



SPE 112180

Integrated Operations: How Effective is the Current Relationship Between Operating Companies and Suppliers?

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This paper was prepared for presentation at the 2008 SPE Intelligent Energy Conference and Exhibition held in Amsterdam, The Netherlands, 25–27 February 2008.

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Abstract

Over the past few years there has been an unprecedented wave of capital spending in the exploration and production industry. Still, the expectations for improved capital efficiency from Integrated Operations and its promise of “faster and better decisions” have not materialized. Industry headlines are filled with notable examples of multi-year, multi-billion-dollar overruns. Indications show that leaders of oil and gas companies may be less satisfied with their overall performance than at any time in the industry’s history.

In this paper, the main focus is on inter-organizational relationships between operators and suppliers in the context of Integrated Operations. We have surveyed one large operator, three large suppliers, and some small suppliers operating on the Norwegian Continental Shelf (NCS). The survey included a broad range of technical professionals at different management and business levels and included questions related to the collaborative relationship between operators and suppliers. The paper presents and discusses some of the results from the survey. We will discuss the disconnection between operators and suppliers related to contractual/ incentive based contracts. Further, end results with use of incentive based contracts will be illustrated and possible improvements will be discussed.

Improving collaboration between operators and suppliers offers perhaps the greatest challenge and, we believe, the greatest potential in achieving the much anticipated value creation from Integrated Operations. This paper contributes to this by identifying the key disconnects between operating companies and suppliers.

Introduction

In this paper, we investigate the oil and gas industry’s interest in adopting incentive-based contracts with risk/reward sharing. If there is such an interest, it will largely be driven by an expectation of increased competitive advantage for all involved parties. In general, competitiveness stems from the possibility of building core competence faster than one’s competitors. A key success factor is management’s ability to consolidate corporate-wide resources into competencies that enable the business to efficiently evolve (Prahalad and Hamel 1990).

Drilling contracts particularly need to be examined more broadly than just considering incentives (Osmundsen, Toft et al. 2006). They have to be evaluated for how they support the new “lean” collaboration that is an integral element of Integrated Operations (IO).

In this paper, we argue that incentive-based contracts can be the driving force for this kind of operation. They should therefore be considered not only in the usual context of safeguarding the relationship, but also in supporting better collaboration between parties.

We have surveyed one large operator, three large service providers, and some small service companies. In total, 27 respondents participated in the qualitative survey.

The paper is organized as follows. First we give an introduction to the survey design, implementation, data collection, and analyses. Next we analyze the survey results, starting with the survey’s attributes. Then we give an overview of the different contracts (fixed-price and day-rate contracts) and evaluate them against the survey results. At the end, we summarize and provide recommendations for future research.

Survey Design and Implementation

The case study described below is a series of four studies employing multiple data sources. The studies were carried out with one large operator (possessing a petroleum license) on the NCS and three of its largest drilling contractors. In addition, we also interviewed some small service providers.

The chosen research design is an embedded multiple-case study. This means that the analysis is conducted at different levels in the organization and includes the organization itself, its collaboration, and the industry at

large. We chose to use embedded-design case studies because they are considered to yield a richer, more complex, and more reliable model than a single case design. The methodology section gives an overview of integrating qualitative methods in a single research study (Scholz and Tietje 2002; Yin 2003). Multiple case studies are often recommended because they permit multiple experiments, enabling simultaneous replication of the experiment (Yin 2003). Multiple case studies are particularly useful when studying relationships between companies, because they provide an understanding of the latent factors that may produce contradictory views between parties (Hedstrom and Swedberg 1998). The embedded case study is considered to be highly relevant to surveys of environments where the boundaries between the factors of interest and the research context are not clear.

Data collection

We collected data for the survey through archival records, direct observations, participant observations, and interviews conducted with employees at the companies.

The primary source for this survey was semi-structured interviews with 23 questions. (See the Appendix for the interview questions.) We conducted 27 qualitative interviews in total. Before conducting the semi-structured interviews, we spent 8 months gathering information from the companies that were relevant to the survey, which aided structuring the interviews. We obtained employees input about what the survey should focus on. Initially we spent one workday at the operator site to obtain informal information and to talk with employees. Then we observed people in their work setting and group meetings. We also participated in a one-day training session for the Onshore Drilling Center (ODC) environment and innovation seminars related to Integrated Operations, as depicted in **TABLE 1**. We also participated in lunches, coffee breaks, and other informal gatherings with employees. This allowed us to obtain candid views that would not typically be shared in formal meetings and were instrumental to the success of the survey. Multiple data collection techniques allowed us to use findings from several sources to strengthen our analyses (Eisenhardt 1989; Yin 2003).

TABLE 1. INFORMATION GATHERING FROM COMPANIES FOR USE IN THE CASE STUDY

Description of case data					
Information source	Operator A	Service provider B	Service provider C	Service provider D	Service provider E ¹
High-level semi-structured interviews	4	5	4	3	1
Low-level semi-structured interviews	3	1	2	n.a.*	4
Meeting with key employees	12	1	4	1	n.a.
Work days on company's site	20	n.a.	n.a.	n.a.	n.a.
One-day ODC training session	1	n.a.	n.a.	n.a.	n.a.
Innovation seminar	1	n.a.	n.a.	n.a.	n.a.
Project reports from the company/companies	Yes, several	Yes, some	Yes, some	n.a.	Yes, some
Strategy reports from the company/companies	Yes, several	Yes, one	n.a.	n.a.	Yes, some
Other relevant information such as presentations, speeches, databases, observation of employees, meeting reports	Yes, several	Yes, some	Yes, some	Yes, some	Yes, some

*An "n.a." entry indicates that we did not receive any information.

A typical interview lasted for 90 minutes, but some lasted up to 3.5 hours. We used two interview guides for the semi-structured interview—one for the operator and one for service providers. The interview guides listed open-ended questions, with possible follow-up questions. The survey was accompanied by an introduction, a case study proposal, focus, background, and case study objectives.

The open-ended questions covered topics such as incentives, incentive-based contracts, conflicts, information flow, development of the organizations, project execution, the possibility for employees to affect the development of IO in either the design or the implementation phase, dynamics between involved companies, development of skills, HSE, and measurement of goals when collaborating. Some of the questions were

¹Some interviews were conducted with small service providers having long-term relationships with the operator. Their work for the operator is performed onsite, on the same tasks as carried out by operator's employees. The small service providers are gathered under one column (column E).

revised after the interviews had started, as we obtained better understanding of the challenges the companies were facing. The interviews were conducted using a digital voice recorder and were transcribed and forwarded to the respondents within 24 hours. Some respondents volunteered written feedback on the forwarded material.

Data analysis

As discussed in the survey design and implementation section, we used an embedded multiple case design for the survey. That gives us the possibility to perform multiple levels of analyses, which was appropriate to our research having interviewed both managers and nonsupervisory employees. This methodology was suitable to study how individuals within different companies perceive and conduct inter-organizational collaboration in the oil & gas industry at different levels. One of the largest challenges in analyzing information from case studies is that the strategy and the techniques for the methodology have not been well defined. Case studies should have a general analytical strategy and try as best as possible to prioritize what to analyze and why it should be analyzed. Producing high-quality analyses requires evaluating all of the information (Yin 2003). We used the computer software QSR NVivo7 to analyze the data. We coded and categorized all of the information transcribed from interviews, historical documents, and formal and informal meetings. The software enabled us through empirical study to derive meaning and insights from word usage and frequency patterns found in the interviews.

Survey results

Demographics

The survey results are as follows.

Number of companies: One of the companies is a large operator (operator A) on the NCS, and three of them are among its largest service providers (service providers B, C, and D). We have also summarized the findings from several small service providers that are permanently at the operator site (service providers in column E). See **TABLE 1**.

Number of respondents: 27 respondents were interviewed in total from all companies involved. 7 were from the operator, 6 from service provider B, 6 from service provider C, 3 from service provider D, and 5 from service providers E. See **TABLE 1**.

Position in the companies: In the survey, we tried to define positions as “high level” or “low level.” High-level consisted of all supervisory positions. Low-level consisted of positions involving operational tasks and no supervisory responsibility. For operator A, 85.7% of the interviewees were considered high-level, and 14.3% low-level. For service provider B, 66.7% were considered high-level, and 33.3% low-level. For service provider C, 80% were considered high-level, and 20% low-level. For service provider D, 66.7% were considered high-level,

and 33.3% low-level. For service companies E, there were 20% high-level and 80% low-level.

Educational level: We asked about the educational level of the respondents. We chose the following categories: high school/technical high school, college 1-3 years, and college 4-6 years. For operator A, we found that 16.7% only had high school/technical high school, 33.3% had 1-3 years of college, and 50% had 4-6 years of college. For service provider B, 50% had 1-3 years of college education and 50% had 4-6 years of college education. For service provider C, 100% of the employees had high school/technical high school education. For service providers D and E, 100% of the interviewees had 1-3 years of college education.

Work experience: For operator A, 14.3% of the respondents had 1-10 years of experience, 71.4% had 21-30 years, and 14.29% had 31-40 years. For service provider B, 33.3% had 1-10 years of experience, 50% had 11-20 years, and 16.7% had 21-30 years. For service provider C, 20% had 11-20 years of experience, 40% had 21-30 years, and 40% had 31-40 years. For service provider D, 33.3% had 11-20 years of experience and 66.7% had 21-30 years. For other service providers E, 40% had 1-10 years of experience, 40% had 11-20 years, and 20% had 31-40 years.

Employees’ opinion on their incentives related to Integrated Operations

Do your personal incentives increase if you perform better than expected?

We wanted to find out whether employees would get increased incentives if they performed better than expected. We found a difference among the companies in the survey. Respondents at operator A and service providers C, D, and E stated that they would not receive incentives if they perform better than expected. Operator A respondents stated that they would most likely perform better if they had incentives based on individual performance. Some respondents at operator A stated that there is an incentive system for some personnel in the company, but that it is unfair. Service provider B has incentives for employees. These are linked to overall company performance, personal performance, and financial results. They also have an award program for individuals who perform beyond what is expected. It was also stated that incentives at this company create a positive attitude among employees. Respondents at service provider C stated that they were positive to incentives on personal level, and that they were working for it in the new contract. At service provider D, some stated that incentives on an individual level could lead some personnel to feel bad or even blame themselves if something goes wrong, and that is to be considered a negative side effect of incentive-based contracts on the individual. On the other side, they did not mention that traditional contracts with e.g. day-rates could help them avoid this challenge. Respondents at service provider E

stated that they would prefer incentive-based contracts, and that it would be positive for employee performance. The results are presented in Fig. 1.

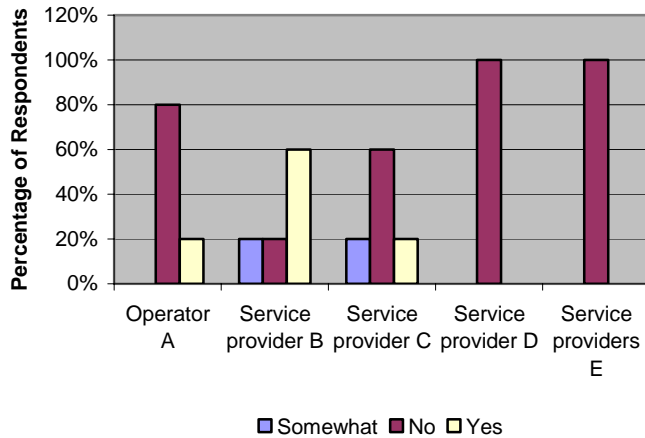


Fig. 1- Do your incentives increase (e.g. salary, bonuses, etc.) if you perform above what is expected by your employer in your work? (e.g. solve a task that you and others can benefit from, without been ask to do so)

Do you receive the right incentives- employee level:

One question asked whether employees had the right incentives (e.g., salary, bonuses) to perform optimally on tasks related to Integrated Operations. Nearly all respondents said that they don't receive optimal incentives for their work. Company C was the only one with a majority of respondents indicating that they were satisfied with the incentives, and respondents at service providers E are to some degree satisfied. The results are presented in Fig. 2.

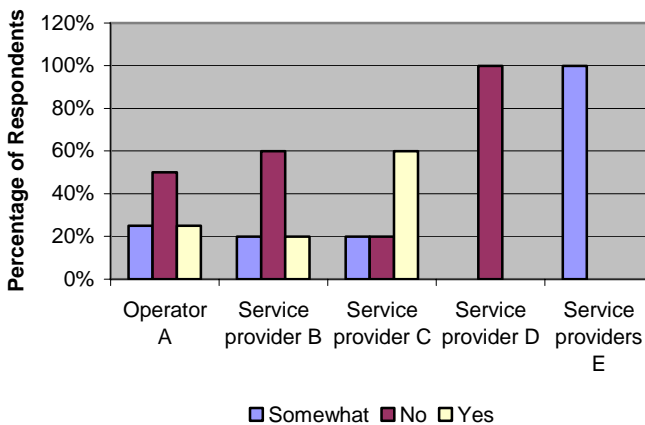


Fig. 2- Do you have the right incentives (e.g. salary, bonuses, etc.) to perform optimally (tasks related to Integrated Operations)?

Does your company increase its incentives if it performs better than expected: Respondents were asked whether company incentives would increase if the company performed better than expected through Integrated Operations. At operator A, they stated that the company

should increase its incentives, some stated that it should not, and some stated that they don't know. At operator A, the answers depend on the employee's department. Service provider D provides incentives if employees perform better. The incentive-based contract at service provider D is set up as a bonus per day. If the service provider can drill the well faster than they have agreed upon in the contract, they will be paid a bonus. For example, if it is agreed that the well should be drilled within 50 days, and the service provider accomplishes it in 47, it will receive for those 3 days, a pre-defined portion of the daily rate. An example of how incentive-based contracts function is shown in Fig. 3.

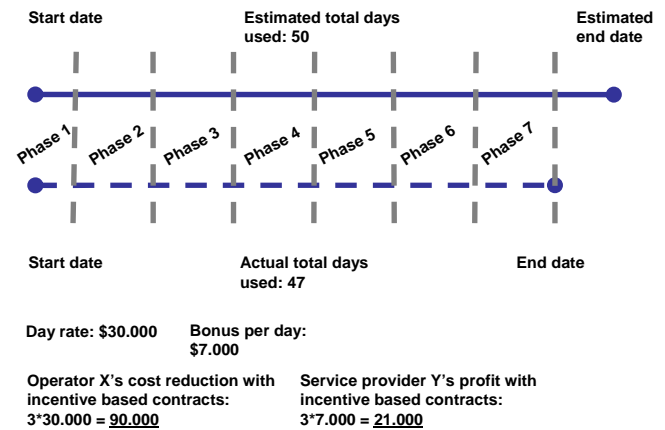


Fig. 3- Example of incentive-based contracts in a drilling project

The majority of the employees of service provider D stated that the incentive-based contract was functioning well. Those that stated that it did not function well cited where a third party was working on the same project with a day-rate contract, without the same goals/KPIs (Key Performance Indicators). If this third party did something wrong, this not only hurt itself but also undermined the performance of service provider D and affected its bonus related to drilling time.

Service provider B increases its incentives if it performs well. Its employees stated that they had positive experience with use of incentives in operations and that it would give all involved parties a substantial benefit. Service provider C does not increase its incentives if its employees perform better than expected, but they are working on a system of incentives related to operations. The largest challenge for service provider C when constructing the incentive contract has been to persuade the operator that the investment will yield a positive payoff over time. Respondents at service provider C also stated that it is very important that the incentive contract be divided into phases. For example, if one performs suboptimally only at the start, the penalty shouldn't persist throughout the project, but should only affect that particular phase. See Fig. 3. Most of the respondents at service providers E stated that it would be helpful for the operation to use incentive-based contracts to increase

productivity, but at present they don't have incentive-based contracts. The results are presented in Fig. 4.

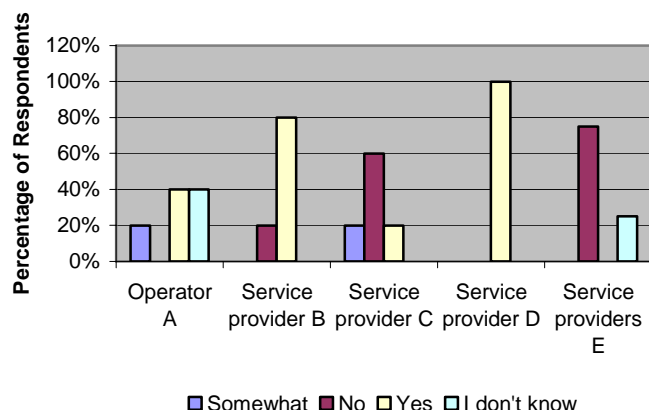


Fig. 4- Does your company increase its incentives (e.g. payments, bonuses, etc.) if it performs more/better than expected? (e.g. solve tasks that your company and other companies can benefit from, without been asked to do so)

Does your company have the right incentives:

Respondents were asked whether the company had optimal incentives (e.g., salary, bonuses) for strong performance. Respondents at operator A and service providers D and E believe that they receive good incentives when working through Integrated Operations. Respondents at service provider C do not believe that they receive what they deserve. Service provider B's employees stated that they are pleased by the incentives, yet only somewhat satisfied with them. Operator A states that there is a strong focus on corporate incentives from management, and a majority of the respondents stated that an assignment's challenge and excitement are incentives in themselves. Respondents at service companies E stated that the more work the company obtains, the better the effort. Work volume is seen as an incentive in itself, and long-lasting relationships would give employees a reason to increase their effort. The results are presented in Fig. 5.

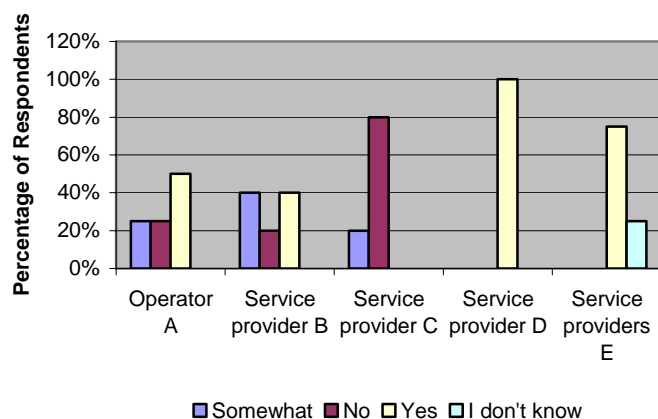


Fig. 5- Does your company have the right incentives (e.g. payments, bonuses, etc.) to perform optimal (tasks related to Integrated Operations)?

How incentives could be developed to improve the performance for your company:

This asked how incentive-based contracts that regulate the relationship between operator A and service providers B-E could be further developed. For operator A respondents, better use of KPIs and keeping business units separate were important. For example, the finance department should not interfere with operations. They also stated that incentives should create value for all involved parties, to ensure that all are working toward common goals. They further stated that attention should be paid to how different parties treat each other and how they affect each other's operations. For service provider B, all respondents answered that the most important issue concerning value creation from incentive contracts is that the contract create value for all involved parties. Today, you get paid when the tools are leaving port and when they return to port. If you perform better than expected and finish earlier, this will give you less pay, something that does not support optimal performance. For service provider C respondents, the most important objective is to develop better incentives for all parties, but it is also important to avoid conflicts and use the KPIs better in operations. For service provider D respondents, it was important that all involved parties have incentive-based contracts and make better use of KPIs on projects. For respondents at service providers E, better use of KPIs and development of better incentives were the most important factors for development of incentives for better performance. The results are presented in Fig. 6.

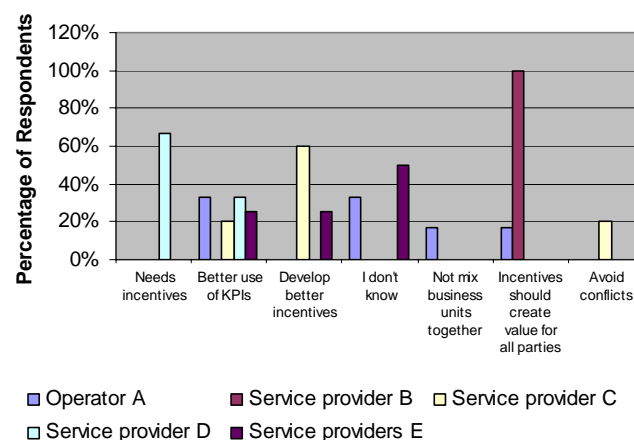


Fig. 6- How could incentives (e.g. salary/ payments, bonuses, etc.) be developed to improve the performance of you and your company?

Choice of contracts - consequences for operations in the oil & gas industry

Collaborating through IO in the oil & gas industry on the NCS has been characterized as having huge profit potential for the industry. The total investment is expected to be 25 billion NOK, and total profit is expected to be 250 billion NOK (OLF 2006). The focus on IO in Norway is intense, but it has mainly been on development of ICT technology. Incentive-based contracts with risk/reward sharing between operating companies and service

providers has not been a priority on the IO agenda of the NCS. There is a difference in the use of incentive-based contracts between and within the different parties in the survey.

More focus is needed on incentive-based contracts for all involved parties in the drilling environment. The survey indicates that only some service providers increase their incentives if they perform better. Service provider D uses incentive-based contracts on all drilling projects for operator A. All employees knew about the incentive-based contract, and that is the company where the employees are most satisfied with the contracts, that is, most of the employees consider the payoff to be good. See **Fig. 4** and **Fig. 5**. All companies stated that better use of KPIs and incentives that increase value for all involved parties are important for better collaboration in drilling projects. See **Fig. 6**.

In the design phase of contracts, it is important that there is a best-practice balance between risk sharing and incentives (Olsen and Osmundsen 2005). Optimal risk sharing means that parties in the contract that has the lowest risk exposure takes on most of the risk. This is often the operating companies, since they are often better off financially and therefore has better capacity to withstand risk. If the operating company assumes all the risk, there are no incentives for the service provider to perform better. Therefore most contracts assign some risk to the service provider. Risks are closely linked with incentives (Osmundsen, Toft et al. 2006). As seen from **Fig. 3**, one service providers are trying to reduce the risk of drilling projects by defining phases. This risk reduction can, as mentioned above, lead to suboptimal performance due to lack of incentives to perform optimally regarding risk. On the other hand, service providers will also demand different ways of being compensated for their risk. The optimal risk assignment probably involves risk/reward sharing between the involved parties (Osmundsen, Toft et al. 2006). Risk/reward sharing will most probably have an impact on the HSE level as well. If the risk for accidents is great, the stronger the service provider's focus on safety (Osmundsen, Toft et al. 2006). In the international oil & gas industry, mainly two types of contracts are used—day rate and fixed price. On NCS, only day-rates are used. These day-rate contracts have rates according to the operating phase: standby rate, moving rate, suspension rate, lay-up rate, re-drilling rate, or no-payment rate (Osmundsen, Toft et al. 2006).

When analyzing drilling contracts, we must look beyond the actual contract (Osmundsen, Toft et al. 2006). IO on the NCS is a new way of operating offshore fields through real time data, and this gives the possibility to establish a “lean” operation. “Lean operations” means production of goods and services using minimal resources, and is recognized to be one of the best management tools to conduct pull processing, waste minimization, perfect first-time quality, continuous improvement, flexibility, and building and maintaining long-term relationships between

involved parties (Ohno 1988; Womack, Jones et al. 1991). Lean operations have previously yielded huge benefits in other industries, especially in the auto industry. Lean operations aims to create long-term relationships between operators and service providers.

The oil & gas industry is characterized by a large degree of outsourcing (Osmundsen, Toft et al. 2006), and this can lead to risk exposure for involved parties. The outsourcing literature shows that anything can be advantageously outsourced except one's core competence. This is because the company can lose its competitive advantage in the relationship with other collaborators (Porter 1980; Prahalad and Hamel 1990). For example, service providers in the oil & gas industry have taken over more and more activities within the drilling process and technology development related to drilling, despite that drilling is core to an operating company. In the long run, this can affect the dynamics between operators and service providers. There is a need for safeguarding this process through creating long-lasting relationships with the use of incentive-based contracts with risk/reward sharing. A contract should be seen either as a “bottleneck” or as an “enabler” within IO. To realize the potential through collaboration requires working toward the same goal, and one way to align goals is through incentive-based contracts. If one cannot implement incentive-based contracts, one will most probably not realize the full potential for IO. The use of incentive-based risk/reward contracts can give involved parties lean operations. This gives a possibility to work for common goals through the use of common KPIs. The survey shows that this can't be done if the contracts specify day rates that give the operator and the service provider different goals. If all are using incentive-based contracts with risk/reward sharing, it is in all involved parties' interests to operate with the highest possible productivity. Then it would be in the interest of every party involved to use best-practice technology and resources available to reach their goals, and if possible, even stretch their goals. **Fig. 7** gives an overview of how the most important fields of interest in IO (seen as input) are closely connected with contracts, and how contracts are to be seen as a bottleneck or as an enabler to gain optimal output.

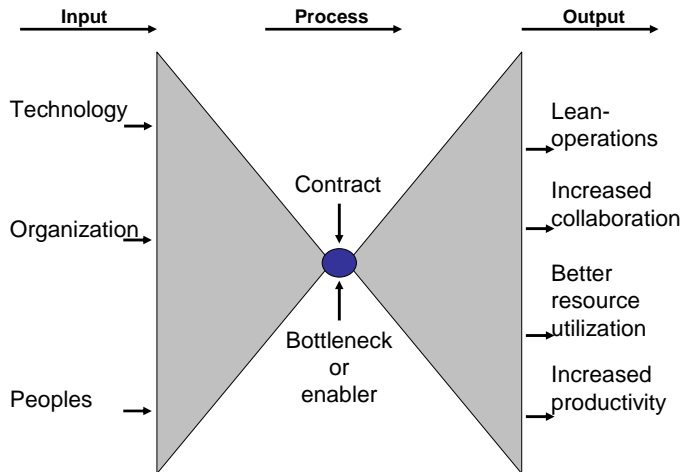


Fig. 7- How incentive based contracts can be seen as a bottleneck or an “enabler”/solution for IO on NCS

It is also difficult for companies to focus on core competence when decentralizing operations and becoming increasingly dependent on third parties with genuine knowledge and skills to maintain their competitive advantages. To possess core competence requires more than just integrating vertically. The decision about collaborating should start with the end product or service, and focus upstream on the value chain. One should not focus narrowly on one's own inventory and skills and apply them in a traditional way (Hamel and Prahalad 1994). If one can succeed by creating a long-lasting relationship, the value and the performance this creates can affect a sustainable competitive advantage. This is where one or several firms creates processes that cannot be easily duplicated by others (Porter 1980; Hamel and Prahalad 1994).

Recommendations for future research

We want to end this paper with some recommendations for future research on the oil & gas industry related to IO.

Additional research on the use of incentive-based contracts should be accompanied by research on how organizations can adopt new resources. Organizations must develop competitive advantages to stay competitive in the market (Barney 1991; Teece, Pisano et al. 1997). Those advantages are dependent on how a firm can combine its resources, and this topic deserves more attention. One possible way to adopt new resources is through inter-organizational relationships with other companies. Two theories are then relevant. The first is the network theory, characterized by the relationship between companies. The other is Resource Based Views (RBV) of the firm, which focuses on the activities/resources between companies. Both theories focus on involvement of companies that will specialize in one or several tasks, and the cluster of companies will together produce a product or service (Barney 1991; Håkansson and Johnason 1993). It would be interesting to see how the

network theory and the RBV theory could be used to further develop the relationship between operators and service providers on the NCS related to IO.

Acknowledgements

We want to thank Mike Herbert for testing an earlier version of this survey. We also want to thank the involved companies and their employees to whom we are grateful for letting us interview them and giving us the necessary feedback to accomplish this survey.

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Appendix

A copy of the survey follows this page.

The survey has been anonymized for publishing.

Inter-organizational collaboration for increased value in Integrated Operations

This interview focuses on inter-organizational relations (e.g. strategic alliances) between one operating company, Operator A and primarily three involved service companies, service provider B, C, D and (E) with particular focus on Integrated Operations.

Introduction

Integrated Operations have increased the strategic focus on the oil and gas industry in Norway, backed with strong support from the authorities. Collaborative and strategic alliances have been mentioned by various parties, such as the OLF, OG21, NPD, and others, as a key factor to success in Integrated Operations. This research project is supported by Operator A and N.N.

Inter-organizational relationship between two parties involves challenges at strategically, tactical and operational levels, and is seen as a complex strategy for all involved parties. Several inter-organizational formations (e.g. strategic alliances) emerge when organizations search for new efficiencies and competitive advantages. Collaboration has recently gained strong focus within business processes, but many companies have no competence or only limited competence on how to manage collaborations. Therefore, many companies have started to invest strongly in leadership tools such as activity-based costing, business process reengineering, and total quality management. It is argued that these tools are effective for measuring and improving the efficiency of people and organizations in accomplishing individual tasks, but they do a poor job of visualizing the challenges that arise between peoples and functions in different companies.

Inter-organizational relationship has become a large challenge for many companies. Reduced communications costs, globalization, and the increasing specialization of knowledge-based work have made strategic alliances between organizations highly important. As interactions between companies replace internal routines, and with the scale and complexity of many corporations increasing, the need to manage the alliances is growing. One solution that some companies have adopted is to invest a lot of money in ICT software, in order to facilitate the sharing of best practices and expertise between involved parties. Often, technology at its best fails to deal with the underlying organizational challenges and becomes a problem due to information overload.

Case study purpose, focus and background

The purpose of this case study is to involve employees from all collaborating companies when developing Integrated Operations. This is highly important when developing a collaborative environment between companies. There has been an increased focus from industry regarding collaboration between companies to strengthen the development of Integrated Operations. Further, there is considerable lack of theoretical and empirical studies within inter-organizational relationships related to Integrated Operations, and hence there is good reason to conduct this survey. A side effect of implementing Integrated Operations could be improved health, safety and environment levels through better collaborative operations between the operator and service providers.

Case study objectives

1. Focus on inter-organizational relationships and change in organizational dynamics between involved parties. How organizational structures shape performance in dynamic environments. How change in the dynamics between companies relates to new incentive models, and how it relates to conflicts of interests.
2. Focus on trust and how incentives between companies influence critical success factors when implementing Integrated Operations. Focus on how incentives relate to increased performance between involved companies.
3. Focus on how asymmetric information relates to opportunistic behaviour and hidden agendas between involved companies. How opportunistic behaviour and hidden agendas relate to lack of trust, and how better training and education could influence performance within the collaborating companies and also how to avoid adverse selection.
4. How common strategic goals between companies can influence collaboration, and how measurement of work performance relates to slack in operations, productivity and collaboration.
5. Focus on collaborating practices where one party has the lead role in the network how this relates to conflicts between involved organizations due to imbalance within the network.

Preliminary Information

Name (not obligatory):

Name of the organization:

Position in organization:

Job specification:

Education:

Career track (other positions in the company/other companies):

Worked in current position since (year):

Work experience (years):

Today's date:

Place:

Telephone:

Fax:

E-mail (not obligatory):

NOTE

All information given in this survey will be treated as confidential

Focus on incentives, conflicts, information flow, development of organization, development of skills, and measurement of goals when collaborating inter-organizationally through Integrated Operations

Questions for guided informal interview

1.	How does your company involve with other companies (e.g. invest in Integrated Operation, relate to other companies, etc.) in Integrated Operations?
2.	Do you have the possibility to affect the development of Integrated Operations in your company?
2. A	If yes (Question 2), are you involved in the design phase, and, if so, how ?
2. B	If yes (Question 2), are you involved in the implementation phase, and, if so, how ?
3.	Do you have the right incentives (e.g. salary, bonuses, etc.) to perform optimally (tasks related to Integrated Operations)?
4.	Does your company have the right incentives (e.g. payments, bonuses, etc.) to perform optimally (tasks related to Integrated Operations)?
5.	Do your incentives increase (e.g. salary, bonuses, etc.) if you perform above what is expected by your employer in your work? (e.g. solve a task that you and others can benefit from, without been ask to do so)
6.	Does your company increase its incentives (e.g. payments, bonuses, etc.) if it performs more/better than expected? (e.g. solve tasks that your company and other companies can benefit from, without been asked to do so)
7.	How could incentives (e.g. salary/ payments, bonuses, etc.) be developed to improve the performance of you and your company?
8.	Would you increase your chance of benefiting from incentives (e.g. salary, bonuses, etc.) if you further developed your personal skills? (E.g. would you receive better incentives if you participated in courses or university programmes, etc.?)
9.	Does your company invest enough in developing your skills so you can perform better on tasks related to Integrated Operations?

10.	Can collaborating companies further develop their skills so their collaborators can perform better?
11.	Does your company receive all the information it needs from its collaborating partners to perform optimally?
11. A	If no (Question 11), does it affect your performance, and, if so, how?
12.	Do you think all of the involved companies related through Integrated Operations environment contribute for the best for all involved parties?
13.	Does geographical distance from employees in other collaborating companies affect your work?
13. A	If yes (Question 13), how does it affect your work (positively/negatively)?
14.	Does geographical distance from employees in other companies affect your company's work?
14. A	If yes (Question 14), how does it affect your company's work (positively/negatively)?

15.	Do conflicts ever occur between Operator A and service provider B, C, D and (E)
15. A	If yes (Question 15), in which areas do conflicts occurs, e.g. related to contracts, integration between involved parts, factors regarding people, processes & technology, other areas?
15. B	If yes (Question 15), would you describe a conflict related to question 15A?
15. C	If yes (Question 15), how do conflict occur?
16.	Do you believe that any of the involved parts in the relationship has taken a lead role in the relationship?
16. A	If yes (Question 16), which part has a lead role in the network?
16. B	If yes (Question 16), how does the service provider perform the lead role in the network?
16. C	If yes (Question 16), does it lead to any conflicts ?
17.	Do you believe that the all of the involved parts are genuinely concerned about the needs of your company in this context?
18.	Is your work performance (e.g. measurement of tasks done, time used, etc.) related to Integrated Operations measured by other collaborating companies?
18. A	If yes (Question 18), how is your performance measured (e.g. measurement of tasks done, time used, etc.)?
19.	Is your company's work performance (e.g. measurement of tasks done, time used, etc.) related to Integrated Operations measured by other collaborating companies?
19. A	If yes (Question 19), how is your company's work performance measured (e.g. measurement of tasks done, time used, etc.)?

20.	Do you think employees from other companies have other goals than yours ?
20. A	If yes (Question 20), how are these evident in daily practice?
20. B	If yes (Question 20), does it affect your performance?
20. C	If yes (Question 20 B), how does it affect your performance?
21.	Are you aware of any incentives within any contracts between Operator A and any of the service providers B, C, D and (E)?
21. A	If yes (Question 21), does the incentive contracts work optimal ?
22.	Do you believe that increased focus on collaboration between Operator A and service provider B, C, D and (E) will have an effect on the health, safety and environment level?

Comments about the questionnaire:

THANK YOU FOR PARTICIPATING

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