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Sustainable Strategic Alliances

by

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Abstract

In today's competitive business environment it is important to frequently look for new ways of improving business. The purpose of strategic alliances is to combine the strengths of two or more companies. However, recent studies show that a high percentage of strategic alliances fail. The results in this thesis are based on current practice from a survey executed in the Oil & Gas industry in Calgary, Canada. The concept of the Delphi Method was used to carry out a qualitative study over three rounds; one round of questions, one round of prioritizing the answers and a final workshop. The major problem and success areas with strategic alliances were identified and ranked and the results emphasized human aspects, establishment of the strategic alliance and maintenance. Based on the achieved results, a set of twenty guidelines for making strategic alliances more sustainable were developed and presented according to the alliance life cycle.

Preface

This thesis is titled "Sustainable Strategic Alliances" and is the final part of the "sivilingeniør studiet", a masters-level engineering study at the Norwegian University of Science and Technology.

This thesis is completed within the Project Management Specialization, Department of Civil Engineering, at the University of Calgary. The purpose of the thesis is to develop guidelines to make strategic alliances more sustainable. The thesis was executed in a group consisting of Karl Blom, Knut Eivind Haaland and Gunnar Johnsen.

This thesis is a collaboration between the University of Calgary, Department of Civil Engineering, Project Management Specialization and the Norwegian University of Science and Technology, Department of Production and Quality Engineering. The thesis is also a part of the Norwegian project management and development program *Project 2000*.

The researchers would like to thank our supervisors at the University of Calgary, Dr. George Jergeas and Dr. Francis Hartman at Department of Civil Engineering and Dr. Janice Thomas at the Faculty of Management for their guidance and support, and Erin Williamson at the Project Management Specialization for assistance and proofreading. The researchers would also thank all the practitioners and companies that have participated in the survey and contributed to the research results.

The researchers hope this thesis will be the beginning of valuable collaboration between the University of Calgary and the Norwegian University of Science and Technology.

Calgary, Alberta, Canada, April 1998.

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Chapter 1

Introduction

1.1 Introduction

In the last decade the business world has become global, and the rapid growth in complexity, technology and economy is a great challenge for companies today. To meet this challenge, many companies seek different forms for partnerships to increase their performance. Traditional strategies for growth and diversification that focused on mergers and acquisitions have been replaced with a variety of partnership agreements[1]. Many consider strategic alliances to be a factor in sustaining a competitive advantage for the long term, and strategic alliances over the last ten years have become a popular form of partnering.

Success in modern business has become highly dependent on participants building effective alliances or other forms of relationships[2]. The purposes of strategic alliances are to combine the strengths of two or more companies and achieve mutual goals. Strategic alliances can give the partners' access to new markets and increase the partners' sales force. The number of recently established alliances have the been growing at a rate of more than 25% annually[3].

Despite the popularity of strategic alliances, the fact that they often fail indicates the need for further exploration of this area. Several studies have indicated failure rates for strategic alliances as high as 60%[4]. As a consequence of companies wanting to improve their business, there are still many companies that are tempted by the concept of alliancing. To make strategic alliances a success more detailed knowledge is required.

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[1] Slowinsky, G., Seelig, G & Hull, F. , "Managing Technology-Based Strategic Alliances Between Large and Small Firms," SAM ADVANCED MANAGEMENT JOURNAL (Spring 1996)
[2] Lanciault, D. & Wintersteller, E., "Strategic Combinations," Oil & Gas Investor (Third Quarter 1996)
[3] Bleeke, J. & Ernst, D. , "Is Your Strategic Alliance Really a Sale?" Harvard Business Review, 73, (1995): 97-105
[4] Segil, L. Intelligent Business Alliances. RANDOM HOUSE, (1996); Ellis, C. Making Strategic Alliances Succeed. Harvard Business Review.(July-August 1996)

1.2 Oil & Gas Industry

This research will examine strategic alliances in the Oil & Gas industry in Calgary, Canada. The Oil & Gas industry, which is a global industry and strongly represented in Western Canada, is today struggling with lower prices on their products and services and higher R&D costs. As a consequence, the amount of investments in exploration, equipment and technology has been severely restricted[5].

These aforementioned facts indicate that a different business approach is needed. Companies in the Oil & Gas industry have started to focus more on their core competencies and forming strategic alliances might be one way to cut costs, increase profit and remain competitive. One study shows that when successful strategic alliances are executed properly, and the partners have a full understanding of true integration, drilling ventures can improve their potential to reduce costs and accelerate production by 12-30%[6].

In a recent McKinsey & Co. survey of top managers from leading U.S. and Canadian oil companies, 84 % of the participants said that their future performance improvements where expected to come mostly from alliances and acquisitions, rather than internal actions[7]. The survey also found that companies prefer alliances to acquisitions because they reduce or avoid the valuation, tax and regulatory issues associated with acquisitions. The survey shows that most leading companies in the Oil & Gas industry believe that alliances will play a key role in reshaping the industry over the next five years.

1.3 Aims for the Research

The main objective for this research is to develop a set of guidelines for making strategic alliances more sustainable. To set up these guidelines the research group will identify success and problem areas in strategic alliances through a literature study and industry survey. The researchers find it of significant importance to make the guidelines understandable, useful and easy to implement.

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[5] Gazi, N. H., Hottman, W.E. & Verrett, R.C., "Alliances and Partnering: A New Relationship Between Oil/Gas producing Companies and Service Companies," Proceedings of the 9th Middle East Oil Show and Conference 1. (1995):199-207

[6] Brett, J.F. et al., "Successful Alliance Driven by Processes, not Discounts," Oil & Gas Journal 95, (1996): 56-66

[7] Ernst, D & Steinhubl, A. "Picking a Partner," Oil & Gas Investor 17, (1997): 40-45

1.4 Guide to the Thesis

The thesis is divided into eight chapters covering the following:

Chapter 1 gives an introduction to the research.

Chapter 2 is Part 1 of the literature study. This chapter gives an introduction to strategic alliancing, and is meant as background information for the industry survey and the analysis of the results.

Chapter 3 is Part 2 of the literature study. This provides more detailed information about issues concerning strategic alliancing.

Chapter 4 explains the research methodology used and the reasons for choosing this specific methodology.

Chapter 5 describes the execution of the survey.

Chapter 6 is an analysis of the results found in the research.

Chapter 7 presents the final results from the research, by introducing the guidelines.

Chapter 8 presents a conclusion and gives recommendations for further studies in the area of strategic alliances.

The appendix includes all supplementary material of the study.

Chapter 2

Literature Study Part I

2.1 Introduction

In the following two chapters we will describe some of the aspects treated in the literature concerning strategic alliancing. We have divided the literature study into two separate chapters, the first part giving a general introduction to strategic alliances and the second part providing more detailed description of some of issues, including leadership, trust risk/reward etc. This chapter briefly presents background information and some of the previous reports and studies recently undertaken. This chapter will increase our understanding of the concept of alliancing in general and help us to better understand the results of the Delphi method survey described later in this report.

This first part will first give a brief introduction to strategic alliances, then examine the stages in a life cycle of strategic alliances.

Despite the fact that our survey is done in the Oil & Gas industry, this chapter will be more general in terms of type of industry. However, this literature chapter will focus on big and global industries similar to the Oil & Gas industry.

2.2 An Introduction to Strategic Alliances

"Companies are just beginning to learn what nations have always known: in a complex, uncertain world filled with dangerous opponents, it is best not to go it alone", states Kenchi Ohmae, head of McKinsey's office in Tokyo[8].

The business world is innovative, frequently experimenting with new structures and collaborative arrangements. Traditional strategies for growth and diversification that focused on mergers and acquisitions have been supplemented by a variety of cooperative arrangements. Over the last 10 years, a new business relationship has become popular;

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[8] Ohmae, K., "The global logic of strategic alliances." Harvard Business Review, (Mar.-Apr. 1989): 143-154.

strategic alliances[9]. If the 1980's was the decade of mergers and acquisitions, then the 1990's will likely be known as the decade of strategic alliances.

The concept of forming alliances is not new. Toshiba started doing this as early as 1906[10]. The alliance topic is in vogue and the number and scale of agreements being signed is growing rapidly[11]. Deals of every conceivable sort are being made. There seems to be no specific pattern for any particular country, industry or type of organization. They occur at all levels in corporations. A survey mentioned by Brown[12], and conducted by Coopers & Lybrand, shows that companies that use strategic alliances are growing much more rapidly than those that do not. Yet, there are many dangers and pitfalls connected to strategic alliancing. Another survey showed that an upward of 60% of alliances and partnerships failed[13].

It is important to be aware of what a strategic alliance really is. The literature has many definitions of strategic alliances. Das and Teng[14] give one short and clear definition of a strategic alliance: "*Strategic alliances refer to inter firm cooperative arrangements aimed at pursuing mutual strategic goals*". Another definition is given by Mohr and Spekman[15]: "*Partnerships are defined as purposive strategic relationships between independent firms who share compatible goals, strive for mutual benefit, and acknowledge a high level of mutual interdependence*". Other authors (Lei and Slocum[16], Harrigan[17]) have similar definitions with emphasis on two or more partners working together to achieve common strategic goals. This is the common denominator in the definitions, although they are angled somewhat different with emphasis on slightly different aspects related to industry and type of strategic alliance.

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9 Slowinski, G., Seelig, G. & Hull, F., "Managing technology-based strategic alliances between large and small firms," SAM ADVANCED MANAGEMENT JOURNAL, (Spring 1996): 42-47.
10 Devlin, G. & Bleackley, M., "Strategic alliances- guidelines for success," Long Range Planning 21, no. 5 (1988): 18-23.
11 Devlin, G. & Bleackley, M., 1988
12 Brown, C.M., "Partnering for Profit," Black Enterprise, (June 1996)
13 Mohr, J. & Spekman, R., "Perfecting partnerships," Marketing Management 4 (1996): 35-43.
14 Das, T. K. & Teng, B.S., "Sustaining strategic alliances: Options and guidelines." Journal of General Management 22, no. 4 (1997)
15 Mohr, J. & Spekman, R. "Characteristics of partnership success: Partnership attributes, communication behavior, and conflict resolution techniques," Strategic Management Journal 15, (1994): 135-152.
16 Lei, D. & Slocum, J.W., "Global strategy, competence building and strategic alliances," California Management Review, Fall 1992 (1992): 81-82.

Devlin and Bleackley[18] distinguish old non-strategic alliances from the new trend of strategic alliances with the following statement: "*Strategic alliances take place in the context of a company's long-term strategic plan and seek to improve or dramatically change a company's competitive position*".

2.2.1 Types of Strategic Alliances

A variety of different relationships exist in today's business environment. Many of these are casual in nature and unlikely to change a company's competitive position[19]. More recently, a growing number of co-operative agreements that do not conform to this pattern have appeared. These are strategic alliances that are specifically concerned with securing, maintaining or enhancing a company's competitive advantage. Unlike other kinds of relationships, they play an important role in the strategic management and the company's future direction. Technology swaps, R&D exchanges, distribution, marketing and manufacturer-supplier relationships, to mention some, are widely practiced in most business sectors[20].

John Hagedoorn[21] works at Maastricht Economic Research Institute on Innovation and Technology (MERIT) in the Netherlands. He distinguishes between different organizational modes of cooperation with relatively strong modes of interorganizational governance, and contractual agreements. In the first group he places relationships such as joint ventures, research corporations and minority investments. In the contractual agreement group he places agreements such as joint R&D agreements, technology exchange agreements, customer-supplier relationships and one-directional technology flows (see Table 1 below).

Hagedoorn[22] refers to joint ventures and research corporations as "combinations of the economic interests of at least two separate companies in a distinct firm, profits and losses are usually shared according to equity investment". Minority equity investment is referred

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[17] Harrigan, K.R., "Strategic Alliances and Partner Asymmetrics" Strategy Research Center, Graduate School of Business, Columbia University, New York, N.Y.
[18] Devlin, G. & Bleackley, M., 1988
[19] Devlin, G. & Bleackley, M., 1988
[20] Devlin, G. & Bleackley, M., 1988
[21] Hagedoorn, J., "Understanding the rationale of strategic technology partnering: Interorganizational modes of cooperation and sectoral differences," Strategic Management Journal 14, (1993): 371-385.
[22] Hagedoorn, J., 1993

to as cooperation which in the long run could affect the performance of at least one partner.

	Joint ventures, research corporations	Joint R&D	Technology exchange
Cost economizing	-	-	+++
Mixed strategy	-	+	+
Long-term positioning	++++	+++	-

Cont…

	Direct investment	Customer-supplier relationship	One-directional technology flows
Cost economizing	-	+++	+++
Mixed strategy	+	+	+
Long-term positioning	+++	-	-

Table 1 Relation between cooperation modes and their strategic content
(- little relevance, + growing relevance)[23]

Joint R&D agreements means joint research pacts and joint development agreements that establish joint undertaking of R&D projects with shared resources[24]. Technology agreements cover technology sharing agreements, cross-licensing and mutual second-sourcing of existing technology. Customer-supplier relationship includes agreements through which contract mediated collaboration in either production or research is established. Finally, there are one-directional technology flows such as second-sourcing and licensing agreements.

Hagedoorn distinguishes between modes of corporation that are more strategically motivated and those that are more short termed and cost economizing[25]. Typical strategic relationships are R&D joint ventures and research corporations, joint R&D agreements and equity investments (refer to Table 1 above).

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[23] Hagedoorn, J., 1993
[24] Hagedoorn, J., 1993
[25] Hagedoorn, J., 1993

2.2.2 The Driving Forces

With globalization, all major players in an industry are competitors, regardless of location. Meeting customer needs is the key, no matter what the source of technology is. Companies now need the technology and skills of others to remain competitive. Using an alliance with a competitor to acquire new technologies or skills is not devious. That's the whole idea, according to Hamel, Doz and Prahalad[26]. It takes so much money to develop new products and to get access to new markets that few companies can do that alone in every situation.

Alliances are not tools of convenience. Alliances are important, even critical, instruments of serving customers in a global environment[27]. An example is the British, pharmaceutical company Glaxo, who did not want to establish a full business system in each country where it did business. Glaxo decided to form alliances with partners in Japan, swap its best drugs with them, and instead focus the resources on its already established network in Europe. This is one example of the kind of value creation that alliances make possible.

J. Hagedoorn[28] has studied a large number of publications on motives for entering strategic alliances. He found that these motives can be categorized into three major groups. The first group includes motives that are related to <u>sharing and further advancement of research</u>. Some motives in this group are related to the increased complexity and intersectoral nature of new technologies. For example, there is a growing number of relationships between the subfields of chemistry, physics and electronics, and the fields of computer science and process technology. Other motives stress the necessity for companies to monitor the evolution of technologies in order to assess technological synergies and relevant complementary skills and technologies. Another number of motives in this group are those dealing with reduction, minimizing and sharing of costs and uncertainty related to research and development. As the business world becomes more and more competitive, the costs of necessary R&D increase. Examples given in the literature are costs of research in high-tech industries and costs of advanced system design such as in telecom and aerospace.

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[26] Hamel, G., Doz, Y.L. & Prahalad, C.K, "Collaborate with your competitor and win," <u>Harvard Business Review</u> (Jan.-Feb. 1989).
[27] Ohmae, K., 1989

The second group of motives is related to innovation projects in a joint activity. One motivation can be the possibility of secretly capturing some of the capabilities, knowledge or technologies of the other partner. In this case the joint activity is more a cover-up for quick absorption of innovative capabilities from others. At least one partner has a “hidden agenda” for his engagement in the alliance (opportunistic behavior). On the other hand, an agreed technology transfer from one part to another can also be a motive for entering cooperative relationships. Another motive is the reduction of the total period of the product-life-cycle and reduction of the period between invention and market introduction.

The third group of motives is associated with market access and the search for opportunities. One motive is the opportunity for market entry through joint monitoring of environmental changes. Internationalization, globalization and entry to foreign markets are also important motives for companies that lack the economic control, competence or experience to go this way alone.

Another literature source that deals with strategic alliance driving factors is Brown and Pattinson[29]. They observe that the globalization of industries and organizations appears to move strategic mindsets towards considering strategic alliances. Some of the driving factors they found, which are not already mentioned, are pooling to gain operational economies of scale and diversification. Strategic alliances are often seen as a more effective diversification strategy than the traditional conglomerate approach.

Probably the greatest stimulus to alliance formation has been the emergence of global competitors and those corporations wishing to become global[30]. Globalization mandates alliances, makes them essential to strategy says Kenichi Ohmae[31]. The simultaneous developments that go under the name of globalization make alliances necessary.

Another driving factor, partly mentioned above, is the rapid pace of technological development and innovation, and the increasingly high costs of the associated research

[28] Hagedoorn, J., 1993
[29] Brown, L. & Pattinson, H., (1995). “Information technology and telecommunications: impact on strategic alliance formation and management,” Management Decision 33, no. 4 (1995).
[30] Devlin, G. & Bleackley, M., 1988
[31] Ohmae, K., 1989

and development[32]. Today's products rely on so many different technologies that most companies can no longer keep all the relevant technologies in-house. Companies have to rely on a certain number of external vendors and suppliers. Vendors want to sell their products to as many customers as possible. As a consequence, they will try to sell them to as wide range of customers as possible. The inevitable result is the rapid dispersion of technology. That means that no one can keep all critical technologies out of the hands of competitors around the world[33]. A company that develops a state of the art component for their own purpose can normally sell many times the volume to other companies. This generates cash flow, lowers unit costs, and builds up the experience needed to push the technology still further[34]. The technology becomes generally available, making time even more critical. Nothing stays proprietary for long, and no company can master everything[35]. Therefore, if a company is operating globally, within a big industry comprised of many competitors, it has to operate with partners[36]. Globally competing companies have to be in all important markets simultaneously if they are going to keep competitors from establishing competing positions. Companies need partners and alliances to manage this[37].

Another driving factor that should not be forgotten is the fashion and fear motives[38]. As companies see their competitors forming alliances, they will follow suit. A good example is Mitsubishi Motors (Japan) and its alliance with Hyundai Motors (South Korea). One of the motives for Mitsubishi for forming this alliance was the pre-emption of any potential alliance between Hyundai and one of Mitsubishi's Japanese competitors.

As already mentioned, time is a critical factor. Alliances can provide shortcuts for companies racing to improve their production efficiency and quality control. This is often seen as a motive for Western companies to form alliances with Asian companies with excellent manufacturing skills[39].

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[32] Devlin, G. & Bleackley, M., 1988
[33] Ohmae, K., 1989
[34] Ohmae, K., 1989
[35] Ohmae, K., 1989
[36] Ohmae, K., 1989
[37] Ohmae, K., 1989
[38] Devlin, G. & Bleackley, M., 1988
[39] Ohmae, K., 1989

2.2.3 Problems Related to Strategic Alliances

Even if strategic alliances are a way of meeting new challenges and the growing competition in the business world, there are many pitfalls, and a very high percentage of strategic alliances fail. Problems associated with different management styles, cultures, operational practices and degrees of control, are reasons often mentioned as to be why many companies do not achieve the potential advantages of strategic alliances[40]. As previously mentioned, one survey showed that more than 60% of alliances and partnerships failed[41].

"A real alliance compromises the independence of the economic actors, and managers do not like that", says Kenichi Ohmae[42]. For managers, management means total control. Alliances mean sharing control. In a continuously changing world with rapidly spreading technology and growing protectionism, this fear of losing control could cause problems.

Ohmae further emphasizes what he calls the dangers of equity. When equity enters the picture, one starts to worry about control and return on investment. One can buy a company's equity, and with that the control over the company, but one cannot buy the mind and the spirit or the initiative of its people. This need for control is deeply rooted, at least in the Western world. The dangerously incorrect arithmetic that equates 51% with 100% and 49% with 0% has been the rule[43]. This often results in attitude problems that prevent the development of intercompany management skills, which are critical for success in today's global business environment. Managers must overcome the common misconception that total control increases the chances of success[44]. One cannot, according to Ohmae, manage a global company through control. Control is what one falls back on when everything else fails and one is willing to risk the demoralization of workers and managers.

Contracts can only reflect an understanding of costs, markets and technologies at the moment companies sign them[45]. When things change, and they will always change, the

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[40] Devlin, G. & Bleackley, M., 1988
[41] Mohr, J. & Spekman, R., 1996
[42] Ohmae, K., 1989
[43] Ohmae, K., 1989
[44] Ohmae, K., 1989
[45] Ohmae, K., 1989

partners do not really try to compromise and adjust. They do not manage the changes well enough[46].

Another problem is that companies tend to undervalue personal relationships. Legal contracts are important, but the vitality of the alliance resides in the relationship that develops between operating managers[47]. Jordan D. Lewis, Washington D.C.-based consultant, has found lack of trust to be a major reason why so many firms do not think their alliances are working as well as they should.

Though there are examples that alliance partners have behaved in an opportunistic manner and were never really in the alliance for the long term, Ohmae states that "nine times out of ten, you want to stay in the alliance if you can"[48]. This because there are enormous costs and risks in establishing distribution, logistics, manufacturing, sales and R&D in every key market around the world. It takes time to build skills in people and develop good relations with vendors and customers.

Western companies has a disadvantage compared to Asian companies because their skills are generally more vulnerable to transfer[49]. The magnet that attracts so many companies to alliances with Asian competitors is their excellent manufacturing skills. This competence is less transferable than the more technological competencies of Western companies. Just-in time systems, quality circles and other Japanese/Asian principles of improving manufacturing performance can be imitated, but are not really transferable in the sense that the principles will work when transferred. Many Western companies have tried to implement these Japanese manufacturing principles without any success[50].

2.2.4 Criteria for Successful Strategic Alliances

Many alliances fail, for many different reasons. There is no absolute step-by-step guide to successful alliancing. However, the literature does describe several guidelines or success criteria for strategic partnering.

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[46] Ohmae, K., 1989
[47] Wolff, M., "Building Trust in Alliances," Research-Technology Management, (May 1994).
[48] Ohmae, K., 1989
[49] Hamel, G., Doz, Y.L. & Prahalad, C.K., 1989
[50] Hamel, G., Doz, Y.L. & Prahalad, C.K., 1989

Hamel, Doz and Prahalad[51] have spent a lot of time studying strategic alliances. They did not judge the success or failure of an alliance by its longevity, which they think is a common mistake when evaluating strategic alliances, but by the shifts in competitive strength for each partner. They found that companies that benefit most from competitive collaboration adhere to a set of simple, but powerful, principles. They are as follows:

- Collaboration is competition in a different form. Successful companies enter strategic alliances with clear strategic objectives. They never forget that their new partners may be out to disarm them.

- Harmony is not the most important measure of success. Occasional conflicts may be the best evidence of mutually beneficial collaboration. Few alliances remain win-win undertakings forever.

- Cooperations have limits. Companies must defend against competitive compromise. Successful companies inform employees at all levels about what skills and technologies are off limits to the partner and monitor what the partner requests and receives.

- Learning from partners is paramount. Successful companies view each alliance as a window to their partner's capabilities.

Harback, Basham and Buhts[52] suggest eight essential elements to a successful alliance partnership:

- Commitment must come from the top.
- Equity, and equality for all stakeholders.
- Trust is the basic foundations for partnering.
- Mutual goals require focusing on the common denominator.
- Implementation means going from the general goals to the area of action plans.

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[51] Hamel, G., Doz, Y.L. & Prahalad, C.K., 1989
[52] Harback, H.F., Basham, D.L. & Buhts, R.E., "Partnering Paradigm," Journal of Management in Engineering, (Jan.-Feb. 1994): 23-27.

- Continuous evaluation is required.
- Timely responsiveness requires that the partners resolve issues in such a manner as not to slow the action down.
- Having fun on the job and celebration of the success.

Another aspect that requires mention, but which we do not want to discuss in detail, is the issue concerning the outcome/return of an alliance. One clear change of mind set that is necessary in order to make an alliance work, according to Ohmae[53], is a shift from a focus on ROI (Return on Investment) to a focus on ROS (Return on Sale). An ROS orientation implies that managers will concern themselves with the ongoing business benefits of the alliance instead of waiting to see if the alliance provides an acceptable return on their investments. Ohmae continues his argument by stating that equity investments almost always have some degree of one company trying to control the other. Few businesses succeed because of control, most make it because of motivation, entrepreneurship, customer relationships, creativity, persistence, and attention to the softer aspects of the organization, such as values and skills, according to Ohmae.

2.3 The Life Cycle of Strategic Alliances

The life cycle contains the major stages of a strategic alliance. The literature suggests different processes for moving an alliance from conceptual phase to close out. The life cycle breaks the alliance into discrete and identifiable stages. Each stage is designed to gather information needed to proceed to the next stage. For instance, the greatest opportunity to ensure that the alliance objectives are met is to plan sufficiently at the early stages, otherwise the costs of change will increase significantly as the alliance proceeds. As the alliance gathers more information about various variables that may have an impact on the project, the uncertainties about the alliance will decrease and the parties will let the amounts at stake increase. The group has based the life cycle on a model from Das and Teng[54]. They suggest that the process of alliance management can be divided into seven major stages. These stages are described in more detail below.

1. Considering a strategic alliance:

[53] Ohmae, K., 1989
[54] Das, T. K. & Teng, B.S., 1997

The first stage of strategic alliancing is to evaluate alliances as a strategic option for the company. One must also consider other alternatives such as vertical or horizontal integration or market based transactions. Strategic alliances are the feasible choice when potential partners compete in a global market that is characterized by costly market transactions[55]. Before one firm makes a strategic alliance with another, it should identify its own core competencies and additional competencies it requires to meet its strategic objectives. Alliancing is one way to build new competencies through collaboration with other companies.

2. Selecting alliance partners:

The second stage is to look for the most attractive and compatible partner. An ideal partnership should involve two or more companies with complementary resources and skills, and compatible objectives[56]. A certain level of interfirm trust between the potential must also exist[57]. Compatibility is based on common values, principles, experiences, resources and desires for the future, because specific opportunities are often short-lived and would not sustain a long term relationship[58]. Another selection criterion is the choice of a partner that is financial stable and well managed[59]. A segmentation analysis should consider a number of potential partners. Benefit segmentation recognizes that companies have different reasons and motivations for establishing an alliance, and therefore, they seek different packages of benefits. Bleeke and Ernst[60] found in their research on strategic alliances that the following alliances often fail; collusion between competitors, alliances of weak, alliances of a weak company and a strong company.

3. Negotiate the alliance agreement:

This stage includes the process of negotiating the alliance agreement with the potential partner(s). The critical task at this stage is to specify the governance of the alliance, as well as other contractual clauses that bind the partners[61]. The alliance negotiating should address requirements, contributions, measurements, risk sharing, resource sharing,

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[55] Das, T. K. & Teng, B.S., 1997
[56] Gora, J.C., "The basics of life insurance industry strategic alliances," Journal of the American Society of CLU & ChHC, March 1996.
[57] Brouthers, K. D., Brouthers, L. E. & Wilkinson, T. J., "Strategic Alliances: Choose your Partners," Long Range Planning 28, no. 3 (1995)
[58] Moss Kanter, Rosabeth, "Collaborative advantage," Harvard Business Review, 72, no. 4 (1994)
[59] Slowinski, G., Seelig, G. & Hull, F., 1996
[60] Bleeke, J. & Ernst, D., 1995
[61] Das, T. K. & Teng, B.S., 1997

incentives and scheduling (delivery deadlines etc.). The partners need to find an appropriate form for the alliance, either equity investment or contractual agreement. Finally, all successful alliance agreements are characterized by the willingness of each side to openly describe its requirements, both those that are fundamental, and those that are “nice” to have. It is also important to emphasize on a complete understanding of each party’s realistic contribution, so that the relationship will be successful.

4. Setting up the alliance:

The next stage is designing the alliance organization. This stage deals with issues such as staffing and human resource management, that have a significant impact on the performance of the alliance[62]. Partners should specify what activities they want to conduct and perform. A strategic alliance is not a “one-department show”. Success of the alliance is highly dependent on a multidisciplinary, multifunctional effort. Therefore, the organizational design is very critical. It is also critical that the scope of work and cost are clearly defined at this stage. The creation of a steering committee to control the alliance activities should occur at this stage. This to ensure that the partners develop ownership of the alliance with a chance to enhance the company’s profitability. The partners should not pursue managerial control in the alliance. More attention should instead be given to the selection of personnel and to keep them in the long term and also to blend the partners cultures. The final organizational ingredients essential for forming strategic alliances, are climate and culture to make this integrated team a success[63].

5. Operating the alliance:

The implementation and operation of the alliance is the following stage. The emphasis in this stage is on the development plan. For long-term strategic alliances, numerous milestones and periodic project reviews should be built into the development plan[64]. These milestones are checkpoints that provide opportunities for greater project control and management. The deliveries at the end of this stage indicate the quality of the process. The operation of the alliance is crucial in order to survive in the long-term. The balance between competition and cooperation is an important issue to resolve. The diversity between competition and cooperation, which both brings out the best in people,

[62] Das, T. K. & Teng, B.S., 1997
[63] Das, T. K. & Teng, B.S., 1997
[64] Das, T. K. & Teng, B.S., 1997

is an essential element in operating alliances. If the alliance manages to balance these two issues, the possibility of meeting the alliance targets and even gain some interfirm learning, is high[65].

6. Evaluating alliance performance:

One of the most difficult questions to ask is: “How is the alliance performing?” Researchers and managers have attempted to use both quantitative and qualitative, as well as short-term and long-term, measures of performance, with varying degree of success[66]. It is important to measure the performance in order to know whether the alliance will be able to meet the established objectives. Close monitoring of the alliance will help the alliance managers with this. The two most common measurements in the petroleum industry for integrated service alliances are reduction in cost and increased efficiency[67]. Other common measurements include quality and profits or net revenue.

7. Modifying the alliance:

A sustainable strategic alliance often undergoes several modifications. According to a study by McKinsey, most successful alliances modify themselves during the first few years[68]. Modifying the alliance along the way provides a means for correcting some of the inopportune decisions that are often made[69]. Alliances that are determined to be unsustainable, may be terminated. Therefore, an exit strategy/clause is needed.

The alliance life cycle includes stages of birth, growth, maturity and death. Even if an alliance operates smoothly, a successful alliance will eventually reach a point of maturation and then death. This (modifying the alliance) is also a stage where the project or alliance is reviewed. The latest data on experience, cost, revenues, profits and expenditure is compiled and gauged to data from other alliances. Finally, there will be a post audit, a critical assessment of the alliance’s strengths and weaknesses, where the partners try to gain knowledge from the alliance experience.

[65] Das, T. K. & Teng, B.S., 1997
[66] Mohr, J. & Spekman, R., 1994
[67] Das, T. K. & Teng, B.S., 1997
[68] Sherman, S., “Are Strategic Alliances Working?” Fortune 21 (1992) citing McKinsey report.
[69] Das, T. K. & Teng, B.S., 1997

Chapter 3

Literature Study Part II

3.1 Introduction

This chapter is a continuation of Part I of the literature study. It will describe some issues about strategic alliancing in more detail. These issues are directly concerned with the success of partnering. They are issues that are primarily concerned with human related aspects, including issues relating to leadership, trust, communication and others.

3.2 Leadership

Alliancing is more complex than just companies that collaborate together to reach a set of goals. Alliancing requires the unwavering commitment and support of all management levels of each partner.

Because alliances offer a possibility to quickly enter new markets and to develop new technologies, the use of strategic alliances is surging in popularity. However, a survey about strategic alliances shows that they have an estimated failure rate of about 60%[70]. Research by Robert E. Spekman and three colleagues at the University of Virginia's Darden Graduate School of Business Administration suggests that the high failure rate is the result of ineffective leadership. In the following section elements that influence the leadership in a strategic alliance are examined.

3.2.1 Vision

A vision is a desirable and ideal state of a preferred future. It is an expression of optimism, despite the changing surroundings[71]. Visions reveal a deep belief in the ability to create the future. With today's rapid change in technology and economic stability visioning becomes a necessity for directing and focusing one's efforts. The creation of the vision might seem to be a personal task, but visioning is to move or transfer the vision from one that relates to an individual to one that is shared. The vision can appear as an

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[70]Ellis, C., "Making Strategic Alliances Succeed," Harvard Business Review, (July-August 1996)
[71] "Vision Creation and Sharing," @ http://ousd.k12.ca.us/sch/comp1.html

ethos, a picture or an object, which give the stakeholders an opportunity to take ownership of the alliance. This, in turn, provides the alliance with a feeling of community and commitment. The range of the vision in strategic alliances should have at least 3-5 years duration[72]. Therefore, the vision is a crucial element in building and maintaining a successful alliance. The view on vision has moved from a singular, clear-cut vision of simple derivatives to recognize the complexity of today's alliances[73].

Vision creation and sharing are important because they provide energy and focus to the alliance members. Without visioning, the possibilities for loss of focus increase and so does the likelihood that the alliance will fail. Visions help the alliance members look at the alliance from a perspective of an integrated entity. In an alliance where two or more different cultures are melding together, it is essential that the alliance members have a clear manifestation of what they want to create. The vision affects the alliance by stating long-term objectives that appear as a positive driving factor for the alliance members.

The purpose of developing a vision is to nurture its "leading star effect". In contrast to a set of goals, the vision encourages commitment of the alliance members to a long-term objective. A common vision therefore creates the framework for establishing an aligned team.

3.2.2 Values

Values provide the basis for how companies, and people, plan to operate. They are the morals, standards and belief that define the manner in which one achieves his/her objectives. A value statement answers questions such as "what do we believe in and what do we stand for?"[74]. The alliance must recognize and be committed to its values so that the members' behavior is brought into compliance. The values are fundamental for the decision making process because they provide the perspectives and approaches to make the basis of the decisions made.

Value agreement is the foundation of any successful partnership. A value negotiation analysis identifies gaps between the values of participants in the alliance. This analysis

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[72] "Vision Creation and Sharing," @ http://ousd.k12.ca.us/sch/comp1.html
[73] Osborn, R.N. & Hagedoorn, J., "The institutionalization and evolutionary dynamics of interorganizational alliances and networks," Academy of Management Journal 20, no. 2 (1997)

will give the alliance a solid, multi-dimensional assessment of the degree of integration of the partners[75].

Value management provides greater adaptability and flexibility of the alliance partners[76]. The alliance members gain a better understanding of their work and, therefore, decisions can be made earlier and with less supervision. This translates to reduced time, less interventions and lower costs. Alliance members feel ownership for their part in the alliance and will more likely propose innovative solutions to problems.

Geert Hofstede[77] considers values as the fundamental core of a culture. He states that "without understanding the values of a culture, and of all of the sub-cultures, one can hardly hope to effectively negotiate with it, much less lead it".

3.2.3 Mission

The mission is the central purpose of the alliance. A clear mission statement clarifies the objectives of the alliance. Groups or individuals that can affect or are affected by the achievement of the alliance organization's objectives, comprise the stakeholders of the alliance. Many organizations fail to integrate the needs of different stakeholders in their management process.

If the objectives of the alliance partners are divergent, it will be difficult to agree on, and achieve, common goals. Consequently, an alliance needs to reach alignment on a common set of objectives during the life of the alliance. If an alliance organization does not have a structured strategic plan, that considers the stakeholders' competencies and needs, it will end up with a mission statement that either says everything, but means nothing, or is hopelessly unrealistic. Therefore, when two or more companies are collaborating together, it is critical that they know how to develop mutual, agreed upon objectives.

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[74] Giblin, E. J. & Amuso, L.E., " Putting meaning into corporate values," Business Forum 22, no. 1, (1997)
[75] Bannister, R. J. and Jesuthasan, R., "Is Your Company Ready for Value-Based Management," Journal of Business Strategy 18, no. 2 (1997)
[76] Bannister, R. J. and Jesuthasan, R., 1997
[77] Hofstede, G., Cultures and Organizations: Software of the mind (London: McGraw-Hills, 1991)

3.2.4 Management Commitment

Management commitment is necessary to make an alliance endurable, and to create a win-win attitude[78]. An important criterion in alliancing is to achieve top management commitment by all parties. This means, that from the outset of the alliance, there are agreed upon mutual goals, and adversarial behavior can be avoided. The initial top management agreement sets the tone for the entire alliancing process. Therefore, presence and initiative from all sides' top management are an important aspect of realizing commitment to the alliance.

Alliance management is based on the principles of teamwork, open communication, and collaborative problem solving and conflict resolution. Additional issues relating to alliance management are the practice of empathy, acknowledgement of each other's agendas, the focus on common goals, the clarification of expectations, and the establishment of ground rules for doing business together. The development of a common set of goals, and a common experience, should create bonds between the alliance managers. Alliance managers from both parties should design and implement teams that represent all the stakeholders in the alliance. The purpose of this teambuilding is to form a cohesive, cooperative management team to develop a joint commitment for timely identification, discussion, and resolution of issues involving maintenance of the alliance[79]. The alliance managers must consistently display a collaborative, as opposed to confrontational response, to problem solving. This is especially important in the early phases of the alliance; the alliance agreement will be tested in terms of how the partners respond to disputes from the initial days of the project.

[78] Bruce, G. and Shermer, R., "Strategic Partnerships, Alliances Used to Find Way To Cut Cost," Oil & Gas Journal Special (Nov. 1993).
[79] Cowan, C., Gray, C. & Larson, E. "Project Partnering," Project Management Journal 22, no. 4. (1992)

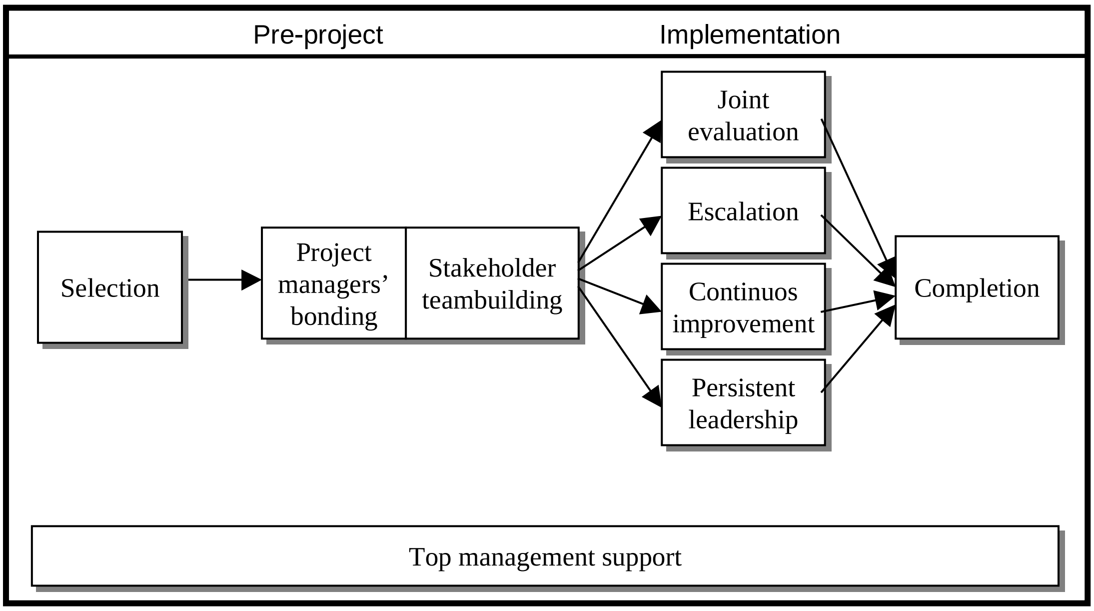

Figure 1 Project Partnering

Figure 1 outlines the role of top management support during the alliance, from pre-alliance to implementation. Each phase shows the alliance managers activities regarding to each respective phase. It emphasizes management commitment and "bridge-building" and teambuilding.

3.3 Trust

"Profitable partnering relationships between companies are cemented by building trust, not by contracts"[80]. Trust is an important issue in all kinds of co-operations. Gene Slowinski, director of alliance studies at Rutgers University, Newark, New Jersey, states: "A relentless assault of trust and respect is the major factor in making alliances work". Other senior practitioners of alliances also emphasize the importance of trust. Peter Booth, senior vice president of strategy and development at Corning Inc., calls trust "the single most important ingredient in making ventures work.. You have to be allied with someone whom you can work through problems"[81].

[80] Maccoby, M., "Building Trust is an Art," Research-Technology Management (Sept.-Oct. 1997): 56-57.
[81] Maccoby, M., 1997

3.3.1 What is trust?

Trust is the confidence or faith that people have in each other[82]. Trust is fostered when the environment in which the alliance operates is conducive to trusting. It should be emphasized that this kind of cooperative relationship cannot be established in a short period of time. Such trust-based relationships have to be established gradually through a deepening, mutual understanding[83]. Trust required for the partnering of companies depends on a shared vision of economic gain, mutual understanding and respect for each other. Within and across organizations, people need to trust each other according to shared goals and how they evaluate other's competencies, reliability, honesty and attitude towards each other.

Michael Maccoby[84], president of The Maccoby Group which is a consultant firm for strategic development, suggests three ways that management can build trust. Maccoby first proposes that people want to work for a successful company and be part of a winning team. This, he explains, depends very much on the company's strategic leadership. Second, people respond to good coaching. This includes communicating goals and expectations, responding to ideas and suggesting ways of improving individual performance. Third, a manager builds trust by "walking the talk", communicating and defending organizational values.

Maccoby[85] also suggests using a checklist of questions to find out whom to trust. The questions are as follows:

- Interests: Does this person share my goals?
- Competence: Does this person have the required knowledge and ability?
- Reliability: Will this person honor commitments?
- Honesty: Will this person tell me what I need to know?
- Attitude: Does this person want me to succeed?

[82] Wolff, M., 1994
[83] Tomiura, A., "How Nippon Steel Conducts Joint Research," Research Management, (Jan.-Feb. 1985): 22-26.
[84] Maccoby, M., 1997
[85] Maccoby, M., 1997

These are questions each party or person should ask when selecting partner(s) for alliances.

3.3.2 Why is trust so important for strategic alliances?

Many organizations and alliances suffer ills such as fear, insubordination, hidden agendas and turf battles.[86]. Most of those ills could be eliminated if a higher level of trust existed between the parties. Lack of trust is found to be a major reason why so many firms do not think their alliances are working as well as they should.

Francis Fukuyama[87] writes, in his book *Trust*, that: "… certain societies can save substantially on transaction costs because economic agents trust one another in their interactions and therefore can be more efficient than low-trust societies, which require detailed contracts and enforcement mechanisms". Fukuyama states that trust is an important aspect of economy and profit, which are also fundamentals of alliancing. "Where trust is low, corruption erodes efficiency. Leaders rule by fear, there are huge differences in wealth, and people become cynical"[88].

3.3.3 Building trust

It takes years to build trusting relationships, and companies don't invest enough time to it[89]. Building trust can be the toughest part of creating a durable, effective alliance[90].

Michael F. Wolff[91] has collected advice from several practitioners on how to build trust in strategic alliances. The following outlines the advices Wolff collected.

One way of building trust is to encourage friendship. A lot of time has to be put into the development of effective personal relationships. The relationship has to be built during social, as well as business, time.

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[86] Noel, J., "Building Trust," Executive Excellence, (June 1996): 16-17.
[87] Fukuyama, F., Trust (New York: The Free Press, 1995), 351-352.
[88] Maccoby, M., 1997
[89] Wolff, M., "Building Trust in Alliances," Research-Technology Management, (May 1994).citing Interview with Lorenz, C., in Financial Times (London), Oct. 25, 1993.
[90] Wells, S., "Building Trust," Executive Excellence, (Sep. 1997): 11-12
[91] Wolff, M., 1994

Another factor is communication. Communication is key to build trust in strategic alliances. Wolff states "Make sure the other person knows your thought processes, your goals and where you think the venture is going"[92]. The alliance participants should exchange relevant memos, final reports and so on. Another issue is mentioned by president William C. Acton of Axel Johnsen Metals, with experience in alliances. He states the following. "You inspire trust by asking whether a decision you are about to make is not only the best one for your company but is consistent with the best interests of the venture. If you don't, it will come back and harm you in the long run"[93].

Trust among scientists, engineers and their managers can be undermined by the organizational culture. It is important to "test the water", to make sure there are no corporate biases before one signs the contract. David J. Bening, manager of international business in Ashland Oil's Composite Polymers Division in Columbus, Ohio, suggests that one "truly understand your management's culture and its guidelines for what it calls trust"[94]. This should be emphasized in the process of building trust.

Anticipate disagreements. Learn as much as possible about the other company, and try to foresee areas of disagreement. An alliance can be derailed by not discussing key issues before they become problems that threaten the alliance.

Try to avoid surprises, because they can defeat trust[95]. If one spots something that affects a partner's interests before he/she does, bring it to his/her attention immediately. Holding back information that is of interest for the other partners, will often result in reduced trust.

Do not count on contracts. It is not possible for contracts to anticipate every kind of problem that arises or to solve them in advance. For Peter Booth in Corning Inc., successful ventures require a genuine belief in the integrity of the other side. Then, when the unexpected happens, he states that "rather than react with a sense of distress and questioning, assume that the other side has a good motive and try to interpret this in the light of efforts to make the venture succeed. If one is overly suspicious, it tends to poison the atmosphere".

[92] Wolff, M., 1994
[93] Wolff, M., 1994
[94] Wolff, M., 1994

Start small. A Conference Board report[96] on strategic alliances observes that it is often competitors that enter into alliances. These companies tend to be very suspicious of each other, and this can have a detrimental effect on the alliance. The report recommends starting "with small uncomplicated operations that allow for a maximum of trust to evolve"[97].

John Noel[98] mentions three action areas for where to build trust in an alliance. First, recognize and reinforce positive performance values. Employers often take for granted the qualities that make their employees good people. When one treats employees well, and pay them the wages they deserve, one builds loyalty, goodwill and trust. Second, break down barriers that prevent the employees in their work. Create a workplace where the employees have the optimum chance of being effective. Avoid bureaucracy and rely more on self-directed work teams. Third, provide positive role models. Leaders serve as models for all employees if they make themselves accessible. Serving as a positive role model can also help to establish goodwill and company pride among employees.

3.4 Contractual agreements

When companies form an alliance, or when people go into a relationship, there is always a need for an agreement between the parties. The lawsuits and disputes that result from failed alliances, show the importance of a good contractual agreement[99].

The Project Management Institute, PMI, defines the term contract as follows[100]:

> "A contract is a mutually binding agreement which obligates the seller to provide the specified product and obligates the buyer to pay for it. A contract is a legal relationship subject to remedy in courts".

This is a general definition of a contract. Some of the aspects might not be relevant for alliances, but the definition will still cover contractual agreements for strategic alliances.

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[95] Wolff, M., 1994
[96] Gates, S., "Strategic Alliances: Guidelines for Successful Management," Conference Board, New York, N.Y. Report no. 1028 (1993).
[97] Gates, S., 1993
[98] Noel, J., 1996
[99] Fenn, D., (1997). "Details, Details, Details," Inc. 19, no. 10 (1997).
[100] Project Management Institute. A guide to the Project Management Body of Knowledge (1996).

Das and Teng[101] write in the Journal of General Management that "Negotiating the alliance agreement is concerned with the gains and costs of pursuing either flexibility or embeddedness in the alliance". With this they identify the problem of whether to be flexible or embedded in an alliance. Much of this can be determined in the development of the contractual agreement.

Important issues that need to be negotiated, and defined in the contract, are[102]:

- Risk allocation/sharing
- Gain sharing
- Equity or non equity alliance
- Exit clauses
- Dispute resolution clauses
- Details of co-operation and monitoring

It is important to agree on the risk and reward sharing and state this agreement in the contract. These issues are described further in chapter 4.4, which deals with the risk issue.

Das and Teng[103] emphasize the importance of choosing the right alliance for the right purpose. They propose that the question of equitable vs. non-equitable alliance is important in determining the embeddedness of the partners involved in the alliance. Equity alliances are alliances were the partners have a shared ownership (joint investments). Non-equity alliances are those with the absence of these shared investments. A typical equity alliance is a joint venture, while non-equity alliances may be licensing or customer-supplier relationship. As the partners become more committed, the sense of trust becomes greater. If one then compares equity and non-equity alliances, the equity alliance can be used to ensure a greater degree of embeddedness. The ability to pull out easily from the alliance is more difficult for a firm if it takes an equity position in other firms. For partners to quit themselves from shared equity ownership, it involves costly and complicated new arrangements. The entity has to be taken over by one partner,

[101] Das, T. K. & Teng, B.S., 1997
[102] Das, T. K. & Teng, B.S., 1997
[103] Das, T. K. & Teng, B.S., 1997

and maybe even by a third party. An increased degree of flexibility can thus be more enjoyed by those in non-equity alliances.

The exit clauses facilitate the process of terminating the alliance, and thereby give the partners an extra degree of flexibility. Das and Teng writes that there is more need for exit clauses in equity alliances, while dispute resolution clauses and detailed monitoring are needed more in non-equity alliances[104].

Das and Teng also compare the strategic alliance agreement to other sorts of contractual agreements. They evaluated strategic alliances as a balance between flexibility and embeddedness. Their research indicated that it is important to keep both of these elements in the alliance in a dynamic balance and that the balance can be influenced by how the contract is worded.

If one evaluates a recent strategic alliance that many call successful, British Petroleum's Andrew project in the North Sea is a brilliant example[105]. In this project the "traditional manner of just dragging contractors onboard" were not used. The alliance managers created a more co-operative contractual environment and tried to link profitability to performance. These issues were emphasized in the contracts, and were among the reasons why this project became a success, both in cost and time.

The literature shows that contracts are an important part of an alliance. The way the contractual agreement is arranged can have great influence later in the alliance. Yet, a relatively small number of publications deal with this issue.

3.5 Risk

Allocation and distribution of risks are major issues to be managed in today's competitive business world. The moment a company enters into an alliance, it has to decide how open it wants to be as well as how much time and resources it wants to dedicate to the alliance. Some alliances might also be more risky than others, therefore, the associated risks and rewards need to be evaluated in order to determine whether the alliance should be

[104]Das, T. K. & Teng, B.S., 1997
[105] Knott, T., No business as usual, An extraordinary North Sea result (London: The British petroleum company p.l.c., 1996)

undertaken. When entering a strategic alliance, parties should agree on how the risks should be shared between the partners.

Throughout the literature, there are different viewpoints on risk and on how risk is different in alliances, compared to other arrangements.

However, J. Hagedorn[106] provides a clear definition of risk: "… risk can be defined as the probability of occurrence of an event with a given probability distribution of the size of the event".

Peter Wright discusses risks in alliancing in his work[107]: "Even the less risky contractual arrangements, such as alliancing, bring new levels of risk to contractors. It is still relatively early days in terms of the potential risks involved and most emphasis to date has been placed on promoting the possible awards". Consequently, risks need to be considered in conjunction with rewards in alliancing relationships, instead of separately.

One problem cited in the literature with regard to alliances, is the issue of clarifying risk allocation in the contractual arrangement. A study done by Francis Hartman and Patrick Snelgrove[108] examined the interpretation of contract clauses and risk apportionment. The participants in this study represented contractors, owners and consultants. Two key results of the study were:

1. Within any one contracting party group, respondents interpreted contract clauses across a range of risk apportionment possibilities.
2. Contract language alone is insufficient to clearly dictate specific risk apportionment between contracting parties.

These along with other results led them to make the following conclusion[109]: "The insight gained through this study was that contracts, which define the rights and duties agreed to by the contracting parties, are not necessarily agreements. A mechanism is required that

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[106] Hagedoorn, J., 1993
[107] Wright, P., "The North Sea Contracting Industry, key issues and companies," Management Report, (September 1996)
[108] Hartman, F. & Snelgrove, P., "Risk allocation in lump sum contracts-concept of latent dispute," Journal of construction engineering and management, (1997): 291-296

converts the subjective interpretation of risk allocating contract clauses to a more objective one, thus enabling identification of latent disputes".

In addition to the findings of Hartman and Snelgrove[110], there seems to be a geographic difference in how the risks are shared. In a 1995 comparison of six contracts, two British contracts, three American contracts and one in the Middle East, by Susan Farrell and J. Ray Dermott[111], the risk-reward issue was examined. One of their findings was that the risk-reward structure of these six contracts showed a great deal of variability. Most frequently the sharing of upside potential between the client and the contractor, was on a 50/50 basis. However, the sharing seems to change as multiple contractors are introduced into an alliance. One of the alliances in Farrell and Dermott's research treats all contractors equally for reward sharing. Another contract rewards in relation to relative value (equity stake) in the contract.

Also, when it comes to downside risk there are differences, but generally sharing was highly dependent on the amount of perceived risk in the contract. Several of the contracts shared 50/50 with the contractors, one contract showed zero downside for the client, while another contract placed most of the downside risk on the client[112]. Farrell and McDermott[113] describe the offshore industry as an industry in the early stages of implementing partnering, alliancing and risk/reward elements. They propose that as the companies gain more experience with alliance concepts, the risk/reward structures will become more complex.

The aforementioned studies indicate that there are different ways of handling the risk/reward concept in alliances. The different approaches depend on the complexity, size, culture and the amount of experience a company has with the concept.

3.6 Incentives

Incentives are clauses in contracts that provide benefits if a certain condition is achieved and are used in an effort to work more effectively. The intention of the incentives is to

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[109] Hartman, F. & Snelgrove, P., 1997
[110] Hartman, F. & Snelgrove, P., 1997
[111] Farrell, S. & McDermott, J. R., An international perspective on Risk/Reward Contracting: Comparison of U.S., Middle East and U.K. Alliances" (Aberdeen: Society of Petroleum Engineers, Inc., 1995)
[112] Farrell, S. & McDermott, J. R., 1995

improve the performance of each party involved and help to create a win-win situation for all parties involved. An incentive can be defined as "Something, such as the fear of punishment or the expectation of reward that induces action or motivates effort"[114].

In a lecture by Peter Van Nort[115] on the importance of incentives and reasons for using them he outlined reasons for using incentives that may also be applied to alliances:

- Basic contract forms do not always achieve alignment with the owner's business objectives
- Incentives:
  - Sharpen focus on the specific business objectives of the project
  - Save money (labor cost)
  - Save time
  - Less disputes
  - Produce alignment

In his lecture Van Nort referred to general projects, but these points are transferable to alliances. He explains how performance will be improved with the help of incentives[116]:

- Drive the definition of project objectives
- Align project participants on common objectives
- Create independence of project participants
- Establish a mutually supportive environment
- Open communication channels and enhance team building
- Reward desired behavior

It is important to know how to use these incentives. A work by M. G. Scahaafsma[117] focuses on the form of the incentives, and the importance that both parties really

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[113] Farrell, S. & McDermott, J. R., 1995
[114] *The American Heritage® Dictionary of the English Language, Third Edition* copyright © 1992 by Houghton Mifflin Company.
[115] Van Nort, P., "Use of Incentives (Implementation status report)," CII Conference (1995)
[116] Van Nort, P., 1995
[117] Schaafsma, M.G., "Partnering between a Major Operator and Lead Contractors for Drilling and Well Services Activity," Society of Petroleum Engineers, December 7-10, 1993.

understand the incentives. The incentives should therefore be simple and easy to implement. One problem that Scahaafsma mentioned is that some alliances use incentives without actually giving it enough thought.

The use of either negative or positive related incentives, effect traditional contracts as well as strategic alliances. Negative incentives punish bad performance. The incentives make it possible to punish a party if certain objectives are not achieved. The positive incentives reward good performance. If certain results are achieved, the positive incentives can provide rewards. In research done by The Construction Industry Institute, CII, the contribution of negative and positive incentives to the performance of the project was studied[118]. This research clearly indicated that the negative incentives hampered the performance of the projects. Positive incentives, on the other hand, were shown to help improve project performance. The importance of positive incentives in an alliance between companies is possibly greater because they encourage positive actions, relationships and behaviors, while negative incentives often result in defensive performance.

3.7 Networks

A network is defined as “a specific set of linkages among a defined set of persons, with the additional property that the characteristics of these linkages, as a whole, may be used to interpret the social behavior of the persons involved”[119]. Network approaches are not unique to the discipline of strategic management. The concept of network has it roots in social anthropology[120]. Tichy and Fombrun summarize the roots of networks as the relationships of individuals, the condition under which they exist, and the evolution of bonds and patterns of interaction and communication.

Network approaches also have potential for further advancing our theoretical understanding of organizations[121]. Pearce and David[122] suggest that network approaches

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[118]Ashley, D.B. & Workman, B.W., “Incentives in Construction Contracts,” The University of Texas at Austin, A Report to the Construction Industry Institute (December 1985); The Construction Industry Institute. Types and Clauses on Project Performance, Publication 7-1, (July 1986).
[119] Mitchell, J.C., Social network in urban situations (Manchester: University Press, 1969).
[120] Tichy, N.M. & Fombrun, C., “Network analysis in organizational settings,” Human Relations, no. 32 (1979).
[121] Fulk, J. and Boyd, B., “Emerging theories of communication in organizations,” Journal of Management, 17, no. 2 (1991).

contribute to structural theories for organizing. The theoretical aspect of networks applies to solve coordination problems between firms. The network approach is primarily concerned with the interaction between the parties. This is opposite of the traditional theories, which mainly focus on conditions concerned with the internal activity of organizations[123]. A network of actors is connected to each other by the act of performing complementary or competing activities. Kay[124] further refines the concept by defining strategy as the effective match between the network of the firm and its distinctive capabilities; strategy becomes the firm's unique set of skills, resources and relationship in the future.

The liaison is the tie that connects the actors in the network. The formation of strong ties between actors is effective between organizations because it efficiently resolves conflicts within two groups. This means that ties between two culturally different groups could be an effective intervention to merge companies. Another reason is that the role of liaison is crucial in creating the total organization structure because their removal destroys the connected unity of the organization[125]. This means that an actualization of liaison is necessary if management needs to design a new organization or an alliance.

Johanson and Mattsson[126] explain how network ties are formed in business environments. The formation of network ties requires a communication process that creates adaptations in attitudes and knowledge of the actors. The partners have to develop a mutual agreement for the relationship. This agreement can be manifested in a common language in terms of technical matters, contracting rules, and a standardization of processes, products, and routines. Other aspects in the agreement may involve views on business ethics, technical philosophy, and managing organizational problems. To maintain the relationship, management has to learn conflict resolution methods other than switching to new counterparts.

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[122] Pearce, J. A. and David, F.R., "A social network approach to organizational design performance," Academy of Management Review 8, no. 3 (1983).
[123] Gadde, L. E. & Håkannson, H., Professionelt inkjöp (Studentlitteratur, 1993).
[124] Kay, J., Foundations of corporate success (London: Oxford University Press, 1993)
[125] Chikudate, N., Communication Network Liaisons as Cultural Interpreters for Organizational Adaption in Japan-Europe Business Environments," Management International Review, no.2 (1995): 27-38, citing Ross, I. C. and Harary, F., "Identification of the liaison persons in an organization: Using the structure matrix," Management Science, no. 1 (1955)

Through relationships, and analysis of the network, companies can acquire control over their environment. They can also use a relationship as a bond for creation of sustainable strategic alliances. Strategic alliances can not be understood without interpretation of the network because they require major change in positioning of the network for the firms included in the alliance. The formation of network ties requires a communication process, which creates understanding of attitude and knowledge of the parties[127].

Williamson[128] uses transaction costs to explain why firms choose a particular type of organization such as an alliance. Transaction cost economics has had a major impact on the analysis of interfirm collaboration. Many analyses of both domestic and international alliance formations utilize key concepts drawn from this body of literature[129]. Figure 2 below illustrates the effect of price risks and transaction costs on the type of organization chosen.

Transaction risk	Low	High
Low	Partnership	Market supplier
High	Vertical integration	Vertical integration

Figure 2 The base case preferred mode of economic organization[130]

With high price risk and low uncertainty in demand (low transaction risk), the preferred organization mode will be use of market suppliers, according to Williamson (Figure 2). This use of market suppliers demands a loose kind of network. As price risk decreases, the benefits from searching to locate the best price among suppliers in the network are

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[126] Johanson, J. and Mattsson, L. , "Interorganizational relations in industrial systems: A network approach compared with the Transaction-cost approach," International Studies of Management and Organization 17, no. 1 (1987).
[127] Mattsson, L. G., "Management of strategic change in a "Market-as-networks" perspective." In The Management of Strategic Change, ed. Andrew, M., 234-260. Oxford: Basil Blackwell, 1988
[128] Willamson, O. E., The economic institutions of capitalism (New York: Free Press, 1985)
[129] Willamson, O. E., 1985
[130] Clemons, E.K.. "The Impact of IT on the Degree of Outsorcing, the Number of Suppliers, and the Duration of Contracts," International Conference on System Sciences, (1994)

lower. The companies will see the benefits of long term purchasing arrangements. Partnership will replace use of market suppliers and stronger network bonds are required. According to Williamson's model, vertical integration is the preferred organization mode when the transaction risks high.

3.8 Interface

The management of contractual interfaces has been a constant source of inefficiency for the industry frequently causing cost growth and delays in schedules[131]. If a form of close collaboration has been accepted as a vital element for the firms, the bonds between the owner and the supplier will grow stronger in the network.

Bidding is eliminated when forming alliances or partnering arrangements. Not bidding gives the supplier more time for process improvement, and the supplier will even know what the client demands for obtaining a successful project.

The interface between the owner and the supplier is a key element in an alliance. Normally deadlines, schedules and stage payments drive the deliverables from the contractor/supplier to the owner. Incomplete or inaccurate documents may be issued purely to meet delivery dates and receive payments[132]. The way traditionally used in new platform drilling facility projects in the Oil & Gas industry has been to select one contractor for the design of the facilities, another to build, and a third to operate the rig offshore. This produces three interfaces and often invariable[133]. In an alliance, the companies go beyond the traditional way of doing business. Given the time pressure of projects, along with the need for a complete quality process, a more appropriate scheme is parallel processing. The new process must be multidisciplinary with each part of the alliance working together and undertaking its parallel or concurrent activity[134]. It is also necessary with an alignment of interests, developed through the product process within the alliance. This is due to the fact that people will recognize that the closer the interfaces are, the easier it is to achieve the alliance objectives. If the alliance can sort out the

[131] Knott, T., 1996
[132] Knott, T., 1996
[133] Knott, T., 1996
[134] Cooper, R., Winning at New Products: Accelerating the Process from Idea to Launch. (Massachusetts: Addison-Wesley Publishing Company, 1993)

interfaces between the alliance members, the alliance could make an immediate impact to find and resolve the conflict causes[135].

An alliance will also have its own confines or boundary that define the interface between the external and the internal parties. The alliance management should require control of the interfaces and coordination. They should make early resolutions to decide in what extent the alliance partners want to be integrated and configure a quality plan for their individual activities and for the control of one another. Decisions on the degree to which the external players of the alliance are involved within the alliance must also be taken.

3.9 Teambuilding

To build the right teams with the right competence and a "good chemistry" is a challenge. Teams that create the foundation for organizational strength have to be built[136]. John Burdett compares teambuilding with trying to make new bricks out of old clay. The glue is essential to keep the parts together, in this case, to hold the team together. He suggests three ingredients to make this "glue". First is needed a "good dash of leadership"; second, a solid team of dedicated members who "buy-in" to the team; and third, an external consultant/facilitator to smooth the teambuilding process.

So, with all the ingredients in place, how does one build a team? Experts have traditionally relied on three basic methods for effective team building[137].

1. *Collaborative long-term consultant support.* An external or internal consultant works and collaborates with the team over a long period of time.

2. *Problem solving intervention.* When performance or interpersonal problems exist within a team or between teams, the consultant intervenes to help solve them. The consultant personally contributes little during the resolution session, except to guide the group in solving the problem(s) itself.

[135] Knott, T., 1996
[136] Burdett, J., "Teambuilding, a manager's construction guide," Business & Finance, (Sept. 1989): 25-26.
[137] Burdett, J., 1989

3. *Training approach.* Consultants meet with team leaders or with the team itself in a training workshop to explore the dynamics of group interaction. This approach is the most celebrated form of teambuilding, according to Burdett[138].

Another, newer method called f*unctional teambuilding* is also mentioned by Burdett. The heart of this approach is the belief that teamwork is difficult to create in a hostile environment. If an environment is constructed that is supportive and functional, teamwork will be the natural outcome.

Burdett[139] mentions several factors that affect teambuilding. The total organization environment and the values voiced by top management have a major impact on teamwork. Teamwork is not an instant or quick fix activity. A focus on teamwork must be part of a business's ongoing strategic and operational mentality. "A team without a vision is like a ship without a rudder", states Burdett, and continuous; "Nobody will freely contribute ideas and work effective together if they don't share a common vision and a clear understanding of their team goals". Issues such as trust and respect are implicit in team working. That means effective communicating and sharing of information that is useful for others to know, and not only limited to information that others need to know.

3.10 Communication and Information Sharing

Communication problems are closely related to lack of partnership success[140]. Mohr and Nevin[141] write that "because communication processes underlie most aspects of organizational functioning, communication behavior is critical to organizational success". According to the study of Mohr and Nevin, the quality of communication is a crucial ingredient of partnerships that work. Communication captures the information exchanged between partners and is a key to the partnership's vitality. Mohr and Spekman[142] examined three aspects of communication behavior: participation, communication quality and information sharing.

[138] Burdett, J., 1989
[139] Burdett, J., 1989
[140] Mohr, J. & Spekman, R., 1996
[141] Mohr, J. and Nevin, J. R., "Communication strategies in marketing channels: A theoretical perspective", Journal of Marketing, 54 (Oct. 1990): 36-51.
[142] Mohr, J. & Spekman, R., 1996

Participation: Joint participation in planning and goal setting establishes mutual expectations and specifies cooperative efforts. The authors found this to be an important predictor of partnership success.

Communication quality: This part embodies aspects like timeliness, accuracy, adequacy, completeness and credibility of the information exchanged[143]. Mohr and Spekman emphasize that timely, accurate and relevant information is essential to achieve the goals of the partnership. To face the continued growth of close ties between trading partners, the authors states the importance of honest and open lines of communication.

Information sharing: This refers to how critical information is communicated between the partners in an alliance. Systematic availability of information should allow for effective completion of tasks. According to the authors, this should be done through extensive information sharing as such information sharing is an important criterion for partnership success.

Devlin and Bleackley[144] emphasize the importance of improving "the information retrieval process". A company's employees within the alliance are its "eyes and ears" to the surroundings. Their roles are, to some extent, to learn from the partner (particularly if the partner is also a competitor). Information channels should be established so that what is learned, is fed effectively into the relevant decision-making center of the parent company.

Well developed communication and information procedures and structures can smooth the alliance processes significantly[145]. Strategic alliances can be implemented quickly when strong communication technology compatibility between the partners exists. This compatibility issue (among the firms' IT systems) is a major criteria for smooth and problem free implementation of alliances.

[143] Mohr, J. & Spekman, R., 1996
[144] Devlin, G. & Bleackley, M., 1988
[145] Mohr, J. and Nevin, J. R., 1990

Chapter 4

Research Methodology

4.1 Introduction

The research methodology is our approach to achieve the objectives of the research. In this section, the researchers will outline the stages of the research methodology and state the reason for choosing it.

4.2 Qualitative vs. Quantitative Methods

There are two main categories of research methods. These two are qualitative and quantitative approaches. Both methods deal with the plan of data collection and interpretation.

The qualitative method characterizes an in-depth investigation[146]. The method is appropriate when few or only one issue (problem) is investigated. In this method, the emphasis is on a close relationship between the researcher and the other participants in the research. Qualitative methods are frequently more interactive, more intensive and involve the development of a longer-term relationship, compared to the quantitative approach. Researchers are likely to build up a social relationship with the research participants, and therefore gain more insight into the data provided by the participants. The focus within qualitative research is to describe and understand the respondents “real world". Due to this, qualitative research relies more on interpretation of the results and is less inclined to quantify every detail of the study. One of the advantages of the qualitative method is that it is more open to the adjusting and refining of research ideas as the inquiry proceeds. A qualitative approach ensures validity of the research.

Quantitative research, on the other hand, is structured in order to provide a linear progression from a problem to the solution. The method is intended to flow from

[146]Patton, M. Q., Qualitative evolution methods (Newbury Park: Sage, 1989)

observation to theory to testing. However, often this order is violated[147]. With a quantitative method the researcher spends time observing the actions of a group of people[148]. The researcher is not making any value judgements, but is simply observing. The next step is to provide an explanation for the observed behaviors. As a result, the quantitative research will often explain the researcher's opinion of the issue. The quantitative approach makes it possible to control the data that will be gathered through the research. After collecting the data, the researcher measures and values the variables, and the link between them. The advantage of the quantitative method is that it is possible to measure the reactions of many people to a limited set of questions, thus facilitating comparison and statistical aggregation of the data[149]. The quantitative method will therefore ensure reliability to the research.

4.2.1 The Researchers Approach to the Methods

The objective of the research is to develop guidelines for sustainable strategic alliances. The researchers need to know if there is a need for such guidelines and where to focus the effort. The research group is interested in types of alliance models being used and their different purposes and stages. Another objective is to examine why alliances succeed and fail. To gain this information, the research will have a qualitative approach. A qualitative approach will provide a powerful tool for investigating the aforementioned alliance related issues. Due to the limited amount of time, data gathering will be focused and limited to a targeted number of participants.

The researchers will try to gain detailed qualitative information through a questionnaire with open-ended questions. The questionnaire will be developed based on general issues about strategic alliances. To gain this information the Delphi method and the snowball selection process will be used. They are described in detail in the following two sections.

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[147] Motley, M. T., Common flaws in contemporary empirical communication research: A research editorial, The Western Journal of Speech Communication, no. 50 (1986)
[148] Smith, M. J., Contemporary communication research methods (Belmont, California: Wadsworth Inc., 1988)
[149] Patton, M. Q., 1989

4.3 The Delphi Method

The Delphi Method was originally developed by the Rand Corporation in the early 1950s for the U.S. Air Force[150]. The concept was that an iterative questionnaire of experts would produce a consensus and accurate forecast when necessary information was not available. The result of the Delphi method is usually a consensus forecast, but the method can be used for other purposes. For example, to collect trustworthy information about a research topic. Typically, three rounds of questions are used to solicit general, then increasingly specific, comments from an expert panel on a concept or idea[151].

Many variations of The Delphi Method exist. Stephen M. Millett and Edward J. Honton[152] describe the basic steps as follows:

- The researcher must determine study goals and requirements, then develop and structure the questionnaire accordingly.
- An important task is to put together an appropriate list of "experts" to complete the questionnaire. The researcher typically mails the questionnaire with instructions and then waits for the response. The participants do not, at this stage, know who else is participating.
- The researcher receives and tabulates the responses to the questionnaire. The tabulated results are sent back to the respondents. The Delphi technique is iterative so the participants are now asked to either remain with their answers or to change them, based on the results from the other participants. The number of iterations varies a lot, from at least two to as many as six, depending on how much the participants' answers are diverging and the degree of consensus wanted.
- The result of the Delphi Method is a consensus forecast. The iteration process, a long with the feedback information that provide for a consensus, make the Delphi Method a dynamic group method of collecting data, rather than a simple questionnaire techniques.

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[150] Millett, S.M & Honton, E.J. , A manager's guide to technology forecasting and strategy analysis methods (Battelle Press, 1991)
[151] Hartman, F. and Baldwin, A., "Using Technology to Improve the Delphi Method," ASCE Journal of Computing in Civil Engineering, 9 (1995): 244-249
[152] Millett, S.M & Honton, E.J. , 1991

Delphi has three characteristics that distinguish it from traditional face-to-face group interaction: (1) anonymity, (2) iteration and (3) statistical group response[153]. First, it is important that the participants do not know who else is in the group. This avoids inhibitions by participants and the possibility of identifying a specific opinion with a particular person. Second, the group interaction is carried out through answers to a questionnaire. Each group member is informed of the current status of the group's collective opinion and the arguments for and against each point of view. Third, the Delphi method presents a statistical response that includes the opinions of the entire group.

The Delphi method is a useful approach to collect true, independent data. This is primarily attributed to the anonymity associated with this method as the participants are usually more "honest and sincere". However two drawbacks are that the participants may feel constrained by the questions asked, and that researchers do not obtain the wanted, in-depth information. Another limitation with having participants write their answers is that they will not provide the wider perspective and "straight from the heart" responses that an are possible if the participants were able to respond orally.

One approach to overcome the aforementioned limitations is to interview industry practitioners to gather the desired depth of information from each of the representative perspectives. In this case, from the perspectives of the project owner, constructor and consultant groups. This process is time-consuming and due to time constraints, the number of interviews would have to be limited. An alternative solution is to arrange a seminar/workshop for the participants. The advantages of this approach are that the researchers can have many participants (compared to the interview approach) and will get many different points of view. This face to face discussion can engage the participants to contribute with useful information. One disadvantage is the difficulties related to capturing all comments. Another is the possibility that one or more participants will dominate the discussion and that some may feel inhibited to contribute with their points of view.

[153] Martino, J.P., Technological forecasting for decision making (New York: North-Holland, 1983)

4.3.1 The Researchers Approach to the Delphi Method

Based on the evaluation of the Delphi method, mentioned above, the researchers elected to combine the Delphi Method with a workshop. The approach consisted of incorporating the workshop as the last round of the Delphi method's iterative approach. With the workshop, the goal is to achieve a deeper insight of the research, have greater exposure to differing viewpoints and aspects, and to incorporate a more "human touch" in our research.

One of the most critical activities is to select a representative list of participants. To select this panel the snowball selection process will be used, as described later. When a suitable number of participants was secured, the participant list was reviewed in order to ensure that there was equal representation of participants representing owners, contractors and consultants.

The Delphi Method will include the following steps:

<u>Round one:</u> After developing the questionnaire, it will be mailed to the participants. The participants are at this stage anonymous to each other.

<u>Round two:</u> The responses from round one will be tabulated and sent back to the respondents. The participants will be asked to prioritize this list, based on their opinion, and asked to add any points that they think are missing.

<u>Round three:</u> The prioritized list will be sent to the participants along with an invitation to the workshop. At the workshop they will be asked again, as one of the questions, to verify and confirm the prioritized list. This will produce a consensus among the participants about the importance of the results. The topics and results of the questionnaires will be further discussed.

In this research thesis, the Delphi method will be used mainly to collect real, honest data from industry practitioners. The goal is to develop a set of guidelines for successfully forming and maintaining strategic alliances.

4.4 The Snowball Selection Process

The snowball selection process will be used to identify knowledgeable and experienced practitioners in the area of strategic alliances. The researchers will use it as the first step in the development of the Delphi survey, in accordance with the methodology outlined in section 4.3.

After completing the questionnaire, potential participants will be contacted and told about the research project. The first group of people contacted will be requested to participate in the survey, and in turn they will be asked to use their network and provide names of two of their acquaintances that matches the criteria required for the research. The process will be repeated, as the second group also will be asked to provide names of two acquaintances. This approach will then be continued until the requested number of participants is reached. The researchers hope to get about 40-50 practitioners to consider participating in our research. The probability that a number of these practitioners will not take part has to be calculated and a final number of approximately 30 participants will be considered sufficient.

There are several advantages with this form of selecting participants. By selecting the first group of people, one can make sure that these people are independent, and that they do not influence each other. Another characteristic that speaks in favor of this method is that the collection of people is effective, the probability that people contacted know others in the same category is high for obvious reasons. The people that work in any kind of industry today usually have some kind of network of people in the same line of business. It is also more likely that a person will be willing to participate if they learn that his or her name was provided by a person that they know, compared to if they were contacted without any references. One incentive to participate is that they will be invited to a workshop at the end of the project, where they will be able to discuss the issues, and get access to information that will be collected in the course of the project.

Chapter 5

Execution of the Delphi method

5.1 Introduction

Chapter 4, Research Methodology, explains how the Delphi method was meant to be executed. This chapter will describe what was actually done and explain what kind of modifications that were done, and why. The execution will be explained in a chronological order, starting with the snowball selection process, and ending with the workshop.

5.2 Snowball selection process

As explained in chapter 4, the snowball selection process was used as a method to help collect a sufficient number of participants to take part in a survey. This process started out with six people in the Oil & Gas industry that the research group knew were involved in, or had been involved in, strategic alliances. The names of these persons were obtained from the supervisors' network, and the participants were selected so that they were anonymous and independent of each other. When the first group of six people were contacted, they were asked to suggest names of other potential participants. The research group had mixed success contacting these people. Due to the fact that the industry practitioners are very busy people, it was difficult to get in touch with them. However once contacted, most of them were friendly and tried to help out as best they could. The snowball selection process stopped when the list of participants grew to around 40 people (see Appendix F for a complete list of participating companies). The supervisors looked through this list to make sure that the participants and companies represented could give a true picture of the alliancing situation in the Oil & Gas industry in Calgary, Canada.

The events of the snowball selection process, can be summarized in the following:

- Contacted independent practitioners from supervisors' network.
- Obtained names of other potential participants.

- Continued snowball selection process until around 50 participants were collected.

5.3 Round 1: The Questionnaire

The researchers made a questionnaire with nine open-ended questions about strategic alliances. The questions were related to success-criteria, pitfalls and measurements (See Appendix B). It was important not to constrain the possible answers by the nature of the questions asked, as this is qualitative research. The open-ended questions gave the participants room to explore each issue in-depth.

Once the questionnaire was developed, it was sent out to the participants together with a prospectus that described the research. The participants were given a date for when the group wanted the questions to be answered and returned.

One other criterion for the Delphi-Method is that the participants' answers are kept anonymous for the other participants. This was emphasized in the research.

The researchers did not expect to receive completed questionnaires from all of the people contacted. The first round resulted in 19 completed questionnaires. This was a response rate of almost 50%, which was approximately what was expected. The answers were tabulated and incorporated in the material for the second round.

The events of the first round can be summarized in the following:

- Made a questionnaire with nine open-ended questions about strategic alliances.
- Sent out prospectus and questionnaire to the participants contacted in the snowball collection process.
- Consolidated the answers into a single list.

5.4 Round 2: Prioritizing

The main purpose of the second round was to rank the different issues mentioned by respondents in the first round. The second round reflects the iterative process that is characteristic of the Delphi Method.

The answers from Round 1 were listed in a descending order with the issues most frequently indicated appearing first. A score system was developed to prioritize the answers. The researchers chose to develop and customize their own system for the purpose of the thesis. This system made it possible for the respondents to give more than one issue the same priority. This was due to the fact that some participants could find some issues of similar importance. The score system was thoroughly explained, and the participants seemed to have no problems understanding it (refer to Appendix C).

The answers from Round 1 had to be narrowed down to a shorter list. The research group chose the 12 most frequently answered issues for each question. After this the results were sent out together with an explanation on how to do the prioritization.

In this round, the participants were given the opportunity to add any additional issues in their responses. If they felt that any of their answers from the first round were missing, if they forgot something the first time, or if the researchers might have misunderstood some of the answers, they would now have the opportunity to get these points included.

The group received 17 answers from the second round. The answers were tabulated based on the points that they were given, and a graphic presentation was made. This presentation included the score and rank distribution for each answer (see Appendix D).

The events of round two can be summarized in the following way:

- Narrowed down the answers to the 12 most frequently answered
- Developed a score system (see Appendix C)
- Sent out the listed questions together with an explanation of the ranking system
- Tabulated the answers (see Appendix D)

5.5 Round 3: The Workshop

5.5.1 Preparations

The graphic presentation of the results was sent back to everyone that was contacted in the snowball selection process. Also included was an invitation to attend a workshop. Two alternative dates were provided, and the date that received the greatest response was selected as the date for the workshop.

A formal invitation and agenda for the workshop was sent. At this point, the supervisors had a last look at the list of participants and they contacted a couple of additional people that they felt could add value to the workshop.

The preparations can be summarized in the following way:

- Sent out results together with suggestions for date of workshop
- Invited participants to the workshop

5.5.2 Execution

The purpose of the workshop was to confirm the results from the previous rounds and to answer some new questions designed for the workshop. The number of participants ended up at 15, and the workshop started by dividing them into three different groups. A small introduction was made and some of the results achieved so far were presented. The researchers had compiled three different sets of questions, one for each group. Each group was asked to first verify and confirm the existing results, before answering the new set of questions. Group 1 examined how to implement success criteria and how to avoid pitfalls. Group 2 concentrated on measurement of the strategic alliance through its lifecycle. They tried to identify the most effective measuring methods and metrics. Group 3 tried to identify and discuss the different types of events according to the phases of a strategic alliance (See Appendix E for complete list of questions).

After the individual group discussions each group presented their findings. Each presentation was recorded by audiocassette to make sure that every point was captured.

During, and after the presentation, everyone had the opportunity to comment on the results presented by the other groups.

The research group gave a short summary at the end of the workshop and all of the participants were thanked for their cooperation. The workshop lasted for approximately 2 hours. Although it was difficult to discuss the issues to the extent desired in the timeframe[154], the results were useful and the participants indicated that they were satisfied with the workshop experience.

The workshop can be summarized in the following way:

- Dividing of participants into three groups
- Short introduction
- Group discussion
- Presentation
- Discussion in plenary
- Summary

[154] The decision to limit the workshop to 2 hours was based on supervisors’ advise, and the fact that the people approached are very busy people.

Chapter 6

Analysis of Data

6.1 Introduction

This chapter provides a description of the steps undertaken for the preparation and analysis of the gathered data. The analysis discusses problems and success areas for establishing and maintaining alliances, which were identified in the Delphi survey. To ensure that the data gathered was valid, the researchers made sure that all parties that are typically part of an alliance (owners, contractors and consultants) were represented in the research. A statistical analysis was not performed because this was not within the scope of the research methodology used.

6.2 Data Preparation

The research group felt that the ethical considerations of the research were important and worked to ensure that ethical standards were upheld. The data has been analyzed carefully, and the anonymity of the respondents was kept throughout the research process.

When consolidating the raw data into a single list, it was critical that the research group be consistent and accurate. After receiving the answers from Round 1, a list of the twelve most frequently identified issues was made for each question.

There was a low degree of agreement among the respondents in Round 1. This was not unexpected given the use of open-ended questions. In Round 2, a score system (refer to Appendix C) was developed so the participants could use that system to rank the list from Round 1. In the second round, a higher degree of agreement was achieved (the prioritized answers from Round 2, showing the score and the rank distribution, are tabulated in Appendix D). In the third round, the participants gave a final consensus about the prioritized “top twelve list” in a workshop, where 15 people attended. This resulted in a final ranking, where the score and the rank distribution indicate the consistency of the answers. The score shows how high the issue is ranked, and the rank distribution shows how the participants' opinions were apportioned.

6.3 Data Analysis

The data analysis was performed using the spreadsheet program Microsoft Excel 97. Graphical representations were made to present the ranked answers from Round 2. These presentations were also used as feedback to the participants in the workshop (See Appendix D).

The survey identified several problem and success areas associated with the use of strategic alliances. These issues will be used in the development of a set of guidelines for making strategic alliances more sustainable. The results from Round 2, which resulted in a prioritized list of issues, are the basis for the following analysis. The discussion of the issues below is based on statements made by the respondents in that round (refer to Appendix D for results from Round 2). However, the raw data from Round 1, and the results from the workshop, are also included in the analysis.

6.3.1 Problem Areas

One objective of the survey was to identify possible pitfalls and problem areas concerning strategic alliances. The discussion that follows, is primarily based on the prioritized answers to Question Four, *What do you consider the major pitfalls in strategic alliances, and why?* Other issues identified in the survey and comments captured at the workshop concerning problem areas are also included in the discussion. The score and the rank distribution of the issues dealt with in this section are tabulated in Table 2. For explanation of the score system used, refer to Appendix C.

The top ranked pitfall was "Lack of baseline and performance measures". The respondents emphasized that performance measurement has to be more than just cost management. The alliance must also measure its ability to satisfy the customers' needs, and break them into measurable goals for the alliance. Measurement of goals achieved, benchmarking and quality are other measurements that should be in place. Additionally, in the workshop respondents emphasized that monitoring the measures and being able to easily and clearly present them, is just as important as measuring them.

Problem Areas	*From quest. #*	*Mean score*	*Rank distribution (%)*			
			1^{st}	2^{nd}	3^{rd}	4^{th}
Lack of baseline and performance measures	4	1.65	58	24	12	6
Alliance not supported by all, resistance to change	4	1.65	58	24	12	6
Lack of clear and achievable targets: without a clear vision, relationships go off track	4	1.76	47	41	0	12
Lack of trust	4	1.82	52	24	12	12
Lack of management support and persistence	4	1.94	41	29	24	6

Table 2 Mean score and rank distribution for problem areas from survey. Score ranging from 1 (highest) to 4 (lowest).

An issue that also received the same score and rank distribution as the issue discussed above, was "The alliance not supported by all, resistance to change". The responses indicate that when partners do not have a mutual commitment to the alliance, the strategic alliance is more likely to erode. Respondents felt that the alliance managers must make sure that the alliance members know why the alliance was formed, and that they agree on, and understand, the vision and the alliance objectives. If the alliance members do not have the right knowledge and understanding about the foundation of the alliance, it is likely that they will not contribute significantly to the alliance work, and therefore, indirectly resist the relationship. Respondents cited the example of instances when some members of the alliance feel that the alliance was forced on them by management to illustrate this point. These people can be very disruptive, and might obstruct the alliance if they can not be convinced to support the alliance. The alliance must provide appropriate empowerment and motivational incentives to employees to make working in the alliance attractive. These human resource issues are all ranked highly in the survey. This indicates that these issues need to be better understood and emphasized, due to their importance for determining the success of an alliance.

The third highest ranked pitfall in the survey was "Lack of clear and achievable targets: without a clear vision, relationships go off track". The survey participants stated that the alliance objectives should not be set independently of the other partners. This indicates the need for mutual goals and shared visions in strategic alliances. When the vision is shared, it becomes a corporate asset that acts as a source for power. Unclear goals make it difficult for the alliance to ensure and demonstrate that it is achieving its goals. Further, the participants agreed that the goals have to be clear, and that the senior managers must agree on how these goals should fit into each company's strategy. As the alliance proceeds, alignment of goals are required, and conflicts have to be resolved in the spirit of the common vision.

The fourth pitfall identified in the survey was "Lack of trust". One of the participants stated that "if the system does not have a corporate buy-in from all concerned, the tendency is revert back to what is seemed as usual". Absence of this buy-in promotes loss of trust, and with the loss of trust, the communication and transfer of knowledge stops. The participants emphasized that building a relationship requires trust, respect and open communication. To generate trust, protectionistic and opportunistic behaviors have to be avoided because they can cause a severance of the alliance.

A short-term alliance, as opposed to long-term strategic alliances, will not give the relationship the time to develop trust between the parties, and as a consequence, the relationship may not be as valuable. The research results state that trust is a fundamental prerequisite to any successful alliance and that it has to be built throughout the course of the alliance relationship.

The fifth pitfall identified was "Lack of management support and persistence". There was a high degree of agreement in the survey that many problems are related to management's attitudes towards the alliance. Further, the practitioners involved in the survey emphasized the importance of commitment and support from all parties, especially from senior management. If top senior management is not willing to provide sufficient resources and do not buy-in to the relationship, the alliance is likely to suffer.

Additional points raised with regard to the issue of management support include:

- All parties' senior management must understand the agreement properly before entering the alliance.

- The alliance managers should share the leadership and invite both parties to participate in decision-making.
- It is critical for the management to tell the truth about the alliances' "health" and needs, and welcome ideas and solutions that both parties can accept.
- An alliance manager's role is to manage the alliance through its evolution, with a close eye on the customers' needs and their level of satisfaction.
- The alliance owners must give the alliance time for implementation rather than looking for results sooner than the relationship can deliver.

6.3.2 Success areas

The other main objective of the survey was to identify success criteria for strategic alliances. Some of the problem areas discussed above, are also issues that are critical in determining whether an alliance will be a success or not. The answers from the following questions from the survey were the basis of the identification and analysis of the success criteria:

Question 2: *What do you consider as the most important criteria for a strategic alliance to succeed?*

Question 3: *Based on your experience, how do you think these success criteria can be achieved?*

Question 7: *What do you consider as the key events of strategic alliances from establishment to close out?*

Question 8: *Think about your most recent alliance experience. If you have to do it again what would you do different?*

The score and the rank distribution of the issues dealt with in this section are tabulated in Table 3 below (for explanation of the score system used, refer to Appendix C).

In fact the five issues mentioned in the previous section, about problem areas, were also identified as important success areas, consequently this section will deal with five other top ranked success areas.

Success Areas	From quest. #	Mean score	Rank distribution (%)			
			1st	2nd	3rd	4th
Both parties must see win-win	2	1.31	75	19	6	0
Open communication and result sharing	3	1.44	63	31	6	0
The selection of partner	7	1.12	88	12	0	0
Strategic planning/clear goals	8	1.41	70	24	0	6
More attention to the maintenance	8	1.88	35	41	24	0

Table 3 Score and rank distribution of success areas from survey. Score range from 1 (highest) to 4 (lowest).

The top ranked success area was that "both parties must see win-win". The participants stated that to obtain a "win-win" situation, each company must know its own as well as the partners' core competencies, and see mutual opportunities to grow the business over time. This can help the companies in an alliance to find a way to combine their skills, and by that achieve mutual goals. The survey participants emphasized that to develop a win-win relationship, the parties have to share the benefits commensurate with the risks taken. The participants also indicated that to achieve a win-win situation, each partner has to be treated equally. Further, they stated the importance of a common understanding of the alliance purposes and objectives, if one partner fails, the whole alliance is likely to fail. Maintaining the win-win deal requires flexibility from all parties.

The second issue that was ranked high in the survey was "the selection of partner". The participants stated that when a company is entering a strategic alliance, it must make sure that its partners are willing to invest enough time, money and energy in the relationship. The participants emphasized that the partners need to have complementary and compatible skills, and therefore the selection must be based on overall value, not on price. With complementary and compatible skills, the survey participants stressed that it will be much easier for the partners to contribute with their core competencies.

Another point stated by the involved practitioners was that the selection of partner(s) should consider whether the potential partners have a good cultural policy and that the companies' needs and objectives match each other. If the partners have totally different ethical behaviors and values, it will be difficult to develop trust and the right chemistry to make the alliance effective and competitive for a long-term. The workshop participants emphasized that picking the right partner is an essential part for the survival of the alliance, but they also mentioned that looking for the perfect partner could take too much time.

The third factor dealt with was “open communication and result sharing”. The respondents felt that these are vital tasks in strategic alliances. They stated that information sharing is essential for the alliance to work the way it was intended to from the inception. The companies must share their information freely. This open communication builds trust, and trust provides synergy effects that impact the performance of the alliance. The survey also revealed that communication and continuous feedback about the alliance conditions are significant, and have to include all people involved in the alliance. The participants felt that it was important to know where the alliance is improving and where it is not doing so well.

The fourth factor dealt with was “strategic planning/clear goals”. The survey results show that the term “strategic alliances” is widely used in the Canadian Oil & Gas industry today. However the participants felt that there is a need for more focus on the strategic aspects. Without a clear strategy, there is no clear direction, and the results are often highly unsatisfactory. The practitioners involved in the survey stated that strategic alliances demand partners that are willing to share their strategies. The participants indicate that without good strategic planning, the alliance partners will inevitably rely on a number of ad hoc decisions made independently of one another, which often results in lack of focus and clear goals.

The fifth high ranked success area was “more attention to the maintenance”. There was a common agreement among the participants that maintenance of the alliance is an important issue. The participants emphasized that partners must continuously strive to maintain and improve the relationship. More focus on regularly measuring and benchmarking during the operation can not be emphasized enough.

6.4 Summary of Findings

This section presents a summary of the findings from the survey and the analysis (refer to Table 4). The researchers have chosen to present three groups of data in this chapter; problem areas identified in the literature study, problem areas identified in the survey and solutions to these problems (guidelines for strategic alliances). The results in this table show that the survey has provided a rich source of information to use to develop guidelines for strategic alliances.

The right column in Table 4 presents the solutions to the problem areas found in the survey and the literature study. These solutions will constitute the research's guidelines for successful strategic alliances. A comparison of the problem areas in the literature and the survey showed that all the different issues were covered in the guidelines. The rows in Table 4 indicate the relationship between the problems found in both the literature and the survey and the proposed solutions. The research group has not found any gap in the literature, but the group will emphasize that there are some topics in the literature that are better described than others. Most of the literature substantiates the early stages of the alliance, and to a lesser degree the operating and maintenance. An answer to this could be that the early stages are very critical for the outcome of the alliance. If the partners do not pay enough attention in the early stages, it is likely that the alliance will quickly terminate itself. This research emphasizes that it is crucial to develop structured mechanisms for measurement and stresses the importance of maintaining and operating the alliance.

The researchers emphasize that this survey has provided a ranked list of problems and success areas as identified by the practitioners, based on their experience. Based on the research group's knowledge no similar research has been completed.

Problem Areas Identified in Literature Study	Problem Areas Identified in Survey	Guidelines for Strategic Alliances (from Survey)
1.1 Selection of partner(s) with insufficient skills and abilities.	1.1 Selection of partners on price, not overall value.	1.1 Go through the diligence process to select the right partner.
2.1 The partners' objectives for the alliance are divergent. 2.2 The partners are doing business on different sets of values and understandings.	2.1 Lack of clear and achievable targets. Without a clear vision, relationships go off track. 2.2 Differences in partner's expectations.	2.1 Attain a high conceptual understanding of goals, business drivers and core competencies for each party. Identify needs and expectations and set clear and common goals for the alliance. 2.2 Determine roles, commitment and responsibilities. Who adds value and where?
3.1 Lack of an appropriate contractual agreement. 3.2 There are problems with risk and reward sharing. 3.3 When equity enters the picture, one starts to worry about degree of control and return on investment.	3.1 Dividing up the benefits is not commensurate with the risks and efforts involved. 3.2 Divergent finical incentives between the partners. 3.3 Lack of dedicated resources and financial commitment.	3.1 Establish a sound business framework in which to operate. All required contractual agreements should be in place prior to the start of the alliance. Complete all negotiations and analysis before entering the alliance. 3.2 Ensure that parties see a win-win situation. Establish an incentives program and agree on risk and reward sharing.
4.1 The management are not fully committed to the alliance. 4.2 The alliance partners do not have sufficient knowledge and experience about alliancing. 4.3 The term partnering is very often used loosely and seen as a panacea.	4.1 Lack of management support. 4.2 Lack of alliance experience. 4.3 The thought that the grass is greener on the other side.	4.1 Ensure that strong management support is in place, and that management with alliance experience are involved in the alliance. 4.2 Obtain joint management buy-in.

Table 4 Comparison of problem areas and solutions (guidelines)

Problem Areas Identified in Literature Study	Problem Areas Identified in Survey	Guidelines for Strategic Alliances (from Survey)
5.1 The partners do not have good enough procedures for measuring the performance of the alliance.	5.1. Lack of baseline and performance measures. 5.2. The alliance tends to evolve into what it was trying to replace.	5.1 Develop structured mechanisms and procedures for implementing, operating and maintaining the alliance. 5.2 Develop effective conflict resolution techniques. 5.3 Establish baselines and develop a tracking and appraisal system.
6.1 One or more of the partners do not contribute with sufficiently competent and experienced people to the alliance.	6.1. Lack of alliance experience. 6.2. Too rapid change of key people, insufficient training of new members people. The best people may not be available. 6.3. The alliance is not supported by all, there is resistance to change.	6.1 Carefully select the team members and champions who demonstrate the right competencies. Ensure that team members have sufficient knowledge about the alliance concept. 6.2 Ensure that the relationship are “process” driven so employees can come and go without loss in productivity!
7.1 Personal relationships between people involved in the alliance and the relationship between the organizations are not sufficiently in place for a fruitful and valuable partnership. 7.2 There is not a sufficient amount of trust among alliance members. 7.3 The relationship is troubled by opportunistic behavior. 7.4 Misunderstandings and frustrations caused by poor communication.	7.1 With lack of trust, the communication transfer stops. 7.2 There is an attitude of protectionism. 7.3 Partners may not be treated equally (the company who has the money makes the rules). 7.4 The parties do not spend enough time and effort to develop relationships.	7.1 Take the time and effort to build relationship and a positive chemistry. Trust and respect must be built slowly. Open communication, information and result sharing are essential. Avoid hidden agendas

Table 4 Comparison of problem areas and solutions (guidelines), continuation.

Problem Areas Identified in Literature Study	***Problem Areas Identified in Survey***	***Guidelines for Strategic Alliances (from Survey)***
8.1 The partners have problem with compromising and assimilating other firm's organizational culture.	8.1 Time to implement. Owners typically look for results sooner than the relationship can deliver. 8.2 Cultural mismatch.	8.1 Align the parties and their cultures to obtain the best possible organizational fit. Spend enough time to implementation. 8.2 Keep stakeholders informed and on track. Measure progress and quality of the implementation and execute improvements where it is needed.
9.1 The management are not committed to the alliance.	9.1 Lack of ownership and commitment by line.	9.1 Demonstrate commitment to the alliance regardless if things go well, or not so well. Commitment from champions that continually foster the alliance relationships is important.
10.1 The partners do not know how the alliance is performing.	10.1 The alliance tends to evolve into what it was trying to replace. 10.2 The alliance is not enough focused on meeting customers needs.	10.1 Use a tracking and appraisal system regularly. Benchmark and continuously challenge and improve the system. Performance awards are positive. 10.2 Focus and pay attention to the maintenance of the alliance. Quickly step in when the alliance starts to erode.
11.1 The alliance does not properly manage changes that occur during the alliance life cycle.	11.1 Loss of degree of flexibility. Changes are not managed properly.	11.1 Keep the meeting needs of the alliance. The alliance parties have to be flexible and able to meet changing conditions.
		12.1 Evaluate the degree of success of the alliance and the partners' satisfaction with the outcome. Do lessons learned.

Table 4 Comparison of problem areas and solutions (guidelines), continuation.

Chapter 7

Results

7.1 Introduction

This chapter presents a set of guidelines for successful strategic alliances. These are presented according to the phases of a strategic alliance. The guidelines are based on the information gathered in the Delphi survey and the analysis of the data collected. It is important to note that the results presented later in this chapter are based on the opinion of a small selection of practitioners in the oil & gas industry in Calgary. Consequently, the validity of the results is not statistically proven. However, the results are the honest opinion of the survey participants who represented all the main players in alliancing (owner, contractor, and consultant). Another round with testing and validation would have ensured the statistic validity of the results, but that was not within the scope of this thesis.

7.2 The Phases of Strategic Alliances

The guidelines are presented according to four different phases of strategic alliances. Companies and alliances use different terms to describe the phases of an alliance. These four phases, described below, are chosen because they are generic and therefore do not conflict with existing phase models. The phases used are as follows:

1. The <u>Initial/selection phase</u> includes all issues that should be addressed early in the process of establishing an alliance. This phase includes issues that include selecting the right partner(s), identification of goals and business drivers and negotiation of the contractual agreement.
2. The <u>Development phase</u> addresses issues that are concerned with the development and design of the alliance. This phase consists of issues such as the selection of team members, the development procedures and mechanisms for the management of the alliance, and the development of a tracking and appraisal system.

3. The Implementation phase includes issues that deal with the setup of the alliance and the transition from development to implementation of the alliance.
4. The Operation/maintenance phase includes issues concerning managing and evaluating the alliance.

Strategic alliances are considered long term relationships and usually without a fixed closeout phase. Due to this fact, such a phase is not included in the result presentation in Table 5.

7.3 Applicability

The results from the survey and the analysis are used for the development of a set of general guidelines for strategic alliances. The information has been gathered through a survey in the Oil & Gas industry in Calgary, Canada. However, the guidelines are of a general nature and not specific to the Oil & Gas industry. Due to this fact, the researchers believe that the results are applicable also to other industries.

The survey participants were mainly practitioners in large oil and construction/engineering companies. The results of this thesis will hopefully contribute to their body of knowledge in strategic alliancing. However, the research group believes that the main target for this research is smaller firms that have little or no experience in strategic alliancing. These firms can gain some basic knowledge and guidance from this present research.

It is important to be aware that the placement of the guidelines is not finite, but a recommendation from the researchers. Some of the guidelines might be in force across the different phases.

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Initial/selection – phase	***Development - phase***	***Implementation - phase***	***Operation/maintenance - phase***
1. Go through the diligence process to select the right partners. 2. Attain a high conceptual understanding of goals, business drivers and core competencies for each party. Identify needs and expectations and set clear and common goals for the alliance. 3. Determine roles, commitment and responsibilities. Who adds value and where? 4. Establish a sound business framework in which to operate. All required contractual agreements should be in place prior to the start of the alliance. Complete all negotiations and analysis before entering the alliance. 5. Ensure that parties see a win-win situation. Establish an incentives program and agree on risk and reward sharing. 6. Ensure that strong management support is in place, and that management with alliance experience are involved in the alliance. 7. Obtain joint management buy-in.	8. Develop structured mechanisms and procedures for implementing, operating and maintaining the alliance. 9. Carefully select the team members and champions who demonstrate the right competencies. Ensure that team members have sufficient knowledge about the alliance concept. 10. Develop effective conflict resolution techniques. 11. Establish baselines and develop a tracking and appraisal system. 12. Take the time and effort to build relationship and a positive chemistry. Trust and respect must be built slowly. Open communication, information and result sharing are essential. Avoid hidden agendas! 13. Ensure that the relationship are "process" driven so employees can come and go without loss in productivity.	14. Align the parties and their cultures to obtain the best possible organizational fit. Spend enough time to implementation. 15. Keep stakeholders informed and on track. Measure progress and quality of the implementation and execute improvements where it is needed.	16. Use a tracking and appraisal system regularly. Benchmark and continuously challenge and improve the system. Performance awards are positive. 17. Demonstrate commitment to the alliance regardless if things go well, or not so well. Commitment from champions that continually foster the alliance relationships is important. 18. Focus and pay attention to the maintenance of the alliance. Quickly step in when the alliance starts to erode. 19. Keep the meeting needs of the alliance. The alliance parties have to be flexible and able to meet changing conditions. 20. Evaluate the degree of success of the alliance and the partners' satisfaction with the outcome. Do lessons learned.

Table 5 Guidelines for Sustainable Strategic Alliances

Chapter 8

Conclusions and Recommendations

8.1 Introduction

The main objective of this thesis was to develop a set of guidelines for strategic alliances. These guidelines are presented in chapter 7. This chapter however, describes some of the major findings in the research in addition to a short evaluation of the present work and some suggestions for further study in the area of strategic alliances.

8.2 Conclusion

In the present thesis, the research group concentrated on finding a way to make strategic alliances more sustainable. The research focused on two sources of information; a literature study and a survey in the Oil & Gas industry. The purpose of the literature study was to give the researchers some basic knowledge about strategic alliances. The survey on the other hand was meant to give trustworthy information directly from industry practitioners. Through this approach, both theoretical aspects and current practices were examined.

The human aspects of strategic alliances are one of the issues that were ranked highly in the survey. Aspects like trust and respect, the building of relationships and open communication are some of the examples that were stressed by the participants. Human aspects were ranked high both as success criteria and on the question on how to avoid pitfalls in strategic alliances. The issue “trust and respect” was the top ranked success criterion. 75% of the participants ranked this issue as the most important success criterion for entering a strategic alliance.

On other issues concerning the establishment of the alliance, the importance of a clear and common understanding of the alliance’s goals were emphasized. On the question on how to avoid pitfalls, 88% of the involved industry practitioners top ranked the issue “set clear and common goals”. The importance of alliances’ early phases was stressed by the participants throughout the whole survey.

The importance of aspects like maintenance, continuous benchmarking and measurement were emphasized strongly by many of the participants in the survey. On a question on what the industry practitioners would have done different if they were to carry out a strategic alliance again, the issue "*develop and regularly use a tracking & appraisal system*" was the top ranked answer. 69% of the participants ranked this as the most important issue.

In the literature study, the researchers found a lot of literature that emphasized the importance of doing proper preparations, and to work hard with the early phases of the alliance. This was also one of the important issues that came out clearly from the survey results. On the other hand, the research group did not find much literature on the issues concerning the later phases of the alliance. The researchers can see a difference in the literature compared to the survey results when it comes to these issues. There is no doubt about the importance of the early phase, but as the survey shows, the alliance does not run itself. Many alliances seem to evolve into what they were trying to replace because of this fact.

The researchers believe that the results of the thesis can be helpful for companies involved in, or considering becoming involved in, strategic alliances. The results can be especially helpful for companies with little or no experience in alliancing.

"Alliances are between people, not companies" (statement from one of the survey participants).

8.3 Evaluation

The objectives for the thesis were set in the research proposal. The main objectives were to identify issues that have an impact on how strategic alliances work and to develop a set of guidelines for making strategic alliances more sustainable. In addition, the group had some internal objectives, which were to gain a thorough knowledge about strategic alliances, establish contact with industry practitioners and improve general project management skills.

Through the literature study and the industry survey, the researchers gained knowledge about strategic alliances and a set of guidelines has been developed. The research relied on cooperation with industry practitioners. These practitioners were all people with substantial knowledge about and experience in strategic alliances, and they contributed with excellent information.

In research it is important to have the ability to be flexible and to make alterations as the research proceeds. This has also been necessary in this present research. The researchers have tried to focus on the main objectives, and have followed the workflow defined in the research proposal. The different steps in the Delphi-Method functioned as natural milestones, and there were no major problems with the control of the project.

The thesis has been successfully completed, and all the external and internal objectives have been obtained.

8.4 Recommendations for further research

Strategic alliances in the Oil & Gas industry include a variety of different aspects. This thesis tried to cover all the major aspects. To achieve this, the level of detail in the research had to be limited. The researchers feel that this thesis could not only be looked upon as an independent thesis, but also as a beginning for further research.

The researchers have identified the following issues for possible further research:

- Study one specific strategic alliance through its different phases.
- Study one particular phase of strategic alliances. Examine one specific phase and look at the important aspects and processes of this particular phase.
- Study one specific aspect of strategic alliances. Based on the survey, the researchers recommend issues concerning trust, communication and measurement to be further examined.
- Further testing and validation of the guidelines developed in the present thesis.

The researchers feel that the survey has given many answers and contributed to the knowledge needed to make strategic alliances more successful. In addition to this, the research has also revealed some unanswered questions concerning strategic alliances. The researchers hope that some of these questions can be answered in further research.

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APPENDIX

A	**Prospectus**
B	**Questionnaire**
C	**Score System**
D	**Ranking**
E	**Group Questions at Workshop**
F	**Participating Companies**

A Prospectus

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Strategic Alliances Survey

We are three Norwegian students who are doing our diploma thesis at the University of Calgary, Project Management Specialization. The thesis is being executed in close collaboration with our supervisors Dr. George Jergeas and Dr. Francis Hartman. The main goal of our research is to develop guidelines for strategic alliances, which hopefully will make strategic alliances more sustainable. As a part of our research, we want to perform a Delphi Method survey combined with a workshop. To make this a success we need participation from senior industry practitioners like yourself.

Background

There are different ways to enter a strategic alliance, and there are different ways to make it work. A survey carried out by McKinsey & Co. (*"Survey of Top Managers From 20 U.S. and Canadian Oil Companies")* shows that a majority (68%) of the survey participants believe strategic alliances will be a key element in reshaping the energy industry over the next five years. On the other hand, only 20% believe they are skilled in strategic matching. We hope our contribution can help industry to solve these and other problems, and make strategic alliances more sustainable.

Objectives

The main objective of our research is to develop guidelines to help industry manage strategic alliances with greater success. These guidelines will be based on existing models and experiences from industry. It is also important that the guidelines can be implemented in an industry company.

Project Implementation

To get the knowledge required for improving today's practice, we hope to get help from people in industry with competence in the right areas. First, we will execute a Delphi Method survey which requires each participant to complete one or two questionnaires. Second, there will be a workshop with face-to-face discussion between the participants, our supervisors and ourselves. The research approach will be as follows:

1. The participants will be requested to answer a questionnaire. The answers will be, and will remain, completely anonymous from the other participants.

2. The answers will be tabulated and sent back to the participants. They will now get the opportunity to change, or to stick with, their original answers.

3. Step 1 and 2 may be repeated in a second round with more detailed questions. This depends on the answers from the first round and our time schedule.

4. All the participants will be invited to a workshop on the university campus.

Why take part?

To take part in this project demands a little attention, but does not require much time. The answering of the questions should not take more than about one hour. Several leading companies, mainly from the oil & gas industry, will be asked to participate. The participants will get continuos feedback as the process proceeds (according to the four steps above). Each participant will also receive a copy of the final report. We believe that this will be worth the effort.

What is next?

1. Please complete the questionnaire and return it by mail within December 12. To ensure anonymity, please do not place your name or address on the questionnaire or on the return envelope.

2. Mid January you will receive the tabulated answers from the first round, with the opportunity to change your answers, and if necessary (and possible) a second questionnaire.

3. The workshop will take place mid February. Further information, and an invitation to attend, will be given later.

We hope and believe that this will be interesting for you, and that you will help us make this project a success.

Sincerely,

Karl Blom	Knut E Haaland	Gunnar Johnsen

B Questionnaire

Strategic Alliances Survey: Round 1

PERSONAL

Line of business	
Occupation	
Years of relevant (strategic alliancing) experience	0-5 years ❑ 6-10 years ❑ 11-20 years ❑ 20 years or more ❑
Types of alliances involved in	Joint Venture ❑ Joint R&D ❑ Licensing ❑ Partnership ❑ Other ❑ (please specify) __________________________________
Numbers of alliances involved in	0 ❑ 1-2 ❑ 3-5 ❑ 6 or more ❑
Roles in alliances	Owner ❑ Contractor ❑ Supplier ❑ Consultant/Advisor ❑ Other ❑ (please specify) __________________________________

Note: If there is not enough space to write your answers below each questions, please use the back page.

INTRODUCTION

1. In your opinion, what are the main reasons for entering a strategic alliance?

SUCCESS CRITERIA

2. What do you consider the most important criteria for a strategic alliance to succeed (and why)?

3. Based on your experience, how do you think these success criteria can be achieved?

PITFALLS

4. What do you consider the major pitfalls in strategic alliancing (and why)?

5. Based on your experience, how do you think you can avoid these pitfalls?

GENERAL

6. How do you measure success in strategic alliances?

7. What do you consider the key events of strategic alliances, from establishment to close out?

8. Think about your most recent strategic alliance experience. If you had to do it again today, what would you do differently?

9. What do you think distinguish (characterize) strategic alliances in the oil & gas industry from other industries?

Please complete the questionnaire and return it by mail to the address below within December 12. To ensure anonymity, please do not place your name or address on the questionnaire or on the return envelope.

Blom, Haaland and Johnsen
Project Management Specialization
Department of Civil Engineering
University of Calgary
2500 University Drive, N.W.
Calgary, Alberta
T2N 1N4

Thank you for your participation !

C Score System

INSTRUCTIONS

To prioritize the answers you gave in the first round, we have chosen a simple seeding system. We want you to prioritize the answers into four groups. You can put a **maximum of four answers** in each group. The first group should contain the reference numbers of the most important responses and the fourth group those of the least important ones.

Example:

The following instructions apply to all nine forms, but use question 1, "*In your opinion, what are the main reasons for entering a strategic alliance?*", as an example.

We want you to group the twelve answers into four groups. If, for example, you find number 5, "*Improve quality/reduce failures*", among the most important issues, please enter "5" in group 1. If you think that answer number 2 and 8 are also among the most important issues, please add "2" and "8" to this group as well. Group number 1, most important issues, will then look like this:

Group 1

2, 5, 8

If, for example, you think that number 6, "*Improve* schedule", is not as important, type "6" in a lower prioritized group. Put the answers you find least important in the lowest groups in term of importance.

The twelve answers that you are being asked to prioritize are summarized from a larger number of answers received in the first round of this study. Because of this summarization, we might have missed or misinterpreted some of your answers. If you want to add some issues/comments, please do so. Add them at the blank lines at the bottom of each page, and then prioritize them.

Please continue until you have prioritized all twelve answers, for all nine questions.

Thank you.

Question #1: ***In your opinion, what are the main reasons for entering a strategic alliance?***

Please, prioritize the answers below in the four boxes to the right, with a **maximum of four** answers in each box. Type the number of the answer you prioritize in the actual box.

	Number of answers
1. Reduce total costs	14
2. Make more money and improve business	6
3. Sharing and advancement (innovation) of old and new technology	6
4. Availability of the right personnel, cheaper and faster	5
5. Improve quality/reduce failures	5
6. Improved schedule and response time	5
7. To execute work more efficiently	4
8. Long term, continuing relationship	4
9. To outsource a complex, but none-core, piece of the business	2
10. Ups and downs of economy managed more efficiently	1
11. Simplify administration	1
12. Challenge existing paradigms	1

Group 1	***Most important***
Group 2	↓
Group 3	↓
Group 4	***Least important***

If you think some important issues are missing, please add them on the blank lines below and prioritize them in the four boxes.

____

____

Question #2: ***What do you consider as the most important criteria for a strategic alliance to succeed?***

Please, prioritize the answers below in the four boxes to the right, with **a maximum of four** answers in each box. Type the number of the answer you prioritize in the actual box.

	Number of answers
1. Trust and respect	11
2. Alignment of good objectives	6
3. Upper management support and belief	5
4. Both parties must see win-win	4
5. Long-term perspective	3
6. Improvements in financial performance	3
7. Performance measurement should be in place. Performance awards are positive	3
8. Sound business framework/agreements in place	2
9. Continual improvement beliefs	2
10. Flexibility to changing conditions	2
11. Organizational fit	2
12. Communication and information sharing	2

Group 1

Group 2

Group 3

Group 4

Most important

Least important

If you think some important issues are missing, please add them on the blank lines below and prioritize them in the four boxes.

____

____

Question #3: ***Based on your experience, how do you think these success criteria can be achieved?***

Please, prioritize the answers below in the four boxes to the right, with a **maximum of four** answers in each box. Type the number of the answer you prioritize in the actual box.

	Number of answers
1. Align, and have clear alliance objectives	7
2. Experienced and strong senior management support on both sides	6
3. Open communication and result sharing	4
4. Measurement, benchmarking and reporting	4
5. Establish a base line for performance measurement at the beginning	3
6. Develop and give trust, and take away if violated	2
7. Demonstrated commitment when things go well, and not so well	2
8. Complete all negotiations and analysis prior to finalizing alliance	2
9. Proper selection of alliance partners	2
10. Avoid hidden agendas	2
11. Actually doing work	2
12. Positive chemistry	1

Group 1

Group 2

Group 3

Group 4

Most important

Least important

If you think some important issues are missing, please add them on the blank lines below and prioritize them in the four boxes.

Question #4: ***What do you consider the major pitfalls in strategic alliancing (and why)?***

Please, prioritize the answers below in the four boxes to the right, with a **maximum of four** answers in each box. Type the number of the answer you prioritize in the actual box.

	Number of answers
1. Lack of baseline and performance measures	6
2. Lack of clear and achievable targets: without a clear vision, relationships go off track	5
3. Lack of trust	5
4. Alliance not supported by all, resistance to change	5
5. The alliance tend to evolve into what it was trying to replace	5
6. Differences in partners' expectations	3
7. Lack of alliance experience	3
8. Poor communications	3
9. Lack of management support and persistence	2
10. The thought that the grass is greener on the other side (overly optimistic)	2
11. Too rapid change of key people, insufficient training of new members	2
12. Divergent financial incentives between partners	1

Group 1

Group 2

Group 3

Group 4

Most important

Least important

If you think some important issues are missing, please add them on the blank lines below and prioritize them in the four boxes.

____

____

Question #5: ***Based on your experience, how do you think you can avoid these pitfalls?***

Please, prioritize the answers below in the four boxes to the right, with a **maximum of four** answers in each box. Type the number of the answer you prioritize in the actual box.

	Number of answers
1. Set clear and common goals	8
2. Strong (senior) management support on both sides	7
3. Establish baseline, benchmark and continuous challenge (improve) the system	6
4. Take the time and effort to build relationship	5
5. Commitment from champions that continually foster the relationship	4
6. Build mutual trust and respect (slowly)	2
7. Align the various cultures	2
8. Joint management buy-in	2
9. Go through the diligence process to select the right partners	1
10. Shared risks and resources	1
11. Establish clear payback time lines	1
12. Persistence	1

Group 1

Group 2

Group 3

Group 4

Most important

Least important

If you think some important issues are missing, please add them on the blank lines below and prioritize them in the four boxes.

____

____

Question #6: ***How do you measure success in strategic alliances?***

Please, prioritize the answers below in the four boxes to the right, with a **maximum of four** answers in each box. Type the number of the answer you prioritize in the actual box.

	Number of answers
1. Schedule on time	7
2. Meet or go below target price	7
3. Benchmarking	6
4. Disputes that arise are small in number	5
5. Satisfaction	5
6. Improvement in quality	4
7. Client feedback	3
8. Improvement in technology/innovation	3
9. Goals achieved	3
10. Safety	3
11. Organizational capability	2
12. Number of process improvements implemented	2

Group 1

Group 2

Group 3

Group 4

Most important

Least important

If you think some important issues are missing, please add them on the blank lines below and prioritize them in the four boxes.

Question #7: ***What do you consider as key events of strategic alliances from establishment to close out?***

Please, prioritize the answers below in the four boxes to the right, with a **maximum of four** answers in each box. Type the number of the answer you prioritize in the actual box.

	Number of answers
1. The selection of partner	11
2. Detailed organization in place	11
3. Owner developing a list of their needs	7
4. Project milestones with measurement	6
5. Getting agreement of procedures	6
6. Know when your objectives have been meet	6
7. High conceptual understanding of goals, incentives & core competence	5
8. Open dialogue	5
9. Selection of team members/champions	5
10. Contractual arrangement	4
11. Determine expectations and degree of commitment	4
12. Ability to change	3

Most important

Group 1

Group 2

Group 3

Group 4

Least important

If you think some important issues are missing, please add them on the blank lines below and prioritize them in the four boxes.

____

____

Question #8: ***Think about your most recent strategic alliance experience. If you had to do it again today, what would you do different?***

Please, prioritize the answers below in the four boxes to the right, with a **maximum of four** answers in each box. Type the number of the answer you prioritize in the actual box.

	Number of answers
1. Develop and regularly use a tracking & appraisal system	3
2. Strategic planning/clear goals	3
3. Complete negotiations of financial issues before entering an alliance	2
4. Emphasis on organizational skills	2
5. Quickly step in when eroding the alliance	2
6. More attention to the maintenance	2
7. Better specification of benefit	1
8. Working out how arrangement works before entering into an alliance	1
9. Cannot apply a specific model	1
10. Pick a more experienced partner	1
11. Get better owner commitment up front	1
12. Define alliance as a role global/regional/local actor	1

Group 1

Group 2

Group 3

Group 4

Most important

Least important

If you think some important issues are missing, please add them on the blank lines below and prioritize them in the four boxes.

____

____

Question #9: ***What do you think distinguish (characterize) strategic alliances in the oil & gas industry from other industries?***

Please, prioritize the answers below in the four boxes to the right, with a **maximum of four** answers in each box. Type the number of the answer you prioritize in the actual box.

	Number of answers
1. No key differences	6
2. The oil & gas industry has led the way, and has the learning curve on their side	3
3. Oil & gas more complex complicates alliance implementation	2
4. Large capital expenditures (the more money an owner has, the bigger the hammer)	2
5. Oil/gas more short term focused, not in for the long term win-win	2
6. Huge number of clients to please	2
7. The intellectual property issues	1
8. Geography: distribution and logistics are far more extensive	1
9. Advanced technology driven alliances	1
10. Other sectors (non-commodity) can afford more waste	1
11. Oil/gas less joint business integration more commercial focus	1
12. Emphasis on schedule	1

Group 1

Group 2

Group 3

Group 4

Most important

Least important

If you think some important issues are missing, please add them on the blank lines below and prioritize them in the four boxes.

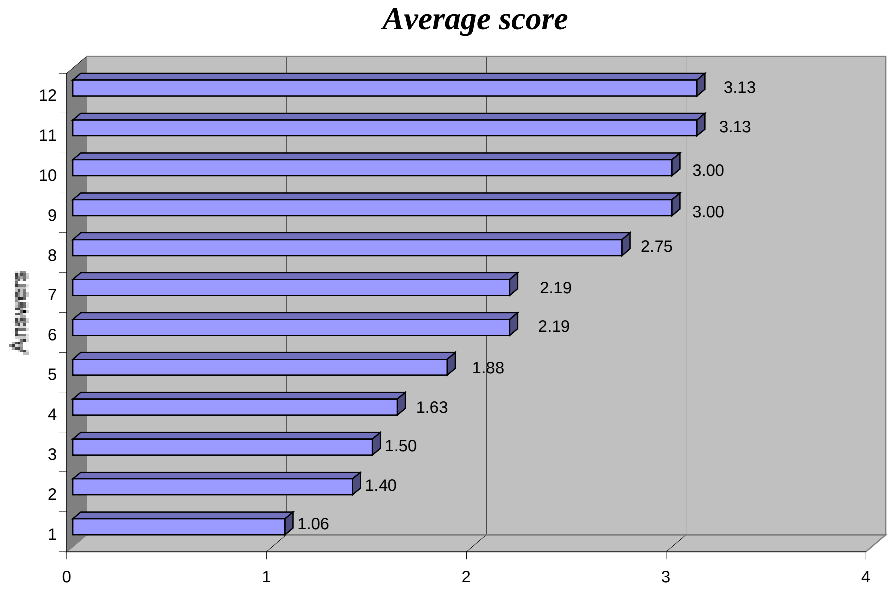
____

____

D Ranking

Question 1: *In your opinion, what are the main reasons for entering a strategic alliance?*

Results:



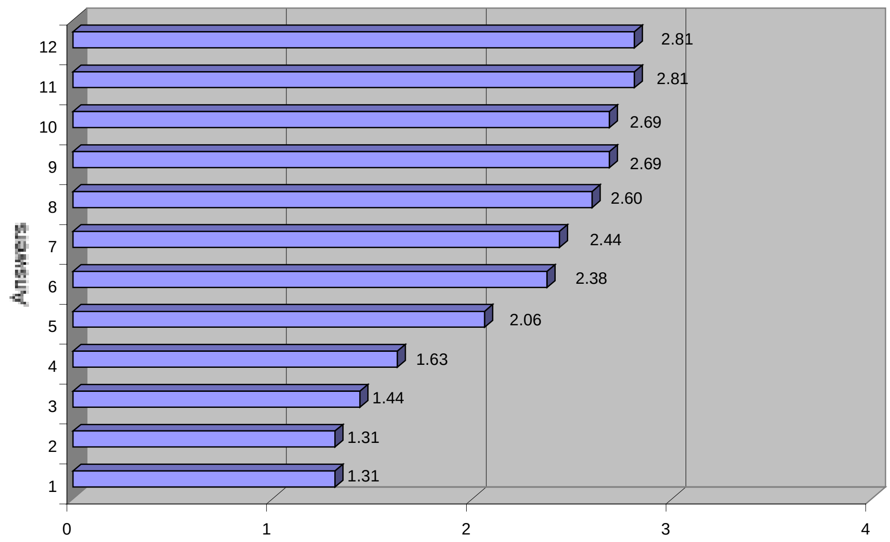
Highest score = 1 - Lowest score = 4

Rank	*Prioritized answers*	*Score*	*Rank distribution (%)*			
			1st	*2nd*	*3rd*	*4th*
1	Reduce total costs	1.06	94	6	0	0
2	Make more money and improve business	1.40	60	40	0	0
3	Improve quality/reduce failures	1.50	69	19	6	6
4	To execute work more efficiently	1.63	56	25	19	0
5	Improved schedule and response time	1.88	44	31	19	6
6	Sharing and advancement (innovation) of old and new technology	2.19	25	43	19	13
7	Availability of the right personnel, cheaper and faster	2.19	19	50	25	6
8	Ups and downs of economy managed more efficiently	2.75	0	50	25	25
9	Long term, continuing relationship	3.00	6	19	44	31
10	Simplify administration	3.00	0	31	38	31
11	To outsource a complex, but none-core, piece of the business	3.13	6	13	43	38
12	Challenge existing paradigms	3.13	0	25	37	38

Question 2: *What do you consider as the most important criteria for a strategic alliance to succeed?*

Results:

Average score

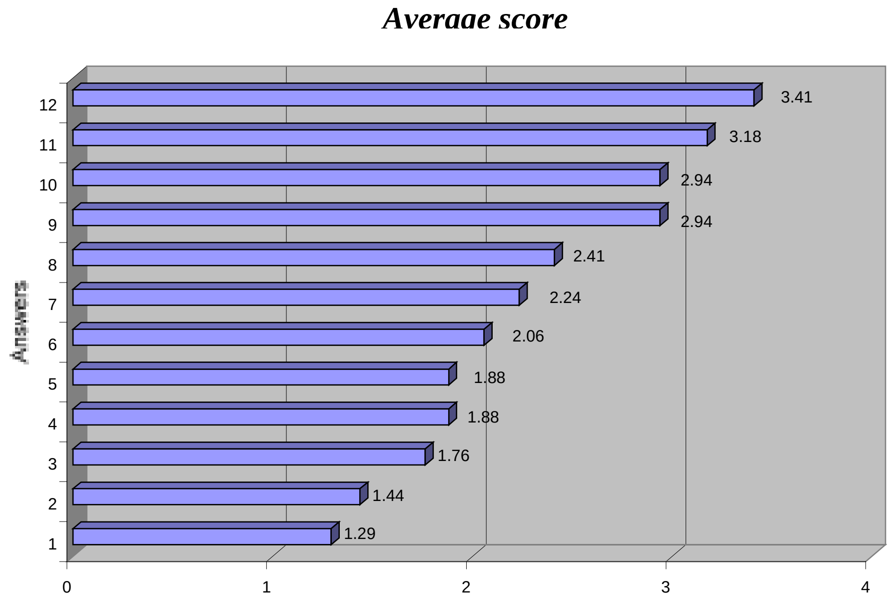


Highest score = 1 - Lowest score = 4

Rank	*Prioritized answers*	*Score*	*Rank distribution (%)*			
			1st	*2nd*	*3rd*	*4th*
1	Trust and respect	1.31	75	19	6	0
1	Both parties must see win-win	1.31	75	19	6	0
3	Alignment of goals and objectives	1.44	68	19	13	0
4	Upper management support and belief	1.63	57	31	6	6
5	Performance measurement should be in place. Performance awards are positive	2.06	31	38	25	6
6	Improvements in financial performance	2.38	19	31	44	6
7	Long-term perspective	2.44	0	68	19	13
8	Continual improvement beliefs	2.60	7	33	53	7
9	Organizational fit	2.69	6	31	50	13
10	Communication and information sharing	2.69	19	19	37	25
11	Sound business framework/agreements in place	2.81	6	31	38	25
12	Flexibility to changing conditions	2.81	13	25	31	31

Question 3: ***Based on your experience, how do you think these success criteria can be achieved?***

Results:

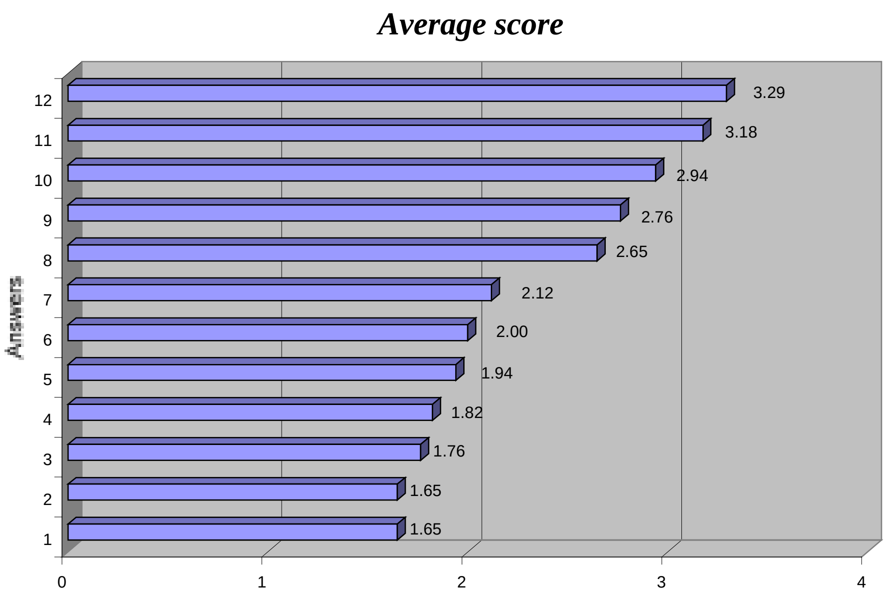


Highest score = 1 - Lowest score = 4

Rank	*Prioritized answers*	*Score*	*Rank distribution (%)*			
			1st	*2nd*	*3rd*	*4th*
1	Align, and have clear alliance objectives	1.29	76	18	6	0
2	Open communication and result sharing	***1.44***	***63***	***31***	***6***	***0***
3	Measurement, benchmarking and reporting	1.76	58	18	12	12
4	Proper selection of alliance partners	1.88	41	41	6	12
5	Experienced and strong senior management support on both sides	1.88	35	41	24	0
6	Establish a base line for performance measurement at the beginning	2.06	24	58	6	12
7	Demonstrated commitment when things go well, and not so well	2.24	24	35	35	6
8	Develop and give trust, and take away if violated	2.41	18	35	35	12
9	Complete all negotiations and analysis prior to finalizing alliance	2.94	12	12	47	29
10	Avoid hidden agendas	2.94	6	18	52	24
11	Actually doing work	3.18	6	12	41	41
12	Positive chemistry	3.41	6	6	29	59

Question 4: ***What do you consider the major pitfalls in strategic alliancing (and why)?***

Results:



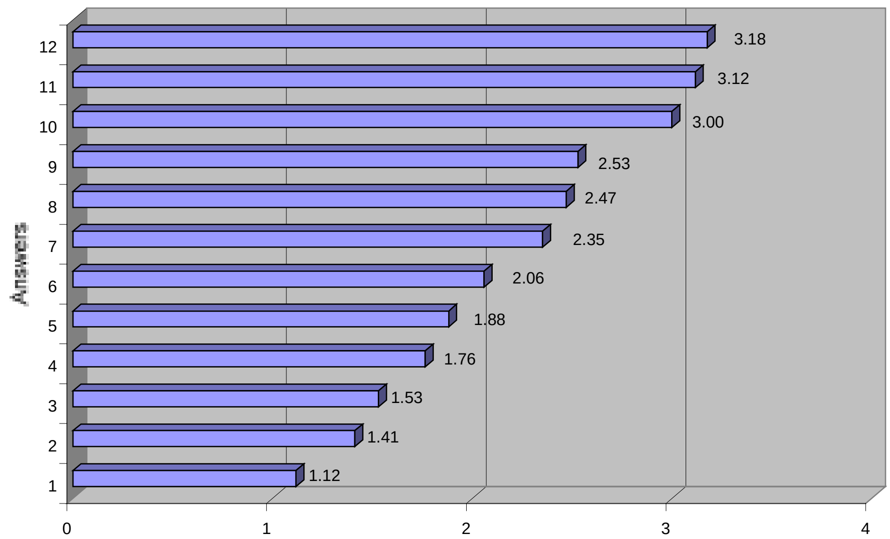
Highest score = 1 - Lowest score = 4

Rank	*Prioritized answers*	*Score*	*Rank distribution (%)*			
			1st	*2nd*	*3rd*	*4th*
1	Lack of baseline and performance measures	1.65	58	24	12	6
1	Alliance not supported by all, resistance to change	1.65	58	24	12	6
3	Lack of clear and achievable targets: without a clear vision, relationships go off track	1.76	47	41	0	12
4	Lack of trust	1.82	52	24	12	12
5	Lack of management support and persistence	1.94	41	29	24	6
6	Differences in partners' expectations	2.00	43	29	14	14
7	Poor communications	2.12	29	29	42	0
8	Too rapid change of key people, insufficient training of new members	2.65	18	18	46	18
9	The alliance tend to evolve into what it was trying to replace	2.76	18	12	46	24
10	Lack of alliance experience	2.94	6	24	41	29
11	Divergent financial incentives between partners	3.18	4	44	26	26
12	The thought that the grass is greener on the other side (overly optimistic)	3.29	0	18	35	47

Question 5: ***Based on your experience, how do you think you can avoid these pitfalls?***

Results:

Average score

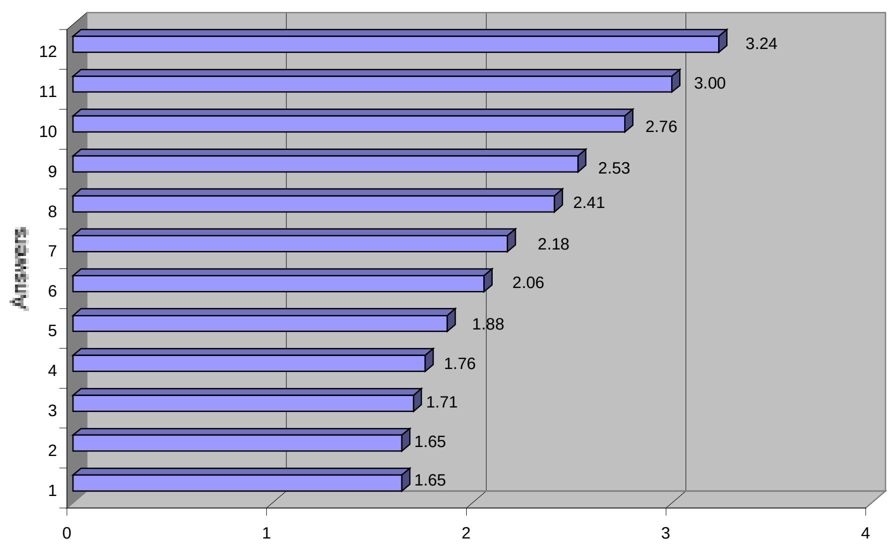


Highest score = 1 - Lowest score = 4

Rank	*Prioritized answers*	*Score*	*Rank distribution (%)*			
			1st	*2nd*	*3rd*	*4th*
1	Set clear and common goals	1.12	88	12	0	0
2	Strong (senior) management support on both sides	1.41	65	29	6	0
3	Establish baseline, benchmark and continuous challenge (improve) the system	1.53	64	24	6	6
4	Take the time and effort to build relationship	1.76	41	41	18	0
5	Commitment from champions that continually foster the relationship	1.88	41	35	18	6
6	Build mutual trust and respect (slowly)	2.06	29	41	24	6
7	Go through the diligence process to select the right partners	2.35	29	24	29	18
8	Joint management buy-in	2.47	0	59	35	6
9	Align the various cultures	2.53	12	46	18	24
10	Shared risks and resources	3.00	6	18	47	29
11	Persistence	3.12	6	6	59	29
12	Establish clear payback time lines	3.18	6	12	41	41

Question 6: *How do you measure success in strategic alliances?*

Results:



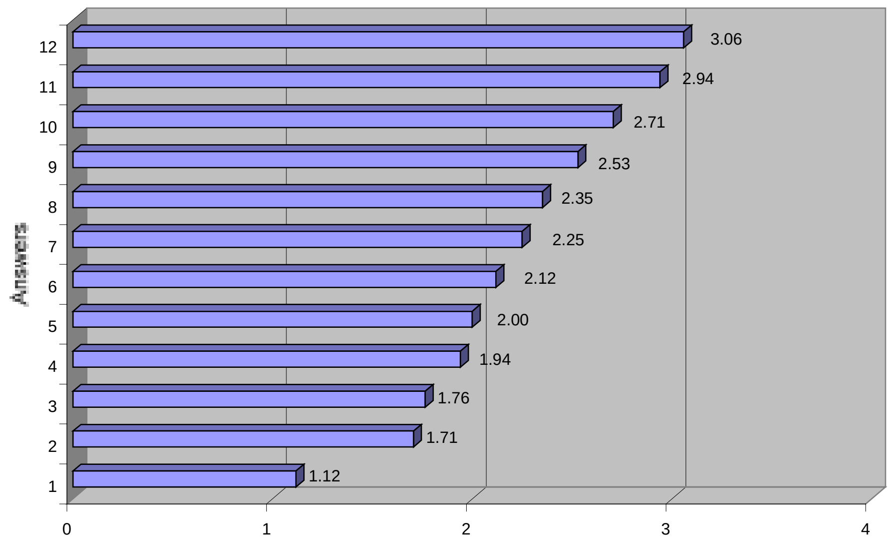
Highest score = 1 - Lowest score = 4

Rank	*Prioritized answers*	*Score*	*Rank distribution (%)*			
			1st	*2nd*	*3rd*	*4th*
1	Goals achieved	1.65	53	35	6	6
2	Total life-cycle costs of product or service	1.65	53	29	18	0
3	Benchmarking (against other alliances and companies)	1.71	58	24	6	12
4	Improvement in quality	1.76	41	41	18	0
5	Schedule on time	1.88	44	31	19	6
6	Client feedback	2.06	35	41	6	18
7	Satisfaction of all partners	2.18	24	52	6	18
8	Safety	2.41	29	12	47	12
9	Disputes that arise are small in number[155]	2.53	24	12	52	12
10	Improvement in technology/innovation	2.76	6	29	47	18
11	Number of process improvements implemented	3.00	12	12	41	35
12	Organizational capability	3.24	12	0	41	47

[155] This is what the participants actually prioritized. We suggest a little change: "Disputes that arise are small in size and number and resolved quickly at the lowest possible level".

Question 7: ***What do you consider as the key events of strategic alliances from establishment to closeout?***

Results:



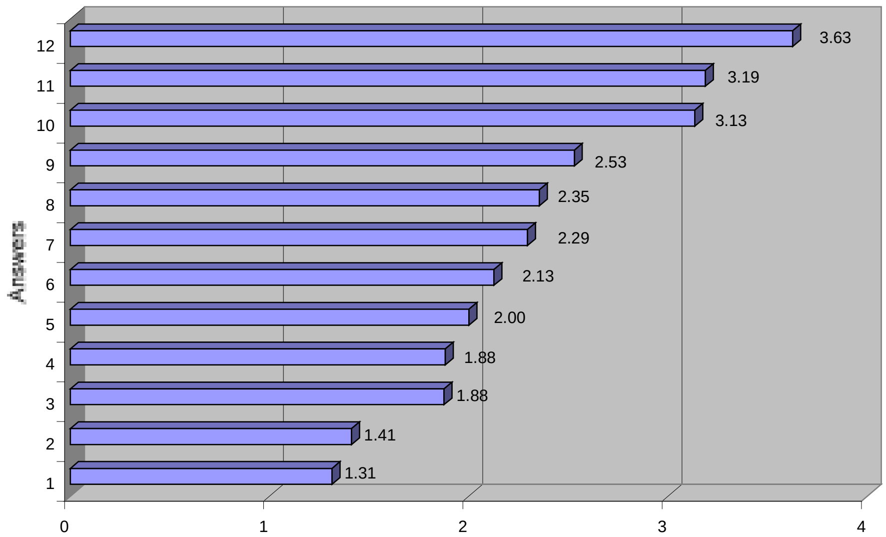
Highest score = 1 - Lowest score = 4

Rank	*Prioritized answers*	*Score*	*Rank distribution (%)*			
			1st	*2nd*	*3rd*	*4th*
1	The selection of partner	1.12	88	12	0	0
2	Selection of team members/champions	1.71	53	29	12	6
3	Owner developing a list of their needs	1.76	41	41	18	0
4	High conceptual understanding of goals, incentives & core competence	1.94	24	58	18	0
5	Open dialogue	2.00	49	19	13	19
6	Detailed organization in place	2.12	24	46	24	6
7	Determine expectations and degree of commitment	2.25	31	25	31	13
8	Project milestones with measurement	2.35	12	58	12	18
9	Know when your objectives have been met	2.53	6	35	59	0
10	Getting agreement on procedures	2.71	12	18	58	12
11	Contractual arrangement	2.94	18	12	29	41
12	Ability to change	3.06	12	18	24	46

Question 8: *Think about your most recent strategic alliance experience. If you had to do it again today, what would you do different?*

Results:

Average score

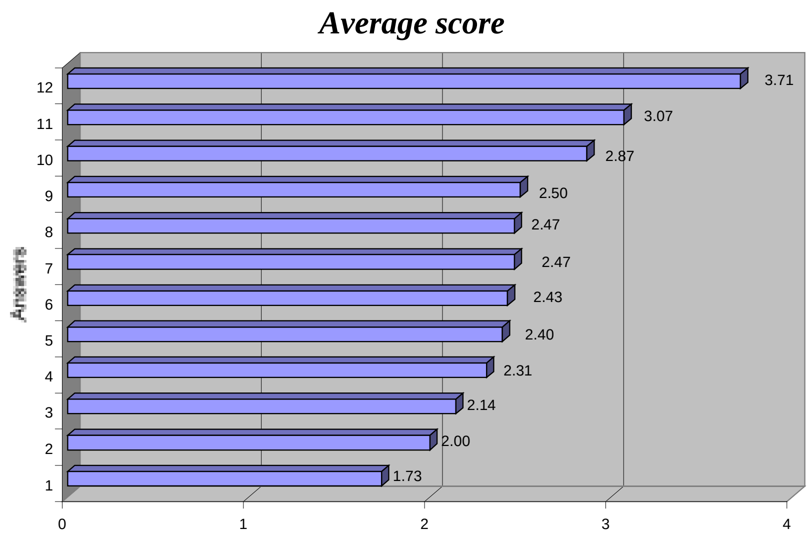


Highest score = 1 - Lowest score = 4

Rank	*Prioritized answers*	*Score*	*Rank distribution (%)*			
			1st	*2nd*	*3rd*	*4th*
1	Develop and regularly use a tracking & appraisal system	1.31	69	31	0	0
2	Strategic planning/clear goals	1.41	70	24	0	6
3	Get better owner commitment up front	1.88	38	43	13	6
4	More attention to the maintenance	1.88	35	41	24	0
5	Working out how arrangement works before entering into an alliance	2.00	45	22	11	22
6	Quickly step in when eroding the alliance	2.13	25	37	38	0
7	Better specification of benefit	2.29	18	41	35	6
8	Emphasis on organizational skills	2.35	29	12	53	6
9	Complete negotiations of financial issues before entering an alliance	2.53	24	29	18	29
10	Pick a more experienced partner	3.13	7	13	40	40
11	Define alliance as a role global/regional/local actor	3.19	19	6	13	62
12	Cannot apply a specific model	3.63	6	0	19	75

Question 9: ***What do you think distinguish (characterize) strategic alliances in the oil & gas industry from other industries?***

Results:



Highest score = 1 - Lowest score = 4

Rank	*Prioritized answers*	*Score*	*Rank distribution (%)*			
			1st	*2nd*	*3rd*	*4th*
1	Geography: distribution and logistics are far more extensive	1.73	53	27	13	7
2	Oil & gas more complex complicates alliance implementation	2.00	43	25	19	13
3	No key differences	2.14	29	29	42	0
4	Huge number of clients to please	2.31	43	19	0	38
5	Oil/gas less joint business integration more commercial focus	2.40	13	47	27	13
6	Oil/gas more short term focused, not in for the long term win-win	2.43	14	13	29	14
7	Advanced technology driven alliances	2.47	26	27	20	27
8	Emphasis on schedule	2.47	44	6	33	17
9	Large capital expenditures (the more money an owner has, the bigger the hammer)	2.50	21	29	29	21
10	The oil & gas industry has led the way, and has the learning curve on their side	2.87	27	13	7	53
11	The intellectual property issues	3.07	7	14	43	36
12	Other sectors (non-commodity) can afford more waste	3.71	0	0	29	71

E Group Questions at Workshop

Group #1 (success criteria and pitfalls):

Based on the results from questions 2, 3, 4 and 5 (success criteria and pitfalls) in the questionnaire, please try to answer the following questions:

- Verify and confirm the existing results. (Approx. 10 min)
- What are the practical issues associated with:
    - implementation of the success criteria? (Approx. 20 min)
    - avoidance of the pitfalls. (Approx. 20 min)

The time usage for each question is just a suggestion, feel free to use the time as you prefer.

Please write your final “answers” on overheads to simplify the presentation of your results.

Group #2 (measurement and life cycle):

Based on the results from questions 6 and 7 (measurement and life cycle) in the questionnaire, please try to answer the following questions:

- Verify and confirm the existing results. (Approx. 10 min.)
- What are the most important measurements (metrics) in each project phase, and how do you measure or assess these factors? See attached chart. (Approx. 20 min.)
- When and how do you know that your alliance is likely to succeed? (Approx. 10 min.)
- What actions/activities are required when an alliance may fail? (Approx. 10 min.)

The time usage for each question is just a suggestion, feel free to use the time as you prefer.

Please write your final “answers” on overheads to simplify the presentation of your results.

Group #3 (key events in strategic alliancing):

Based on the results from question 8 (key events in strategic alliances) in the questionnaire, please discuss the following questions:

- Verify and confirm the existing results. (Approx. 10 min.)
- If you were to form a new alliance today, what actions and activities (main events and success measures or criteria) are required in each phase of the alliance? Please use the attached chart, and for each phase answer the following questions: (Approx. 40 min.)

    1. What are the most important actions/activities in this phase?
    2. What processes are involved?
    3. Who is involved (where in the organizational/alliance hierarchy will the decisions be made)?
    4. How do you know you have succeeded?

The time usage for each question is just a suggestion, feel free to use the time as you prefer.

Please write your final “answers” on overheads to simplify the presentation of your results.

F Participating Companies

Participating Companies[156]

Company name	*Type*
Amoco Canada Petroleum Company Ltd.	Oil & Gas
Bantrel Inc.	EPC
Canadian Occidental Petroleum Ltd.	Oil & Gas
Colt Engineering Corporation	EPC
Dowell	Oil services
Fluor Daniel Canada Inc.	EPC
Husky Oil Ltd.	Oil & Gas
Imperial Oil Resources	Oil & Gas
Mobil Oil Canada	Oil & Gas
Norsk Hydro Canada Oil & Gas	Oil & Gas
Optima Engineers & Constructors Inc.	EPC
Pan Canadian Petroleum	Oil & Gas
Petro Canada	Oil & Gas
Procall Management	Consultant
Shell Canada Ltd.	Oil & Gas
Talisman Energy Inc.	Oil & Gas
Triocean Engineering	Engineering
Quest An Alliance Corp.	
Stanely Revay Inc.	Engineering
Titan Electric	Contractor

[156] This is a list of all companies that contributed with one or more participants, in one or more rounds, of the Delphi survey.