, 1981). To determine who has power is to observe who benefits, and to what extent, from organizational actions (Pfeffer, 1992).

As presented in chapter four, there are many different sources for power in organizations (Pfeffer, 1992; Hardy, 1995; Brass & Burkhardt, 1993). However, it is not only important to identify the sources to power but also to understand the process of mobilization of power. The important aspect here is not only on who possesses power but also on how one uses power. The successful use of power is a matter of tactical skill rather than merely of possession (Pettigrew, 1973). Probing it, when and how power was used during the implementation of BRA should give insight to why organizations measure progress the way they do. Hence, the aim in this part is to detect explanatory

factors that answer the third research question of this thesis: *Which factors influence how organizations evaluate progress and use the results?*

Each case will now be presented and analyzed with respect to use of power in the implementation process of BRA and how this affected the evaluation processes. The theory on power in organizations that was presented in chapter four will be used in order to detect explanatory factors to why the business units evaluated progress the way they did as described in chapter six. First of all there will be a within case analysis over time. The focus here will be on detecting how power was used under the implementation of BRA in the respective business units. Secondly, an analysis across cases will probe into the major findings.

8.1. Use of Power during Implementation process in Case A

Case A was the first business unit in Statoil to implement the BRA strategy and as described in chapter six and seven the business unit was quite eager to implement the strategy. The BRA strategy was looked upon as a tool to cut costs, which was something the business unit historically had been aiming at. The strategy was therefore well anchored amongst the management in the business unit. Actions that support this view is for example giving up resources in an early phase in order for representatives from the business unit to take part in the central project group in order to learn as much as possible about the strategy. Some of the representatives in the local project group had also taken part in the implementation of BRA in the pilot division, which was another division located in Denmark. In addition to dedicating local resources to the project team there were also representatives from the BRA project, and the project leader in Case A was a representative from the BRA project.

Phase 1

In the first phase of the implementation of BRA in Case A, a local BRA team headed by a central BRA representative prepared for the implementation of the BRA principles in the business unit. One of their main tasks was also to lead the implementation of the new IT system SAP. The business unit was "on air" with the new system in January of 1999 and the conversion and implementation was looked upon as very successful.

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The SAP implementation was successful...The implementation of SAP couldn't have been better (Project group member).

In order to prepare for the implementation of BRA the organization also had to carry through evaluations in the early phase of the project. These were the profit case analysis and the gap analysis (as-is-to-be analysis) as initiated by BRA, and both evaluations were meant conducted by the local project group. Due to earlier evaluations conducted by the business unit the profit case was the only evaluation conducted in the early phase of the project in the business unit. In fact, it turned out to be the only evaluation conducted at all during the implementation of BRA in Case A. The local BRA group had the responsibility for conducting this evaluation, as it was this group that was in charge of all activities concerning the BRA implementation. At this point the management in Case A were in agreement with the goals of the BRA strategy and they were dependent on the expertise that the BRA project could provide. Thus, at the first phase of the implementation process in Case A the BRA project had organizational power through their *resources* as well as through their *expertise* on the BRA strategy as well as how the evaluation was conducted. This position was used to influence the development of the BRA project in the business unit. On the other hand the management in Case A had organizational power through their *formal structure* in the organization. This source of power was used in order to make the overall strategic decisions. So how the project team planed to implement the strategy, had to be approved by the management in the business unit. At this time was agreement on goals between these levels, and there was not much disagreement on how to implement BRA. It was also decided that a local project team consisting of only representatives from the business unit would continue to plan as well as implement the organizational changes. At this stage only SAP had been implemented.

Phase 2 and 3

In phase two of the implementation process in Case A a local project group was assigned and the representatives in this group were employees in the business unit. Some of the representatives had participated in the first phase and others were new members. This project group was called the improvement group. The group was assigned to plan for the implementation of the remaining BRA strategy, specify concrete activities as well as implement these changes. The profit case, conducted in the

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first phase, was meant to serve as guidance as to what areas had the potential for the largest cost-savings. However, as the improvement group started their work, their opinion of the profit case and of those who conducted the evaluation were believed to be quite inadequate.

> *Those who conducted the profit case had no knowledge of our business and that is reflected in the results of this case. The calculations have no grasp in reality (Member of improvement group).*

> *The potential gains in the profit case is so unrealistic that no one beliefs in it. Not even those who conducted it (Employee).*

Due to lack of faith in how the profit case was conducted, the outcome results were not used. The improvement group used power through their **formal position** in the organization to decide on whether and how they would use the results. The improvement group had also problems with understanding how the BRA strategy was actually to work in practice as well as implemented in the organization.

> *BRA has nice presentations of their strategy, but they are poorly rooted in reality. They do not deal with the practical issues on how BRA will work in the organization and the hurdles of implementing the strategy (Improvement group).*

The improvement group strived at trying to make plans for the implementation of BRA and making a local strategy plan. It was decided to involve the organization in developing an organizational development plan and several teams were created consisting of members both from the management team as well as employees from the business unit. Thus, by *involving* the organization one hoped to gain an anchoring of the plans for changes amongst both the management and the employees. Each team were designated an area to work on and separate plans for the respective areas was to be presented the whole group. Although each team provided plans for the implementation of BRA, the management decided to focus on one of these areas that would undergo changes. The decision was due to external conditions where Case A had entered into a partnership with an external actor who now owned a percentage of this business unit. The new partner provided new ideas for improvement, particular in the area of operations and maintenance (O&M). The management had thus decided to go for

changes just within O&M before the OD groups had finished their work on the plans for improvement.

> *BRA does not provide the right tools on how to improve our business and we need help from someone who knows our business and have experience from rationalization of the business area (Management).*

Through *setting the agenda*, where the management had decided on how to proceed with the change program, it was decided that the continuous work with BRA would be incorporated in the overall change program for O&M. Thus, by using authority through its formal structure the management lead the way for the change program. New reports and analysis were to be made and representative from the both business unit as well as from the new partner would work in a team. The new business partner would however lead the way as it was them who provided the know how on rationalization of this particular business area. The new team started out with conducting a gap analysis that was here called the MERIT analysis. This evaluation is not a part of this study as our time with this business unit had ended. However, this evaluation can be categorized in the same group as an as-is-to-be analysis, which BRA conducted in an early phase of the change program. Thus, the MERIT analysis was conducted in an early phase of a "new" change program, although it would also incorporate some of the BRA principles.

Summary of process in Case A

In this part the implementation process of BRA in Case A has been described. The focus here has been on how the use of organizational power both influenced the implementation process as well as how progress measurement was conducted, or as for the case of this business unit; why there was a lack of progress measurement. It has been shown that only one evaluation was conducted during the implementation process in this business unit, which was at the very early phase of the process. Before the organization could plan for new evaluations, the management had changed their goals and new plans were conducted. During this time the use of organizational power shifted from the BRA project to the management of the business unit. In the early phase of the BRA project there was agreement on goals between these two levels and therefore the need to use power in the planning phase was not a big issue. However, power was used in order to convey the main goals with the BRA project to ensure that plans were made

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in accordance to the corporate strategy. The sources to power by the different levels are illustrated in table 8.1.

Table 8-1   *Sources of power in Case A*

	Phase 1	Phase 2	Phase 3
BRA project	Resources Expertise Information		
Management	Formal structure	Formal structure Setting the agenda Involvement	Authority
Employees			

As also illustrated in this table the management in the business unit held power through their formal structure and as described in the context of the organization, power is dispersed in the organization. Thus in the end it is the business unit that takes the formal decision on how it wants to go about the change program. Further in the process the management used organizational power towards the employees in order to influence as well as be in control of the implementation process. Contrary to the following two business units in this study, the employees of Case A did not mobilize sources to power that could have been used to influence the process.

As discussed in chapter four on theory on organizational power there are numerous sources to power in organizations and further these sources to power are context specific. Thus in order to abstract the findings in table 8.1 on sources to power used that influences how organizations measure progress, the four categories of dimension of power defined by Hardy (1995) will be used; context power, resource power, process power, and meaning power. The findings illustrated in table 8.1 can therefore be abstracted to the following dimension of power as illustrated in table 8.2. In table 8.2 the dimension to power are illustrated for the different time periods in the implementation process in Case A. It is also illustrated which level is most powerful and which dimension of power is used for each phase. In the same table it is also illustrated whether or not there is agreement or disagreement on goals between the involved parties. As discussed earlier, disagreement in goals is a condition that should be present in an organization in order for power to be used. However, in spite of this, it is found

that power will be used when there is disagreement on how the evaluation is conducted, and this is why the outcome results from the evaluation conducted by the BRA project in the first phase in Case A was not used.

Table 8-2 *Dimensions of power in Case A*

	Phase 1	Phase 2	Phase 3
BRA project	Resources / Meaning *[Agreement on goals]*	*[Disagreement on goals]*	*[Disagreement on goals]*
Management	Context / Resources	Resources / Process	Resources
Employees	*[Agreement on goals]*	*[Disagreement on goals]*	*[Agreement on goals]*

Agreement or disagreement on goals and process between the different levels is respectively illustrated in figure 8.1 and 8.2. Figure 8.1 illustrates that in the first phase of the project there is agreement between BRA project and the management in the business unit on the goals as well as the process. This however changes in phase two of the implementation process where the management is now in disagreement on both the goals and the process, which is a situation that remains throughout the change process. Figure 8.2 illustrates that there was agreement between the management and employees with respect to goals and process. This however changes in phase two where there was disagreement on both goals and process. In the final phase this condition changed back to the situation as in phase one.

Figure 8-1 *Agreement or disagreement on goals and process between BRA project and management*

Agreement on process

	Yes	No
Yes	Phase 1	
No		Phase 2 + 3
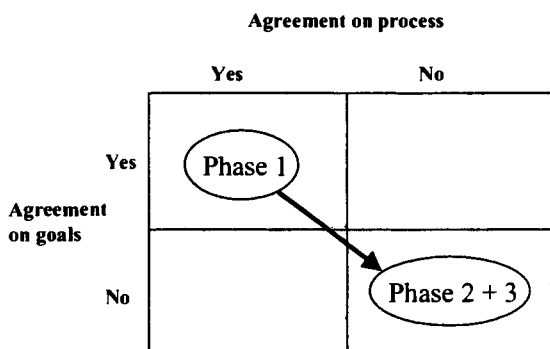
Agreement on goals

Figure 8-2 *Agreement or disagreement on goals and process between management and employees*

Agreement on process

	Yes	No
Yes	Phase 1 / Phase 3	
No		Phase 2

Agreement on goals

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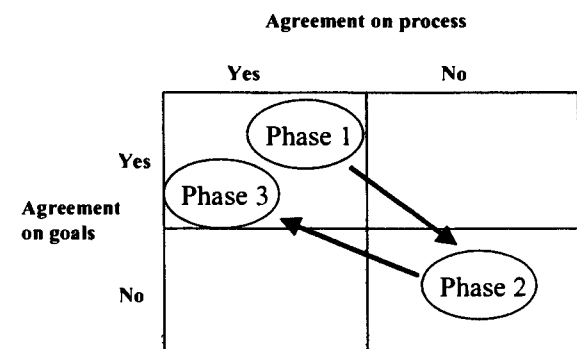
8.2. Use of Power during Implementation process in Case B

The second case in this study, Case B, was eager to implement the BRA strategy. Their main objective was to fully implement the BRA principles as they looked upon this program as a mean to become an even more efficient organization aiming to achieve good business results. As was described about the implementation environment of this business unit (see chapter seven) the characteristics of the employees were that they were perceived as relatively adaptable to changes and seek challenges by working for an organization continuously improving their efficiency. The management in case B planed with full implementation of BRA, which would be implemented in a short time period of three months and little resistance from the employees was expected.

Use of power varied over time during the implementation process. The characteristic of the first phase is that the sources of power is dispersed mainly between the BRA program and the management team in Case B. Phase 2 is characterized by a situation where the BRA project loses more or less its power to the business unit and it is also a situation where the employees mobilizes and uses their sources of power to influence the implementation process. In this phase we will see that the employees mobilize in terms of using their sources of power. Finally, in phase three it will be shown how the management mobilizes its sources of power in order to regain control again over the implementation process. The use of power and how it has been used between three different parties in the implementation of BRA, affected the implementation process and how this case both conducted the evaluation of the process as well as how the results were used. Hence, in the description and analysis of case B the focus will be on how power has been used and how this has affected progress measurement.

Phase 1

In this first phase there were not that many evaluations of progress conducted, as one had not really started to make any changes in the organization. This phase was more or less the planning phase. However, the BRA project had as one of its main activities to do an assessment of the business unit both with respect to what has to what had to be changed in order to become a BRA organization, as-is to-be analysis. A second evaluation was to help the business unit conduct a profit case where the cost savings as a result of implementing these changes were assessed (both evaluations are described in chapter six). Both of these assessments were input to the organizational development

(OD) plan. In this phase the sources of power was dispersed between the BRA project and the management in Case B. The management in the business unit was in this phase quite dependent on *information* and *resources* from the corporate BRA project group. Case B wanted to fully implement the BRA principles and thus they were reliant on getting the right information and knowledge on what needed to be changed in order to fulfill the requirements of becoming a BRA organization. In addition, Case B was also dependent on receiving support in the development of the BRA strategy for the business unit and not at least they were heavily dependent on receiving help during the implementation of SAP.

The management in Case B on the other hand was also in the position of possessing sources of power. Through their structural position in the organization the management had *formal authority* both vis-à-vis employees and the BRA project. Authority includes the right of one agent to influence specified aspects of the behavior of other agents were the former has the right to make particular request and the latter has the duty to obey (Yukle, 1989). Another vital source of power, which could only be exercised vis-à-vis the employees, at this phase of the implementation process was the managements control over *rewards* that would be distributed amongst the offshore workers if they organized the working process abiding to the new principles as defined in the BRA /IBD program. This source to power can be used directly by those who possess it to influence the behavior of those who desires it (Hardy, 1995; Yukle, 1989).

The first phase in case B can be characterized as a process of (a) defining the goals, and (b) large involvement through task groups represented by people from all levels in the organization. Case B worked hard on making an organizational development plan for the implementation of BRA in the business unit. Representatives from all levels in the organization were present in various task groups. Hence there was broad involvement of both managers and employees mainly from the offshore installations, but not enough onshore employees took part in this work.

> *The fact that it was a majority of offshore workers in the group was going to characterize the work performed by this group. (Managment)*

The involvement of people in the processes was done with the intention of anchoring the whole change project amongst the middle management and employees. Hence, there was a deliberate intention of using *involvement* as a mean to get people "on board" with the decision. Thus, by shifting the bias towards a common understanding of the strategy, the management in case B used power through involving employees. The decision to implement BRA was a formal decision, which everyone was expected to consent to.

Naturally, not everyone in the organization could be involved and those who did not take part in tasks groups were meant to get information from their peers. Information on BRA was given to a broad extent throughout the organization. However, the complexity of BRA required a deeper insight into the strategy and content of BRA. People not involved through the task groups had difficulties to grasp the consequences of BRA. Therefore, when information on the strategy described in the OD document was distributed in the organization it created much unrest and especially amongst the employees offshore.

> *The reason for this unrest is first of all due to insufficient communication, and where people that are not part in the work are allowed to comment on preliminary results without having knowledge on all the assumptions, conditions and discussions. An experience from this is that when information of this character is to be distributed or sent on hearings the material must be presented by people with thorough knowledge of its content as well as the process from working with it. (Document)*

Control over information is another source of power (Yukle, 1989). This control involves a person's access to vital information and control over the distribution of information to others (Pettigrew, 1972). At this phase in the implementation process the management were more concerned with getting the information out to the employees than controlling the dispersion of information for tactical reasons.

In this period there were also arranged general meetings in the division with the focus on giving information about BRA/IBD and the upcoming organizational change process. However, there was not enough emphasis on training of the project group and there was not enough help given by BRA in order to explain the BRA principles.

More time should have been spent on the preparation phase. The group members should have been given a more thorough introduction to the BRA/IBD principles (Project management).

My impression from this phase was that there was little specific help from BRA with respect to applying the BRA principles in practice (Project management).

It proved to be a difficult process to get the rest of the organization on tune with the BRA principles and as we will see in the analysis of phase two there was a process of mobilization of use of power amongst the employees.

Phase 2

This second phase encompasses half a year of the implementation process of BRA in case B. The management in Case B decided shortly after the implementation of SAP that they would do an evaluation as to how successful they had been in implementing BRA. They hired an external team to do a survey amongst the employees where the focus was to measure how well they had implemented the changes, the understanding of the BRA principles, and how the employees perceived these changes. A problem with this evaluation was that the management had difficulties understanding the results. The questions in the survey did not really give the management an insight in how successful they had been with the issues they were concerned with.

The results were some numbers on a scale...What do a score of 4.4 mean! (Project management)

The consequences from this evaluation were that they did not use the results there and then in the implementation process. Already at that stage they decided that they would do a new evaluation, which would give them more specific and detailed information on the progress with the implementation of BRA.

We want to get feedback from our employees on how well we are implementing the BRA strategy (Project management).

In this phase of a new organizational structure in Case B as described in the "Bible" (OD document) is introduced. At this time the new strategy was mainly on paper, as one had not yet started working abiding to the new principles. In addition to the start-up with a new organization and the practical problems as well as training on new roles for

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everyone in the division, the business unit used lot of resources on the preparations for implementation of SAP. Case B became online with SAP 17 April 2000. The issue after the implementation of SAP was how to manage the further implementation process of the BRA principles. The management in case B was clear on the fact that the further process had to be driven by the management in the division. Thus, the responsibility to get the organization working in accordance to the BRA principles was handed over to the management in case B. The BRA project withdrew also from the implementation process in Case B at this time, except for one change agent from the BRA project who remained in the business unit.

The management should provide the conditions for the implementation process and take responsibility for the totality (Project management).

The employees working offshore were promised a pay-rise if the new working principles were implemented in the organization. This was an incentive that was offered to the organization if they managed to become a BRA/IBD organization. However, the wage rise was given when BRA was only implemented "on paper" with the introduction of the OD plan, which was before they had actually started working abiding to the new principles. The management in case B had thus lost their power in form of incentives and their authority could also be questioned at that time. The employees thought less of the managements' decision to implement BRA and the workers even questioned the managements' insight in the business processes. Hence, the management at this time had because of lost control over rewards *decreased* their sources to power.

The majority of employees and middle management were frustrated with respect to the consequences of BRA. This frustration was also amongst those who had participated in task groups. They were surprised at the outcome of their input to the OD plan and felt in fact that their input had not been taken seriously. The strategy thus had poor anchorage both amongst middle management and employees due to their perception of not having been heard in the process.

We use a lot of time and resources on finding out how to become more efficient and effective. But the answers to this had already been worked out. It was stupid to sit out here and use a lot of time on discussions and making plans... The managers out here also felt deceived, as the answers were already clear (Employee).

They were manipulating us, and it is awful to make people believe they can influence the process when in fact they can't. People feel deceived (Employee).

There was turmoil and frustration in the organization and management and employees' time were used in meetings for planning how to implement the strategy. Consequences of BRA and how one should organize oneself and the teams were continuous themes. The implementation of BRA was so far only on paper and people worked as before. The exception was that they now were designated into teams (integrated teams) and had a new manager. However, the daily tasks were seen to as before and accomplished in the same manner and by the same people. This was both due to the fact that the new working processes were not clear to everyone, but they were also of the opinion that these processes would not increase the efficiency of the organization.

We work as we used to before BRA.... Working in integrated teams will not increase the efficiency of the organization as we work in teams today. (Employee)

With the growing resistance amongst the employees towards BRA the employees at this point started to use their sources to power. Through their **know-how or expertise** the employees used this source of power to control the implementation process. Expertise as a source of power in organizations is a persons ability in solving problems and performing important tasks (Yukle, 1989). The employees were in control of how they performed their jobs, as it was they who possessed the know-how and skills on the operation of the business processes. However, the employees continued as they had before BRA was introduced.

Another source of power that the employees used at this phase was the access to other colleagues. This is also referred to as **referent power** (French & Raven, 1959). Colleagues tend to imitate the behavior, adapt same meaning or attitudes similar with those whom they admire and identify themselves with (Yukle, 1989).

There are some people that are very against what we are doing and they are spreading their views in the organization (Manager).

The employees were in a stage were they waited for the evaluation of BRA one year after implementation. It was decided one year in advance that this evaluation would be conducted when one year had elapsed after the new organizational structure was

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implemented in January 2000. The employees were certain that the results of this evaluation would give the management no options but to return to the "old" organizational structure.

Phase 3

In phase three the management appointed a coordinator that was to assist the organization in the implementation of BRA. This person worked with identifying and assessing problematic issues with the BRA strategy as well as the implementation of it. The coordinator used a lot of time out in the organization, speaking to people and to get a feel of the situation. It was also decided to do another evaluation of the progress of the implementation of BRA. Also during this evaluation they hired an external team to carry through the evaluation. The method used was in-depth interviews of people in the organization; key members of the local implementation group (that no longer worked in the group), the management, middle management, and employees. Again the focus was to get information on how successful case B had been with respect to implementing the BRA principles. The result of this evaluation was then given to the management, who then used the information to guide the further process on how to proceed with the implementation of BRA. There were two evaluations of this character and the results were also to be used as input to the "big" evaluation promised to the organization to be conducted one year after the new organizational structure was put in effect.

Information, from the evaluations together with the knowledge of the coordinator and change agents, was used as input to new plans on what should be done in order to solve the problems they experienced with the implementation of BRA. One was also to find solutions on how to implement these issues. Once again Case B decided to involve the organization through task groups. At first there was resistance in the organization towards this decision.

> *Why should they use time on working on plans when they were not heard the first time they got involved (Employee).*

However, task groups were established and each group was appointed an area within the BRA strategy that they should come up with suggestions on how it should be implemented in the organization.

From having lost their sources to power, the management started to gain control over the situation again. Through providing guidelines on what the task groups were working with the management in Case B again increased their sources to power by *setting the agenda* for the issues worked with in the implementation process. Organizational process as a source of power incorporates a variety of procedures and routines that can be invoked by dominant groups to prevent subordinates from fully participating in the decision-making process (Hardy, 1995). The themes delegated to the new task groups were defined by the management but also supported by the results from the evaluations. At this time the management knew how they wanted to further proceed with the implementation of BRA and had as well more or less defined their new goals. Thus, the task groups were given problems defined by the management and through this the management were able to control the process by setting the agenda for what issues were deemed as important for the organization to work on. The management also tried to influence the middle management and employees to become more "in tune" with the goals of the BRA project. By participating in formal and informal meetings, *coalition formation* and *rationality* was used as means to regain the support from the organization. The focus was to avoid opposition and conflict, referred to as meaning power (Hardy, 1995), to the revised plan.

The results from the work in the task groups together with the evaluations conducted in phase two and as well as business results over the past year, were used as input in the one year evaluation after the "implementation" of BRA in the business unit. This evaluation was conducted by a group of people that broadly represented the offshore organization. The management in Case B also appointed the members of this group. However, the employees were quite reluctant to participate in task groups again, based on earlier experiences. It was thus important for the management to prove that they would take this work seriously and not produce their own results.

> *We are quite reluctant to get involved again...It better not be just another job where the results are hidden in the drawer exchanged with results already produced by the management. (Employee)*

The evaluation report on the progress of implementation of BRA/IBD in Case B resulted in a process where new goals with respect to the strategy were formulated. However, the new goals defined here were not a surprise to the management. In fact the

management through how they involved the organization, the control over tasks delegated to the groups, and the information given to them influenced the outcome of the evaluation. The management controlled the whole process and more or less got the outcome they wanted, which was also the case for the consequence analysis conducted after the new goals had here been defined.

Summary of Process in Case B

In this part I have described (1) the implementation process of BRA in Case B, (2) how power was used during this process, and (3) how use of power influenced the process of evaluation and how the results were used. Progress measurement was a result of how power was used during the implementation as well as during evaluation of BRA in Case B. Table 8.3 illustrates the sources of power used by three different levels involved in the implementation process throughout the three phases.

Table 8-3   *Sources of power in Case B*

	Phase 1	Phase 2	Phase 3
BRA project	Resources Information		
Management	Formal structure Rewards Involvement		Coalition formation Rationality Setting the agenda Involvement
Employees		Know-how Referent power	

The above table shows that in phase one of the implementation processes in Case B the BRA project possesses power in terms of resources and information, and through these sources influenced how the business implemented the BRA strategy. The management in the business unit on the other hand possessed other sources of power that they used in order to get the organization on tune with the changes that were to be implemented. In phase two, however, we see that both the BRA project and the management had lost their sources of power. The organization had now mobilized their efforts on influencing the implementation process. This they achieved by using referent power and know-how. Finally, in phase three we see that the management again uses different sources to

power in order to regain control over the implementation process and the evaluation process. Through behavioral tactics such as intervening in the organization and by setting the agenda, the management were able to regain control. Management got the results they wanted by *controlling the evaluation process*.

In order to abstract the findings in table 8.4 on sources to power used that influences how organizations measure progress, the dimensions of sources to power defined by Hardy (1995) is used. The findings illustrated in table 8.3 can therefore be abstracted to the following dimensions of power as illustrated in table 8.4.

Table 8-4   *Dimensions of power in Case B*

	Phase 1	Phase 2	Phase 3
BRA project	Resources Meaning	*Agreement on goals*	*Agreement on goals*	*Disagreement on goals*
Management	Resources Process			Meaning Process	*Disagreement on goals*
Employees	*Agreement on goals*	Resources	*Disagreement on goals*	*Disagreement on goals*

In table 8.4 the dimensions of power are illustrated for the different time periods in the implementation process in Case B. It is also illustrated which level is most powerful and which dimension of power is used for each phase. In the same table it is also illustrated whether or not there is agreement or disagreement on goals between the involved parties. As illustrated in table 8.4 there is use of power although when there is agreement on goals. In accordance to theory there should be disagreement on goals in order for power to be used (Pfeffer, 1981). However, it was also argued that organizational power could be used when there is disagreement on process (Thompson, 1967). Agreement or disagreement on goals as well as the process between the different levels is further illustrated respectively in figure 8.3 and 8.4. Figure 8.3 illustrates that in the first and second phase of the project there is agreement between BRA project and the management in the business unit on the goals as well as the process. This however changes in phase three of the implementation process where the management is now in

disagreement on both the goals and the process. Figure 8.4 illustrates that in phase one there is agreement on both goals and process between the management and employees. In phase two this changes to disagreement on both goals and process. Finally, in phase three there is on the one hand still disagreement on goals, but on the other hand there is agreement on how the process is conducted.

Figure 8-3　　**Agreement or disagreements on goals and process between the BRA project and management**

Agreement on process

　　　　Yes　　　　　No

Agreement on goals

Yes　　Phase 1 + 2

No　　　　　　　　Phase 3
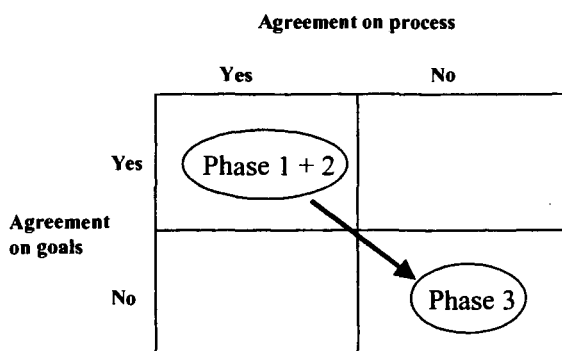
Figure 8-4　　**Agreement or disagreements on goals and process between the management and employees**

Agreement on process

　　　　Yes　　　　　No

Agreement on goals

Yes　　Phase 1

No　　Phase 3　　Phase 2
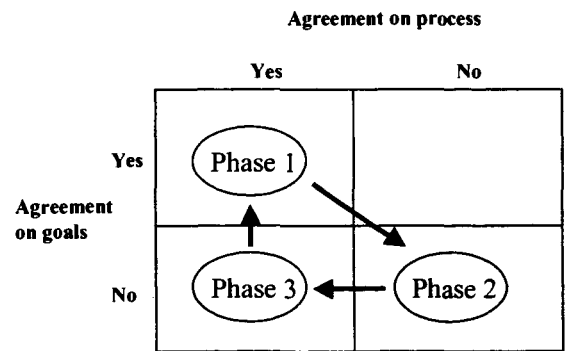
8.3.　Use of Power during Implementation process in Case C

In this part the implementation process in Case C will be described and analyzed in order to understand reasons to why the business unit evaluated progress the way they did as outlined in chapter six. The business unit started to prepare for the implementation of BRA fall of 1998. Here enquiries were made about BRA, and the business unit sent some representatives to the headquarters of the BRA project to learn more about this program. In December 1998 a local project leader for the implementation of BRA in Case C was appointed. Although the business unit was not scheduled to start the implementation process for another year, they wanted to get acquainted with the BRA strategy.

The main focus in this first phase of the implementation process in Case C was to make plans for the implementation of the BRA strategy. The focus in the second phase, the decision and implementation phase, was to make a decision on the implementation plan for Case C as well as implement SAP along with new working processes and governance principles. In the last phase, the evaluation phase, the focus was on evaluating the implications of the changes that had been made. The results would be

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used as input to determine the next step in the implementation of the BRA strategy in the business unit. As in Case B, this last business unit in this study also conducted evaluations throughout the implementation process, and as will be described in this part, power was used during the change process that influenced how progress measurement was conducted as well as how the results were used. The three phases of the implementation process will be described subsequently.

Phase 1

In the first phase of the implementation process of BRA a local project team was established two years before they were due to implement the IT system SAP. The project leader was given the responsibility to plan for as well as see through the organizational changes that had to be made in order to become a "BRA/IBD organization". The business unit concentrated on learning everything about the BRA program.

> *If one compared Case C to Kalundborg (the first division to implement BRA) then one would see that we were more concerned with defining the organizational changes that had to be made before we implemented SAP and new working processes. (Project management)*

This was an enduring process in Case C and much energy was spent on understanding and translating the BRA strategy in order for it to fit with the operating division. The business unit was in fact not pleased with how BRA was defined and therefore had to spend much time on translating the strategy in order for it to become operational. Already at this early phase the business unit seemed to be skeptical towards the BRA strategy as well as the BRA project. One of the reasons to this skepticism was that the BRA project themselves gave "signals" in the corporation that reflected a negative attitude towards the business unit. The business unit got the impression that they were looked upon as not being an efficient organization through the way they had chosen to structure the organization compared to how the BRA strategy defined efficient organizational structures.

> *The BRA project gave the impression that we were with our seats in our trousers and a tardy organization (Project management)*

The business unit of course poorly received this attitude towards the organization, and a contradicting view by Case C was that they believed that the BRA project did not have sufficient in-depth knowledge of their business operations. The business unit was in general skeptical towards the BRA project for their obvious lack of knowledge of the operative environments. The BRA project had strong opinions on what was to be changed in the organization in spite of their lack of concrete plans on how to achieve the goals as well as calculate the business effects.

The BRA project had only good theories developed by theoretical thinking people, but lacked practical anchorage (Management).

There is a big gap between the philosophy behind the BRA project and how the divisions are operated (Management).

As illustrated in the above citations there were many people amongst the management group that were generally skeptical to BRA, but on the other hand there were also people who were more positive towards the BRA strategy although they again were also reluctant to fully implement the plans as outlined by the BRA project. Because of this lack of faith in the BRA project, the BRA project did not succeed in getting a close relationship with the business unit and thereby interacting with the operative environment.

In spite of a more distant relationship, the director of the business unit at that time along with the project team were positive towards the BRA strategy and had as a goal to implement BRA, but at their own pace and in a manner defined by themselves. The business unit were to some degree reliant on the resources as well as on information from the BRA project, but Case C was in control of how they wanted to use this expertise and used the knowledge from BRA as they saw fit. Hence, Case C was in control over the processes and through their *formal structural position* in the corporation they used this source of power to be in control of the implementation process. Although the BRA project had the resources and information about the BRA strategy, as were found to be sources of power in the former cases, Case C did not allow for the BRA project to efficiently use these as a mean to acquire power over the business unit.

In phase one, the local project group also started to inform the organization about the BRA project in order to prepare the employees on the forthcoming changes that would affect every one in the organization. Broad involvements of working groups were used. Thus, the management used power through the *information* provided to the organization as well as through *involvement*. In addition to using these sources of power the management also used *rewards* as a mean to motivate the employees for the coming changes. As for Case B, the employees were also here promised a wage increase if the BRA/IBD were successfully implemented in the organization. In the fall of 1999 two task groups were established consisting of representatives from the business unit organization. These two groups worked respectively on w*orking processes for operations and maintenance* and s*ystem- and team grouping*. These assessments were described in chapter six. At the same period of time as these local groups were working on their tasks, representatives from the BRA project worked on two separate reports related to the implementation of BRA in Case C. These reports were the *as-is-to-be assessment* and the *profit case*. Both of these evaluations were also described in chapter six.

The local project group in Case C was to deliver a report on the implementation plan for BRA in the business unit, based amongst others on the reports from the task groups. In the implementation plan a four-step model for implementing BRA at in the business unit was described. The ambitions in Case C were at that time very high, which was reflected in the four-step model. By concluding the fourth step would mean that business unit had fully implemented the BRA strategy. The time used for reaching step four would be approximately 2 years, varying to some degree amongst the three platforms. The presentation of the implementation plan triggered strong reactions in the business unit, and the four-step model lead to disagreement and conflict amongst people in the business unit.

We in the project group came with a message that resulted in turmoil in the organization (Project leader)

Not everyone agreed upon the goals of the implementation plan. One of the reasons to this reaction was that the organization did not see or understand that it would be a step-by-step implementation until step four. The organization seemed to be most concerned

with the ultimate goals, which was full implementation of the BRA principles, and therefore failed to see and consider all the steps it would take before step four could be reached.

> *It was completely impossible to get people to understand that this was something that would evolve over time and would not change over night at 6th of November 2000 (Project leader).*

> *We will implement parts of the BRA strategy that suits us and we will not do things that will disturb the organization too much or put the organizational results at risk (Management).*

The local project group also experienced a difficult process in defining and developing the four different steps in the implementation plan. The reason for this was mainly that the people involved with developing the plan had not strong beliefs in the BRA principles and the engagement from these members on defining on how to apply BRA to Case C was therefore not optimal. Thus it proved to be a poor process at that time since the wrong people were involved in this work. As a result, the group presented a report where the steps were not sufficiently defined and developed.

> *This was a process that required much work, but the people working with the plan were most interested in conserving the existing organizational structure. (Project leader)*

In the process of defining the implementation plan the local project group claimed to have made two mistakes:

(1) They were not able to convey thoroughly that there would be four steps in the implementation model, and

(2) the people in the organization got the impression that step four would be implemented immediately.

> *Because of these two mistakes we experienced great resistance to the implementation plan. (Project leader)*

Given the negative reactions to the implementation plan in Case C it became clear that something had to be done. It was pointless to proceed with this plan since it had poor anchorage at all levels within the division.

After the reactions from all levels in the organization, the project group had to decide what to do next. The group had to decide upon whether or not to push this report through, but at this time there was little enthusiasm amongst both employees and management. At this point of time the BRA project in Case C was given a "sick leave". (Project leader)

Because of all the turmoil, I will write a sick leave on the BRA implementation and discuss the further actions in the management group. (Project leader)

Following this discussion in the management group in the business unit it was decided that a new hearing round would take place, the project group would then give a report that would be concluded by the management group. This final report was finished in March 2000. The next step was then to do a consequence analysis of this report. The consequence analysis is described further in phase two. This is the beginning of the *second phase* of the case description. This phase contains a description of the further process in Case C with formulating a revised plan as well as the implementation of certain parts of this strategy.

Phase 2

At this time in the project the business unit had also changed its director. The new director had thus not been involved in the project from the very start and held other views towards the BRA strategy, which also would influence the ongoing change process. After the management group had approved the first implementation plan, the next step in the process was to do a consequence analysis of the implementation plan. The purpose with the consequence analysis was to detect all the consequences for Case C from implementing the BRA strategy. The consequence analysis was especially to focus on the consequences the new organizational form would have on security and the working environment. Further the consequence analysis was also to include an assessment of the changes in responsibility for working principles from introducing new steering principles. In this analysis, aspects that were both for and against the new organizational structure were to be discussed.

The overall goal with the consequence analysis was to get an acceptance for the original implementation plan for BRA at Case C. This would then make the business unit ready to start full implementation of BRA. However, the results of the consequence analysis

together with the report from the team- and system allocation created turmoil in the organization.

The results from the consequence analysis were very discouraging. (Project leader)

The consequence analysis focused on the negative outcomes. It reflected the employees' reactions towards BRA. (Project group)

The consequences of these reactions made Case C decide that they could not go further with the original implementation plan for BRA until a new plan had been developed. The reason to this decision was mainly based on the fact that there was such massive resistance in the organization towards the intentions of BRA.

We agreed upon in the steering group that we could not go further with our intentions. We decided therefore to moderate our ambition level. (Project group)

Although some of the aspects in the report were not viable, it would be hazardous to be too tough in our plans. If we had been too tough in the process the Norwegian oil directorate would have been after us. (Project leader)

Case C was pleased with having decided to do a consequence analysis of the implementation plan for BRA. As the report showed, the analysis pointed to limitations that the management in the business unit feared, and what one started to see from other divisions in Statoil implementing BRA.

The consequence analysis was a confirmation on what the management had suspected. (Management)

In spite of the results of the consequence analysis, it is claimed that management in Case C would not in any case have fully implemented the BRA principals. The management was very concerned with not pursuing to any changes that would induce risks to the platforms. Focus on security is a daily concern in the organization. Hence, through involving representatives from the organization in the work on consequence analysis, although the management knew that there was strong opposition in the organization to the implementation plan, *involvement* was used as a source of power by management in order to control the evaluation results.

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Full implementation of BRA/IBD would have resulted in people sitting in meetings and behind PCs instead of being outside in pullovers doing their job. (Management)

Based on the results of the consequence analysis, the business unit decided not to go further with the first implementation plan. The report from the consequence analysis was discussed in a business unit committee in June 2000. The result from this meeting was a recommendation that a new revised implementation plan had to be developed. The revised implementation plan was then decided upon in August 2000 in the management group. Case C gained broad agreement in the organization to the new implementation plan for BRA. At the same time as this decision was made, the business unit sent their application for becoming acknowledged for having implemented the IBD principles.

The revised implementation plan implied that Case C would go for implementation of step two in the four-step model. However, a modification to step two in this model had been made. This implied that more aspects were to be changed than what was planned for in the original step two.

Our director's dilemma is that he cannot go further with the implementation of a new organizational structure than what the employees are willing to. He has the responsibility for maintaining a good working environment and high security. We could not to do anything that would deteriorate these two important conditions. We know that there are divisions that have proceeded more rapidly with the implementation without assessing the organizational consequences. (Project leader)

In sum, Case C is now an organization one can live with. (Management)

The management was aware that the new decision document presented BU (local company committee) would create some frustration amongst the unions. The unions were on behalf of their representatives concerned with whether or not the new decision would make Case C eligible for wage group H, which would give them a wage increase. When the management expressed that the decision document now presented would not make the business unit eligible for the new wage group, then the unions added dimensions to the decision document that would satisfy the criteria for wage group H. The unions in were eager to qualify for wage group H. Other divisions that had in their

opinion not done more changes in the organization than what they were about to do had received the increased wages before they started with the implementation. They had qualified for group H based on intentions on what would be changed in the respective divisions. In Case C however, the wage group would not be given before an evaluation would prove that the division had started to work by the BRA/IBD principles. The terms of qualifying for the wage group H was therefore a pressure imposed on the employees.

> *With the evaluation we wish to impose an extra pressure upon our selves. We wish to be sincere towards our ambitions, and the unions are with us on this. (Management)*

The strategy behind the process of getting the unions involved in the decision document was deliberate. By presenting a document that did not qualify for wage group H, the management deliberately provoked the unions to get involved and contribute to achieving a more progressive decision document. The management had now accomplished to get the unions and through them the employees to believe and support the plans for further implementation of BRA.

> *We (the management) were of course tactical when we expressed that the new wage group would not apply to Case C. (Management)*

After management and BU approved the revised decision document, the project group developed a report for the continued implementation plan. During the fall towards February 2001 all employees at in the business unit went through intensive training in BRA principles and SAP.

Phase 3

After the implementation of SAP and the new steering principles, the business unit carried out an evaluation of the process. It was already decided in august 2000 that this evaluation would be carried through in March 2001. The purpose with this evaluation was to assess if the organization was qualified to receive wage group H. Wage group H would be awarded the off shore employees if the results were satisfactory. A local task group represented by union leaders as well as representatives from the project group was appointed to carry through the evaluation. In addition the management engaged an external research group to help out with the evaluation. The task group designed a

survey and the questions were concerned with the issues of the BRA principles. The survey was then sent to offshore workers who were eligible to receive the increased wages. A fair question to ask here is if the task group had self-seeking interests in the results of the evaluation?

> *I think that the result of the evaluation is given in advance. However there is a pressure in the organization to implement the BRA/IBD principles,· and the results will give us an indication how far we have come with the implementation. No one is celebrating in advance of the presentation of the results. (Project management)*

The questions in the questioner were designed in such a way that it would ensure good results.

> *Although the evaluation is designed in such a way that the results will be positive there is nothing automatic about giving the new wage group... If it turns out that we have not reached our goals, well then we have see what we have to do in order to acquire this. Then we apparently have a problem. (Management)*

However, if the results against all odds were to be negative, there is no indication that the business unit would not receive wage group H.

> *It has already been indicated from the central IBD group that we will get wage group H so this we feel safe about this. There are so many other divisions that have received wage group H before they have implemented any big changes. (Interview)*

There are people in the business unit that feel that the evaluation process in March was a farce. There was political activity in order to both achieving the pressure in the organization and to acquire the results that would qualify for the new wage group.

> *This is policy, where the results of the evaluation do not mean anything. The unions want the money and therefore it depends on how honest they will be. We have examples from earlier were they have manipulated the answers although this is not possible here...There is political activity going on in this process. (Interview)*

By controlling who were involved in the evaluation process as well as who would be the respondents to the survey, the management used *involvement* as a source of power to influence this process. They further used the means of *rewards* as a source of power that

would motivate or even manipulate both how the evaluation was designed as well as how the respondents answered the questionnaire. The results of the March evaluation were above the expectation level.

> *We are very pleased with the results and in fact they are better then what we had expected. (Management)*

Wage group H was awarded the business unit with retrospective effect from June 2000. Case C had two different aims with regards to this evaluation: (1) to increase the pressure in the organization, and (2) gain legitimacy in Statoil. As to this second aspect, the purpose with the evaluation was to gain legitimacy in Statoil for the change processes that the business unit had decided upon. Good evaluation results would be a support to the decision on a more moderate implementation process, as compared to what was the strategy of Statoil.

After the March evaluation the concern of the management was to continue with the implementation of the BRA/IBS principles as described in their revised plans. The same external research group shortly after the March evaluation carried through a second evaluation in this last phase of the implementation process. The local project group initiated the evaluation and the focus was to assess the progress of the implementation of BRA in the organization. As opposed to the March evaluation, the second evaluation was based on interviews with representatives from all levels in the organization. The results from this evaluation were presented the management in Case C, and it was in their interest on whether and how they intended using the information. They used their *formal position* to decide on the further process.

In the last evaluation conducted in Case C, the November evaluation, the focus was to assess once again the progress of the implementation of BRA in order to decide on future directions. A task group was appointed and input from former evaluations together with new assessments was used in this evaluation. At this stage the management had decided that there would no longer be an implementation process lead by a project group. However, based on the output results from the November evaluation, the middle management were to take responsibility for ensuring that the respective areas within the business unit continued to work with the changes where these were yet not applied.

Conclusion: Case C

In this part the implementation process of BRA in Case C has been described. It was here illustrated how the use of power by management influenced the implementation process itself, how progress measurement was conducted as well as how the results were used. Table 8.5 illustrates the different sources to power used by management at various stages in the implementation process.

Table 8-5   *Sources of power in Case C*

	Phase 1	Phase 2	Phase 3
Management	Formal structure Rewards Information Involvement	Involvement	Involvement Rewards Formal structure

As opposed to Case B where there was use of power by all levels involved in the implementation of BRA, it is found that in Case C there is only use of power by the management in the business unit. In phase one the management uses their formal structure, rewards, information, and involvement. The focus was to be in control of the implementation process as well as to ensure a good anchorage of the strategy in the organization. The management controlled how the evaluations were conducted in this phase as well as how the results were used. In the second phase, management as a source of power used involvement by involving representatives from the business unit to conduct the evaluation. Although it was known that there was strong opposition amongst the employees to the BRA strategy, they were nevertheless involved in the evaluation. Finally, in phase three the management also used involvement in addition to rewards and formal structure as sources to power to control the implementation process as well as the evaluation process and the use of the outcome results. By involving representatives that would be rewarded with increased wages if the results from the evaluation were satisfactory, the management were able to control both how progress measurement was conducted as well as ensure that the outcome results would be in accordance to the managements' intentions. The evaluation processes in Case C were thus a result of how power was used during the implementation of BRA. The sources of power illustrated in table 8.5 are abstracted to dimensions of power as illustrated in the following table 8.6.

Table 8-6   Dimensions of power in Case C

	Phase 1	Phase 2	Phase 3
BRA project	*Agreement on goals*	*Disagreement on goals*	*Disagreement on goals*
Management	Resources	Process	Resources
	Process Meaning		Process
	Disagreement on goals	*Disagreement on goals*	*Disagreement on goals*
Employees			

In table 8.6 the dimensions of power used by management in Case C are illustrated for the three different time periods. It is also illustrated in this table whether or not there was disagreement on goals between the three different levels involved in the implementation process. From the table we see that it is only in phase one that there is agreement on goals, which was between the BRA project and the management in Case C. However, the management used sources to power in order to control how the implementation as well as the evaluation processes was conducted. As for both Case A and Case B, there is also in Case C use of power when there is agreement on goals, but it is found that there is disagreement on the process of how the evaluations as well as the implementation process is conducted. Agreement or disagreement on goals and process between the different levels is further illustrated in respectively figure 8.5 and 8.6. Figure 8.5 illustrates that there is agreement on goals between the BRA project and the management in phase one, but at the same time there is disagreement on the process. Further in phase two and three there is disagreement on both the goals and the process. Figure 8.6 illustrates the relationship between the management and employees. In phase one there is disagreement on both goals and the process. In phase two and three, there is still disagreement on goals but through resource power and process power the employees are in agreement on how the processes are carried through.

Figure 8-5   *Agreement or disagreement on goals and process in Case C between BRA project and management*

Agreement on process

	Yes	No
Yes		(Phase 1)
No		(Phase 2 + 3)
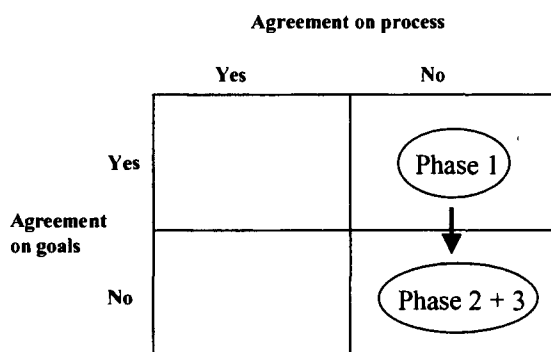
Agreement on goals

Figure 8-6   *Agreement or disagreement on goals and process in Case C between management and employees*

Agreement on process

	Yes	No
Yes		
No	(Phase 2 + 3) ◀── (Phase 1)	

Agreement on goals
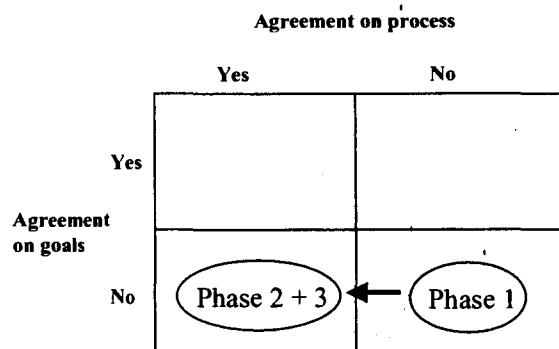
8.4. Summary and Conclusion

In this chapter the implementation process has been described and analyzed with respect to how organizational power was used during the change process as well as during the evaluations. It has been illustrated how the use of power influenced both the change process itself as well as how the evaluations were conducted and how the results were used. During the implementation process in all three cases there were three levels involved; the BRA project, the management in the business unit, and the employees. In this chapter it was illustrated how power was mobilized between these levels for the respective cases throughout the different time periods. The mobilization of power between different levels influenced how the evaluations were conducted, and in some instances the evaluations themselves were used as means to control the direction of the implementation process. It was also found that there was variation between the cases as to which levels was the most powerful at different stages in the implementation process and even if all three levels at all were powerful. A comparison of the findings analyzed in this chapter as to the dispersion of power between the different levels in the respective phases is illustrated in table 8.7.

Table 8-7   *Dimensions of power*

		Phase 1	Phase 2	Phase 3
Case A	**Bra project**	Resources Meaning		
	Management	Context Resources	Resources	Process
	Employees			
Case B	**Bra project**	Resources Meaning		
	Management	Resources Process		Meaning Process
	Employees		Resources	
Case C	**Bra project**			
	Management	Resources Process Meaning	Process	Resources Process
	Employees			

As illustrated in table 8.7 there is use of power in all business units throughout the implementation process. The dispersion of power between the involved levels is however different between the three cases. In Case A and Case B it was found that the BRA project was powerful in the first phase only of the implementation process, and in Case C they were not powerful at all. From table 8.7 we can see that it is the management in all three cases that is the most powerful level during the implementation of BRA. The only exception is in Case B where the employees are able to mobilize sources of power in phase two of the implementation process. However, the management is able to regain their position by mobilizing their sources of power.

Table 8.7 seems to give a picture where it is more or less the management in the business units that are the most powerful level, and thereby one should not expect internal struggles as to how the evaluations are conducted. However as have been described in this chapter, it is found that the management uses its sources of power in order to influence the evaluation processes. The evaluations conducted in phase one of the implementation process focused on assessing the consequences of the

implementation of BRA or point to areas that had to be changed in order for the organization to become a "BRA organization". It was found in this chapter that sources of power were used as a mean to control how the outcome of these evaluations was used and if they were used at all. Evaluations conducted in the later phases were controlled in respect to who were assigned to carry through the evaluations, what areas were to be measured and who should be a part of the evaluation. Through controlling the evaluation processes the management was in a position to also control the outcome of the evaluations as well as whether and how they sought to use the results.

The findings described and analyzed in this chapter as to how the use of power influenced both how evaluations were conducted and whether and how the results were used, will be used as a departure point to develop a new perspective of progress measurement. This will be the theme of the following chapter.

9. Towards a New Perspective on Progress Measurement

This chapter integrates the findings from the analysis of the empirical data in the previous three chapters with the theoretical perspective on use of power in organizations. Thus the purpose of this chapter is to advocate a partly new and modified *perspective on progress measurement*. The suggested perspective is founded on the empirical findings from this research project as well as on prior research on progress measurement. In doing so I try to integrate the empirical findings on how progress measurement is conducted with factors on what influences this process as well as whether and how the results are used. As discussed in chapter two organizations' intentions may differ as to the purpose of the evaluation and how the results are then used, which is a relation that I also find support for from the empirical data in this thesis. Based on the new theoretical perspective presented in the following part; three approaches of progress measurement can be deduced. The three approaches of progress measurement that will be presented in this chapter I have labeled as: *the rational approach*, *the political approach*, and *the learning approach*.

The processes of evaluations conducted by the organization in this study were found to be different approaches to progress measurement as to; how this was conducted, in which phases of the implementation process progress was measured, and how the results were used. My findings showed that there were both variations within each business unit over time and across the different business units with respect to how progress measurement was conducted. In chapter six I concluded by presenting three typologies of evaluation: *"seeking the path"*, *"assessing the consequences"*, and *"seeking the truth"*. The theory used to explain the empirical findings on how organizations measure progress and whether and how the results are used, is based on theory on use of power in organizations. Chapter seven offered an analysis on whether or not there were conditions for use of power present in the respective business units. It was here argued that there had to be several conditions present in an organization in order for power to be used. An analysis of both contextual and content conditions were given, and the fact that there are different groups within an organization, these conditions will vary as to the presence of them and how strongly represented they are in the organization. Having found that use of power was present in all three business units, chapter eight offered an analysis on how power was used, and further, how use of power

during the implementation processes affected how progress measurement was conducted and how the outcome results were used.

Drawing on these findings, I present in this chapter a new theoretical perspective on progress measurement. I will take a further step and combine the findings on how organizations measure progress with findings on what influences these activities. Following the presentation of the new perspective on progress measurement, the three different approaches to progress measurement will be defined. I also predict when the respective approaches are likely to be used. The prevailing assumption in each approach is that power will be used during evaluations, but the extent and purpose will differ among the three approaches.

The remaining part of this chapter is organized as following; first a new perspective on progress measurement will be presented, secondly the three approaches of progress measurement will be described, thirdly a discussion of the how corporate conducted a final evaluation of the BRA program will be given, and finally this chapter will conclude with a discussion of the findings presented in this chapter.

9.1.   A New Perspective on Progress Measurement

This part presents a new perspective on progress measurement. From the literature reviewed in chapter three we saw that the main focus from the strategy and information system research on progress measurement as well as the program evaluation literature, were more or less prescriptions on i.e. how to evaluate during the implementation of a strategy. The purpose of this chapter is not to present yet another recipe on progress measurement, but rather offer a new perspective on what influences how organizations actually measure progress and whether and how this influences the used of the results.

From the assessment of the literature reviewed in chapter three it was argued that in order to develop the research on progress measurement it is necessary to look at explanations to why organizations choose to conduct progress measurement the way they do, which in this thesis has proved to be quite different than what is prescribed in the literature. It has also been argued that the use of power in organizations is a factor that influences how progress measurement is conducted, whether and how the results

are used, and if the results are used as intended feedback for learning purposes. In chapter eight it was shown that there was use of power at different levels in the organization, and further there was found to be mobilization of power where those whom had power changed from phase to phase. These findings influenced both how progress measurement was conducted as well as how the results were used.

The focus in the new perspective on progress measurement is that both contextual and content conditions will influence to what degree there is use of power in the organization, and use of power will influence how progress measurement is conducted and whether and how the results are used. Use of power as here defined by three dimensions; power through resources, power through process, and power through meaning (see chapter four for a description of these dimensions). These dimensions influence both how progress measurement is conducted and whether and how the results are used. All three dimensions of power will not be present at all times and in fact the dimension(s) in use may vary over time during measurement and one dimension may be more prevailing than the others in certain evaluations. From the data I also find that there is mobilization of power over time between the different levels in the organization and the groups who are found to be the most powerful, changes over time with each evaluation.

Based on these findings, a new perspective on progress measurement was deduced, which is illustrated in figure 9.1. This figure illustrates that the presence of conditions for power to be used is a prerequisite for use of power in the organization. However, as discussed earlier not all conditions must be present, and neither will all dimensions of power be necessarily used simultaneously at all times. The figure illustrates that use of power will influence both how progress measurement is conducted as well as how the results are used. The influence of power on progress measurement and use of results is in figure 9.1 illustrated by the solid lines. Further there is also a connection between progress measurement and use of results, which is here illustrated by solid lines drawn in both directions. However, as I discuss in the next part of this chapter the results may not be used. The outcome of the measurement is thought initially to be of use to the organization, but the empirical data reveal that the results are not used, or they are predefined, or controlled by the management. Therefore, the links between the dimensions in figure 9.1 will be more prevailing under certain circumstances or may not

be present at all. The feedback lines, illustrated by the dotted lines, in this perspective indicate a dynamic process where one measurement process is influenced by prior activities and will again influence how the next evaluation is conducted as well as the implementation process itself. The reported findings in this thesis revealed that there was variation on how progress measurement was conducted from time to time both within each case and across the three cases. In fact with the elapse of time there was not two evaluations conducted in a similar manner, and in all cases of evaluations it was found that use of power influenced both how progress measurement was conducted as well as how the results were used.

Figure 9-1 *A Theoretical Perspective on Progress Measurement*
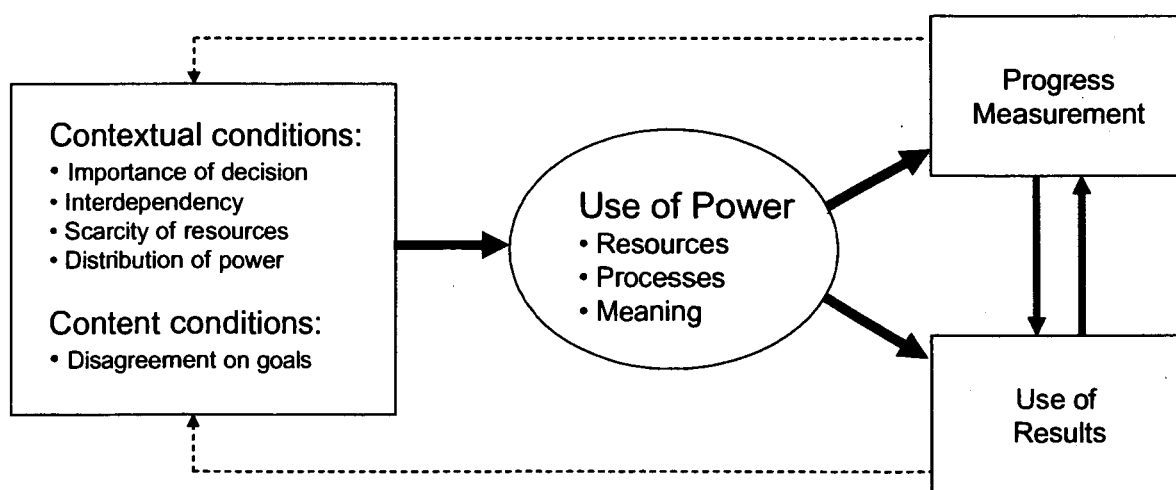
In the next part I will demonstrate how (1) the intensions with the evaluation, (2) the timing of the evaluation, (3) who initiates the evaluation, (4) disagreement on goals, and (5) the distribution of power determine how progress measurement is conducted and how the results are used. Deduced from these dimensions together with the new perspective on progress measurement presented in figure 9.1, three approaches to progress measurement will be presented in the following part.

9.2. Three Approaches to Progress Measurement

The aim in this chapter is to combine the empirical findings on how progress measurement was conducted during change processes with findings on how power was used during these processes. This will enable me to go one step further from merely describing how organizations measure progress to in fact illustrate what influences this

process. The approaches presented in this part are all reflected in the new perspective on progress measurement (see figure 9.1). Hence, the difference between the _typologies_ of evaluations presented in chapter six and the _approaches_ to progress measurement that will be presented is that the approaches developed in this chapter are deduced from both _data_ and _theory_.

As figure 9.1 illustrates the arrows in this new perspective on progress measurement includes all possible links between how power influences progress measurement and how power either directly or through the conduct of progress measurement influence how the outcome results are used. However, by linking (a) the conditions for use of power, (b) the dimensions of power, and (c) the different typologies of evaluations, we are able to develop more precise approaches of progress measurement. The approaches presented are, as opposed to the typologies of evaluations presented in table 6.6, generic approaches of progress measurement, which is a combination of prior research on progress measurement, theory on use of power in organizations and new empirical data. Mapping the evaluations with the data from the implementation and evaluation processes enables me to link the use of power with both how progress measurement was conducted and how the results were used. This visual mapping of process data allows the simultaneous representation of a large number of dimensions, and they can easily be used to show precedence, parallel processes, and the passage of time (Langley, 1999).

In order to get a coherent picture of the sixteen cases on progress measurement (presented in chapter six), I first of all mapped each of the sixteen evaluations into the research perspective presented in figure 9.1. Based on the results revealed from the case descriptions and analysis in the three proceeding chapters, I am able to map for each evaluation (a) the timing of the evaluations (early, middle or late phase of the implementation process), (b) who initiates the evaluation, (c) the conditions for use of power present during evaluation, (d) agreement or disagreement on the process, (e) the dimensions of power used and which level in the organization used power, (f) the typology of evaluation conducted, (g) whether and how the results were used, and finally (h) the direction of the arrows between the dimensions in the perspective. For each evaluation then the presence of conditions for use of power was mapped in the figure of each evaluation. Then the dimensions of power used during the different evaluations were also mapped into the figure together with whether and how the results

were used. For each evaluation the use of power has consequences for how evaluations are conducted and whether and how the results are used. Each figure has its own illustration as to the relationship between the categories in figure 9.1. The findings from this first step in the abstraction of the results are sixteen independent cases of how progress measurement was conducted and what influenced this process. However, as the next step in this analysis revealed these sixteen cases have similar characteristics, which allows for a clustering of the figures in different groups of evaluations.

The next step in the process was thus to see if there were similarities in these pictures that each evaluation represented. All the sixteen cases were divided in the three phases of the implementation process, defined here as the early, middle and late phase (this is illustrated in chapter six). The findings reveal that evaluations are mainly conducted in the early and late phase of the project. We also find that the number of evaluations conducted varies between the cases and there is no clear pattern as to the choice of evaluation typology used by the respective business units. Case B and Case C use all three evaluations typologies (seeking the path, assessing the consequences, and seeking the truth) at various stages throughout the process, while Case A only conducted one evaluation that took place in the early phase.

After going through these steps for each evaluation in this study, I then started to look for similar characteristics of these different figures. At this stage I had divided the different figures into three phases as to when the respective evaluations were conducted. All of the evaluations in each phase were then organized with respect to the typology of evaluation conducted. Based on the pictures presented from these classifications, I was further able to group these evaluations into three approaches of evaluation. This was achieved by recognizing which conditions were present, dimensions of power used, whether and how the results were used, and finally the links between these categories.

For each phase then, I first of all looked for which conditions were present during the evaluations and what dimensions of power used. The findings revealed that for the early phase of the implementation process there was agreement on goals between the different levels involved in all three business units and further it was found that all dimensions of power was present at this stage. (These findings together with how these conditions and dimensions of power were present in the remaining phases are illustrated in chapter

eight.) I further mapped this with how the results were used and what influenced the use of the results. The characteristics of these evaluations enabled me to abstract these findings to a more generic understanding of what influences how organizations measure progress and use the results. Based on these findings, *three approaches of progress measurement* are identified; the rational, the political and the learning approach to progress measurement. All three approaches are founded on the same theoretical perspective as presented in figure 9.1 but they give a more precise depiction on how the use of power under different circumstances influences how progress measurement is conducted. This answers the third research question of this thesis.

As will be illustrated in the following parts each approach has different characteristics as to (1) typology of evaluations used, (2) which conditions for use of power are present, (3) which dimensions of power are used, and (4) how the outcome results are used. A further distinction among these approaches and the overall perspective is more prevailing findings on the links between the dimensions in the approaches that predicts how power influences how measurement is conducted, how the results are used or intended used which again might influence the choice of measurement typology. All three approaches presented in the following parts are thus abstracted from the new research perspective. A description of the approaches of progress measurement developed is given in the following sections.

9.2.1.   The Rational Approach

The first approach deduced from the empirical findings and the new research perspective is labelled the *"rational approach"* of progress measurement. This approach is similar to the methods prescribed especially in the strategy literature. The "rational approach" is seemingly a linear and straightforward process, as described in the literature, where one first evaluates and then uses the results. In the rational approach the goals of the program is determined and there is agreement on goals between corporate and the business unit level. The evaluation is conducted and then the results are intended used as input or feedback to further plans. Thus the links between the dimensions in the rational approach will be from the conditions for use of power, to the use of power, to the use of either typology one or typology two evaluation, and then finally to the use of outcome results. However, although there is agreement on the goals the data reveals that the likelihood of not using the outcome results is present in this

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approach. In fact it is found that results are *not* used when staff initiates the evaluation on behalf of corporate management. Recalling the theory on use of power it is when the condition of disagreement on goals is present that power in organizations will be used, but on the other hand it was also argued that power would be used when there is disagreement on the process. Thus in this approach we find that although there is *agreement on goals, power will be used* when there is disagreement on the process of evaluation, and if that is the case, the outcome *results will not be used*.

The following sections will continue with a brief recapitulation of the evaluation processes in each of the business units. This will facilitate a more analytical discussion of the rational approach as well as enable me to present propositions on the findings revealed in this study.

Case A

In Case A all conditions for use of power; importance of decision, interdependency, scarcity of resources and distribution of power were present in an *early* stage of the implementation process except for the condition of disagreement on goals. Case A was as described in chapter seven very much in favour of the new strategy and was anxious to implement the changes in order to realize the benefits from cost reductions. This business unit was therefore in *agreement* with the goals of the project at its early phase. Case A conducted one evaluation in the first phase that has the characteristics of a rational approach. The typology of evaluation conducted was in chapter six termed a *"type 2" evaluation* (assessing the consequences) where the focus was to calculate the cost-benefits with implementing the strategy. This evaluation was *initiated* as well as undertaken by the *BRA project*. The BRA project controlled how the evaluation was conducted by using *process power* and through *resource power* as they possessed the knowledge of the strategy. As the BRA project had its mandate from the corporate level, they were given as well has had the ability to acquire the most knowledge of the strategy. This put them in a superior position towards the business units who were then reliable on the BRA project in order to get the information as well as solutions on how to implement the BRA strategy. This again enabled the BRA project to control how the evaluation was conducted by using process power. On the other hand the business unit possessed power through the fact that power is delegated to the business units as part of the BRA project culture. In Statoil power is dispersed in the organization. Although the

BRA project had an important role in the first phase of the project, the business unit did not have much faith in the outcome results.

> *They are just figures that any smart person could calculate. They sat locked in a room in some hotel for a couple of days and calculated the potential profits through implementing the BRA strategy. What they didn't know was that most of these profits has already been realized through an earlier rationalization process. (Improvement group)*

The result of this evaluation process was that the business unit did *not use the results* as they had little or no faith in the evaluation process itself as well as in the results produced.

Case B

Case B conducted two evaluations in the *early phase* of the project where the rational approach of progress measurement was used. This business unit was also very much in favour of the strategy and there was, as for Case A, also in this business unit *agreement on the goals* of the project. In both cases the evaluations were *initiated by the BRA project*, but representatives from the business unit also took part in the evaluation process. The purpose of these evaluations was to (a) assess the gap of the changes needed implemented in order to fulfil the strategic plans; *"type 1" evaluation* and (b) assess the potential gains with implementing the new strategy; *"type 2"* evaluation. The outcome results of both evaluations were *used as input* to the business unit's strategy plan for the implementation strategy.

There was also in this business unit the use of power during the evaluations when the rational approach of progress measurement was applied. The BRA project level held *power through resources and meaning*. The BRA project had the knowledge of the strategy that the business units were dependent on in order for them to be successful or at any case to know what was to be changed in order to reach the strategic goals. Power through meaning was used by the BRA project to acquire the consent of the business units for the strategy that was to be implemented. Information through presentations, seminars and workshops were provided by BRA project to all levels in the business unit. In this respect the BRA project hoped to achieve less opposition to a strategy that by being implemented would create large changes to the organization. The management

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in Case B hoped to achieve a consensus amongst the employees in the organization that were in favour of the strategy through involving them in the evaluation process. Thus the management in Case B used *process power* and *resource power* towards the employees in order to create a favourable attitude to the upcoming changes. Although the input was used in the early phase of the implementation process, the circumstances changed in the later phase where the business unit changed its goals for the BRA strategy. Thus at this time in the implementation process, the evaluations conducted in the early phase had *lost its relevance*, and in fact outcome results from later evaluations were used as input to revised strategy.

Case C

The last business unit in this study, Case C, conducted four evaluations by using the rational approach of progress measurement. Also in this business unit the evaluations of this method were conducted in the *early phase* of the implementation process. Two of these evaluations were *initiated by the BRA project*, and the *business unit* itself conducted the other two that followed subsequently. Like the previous two business units, Case C was also at the early phase of the process in favour of the BRA strategy. Thus when the rational model was used there was *agreement on goals*, but apparently the business unit was more reluctant to the process outlined by the BRA project. The BRA project initiated and conducted two evaluations, and the purpose of these evaluations was to (a) assess the gap of the changes needed implemented in order to fulfil the strategic plans; *"type 1" evaluation* and (b) assess the potential gains with implementing the new strategy; *"type 2"* evaluation. The business unit conducted two evaluations where the purpose was to assess what needed to be changed in the organization in order to fulfil the BRA strategy; *"type 1" evaluation*. The business unit did *not use* the evaluations conducted by the BRA project as intended although there was to a large extent involvement by the business unit in these evaluations. The outcomes of these evaluations were used as input in further assessments of the organization initiated by the business unit itself. The business unit was because of its reluctance towards the process of the BRA project less lenient in allowing them to be in control of the evaluations. The business unit used its power through *resource power* to control the evaluation process and how the results were used. The business unit further used *process power* by involving employees in the evaluation process. This was done with the intention of preparing the organization for the changes that were going to be

realized. In addition, *meaning power* was used by the BRA project in the early phase as a source of power to prepare the organization for the upcoming changes.

Although the "*rational approach*" of progress measurement is seemingly a straightforward method of evaluation and have similar characteristics as the evaluation methods prescribed in the literature, it proves also to be quite different as described in the recapitulation of the three business units. The main difference of the rational approach deduced in this part as compared to the methods prescribed in the literature, is that it is here found that there is *use of power* that influences how the evaluations are conducted as well as whether and how the results are used. The rational approach of progress measurement is illustrated in the following figure 9.2.

Figure 9-2   *The Rational approach*
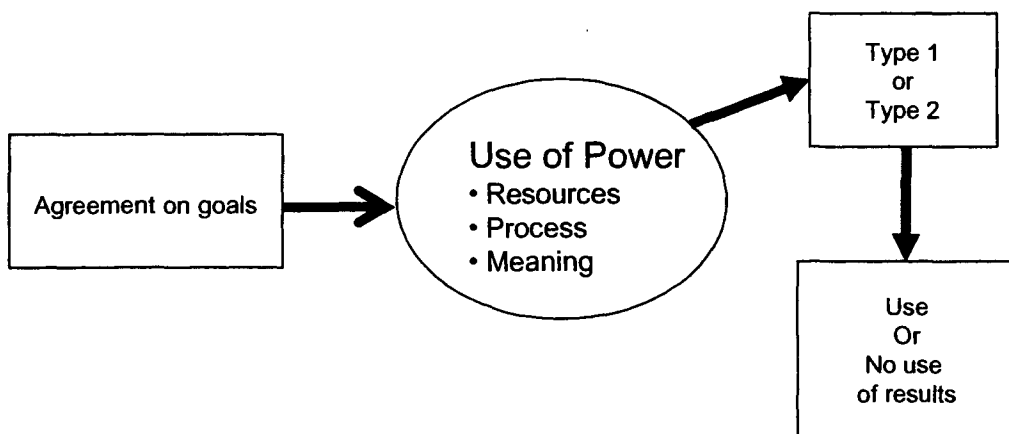
* Type 1 evaluation: seeking the path, type 2 evaluation: assessing the consequences.

From the discussion above we find that the rational approach of progress measurement has characteristics as illustrated in table 9.1.

Table 9-1   *Characteristics of the Rational approach*

Dimensions	Characteristics
Timing of evaluation	Early phase of implementation process
Initiator	Corporate or business unit
Condition	Agreement on goals
Process	Disagreement on process
Power dimensions	Resource
	Meaning
	Process
Typology of evaluation	Type 1 and/or Type 2
Use of results	Use or No use of results

The empirical results of this study reveal that the rational approach is used in an early phase of the implementation process, and the approach was found present in all three business units of this study. The evaluations were either initiated by the BRA project level or by the business unit itself. The outcome results of the evaluations were intended used as input to defining plans and activities for the implementation of the strategy. The focus of this method is (a) either to assess the gap of the changes needed implemented in order to fulfil the strategic plans (type 1 evaluation) and/or (b) to assess the potential gains with implementing the new strategy (type 2 evaluation). Based on the characteristic of a rational approach of progress measurement as illustrated in table 9.1, the following proposition is proposed:

P1a: *Use of the rational approach is likely to occur in an early phase of an implementation process.*

From the discussion in this part it is found that the rational approach will only be used in an early phase of an implementation process. This may have to do with the fact that since at an early phase there most likely will not be much disagreement within the organization or between different levels within the organization. There could be several reasons for why we find that there is agreement on goals in an early phase, but one that

seem prevailing from the data, is that a strategy initiated by the top management within a company seems to be a decision business units will comply with. However, the strategy has yet to be implemented and all potential obstacles with the written plans have not yet been put into life. A strategy is most likely to be presented in a quite rational manner where all actions to be made in order to reach the goals are presented in an orderly and straightforward manner. It is most likely that those who initiated the strategy, which in this case was the corporate level in Statoil, will initiate the evaluation and the intention is that the respective business units will use the results as input to local plans. Because the method is applied in an early phase where there is agreement on goals, there is not often much activity going on that will disturb this linear approach to evaluation. Thus, when there is agreement on goals the following proposition is proposed:

P1b: *When there is agreement on goals the rational approach to progress measurement is likely to be used.*

In spite of agreement on goals between the involved parties, there is however the evidence of use of organizational power. The degree to which power is used depends on the disagreement concerning the process of evaluation, and based on these circumstances there will be difference in use of the outcome results. In the rational approach of progress measurement power is present and as illustrated in this part both the corporate level and business unit uses organizational power during the evaluation as well as the implementation process. However, the data reveals that at the end it is the business units who are able to mobilize its sources of power and thereby decide whether and how the outcome results will be used. Based on this, the following proposition is posed.

P1c: *When the rational approach is used the business unit is likely to use its sources of power to control whether and how the outcome results are used.*

Although we find that there is agreement on goals between the business units and the BRA project, it is also found that the business units do not always comply with how the change process or the evaluation itself is carried through. In fact we find that when the corporate level initiates the evaluation, the business unit will not use the outcome

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results. This can be an immediate reaction to the evaluation process or it might be a reaction developed over time during the implementation process. When in the change process the business reacts by not using the output results from the evaluation is found to differ between the business units, but never the less the outcome results will not be used by the business units. Based on this finding, the following proposition is posed:

P1d: ***When the rational approach is initiated by corporate level the outcome results is likely not to be used.***

The findings regarding the rational approach to progress measurement supports the results presented in a study by Langley (1999) where she studied the process of formal analysis in organizations. Here she studied how the formal analysis was used depending on who initiated the evaluation: corporate, staff or line. This study revealed that in the cases where formal analysis was initiated by corporate and where staff conducted the analysis, the line level found it hard to use the outcome results of these studies. Reasons for this were that the ideas were too theoretical to be applied directly and line managers had to make their own judgement on how to operate the business although the analysis served as a challenge.

In sum, the rational approach to progress measurement has been argued to only take place in an early stage of a change process, as it will here be a quite clear understanding and consensus of the goals. However, when evaluations are initiated and carried out by corporate, the outcome results will most likely not be used. Although, there is agreement on the goals, all three business units in this study did not consent to the way the evaluations were conducted. This will results in the fact that the outcome of the evaluations will not be used by the organization as input to the implementation process. The management in the business units will use its sources of power to control whether and how the results are to be used. As was the case in the business units in this study, the outcome results from evaluations conducted by corporate that had the characteristics of a rational approach, would not be used by the respective business units. Reasons for this is that organizations have little faith in results produced by external parties as they feel that these are not as knowledgeable of their business and thereby not addressing the correct issues in the evaluations.

9.2.2. The Political Approach

The second evaluation approach deduced from the empirical findings and the perspective illustrated in figure 9.1 is labelled the "*political approach*". This method is more complex than the rational approach, and also the political approach is quite different from the methods of evaluation prescribed in the literature. When the political approach is used one will find that there is disagreement on goals between different levels in the organization. According to theory there should be agreement on goals in order for the organization to evaluate a process; without goals there is nothing to evaluate progress against (Otley, 1978; Kaplan & Norton, 1992; Stacey, 1996; Simons, 2000). However, the data reveals that organizations do undertake evaluations even when there is disagreement on goals, and one reason is to be able to influence the implementation process itself. As opposed to the rational approach, use of power is more prevailing in the political approach. The evaluations are used as instruments in order to manipulate the direction the implementation process is taking. In this respect the initiators of the evaluation have more or less predetermined the outcome of the evaluation before it takes place. This will influence how progress measurement is conducted with respect to who is involved in the evaluation and the focus in the evaluation. In this respect one is in control of what is being evaluated as well as whether and how the outcome results are used.

The political approach to progress measurement was used in two of the business units of this study, Case B and Case C. As discussed in chapter six, Case A did not conduct more than one evaluation due to difficulties in implementing the strategy, which in the end lead to a redefinition of goals due to a venture with an external partner. This section will continue with a brief recapitulation of the evaluation processes related to the political approach in both Case B and Case C. This part will also conclude with a discussion of the political approach, which will enable me to pose propositions on the findings revealed in this study.

Case B

Case B used the political approach of progress measurement in the *later phases* of the implementation process. Since the middle phase of the project, there had been *disagreement on goals* of the strategy between the management and the employees in the business unit. In the later phase there was even disagreement between the BRA

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project and the business units as to the goals of the change program. This fact did not influence the evaluation process, as the BRA project was no longer involved in the implementation of the strategy in the business unit. However, the fact that there was disagreement between management and the employees in the business unit affected how the evaluations were conducted. Two evaluations were conducted in the business unit that have the characteristics of the political approach. The first evaluation conducted was a *"type 1" evaluation* (seeking the path) where the focus was to assess the progress of the implantation of the BRA strategy. Following this evaluation a *"type 2" evaluation* (assessing the consequences) was carried through where the focus was to assess the consequences of the modified strategy.

The *management initiated the evaluations* while representative from the business unit carried through the evaluations. The management used power in order to influence the direction the change process was taking. Dimensions of power used were *meaning and process power* towards the employees in order to *influence the evaluation process*. As described in chapter eight the management more or less controlled who participated in the evaluation as well as what aspects that were to be evaluated in order to reach its own *predefined goals*. The management had more or less decided on the overall aspects on the redefined goals of the strategy before the evaluation took place and therefore it was important to control the process of evaluation in order to ensure the outcome of the evaluation was in line with the managements' goals.

Case C

The last business unit in this study, Case C, used the political approach of progress measurement in both the *middle and later phase* of the implementation process. It was also in this case *disagreement on goals* between the management and the employees in the business unit. The employees were not in favour of changes that would effect their working environment. The management were also more reluctant to implement the strategy fully as presented by the corporation. This resulted in a step-by-step implementation that differentiated from the original strategy, but never the less had to be cautiously implemented in the business unit in order not to create too much turmoil and disorder within the organization. In the middle phase the business unit conducted one evaluation and in the later phase two evaluations, which all have the characteristics of the political approach. In the middle phase a *"type 2" evaluation* was conducted

where the focus was to assess the consequences of revised strategy. In the last phase the business unit conducted two evaluations of *"type 1"*, where the focus was to assess the progress of the implementation of the strategy for then to decide on necessary actions.

In the middle phase, *process power* was used as a mean to control the evaluation process in order to produce the results sought by management. The management in the business unit had more or less decided on the future direction of the implementation process and what the goals were to be for the organization. During the evaluations conducted in the later phase the management used dimensions of power such as *resource and process power*. If the results of the evaluation were favourable then the offshore workers would be rewarded with increase in wages. The increase in wages was believed to aid as encouragement amongst the employees to proceed with the change program. In this respect the management both controlled how the evaluation was being carried through and what was being evaluated. This was again, as for Case B, to acquire the *results predetermined* before the evaluation took place. The fact that one knew before the evaluation was taking place how the results were going to be used influenced also how the evaluation was being conducted.

The second approach to progress measurement deduced from the new theoretical perspective as well as from the data in this study is the *"political approach"*. The data reveals that when the political approach is used there is disagreement on goals. According to theory on progress measurement there should be a consensus on goals in order to carry through an evaluation. In spite of disagreement on goals, it is found that organizations carry through evaluations in order to manipulate the implementation process itself. The initiator of the evaluation uses its sources of power to influence how the evaluation is conducted in order to secure the outcome that was predetermined by management. This is illustrated in figure 9.3 with a link from "use of power" to both "progress measurement" and "use of results". Finally, the fact that the use of results is predetermined will also influence how progress measurement is conducted, which is illustrated with the link back from "use" to "measurement". The political approach is illustrated in figure 9.3.

Figure 9-3   *The Political approach*
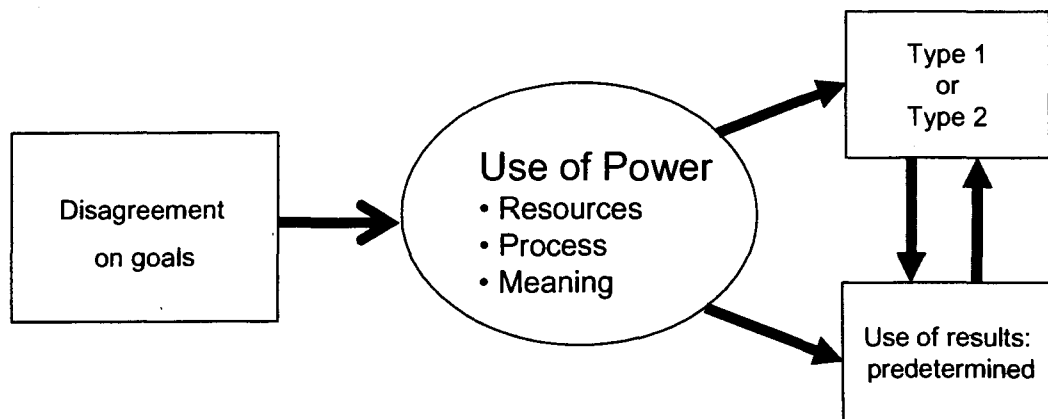
* Type 1 evaluation: seeking the path, type 2 evaluation: assessing the consequences.

From the discussion in this part the political approach is found to have the following characteristics as illustrated in table 9.2.

Table 9-2   *Characteristics of the Political approach*

Dimensions	Characteristics
Timing of evaluation	Middle or later phase during the implementation process
Initiator	Management in business unit (BU)
Condition	Disagreement on goals
Process	Controlled by management in BU
Power dimensions	Resource
	Meaning
	Process
Typology of evaluation	Type 1 or Type 2
Use of results	Predefined use of results

Similar to the rational approach, the type of evaluation conducted in the political approach is either a "type 1" or "type 2" evaluation. The focus in these evaluations is either to assess the consequences of a strategy plan that is either issued for the first time or revised after some time during the process. The other type of evaluation is to determine if changes to the strategy has to be made. The data also reveals that the political approach will be used in the middle or later phase of a project. The business

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units are more or less quite positive to a strategy when it is first introduced. However, as the data reveal, the business units will over time change their perception towards the strategy when the implementation process is well on its way. This has to do with the fact that individuals or groups have different views or opinions on what should be changed as well as how it should be changed when they have a clearer understanding of the strategy proposed. As discussed earlier in this thesis, theory on power in organizations states that groups will use their sources to power in order to influence a process. Thus, when groups have a developed an understanding of the strategy, which will most likely develop over time, they will use their sources to power to influence how this strategy will be formed in their organization. Based on the characteristics of a political approach of progress measurement the following proposition is proposed:

P2a: A political approach is likely to be applied in middle or late phase of an implementation process.

In this approach it is the management in the business unit itself that initiates the evaluation. The most prevailing issue is to implement the strategy in accordance with managements' goals and to make the necessary evaluations as found necessary. All the conditions for power to be used during progress measurement are present in this method, and as opposed to the rational approach it is found that disagreement on goals is present in the political approach. In according to theory on evaluations one should not expect evaluations to be carried out when there is disagreement on goals. Management should rather spend time on establishing the goals as well as ensuring consensus or understanding of these goals in the organization before the evaluation takes place (Simons, 2000). However, the data reveals that although there is disagreement on goals the organizations undertake evaluations; contrary to the assumption that information should be gathered and analysed before decision-making. Organizations have strategic and symbolic incentives for gathering information, and this influences how information is gathered and used (Feldman and March, 1988). Power is then used to influence how the evaluation is conducted, how the results are used or both. The following proposition is proposed:

P2b: When there is disagreement on goals a political approach to progress measurement is likely to be used.

In the political approach the data reveals that the use of the outcome results will be determined before the evaluation takes place. Also through controlling how the evaluation is being conducted, the outcome of the evaluation is more or less predetermined. When the political approach is in use the management uses power through controlling the evaluation process in terms of who evaluates and what is being evaluated, and thus achieving the outcome that serves their interest. Power is here used as a mean to defeat declared and identifiable opponents, which was by Hardy (1985) referred to as overt power. Based on these findings the following proposition is proposed:

P2c: *The outcome results and use of results is likely to be predetermined before the evaluation takes place, which again influences how progress measurement is conducted.*

Through controlling the evaluation process by setting the agenda for what to evaluate as well as dedicating the task to a chosen evaluation team, the management is in control of the evaluation process. The evaluation in the political approach is conducted in such a manner that one can control the outcome of the process. Thus, there is a self-seeking interest in how the evaluation is conducted. Examples here are either the management sets the agenda for what is to be evaluated so as to predetermine what is being measured, or how it is done, or by involving the "right" people in the evaluation process the outcome can be controlled. This again shows that by controlling the outcome results one also influences how progress measurement is conducted. By influencing the evaluation process both through how it is conducted and how the results are used, those who hold power will also influence the ongoing implementation process. Similar types of evaluations are used in both the rational approach and the political approach. However, the difference between these methods is the stronger presence of use of power in the political approach. By controlling the evaluation process and thereby controlling the outcome results, one is able to control or influence the further process in the change process. The following propositions can thus be proposed:

P2d: *Use of the political approach in evaluations allows for the control of the ongoing change process.*

When the political approach is used during evaluations the data reveals that the group who initiates the evaluation is in control of the whole process from the evaluation itself to how the results are used. In both business units where the political approach was applied the management was in the position where they had the power. The employees involved in the evaluation would seem to be pointed out by chance, but the management would ensure that the people involved were employees that did i.e. not have the strongest opposition to the strategy. Another way to control the process was to involve employees who had an important standing amongst colleagues and thereby the evaluation would increase its legitimism in the organization. When the "right" people were appointed to work with the evaluation the areas to evaluate where also more or less predefined by the management. In this way the management controlled the areas that were given attention during the evaluation - what is being measured is what gets attention (Markus and Pfeffer, 1983)). Hence, the results in this thesis reveal that the outcome of the evaluations was of no surprise to those who initiated the evaluation. In fact, the results where more or less in accordance with the outcome hoped for in advance of the evaluation. The management could based on the results of the evaluation continue with the implementation process as they had more or less defined before the evaluation had taken place. Hence, the intention with the evaluation when the political approach is in use is either to defeat the resistance in the organization to the ongoing change program or to produce favorable results, which enables one to proceed as intended.

In sum, evaluations conducted with the characteristics of the political approach will most likely take place in the later phases of an implementation process, and there will be use of power in order to achieve outcomes sought for before the evaluation is conducted. The evaluation process will be manipulated in terms of how it is conducted; where power will be used in order to determine who carries out the evaluation as well as setting the agenda for which aspects are to be evaluated. Hence, through using power the outcome results of evaluations with the characteristics of the political approach will most likely be in accordance to managements' predetermined goals for the evaluation.

9.2.3.   The Learning Approach

Finally, the third approach of progress measurement deduced from the data and the perspective in figure 9.1 is the *"learning approach"*. The learning approach has

different characteristics to those of both the rational and political approach. The main difference as compared to the rational approach is that in the learning approach the use of power will control how the results are used while or after the evaluation is conducted. For the learning approach it is also found that there is disagreement on goals. The major difference to the political approach is that in the learning approach the control of the use of the results will not directly influence how progress measurement will be conducted. Another difference between these two approaches is that in the learning approach the outcome of the evaluation is not predetermined, but rather controlled as to how the results will be used. According to theory on progress measurement there should be learning during the evaluation that allows for feedback to the implementation process, which again allows for corrective actions if the results are not in accordance to the goals of the project. However, the results reveals that although the focus in the evaluation is to determine the course of the ongoing implementation process and the intention with the evaluation is to get a true estimate of the status of the program, the use of the *outcome results is controlled*.

The learning approach was as the political approach used in two of the business units of this study, Case B and Case C. This section will continue with a brief recapitulation of the evaluation processes that have the characteristics of the learning approach. This part will conclude with a discussion of the learning approach in order to pose some propositions.

Case B

Case B used the learning approach of progress measurement in both the *middle and later phase* of the implementation process. At the time when these evaluations of this character were conducted, there was *disagreement on goals* as well as disagreement on the *process* between the management and employees in the business unit. These were phases where there was much turmoil and it was in fact the employees who used their sources of power to control the process of the implementation of the strategy. The management on the other hand was trying to grasp what had caused this opposition to the strategy as well as define how the organization was going to proceed with the change project. The *management initiated* evaluations of *"type 3"*; seeking the truth. The focus was to get feedback on the progress of the implementation process and why there was resistance in the organization towards the strategy. While the evaluations

were taking place the management used *meaning power* in order to try to turn the opinion amongst the workers. By the time the results of the second evaluation conducted in phase three were presented, the management had started to get an opinion on how they would continue with the implementation process. The results were used in such a manner that they sought the information that could be used in order to support their decisions on how to proceed with the changes. Thus, the management *controlled the use* of the results of these evaluations through selective use of information needed to support their plans for how to proceed with the implementation process.

Case C

Case C used the learning approach of progress measurement in the *later phase* of the implementation process. The evaluation was *initiated by the project group* in the business unit and the evaluation was of *"type 3"*. The focus was to assess the progress of the implementation of the strategy as well as the opinions and reactions amongst employees towards the strategy. At the time when the evaluation took place the employees in the organization was quite reluctant to any changes and, as illustrated in chapter seven, there was at this time *disagreement on goals* to those of the management. The management were in a position where they used their sources of power to control the ongoing implementation process. They also used their sources of power to control how the outcome of the evaluation was to be used. The management used *resource power* to control how they wanted to use the outcome results and if the results at all were going to be used. The data revealed that the management was quite reluctant to the information given as feedback on the implementation process as they had already determined the next courses of action.

In summary, the results reveal that there is disagreement on goals when evaluations that have the characteristics to the learning approach are taking place. Further it was shown that the outcome results were not used as feedback in order to do corrective actions, as the literature prescribed how the results should be used. Rather it is found that the management *controls the use* of the outcome results in order or selectively use the information needed to support the decision more or less already determined. This is illustrated with a link between "use of power" to "use of results" in figure 9.4.

Figure 9-4   ***The Learning approach***
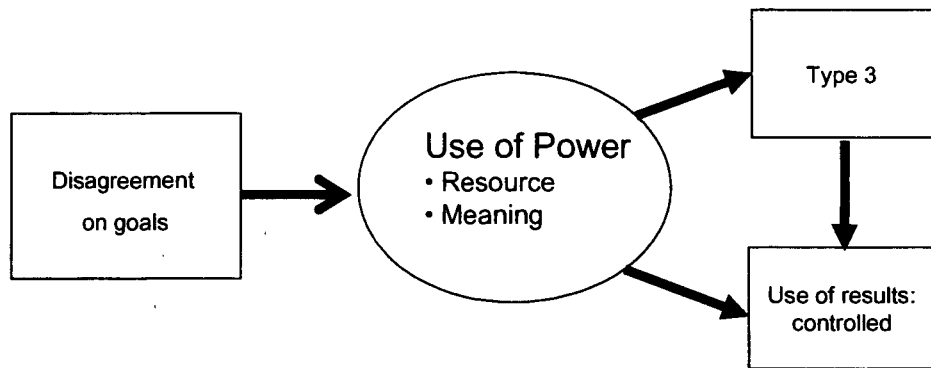
* Type 3: seeking the truth

From the discussion in this part the learning approach is found to have characteristics as described in the following table 9.3.

Table 9-3   ***Characteristics of the Learning approach***

Dimensions	Characteristics
Timing of evaluation	Middle or late phase
Initiator	Management or staff level in BU
Condition	Disagreement on goals
Process dimensions	Disagreement on process
Power	Resource
	Meaning
Typology of evaluation	Type 3
Use of results	Controlled use

The type of evaluation conducted in the learning approach is a "type 3" evaluation – "seeking the truth". The management initiates evaluations in order to assess the impact in the organization of the aspects so far implemented in such a way that for example the employees are performing their jobs in a new way according to the new strategy. From the data it is found that the learning approach will be applied in a middle or late phase of an implementation process. Based on the characteristics of a learning approach to progress measurement the following proposition can be proposed:

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P3a: *The learning approach is likely to be applied in middle or late phase of an implementation process.*

This has also to do with the fact that further on in a change process there is a larger demand for information on how things are proceeding. All the conditions for the use of power are present in the organization when a learning approach takes place. As was the case for the political approach, it is also here found that disagreement on goals is the prevailing condition that creates disagreements on how the ongoing implementation process should proceed. Although the intention is to get feedback on the status of the implementation of the strategy, power will also here be used. The dimension of power present in a learning approach is resource power and meaning power, and is here used by management. The difference between a learning approach and the political approach is that the process of evaluation itself in a learning approach is not controlled or influenced by management.

P3b: *When there is disagreement on goals a learning approach to progress measurement is likely to be used.*

In accordance to the theory on progress measurement the results of an evaluation during a change process is meant to be used as feedback to the organization with the intention of achieving organizational learning so that corrective actions can be made if found necessary based on the outcome results. However, in a learning approach one will find that organizations do not act in this manner. Rather it is found that the management uses the results in such a manner that it fits with its own plans for further implementation of the strategy. As opposed to the political approach, one is in the learning approach not controlling the evaluation process itself but one is still in the position of controlling the use of the outcome results. On the one hand the management does not manipulate how the evaluation is conducted by advising what should be the focus in the evaluation, but on the other hand they are in control of how the results are to be used and the use of the outcome results is used as seen fit by the management. From the data it was found that the outcome of the results also helped the management to make decisions on what would be the focus in the ongoing implementation process, which again put them in position to control the implementation process itself. The following proposition can thus be proposed:

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P3c: When the learning approach is in use the management is likely to control the use of the outcome results.

An explanation to the relationship in this proposition is that the management is in fact not looking for the "right" answer, as given through the results of the evaluation. The results are not used bluntly as feedback on the progress of the change process. Rather the management is looking for support in the results to their own ideas on how the change process should proceed. Hence, the management is using the parts of the outcome results that support management's opinion on how to proceed with the change process. In the research on progress measurement there is focus on how to produce the outcome results, but no attention is given on how the results may be used. However, the research does state that results should be used as feedback to do corrective actions. The relationship in proposition 3c reveals that there are limitations to this research. In accordance to theory there is organizational learning when through processing of information the range of the potential behavior is changed (Huber, 1991). However, learning involves understanding and making ones own perception of the information and according to Feldman and March (1981) the use of information is embedded in social norms that make it highly individual as to how the information is used and understood. The relationship in this proposition is supported by research on decision-making and as discussed in chapter three, organizations are not looking for the best way or most efficient alternative for solving a problem; rather they are looking for support that serves their chosen strategy (Feldman and March, 1988; Pfeffer, 1997).

In sum, in contrast to the political approach, evaluations with the characteristics of the learning approach are not controlled in terms of how they are conducted. The intention with these evaluations is to get feedback on the progress of the implementation process in its true state. However, the information from the evaluation is not adapted in its true state, but rather interpreted in order for the results to fit with managements' own goals with the change process. Thus, the difference between this approach and the political approach is that management does not control the evaluation process itself, but rather the use of the outcome results are controlled. The difference between the rational approach and the learning approach is that, although management in both approaches controls whether and how the results are used, management will in the learning approach through its sources of power control how the results are presented and adapted

by the organization. The results will be abstracted in such a manner that it fits or supports the managements' overall goals with the change process.

9.2.4. Summary

In this chapter a theoretical research perspective on progress measurement has been presented. This new perspective was deduced from earlier research on progress measurement, theory on the use of power in organizations and new empirical findings on how organizations actually conduct progress measurement in a true setting during an implementation process. The focus in the perspective is that conditions for use of power in organization influences the use of power, which again influences how progress measurement is conducted. The use of power will also influence whether and how the results are used either directly or indirectly through the measurement process. The new perspective on progress measurement is a dynamic process where the present evaluation process will influence both the next evaluation process as well as the implementation process itself.

The new perspective was further used as a departure for abstracting three generic approaches to progress measurement. Using the empirical findings on how organizations measure progress together with analysis of what influences this process as well as how the outcome results are used, three approaches to progress measurement were developed. These approaches were labeled (1) the "rational approach", (2) the "political approach", and (3) the "learning approach" of progress measurement. These three approaches are illustrated in figure 9.5.

Figure 9-5   **Three Approaches to Progress Measurement**
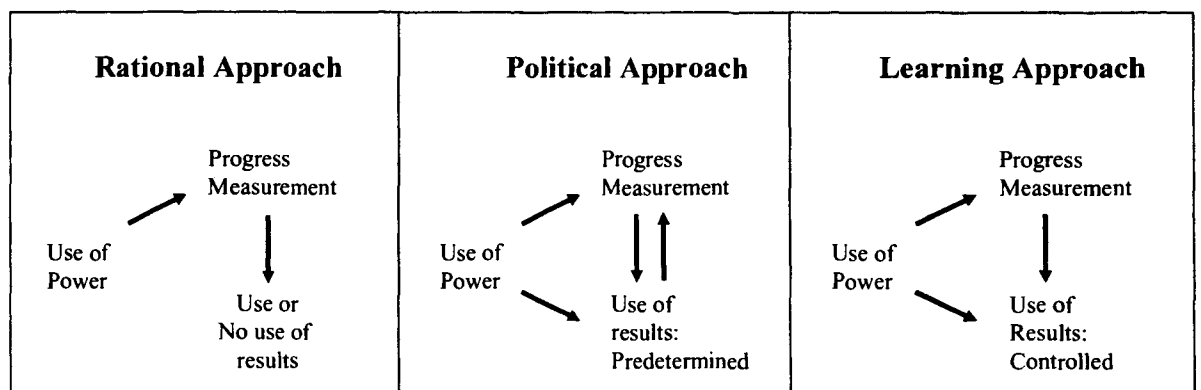
In all three approaches to progress measurement power will be used, which influences how progress measurement is conducted and whether and how the results are used either directly or indirectly. In this chapter propositions for each different approach to progress measurement were developed. The reasoning behind each proposition was explained in this chapter, and the propositions were linked with the empirical findings in this thesis as well as to existing research. The most prevailing assumptions in these propositions is that power will be used during the evaluations irrespective of when they occur during the implementation process and irrespective of whom initiates the evaluation i.e. corporate or the business unit itself. Further another fundamental relationship in the propositions had to do with the use of results from the evaluations. It was here discussed that the results would not be used in accordance to how research describes this, but rather the organizations manipulated the results themselves or how these were being used. The following table 9.4 summarizes the propositions proposed in this chapter:

Table 9-4   *Propositions*

P1a	*Use of the rational approach is likely to occur in an early phase of an implementation process.*
P1b	*When there is agreement on goals the rational approach to progress measurement is likely to be used.*
P1c	*When the rational approach is used the business unit is likely to use its sources of power to control whether and how the outcome results are used.*
P1d	*When the rational approach is initiated by corporate level the outcome results is likely not to be used.*
P2a	*A political approach is likely to be applied in middle or late phase of an implementation process.*
P2b	*When there is disagreement on goals a political approach to progress measurement is likely to be used.*
P2c	*The outcome results and use of results is likely to be predetermined before the evaluation takes place, which again influences how progress measurement is conducted.*
P2d	*Use of the political approach in evaluations allows for the control of the ongoing change process.*
P3a	*The learning approach is likely to be applied in middle or late phase of an implementation process.*
P3b	*When there is disagreement on goals a learning approach to progress measurement is likely to be used.*
P3c	*When the learning approach is in use the management is likely to control the use of the outcome results.*

As discussed in this chapter the approaches of progress measurement have different characteristics. The three approaches to progress measurement deduced from the new perspective on progress measurement were found to be different with respect to (a) when in the implementation process they were used, (b) conditions for use of power present in the evaluation, (c) dimensions of power used, and (d) the intention behind the evaluation. Contrary to theory on progress measurement we found that progress measurement took place although there was disagreement on goals. It was found that the management tried to influence the implementation process itself, and by controlling either how the evaluation was conducted or how the results were used, allowed them to both influence the evaluation process and the implementation process. Also contrary to theory it was found that evaluations were not used as feedback in order to do corrective actions that comply with the goals of the strategy. Rather it was found that (a) the results of the evaluation were not always used, (b) the use of the results were sometimes predetermined, and (c) management controlled use of results in accordance to how they planned to proceed with the implementation process.

A comparison of the characteristics of each approach is illustrated in table 9.5.

Table 9-5   *Characteristics of the Approaches of Progress measurement*

Dimensions	Rational approach	Political approach	Learning approach
Timing	Early phase	Middle and/or later phase	Middle or late phase
Initiator	Corporate or business unit (BU)	Management in BU	Management or staff level in BU
Condition	Agreement on goals	Disagreement on goals	Disagreement on goals
Process	Disagreement on process	Controlled by management in BU	Disagreement on process
Power dimensions	Resource	Resource	Resource
	Meaning	Meaning	Meaning
	Process	Process	
Typology of evaluation	Type 1 or Type 2	Type 1 or Type 2	Type 3
Use of results	Use or No use of results	Predefined use of results	Controlled use

The above table illustrates that the rational approach is only used in the early phase of an implementation process, while the political approach and learning approach are used in a middle and later phase. As discussed in this section a reason to this may be the fact that organizations are more forthcoming to a strategy introduced by corporate in its early phase. At the introduction of a strategy it is yet too early to have encountered practical problems with the implementation of the strategy, and therefore resistance to the strategy has not yet been built up. However, later in the implementation process the data reveals that the business units encounter difficulties with implementing the strategy, and as well, different goals to those of corporate are developed.

For the rational model it is also found that there is agreement on goals as apposed to disagreement on goals for the other two methods. However, in spite on agreement on goals, the outcome results are not used when corporate initiates and conducts the evaluation. As discussed, a reason to this was disagreement on how the evaluations were carried through. Thus, the management in the business unit used their sources of power to control how the results were used. When evaluations of the rational approach are conducted all dimension to power are used: resource, meaning and process. On the other hand, when the management initiates the evaluation the results are used as input to the implementation plans.

In the political approach and the learning approach the use of power is more prevailing than what is the case for the rational approach. When these two methods are used it is found that the role of corporate in the implementation process has diminished, and the use of power is between the management and employees in the business unit. In the political approach there is use of power by management, which influences both how progress measurement is conducted as well as whether and how the outcome results are used. Through ongoing processes the management has before the evaluation takes place predetermined what results they want to achieve from the evaluation. Hence, what is being measured is controlled through who participates in the evaluations as well as assigning areas to be evaluated. In figure 9.5 this is illustrated with a link from "use of results" to "progress measurement" as the use of results is predetermined, which influences how progress measurement is conducted.

In the learning approach the evaluation is initiated either by management or staff in the business unit. The aim is to get feedback on the progress of the implementation process as well as the attitude amongst people in the organization towards the strategy. The difference between this method and the political approach is that instead of having predetermined the outcome of the evaluation, the use of the outcome results in this case are controlled. Under the learning approach it is the management in the business unit that initiates the evaluation, but a dedicated group carries out the evaluation. As opposed to the political approach, the management does not control the evaluation process itself in the learning approach, but however the management controls how the results are used. This implies that the use of results will not influence how progress measurement is conducted, which is the case in the political approach.

In the following part an illustration as well as a discussion will be given on how corporate conducted a final evaluation of the change program in Statoil. This discussion will support the findings presented in this chapter and will further illustrate how power is used in evaluations in order to achieve the outcomes that are most preferable to the organization.

9.3.   Evaluation at corporate level

Corporate conducted a final evaluation of the change process in Statoil. The BRA Final Report was conducted four years after the change process started, which was the dedicated time for the implementation of BRA. After the four-year period all divisions should have adopted the BRA strategy. The aim of the evaluation was then to assess how successful Statoil had been in the implementation of BRA. This part will give a brief discussion on how the evaluation of the BRA Final Report was conducted as well as comment on the results of the evaluation. The discussion of the report is based on secondary data as well as on discussions of the results of this evaluation with key informants in the business units. This part will, thus, not provide a thorough analysis of the evaluation process. Rather, the aim is to use this report to highlight and underpin findings already discussed in this chapter.

The goals of the BRA program was to increase the efficiency of the organization through implementing the IT system SAP as well as organizational changes as

described in the BRA strategy (see chapter five for a description of the BRA strategy). As illustrated and discussed earlier, the three business units that comprises the empirical data in this thesis, all changed their goals regarding the BRA strategy during the implementation process. So, when we left the divisions all three business units had modified their goals concerning the strategy, which deviated quite extensively with the original BRA strategy. We also know that other divisions encountered similar difficulties as the three cases in this study. This information was given to us through; interviews with management in especially Case B and Case C whom would have meetings with members of other divisions; through observations in project meetings initiated by corporate BRA group where several divisions would participate; and finally through other researchers that gathered data from other divisions that are not a part of this study. See also Stensaker (2002) for a more extensive discussion of modifications of strategy and reasons to why modifications occur.

So, based on the findings that the changes implemented by the business units in Statoil deviates from the original BRA strategy, a viable question then to ask is; against which goals did the BRA Final Report evaluate the implementation success of BRA?

The BRA programme management initiated and was responsible for the BRA Final Report, which in the end was approved by the BRA programme director. Thus, people. that had been involved in the BRA programme group during the implementation of BRA in the organization conducted the evaluation itself. The following major conclusion of the BRA project made by the evaluation team in the report was; "*The BRA project has been completed in a shorter period of time than was estimated at the start of the project in the autumn of 1996, and approximately 10 per cent below budgeted costs*" (Pg. 1). The report continues to state; "*In accordance with he objective, Statoil has introduced an administrative solution which is flexible in relation to both changing organizational frameworks and different geographical locations*" (Pg. 1). Finally, the report states; "*In connection with the financial benefits from the BRA investments... In November 2000, the units reported estimated benefits of approximately NOK 1.4 billion/year*" (Pg. 35).

These conclusions made on the implementation success of the BRA project are not supported by the empirical data presented in this thesis. First of all, the business units

here studied did not fully adapt the BRA goals, and one major aspect that does not comply with a flexible organization as defined by the BRA programme management was the decision made by the divisions not to implement integrated teams (see chapter seven for the discussions on goals). Secondly, the timeframe allotted for the implementation of BRA in each division does not coincide with the actual time spent on the change process. When BRA withdrew from the divisions and considered the implementation as completed, the divisions were still working on adapting the changes in the organization. Thirdly, the costs calculated by the programme management do not include costs that the business units themselves encountered with respect to the implementation process. The divisions had to spend time and resources on the implementation process, and these were costs that were not taken into account in the BRA programme's calculations (Interview, management in Case B and Case C). Finally, how the programme management actually calculated the benefits is hard to understand. The report states under aspects that worked well in the change process was amongst others; *"The benefit case for each unit was set out in the charter for the implementation projects"* (Pg. 36). However, from the data presented in this thesis we know that the divisions had difficulties abiding to the benefit cases and in fact that the prospects of benefits were changed during the implementation process in the respective cases (see chapter six for discussion on evaluations).

Although the BRA project is considered a success by the BRA programme management, they also indicate that there are certain aspects to the goals of the BRA strategy that had not yet been attained. The reports states; *"In the BU (business units), it is important that the action plans which the units created during he implementation of BRA are realised. Units with inadequate plans or an unclear relationship to the BRA processes must be followed up. It is vital that process owners have the resources to document and follow up the implementation through the verification and further development of best practice...A change project such as BRA requires active involvement from the management...Disloyalty to a decision to implement change must have a consequence"* (Pg. 2). Based on these statements, the evaluation team proposed the following recommendation; *"The top management must take an active ownership of change projects and BU managers must be loyal to these projects. The best possible foundation in each unit must be ensured. Investment in good planning and communication in all links is vital"* (Pg. 2).

Based on the results given in the BRA Final Report as well as the comments made to the implementation process itself as given in the above citations, the outcome of the evaluation seems to lack consistency. On the one hand the implementation of BRA is considered a success, but on the other hand business units have not fully abided to the BRA strategy. This again should have had consequences for the overall success of the change process. It has also been proved in this thesis that the business units did not agree upon how neither costs nor benefits were calculated by the BRA management during the implementation processes in the respective business units. Hence, given the outcome of the Final BRA Report it is also in this case valid to propose that there have been mechanisms of use of power in the process of conducting the evaluation. The evaluation was conducted by a team that had also been part of the BRA project during implementation of BRA in Statoil. It seems as though it would be in their interest that the outcome of the evaluation was favourable to the success of the BRA strategy. Although there is no further empirical data on the evaluation process, but based on the outcome of the evaluation together with data from the divisions one can nevertheless make the assumption that a political approach to progress measurement was in use here.

9.4.   Conclusion

Existing research on progress measurement mostly focuses on developing methods of evaluations where the intention of the evaluations is to use the results as feedback to the ongoing change process (Kaplan & Norton, 1992; Simons, 2000). To some extent this line of research acknowledges that the behaviour of individuals and political activities may influence both how evaluations are conducted as well as how the results are used (Guba & Lincoln, 1989; Worthen et al, 1997). In this line of research use of power in organizations is pointed to as a dimension that may influence the evaluation processes. However, a limitation to the literature is that there is lack of focus on how the political activities influence the conduction of evaluations and neither is this aspect incorporated in the methods of evaluation.

The data reveals that organizations in fact do not plan in advance for the evaluations taking place, but that this more or less is conducted on an ad-hoc basis as the time passes by in the change process. This is contrary to the literature on progress measurement that stress the importance of conducting evaluations during change

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process and that these should be planned for along with other activities. The majority of evaluations take place in the middle or later phase of the change process, and except for in some cases, these evaluations occur unplanned for. This was not the intention of the program management, where it was stressed that it would be vital for the project to evaluate the progress during the implementation process. The project management tried to develop an evaluation method guideline that was to be adapted by the business units during the implementation processes. However, the project group encountered difficulties in designing an evaluation method, and finally the whole task of progress measurement became the business units' own responsibility. Hence, a question asked in this thesis was; how come the vast literature on progress evaluation, which is prescriptive in nature, is found hard to adapt by organizations?

The answer to this is most likely that organizations do not conduct evaluations with the same intentions as prescribed in the literature on progress measurement. The evaluations are not merely used as a mean to get feedback on the change process per se, but rather as a mean to control the change process itself and to ensure that managements' own strategies are implemented. These findings strengthen the appropriateness of using a political perspective in order to understand how progress measurement is conducted.

10. Conclusions and Implications

In this chapter I will discuss my findings with relation to existing research and theory. This chapter is divided into three parts. First of all, I will begin with a brief overview of major findings and contributions provided in this study, together with a presentation of identified limitations. This leads to a discussion of practical implications as well as a discussion of theoretical implications and suggestions for future research. Finally, this chapter concludes with two closing remarks.

10.1. Overview of Findings, Contributions and Limitations

The main focus in this study has been to enhance our understanding of what influences how organizations measure progress during change processes. This study has revealed that organizations do not apply models of progress measurement as described in the literature, which was described as being prescriptive and normative in nature. Organizations do evaluate progress during change process, but not in an always planned and orderly manner. Nor do they measure progress with the intention of getting feedback in order to do corrective actions. This study shows that evaluations often occur in an ad hoc manner where the aim of the evaluation is not to get feedback, but to the contrary, to use the evaluations in order to manipulate or control the direction of the ongoing change process.

In chapter 3, three streams of literatures with respect to progress measurement were reviewed: strategic change, information system implementation, and program evaluation. All three literatures were reviewed with the aim of answering both how organizations measure progress, and what influences this process. However, as the literature review revealed, this line of research was not sufficient in order to answer the research questions. The literature was criticized for being overly rational, using weak measurement variables, producing irrelevant outcomes, and for not focusing on how the results may be used in organizations. The literatures had little focus on how to deal with these issues, and for most part, evaluation models are described as straightforward processes where social aspects or contextual factors are not considered. Based on these weaknesses to the research on progress measurement, new theoretical perspectives were consulted in order to probe the research problem.

In chapter 4, reasons why organizations are unable to apply prescriptive measurement models when evaluating progress and use the results of the evaluation for the purpose of feedback and thus enhance organizational learning were discussed. These findings led this study to probe the theoretical perspective of power in organizations. The perspectives of organizational learning and bounded rationality, and some of the research on evaluations (see fourth generation evaluation), pointed to the necessity of understanding how social aspects such as values, culture, psychological and political actions may influence how organizations measure progress. Hence, the perspective on use of power in organizations was probed to search for explanations to the findings revealed in the data. This may be a limitation to this study as there are other theoretical perspectives that are suitable to apply in the analysis of the data in order to shed light on the research problems. However, the power perspective was found to be the most suitable to use in the analysis of the data. The data revealed that there was extensive use of power between different levels and groups in the organization and the dimensions of power in use changed during the phases of the project and those who held power also changed. Finally, in chapter four a tentative research model was presented, which was based on review of the literature on evaluations in organizations as well as the critiques towards this literature.

In chapter 5, the method used in this study was documented. The elaboration on the research design and data analysis revealed some of the inherent methodological problems related to qualitative empirical studies. Potential limitations to this study were related to external validity and generalizability from the relatively few samples of cases. However, as pointed out in the research on progress measurement, longitudinal studies that explore how organizations evaluate programs are needed in order to enhance our knowledge on this field of research. The aim of this study, was thus to contribute with new findings on how and why organizations measure progress in certain ways.

Chapter 6 documented how organizations measure progress during change processes. Sixteen different evaluations were identified, and the evaluation methods varied across the cases as to when evaluations in the change process were conducted, the purpose of the evaluation, and how the results were used. The findings revealed that none of the evaluations were conducted in an identical way with the same intentions. However, based on similar characteristics of the evaluations, the different methods applied were

grouped into three typologies of progress measurement: seeking the path, assessing the consequences, and seeking the truth. The purpose of developing typologies of evaluation methods was to enable the further analysis of the empirical data in order to detect what influences the organizations when they conduct evaluations. Thus, in the following three chapters, the political perspective was applied in order to probe into explanatory factors.

In chapter 7 it was showed that there were many of the necessary conditions for power to be used present in the organization. The conditions were classified as contextual conditions or content conditions for use of power. The analysis revealed that the presence of the conditions varied over time during the implementation process and the presence of the conditions also varied across cases. However, the concluding finding was that there were conditions present for power to exist at all time throughout the implementation processes.

Chapter 8 analysed how power was used during progress measurement and how this influenced how the evaluations were conducted, what typology of evaluation was applied, and whether and how the results of the evaluations were used. Progress measurement was studied at three levels during the implementation process and this chapter illustrated how there was mobilization of power within and across these levels in the different phases of the project. How these different groups then used power during the process influenced how progress measurement was conducted and whether and how the results were used. In this chapter four dimensions of power were defined: contextual power, resource power, process power, and meaning power. The analysis revealed that all three dimension of power were used, but in later phases of the project process power and meaning power were the prevailing dimensions of power used. It was illustrated here how the management used these sources of power in order to control and manipulate the evaluation processes.

Based on the analysis of the data and the findings revealed from probing the theoretical perspective on use of power in organizations, a new perspective on progress measurement was introduced in chapter 9. The main focus in this perspective is that power influences how progress measurement is conducted and whether and how the results are used. Based on the new perspective of progress measurement and the

empirical data in this thesis, three generic methods of progress measurement were deduced: the rational, political and learning method of progress measurement. These three methods have different characteristics, which again influences when it is most likely that they will be in use during a change process. However, all methods are founded on the fact that there will be use of power during the evaluations, which will influence both how the evaluations are conducted and how the results will be used. These generic methods can further aid as a tool to assess the characteristics of evaluation programs, thereby, enabling one to foresee how the evaluations will be conducted and what consequences this again will have for the use of the outcome results.

10.2. Practical implications

Strategy processes have become more and more complex. Strategy processes often include structural changes to the organization and today it is also common to implement new IT systems, which often increase the complexity of the change process. The aim for most companies undergoing changes to the organization is to enhance its competitive position, and in this thesis it has been argued that in order to reach ones goals it is important to monitor the process while it is taking place. However, there are many challenges an organization encounters during implementation processes, and as shown in this thesis, monitoring progress is one of them. Evaluating progress and what to evaluate is not a straightforward process.

Through a political perspective on progress measurement it has been revealed that organizations do not use evaluation methods as prescribed in the literature. This thesis reveals that organizations do not conduct evaluations in a rational and analytical manner. Through applying theory on use of power in organizations on how progress measurement is conducted, predictions of how progress measurement is conducted as well as how the outcome results are used, is possible. From a political perspective, evaluations will occur regardless of goals or consensus in goals, and the evaluations will be controlled by those whom are most powerful at the given time and depending on their intentions, the evaluation will be conducted in certain manners and use of results are controlled. Thus, the findings in this study have practical implications for; (1) the planning of the evaluations in strategic change programs and (2) evaluation of progress during the change process.

The findings revealed in this thesis have first of all implications on the *planning* of the implementation process. Planning takes part at several levels of an organization, but initially the planning is conducted on the corporate level. This is in projects where the decisions are made at corporate level and hence is a top-down decision. The focus in a preliminary stage of a strategic change project on designing a progress measurement system may be exaggerated. Although, everyone more or less would agree on the fact that one needs to plan to some extent in advance, it is not fruitful to plan to the very last detail. As revealed in this thesis, goals will change over time. Peoples' perception of the strategy will also change over time. Both have consequences on the evaluation process. In the planning process, the change management team working with the implementation plans should be aware of possible responses from the divisional levels once the plan is introduced and implementation has started in the organization. A power perspective predicts that evaluations will occur regardless of planning in advance and they will most likely be carried out differently than how they were planned for. The implication for organizations then, is to be aware in the planning process as to not spend too much time and resources on careful planning and designing of evaluation programs before the implementation has started. The focus should rather be to ensure that enough resources are made available during the evaluations themselves as well as during the implementation process in general. Most likely, the divisions may not readily adapt plans developed by a corporate group. In fact, *plans will be modified* (Stensaker, 2002), which also will have consequences for how thorough one should be in designing an evaluation system to be used in the monitoring of the change process.

Secondly, the findings in this thesis have implications for progress measurement during change processes. Deciding *what to evaluate* in change processes can prove to be a challenge and especially when the goals change over time. How does one detect factors that give feedback on the desired goals? The management should be aware of the nature of the results of the evaluations; "what is measured achieves attention". This implies that the elements one chooses to measure will subsequently be given the most attention as compared to other areas of concern in the change program that might have needed more attention. The emphasis on certain elements may prove to be right, but it can also be an error. The implication for management is to ensure that the factors that are measured are factors that give feedback on the desired goals or sub-goals.

Progress measurement should provide *feedback* on how the change process is progressing. This feedback should then be used in the process to do necessary corrective actions if there is a gap between what is actually implemented and the desired goals. However, one might find that there is an unclear understanding of what the goals are. Implication for management is to ensure that the goals are communicated in such a way that they are translated into a language that is understandable in terms of the business profile to each business unit. It is not fruitful to have goals that are communicated in such a way that they are not actually translated into day to day business language. Goals not adapted to the business environment can create confusion in the organization, misunderstanding of what the goals are, and finally the feedback will not be used in the process as there is uncertainty of what the feedback actually points to.

The power perspective shows that organizations may manipulate the process by focusing on specific areas, which are of their own interest, as well as control or manipulate the outcome results of the evaluation. The fact that there are *diverse and opposing interest* amongst groups in organizations creates a challenge for organizations conducting evaluations during change processes. One possible way to solve this is that the management initiating the evaluations should be cautious of who actually is involved in carrying out the evaluation in order to create a strong support for the process so that the outcome results are not questioned. In order to successfully implement the changes, the members in organizations have to be involved and participate in the change process. Who controls and conducts the evaluation will have consequences for the anchorage of the strategy and goals, in the organization. The challenge then is to ensure that the "right" people (people that other organizational members trust) are involved so that the results of the evaluation are hard to question. Another possible way to ensure that the organization has a common interest as to the strategic goals, is to create incentives. The right incentives can possibly motivate organizations to strive at common goals.

Results reveal that depending on *who initiates* as well as *who conducts* the evaluation, will influence what the focus is in the evaluation, and consequently, what is being measured. Most likely what is evaluated, and how it is evaluated, depend on who initiates and who carries through the evaluations. This thesis has shown that line managers will not take input or follow plans designed by a corporate staff group for

granted. This has mainly to do with the fact that managers often believe that "outsiders" do not have enough understanding of the business, and therefore do not have the correct solutions as how to go about doing changes, or for other matters, how to monitor their operations.

Management should be aware that if evaluations are conducted without their control, the outcome of an evaluation can be detrimental for the change process. What is being measured is what achieves attention by both management and the organization. A viable question is therefore, does the evaluation have the right focus at the given time in the change process, or are there more pressing matters that should be of more concern to management? In cases where evaluations with little relevance for the strategic process have been conducted, the management may follow up with a new evaluation where they make sure they are in control of the process. They then have the opportunity to focus on factors that are vital for the success of the strategy. The evaluation can be used for the purpose of either legitimizing ones predetermined goals, or to influence other groups to adapt similar goals through controlling the evaluation process.

So far, I have pointed to several challenges related to progress measurement and the implications this has for management. In order to minimize these challenges, it is extremely important to *be in control of the evaluations.* In this thesis, three approaches to progress measurement were defined; the rational approach, the political approach, and the learning approach. Each approach can be used by management as a means to control how evaluations are conducted, and depending on timing and circumstances in the organization; one approach is more applicable than the other during the change process.

The rational approach is most applicable in an early phase of the change process, where the aim is to assess consequences of the planned strategy or assess the gap between the present organization and the desired goals for the change process. The management should be aware of the fact that depending on who is involved in the evaluation will have consequences for whether or not the results are used. If the "right" people are not involved in this evaluation, the outcome of the evaluation will most likely not be used as feedback in the organization. Change management can solve this

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problem by ensuring that the evaluation is well anchored in the organization by involving representatives from business units in the evaluation process.

A political approach is appropriate when there is a lot of uncertainty in the organization and as a consequence, diverse interests between different levels or entities are present. Progress measurement can then be used as a means to influence the process through focusing on elements in the evaluation that are vital for the progress of the change program. The management then controls who conducts the evaluation and what is being evaluated, thereby ensuring the outcomes that were sought after before the evaluation takes place.

A learning approach is appropriate when there is a need to acquire status on how the change process is progressing. The focus in the evaluation is then to get a "true" picture of what is implemented and reasons for potential delays. In this approach there may be several reasons, depending on where the information comes from, for what causes delays or what is found problematic to implement. Some feedback may be very relevant for the progress of the change process, while some feedback may be due to factors such as general opposition to change. It is thus important to control what information to use from the evaluation as feedback to the ongoing change process in order to ensure the right focus according to the overall goals.

In all three approaches to progress measurement, there is an underlying assumption that use of power in the organizations is present. The challenge then for change management is to be aware, as well as to be able to detect the ongoing political activities. This could be extremely helpful in the process of designing evaluation methods, as one can take into account the ongoing struggles that can have implications for how the evaluation is carried through.

10.3. Theoretical Implications and Suggestions for Future Research

In this thesis I have sought to probe explanations to how organizations measure progress, and use the results, through a longitudinal case study. An organization pursuing a strategic program has been studied while the implementation has taken place and specifically the focus has been on how the organization measured progress. In the

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evaluation research there has been a lack of studies of this nature, which has resulted in a limited applicability of the numerous prescriptive models for progress measurement. This thesis contributes to the evaluation literature in several ways. First of all, this study provides insight on how organizations actually conduct evaluations during a change process. As opposed to the literature, organizations do not use one method of evaluation throughout a change process. The character of the evaluation varies with the elapse of time and what is of interest at that given time to those who control the evaluation. Secondly, the plans as well as the goals with the strategy change over time. Plans and evaluations must therefore be adjusted for the new goals. Thirdly, the organizations do not use the results as prescribed in the literature. Here outcomes from evaluations during a change process are thought to be used as feedback in order to do necessary corrective actions, and used as a means to be in control of the process. In this study however, the results reveal that the organization either did not use the results, or they were predetermined and manipulated with, or the use of the results were controlled and thus also manipulated in order to fit with ones intentions with the change process.

The findings in this thesis have several implications for research on progress measurement. Through a political perspective on what influences how organizations evaluate progress, it has been revealed that the interest of groups or individuals influence how progress measurement is conducted and whether and how the results are used. The interests of those conducting the evaluation have consequences for what is being measured and thus impacts on the progress of the change process. What is measured, how the results are interpreted, and how the results are used as feedback in the change process are all factors that have to be incorporated into future research. Future research on progress measurement must acknowledge and take into consideration behavioural aspects of organizations and individuals, and thus not look upon organizations as rational entities where evaluations are conducted without the influence of self-seeking interests. Future research on progress measurement must realize that a rational view on organizations and on progress measurement as a straight-forward rational-analytical process will not be fruitful for the development of this field.

This thesis has further contributed to evaluation literature through studying the evaluation process from multiple levels in organizations. This has given insight on how different groups in organizations have diverse interests with the planned strategy and

how this again affects progress measurement. The evaluation literature does not take into account that individuals or groups in organizations may have different interpretations, meanings or interest of the strategy, which will influence how this strategy is implemented and thus how the evaluations are conducted. Future research should thus incorporate several levels of analysis in order to capture how evaluations are conducted or how the results are used throughout the organizations.

Future research should not view evaluations as static processes where first one measures and then the results are used as feedback where necessary corrective actions are made thereafter. Measurement of progress is a dynamic process as is the implementation process itself. Change processes have immense impact on an organization, and thus one can be certain that there are many diverse and even conflicting views on what is important in the change process. In order to capture the dynamics in change process in general and in particular how organizations measure progress, future research could incorporate a much stronger degree organizational theory in order to enhance the evaluation models theoretical applicability.

Finally, future research should focus on the relationship between progress measurement and performance measurement. Is there in reality a link, as assumed in the literature, that measuring progress during change processes has implications for a firm's performance? Management are striving to identify factors that evaluate progress, but at the same time these factors should also have implications for the overall performance of the organizations. The challenge for future research is, first of all then, to study evaluation processes in change processes and to establish the link between these factors and end results. Secondly, to be aware of other factors in the organizational environment that are not due to the change process, but nevertheless will also influence firm performance. In order to establish the link between evaluations and firm performance, more in-depth studies are required where focus is both on change processes and the overall activities in the organization.

10.4. Closing Remarks

Looking back at what has been presented and discussed in this thesis, I have two closing remarks that I would like to make. First of all, especially in the program evaluation

literature it was pointed to the necessity of incorporating theory on organizational behaviour in order to further develop the research on evaluations in organizations, and hitherto research on progress measurement. Theory on how individuals behave and how use of power in organizations influence evaluations as well as the use of the outcome results, were some dimensions suggested to be incorporated in the research on program evaluation. This was referred to as the fourth generation evaluation: research on evaluations should, in addition to focus on how to conduct evaluations, also incorporate factors that influence the evaluation process such as social norms, culture and politics (Guba and Lincoln, 1989). Based on the findings in this thesis, with regards to both the research on evaluations and what the data has revealed, I believe that this recommendation is still valid.

Secondly, when I first started working on the theme of performance measurement the question I asked myself was; why do organizations not use the seemingly unlimited management literature as well as research on this topic? As discussed in the thesis, the literature on progress measurement is quite prescriptive in nature and does not incorporate the classics on organization theory. I found that many researchers pointed to the necessity of incorporating this theory. However, the researches nevertheless failed or lacked to incorporate organizational theory in their models on performance measurement.

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12. APPENDICES

Appendix A: Glossary of BRA related terms

Appendix B: Potential benefits from implementing BRA (document)

Appendix C: Implementation Plan

Appendix D: The Implementation Process in Case A, Case B and Case C

Appendix E: Interview Guide

Appendix F: Internal Reports

Appendix A: Glossary of BRA related terms

BRA

Better Faster Administration (in Norwegian: Bedre Raskere

Administrasjon). A large-scale change program in Statoil. The decision on BRA was

made at corporate level in 1996. BRA would be implemented over four years.

BRA Basis

The early work of the Corporate Implementation Project consisted of a set of core work processes and a common SAP solution named BRA Basis.

Corporate Implementation Project

The BRA Implementation Project Group at Corporate Headquarters. Consisted of hired

consultants, staff members, and members of the different business units. The Corporate

Implementation Project worked for over one year at BRA Basis formulation and

development of BRA after the decision to implement BRA had been made.

Discipline-based organization

A way of organizing work. Different disciplines, such as mechanics, are grouped

together. Allows for specialization, but is different from integrated team based

organization where the different disciplines are mixed in teams.

IBD

The Industry's Best Practice (in Norwegian: Industriens Beste

Driftspraksis). Another, more narrowly focused change program in the upstream
business units in Statoil. IBD focused on teamwork and empowerment within
operations and maintenance. This decision was made at UPN level prior to the BRA
decision.

Integrated Teams

Teamwork means responsibilities for performing work is placed with a team. Team

members can have different roles, which to some degree replace middle managers'

roles. Integrated teams means teams consisting of people from different positions, e.g. mechanics, operators, and automation.

Local Implementation Project

The BRA implementation project group within each business unit.

OD changes

BRA changes that involved organizational changes, as opposed to IT changes.

Process

A way of performing work related activities.

Roles

Description of tasks connected with a specific work process in BRA. A role says something about access in SAP, but it is also used to indicate position and responsibilities.

SAP/R3

Systeme – Andwendunge – Produkte

An IT-system that integrates different organizational tasks such as procurements, stock, accounting etc.

Situational Teams

Situational team means team organization on a situational basis. Team members only work together to solve specific tasks. The team members are otherwise place with their discipline, eg. mechanics in one group, operators in another.

Teambased   organization

Teamwork means responsibilities for performing work is placed with a team. Team members can have different roles, which to some degree replace middle managers' roles.

UPN

The Norwegian Upstream Division. Organizationally located between corporate headquarters and business unit level but included in the corporate level in this thesis.

Work Processes

A way of performing work. Refers both to a general organizational level, e.g. accounting, procurements etc. , but also to a more specific level which has to do with a particular task such as doing maintenance on a pump offshore.

Appendix B: Potential benefits from implementing BRA (document)

Process	How to increase benefits	Benefits in million NOK per year	Benefits in Heads per year
Procurement	Automation	250-300	100-150
Sales & Logistics	Common warehouse Standardization Better utilization of capacity	500-550	10-20
Operations & Maintenance	Integrated teams Better information Status/condition-based maintenance	290-439	290-430
External Accounting	Standardization and simplification.	40-50	40-50
Steering, budget and plan	New governance model Increased coordination between budget, plan and accounting	70-100	70-100
Finance	Automation Coordination Internalization	100-250	50-60
HRM	Register hours and travel Standardization Better steering of competence	50-60	50-60
IS/IT	Reduction in number of systems Standardized system	60-100	40-70
Sum		1400-1800	600-900

Appendix C: Implementation Plan

BRA Implementation Plan (revision 01.03.98)

STATUS
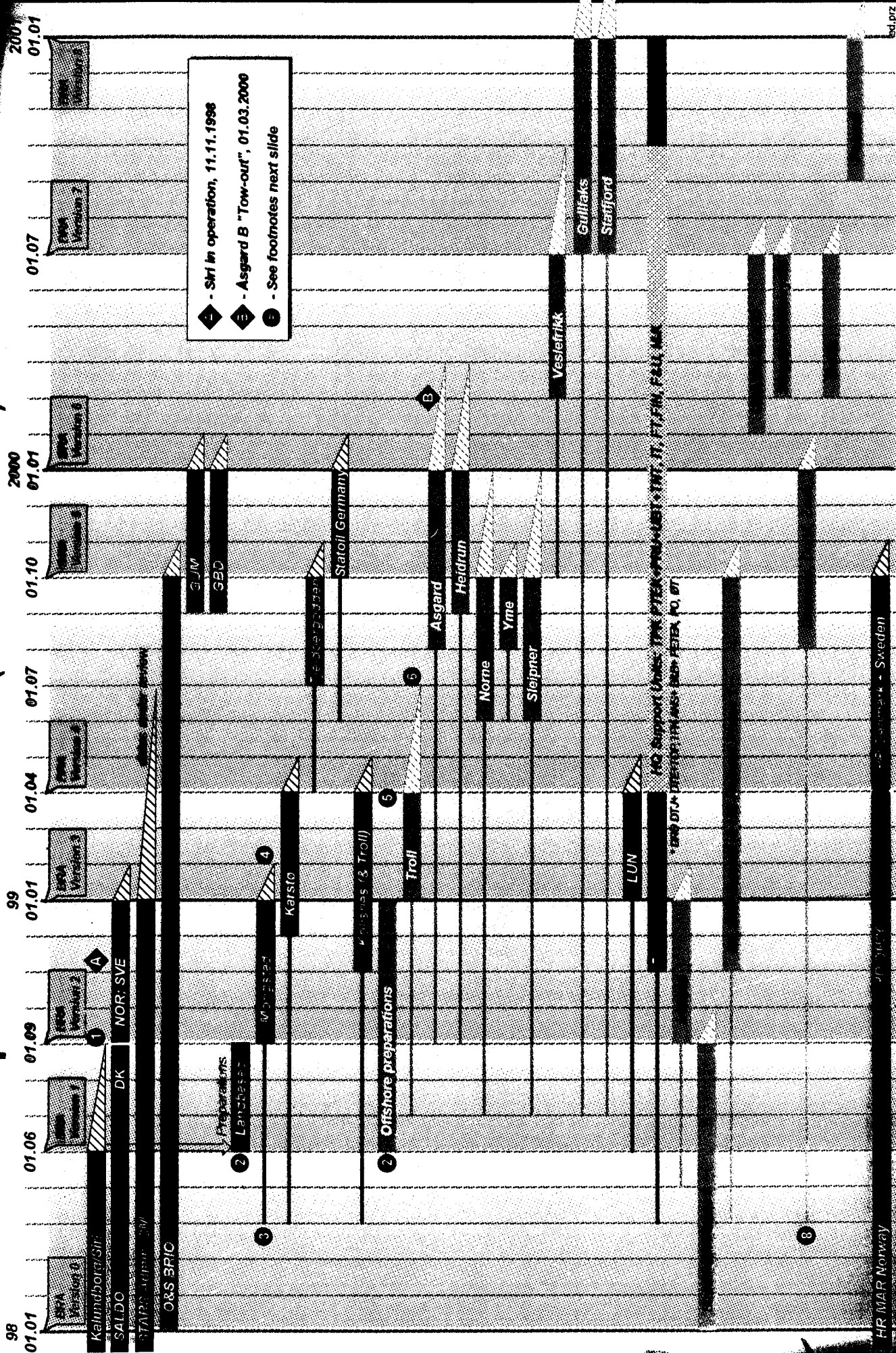
- ◆ - SIri in operation, 11.11.1998
- ◆ - Asgard B "Tow-out", 01.03.2000
- ● - See footnotes next slide

Appendix D:

The Implementation Process in Case A, Case B and Case C

The implemenation process at Case A

	Phase 1 Implementation of SAP and preparation for organizational development	Phase 2 Planning for new organizational structure in accordance to BRA principles	Phase 3 Focus on organizational development within "operations & maintenance"
Time-period	Sept. 1998 – Jan. 1999	February 1999 – May 1999	May 1999 - 2001
Main events	Implementation of SAP Preparation for BRA principles Establishment of improvement group and breaking up of BRA group	Improvement group defining the new organizational structure Unclear on BRA principles- working out the goals but never getting there OU-groups that involves others. Different improvement areas are suggested.	New leader for improvement group Focus on operations and maintenance Partnership with external partner
Evaluations	*Profit case*		*(MERIT: new analysis of the organization conducted by external partner)*
Main participants	BRA local group	Improvement group: employees 100% engaged in this work	Improvement team External partner

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The implemenation process at Case B

	Phase 1 **Preparation and definition of clear goals**	**Phase 2** **Goals poorly anchored**	**Phase 3** **Redefinition of goals**
Time-period	Sept. 1998 – Jan. 2000	Jan. 2000 – August. 2000	Sept. 2000 – Mai 2001
Main events	Organizational development project group established Formal start with BRA Defining the goals of BRA in Sleipner OD start-up document	Implementation of: - New organizational structure (week 2, 2001) - SAP (14. April 2001) Continuous work with new organizational structure.	Modifications in content and goals of the BRA strategy
Evaluations	*As-is-to-be assessment* *Profit case*	*Survey in Mai*	*Interviews in September* *Interviews in December* *Evaluation of the organizational structure after one year in effect.* *Consequence analysis*
Main participants	Local BRA project group Task groups	Project group dissolved during spring Change agent	Evaluation group Task group for consequence analysis

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The implemenation process at Case C

	Phase 1 *The planning phase*	*Phase 2* *The decision and* *implementation phase*	*Phase 3* Evaluation phase
Time-period	Dec. 1998 – April 2000	Mai 2000 – Feb. 2001	March 2001- Dec. 2001
Main events	Starts planning for BRA in the BU. Plans for implementation of BRA/IBD in BU presented. Main focus is on org. development and new org. structure. The manager of the BU leaves.	New manager for the BU appointed. An analysis of the consequences of the implementation plan is conducted. Revised implementation plan for BU accepted by the management. Implementing Nov. 2000: - SAP - new working processes - new governance principles	Employees get pay-rice as a result of the March evaluation. BU working with implementing the first step in the strategy plan. The November evaluation will be input to determine what the next step will be.
Evaluations	*Profit case* *As-is-to-be assessment* *Working processes* *System and team grouping*	*Consequence analysis* *Local AMOU*	*March evaluation* *Qualitative evaluation* *November evaluation*
Main participants	Local BRA project team Task groups	Local BRA project team Task groups	Local BRA project team IBD group Task groups

Appendix E: Example of Interview Guide

0) Who is the informant
- Describe your role in the organization
- Describe your connection with BRA/your role in the BRA change process

1) Describe the BRA change process in your business unit
- What has been in focus so far? What has been implemented so far? What has not been implemented yet? What will the unit be focusing on in the near future?
- How do actual changes correspond with expectations?

2) Give your evaluation of hoe the following has worked out in the BRA change process in your business unit
- Communication/information (amount, mode, usefulness etc)
- Possibilities to influence/participate
- Management's capability to motivate employees to change
- Training (amount, content)
- Management of the change process (Who is in charge, corporate or local mangers/actors?)
- Performance measurement and control

3) Change Management and flexibility
- Have you experienced any changes in BRA during implementation?
- What would you say were the reasons for those changes?
- Would you say the changes were positive or negative? In relation to what (implementation success, outcome, performance, corporate performance)

4) Realization of benefits – heading in the right direction
- Describe the process around performance measurement and control of the implementation process
    - Do managers focus on realization of benefits based on BRA changes?
    - Are there specific goals with BRA changes?
    - Do you know if any of the goals are broken down in sub-goals?
    - Would you say the goals are realistic?
    - Do you know of any process goals that indicate how well the implementation is going?
- What are the main challenges when it comes to realization of benefits?
- Which benefits do you expect to gain from BRA?
- How have the expectations for benefits changes over time?

5) New work processes (esp. integrated teams)
- How does the way you perform your job differ today from prior to the BRA changes?

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- What does integrated teams mean to you?
- Would you say the BRA way to work has been adopted by the organization?
- Has your competence changed since you began to work in teams?
- What has been done to gain acceptance for the new work processes?

6) Cooperation/relationship between BRA and other change initiatives

- What other change processes affect you in your daily work?
- Would you say your unit changes too seldom/too few changes, too often/too many changes, or just enough?
- How does the BRA change initiative fit with other organizational and strategic changes in your unit?

(For local implementation project members only):

- How would you describe the relationship between
    o The local implementation project and the business unit/line management?
    o The local implementation project and the corporate BRA program?

7) Ideal change process

- Has there been any experience transfer/learning? How?
- What would you do differently if the BRA change project began today? What kind of advice would you give the business units who have not yet implemented BRA?

Appendix F: Internal Reports

BRA at Mongstad – Six months after "take-off", September 1999

BRA/IBD implementation at Sleipner: November 2000

Description and Discussion of BRA/IBD at Gullfaks, April 2001

INTRODUCTION

GENERAL DESCRIPTION OF BRA/IBD AT GULLFAKS

SCEPTICISM TOWARDS BRA/IBD – IS THIS USEFUL FOR US/DO WE NEED THIS?
INVOLVEMENT AND COMMITMENT - WE WANT EVERYBODY TO AGREE!
SUCCESSFUL PROCESS – WE HAVE DONE THIS WELL!

MODIFICATIONS IN THE CHANGE PROCESS – THE ROAD IS BUILT AS WE GO ALONG!

WHICH MODIFICATIONS HAVE BEEN MADE?
WHY HAVE MODIFICATIONS BEEN MADE?
POSTIVIVE OR NEGATIVE MODIFICAITONS?

MEASUREMENTS IN THE CHANGE PROCESS – HOW DO WE KNOW WE ARE GOING IN THE RIGHT DIRECTION?

GOALS AND BENEFITS CASE
MEASUREMENTS DURING IMPLEMENTATION

IMPLICATIONS