



Norwegian University of  
Science and Technology

## Public Procurement

Contemporary Construction Industry  
Practices and Best Value in Norway

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Master of Science in Project Management

Submission date: March 2017

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Report Title: <b>Public Procurement</b> Contemporary Construction Industry Practices and Best Value in Norway	Date: <b>March 18, 2017</b> Number of pages (incl. appendices): <b>122</b> Master's thesis:
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**Abstract:**

Projects consist of complex structures that require strategizing. As an important part of a project, strategic approaches of procurement may yield greater success, quality and value. This report focuses on the contracting strategy and public procurement practices in the Norwegian construction industry. In order to shed light on these practices and the reasons for them being as they are, this report aim to map out perceptions of these practices through the eyes of contractors and proprietors. Furthermore, due to the impressive claims of project success through *Best Value Procurement* (BVP), a comparison between that method and the contemporary practices is presented.

The study utilizes a qualitative approach which consist of a literature study whose output functions as the theoretical background and a case study where data is collected through semi-structured interviews and mapping of a figure fill-out form. The sample population consisted of five interviewees representing some of the largest contractors and public proprietors in Norway. Analysis of data was conducted in several steps utilizing multiple loops to ensure extraction of relevant information.

The results gave clear indications of a preference towards integrated contracting approaches, which there is little of in current practices — The study indicated that most procurement strategies were habitual and separation based. Also, both contractors and proprietors recognized that there was an unbalanced relationship between the two, where contractors were pressured with small earnings.

Furthermore, both contractors and proprietors indicated the belief that awarding contracts based on multiple criteria would produce the highest quality end product. Also, the study found that the current Norwegian procurement practices and BVP are mostly dissimilar. However, indications were found showing that especially contractors wished for practices with similar philosophies as those of BVP. Still, the knowledge of BVP was found to be limited amongst study participants.

Keywords:

1. Public procurement
2. Contracting strategy
3. Best Value Procurement
4. Procurement route

Simeon Mavropoulos



## Preface

The following is the *TBA4910 — Project Management, Master's Thesis*, marking my completion of the MSc. Project Management program at both the *Department of Civil and Environmental Engineering* and the *Department of Industrial Economics and Technology Management* at NTNU. The thesis itself constitutes 30 credits and was completed during the spring of 2017. The document layout is based on the *Maggi Memoir* by Federico Maggi and Vel / CC BY-NC-SA.

Working on this report has taught me many things about procurement and the process of scientific research and academic writing. Through gaining and understanding of the complexity of projects and how value and supply chains, *Health, Safety and Environment* (HSE) practices, *Corporate Social Responsibility* (CSR), etc. affects organizations and society, a thought about the potential for improving such practices through procurement arose. From this I gained an interest in *Best Value Procurement* (BVP) and the field of procurement, and ultimately decided that this was what I *had* to write my thesis on.

It has been an interesting and fun journey, but some times also a difficult one. Through highly valued help and guidance from my supervisor, Olav Torp, I was able to get on the right track whenever I felt stuck or was unsure of how to proceed — For this I would like to thank him. Further, I would like to thank the participants in the study, who took their time to contribute. Lastly, I would like to thank my parents who have been forced to listen to me talking about procurement for 20 weeks.

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## Abstract

Projects consist of complex structures that require strategizing. As an important part of a project, strategic approaches of procurement may yield greater success, quality and value. This report focuses on the contracting strategy and public procurement practices in the Norwegian construction industry. In order to shed light on these practices and the reasons for them being as they are, this report aim to map out perceptions of these practices through the eyes of contractors and proprietors. Furthermore, due to the impressive claims of project success through *Best Value Procurement* (BVP), a comparison between that method and the contemporary practices is presented.

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Furthermore, both contractors and proprietors indicated the belief that awarding contracts based on multiple criteria would produce the highest quality end product. Also, the study found that the current Norwegian procurement practices and BVP are mostly dissimilar. However, indications were found showing that especially contractors wished for practices with similar philosophies as those of BVP. Still, the knowledge of BVP was found to be limited amongst study participants.



## Samandrag

Prosjekt er komplekse strukturar som må byggjast på strategi. Som ein viktig del av prosjekt, kan strategiske tilnærmingar til innkjøp hjelpe å gjeve større suksess, høgare kvalitet og meir verdi. Denne rapporten fokuserer på kontraktstrategi og offentleg innkjøpspraksis i den norske byggeindustrien. For å kunne kaste lys over desse praksisane og kvifor dei blir praktisert som dei blir, siktar denne studien på å kartleggje inntrykk av samtidspraksisane frå ståstaden til entreprenørane og byggherrane. I tillegg presenterer denne studien ei samankning mellom samtidspraksisen og prestasjonsinnkjøp. Dette med bakgrunn i dei imponerande påstandane om prosjektsuksess som resultat av prestasjonsinnkjøp.

I studien blir ei kvalitativ tilnærming nytta. Denne er samansett av eit litteraturstudium som ligg til grunn for den teoretiske bakgrunnen i rapporten, samt eit kasusstudie der data er samla inn gjennom semistrukturerte intervju og ein utfyllingsfigur. Studiepopulasjonen var samansett av fem representantar frå nokre av dei største entreprenørane og offentlege byggherrane i Noreg. Analyseringa av data blei gjennomført i fleire steg med fleire løkkjer for å trygge at relevant informasjon blei henta ut.

Resultata ga klare indikasjonar på at ei integrasjonstilnærming var å føretrekke, trass at det er lite av dette i samtidspraksisen — studien indikerte at størsteparten av kontraktstrategien var basert på vaner, samt at dei var separasjonsbaserte. Både entreprenørane og byggherrane var samde om at dei var i eit ubalansert forhold, der entreprenøren var pressa og med låge fortenestar.

Ei samstemd tru på at å velje entreprenør med bakgrunn i mange kriterier ville produsere høgast kvalitet og det beste produktet blei indikert av entreprenørane og byggherrane. Studien viste også at samtidskontraktstrategipraksisen er særst ulik frå prestasjonsinnkjøp, men at spesielt entreprenørane ynskte seg mot ein praksis med liknande filosofi som den ein finn i prestasjonsinnkjøpsmetoden. Samstundes viste det seg at kunnskapen om prestasjonsinnkjøp var avgrensa.



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# List of Acronyms

**BOT** Build Operate Transfer ..... 11

**BVP** Best Value Procurement ..... 1

**CPAF** Cost Plus Award Fee Contracts ..... 14

**CPFF** Cost Plus Fixed Fee Contracts ..... 14

**CPIF** Cost Plus Incentive Fee Contracts ..... 14

**CSR** Corporate Social Responsibility ..... 41

**FFP** Firm Fixed Price Contracts ..... 13

**FP-EPA** Fixed Price with Economic Price Adjustment Contracts ..... 13

**FPIF** Fixed Price Incentive Fee Contracts ..... 13

**GCS** General Contracting Strategy ..... 5

**HSE** Health, Safety and Environment ..... 56

**IMT** Information Measurement Theory ..... 20

**NPRA** Norwegian Public Roads Administration ..... 38

**PIPS** Performance Information Procurement System ..... 19

**PPP** Public-Private Partnership ..... 12

**PSCS** Project Specific Contracting Strategy ..... 5

**PSU** Project Start Up ..... 24

**TCC** Traditional Contract Condition ..... 15

**TCO** Total Cost of Ownership ..... 19

**TM** Time and Material Contract ..... 13

**UCC** Untraditional Contract Condition ..... 15



## 1.1 Background

Projects are complex endeavors. They are multi-phased and consist of multiple people performing multiple tasks coordinated within and between multiple disciplines. The ultimate goal can be said to be *the successful delivery of the intended product through a stream-lined conflict-free process from start to finish*. With such a description in mind, it is easy to see that many components of this process influences project success, and that these need to be continually improved.

There are many components that could be suggested as the most important ones, but some do stick out more than others. Torp et al. (2006, p. 49) says that there are six critical success criteria that are especially important, and that keep showing up as critical in projects. Further, they elaborate that “These are the organization, project management, conditions, contracting strategy and procurement, goal directed project management, and scope management.” If one was to extract *contracting strategy and procurement* from this list, that would account for 13 % of the conditions contributing to project success.

According to Lædre et al. (2006) public proprietors in the Norwegian construction industry design contracting strategy based on habit, or rather, *select* contract strategy based on habit. Based on this, there is a lack of focus on at least 13 % of critical success factors.

*Best Value Procurement* (BVP) is claimed to contribute greatly to project success where results such as 90 % minimization of risk and 98 % client satisfaction is reported (Kashiwagi, 2011). With such figures in mind, the potential for increased quality and contribution to project success through contracting strategy and procurement is substantial.

Because of this, it seemed interesting to map the perceptions of contemporary public procurement practices i the Norwegian construction industry, through the eyes of the involved parties — the contractors and proprietors. This would help shed light on what the contemporary

situation is, and why it is as it is.

Lastly, comparing the contemporary practices with BVP might help lay the groundwork for identifying the success contributing measures performed in today's contracting strategy, as well as identifying the success repressive practices.

### 1.2 Purpose

This thesis is concerned with public procurement practices in Norway, and through this aims to reveal whether the current practices are satisfactory in regards to the value creation sought after by both the procurer and the contractor. Primarily, as BVP has just started to gain interest amongst Norwegian public procurers, the current practices found will be compared to that of BVP, where differences will be highlighted. This will help to shed light on the effectiveness of today's procurement in Norway, with respect to the high success rate of BVP in other countries.

Furthermore, it would be interesting to see if the construction industry in Norway indeed is open for change to Best Value Procurement. So far, this method of procuring is almost non-existent in Norway, but some try-out projects are starting up.

Based on this, I chose the following six research questions:

- (a) What are the current public procurement practices in Norway today?
- (b) What are the differences in understanding of the current practices amongst both proprietors and contractors?
- (c) What are the views on the need for change of the current practices — Both amongst contractors and proprietors?
- (d) Is there focus on values other than monetary and/or are there wishes for shift in the view of values in the industry?
- (e) What are the major overlaps between today's practices and Best Value Procurement?
- (f) Are there proponents or opponents to BVP, and if so, why do they take these standpoints?

### 1.3 Scope

The scope of this thesis is limited both due to the timeframe of the research but also it's method. Interviews are the main source of analyzed data and the research focuses on persons with procurement responsibilities in the Norwegian construction industry — Primarily in road infrastructure projects. Further specifications and limitations are that the study:

- Is concerned with perceptions from the industry,
- Looks at the public proprietor—contractor relationship,

- Has a small sample group,
- Looks into some of the leading actors in the industry.

Apart from the aforementioned, it is also important to point out that terminology seem to vary greatly between authors relative to their backgrounds. Consequently, identifying relevant literature for the literature study was a difficult task. Therefore, the study is also limited to use of terminology. This author has translated the terms used by Lædre (2009) from Norwegian to English.

## 1.4 Structure of the Report

The report utilizes a modified IMRaD structure. This structure gives a logical progression that is transparent and credible. Figure 1.1 depicts the purpose of such a structure, where the thesis goes from a wide perspective and selects a smaller topic, to when it concludes and suggests further research. The purpose of each chapter and a short description of its contents are listed below:

**Chapter 1** functions as the thesis introduction and aims to depict the reasoning behind choices of research subject, purpose, limitations, and scope. Furthermore, it provides the reasoning for research questions, as well as the questions themselves.

**Chapter 2** presents the theoretical background needed to understand what contracting strategies are. It presents relevant background information and elaborates on important subject related matters.

**Chapter 3** presents the theoretical background needed to understand BVP. It serves as a quick introduction to the concept.

**Chapter 4** gives shows the methodological choices and tools used in this thesis. It also gives explanations to why and how these tools or methods were selected.

**Chapter 5** shows the results from each of the interviews. Further, it elaborates on these results with regards to the interview itself.

**Chapter 6** provides larger discussions related to the research questions. It is here the interview results will be linked to the research questions.

**Chapter 7** gathers the main points from the discussion, and concludes the thesis.

**Chapter 8** proposes future work on this topic.

# 1. Introduction

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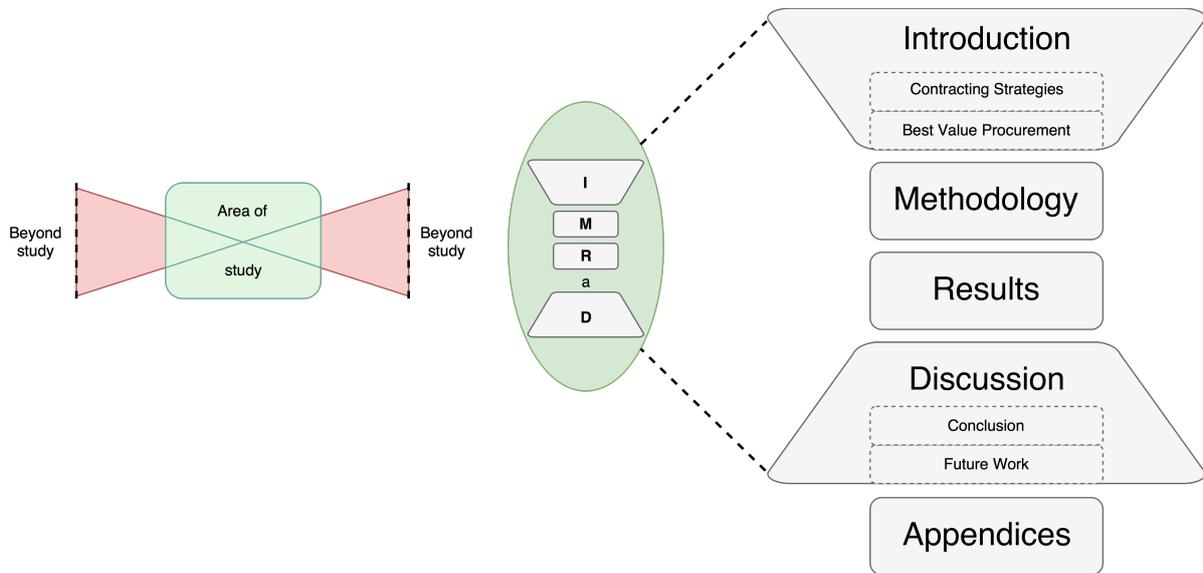


Figure adapted and re-drawn from Wu (2011, p. 1346)

Figure 1.1: Report Structure in Relation to IMRaD

Strategies are an essential part of projects. It lays foundations for the abilities to reach the intended project goals, but also steer the conducting within the given project. Consequently, the strategy needs to be tailored to the project it serves. The first step in strategizing then becomes the strategy of contracting — Which structure of contract is best suited for our project? Who sits with responsibilities and risks?

The contracting strategy are the steps prior to entering a contract. Here, the proprietor has to strategically select agents that will suit her own goals, but also be able to attract the right contractor. Lædre (2009) divides contracting strategy into two types: *General Contracting Strategy* (GCS) and *Project Specific Contracting Strategy* (PSCS). Further, he states that GCSs should always be present amongst serious proprietors. The function of this is to have a general strategy for all the projects within the proprietor's program. Furthermore, it can function as a foundation for the PSCSs by giving guidelines for choosing agents and making decisions suiting single and separate projects.

Since there are no identical projects, the PSCSs are needed. Components such as uncertainty, duration, project breakdown structure, and criticality (amongst others) creates this need (Lædre, 2009).

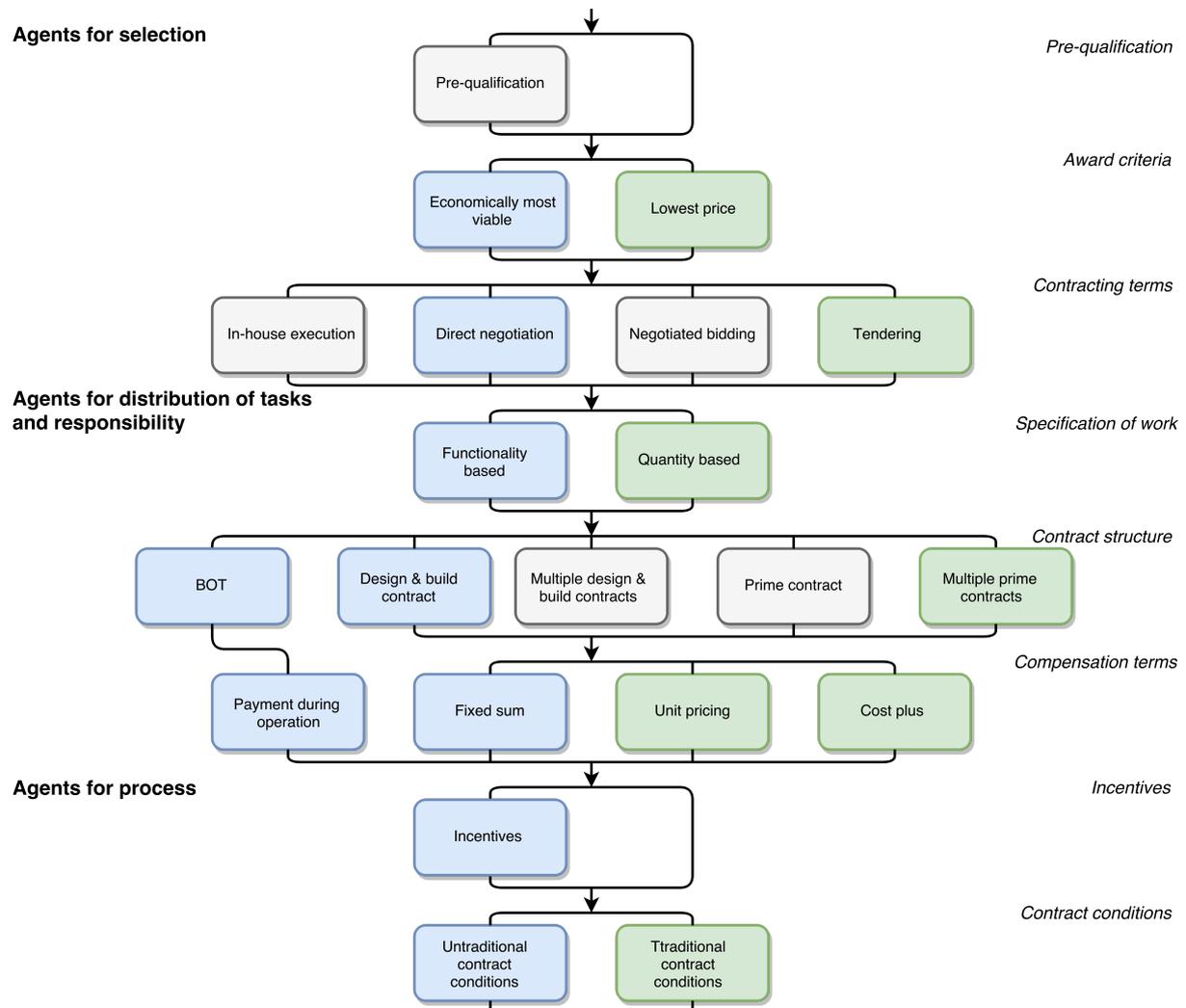
According to Lædre (2009), contracting strategies<sup>1,2</sup> are further divided into two primary categories: *Integration based* and *separation based*, as depicted in figure 2.1. To determine in which of these categories a given project should reside, up to eight choices of agents have to be made. Figure 2.1 depicts what the different choices are, and the options to choose from. Lædre (2012) stresses that there is no specific order in which these choices have to be made, and

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<sup>1</sup>It is important for this discussion to point out that “contracting strategies” are defined differently by authors, and that the use of the term in this paper will use the concept as it is referred to by Lædre (2009) — That is, the strategy in which procurement is conducted.

<sup>2</sup>This thesis distinguish between “contracting strategies” and “procurement route/method”. The latter is the final route chosen, while the former is the choices themselves.

## 2. Contracting Strategies



The figure is re-drawn from Lædre (2012, p. 5). Blue signifies choices leading to integration based contracting, and green signifies choices leading to separation based contracting

Figure 2.1: The Choice of Contracting Strategy Involve Choosing up to Eight Agents

that the choices are not necessarily independent of one another — some agents suit each other better than others. Further, Lædre (2009) divides the possible choices into three categories:

Generally, the contracting strategies are based on three categories of agents, determining the primary conditions (figure 2.1), these are:

1. Agents for selection
2. Agents for distribution of tasks and responsibility
3. Agents for process

These agents form the framework within which the proprietor chooses its contracting strategy. Given the choice of either integration based or separation based contracting, there are

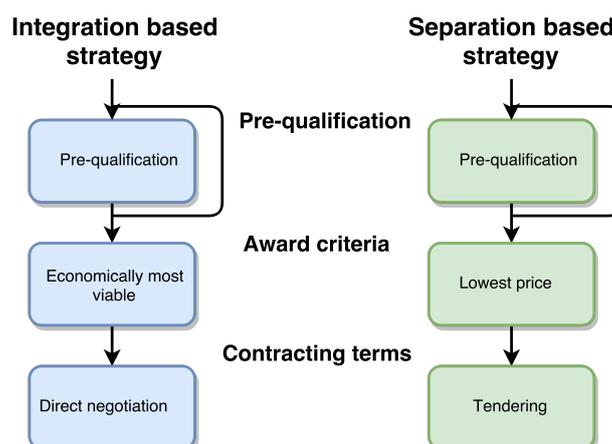
legislations that a public contract must follow. Consequently, the proprietor (when a public actor) has limited room for maneuvering when trying to select its strategy based on other formats than tendering — The purpose being to restrict the contract strategy from being biased. The Norwegian Law for Public Procurement (2013, § 5) states that “Procurement shall insofar as possible be based on competition”, and that “Selection of qualified bidders and awarding contracts shall be based on objective and non-discriminatory criteria.” The law gives the following significant provisions, amongst others:

- A demand for competition
- A demand for equal treatment
- An embargo on discrimination
- A demand for transparency

If the proprietor chooses the option of selecting based on the most economically viable bid, Lædre (2006) says that the awarding contract-criteria must be stated clearly and must be unmisinterpretable.

The same rules do not apply to private actors, who can freely choose their strategies. This enables them to consider other values than economical ones (in a simpler fashion), and create business relations with their contractors. Consequently, the private proprietor can choose either approach or a mix of them, whereas the public proprietor can choose either the separation based strategy or a mix of the two within the legislative framework.

## 2.1 Agents for Selection



The figure is re-drawn from Lædre (2009, p.15). The primary conditions, both generally and project specific, needs to be in order before choosing strategy, and agents of selection.

Figure 2.2: Agents for Selection

The *integration based agents* are primarily based on the idea that there are more values than simply economical ones. This approach gives the proprietor a free room of maneuvering and a more secure environment to contract in, due to the possibility of accounting for competence, experience, relations, etc. with the contractor of her choice. And because of this, these agents will be simpler to handle.

On the opposite side of the spectrum, are the *separation based agents*. These are more just to the contractors, since they favor a competition based on the lowest price the contractors can provide. They provide a transparent process, where bias is at a minimum and therefore results in a fair competition (Lædre, 2009).

### 2.1.1 Pre-qualification

This is an assessment of possible contractors prior to offering contracts for bidding. It helps minimizing waste by sorting out unqualified contractors in an early phase. Certain pre-qualification criteria are set by the proprietor, and the contractor needs to fulfill these in order to be able to bid on the contract. It is not only beneficial for proprietors but for contractors also, since unqualified contractors ends up not having to waste resources on a contract they will not get.

### 2.1.2 Award Criteria

When selecting contracting strategy, cost will always be a factor — In most cases it will be the main factor. Still, the proprietor has the option of selection based on values other than purely monetary.

#### *Economically most viable*

By selecting based on the economically most viable bid, the proprietor puts value onto other factors than monetary. This approach is well suited for complex projects where special competence is needed. The proprietor needs to, to the best of her abilities, specify the criteria and their weight in the contract. Such criteria might be: price, esthetics, quality, environmental properties, delivery time, etc (Difi, 2016c). Regulations §§ 13-2 og 22-2 are the decisive authority regarding which criteria can be used.

#### *Lowest price*

When awarding based on lowest price, the proprietor needs to be very specific and thought-thorough in designing the qualification criteria. This is because legal commitment comes in to play when offering using lowest price as the award criterion. This means that the proprietor can be forced to select a contractor that may not be fit to take the contract, due to a low bid. Causes of such low bids can be: pricing risk low, assuming too high productivity, and tactical pricing. These factors may lead to a product that does not fulfill the contracting requirements.

### 2.1.3 Contracting Terms

The contracting terms describes the criteria and the obligations the parties have onto one another. Generally, there are four types of contracting terms that the proprietor can chose from: Own account, direct buy, competition with negotiation, and tendering.

#### *In-house execution*

An in-house execution-contract is a form of direct purchase, where the contract is awarded to another business entity or division within the proprietor's organization (Lædre, 2012).

#### *Direct negotiation*

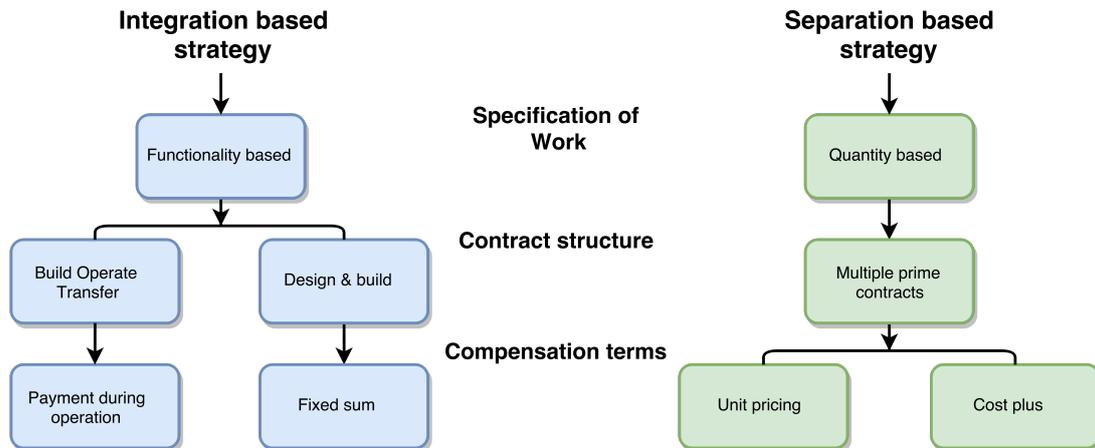
A direct negotiation-contract is signified by a proprietor selecting a contractor without any form of tendering or competition. This approach is suitable when special competence is needed, and only one contractor sits with this competence. Furthermore, it is a good method for developing relations. However, the method is only legal when the cost of the product is less than NOK 500,000 (Lædre, 2009).

#### *Negotiated bidding*

When a proprietor uses a negotiated bidding, the awarding process happens over several stages, according to Difi (2016b). A valid offer — one that meets the qualifying criteria — will have the right to enter negotiations. This gives the contractors the possibility to elaborate on their project descriptions, and also improve their offer. After negotiations, the proprietor choses the seemingly best offer.

#### *Tendering*

In public procurement, the proprietor is in most cases required to award contracts based on tendering. In a tender, anyone can bid, given fulfillment of the pre-qualification. Further, negotiations are strictly forbidden — this applies to every aspect of the process — and therefore the tender descriptions needs to be descriptive and well formulated, which leads to a high demand and use of resources. However, the approach gives a good overview of the costs of the project, and therefore also predictability (Lædre, 2009). Furthermore, the process is transparent, and all bidders know how selection went about and on what criteria the selection was done. This strengthens the view that the approach is non-discriminatory.



The figure is re-drawn from Lædre (2009, p.16), and depicts the integration based and separation based strategies for task and responsibility distribution.

Figure 2.3: Agents for Tasks and Responsibility

## 2.2 Agents for Distribution of Tasks and Responsibility

Either responsibilities and accountabilities lie with the proprietor, contractor, or is divided between them. In a multiple party project, this *must* be the case. The handling of this, and consequently the risks involved, are major factors in the economical balance between the parties. The agents for distribution of responsibilities are performance descriptions, contract practice, and type of contract. Typically, this would mean *descriptions of functions, design and build contracts, and fixed sum* for *integration based contracting*, and *descriptions of quantity, multiple prime contracts, and calculation work* for *separation based contracting* (Lædre, 2009).

When deciding upon whether to choose integration or separation, the main focus for the proprietor should be competence. For the proprietor to contract someone to perform tasks which the proprietor has equal (or better) competence in and time to perform herself, would result in complete waste, potentially add risk, and thereby not add any value. This is poor contracting design. By choosing the separation based approach, the risk can be divided according to competence.

The opposite will be true for the integration approach. Choosing this approach enables the proprietor to transfer unwanted risks to the contractor. Still, Lædre (2009) points out, some risk will always remain with the proprietor.

### 2.2.1 Specification of Work

When specifying the work to be done, the proprietor can generally either describe this through functionality of the product, or through technical specifications. However, these *can* be mixed (Lædre, 2012).

### ***Functionality based***

Functionality based specifications gives the contractor room of maneuverability when designing the product. The proprietor describes what the functions of the product should be, and the contractor designs solutions that will meet these requirements, and can do so with regards to her resources and available competence (Lædre, 2012). Furthermore, this approach opens possibilities of innovation, since the contractor can suggest multiple solutions to the proprietor.

### ***Quantity based***

Quantity based specifications are, according to Lædre (2006) the most common approach in construction. This is when the proprietor gives detailed descriptions of technical specifications and scope of the project. In its totality, the descriptions should include descriptions of the product's *properties, use, durability, management, maintenance, etc.* These types of specifications are usually presented in a standardized manner, in the traditions of NS3420 and NS3421.

## **2.2.2 Contract Structure**

The contract structure is the decisive factor on the organizational structure of the project, risk distribution, and who is contracting with whom. There are several options to choose from when selecting the contract structure, and the choice will affect the ability to influence the project — both from a contractor and proprietor standpoint.

### ***Build Operate Transfer***

*Build Operate Transfer* (BOT) is a collaboration between private and public actors. It is signified by a private actor that has the full responsibility of the project and management afterwards, until a specified point in time when the public actors take over responsibility and future management (Difi, 2016a). This can foster innovation and life-cycle thinking since both parties will benefit from design and management that creates long-time revenue. Greve (2003) adds that this contract structure require deep procurement insight from the public proprietor, due to the complex nature of the model.

### ***Design & Build***

When a design & build contract is chosen, the proprietor leaves parts of, or the entire, responsibility to the contractor — This includes transferring of unwanted risks. Further, only these two parties sign contracts with each other — The subcontractors will have to sign with the contractor, and not the proprietor (Skatvedt, 2011).

This approach gives a good overview of costs at an early stage, and the proprietor has few contracting partners to relate to (Difi, 2016d). However, for the bidders this approach

is demanding and requires many resources. For the ones not selected for contract signing, the bidding process has inferred a loss.

### ***Multiple prime contracts***

Multiple prime contracts approach is when the proprietor enters into multiple contracts where some will be with contractors, and some with designers. The approach requires active involvement by the proprietor in all areas that has not been contracted to either a contractor or designer (Lædre, 2006). However, the responsibilities of the proprietor can also be contracted to a third party, a so called *construction manager* — This is known as *construction management*.

A major benefit of this approach is that the proprietor can create further competition in the bidding process, simply because there are more to bid on. This, in turn, can help lowering costs or getting a better product. Also, she is in charge of the entire process, deciding when and what shall be constructed.

### **2.2.3 Compensation Terms**

The compensation terms determines how payment will occur. There are many different methods of determining how costs should be calculated, and consequently how compensation is performed. According to Lædre (2009), the most common are *fixed sum-contracts* and *cost plus-contracts*.

Finansdepartementet (2008) proposes tables 2.1 and 2.2 to illustrate the natural incentives for selection of compensation terms. The tables give valuable insight in benefits and disadvantages with the different compensation terms.

Table 2.1: Criteria for Selecting Compensation Terms

<b>Criteria</b>	<b>Fixed sum</b>	<b>Unit pricing</b>	<b>Cost plus</b>
Project definition	High	Mid	Low
Proprietor involvement	Non	Non	High
Market capacity and competence	High	Low	Low

Modified from Finansdepartementet (2008, p. 7)

### ***Payment during operation***

Payment during operation is only used when the contract structure used is some form of *Public-Private Partnership* (PPP), for instance BOT. This approach forces the contractor to handle payment prior to the operation phase, within which the proprietor will start payment (Lædre, 2012).

Table 2.2: Consequences of the Selected Compensation Terms

Compensation terms	Fixed sum	Unit pricing	Cost plus
Proprietor sits with risk of	n/a	Units	Units, norms, rates
Contractor sits with risk of	Units, norms, rates	Norms, rates	n/a
Risk of contracting conflicts	High	Mid	Low
Contractor incentive, cost effectiveness	Positive	Positive	Negative
Contractor incentive, solution effectiveness	High	Low	Low
Proprietor's risk of product quality	High	High	Low

Modified from Finansdepartementet (2008, p. 7)

### ***Fixed sum***

According to Project Management Institute (2013), *fixed sum* or *fixed-price* contracts involves a fixed monetary compensation for a product. This product must be well defined by the proprietor and unmisinterpretable for the contractor. Furthermore, the contractor is obligated to fulfill the work and deliver the specified product within the contract constraints. If not, she can get financial penalties. However, if specifications of the product changes, the fixed sum may also change.

According to Lædre (2009), this compensation format is best suited when the project uncertainty is low — usually a consequence of well defined product specifications. In the further, these contracts are well suited when the proprietor either don't want to or can't handle the uncertainty.

Lastly, there are a few variations of fixed sum contracts. Project Management Institute (2013) mentions *Firm Fixed Price Contracts* (FFP) (described above), but also *Fixed Price Incentive Fee Contracts* (FPIF), and *Fixed Price with Economic Price Adjustment Contracts* (FP-EPA), which involves flexibility due to the use of incentives and changes in pricing due to changed conditions in long-term contracts, respectively.

### ***Unit pricing***

The unit pricing approach<sup>3</sup> is a *Time and Material Contract* (TM) gives a predictable outcome of costs — more so than the other methods. Here, uncertainty is divided between contractor and proprietor. The contractor is responsible for the pricing of units, whereas the proprietor is responsible for the amount of units (Lædre, 2009). Essentially, this is what makes the method predictable.

The rates and amounts are set in advance, and the final cost is calculated from these two factors. If then, the amount of units become higher than what was predicted, this will be on

<sup>3</sup>According to Project Management Institute (2013), this type of contract is a hybrid between fixed and cost plus-contracts — i.e. a hybrid between integration and separation based. However, Lædre (2009) categorizes these contracts as separation based, despite the sharing of risk. Here, they will be regarded as Lædre proposes.

the account of the proprietor, and the cost will rise — likewise the other way around.

### ***Cost plus***

According to Project Management Institute (2013), the cost plus-approaches constitutes of payments for all contracted work and the costs related to that work. In addition, a seller profit has to be paid to the contractor. This means that the performance of the contractor will not have an effect on costs — this can, potentially, cause discrepancies if the performance shows not to be as expected by the proprietor.

The approach gives the proprietor the possibility of deep involvement in the project process, since she also will have to sit with most of the uncertainty (Lædre, 2009). Because of this, the approach is well suited for project within which the proprietor can't provide detailed descriptions of the project or the scope. Consequently, unit costs and amounts are the responsibility of the proprietor.

Project Management Institute (2013) presents three variations of cost plus contracts — all being results of other choices made in Lædre's model (figure 2.1). The variations are: *Cost Plus Fixed Fee Contracts* (CPFF) (described above), *Cost Plus Incentive Fee Contracts* (CPIF) where incentive fees are added and a sharing of costs beyond or below budgeted costs are performed, and *Cost Plus Award Fee Contracts* (CPAF) where predetermined subjective criteria on contractor's performance constitutes the majority of fees.

## **2.3 Agents for Process**

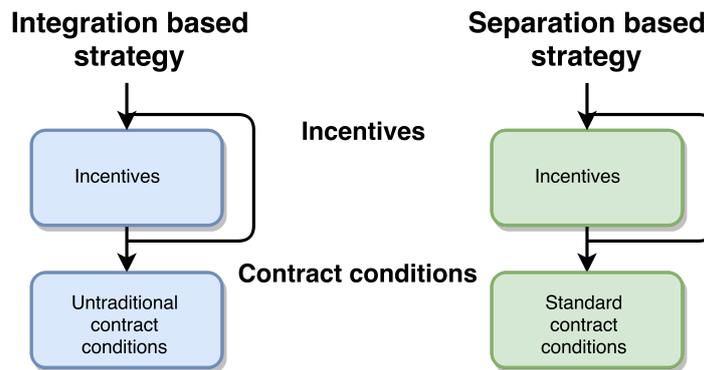
Lædre (2009) presents incentives and contract conditions as the two agents for process. Generally, he says, the *integration based* approach aims at creating an environment for co-operation between the parties. Incentives, for instance, helps in providing a common goal, as well as dividing the economical uncertainty more evenly.

For the *separation based* approach, the responsibilities are clearly separated between the parties. By keeping uncertainty, the proprietor can gain better control over the project and thereby achieve lower costs. However, Lædre stresses, this often means a higher chance of cost overrun.

### **2.3.1 Incentives**

Incentives are intended as “driving forces” leading to the achievement of some goal. These driving forces can either be rewards or penalties, and can be monetary or not. Often used non-monetary incentives are the possibility of being awarded future contracts or tasks. Furthermore, incentives can help create joint objectives, with the intent of better co-operation.

According to Lædre (2009), the most important aspect of incentives is that it can function as a distributor of uncertainty in a project. This means that when neither of the parties



The figure is re-drawn from Lædre (2009, p.17), and depicts the integration based and separation based strategies for process and coordination.

Figure 2.4: Agents for Process

wishes to take responsibility of uncertainties, they divide the uncertainty between them, with appurtenant incentives. In the further, both parties will be affected by discrepancies.

### 2.3.2 Contract Conditions

The contract conditions can be either *traditional* corresponding to standards, or *untraditional* and incongruent with the standards — there are many variations of both of these options.

#### *Untraditional contract conditions*

*Untraditional Contract Conditions* (UCCs) are contract conditions which are not standardized. The approach can help lay foundations for deeper involvement by contractors. According to Lædre (2009), this is because the UCC can be shaped to make the interests of the proprietor and other parties concerned become the interests of the contractor. Therefore, UCCs a close cooperation between the parties will often arise, and the proprietor will become more involved.

As with most topics discussed hitherto, UCCs brings some challenges. The biggest, perhaps, is the difficulty in defining roles and responsibilities — a natural consequence of which is the fuzzy relationship the parties will have with their roles and responsibilities. This, in turn, might lead to potential disagreements and conflicts. Moreover, the difficulty in defining conditions is not limited to roles and responsibilities, but to all aspects of the contract.

#### *Traditional contract conditions*

One of the major benefits of *Traditional Contract Conditions* (TCCs) is that they are standardized and widely familiarized with within the industry — this creates predictability. In addition, the standardized conditions provide security for both parties in that they are designed to consider both parties' interests (Lædre, 2009).

2. Contracting Strategies

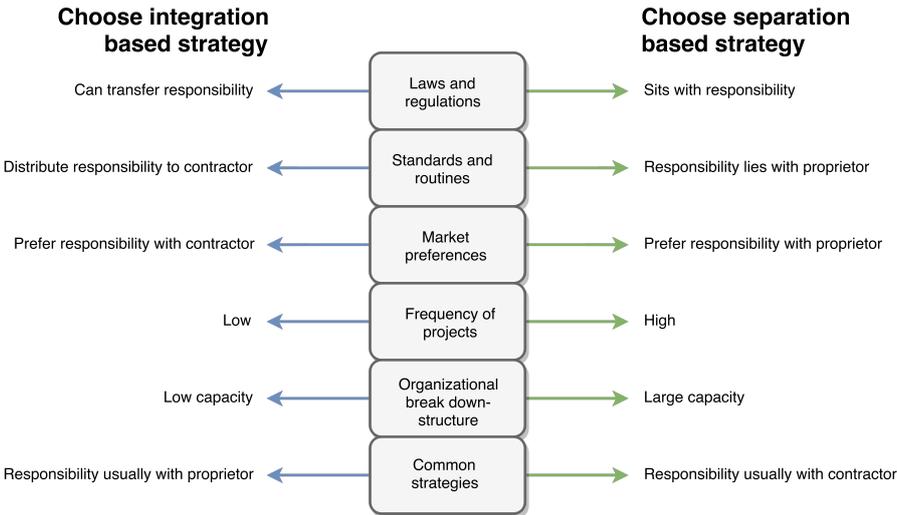
However, TCCs have clear separations of roles and responsibilities, which according to Lædre (2009) is a pitfall concerning potential conflicts. This is because the parties will be quick in assuring their own and not the project’s best interest when conflicts arise.

Moreover, the applicability of a TCC is best when the project has both low uncertainty and complexity. This coincides with less co-operation between the parties, as opposed to projects where much co-operation is needed.

2.4 General Contracting Strategy

Simply put, GCSs are the contracting strategies that encapsulates the conditions that will stay the same for every single project. This lays the foundation for how the proprietor generally wishes to distribute risks, duties and responsibilities. According to Lædre (2009), the GCSs must be formed in such a way that information on the general conditions need not be gathered for each project. However, he states, the general conditions are subject to change due to their dependence on factors such as standards, laws and regulations, to name a few. Therefore, frequent updates of the GCS is imperative.

The main point here is that, for instance legislations will stay the same and provide the same guidelines and restrictions no matter which project the proprietor is working on. In order to not have to spend time on strategizing for this in every project, the GCS have already been established, and thus these matters have been handled. Lædre (2009) elaborates on the main factors of priority in the GCS and suggests how to strategize, as illustrated by figure 2.5.



The figure is re-drawn from Lædre (2009, p. 44).

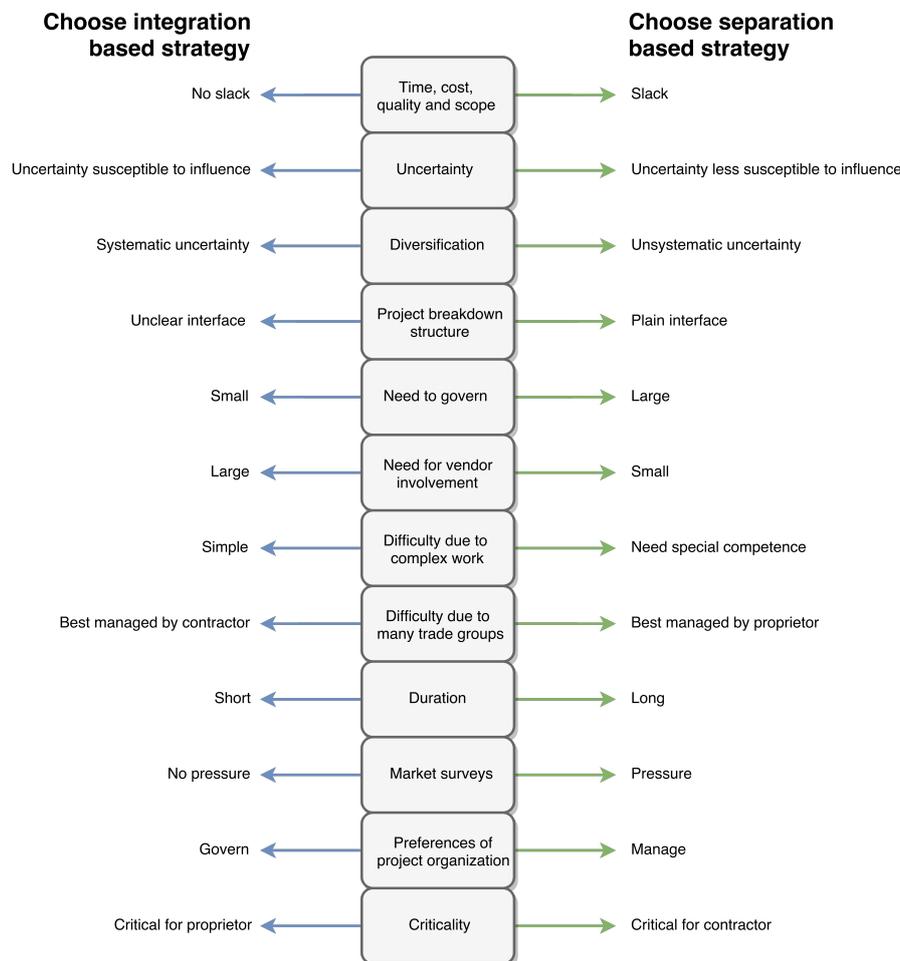
Figure 2.5: General Contracting Strategy

## 2.5 Project Specific Contracting Strategy

PSCSs are the strategic choices made for each single project. Indeed, they can be a derivative of the GCS, but they also need to be specified and strategized based on the conditions that are specific and different from every single project. Factors such as the contractors capabilities to handle uncertainties, the proprietors ability to handle uncertainties, the need of project governing, project complexity etc. are part in the PSCS.

In order to create a strategy, Lædre (2009) says that project specific information must be present — If it is not, it might be too soon to choose the PSCS. The main point of having PSCS is the idea that each project is different from the other — They are all unique endeavors and are in need of being treated as such.

As with GCSs, Lædre (2009, 2012) suggest the process of how to strategize and elaborates on the factors involved. This is summarized in figure 2.6.



The figure is re-drawn from Lædre (2009, p. 45).

Figure 2.6: Project Specific Contracting Strategy

### **2.6 Other Routes**

In addition to the strategic approach described hitherto, other authors suggest additional approaches. This thesis is only concerned with the extremities integration and separation — This simply is because these are the most commonly used strategic choices. However, other options do exist and short descriptions of some of these can be found in appendix A. These include packaged and relational approaches in addition to the aforementioned.

This chapter provides a basic introductory presentation of the general idea behind the *Best Value Procurement* (BVP) and a look at the claims of its effectiveness. Then, a basic description of the phases involved and their purpose will follow. Lastly, a BVP procurement route will be proposed.

## 3.1 The BVP Philosophy

BVP, often referred to as *Performance Information Procurement System* (PIPS), was developed by Dean Kashiwagi in 1991, and had the intent of maximizing value by minimizing the risk of having to deal with poor performing contractors (Kashiwagi & Byfield, 2002). The idea was that since information help reducing project risk, this would also apply in the phase where contractors were selected.

The way of reducing risks involves a shift of focus from costs over to quality. The term “quality” is here used to describe good *life expectancy*, *delivery time*, *Total Cost of Ownership* (TCO), etc (Santema et al., 2016). The use of such criteria is what in figure 2.1 is referred to as *economically most viable*. Still, costs remain a parameter which is considered. However it is here accompanied by several other parameters. Ultimately, the aim is to achieve the “most value for the lowest price” (Kashiwagi, 2011, p. 36).

Kashiwagi (2011, p. 36) explains that BVP changes the role of the proprietor (procurer) to a facilitator of service delivery, in contrast to the traditional role of “being the guardian over the award of a contract”. This role involves collaboration between the contractor and proprietor in deciding who is best able to perform certain tasks (the expert), and assigning these tasks or responsibilities to that party. Simply put, this means that the proprietor’s job is to no longer act as an expert, but instead be able to distinguish experts from non-experts, and facilitate

### 3. Best Value Procurement

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the expert's delivery of the product.

*Information Measurement Theory* (IMT) is one of the fundamental components of BVP. It explains how a person of low information processing speed assumes that there is a lack of information, and then compensates for this lack through previous experiences. This is a problem since it pollutes the information. Further, the information is already there, but the person just haven't found it. Santema et al. (2016) explains this using an analogy to the law of gravity: the law was always there — Even when we didn't know how to express it.

The essential point here is that some people are better at predicting future events based on their knowledge, experience and how they process information. Consequently, these are the experts the proprietors should be looking for. This again, leads to the idea of utilizing complete project transparency so that the contractors can show how they use information, how they see the project holistically, and how they know that they are experts.

An important problem in contemporary practices that BVP addresses is the use of *minimum requirements* of delivery. Santema et al. (2016) points out that when presented with a minimum requirement, the contractor will treat this as the *maximum* needed in order to be awarded the contract, as shown by figure 3.1.

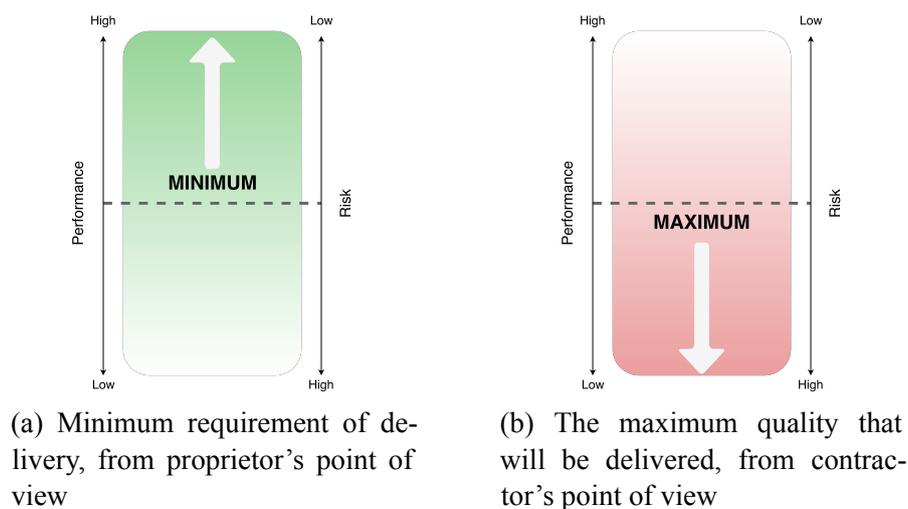


Figure adapted, modified and re-drawn from Kashiwagi (2016, p. 29).

Figure 3.1: The “Paradox” of Minimum Requirements

BVP seeks to hinder these occurrences by selecting based on the quality that the contractor can deliver. The idea being that if she has to suggest and specify the quality she can and will deliver, either the suggestion will show that she is an expert or it will eliminate the contractor since it shows she is not (Santema et al., 2016).

Through testing BVP more than 700 times in different industries (including construction), with total project value of \$ 2.3 Billion between 1994 and 2010, Kashiwagi (2011, p. 13) claims the following results:

1. 98% client satisfaction and no vendor caused cost deviation.
2. Minimized up to 90% of the client's risk and project management.
3. Vendors increased profits up to 100% without increasing the cost to the client.

However, despite these numbers being as impressive as they are, van Duren & Dorée (2008) concludes that these claims seem to be a bit too positive — Most projects were small and simple. Still, as they also point out, the scales of the projects are steadily increasing, while the BVP results seem stable. They also confirm that clients (proprietors) utilizing BVP are “substantially more satisfied”.

## 3.2 Phases of BVP

BVP is divided into four separate phases, where the first three are concerned with procurement, and the last with execution of the project. Here, the four phases, depicted in figure 3.2, are described. Since this is an introduction to BVP, this text will *not* go in-depth on the phases and their contents, but rather describe them in short form.



Figure adapted and re-drawn from Santema et al. (2016, p. 23).

Figure 3.2: BVP Phases

### 3.2.1 Pre-qualification

The pre-qualification is the phase in which pre-planning is made — It starts prior to having selected a project to work on. Here the focus lies in preparing the contractors and the proprietor's team for the new process of procuring, while also performing future risk reducing measures by meticulously defining the project. This is a step-by-step process, beginning with a selection of a sponsor.

This step is meant to help ensure a organizational culture change through selecting a person with wide knowledge of BVP to lead the process. This is important since changes often are met with limited understanding and willingness on the parties affected by this change. Next, a strategic framework is established, defining goals directed at 'increasing effectiveness, lower

### 3. Best Value Procurement

costs, reduce time waste, etc. A group will then be selected and educated in BVP, and this group will see the process through to the end.

Now, the group needs to select a project. Santema et al. (2016) claims that the larger the project, the higher the benefit of BVP will be. However, often a smaller project is selected (for first-timers) so that the organization doesn't take any large risks. The selected project will need specifications of goals, and the next step takes care of this. Here it is important to keep in mind that these goals constitute the units of measuring the project success. Now, the group can create a project schedule that will help prepare and give time for selection and clarification.

The next step revolves around formulating the award criteria. The point of this is to not choose contractor based on the traditional lowest price, but to choose based on "quality for money". Santema et al. (2016) stresses the importance of emphasizing the interviews (in the selection phase) the most. This is because the interviews will provide the clearest information on whether a contractor is right for the project or not.

The group now needs to formulate a document intended for the bidding contractors. This document should contain project goals, scope, schedules, and award criteria. Also, the maximum cost should be included. The intent is that now the contractors understand what they are working with, and consequently the proprietor can see who can provide the best offer. The non-interesting candidates can be identified and sorted out using this information.

With this in hand, the proprietor can now identify potential bidders and invite them to a BVP educational meeting. The intent with this meeting is to prepare the potential bidders for the process they are now entering. Also, Santema et al. (2016) adds, this meeting can act as a first filter, where the contractors not impressed with the method refrains from entering the process.

#### 3.2.2 Selection

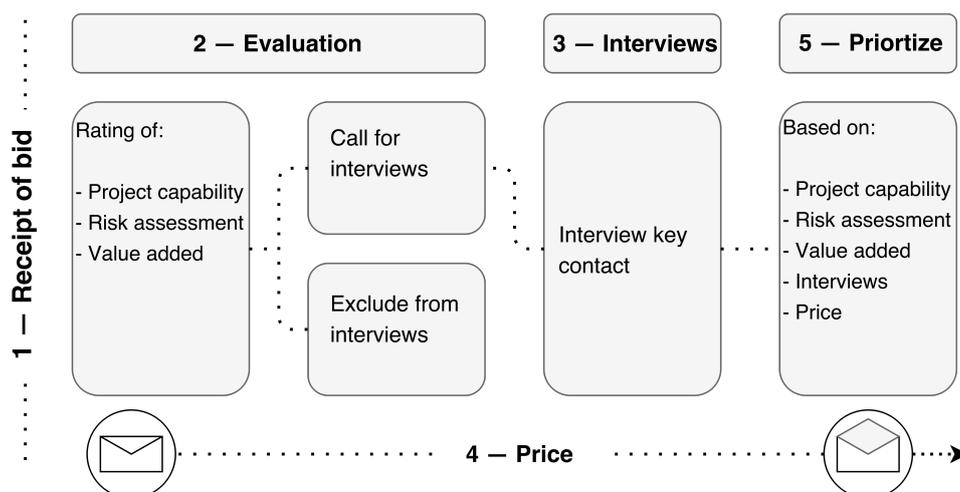


Figure adapted and re-drawn from Santema et al. (2016, p. 35).

Figure 3.3: Steps of the Selection Phase

As illustrated in figure 3.3, the selection phase consists of five main parts. These occur in a step-by-step fashion, and starts with the receipt of bids. These needs to be processed through the first filter — evaluation — in order to determine whether the bidder should be called for interview or not. This happens through evaluating different parts of each bid.

First, the project capability is evaluated. The evaluation is based on a document provided by the bidder, that describes how and why she is capable to deliver. This is done through objective, precise, verifiable information presented with respect to the project the contractor is bidding on.

Second, a document showing the risk assessment done by the bidder is evaluated. Here the bidder should show the risks she has identified, but also how she intend to mitigate these risks. Further, Santema et al. (2016) points out, the document must show that the bidder keeps the proprietor and her interests in mind in this assessment.

Last, an evaluation of the value the bidder can add to the project is performed. Some important questions need to be kept in mind during this evaluation can be:

- How does this added value contribute to the project goals?
- How does this added value influence costs?
- How does this added value influence time?

Based on these evaluations, the first filtering is completed, and it is time to decide who will be called for interviews.

The goal of the interviews is to allow the bidder to further elaborate on her offer. Santema et al. (2016) argues that for precisely this reason, the interviews fit within the framework of legislations on public procurement. This is because the intention is *not* to evaluate the bidder herself, but the bid itself.

When the interviews have been completed, the proprietor's procurement group is allowed to see the price each bidder asks. The point of waiting until this point with revealing the price, is to not let it influence other evaluations — They need to be as objective as possible.

Now, each bid can be ranked and prioritized based on the evaluations and the price asked, based on the award criteria that were defined in the previous phase. There are multiple procedures on how to perform this prioritization: either transform all information to prices and subtract from asked price, or award points to price and other criteria separately. Based on this ranking, the best suited contractor has been identified.

### **3.2.3 Clarification**

The best ranked contractor (a.k.a. presumptive contractor) will in this phase get the chance to clarify her offer. It is important to keep in mind that this phase is not a negotiation-type phase, but a phase in which the offer becomes clarified through specific and technical elaborations. Also, until this point, technical specifications have been kept to a minimum. The procurement process has now gone from “what will you do?” to “how will you do it?” and the project should

be clarified from A to Z — The contractor must now prove that she is the expert she claims to be. Clarification consists of three parts or steps (Santema et al., 2016):

- *Project Start Up* (PSU), or Kick-off
- Clarification
- Award meeting

The PSU functions as the initial broad strokes clarification, where the involved parties meet (for one or two days) and the presumptive contractor elaborates on the larger important project parts, such as the schedule, assumptions made, risk mitigation, etc. The proprietor's role in this step is to observe.

Now, the a more “down-to-detail”-step begins — The clarification. Here the contractor goes in-depth on how she plans to reach project goals — Schedules become more specific, risk mitigation steps are further clarified, added value are further described, etc. In this step, the contractor is the leading party, and the proprietor is not to be involved, according to Santema et al. (2016). It can be thought of as a pre-project preparation phase for the contractor.

Finally, the award meeting is reached. This is when the contractor presents her preparations from the previous step, and the decision of awarding the contract is made. Santema et al. (2016) points out that clarification is the most difficult phase in the whole procurement process, since the proprietor for the first time really lets go of control, and hands it over to the contractor.

#### **3.2.4 Execution**

The execution phase is after the contract has been awarded, and the project has started. Here, the essential idea is that the proprietor should not get in the way of the contractor — She has already proven that she can perform the tasks she is hired to perform. Instead, weekly reports are made by the contractor. These should be short and only contain essential information and reveal deviations Santema et al. (2016). In its essence, the report is a risk revealing report that helps mitigate risks since no one wants their name written in it — It acts as an incentive for the contractor, as well as information to the proprietor regarding how the project is going.

### **3.3 The BVP Route**

Through the hitherto presentation of BVP we see that the procurement route taken may consist of the choices highlighted in figure 3.4. This is an integration based route where the ideas of identifying and selecting experts, allowing experts to prove they are experts and letting the experts use their expertise lie as the foundation. Also, uncertainties and risks are handled by the party best capable to do so.

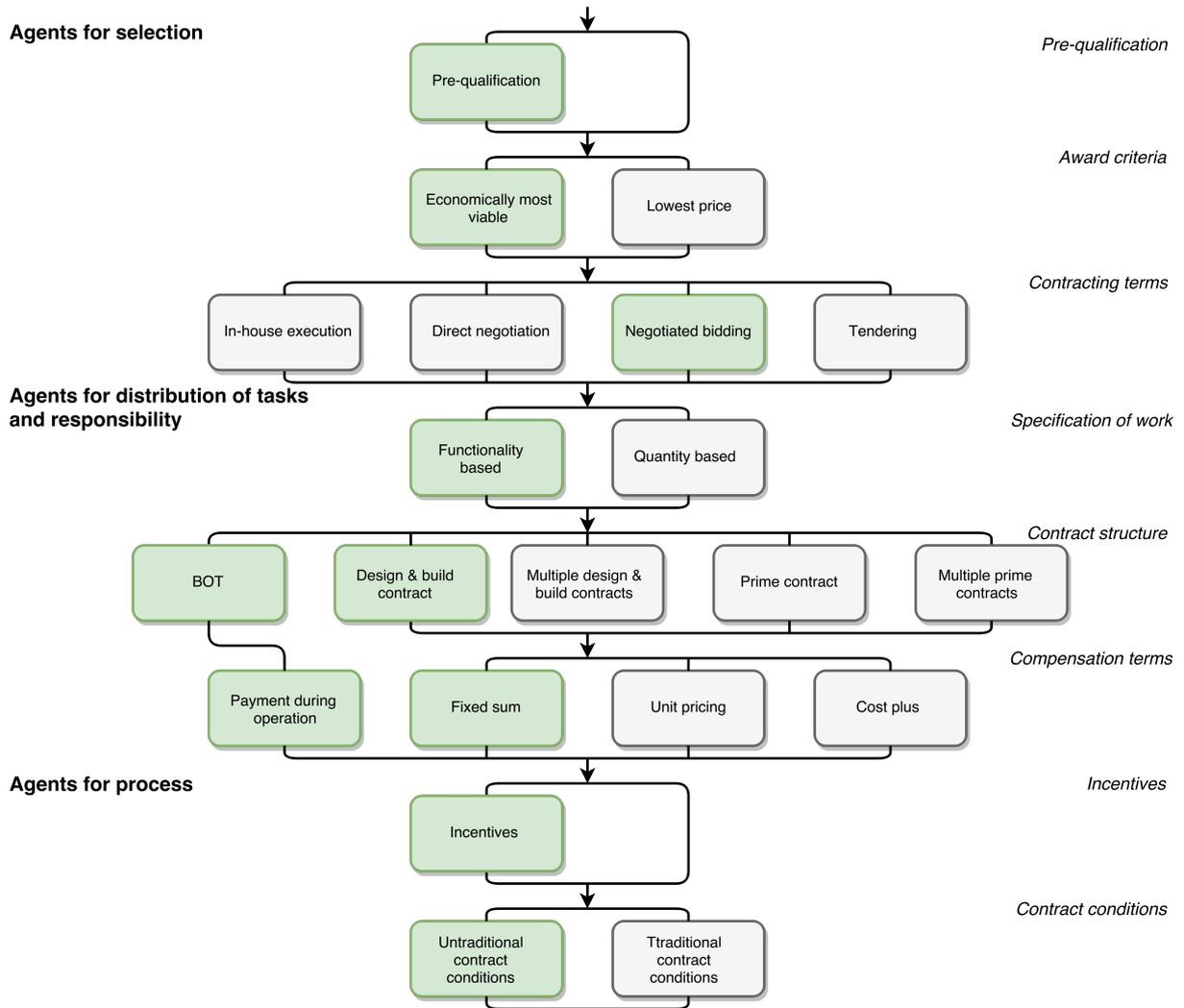


Figure 3.4: The BVP Route



## 4.1 Literature

The work on this thesis initially started with a literature review as a part of the course *TBA4128 — Project Management AC* in the fall of 2016. The report created in that course therefore constitutes part of the literature review in this thesis. During the initial searching, the problem statement and direction of research for the thesis matured. Therefore, the search needed to be adjusted accordingly. Further, the methods used and learned during *TBA4128* were implemented and used to enlarge the literature searching and review for use in this thesis, as well as specifying the searching towards more specific literature. Figure 4.1 depicts the general structure of the literature search for and selection for further use.

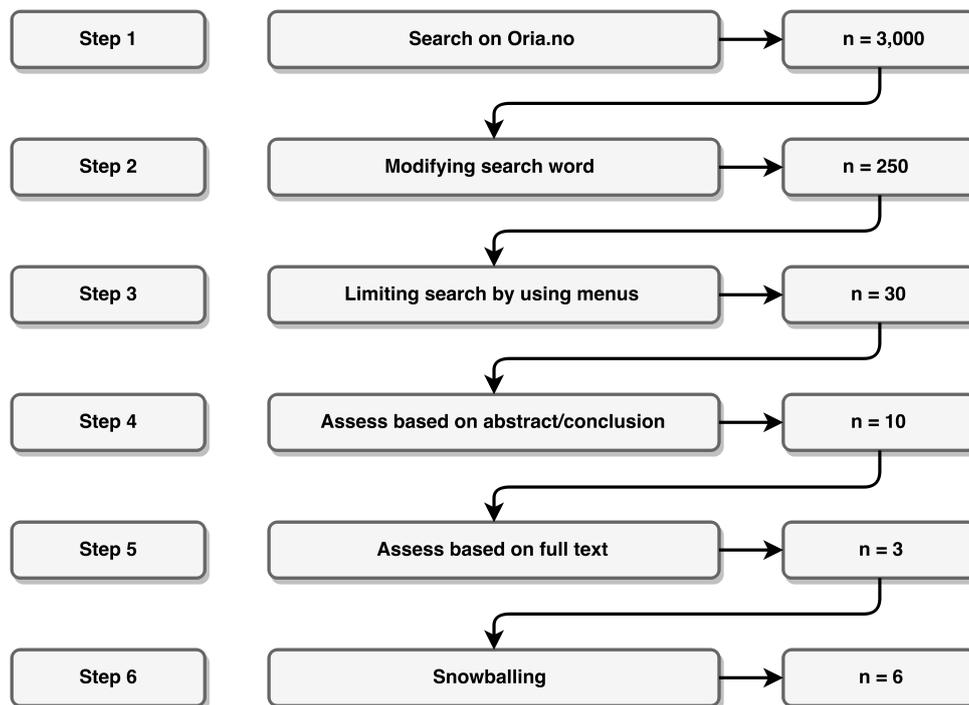
### 4.1.1 Databases and Search Engines

In order to acquire relevant literature, several popular databases and search engines were used. The databases vary in content, but also overlap to some extent. Therefore, it was deemed necessary to perform identical searches (or similar if/when needed) in all databases and search engines depicted in figure 4.1, so that the searching would give the best pay-off and provide a good basis of relevant literature.

### 4.1.2 Wording

The search engines occasionally provide different methods of searching and use of logical operators when wording a search — This was accounted for when performing identical searches in the different databases. Quotation marks (“ ”), for instance, will in most cases mean that the search

## 4. Methodology



$n$  represent the number of hits on a given search

Figure 4.1: Literature Searching Process

Table 4.1: Databases and Search Engines

Name	Type
Oria	Database
Scopus	Database
Engineering Village	Search engine
Ei Compendex	Database
Google Scholar	Search engine

results will be identical as to the search words within the quotation marks. Beyond that, there are several different logical commands that will result in different results while using the same search words. Therefore, the wording, and use of logical operators, are of immense importance. In Table 4.2, Oria's logical operator guidance is depicted.

Variations of many search words were utilized in this study. These variations included use of plural and singular form, Norwegian and English language, synonyms, as well as logical operators and combinations of search terms. The list of search terms is quite extensive, and many searches did not yield satisfactory results. Therefore, only the most relevant searches are included in the following list of examples:

- Best Value Procurement/Approach/BVP

- Performance Information Procurement System/PIPS
- Public Procurement
- Contracting Strategy
- Procurement route/method
- Construction Procurement

Table 4.2: Searching Example Using Logical Operators

To find	Use	Example
All words		Procurement Norway Lædre
Phrase	“ ”	“Best Value Procurement”
Words that start with	*	Procur*
At least one of the words	OR	“Green Procurement” OR “Sustainable Procurement”
Exclude	NOT	Procurement NOT Purchasing
Group search words	( )	Procurement (Method OR Route)

Modified and adapted from Oria (n.d.).

### 4.1.3 Snowballing

The method of *snowballing* is often used to find good and relevant literature based on the bibliography of some other literature. Given a literature search where one finds an interesting piece of literature, one simply look at the references used in that literary work and pick the references that seem interesting and relevant, according to Wohlin (2014). This is not to say that one should replicate other authors’ reference use, but that interesting literature can be found and used from that source.

### 4.1.4 Evaluation Criteria

According to VIKO (2016), four points should be kept in mind when evaluating and choosing literature. This principle is called *TONE* (in Norwegian), after the concepts of Credibility, Objectivity, Accuracy, and Aptness. These criteria have been used in this thesis to evaluate the quality of background literature. Some of the acquired literature did not pass these criteria, and were discarded from use in this thesis.

Furthermore, other measures such as impact factor and journal rating were also used in order to assure quality. According to Lohne (2016), there is also a hierarchy showing the general quality of information, based on the publishing of that information. This hierarchy is illustrated in figure 4.2, and the concept was used to keep track of what type of information was being used at specific time points.

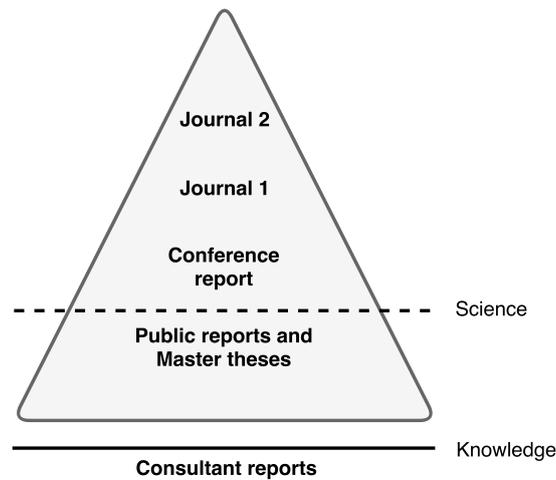


Figure adapted from Lohne (2016).

Figure 4.2: The Hierarchy of Publication Quality

## 4.2 Research Approach

When conducting research, some form of structured approach is needed both in the collection of data, but also for the analyzing of data. Here, the choice of approach, the structure of interviews, and the process of analyzing collected data are presented.

Firstly, a decision on whether to make use of a qualitative or a quantitative approach needed to be made. A short description of characteristics of these will follow here.

### 4.2.1 Quantitative and Qualitative Approach

The two approaches vary significantly in their execution, study design and their goals. according to Kumar (2011), quantitative approaches are generally specific and well-structured. Further, they get quantitatively tested for validity and reliability. Qualitative research, on the other hand, may be less structured and not as precise. He furthers that:

“The main focus in qualitative research is to understand, explain, explore, discover and clarify situations, feelings, perceptions, attitudes, values, beliefs and experiences of a group of people.” — (Kumar, 2011, p. 116)

The qualitative approach becomes a very flexible one, where the scope can evolve, resulting in a less structured approach than the quantitative. Amongst many focuses in the qualitative approach, Kumar (2011, p. 116) names “attitudes, values, beliefs and experiences of a group of people.”

The most common study design of the qualitative approach are *case studies* — This design is used in this thesis (more on that in chapter 4.2.2).

In the early phases of this thesis project, it was decided that the study should be a qualitative one. There were four main factors contributing to this decision:

1. The nature of the research questions seem to cohere best with a qualitative approach, since the research in many areas is looking for opinions and experiences.
2. The qualitative approach was suggested and endorsed by the author's supervisor.
3. The issue of time and availability of data pointed towards a qualitative approach.
4. The knowledge gained by using a qualitative approach was viewed as higher.

### 4.2.2 Case Study

According to Kumar (2011), the case study design is a good way of achieving a holistic understanding of a group, community, situation, etc. In contrast to purely quantitative designs (seeking to confirm and quantify), the qualitative case study focuses on exploring and understanding. Since this approach makes it hard to generalize beyond similar situations to the one studied, the sources from which information is gathered need to carefully be selected. Yin (2009, p. 24) says that: "The method [case study] (...) is relevant the more that your questions require an extensive and 'in-depth' description of some social phenomenon."

Further, Yin (2009) explains that there are four basic case study designs to choose from, as shown from figure 4.3. One could argue that for this study, the *single-case holistic design* is employed. However, since this study is attempting to answer several questions that can be put into two units — namely about current procurement practices and BVP — it is here argued that in fact the *multiple-case embedded design* is employed.

### 4.2.3 Interviews

According to Rowley (2012), the qualitative approach is suitable for novice researchers. In her article she gives advice on how to design research, directed at novice researchers. With two things in mind — her suggestions, and the research questions — the interview ended up being semi-structured, with an emphasis on *semi*. Largely, this approach was decided upon since it allows the interviewee to talk about the issues important to him, but at the same time it gives the interviewer the ability to steer the interview towards the interesting topics.

In this research, the interviewees were presented with a figure depicting a number of choices a procurer must, or should, take. These choices will, in turn, form a procurement route. The interviewees were asked to fill in the route taken on a project they had experienced as positive, and the route taken on one they had experienced as less positive. Further, they were to describe for each decision: *why* it was good/bad, *what* contributions to the project did it bring, *what* could have improved/worsened the situation. This was the structured part of the interviews — It gave the interviewees a good understanding of the topic of interest, and therefore laid a good ground for the less structured part.

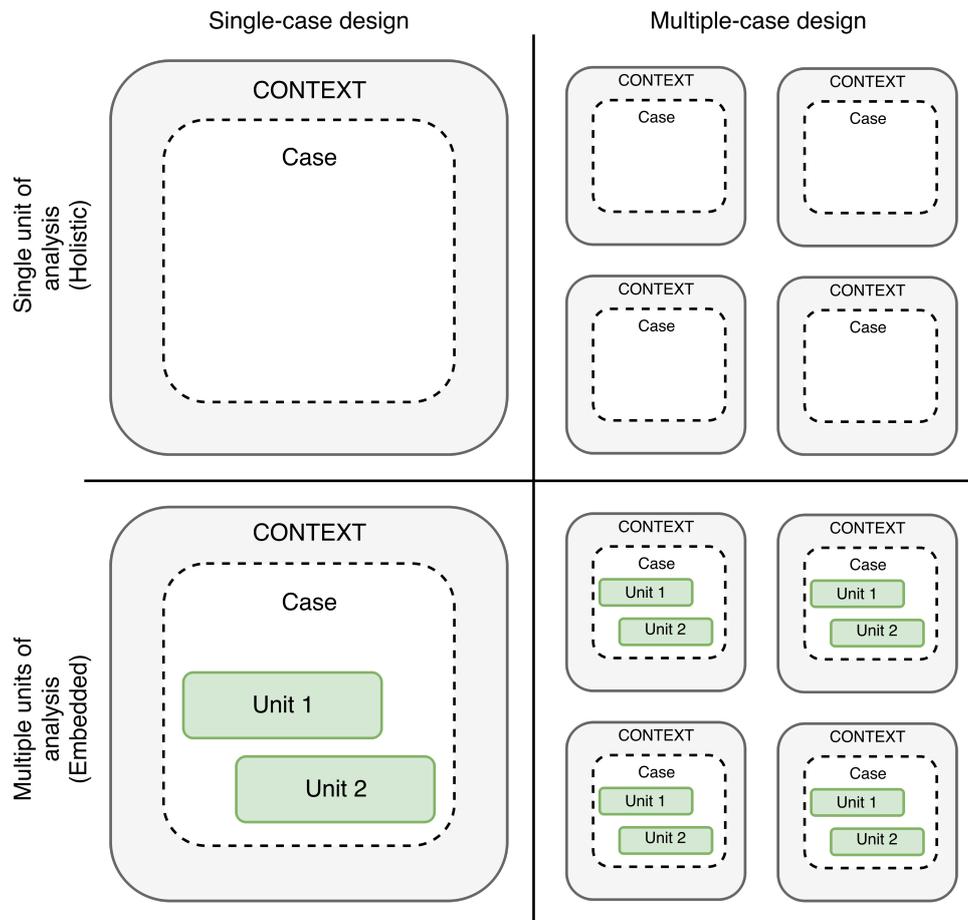


Figure adapted from Yin (2009, p. 75).

Figure 4.3: Basic Case Study Designs

Now, the interviewees were asked a few *very* wide questions where they could talk about what was important to them in relation to that question. These questions could vary from interview to interview, based on what had already been touched upon.

To finish the interview, the interviewees were asked if they felt like some questions hadn't been asked, if there was anything that should have been asked, and if they wanted to add something or elaborate on a topic.

This approach allowed the interviewer to gain a better understanding of the topic, while at the same time not demanding a vast previous knowledge of it — this seemed suitable for a novice researcher. Furthermore, the introductory figure allowed for a systematic analysis of the interviews, since it contained different nodes for the different information. This made the information easy to organize and, consequently, easier to extract and compare.

#### 4.2.4 Analysis

The methods of analyzing the collected data and presenting the results were largely inspired by the advice and suggestions from Burnard et al. (2008). They describe how a continuous simplification of categorizing different statements from interviews help organize and simplify the analysis. It is this general idea that has been used in the analysis in this study. As shown from figure 4.4, statements are put into categories that through multiple sub-layers help to gather statements relevant to the a specific research questions in one place. Further, two loops are utilized in order to double check and change categories, if needed.

Regarding the presentation of results and discussion, Burnard et al. (2008) suggest two approaches: either presenting them together, or presenting them separately. The separate presentation was chosen for this study, since it seemed fruitful to handle the research questions and the interviews separate:

- The results present statements and results in context of some important topics. Also, the results are presented in text format which provides context and further explanation to each interviewee's statements.
- The discussion is divided into parts concerned with one research question at a time.

It is important to point out that analyzing interviews is a complex matter in which a multitude of factors are involved. The interviewer's own interpretation of answers, phrasing of questions, bias when interviewing and analyzing, etc. all are factors that influence interpretation, and thereby results. The same applies to the interviewees and the environment in which the interview and analyses are conducted. For these reasons, it seemed beneficial to both separate results and discussion, and to present the results with the context from which they emerged — i.e. describing results in both text format, tables and figures.

#### 4.2.5 Research Quality

The measures of quality in scientific research are *validity* and *reliability*. These measures are presented in figure 4.5. Here we see how reliability is a measure of the trustworthiness of results, and how validity is a measure of how well the results apply to what is being studied.

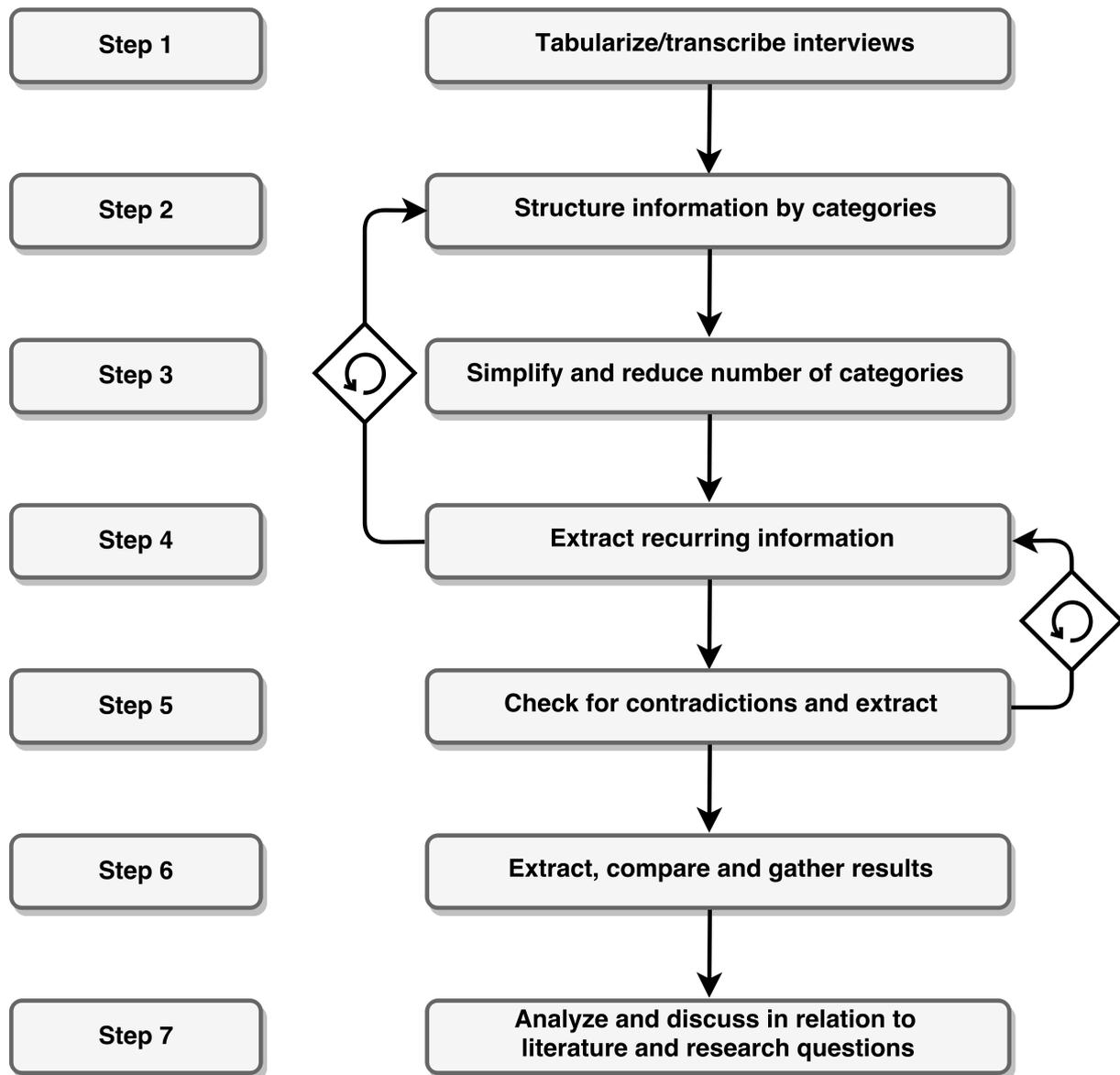
As earlier mentioned, validity and reliability may be quantified in quantitative research. For qualitative approaches, this is not easily done. However, Yin (2009) presents four measures for judging quality of case study designs — three are measures of validity and one is the measure of reliability.

**Construct validity** describes how well the results apply to the studied phenomenon.

**Internal validity** measures if causal relationships can be inferred from the study.

**External validity** describes to what degree the study can be generalized.

**Reliability** describes the trustworthiness and repeatability of the study.



For step 1, see appendix E

Figure 4.4: The Process of Analyzing

To address these measures, Yin (2009) also presents guidance on how to ensure higher quality of the research by implementing measures to increase focus on the aforementioned concepts. Some of these measures were employed in this study, and are presented in table 4.3.

### 4.3 Alternate Methodology

Initially, the use of questionnaires were considered as a method of data collection. One advantage with this approach was that it would enable quantification of validity and reliability, through

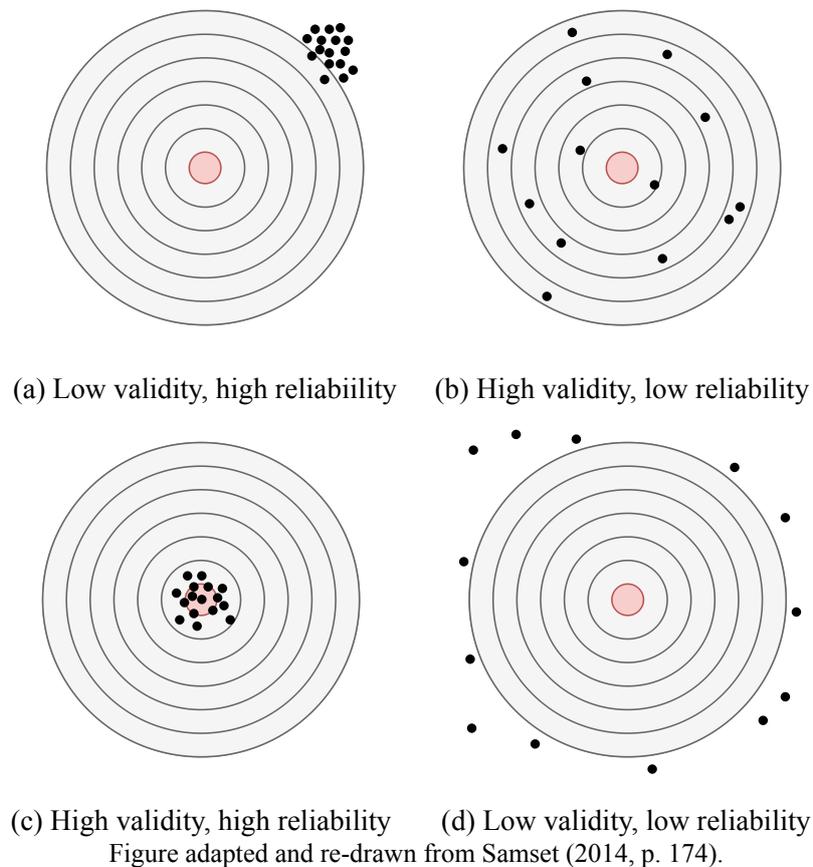


Figure 4.5: Relationship Between Reliability and Validity

Table 4.3: Employed Quality Measures

Test	Case Study Tactic	Phase
<b>Construct validity</b>	Multiple sources of evidence	Data collection
	Establish chain of evidence	Data collection
<b>Internal validity</b>	Address contradictions	Data analysis
	Do pattern matching	Data analysis
<b>External validity</b>	Use replication logic	Research design
<b>Reliability</b>	Develop case study database	Data collection
	Use case study protocol (i.e. interview guide)	Data collection

the use of the same specific questions to a larger base of respondents. However, this approach was discarded since the focus of this study is the values and opinions of the industry, and many of these opinions would not have been identified through questionnaires. For instance, some interviewees participating in this study elaborated on the importance of factors beyond contract

#### 4. Methodology

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strategy in achieving project success — these argumentations would not have been picked up by a questionnaire. Also, a high number of respondents are required in order to achieve high validity and reliability through the use of questionnaires. The selection of participants would therefore be time consuming, while at the same time not adding much value to the study. Furthermore, it is uncertain how many participants would actually respond.

An additional document study helping to map the actual contemporary contract strategies used by the interviewed organizations was considered. This was also disregarded since, as the interviewees themselves, Oyegoke et al. (2009) and Lædre et al. (2006) pointed out, that the vast majority of projects follow a traditional separation based structure. To verify this further in this study would not have added much value.

In this chapter, the result from each of the interviews, in context, will be presented. The purpose of this is to get a clear view of the different opinions as well as the reasoning behind them. The results will not be discussed in relation to the research questions, but rather clarified in a text format in relation to each interviewee.

## 5.1 General Information

According to Rowley (2012, p. 263), a “*good rule-of-thumb for new researchers is to aim for around 12 interviews of approximately 30 minutes in length, or the equivalent, such as six to eight interviews of around one hour*”. In accordance with this, six interviewees were selected and contacted. Five of these responded and agreed to participate in the research. The interviews ranged from 45 minutes to 2 hours. One interview had two participants and four had one.

In the selection of interviewees, we looked for a fifty-fifty distribution of proprietors and contractors/vendors. We were also looking for the largest actors in the Norwegian construction industry as well as proprietors that were public. Table 5.1 depicts the interviewees contacted for this research, their functions, and whether they participated or not. Further, It is important to point out that the participants will be anonymized from here on out, and statements and opinions should not be traceable. To achieve this, a random letter will be assigned to each participant, and they will be referred to with this letter. For the sake of the results and discussion, the type of organization will be mentioned.

Not all of the interviewees appreciated the figure used or the method of interviewing. Initially, all interviews were intended to be recorded in order to thoroughly be able to analyze them and give a correct representation of the interview. One of the participants refused this, and the material gained from that interview was based only on hand-notes.

Table 5.1: List of Interviewees

Company	Participated	No. of representatives	Type
Nye Veier	Yes	One	Public Proprietor
Skanska	Yes	Two	Contractor
Statens Vegvesen <sup>a</sup>	Yes	One	Public Proprietor
Veidekke	Yes	One	Contractor
Jernbaneverket	Yes	One	Public Proprietor
AF Gruppen	No	Zero	Contractor

<sup>a</sup> In English known as *Norwegian Public Roads Administration* (NPRA)

## 5.2 Interview $\alpha$

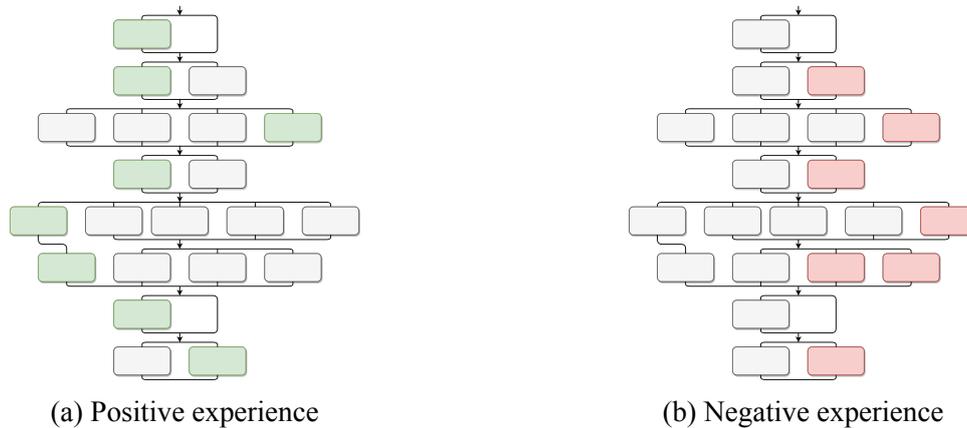
The interviewee represented a public proprietor, or as he put it: *a purchasing organization*. He stressed the importance of keeping the end users in mind and the value for society of the end product. This lay as a clear foundation throughout the interview. He claimed disagreements as the largest negatively influencing factor in a project. The solution, he said, was to choose the correct contracting strategy. This meant that both the interests of the proprietor and contractor must be kept in mind, but also the end users. Choosing the right contracting strategy could help achieve this.

The *specification of work* should always be functionality based — Then he can use his competencies. Further, the contract conditions of today are not suited the projects of today. We should adopt contract conditions from the oil industry because they are structured to suit the large size of contemporary projects. Still, the most important of all is the *contract structure*, where integrated contract structures are best.

The interviewee also stressed that price and payments are huge contributors to conflicts — The margins in which the contractor has to work within are unfair. He further stated multiple times that a maximum price system should be able to help this situation:

“If we were initially happy with the maximum price, then it is great that they [the contractor] can optimize and make money — We were happy with the initial price anyway.”

He further thinks that lowest price competitions are not a good idea. You can achieve just as low a price with economically most viable, but you will have taken surrounding factors into account. In the end, one will achieve added value. From figure 5.1, but also the interview as a whole, it is clear that the interviewee prefers the *integrated approach*. He mentioned *Statens Vegvesen* many times, and stated that trying to get them to use an integrated approach was impossible, that they have their own way of doing things, and that they want full control over the entire value chain. Figure 5.1b depicts one such project, in which he did not like the approach. He said that this was the type of environment in which he had been, until he became a part of a PPP, depicted in figure 5.1a. Projects like this PPP are the ones that have given greatest results in his opinion.

Figure 5.1: Project Experiences of Interviewee  $\alpha$ 

He was clear that the industry should be heading towards integration based contracting strategies. He stated that, even though he did not know BVP that well, from what he could gather, it would reduce conflicts and produce added value. The argument being that the approach is simple, the one who can handle the uncertainty and risk handles it, and that “all will be in the same boat”. In other words, BVP was welcome.

In conclusion, he stated that it is important that the market become more flexible and open for new approaches. Also, the proprietors have to work more thoroughly with the contracting strategies. From table 5.2, the three factors the interviewee thought were of most importance for achieving a successful project, with regards to contracting strategies.

Table 5.2: Interview  $\alpha$  — Most Important Factors

Concept	Arguments
Description of Functions	The possibility to use the contractor’s competencies will often give lower prices. It influences on conflict levels.
Contracting terms	It decides chain of command and the level of freedom for the contractor which may prevent or cause conflicts, depending on selected structure. May limit options for the rest of the strategy.
Contract conditions	Today’s contract conditions are not suited the size/scope of contemporary projects. We should try new approaches.

### 5.3 Interview $\beta$

This interview represented a contractor. While filling in the contracting strategy figure for a project that had given him positive experiences, he slowly realized that the interview was solely concerned with contracting strategies, and not the entire project chain. He therefore wished to fill in a new form — The first form had a *separation based* structure. He claimed that the success of that specific project came from the efforts of the construction manager — He was extremely professional, he said. The atmosphere between the involved parties was also very important. Further, he pointed out, there were few changes in scope of the project, which might have been the most important factor for success — This was attributed to the construction manager. And lastly: “This project is an exception, in which the separation based structure led to success”, he stated.

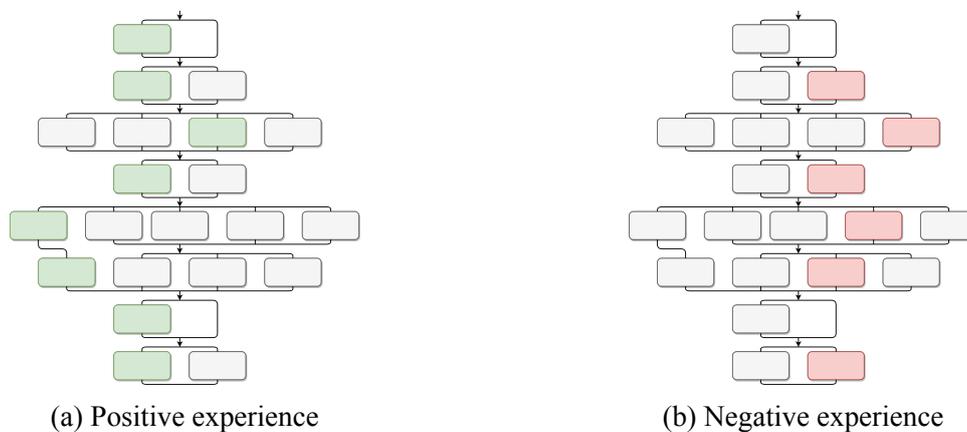


Figure 5.2: Project Experiences of Interviewee  $\beta$

Figure 5.2a depicts the route taken for the successful project of choice. This is a PPP project that is closing in on the end of its operational phase. He highlighted that in this project environment, the contractor can act as the proprietor also, which is a huge plus — The contractor gets to make use of creativity, and he gets responsibility. On the flip side of this, as shown in figure 5.2b (the unsuccessful project), creativity does not exist. He called this “Vegvesen-thinking” and stated that this is nothing but a nuance. Furthermore, the construction phase would have taken *five* years with this type of thinking, as opposed to *two* years, which was de facto.

The interviewee claimed that changes in scope were a natural consequence of the “Vegvesen-thinking” and the separation based structure. However, professionalism and competence are more important than the contracting strategy, as he highlighted earlier. He elaborated that:

“They [Statens Vegvesen] are procurers, but they act as if they were contractors. This is because of the transitions the company has gone through over the years, where many people of the ‘old school’ still resides and continues doing as they are used to. (...) Nye Veier, Avinor and Jernbaneverket understand the distinction [between procurer and contractor] better”

Further, he applauds Nye Veier for thinking new and implementing integration based strategies. Selecting contractors based on competence, experience and documentation will give a lower sum of costs for all, he said. Also, one should learn to see the connection between building, operating and maintenance. The interviewee's organization wants progress, and integration leads to progress. However, "you can't mention this to Vegvesenet. They don't know what this is. Price is what's important [to them]", he said.

The most important factors and topics of discussion in this interview, has been summarized in table 5.3. The selection of these are based on what was most frequently talked about, and the vocal and enthusiastic emphasis put on the topics by the interviewee.

Table 5.3: Interview  $\beta$  — Most Important Factors

Concept	Arguments
Contract structure	<p>Choosing the right structure can help reduce conflicts and clarify roles.</p> <p>It can help reduce scope changes.</p> <p>The freedom to use competence and creativity relies on contract structure.</p> <p>Wants to move in direction of design &amp; build contracts.</p>
Award criteria	<p>The sum of costs can be lower for all parties when choosing economically most viable.</p> <p><i>Corporate Social Responsibility (CSR)</i> and other non-law regulated practices should be awarded.</p> <p>One ensures quality by choosing using multiple criteria.</p>
Specification of work	<p>The specifications need to be correct.</p> <p>Wrong specifications can cause changes in scope, resulting in conflicts.</p> <p>Contractor should have more freedom to design — Why do the proprietor have to decide details not changing quality of the product?</p>

This interviewee was a clear proponent for integration based structure, where he emphasized the freedom to be creative and to make use of the contractor's competencies. He categorizes BVP as a design& build contract with the economically most viable option being awarded. This is the direction he wants to head. More importantly, however, were the atmosphere and competencies of all involved parties, including earlier and later phases. Consequently, it was difficult to extract whether his dislike towards Statens Vegvesen or his advocacy for the integration based approach was bigger. Because throughout the interview, minor contradictions were found. However, he finished of the interview by saying that:

"If we can avoid working in the *prime contract* environment ever again, we will escape it. But, as things are now we are still in the war and have to keep fighting"

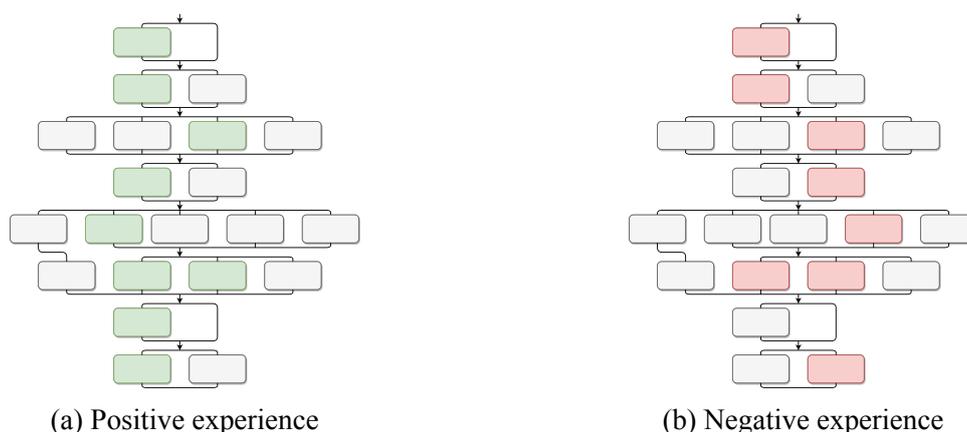


Table 5.4: Interview  $\Upsilon$  — Most Important Factors

Concept	Arguments
Contract structure	Must suit the project, but mostly prefer PPP or design & build. No further argumentation were given.
Contract conditions	Preferred traditional contracts since untraditional contracts can be confusing and unclear.
Award criteria	Stated that competence and experience are vital factors to project success. This, however, can also be retrieved by awarding/bidding based on previous relations.

strategies. The first three strategic choices (as seen in figure 2.1) are more or less the same on every project they have. Firstly, they always use *pre-qualification* since it is better for all parties involved. Second, selecting based on more criteria than costs will give a more predictable project process and outcome. Lastly, negotiated bidding gives the possibility for all parties to elaborate on their bid, which helps align project goals and give a more predictable output.

Primarily they also chose to go with quantity based description of work since “our systems are set up that way”, as he stated it. However, the interviewee thought that their system is set up in such a way that they spend too much time on designing and detailing the work. Consequently, he said that they were slowly moving towards a *more* integrated approach, that would help secure the proprietors quantity descriptions but also allow contractors to develop solutions. He called this a two-levelled approach — One part with suggestions of solutions where the contractor have the freedom to disregard these suggestions, and one part with demands on how specific parts should be solved. And, as a result of this, they move closer to design & build contracts.

Figure 5.4: Project Experiences of Interviewee  $\delta$ 

Concerning incentives, the interviewee stated that they sometimes use rewarding, in

form of bonuses, as incentives. However, he ment that punishment, in form of fining the contractors, is much more effective. Consequently, they ship out a lot of time penalties. However, he ment that his experiences on the benefits and drawbacks of incentives were mixed, and therefore he did not have much of an opinion — He instead referred to the contemporary practice.

The organization mostly use untraditional contract conditions. By this, the interviewee was talking about traditional contract conditions that had been modified to better suit his organization’s goals. They were for instance modified to grant the proprietor a higher percentage of scope changes during the project, than what would have been acceptable with traditional contract conditions.

On a more general note, he stated that he had very few bad project experiences and that an overwhelming majority of his organization’s project were successful projects. Further, he provided this author with a guide showing how the selection of their contracting strategic routes should be selected. This clarified that their project indeed are similar and that the contracting strategy would therefore be similar.

Throughout the interview the interviewee numerous of times talked about the importance of what is done prior to designing contracting strategies. He felt that this had a much greater impact in achieving success, than what contract strategy have. His bad experiences had been bad due too poor pre-project research, which in turn had led to poor specification of work, which in turn had uncovered that much more work had to be done and that an alternative approach would have been much better. Also, he said that “the project scope and success criteria must be clearly defined” — This is what leads to success.

Lastly, in regards to BVP he stated that he believed that this method could be beneficial to many organizations, just not to his. He agreed with the principles of BVP and stated that this is the direction in which they are already heading. The problem with BVP, he felt, was the limited size of the negotiation documents — “One can’t spend billions based on six pages”. Still, BVP would be much more beneficial to other public proprietors in Norway, since they are bound to stricter laws and regulations that the interviewee’s organization. And it was precisely the absence of these laws and regulations for his organization that made him able to use the principles of BVP, but award contracts based on meetings and much more detailed documentation.

From table 5.5 it is evident that pre-project evaluations and assessments are of utmost importance. According to the interviewee, this is the decisive factor on whether the project will be a success or not — It influences everything in the project, including the right choices for the contracting strategy. Also, from figure 5.4 we see that the interviewee is leaning towards a more integrated approach, while at the same time trying to stay somewhere in between the two extremities. Currently he is positioned in a hybrid area, in order to give some freedom of movement to the contractor, but at the same time keeping control of what he judges to be necessary to keep control over.

Table 5.5: Interview  $\delta$  — Most Important Factors

Concept	Arguments
Pre-project research	The assessments prior needs to be detailed and of good quality — This is imperative for success. It lays the foundation for how to select strategy and which type of specification of work that is suitable — This again influences other strategic choices.
Negotiated bidding	This enables more detailed negotiations and description of goals. It provides better insight in possible outcomes of the project as well as securing that the best contractor will be selected.
Contract conditions	Untraditional conditions enables the proprietor to better secure his goals and his standing in the project.

## 5.6 Interview $\epsilon$

This interview was conducted with a public proprietor. The information gathered in this session is somewhat lacking, since the interviewee wished not to fill in the form depicting characteristics of a project he had experienced as less positive. Further, the interview can be characterized by the difficulty of getting the interviewee to respond to the questions asked and the theme discussed.

Firstly, interviewee  $\epsilon$  disagreed (fundamentally, he said) with both the figure being used to track experiences and the idea that certain contract strategies are repeated in similar and dissimilar projects. He was crystal clear in that all projects are dissimilar and that they therefore need meticulous tailoring with regards to their contract strategies. However, he also stated that approximately 5% of their projects followed an integration based route and that 95% followed a separation based route. Further, he added that these 5% had been added to their portfolio in recent years.

Collective experience and expertise were the most important factors in achieving success. Therefore, the strategy must be tailored with that in mind, he said. Ways of doing this were to split the project into smaller sub-projects and award contracts for these smaller parts (a type of isomorphic project structure). These should be contracted with prime and multiple prime contracts. This meant that quantitative specification of work would be used. However, they were moving more towards build and design contracts, so that this practice might be on the verge of changing.

Further, on the subject of contract conditions, he stated that his organization is bound legally to only use traditional contract conditions. Consequently, all of the organization's projects are contracted using standard conditions.

When it comes to incentives, he meant that he had not witnessed any benefits by it. Further, they seldom incorporate it in their contracts, with the exception of time penalties. However,



Table 5.6: Interview  $\varepsilon$  — Most Important Factors

Concept	Arguments
Collective experience and expertise	This provides a larger competence base, and allows for the right solutions being produced correctly.
Negotiated bidding	This method enables bidding from serious potential contractors one wishes to work with. It opens up for negotiating on the conducting of the project and its terms, and also helps select good solutions.
Isomorphic project structure	Allows for more project control and selection of the right contractor for each sub-project.

## 5.7 Summary

Through this chapter, results have mostly been presented in text format. In table 5.7, a summary of the presented results from the interviews are summarized. Further, figure 5.6a and 5.6b show a compilation of the selections made in the mapping figures.

From table 5.7 we can extract that contract terms, conditions and structure is viewed as important for project success among all interviewees. Further, we see a welcoming of integration approaches and an agreement of awarding based on multiple factors, i.e. choosing economically most viable. Lastly, we see that BVP is seen in a positive light, and that there seems to be an agreement on the wish for a more synchronized value sharing.

Regarding the positive experiences (figure 5.6a), we see a clear tendency of choosing integration based agents. Further, the majority of choices were repeated three or more times, which shows synchronicity among the interviewees.

Concerning the less positive experiences (figure 5.6b), the results are more ambiguous. The trend, however, seem to be the choice of separation based agents.

Table 5.7: Summary of Results

	Interviewee				
	$\alpha$	$\beta$	$\gamma$	$\delta$	$\epsilon$
Most important factor #1 <sup>a</sup>	Desc. of func.	Contract structure	Contract structure	Project maturity	Expertise <sup>1</sup>
Most important factor #2 <sup>a</sup>	Contract terms	Award criteria	Contract cond.	Contract terms	Contract terms
Most important factor #3 <sup>a</sup>	Contract cond.	Spec. of work	Award criteria	Contract cond.	Contract structure
Choice on positive questionnaire	Integrated	Integrated	Integrated	Integrated	Hybrid*
Choice on negative questionnaire	Separated	Separated	—**	Separated	—**
Welcoming of integration	Yes	Yes	Yes	Yes	Yes
Content with today's standing	No	No	Yes	No	Yes
Contradictions during interview	Negligible	Few	Few	Few	Yes
Wish for change in practices	Yes	Yes	—**	No	Yes
Awarding based on several factors	Yes	Yes	Yes	Yes	Yes
Increase in value for both parties <sup>b</sup>	Yes	Yes	—**	Yes	Yes
View on Best Value Procurement	Positive	Positive	Positive	Positive	—**

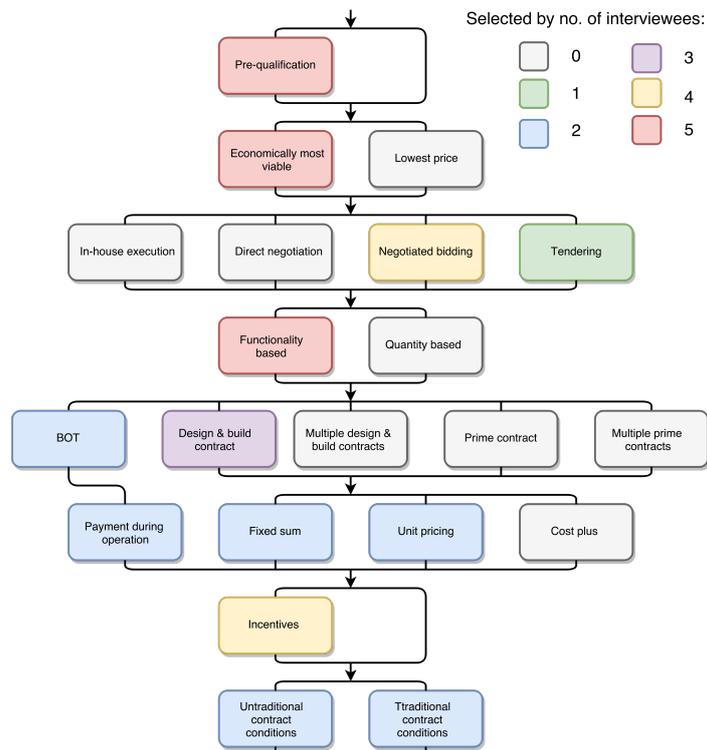
\* The hybrid was unbalanced, and slightly in favor of integration.

\*\* The interview provided no clear answer.

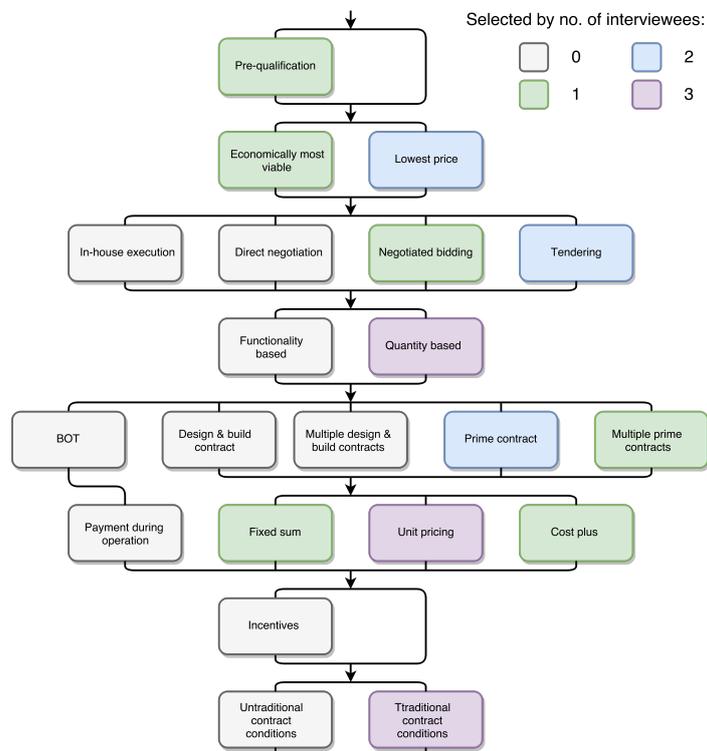
<sup>1</sup> Collective experience and expertise.

<sup>a</sup> These are not ranked by significance.

<sup>b</sup> The interviewee gets a "Yes" if he stated that contracting strategy should benefit both parties, and a "No" if not.



(a) Strategic Choice by Frequency for Positive Experiences Amongst Interviewees.



(b) Strategic Choice by Frequency for Negative Experiences Amongst Interviewees.

Figure 5.6: Summary of Mapping Figures  $\alpha$  -  $\epsilon$



The purpose of this study was to look into the current public procurement practices in the Norwegian construction industry. Six research questions were formulated, and interviews were used to extract the information needed to answer these questions. This chapter presents several discussions based on the results obtained from these interviews, with regards to the research questions. Each research question will have its own discussion, where extremities, opposing viewpoints, the common views, analyzed findings, etc. will be presented.

## 6.1 Contemporary Practices

*What are the current public procurement practices in Norway today?*

The results showed that most contemporary projects utilizes a separation based contracting strategy, whereas a small percentage of projects are spent on trying different methods — most of whom are integration based, but also other approaches. However, it is interesting to see that this was mostly true for the contractors, and not equally true for the proprietors.

One proprietor showed that 95% of projects were contracted based on the separation approach. Of these 95%, most consisted of *lowest price, regular tendering, quantitative specification of work, multiple prime contracts and traditional contract conditions*. This means that the projects utilized a typical separation-route, following the extremities from figure 2.1.

The other two proprietors showed different approaches. One is the exact opposite of the aforementioned, and consistently choose the other extremity — a strict integration based route. The other one choose a generic hybrid route that slightly weighs in favor of separation. Two important factors that can help explain the organizations' dissimilar approaches have been identified:

- (a) The differences in their respective industries
- (b) Their different business ideas

The first, (a), is a complex situational difference where one proprietor works in the rail road industry, and the two others work with common road infrastructure. Though a discussion on these differences goes beyond the scope of this research, it is important to point out that due to the different natures of the industries and certain industry specific factors<sup>1</sup> the organizations might have to think differently in how they strategize contracting.

Regarding the second, (b), one proprietor mostly carries out the operation phase internally in the organization. Therefore, this proprietor would *seldom* contract a PPP project, for instance. Another proprietor has the fundamental standing that his organization is only a procurer. This means that he will always avoid concepts like quantity based specification of work. Further, This makes his organization much more susceptible to choosing options where the contractor comes with all the solutions, i.e. integration. The first proprietor is the largest in the industry and can choose routes more or less freely. However, this is an experienced organization with a huge employee base that holds much competence and experience. Consequently, it is likely that they utilize this competency in choosing strategies, and that this might be the reason for selecting more traditional separation based approaches. As all interviewees pointed out: *This organization continue walking the same path as always* and that *the organization consist of experience and knowledge from the 'old school'*.

Still, most of road infrastructure contracts are separation oriented. This is simply because the largest proprietor in the industry almost has a monopoly on road building, and they see separation as the most beneficial route. This was pointed out by a frustrated contractor that showed gratitude towards new proprietors in the market who are trying new approaches. Oye-goke et al. (2009) also found that separation based routes were dominant in the industry, specifically what they called *traditional routes*, by which they meant lump sum and (multiple) prime contracts.

This is the pathway to the next important issue concerning contemporary practice: *How do they go about designing strategies?* It is interesting to see that most interviewees stressed the importance of tailoring the contracting strategy for each individual project — They are all unique, one said. Still, we see from the results that it is *not* the case that every single project's strategy is tailored. At least it seems that most actors have chosen a sort of "comfort zone" in which they tailor the strategy. By this, it is meant that some actors might have chosen to primarily (or entirely) select a separation (or integration) based route, and that within the restrictions that follows, they tailor. Consequently, their choices become fewer, and the strategies become similar or more or less the same. This is in agreement with the findings of Lædre et al. (2006) who found that proprietors choose strategy based on habits rather than tailoring for each project.

Two of the proprietors were very open about their practices. One showed that he utilizes a generic route in his strategies, and that this route was minorly modified where it was

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<sup>1</sup>An example would be that an actor in the rail road industry would suffer much more severe consequences of downtime than an actor in the road infrastructure industry. Therefore, one might have to choose different approaches of strategy based on the industry itself.

needed for each project. This makes sense when considering that both the proprietor and the contractor has experience and expertise, and it is the proprietor's job to initially determine if she has the right knowledge and experience for a specific project. If not, she might want to make changes and re-evaluate to better strategize and be able to place the right knowledge where it is needed.

The other proprietor described his organization as a “purchasing organization”, and elaborated that this meant that their job was to ensure that the right contractor was put on the right project because it was the contractor that had the competencies for solving the problems and producing the product. The proprietor's competence is in this case the ability to find the right candidate based on the product's functional descriptions and the abilities of the contractors.

It becomes more and more clear that there indeed are several procurement practices in the industry today. However, most of these practices either adhere to one specific industry or they constitute a small percentage of the practices of one industry. And for the case of road infrastructure it is quite clear that despite there being more than one public proprietor, it is one that dominates the industry. Due to this dominance, today's practices are predominantly *separation based*. However, there also is a clear tendency of movement towards utilizing *integration based strategies*, with the inception of *Nye Veier*.

## 6.2 Alignment of Understanding

*What are the differences in understanding of the current practices amongst both proprietors and contractors?*

It was evident from the interviews that all parties perceived the same concerning the frequency of different routes. All showed understanding of what the different routes, and consequently the different types of contracts, meant for themselves. Mostly, the interviewees showed great theoretical understanding of the concepts, but mainly in relation to how they thought the strategy could benefit themselves. In other words: there was a lack of understanding for what a certain strategy would mean for the opposing party. This, however, was not the case for all.

One proprietor pointed out the importance of letting the contractor “earn what she deserved.” To push the market and make contractors submit low bids is not beneficial for anyone — Especially in the long run. Firstly, it seems to compromise the quality of the product, the relationship with the opposing party, and invites opportunistic behavior.

Second, it seems to help hurting the domestic market. Some interviewees (both proprietors and contractors) pointed out that if proprietors only think of getting the cheapest product, then the few contractors large enough to bid will sooner or later start disappearing from the market due to the harsh competition environments.

Still, there were differences in how solving this issue were approached. Firstly, it seems that the contractors have little power in influencing the contracting strategy. Or at least they haven't had any influence until recently. The proprietors have, according to contractors, been acting in self interest allowing small earnings for the contractors down to 2-3%. The con-

tractors feel that they have no influence on this and that they just have to take the projects they are awarded. Proprietors seem to be of the same understanding and choose to do one of the following:

- (a) Not take it under future consideration
- (b) Try new approaches

Now, the results showed that one proprietor had a business model that rewarded the contractor (when considering the low earnings). This is incorporated in their idea of finding contractors willing and capable of taking responsibility for uncertainty and in general run the project integrated. Another proprietor took a similar approach, but instead focused on selecting contractors based on other factors than lowest price alone, meaning that the contractor better could influence the pricing, earn more than other potential candidates, and still be awarded the project. Another approach taken was to, seemingly, not consider the needs of the contractor very much — This seem to be the most frequent approach.

The interesting part is that these perceptions were shared by the contractors. They have felt overlooked and that their knowledge, expertise and competence is undervalued. Consequently, they applaud any strategy that goes beyond the traditional separation based. Is it so then, that the proprietors knowingly are pushing the contractors to their limits? No. There is an ongoing change in the procurement practices and contracting strategy that seem to move in a direction beneficial to the contractors. This is the reason that many interviewees admired the new way of thinking that *Nye Veier* is utilizing.

### 6.3 Need for Change

*What are the views on the need for change of the current practices — Both amongst contractors and proprietors?*

Perhaps the most prevalent finding in this research was the wish for a change in contracting strategy. This was evident from the mapping figures (figures 5.1 - 5.5), but further it was an ongoing theme throughout the interviews. Also, it follows naturally from the previous discussed topics that there indeed is a wish, if not a need, for change.

There are some literature providing information about the benefits and disadvantages of the different strategic choices in a contract strategy (Lædre, 2009; Davis et al., 2008; Love et al., 2008). These authors seem to largely agree with one another. This is also the case for the information obtained in this research. It seems that their results cohere with the ideas and experiences of interviewees in this study.

However, this should mean, as many has stated, that there are methods more optimal than others dependent on the specific project. So why is it then, that the contractors seemingly want out of today's practices and on to something different and new? Three possible explanations may be that:

- (a) The best option is not used for the project
- (b) The same strategy is used for all/most projects
- (c) The benefit—disadvantage relationship favors one party

Concerning (a), whether or not the best approaches has been used in the projects discussed in the interviews is hard to tell — It goes beyond the scope of this study and would require a different research methodology. However, it is clear that some approaches in general seem more welcomed and wanted than others. Another factor that influences on whether or not the best option has been used is the goals of the two parties — The option can indeed be best for one party and not best for the other party. If we look at this from the perspective of the proprietors, they all felt that their approach was the best one. However, one proprietor pointed out that his approach was the best *for him*, and that other proprietors might have other goals, needs and restrictions. From the viewpoint of the contractors, the opinions were more harmonized. They seemed clear in that integration based approaches were best (keeping in mind that the vast majority of projects are separation based) — Not only for themselves, but also for the proprietors.

Explanation (b), has many similarities with (a), but a major point here is that both proprietors and contractors seem to prefer using the same or similar strategies for each project. The proprietors show this through explaining that they follow a generic route, that 95% of their projects are separation based, or that their business strategy is to use integration based strategy. The contractors show this through asking for integration based strategies — they seem to say that they want similar approaches on their projects, just not separation based approaches.

The third explanation, (c), encapsulates both (a) and (b), but stresses the *direction* the advantages and disadvantages go — Who does a strategy benefit? It is here it can be interesting to bring up the importance of common goals for the parties. Based on the results found in this research it looks like contractors feel left out or under-appreciated since they seldom get to use their entire base of competence — They don't get to come with solutions, they don't get to handle uncertainties and risks, and they must accept changes in design and schedule made by the proprietor. This is in the nature of the separation based approaches, and the contractors seem not to feel positively about this.

On the other hand, traditionally the proprietors seem to not have noticed this, and it is unclear if they feel that they get more advantages than the contractors. Still, they are the ones who have to judge who is better capable of handling risks and uncertainty, and whether they need a solution or if they know exactly what they want and how they want it. Nevertheless, it is a trend that proprietors are trying new approaches and these are indeed moving in the direction of integration.

Whether or not the one should do as the contractors seem to want, namely to move away from separation based strategies, is a question beyond the scope of this study. However, as mentioned earlier, several authors claim that different procurement routes are suited for different purposes (Lædre, 2009; Davis et al., 2008; Love et al., 2008), and it seems as if the major problem (with both parties in mind) is that the tailoring needed to ensure that the right approach for a

project is not performed, as Lædre et al. (2006) found. However, they also says that there is no established best practice on how to select, and this might be an influencing factor in today's situation, and consequently the need for change.

### 6.4 Procurement Values

*Is there focus on values other than monetary and/or are there wishes for shift in the view of values in the industry?*

The question above looks into the basis in which contractors are selected — Either by choosing the lowest bid or by choosing the economically most viable option. This question is important since it sheds light on where contractors need to focus their efforts in getting the contract, but also CSR in relation to procurement (also known as *sustainable/green procurement*).

Only two interviewee raised the topic of CSR's role in the selection of contractors, and this was a contractor and a proprietor. The contractor told that within his organization, many initiatives had been implemented in order for the organization to be more socially responsible and to be able to show this to the public and to proprietors. This included a shift to electrical vehicles and machinery, a greater focus on *Health, Safety and Environment (HSE)*, offering education to employees, they have cut  $CO_2$  emissions, etc. Still, this was never considered when selecting contractors, he felt. It seems plausible that this is the case, since when asked about values and selection, only one proprietor mentioned these types of initiatives as being part of the contractor selection.

Still, all agreed that selection based on multiple criteria is best. This raises another question: What type of criteria is this? And, the answer to this question varied slightly, seemingly with regards to whether a contractor or a proprietor answered. One proprietor pointed out that one important criteria would be that the contractor must not have been involved in financial crimes — An answer that seem to put value on the absence of negative factors, rather than valuing positive factors. Such answers were not found amongst contractors.

Interestingly, the interviewees unanimously named competence and experience as critical success factors and that this should be a significant part of selection criteria. What is interesting with this is that some claimed that selecting based on lowest bid did not exclude the factor of competence — Especially when a pre-qualification had been selected. The point here is that pre-qualification is already a safeguard in which selection factors are implemented. After pre-qualification, there might not be a need for further criteria based selection — Often the cheapest option will be chosen despite selecting based on the most economically viable award criteria. However, this is not always the case either.

Still, all proprietors agreed that cost would always account for the largest part of the selection criteria — values between 60% and 90% were mentioned. Consequently, it would seem that it all comes down to costs when awarding. It seems that the idea of CSR, HSE and similar concepts as award criteria has not matured enough to considered to a significant extent, or that it simply has been deemed as not a good award criterion. However, it also seems that from 10% and up to 40% of the award criteria often will be based on factors such as previous

project success and competence. So there are indeed other values than purely monetary ones in the industry.

## 6.5 Overlaps with BVP

*What are the major overlaps between today's practices and Best Value Procurement?*

As established in chapter 3, BVP follows an integrated procurement route — Or rather, when choosing a procurement route, BVP tells the procurer to select integration agents. This gives the possibility of variations in selection of integration based agents. In this study, all participants showed a liking of such agents. Looking at figure 5.6, this is quite clear. However, these types of projects were reported by several interviewees to be around 5% of their portfolios of projects — the remaining 95% being separation oriented. So, the current standing seem not to correspond to the participant's preferences.

Most interviewees told that they mostly work with agents such as *lowest price award criterion, ordinary tendering, quantity based specification of work and prime contracts*. Pre-qualification was also often used, but this varied. A comparison of this situation and the BVP principles and figure 3.4 reveal substantial differences between the situations. The only overlap that can be identified is the occasional use of pre-qualification.

Still, as discussed earlier, the industry is under change towards more frequent use of integration agents — One of the interviewees exclusively used *descriptions of functions, design & build or PPP and economically most viable award criteria*. This change is clearly moving in the direction of a BVP-like philosophy. However, as of today, this only constitutes a small minority of projects.

Some interviewees talked about “expertise” and how important that was for project success — This indeed is in alignment with BVP. However, when selecting contractors based on the economically most viable option, the proprietors would still choose quantity based descriptions of functions and (multiple) prime contracts. Consequently, it was difficult to extract what was meant with “expertise”, since it seemed not to be utilized based on the rest of the contracting strategy.

All three proprietors talked about the benefits of *negotiated bidding*. Two of these claimed to mostly use this method, while the third<sup>2</sup> occasionally used it but also preferred it. It was pointed out from all parties that the contractor and proprietor gets to achieve a greater understanding of the project and the bid through this process. The contractor get to clarify her plans and show that she indeed is the right contractor for the project. This is very similar to the clarification in BVP, except that in BVP-clarification there is no change in contract — scope, costs, responsibilities, accountabilities, etc. stay the same as in the original bid. Still, this might

<sup>2</sup>This proprietor accounts for most projects today. The most frequent contract term remains traditional tendering.

be the clearest overlap, despite not being the most frequent contracting term utilized today.

There seem not to be many overlaps between contemporary practices and BVP. However, the tendency to implement more integration based contracting strategies seem to allow for a change where there will be overlaps. Further, the projects that do utilize integration agents share many similarities with BVP, simply because BVP also is integration based.

### 6.6 Proponents and Opponents

*Are there proponents or opponents to BVP, and if so, why do they take these standpoints?*

Based on the clear wish for change in practices amongst contractors, the unanimous agreement on the importance of selecting contractors based on multiple criteria, the agreement of wanting to increase shared value between the involved parties, etc., it is interesting to see which direction the interviewees wanted the change in practice to go. From the previously discussed topics, it is clear that the participants wanted a shift towards integration. In this study, BVP is the interesting alternative approach that is suggested.

When asked about the changes the interviewees wanted to see in the future industry, one contractor and one proprietor mentioned BVP. They both elaborated on the same benefits of the method, illustrating that both parties would benefit from this. Mainly, the idea of investing in the procurement process in order to extract an expert that was not in need of governing by the proprietor seemed attractive and logical to them. It seems like the factors they are dissatisfied with today, are the same factors with which they think BVP will make all the difference. However, none of them felt like BVP was the only option — Mainly they just wanted change. They also stressed that they were only familiar with the general strokes of BVP.

One proprietor said that BVP would be a great option for those restricted by certain laws and regulations. For most, however, they are free to perform procurement how they see fit. Thus, it is not necessarily a valuable option for all. One important negative factor with BVP was the fact that decisions are made on very little information — The presumptive contractor is selected for clarification based on a few short documents. To award contracts worth several billion NOK on that information would be a mistake, he felt.

It is interesting that, despite calling for change and emphasizing the importance of collaboration, expertise and selection based on multiple criteria, most interviewees seemed as if they had limited knowledge of BVP, which also emphasizes these factors. Still, there might be other approaches that were interesting, but that were not discussed in the interviews.

The material on this topic becomes somewhat ambiguous and inconclusive. There were no direct argumentation in favor for BVP, instead there were argumentation for the need of changing practices in the direction of integration. It might seem as if that the current knowledge of BVP is not high enough for the industry to form opinions yet. It does seem, however, as if the general philosophy behind the wanted change and BVP aligns quite well. Mostly, it is the

*economically most viable selection, functionality based specification of work* and the moving towards *design & build* that speaks in favor of this.

On the other hand, not all proprietors agreed that *functionality based specification of work* and *design & build* necessarily were the best options. Often they would be the ones having greatest knowledge and experience and thus they would have to take control over the project, ergo choosing separation based agents.

As the situation is today, it looks like the industry needs more time to get to know BVP (and also other procurement practices) in order to form well informed opinions.



This study aimed at mapping perceptions of success with regards to contracting strategy in the Norwegian construction industry. Further, it sought to identify the contemporary practices, investigate the need for change in practices, and selection criteria. Lastly, the study compared these findings with the principles of BVP, in order to see how similar the practices are. This chapter presents the conclusions made based on the data collected and analyzed in this study.

The study found that there are a variety of contracting strategies being used in contemporary practices. However, the vast majority (estimated up to 95% by some interviewees) of strategies utilized separation based routes. It can therefore be concluded that contemporary practices in the Norwegian construction industries are mostly separation based. Further, it was also revealed the trend of habitual design of contracting strategy.

However, the study also found that an ongoing change towards use of integration agents in contracting strategy is happening. Not only was there a strong wish for such a change amongst contractors, but a tendency of utilizing *economically most viable option* was also found amongst proprietors. Furthermore, some proprietors showed an openness towards less proprietor management, and one even had it as a principle to only act as a purchaser.

Concerning the perceptions of current practices, proprietors and contractors seemed to have similar understandings. Both parties recognized the small margins of contractor earnings and the harsh competitive environments. The approaches to handle this situation varied between the proprietors, while the contractors felt they had no power to influence change. Further, the study showed that the parties seemed aware of an unbalanced relationship between contractors and proprietors.

With regards to award criteria, it was found that both parties prefer awarding based on multiple criteria. Cost seem to still be the most important one, but experience and expertise were seen as greatly impacting success, and thus important in awarding contracts.

## 7. Conclusion

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The similarities between BVP and contemporary practices were found to be minimal. However, the small minority of projects utilizing integration approaches were similar to the proposed BVP contract strategy. Also, the use of *economically most viable* award criteria showed some sharing of philosophy with BVP.

Lastly, the knowledge of BVP were found to be limited amongst the study participants, and thus the data does not support a clear answer as to whether there were proponents to the method. However, the data indicated that many of the practices wished for by the contractors seemed to share properties with BVP.

Further studies mapping the procurement practices in the Norwegian construction industry, quantitatively, should be conducted. More extensive research of this kind will help lay a foundation upon which further research can be conducted. Suggested examples are, but are not limited to:

- Investigations on correlations between project success rate and method or strategy — Is the assumption that each project needs a tailored strategy actually true? Are projects that unique?
- Examine whether the perceptions of the industry correlates with the methods and strategies used.
- Look into conflict rates by strategy or method.
- Examine time and cost deviations by strategy and method.
- Mapping of proprietor and contractor satisfaction rates by method.

It is also suggested that studies examining the correlation between the contracting strategies sought after by the contractors/proprietors and their impact on project success, be conducted. Such a study will help to reveal if the industry's perceptions are in line with actual conditions.

Research on the BVP process in the Norwegian construction industry would also give interesting insight, not only to project success in terms of time and cost, but also to proprietor and contractor satisfaction, and quality of deliverables.

Lastly, research on award criteria would be fruitful. Here it could be interesting to see the practical application of using criteria such as CSR, HSE, sustainable development, etc. This could further be seen in light of green and sustainable procurement and the practical applications of it, as well as the rewards it might bring.



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# **Appendix A**

## **Comparison of Methods**

The contents of this appendix is a table presented in Love et al. (2008, p. 4-6) comparing different approaches to contracting strategy. This has been included purely for the purpose of highlighting that there are more approaches to contracting strategies than the two discussed in this thesis.



<b>Criteria</b>	<b>Traditional (Separated)</b>	<b>Design and Construct (Integrated)</b>	<b>Management (Packaged)</b>	<b>Collaborative (Relational)</b>
<b>Time/ Certainty of Time</b>	Not the fastest of methods. Desirable to have all information at the tender stage. Consider two stages or negotiated tendering.	Relatively fast. Pre-tender time largely depends on the amount of detail in the client's requirements. Construction time reduced because design and building proceed in parallel.	Early start on site is possible, long before tenders have been invited for some of the works packages.	High level of dependence on relationships, teamwork, and the adaptability and performance of individuals.
<b>Complexity</b>	Basically straightforward but complications can arise if client requires that certain subcontractors are used.	An efficient single-point contractual arrangement integrating design and construction expertise with just one accountable organisation.	Design and construction skills integrated at an early stage. Complex management operation requiring sophisticated techniques.	Considerable complexity involved. Collaboration and mutual scope needed.
<b>Quality</b>	Comprehensive design sets out quality standards. Contractor is wholly responsible for achieving quality on site.	Client has less control over design details. Contractor's design expertise may be limited. The client has little say in the choice of specialist sub-contractors.	Client requires certain standards to be shown or described. Management contractor responsible for quality of work and materials on site.	Some potential for quality to be comprised to meet cost targets, mitigated by cost targets and client involvement.
<b>Flexibility</b>	Client controls design and variations to a large extent.	Limited without cost penalties once the contract is signed. Flexibility in developing details or making substitutions is to the contractor's advantage.	Client can modify or develop design requirements during construction. Management contractor can adjust programme and costs.	Project scope is developed collaboratively albeit unclear or uncertain in the concept phase. Effort is required to properly define in the time available. Requires a high degree of flexibility but fixed within a Target Outturn Cost (TOC) constraint.
<b>Certainty of Cost</b>	Certainty in cost before commitment to build. Clear accountability and cost monitoring at all stages.	Guaranteed cost and completion date.	Client is committed to start building on a cost plan, project drawings and specification only.	Once the TOC is determined history of alliance projects has shown that few exceed cost.

## A. Comparison of Methods

<b>Price Competition</b>	Competitive tenders are possible. Negotiated tenders reduce competitive element.	Difficult for the client to compare proposals which include both price and design. No benefit passes to client if the contractor seeks greater competitiveness for specialist work and materials.	Management contractor is appointed because of management expertise rather than because their fee is competitive. However, competition can be retained for the works packages?.	Selection is based on non-cost criteria. Alternative models of cost competition at the time of tender.
<b>Responsibility</b>	Can be clear-cut division of design and construction. Confusion possible where there is some design input from the contractor or specialist subcontractors and suppliers.	Can be clear division, but confused where the client's requirements are detailed as this reduces reliance on the contractor for design or performance. Limited role for the client's representative during construction.	Success depends on the management contractor's skill. An element of trust is essential. The professional team must be well coordinated through all the stages.	Heavy focus on collaboration. Developing and maintaining relationships with the use of expert facilitation is the key.
<b>Risk</b>	Generally fair and balanced between the parties.	Can lie almost wholly with the contractor.	Lies mainly with the client ? almost wholly in the case of construction management.	Project risks shared and collaboratively managed. Model available for financial risk and reward.
<b>Summary</b>	Benefits of cost and quality but at the expense of time.	Benefits of cost and time but at the expense of quality	Benefits of time and quality but at the expense of cost	Alliances instil a no blame culture of collaboration and trust. Fiscal transparency is at the fore. Selection on the basis of best for project generates commitment and alignment of mutual goals.

This table is re-drawn after Love et al. (2008, p. 4-6)

# **Appendix B**

## **Mapping Figure**

This appendix contains the interview mapping figure used for all interviews. Since the interviews were conducted in Norwegian, the questionnaire/fill-out form is written in that language.



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# Bakgrunnsinformasjon om intervjuobjekt

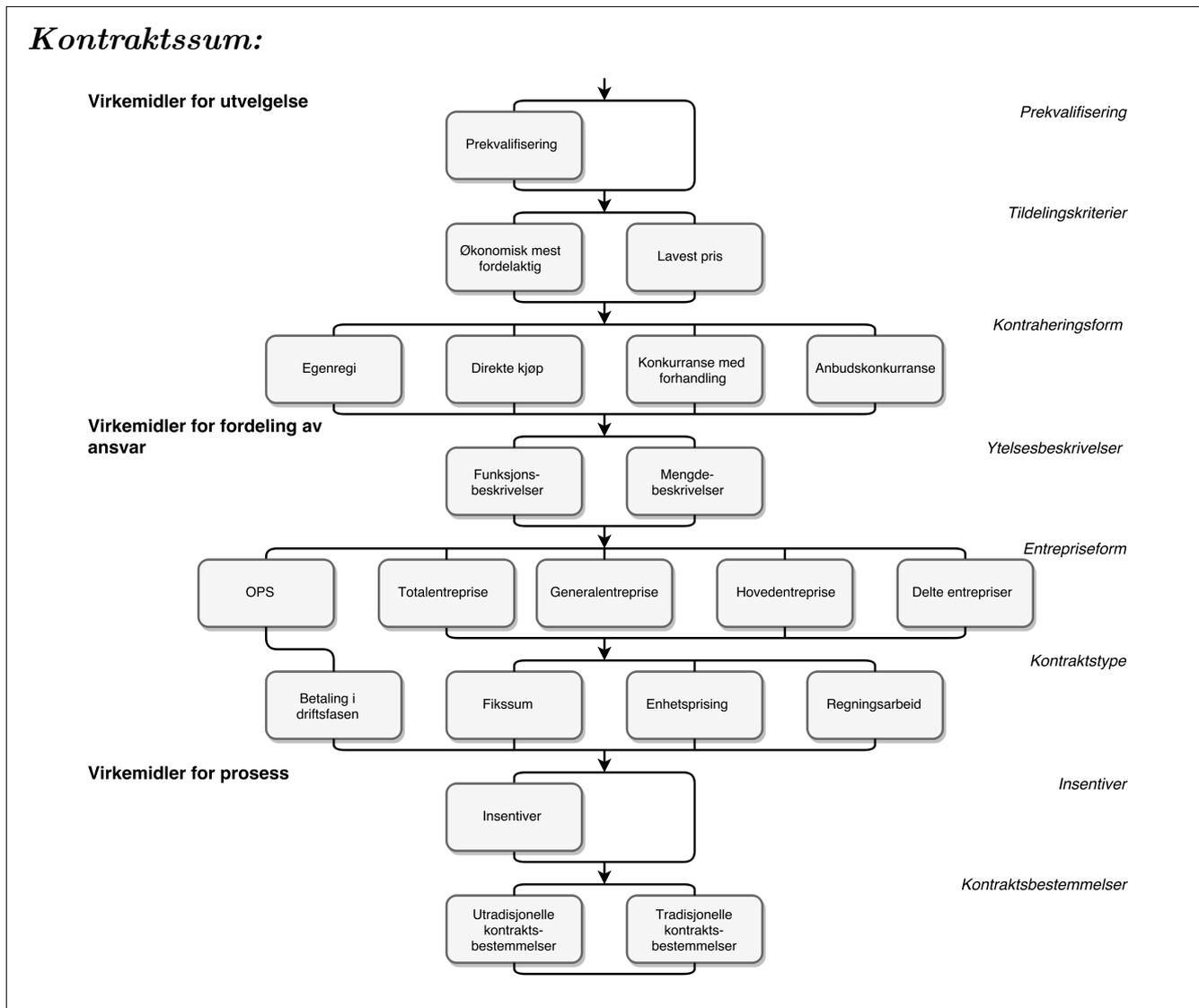
Intervju kring kontraktstrategi med omsyn til offentlege byggherrar og entreprenørar

NAMN  
ORGANISASJON  
ROLLE  
ALDER

Dato:

# Lædres åtte val for kontraktstrategi

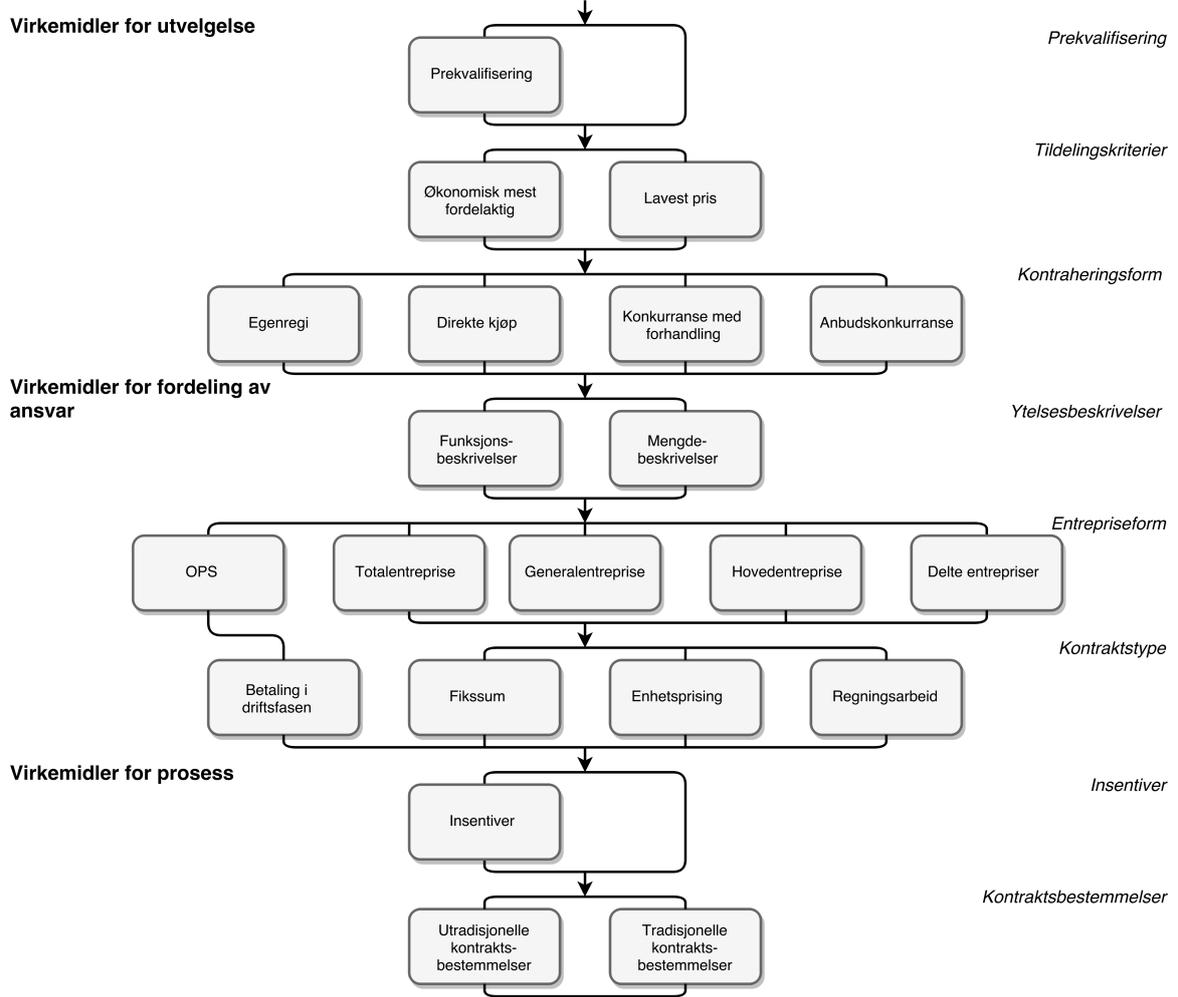
På denne sida skal de markere, med **grøn** farge, dei vala som vart tekne i eit prosjekt som ga gode erfaringar. De skal dernest gå gjennom kvart val og forklare kvifor desse vala var gode og kvifor dei vart tekne.



Er der noko anna som bør takast med eller noko du ynskjer legge til, skriv her:

På denne sida skal de markere, med **raud** farge, dei vala som vart tekne i eit prosjekt med mindre gode erfaringar. De skal dernest gå gjennom kvart val og forklare kvifor desse vala var uheldige og kvifor dei vart tekne.

**Kontraktssum:**



Er der noko anna som bør takast med eller noko du ynskjer legge til, skriv her:



# **Appendix C**

## **Letter to Interviewees**

This appendix contains the letter sent to all interviewees prior to the interviews. It is written in Norwegian due to the interviewees being Norwegian. It contains information about the interview structure, theme of the interview, as well as background and goals for the thesis.



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**Namn**  
*Organisasjon*  
*Adresse*  
*By*

Dato

# Intervju kring kontraktstrategi

Hei, *Organisasjon*.

Herunder ligg litt informasjon kring intervju i samband med eksamensarbeidet mitt.

## Om meg

Mitt namn er Simeon Mavropoulos og eg er 26 år. Eg har tidlegare fullført ein bachelorgrad i *bygg og miljø*, med konstruksjon som spesialisering, og studerar for augneblinken den internasjonale mastergraden i prosjektleiing hjå NTNU — Msc Project Management. I desse tider samlar eg inn data til masteroppgåva mi som skal ferdigstillast i mars 2017.

## Litt bakgrunn om oppgåva

Oppgåva eg har teke fatt på konsentrerer seg kring samtidens kontraktstrategi i byggebransjen i Noreg. Eg ynskjer å sjå nærare på kva praksisar som har gjeve positive og mindre positive erfaringar — dette frå perspektivet til både byggherre og entreprenør. Vidare søker eg etter indikasjonar på kva endringar i dagens praksisar som er ynskte. Ein samanfating av denne informasjonen vil bidra til å sjå korvidt en modell som *Best Value Procurement* er ynskt hjå bransjen, og kor langt derifrå dagens situasjon ligg.

## Førebunde spørsmål

For å gjeve eit nærare inntrykk av samtaleemne, listar eg her opp nokre vegleiande spørsmål som intervjurunda skal bidra til å svare på:

- *Kva er dagens kontraktstrategipraksisar?*
- *Kva meiner de burde endrast med dagens praksisar?*
- *Kva og korleis er verdiar vektlagde i kontraktstrategien?*
- *Kva i motparten (byggherre/entreprenør) sine praksisar burde endrast?*

## Om intervjuet

Det er planlagt eit semi-strukturert intervju, der eg vil stille få, men vide, spørsmål. Her får de stort rom til å diskutere og utdjupe. Vi kjem også til å gå gjennom ein liten modell for kontraktstrategi der eg ynskjer at de skal forklare litt kring val de har teke/ville teke.

Med venleg helsing,  
Simeon Mavropoulos



# **Appendix D**

## **Interview Guide**

This appendix contains the interview guide used for all interviews. Since the interviews were conducted in Norwegian, the guide is written in that language.



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# INTERVJURETTLEIAR

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Simeon K B Mavropoulos

Studentnr.: 713423

## 1 Introduksjon

Eg forklarar litt om oppgåva, kva eg vil nytte informasjonen frå intervjuet til, samt kva målsetnaden med arbeidet er.

**Oppgåva** Går ut på å identifisere kva samtidspraksisane er og kva som har gjeve positive og negative erfaringar. Kva meiner intervjuobjekta at har gjeve best resultat (der "best resultat" er definert av dei sjølve). Kva kan utbetrast og kva praksisar bør vi halde fram med? Er der metodar vi har trua på, og ligg desse eigentleg nær den praksisen som bransjen praktiserar?

**Informasjon** Den vil bli nytta til å kartlegge felles inntrykk frå intervjuobjekta, for å danne eit billete av kva bransjen kollektivt meiner er bra. Dette vil også nyttast til å vurdere der finnast metodar som nyttar nettopp desse foretrukne metodane. Dernest kan vi sjå på kor villige bransjen er til å prøve desse nye metodane.

**Målsetnad** Denne er å kartlegge dagens praksisar for å sjå kvar ein kan auke "verdiutvinninga" og unngå missforståingar og uoverensstemmingar mellom partane. Folgeleg også sjå om ein då kan ta vare på andre verdiar enn reint økonomiske — sånn som i TBL.

## 2 Figur — positiv vs. negativ erfaring

Her delar eg ut Figuren til Lædre og får dei til å gå gjennom og fylle ut den. Dernest går vi steg for steg gjennom vala dei har teke og dei får, i djupna, forklare:

- Kvifor dei valde dette.
- Kva var bra med dette valet.
- Kva kunne vore endå betre.
- etc.

Avslutningsvis ber eg dei om å kommentere om:

- der er anna viktig å ta høgde for.
- der er andre val dei kunne tenke seg å ha teke.
- etc.

Vi går så vidare til "forsknings spørsmål".

### 3 Tema — steg for steg

- (a) Kva er samtidspraksisane i Noreg?
- Dette får vi delvis frå figuren.
  - Kva tenkjer de kring desse praksisane?
  - Kva er for deg viktig i kontraktstrategi?
  - Kva tenkjer du om opportunisme? Er der val som aukar/minskar dette?
- (b) Korleis forstår byggherre og entreprenør desse praksisane ulikt?
- Kva tenkjer du er i fokus hjå motparten (byggherre/entreprenør)?
  - Kvifor dette?
  - Er der noko motparten (byggherre/entreprenør) må fokusere meir på? Noko hen må endre?
- (c) **Kva er dei store kryssningspunkta mellom samtidspraksisen og Best Value Procurement?**
- **Denne kjem som ei totalvurdering/samanfatning av den øvrige tematikken.**
- (d) Kva ynskjer partane å endre på, frå samtidspraksisen? jf. (b)
- Kva punkt bør utbetrast?
  - Kva er det med samtidspraksisen som ikkje er tilfredsstillande?
  - Kvifor er dette ikkje tilfredsstillande?
  - Kva er bra? Kvifor?
- (e) Har du arbeidd med eller vurdert metodar som du synst er interessante? Kvifor?
- Er du open for nye gjennomføringsmodellar?
  - Kva modellar, i så høve?
  - Kva er det som avgjerder kva metodar de nyttar?
  - Kvifor desse modellane?
- (f) Korleis vektlegg de verdier ved utvelgelse?
- Korleis ville du vektlagt? Kvifor dette?
  - Har de mekanismar for dette i strategiane dykkar?

### 4 Avslutning

Vi tek tak i kva enn dei føler er viktig og relevant for tematikken — her er det heilt frie tøyalar til å kommentere om kva som *heilheitleg* for dei er viktig. Dersom vi har god tid tek vi fram figuren til Lædre og eg spør om *kva som bør tenkast på for kvart steg — kva tenkjer dei er viktig*. Eg spør dei så: "kva ville de ha spurt om no?". Eg tek med meg dei utfylde arka, og intervjuet er ferdig.

# **Appendix E**

## **Interview Transcripts**

This appendix contains transcriptions of the interviews in a table format. Since the interviews were conducted in Norwegian, the transcriptions are written in that language. The contents of the tables provide short descriptions of topics and opinions, as well as time codes referring to where in the audio recordings these topics were discussed.



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# Intervju $\alpha$

## Positive erfaringar frå eit OPS-prosjekt

Tid	Tema	Innstilling
00.22.48	Generelt om prosjektet	
00.24.05	Prekvalifisering	Viktig då det gjev enklare og tryggare utvelgelse, samt at entr. som ikkje er gode nok slepp å kaste vekk pengar.
00.26.31	Økonomisk mest fordelaktig	2 år mindre byggetid.
00.27.46	Anbudskonkurranse	Offentlig.
00.28.03	Funksjonsbeskrivelse	Gi entrp. mulighet til å velge beste løsning —gjev billigare pris. Løysinga er ikkje så viktig. Best at entrp. får velge utifrå det dei kan.
00.30.22	OPS	Forvalgt metode for å teste ut. Hadde allereie hørt positivt frå utlande. Viss storleik var krevd.
00.30.30	Betaling i driftsfasen	
00.32.27	Tilgjengelighetsmetoden	Relevant til OPS. Betaling for kvart minutt vegen er ope. Trekk av betaling ved stengt veg. Betaling med tanke på brukaren. (negativ komm. om Vegvesenet). Bonusbetaling for mindre ulukker på denne strekning (Incentiv?).
00. 35.54	Tradisjonell	Veldig usikker på type. Er tryggast. «Alle» Kjenner den. MEN(!) Bør bytte til kontraktstandard frå olje og gass. Våre standardar er ikkje laga for så store prosjekt som i dag — Storleiken er viktig!
00.40.18	OPS	Privatfinansiering er ikkje bra, men OPS med bet. i drift er best!
00.42.30	Prosjektet	Einaste integrasjonsbaserte han var med på hittil. Vegvesenet er konsekvent motsett.

## Negative erfaringar frå eit prosjekt (1281/00.43.30)

Tid	Tema	Innstilling
00.43.54/ 00.44.45	Generelt om prosjekt	Multiconsult. Rådgjervar. Undersjåisk tunnel.
00.45.18	Lågast pris	
00.45.26	Ikkje prekvalifisering	
00.45.38	Enhetspris	
00.45.53	Delte entrepriser	Var rådgjevar og ikkje med i entreprise.
00.46.04	Anbudskonkurrans og mengdebeskrivingar	
00.46.16	Enhetspris med regningsarbeid	
00.46.31	Ikkje incentiv	
00.46.34	Tradisjonell kontrakt	
00.46.50	Problem med prosjektet	Entreprenørkrangel, krangel mellom rådgjevande og byggherre, krangel mellom nesten alle partar.
00.47.21	Bidrag til negativ situasjon	<ul style="list-style-type: none"> <li>• Prekvalifisering var ikkje så aktuelt.</li> <li>• Burde vore økonomisk mest fordelaktig, men Vegvesenet gjer det ikkje sånn. Dei går berre på låge prisar—ikkje snakk om dette.</li> <li>• Anbud grunna offentleg av ein viss storleik: 500 mill.</li> <li>• (00.48.50) Burde vore totalentreprise. Men, sånn tenkjer ikkje Vegvesenet. Dei vil ha full kontroll over alle i heile verdikjeda. No tar dei litt i bruk totalentreprise.</li> <li>• Enhetsprising og regningsarbeid hadde nok ikkje vore noko å gjere med — det hadde nok ikkje gjort noko utslag.</li> <li>• Incentiv burde alltid vere med!</li> <li>• Tradisjonell kontrakt var greit.</li> <li>• (00.50.30) Entrepriseform er det viktigaste.</li> </ul>
00.51.13	Kva ville desse utbedringane ha gjeve prosjektet?	<ul style="list-style-type: none"> <li>• Forholdet mellom aktørane hadde vore betre.</li> <li>• Totalentreprisa ville vore ryddigare (har ikkje så mykje erfaring med dette)</li> <li>• Total pris hadde blitt lågare med totalentreprise.</li> <li>• Konfliktnivå kan målast økonomisk og derfor bidra på pris.</li> </ul>

## Generelle spørsmål (1537/00.53.22)

Tid	Tema	Innstilling
00.55.05	Kva er dei ulike partane ute etter	<ul style="list-style-type: none"> <li>• Retninga ein vel heng saman med ynskjer.</li> <li>• Konsulent som lagar byggeplan (lagar produkt), vil berre at der ikkje er feil i forhold til standardar. Utover dette finnst ingen incentiver.</li> <li>• Entreprenør varierer: <ul style="list-style-type: none"> <li>- nokre vil ha klare liner på kva som skal byggast (mengdebeskrivelse og bli styrt). Andre ikkje.</li> <li>- Heng saman med riskar, m.m. Det er avhengig av business du har i selskapet.</li> </ul> </li> <li>• Alle har eigne interesser.</li> <li>• MEN, VIKTIG å samkjøre interessene.</li> </ul>
00.59.16	EKSEMPEL	<p>Poeng: Ikkje «spar» pengane —det mest samfunnsnyttige er viktig i heilskapen. Tenk Holistisk!</p> <p>TENK: Vår felles interesse er...</p>
01.03.50	Kva bør endrast?	<ul style="list-style-type: none"> <li>• Fellesmål er viktig.</li> <li>• Pressing på pris gjev konflikt — dømesvis hente inn hjå endringsmeldingar. Dette må vekk! — Incentiv og maksprismodellar kan hjelpe. Mindre fokus på økonomi.</li> <li>• Vi må auke meirverdi i prosjekt.</li> </ul>
01.06.03	Opportunisme	<p>Byggherre må auke marginen.</p> <ul style="list-style-type: none"> <li>• Entreprenør må kunne tene betre.</li> <li>• BH bør ikkje presse for mykje.</li> <li>• Ynskjer at entreprenør skal tene pengar på organisasjonen sine prosjekt.</li> <li>• Entrep. er forplikta frå sine aksjonærar til å tene pengar.</li> <li>• Til slutt kjem alt tilbake til pengar, og det er ikkje noko feil med dette.</li> <li>•</li> </ul>
01.09.30	Forskjell i verdiperspektiv	<p>Kan konkurrere på pris og teknisk løysing.</p> <ul style="list-style-type: none"> <li>• Ikkje sånn at beste tekniske løysingar er dyrast. Ofte er det annleis.</li> <li>• Teknisk løysing, gjennomføringsevne, HMS, CSR m.m. er ikkje kostnadsdrivande, men reduserande. — Du kan ha lågast pris og samstundes score høgt!</li> <li>• Pris teller mest, uansett!</li> <li>• CSR, Kvalitet, referanseprosjekt, gode tilbakemeldingar, etc. er viktige faktorar.</li> </ul>
01.14.50	Nye gjennomføringsmodellar	<ul style="list-style-type: none"> <li>• Ta heile verdikjeda inn til ein leverandør.</li> </ul>

## E. Interview Transcripts

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Tid	Tema	Innstilling
01.17.10	BVP	<ul style="list-style-type: none"><li>• Trur den bidrar til mindre konflik.</li><li>• Den er enkel.</li><li>• Alle sit i same båt.</li><li>• Den som handterer risk best, tek den.</li><li>• Den kan gje meirverdi.</li></ul>
01.20.30	Makspris	Om vi var nógde med maksprisen, er det berre fint at dei kan optimalisere og tene pengar på det, bør det vere bra! — vi var nógde med prisen i utgongspunktet.
01.22.50	Eventuelt	<ul style="list-style-type: none"><li>• Korfor er ein låst i ulike bransjer?</li><li>• Korfor kan ein ikkje hente fungerande kontraktbestemmelser frå andre bransjer, når dei fungerer der?</li><li>• Har mange medarbeidarar frå ulike bransjer — nye tankar kjem då.</li><li>• Storleiken av prosjektet bør avgjerde strategien.</li><li>• Managementselskap trengs for 5 MRD-prosjekt.</li><li>• Heile marknaden må bli meir fleksibel.</li><li>• BH må jobbe med kontraktstrategi og bli meir fleksible.</li></ul>

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# Intervju β

## Positive erfaringar frå eit prosjekt

Tid	Tema	Innstilling
00.02.50	Hovudentreprise	E18 Ski-Larvik. Mengdebeskrivelse.
00.03.25	Mengdebeskrivelse	Godt prosjekteringsarbeid. <ul style="list-style-type: none"><li>• Byggherens prosj.- og byggledar var erfarne og vokosne.</li><li>• Hyggelige folk.</li><li>• Byggeleiar holdt «alle» i øyra — tok tak i ting med ein gong.</li></ul>
00.04.50	Anbudskonkurransse	Byggeleiar hadd gjort god jobb med grunnlaget. Det var trivelig. Samlingar kvart halvår med litt «stas».
00.05.40	Litt generelt	1,1 MRD, men endte på 1,3. Kåra til årets anlegg — god PR.
00.06.30	Kontraktmodell	Potensielt kofliktsskapande, men var ikkje det i dette tilfellet grunna profesjonalitet frå begge sider.
00.07.35	Medllen (konflikt)	Ikkje konflikt grunna profesjonalitet.
00.08.08	Bra	Bra for alle partar, men kunne gjerne tent meir pengar. God, kvalitetsmessig, jobb.
00.09.25	Mengdebeskrivelse	God gjennomført og skapte ikkje konflikter. Men, det er muleg det er kanskje tilfeldig.
00. 10.00	Kunne vore totalentreprise	Då hadde det vore prekval.
00.10.20	Lågast pris	Prekvalifisering hadde ikkje gjort forskjell.
00.10.45	Prekvalifisering er bra	Best å la dei som ikkje hadde kome med i anbudet slippe å bruke resursar på rekning. I ein totalentreprise er det VERST å IKKJE ha prekvalifisering.
00.12.03	Nye Vegar	God og omfattande prekvalifisering. Berre 4 stk får rekne. dette er bra! Mange faktorar tel i utvelgelse — Parallell er BVP — ikkje lågast pris.
00.13.15	Lågast pris	Misslikar det generelt — konfliktsskapande. Ynskjer å nytte sin eigen kompetanse til å finne løysingar. Kvifor skal alt vere ulikt? Sjølv i same prosjekt? — Standardisering kan vere bra. Kvifor skal BH avgjerde smådetaljar? Standardisering kan gjeve lågare pris, og kanskje høgare fortensese.  Litt uti blir det mykje generelt.

## E. Interview Transcripts

Tid	Tema	Innstilling
00.16.10	Effektivitet	
00.16.38	Økonomisk mest fordelaktig	Ynskjer at meir enn pris ALLTID skal bestemme. Argumentasjon kjem tidlegare.
00.16.45	Enhetspris	~90% Fix/enhetspris ~5% rekningsarbeid (tillegg/ending) I Totalentreprisens natur å ha enhetspris
00.18.25	Incentiv	Besparelsesdeling (standardkontraktar). Men, nyttar seg sjeldan av det. <ul style="list-style-type: none"> <li>• Det er om å gjere å snappe opp løysingane først, og det gjer som regel kunden</li> <li>•</li> </ul>
00.19.54	Endringar	<ul style="list-style-type: none"> <li>• Endringar/seinendingar er øydeleggande for produktivitet</li> <li>• Mykje administrativt med ei lita endring.</li> <li>• «Berre ei lita endring kostar 10-20K pr stykk. Problemet blir stort når det blir 200, 300, 700.» — Det verste er dei seine endringane.</li> <li>• Desse endringane er ikkje entreprenørens ansvar, men det er dei som må tilpasse seg og ta kostnadane.</li> <li>• I dette prosjektet var det få endringar. Derfor gikk dette bra!</li> </ul>
00.23.40	Separasjon/intergrasjon	<ul style="list-style-type: none"> <li>• Ynskjer seg meir i retninga av totalentreprise</li> <li>• Dette prosjektet er eit unntak der det gikk godt i separasjon</li> <li>• Applauderer Nye Vegar for deira nytenking med integrasjon</li> <li>• Med separasjon går ~70% bra, ~20% skapelig, men ~50% (eller ein eller annan brøk) endar i ein eller anna konflikt.</li> <li>•</li> </ul>

### Positive erfaringar frå eit prosjekt 2 (792/00.26.00)

Tid	Tema	Innstilling
00.26.23	Generelt om prosjekt	OPS-prosjekt.
00.26.37	Prekvalifisering	
00.26.40	Økonomisk mest fordelaktig	Pris telte nok tungt
00.26.58	Forhandling	

Tid	Tema	Innstilling
00.27.00	Om prosjektet	<p>Entrep. skulle finansiere, bygge og drifte i 20-25 år.</p> <ul style="list-style-type: none"> <li>• Er på ein måte eigen byggherre.</li> <li>• Etablerte eit slankt byggherreselskap under denne org.</li> <li>• Ansvarsforhold var tydelig</li> <li>• Ein sjølv prosjekterte, gjorde undersøkingar sjølv, og fekk optimalisere.</li> <li>• Dette gikk i hovudsak bra.</li> <li>• Kort byggetid (2år)-&gt; raskare nedbetaling</li> <li>• «Dersom ein hadde brukt Vegvesen-tankegang, kunne det tatt 5 år —i alle fall 4.»</li> <li>•</li> </ul>
00.30.33	Fikssum/OPS	
00.31.25	Betaling i driftsfasen	Ulukker, nedetid, etc.
00.31.58	Ansvar	Bygging, driftskontrakt, vedlikehold, finansiering, prosjektering.
00.32.30	Incentiv	<ul style="list-style-type: none"> <li>• Både under bygging og drift</li> <li>•</li> </ul>
00.33.25	Utradisjonell kontrakt	Hadde ikkje vore utprøvd før.
00.34.08	Funksjonsbeskrivelser	
00.35.00	Generelle tankar	<ul style="list-style-type: none"> <li>• Få bruke kreativitet og få ansvar (totalentreprise) er bra</li> <li>• Vegvesenet-tankegang der endringar kjem er berre forstyrrende</li> <li>• Ein er flinkare sjølv til å finne problem tidlig saman med konsulentar</li> <li>• Mindre kranglar ved total</li> <li>• Ynskjer å bruke kreativitet og finne løysingar</li> <li>• Her blir det kanskje ~10% kranglar, dersom det er så mykje</li> </ul>
00.37.35	Viktige punkt/val	<ul style="list-style-type: none"> <li>• Lagt ned resursar i tidligfase og mange tapar utan prekvalifisering (10 mill.).</li> <li>• Her gjer Nye Vegar riktig</li> <li>• Menneske har mykje å bety. Kompetanse, oppførsel, etc. er viktige faktorar.</li> </ul>

## Mindre positivt prosjekt (1200/00.39.55)

Tid	Tema	Innstilling
00.40.00	Generelt om prosjektet	
00.40.10	Hovudentreprise	

## E. Interview Transcripts

Tid	Tema	Innstilling
00.40.18	Mengdebeskrivelsar	<ul style="list-style-type: none"> <li>• Delvis riktig, delvis feil</li> <li>• Halvgod kvalitet</li> </ul>
00.40.38	Tid	Knapp byggetid
00.40.50	Endringar	<ul style="list-style-type: none"> <li>• Mykje endringar</li> <li>• Forsinkelse frå tidlegare prosjekt -&gt; gav endå kortare byggetid</li> <li>• Vegvesenet prosjekterte sjølv, men har liten kapasitet til det</li> <li>• Avhengigheter</li> <li>• Nært på eksisterande trafikk</li> <li>• Tida sprang ifrå.</li> <li>• Ansvarsforholdet var uklart</li> </ul>
00.43.53	Byggeleiinga	<ul style="list-style-type: none"> <li>• Dårleg jobb</li> <li>• Tok ikkje folk i øra</li> <li>• Det blir konflikter</li> <li>• Gammaldagse holdningar mtp. HMS o.l.</li> <li>• Uprofesjonalitet og lite kompetanse</li> <li>• Entreprenøren har også skuld.</li> </ul>
00.46.40	Styre sjølv	<ul style="list-style-type: none"> <li>• Alt måtte vore ulikt</li> <li>• Det er ikkje berre ansvarsfordeling som er viktig</li> <li>• Det er ikkje berre kompetanse som er viktig</li> </ul>
00.47.00	Styring	<ul style="list-style-type: none"> <li>• ulukkelig slutt for alle</li> <li>• For komplisert prosjektorganisasjon</li> <li>• For mykje å styre og koordinere for byggherre.</li> </ul>
00.48.35	Enhetspris	
00.48.40	Incentiv	Ingen
00.48.47	Anbud og lågast pris	
00.49.00	Tradisjonell kontrakt	Veldig tradisjonellt, men ting endrar seg litt med tida. Det her var litt ubalansert.
00.50.20	Om Vegvesen	<p>Dei er ein bestillar, men opptrer som ein entreprenør. Dette på grunn av endringane bedrifta har vore gjennom, der mange frå «gamleskulen» sitt att og gjer som før. Argumentasjon kjem før påstand.</p> <p>Nye Vegar, Avinor og Jernbaneverket er betre på å forstå dette skillet.</p>
00.51.30	Generelt	<ul style="list-style-type: none"> <li>• Opptredelse og kompetanse er viktigare enn kontraktstrategien.</li> <li>• Kompetanse er viktigast — «det er ikkje nok å vere snill og grei».</li> </ul>

## Generelle oppfatningar

Tid	Tema	Innstilling
00.57.47	Alternative metodar	<ul style="list-style-type: none"> <li>• BVP er i hovudsak ein totalentreprise</li> <li>• det er vegen dit som er annleis</li> <li>• Trur at å velge etter kompetanse, erfaring og dokumentasjon gjev lågare sluttsam for alle.</li> <li>• Ser samanheng mellom bygging, drift og vedlikehald. Ein må finne riktig miks.</li> <li>• Finst ikkje overhode mulegheiter for å nemne tankar kring alt. løysingar hjå Vegvesen — Alt skal vere sånn som dei har avgjort (min tolkning).</li> </ul>
01.01.14	Utvikling	<ul style="list-style-type: none"> <li>• Vegvesen blir med på konsulentane sine løp, og heng difor litt etter.</li> <li>• Drar konsulenten dit dei sjølv ynskjer.</li> <li>• Køyrrer heil-BIM-modellar.</li> <li>• Ynskjer å kome framover, men klarer ikkje det «med Vegvesenet rundt roret».</li> <li>• Integrasjon bidreg til framgong.</li> <li>•</li> </ul>
01.06.00	Vektlegging	<ul style="list-style-type: none"> <li>• Kompetanse, tidlegare erfaring, openheit, profesjonalitet og relasjonsbygging</li> <li>• «Dei her gjorde ein god jobb sist — dei vil vi ha igjen!»</li> <li>• Pris må nok vere med, men ein bør trekke inn andre faktorar.</li> <li>• Samfunnsansvar bør takast med.</li> <li>• Vegvesenet har ikkje gjort noko med CSR — dei har «tenkt litt».</li> <li>• Ikkje nemne sånt til Vegvesenet: dei veit ikkje kva dette er for noko. Det er pris som er viktig.</li> </ul>
01.16.05	Eventuelt	<ul style="list-style-type: none"> <li>• Fagarbeidarar — eigenregi</li> <li>• Kan mykje om faget</li> <li>• Har fag i eget hus</li> <li>• Folk klatrar stigen og kan difor bidra — dei har vore gjennom trinna.</li> <li>• Sjeldan incentiv for «rett-frå-skulebenken-folk» til å gjere meir.</li> <li>• Dersom org. slepp å jobbe i hovudentreprisemarknaden, så rømmer dei. Men, enn så lenge må dei vere i krigen og kjempe vidare.</li> <li>• Men, Vegvesenet er kanskje i ein endringsmodus no, så vi får sjå kor vi endar opp.</li> <li>• Ynskjer å bruke minst muleg ressursar og få nå målet sånn at alle blir nøgde.</li> <li>•</li> </ul>

## Intervju 8

### Intro/vellukka prosjekt

Tid	Tema	Innstilling
00.00.045	Generelt	<ul style="list-style-type: none"> <li>• Følgjer stort sett ei generisk rute.</li> </ul>
00.01.34	Generelt om prosjektet	<ul style="list-style-type: none"> <li>• Stort sett gode erfaringar med prosjekter</li> <li>• Follobanen</li> </ul>
00.02.30	Prekvalifisering	<ul style="list-style-type: none"> <li>• Prekvalifisering er standard</li> <li>• Todelt: Totaløkonomisk betre då færre reknar på prosjektet, Betre at 3 tapar enn at 9 tapar. <ul style="list-style-type: none"> <li>— Med omsyn til eigen kapasitet er det betre å ha færre tilbod.</li> </ul> </li> </ul>
00.04.00	Økonomisk mest fordelaktig	<ul style="list-style-type: none"> <li>• Må evaluere andre faktorar enn pris: tryggleik, gjennomføringsevne, kompetanse, finansiell soliditet, osb.</li> </ul>
00.04.45	Konkurransen med forhandling	<ul style="list-style-type: none"> <li>• Veldig nyttig: får avklart ukklarheter og får presissere</li> <li>• Får re-prisa grunna endringar</li> <li>• Muligheit Vegvesenet ikkje har</li> </ul>
00.05.55	Generelt	<ul style="list-style-type: none"> <li>• Fram til hit er det veldig likt for alle prosjekt</li> </ul>
00.06.05	Mengdebeskrevne entreprisar	<ul style="list-style-type: none"> <li>• Dette er i hovudsak</li> <li>• Follobanen har funksjonsbeskrivingar</li> <li>• Detaljerer lenger enn naudsynt</li> <li>• To nivå: <ul style="list-style-type: none"> <li>— Informasjon: Forslag til gjennomføring</li> <li>— Krav: Må følgjast</li> </ul> </li> </ul>
00.07.30	OPS	<ul style="list-style-type: none"> <li>• Hevar stemma: «OPS er ikkje aktuelt!»</li> </ul>
00.07.32	Totalentreprise	<ul style="list-style-type: none"> <li>• Byrjar å bruke dette meir</li> <li>• Mykje av systema er lagt opp til mengdebeskrivingar og difor gjerne delte entreprisar.</li> </ul>
00.08.46	Kompensasjonsform	<ul style="list-style-type: none"> <li>• Lite rekningsarbeid</li> <li>• Anten einingsprising eller fastpris</li> <li>• Veldig mykje einingspris</li> </ul>
00.09.12	Incentiv	<ul style="list-style-type: none"> <li>• Ikkje inledningsvis</li> <li>• I gjennomføringsfasen</li> <li>• Bonuser blir gjerne lagt til</li> <li>• Gjerne i samband med HMS og SHA</li> <li>• Milepelsbonusar finnast også</li> <li>• Men, her er det varierende erfaringar</li> <li>• Mykje dagbøter</li> <li>• Kraftige virkemidler i forhold til endringsomfang <ul style="list-style-type: none"> <li>— Kan kreve 15% endringar</li> </ul> </li> </ul>

Tid	Tema	Innstilling
00.11.05	Kontraksbestemmelser	<ul style="list-style-type: none"> <li>• Bruker standarkontraktar med tilpassingar</li> <li>• Nokre vil påstå at dei er utradisjonelle, då dei bryt med standardane på mange områder</li> <li>• XXXXXXXXX er så spesielt, og derfor trengst dette. <ul style="list-style-type: none"> <li>— enorme konsekvenser av forseinkingar</li> </ul> </li> <li>• Offshore-kontraktar (NTK-kontraktar) <ul style="list-style-type: none"> <li>— gjev betre verkemidlar samt lågare konfliktnivå</li> </ul> </li> </ul>
00.13.55	Totalentreprise (tilbake til prosjektet)	
00.14.03	Fikssum med einingspris	<ul style="list-style-type: none"> <li>• Ein fastpris-del og ein del med regningsarbeid</li> <li>• Regningsarbeid er sjeldan, då dei klarer å definere godt ka som skal gjerast.</li> <li>• Litt regningsarbeid, men det er hovudsaklig knytta til usikkerhet.</li> </ul>
00.15.05	Incentiv	<ul style="list-style-type: none"> <li>• Bonus og bøter</li> </ul>
00.15.26	Utradisjonell	<ul style="list-style-type: none"> <li>• NTK-kontrakt</li> <li>• Mykje diskusjon kring dette</li> <li>• Ber meg om å google det.</li> </ul>

## Mindre vellukka prosjekt

Tid	Tema	Innstilling
00.17.00	Generelt	<ul style="list-style-type: none"> <li>• Ikkje desse prosessane som er problemet når det går dårleg</li> <li>• Prosjektets modenskap er viktigast — at prosjekt blir starta for tidleg i forhold til omfang og bestilling. For lite utredning og scope-ending.</li> <li>• Kontraktstrategien er ikkje utfordringa, men vurderingane i forkant er avgjerande.</li> <li>• Kvaliteten på forarbeidet og korleis det påvirkar resten av prosjektet er det viktige.</li> <li>• Dette blir ikkje fanga opp i kontraktstrategien.</li> <li>• «Anskaffelsesprosessen kan vere så bra den berre vil, men det hjelper ikkje når inputten er for dårleg».</li> <li>• «Prosjektets grad av suksess kan ikkje berre begrensa til dette».</li> </ul>
00.22.30	Prekvalifisering, ØmF, Konkurrans med forhandling, Mengdebeskrivelser, Hovudentreprise, Enhetsprising og fikssum, lite incentiv, tradisjonell.	

Tid	Tema	Innstilling
00.23.10	Problem	<ul style="list-style-type: none"> <li>• Sprakk alvorleg</li> <li>• Utgangspunktet var problemet — ikkje strategien!</li> <li>• «Prosjektets scope og suksesskriterier må vere tydelig definert»</li> </ul>

## Spørsmål i etterkant

Tid	Tema	Innstilling
00.24.55	Alternative metodar	<ul style="list-style-type: none"> <li>• Stiller seg «i og for seg open»</li> <li>• Men, fokus ligg på å profesjonalisere eksisterande prosessar <ul style="list-style-type: none"> <li>— gjere dei meir strømlinjeforma, forutsigbare og robuste.</li> </ul> </li> <li>• Prøvar nye entrepriseforamar (totalentreprise) og nye kontraktsforamar (NTK)</li> <li>• Evalueringar og forhandlingar i eit meir profesjonelt format (eigne lokal, osv.)</li> <li>• Aukar tryggleg i IKT</li> <li>• Aukar kvaliteten av evakueringar for å kunne utføre betre forhandlingar.</li> </ul>
00.26.13	BVP	<ul style="list-style-type: none"> <li>• Kan sikkert ha noko for seg, men ikkje hjå org.</li> <li>• Det gjev adgang til forhandlingar for Vegvesen, Nye Vegar, osv. Men, org har ikkje desse restriksjonane. <ul style="list-style-type: none"> <li>— difor treng dei ikkje dette.</li> </ul> </li> <li>• 6 sider med dokumentasjon som forhandlingsgrunnlag er dessutan lite. Vil heller ha eit meir fullstendig grunnlag.</li> <li>• Er skeptisk til å dele ut milliardkontraktar på eit 6-siders dokument. *mykje latter*</li> </ul>
00.28.30	Vektlegging	<ul style="list-style-type: none"> <li>• Pris er alltid minst 50%</li> <li>• tradisjonelt 90% på pris, men beveger seg bort ifrå dette <ul style="list-style-type: none"> <li>— andre kriterier må leggest til grunn ved totalentreprise.</li> <li>— mindre forutsigbart, og difor må andre kriterier telle meir.</li> </ul> </li> </ul>
00.30.15	Ting eg bør ta med vidare	<ul style="list-style-type: none"> <li>• Kva leggest til grunn?</li> <li>• Metode for kva-skal-ein-velge-når: entrepriseform <ul style="list-style-type: none"> <li>— med tog i skarp drift kan org. mest, og vel difor utførelsesentreprise (sjå motteke dokument)</li> </ul> </li> </ul>

# Intervju 8

## Intro/vellukka prosjekt

Tid	Tema	Innstilling
00.00.00	Generelt om oppgåva	Skepsis til utgangspunkt. Kvart prosjekt må ha ein skreddarsydd kontraktstrategi.
00.04.18	Helgeland/møllenberg	
00.04.28	Konkurransprega dialog	<ul style="list-style-type: none"><li>• Vellukka, framtidsretta</li><li>• Spelar på felles erfaring og kompetanse</li><li>• Utvikle prosjektet i fellesskap</li></ul>
00.05.26	Prekvalifisering	<ul style="list-style-type: none"><li>• Evaluering og utvelgelse frå dette</li></ul>
00.05.45	Økonomisk mest fordelaktig (ØmF)	
00.06.05	Kva verdiar tilfører desse vala prosjektet?	Irritert, forklarar han kva prekvalifisering er for noko. <ul style="list-style-type: none"><li>• Seier sjølv at dei nesten aldri nyttar dette</li><li>• Nyttar det når ØmF</li><li>• Brukt til meir kompliserte og krevande prosjekt</li></ul>
00.07.50	Vektlegging ØmF	<ul style="list-style-type: none"><li>• Sit ikkje med denne informasjonen, men vel kva som skal vektleggast (motseieing?)<ul style="list-style-type: none"><li>— Kanskje han ikkje hugsar dette prosjektet?</li></ul></li><li>• Går heller over til å snakke generelt og gje ein lekson i kva ØmF er for noko (småirritert?)</li><li>• Kriteria må tilpassast det du er ute etter å vekte</li><li>• «Kan ikkje ha ein generell sak som heiter tildelingskriterier, og så tru at det er målretta til kvart enkelt prosjekt.»</li><li>• Kan ikkje hugse noko om ØmF i dette prosjektet/vil ikkje estimere.</li><li>• Ta intervju med dei som arbeidde med Møllenberg.</li><li>• Generellt: «Tildelingskriterier er viktig for å vere i stand til å finne det mest økonomisk fordelaktige — kriteria må vere av ein sånn art at dei er gjennomtenkt i forkant og at dei er objektivt sånn at du er i stand til å sette ein verdi på det.»</li></ul>
00.11.15	Konkurrans med dialog	<ul style="list-style-type: none"><li>• Eigen anskaffelsesprosedyre som er gjeve i lov om anskaffelser</li><li>• Er ein gjennomføringsmodell</li><li>• Forklarar konkurransprega dialog.</li><li>• Kan ta ut mykje verdi gjennom dette: felles erfaring og kompetanse.</li></ul>
00. 17.20	Anbudskonkurrans	<ul style="list-style-type: none"><li>• Meiner at konkurransprega dialog er ein anbudskonkurrans</li><li>• Kan velje open eller avgrensa</li><li>• Avgrensa tyder at ein vel ut nokre som ein ynskjer å få tilbud ifrå — spesialreglar</li></ul>

## E. Interview Transcripts

Tid	Tema	Innstilling
00.18.08	Prekvalifisering	<ul style="list-style-type: none"> <li>• Gjer det sjeldan</li> <li>• Ser ikkje behov for å avgrense marknaden frå å delta i deira konkurransar</li> <li>• <i>Ved spesielle prosjekt køyrer dei alltid prekvalifisering og ØmF!</i></li> </ul>
00.18.52	Funksjonsbaserte	<ul style="list-style-type: none"> <li>• Totalentreprise: funksjonsbeskrivingar</li> <li>• Utførelsesentreprise (hovud, general, delt, osv.): mengdebeskrivingar</li> <li>• 95% mengde, 5% funksjon.</li> <li>• Dette prosjektet var (sjølvstøtt), funksjonsbasert.</li> </ul>
00.20.40	Om oppgåva	<ul style="list-style-type: none"> <li>• Eg bør samle informasjon og lære meg, og så lage oppgåve etterpå (denne gongen mykje greiare enn før).</li> <li>• Råd: følg opp Møllenberg — snakk med dei som var involverte.</li> </ul>
00.22.10	Entrepriseform	<ul style="list-style-type: none"> <li>• Meiner figuren er feil.</li> <li>• Finnast berre total- og utførelsesentreprise.</li> <li>• OPS er ikkje entrepriseform — anskaffelsesprosedyre og finansieringsform.</li> <li>• Leksjon i entrepriser...</li> <li>• Mine inndelingar går meir på organisering av prosjektet.</li> <li>• Avslutter med å fortelle at det er «hans og deira bilete av dette»</li> </ul>
00.26.12	Kontraktstyper	<ul style="list-style-type: none"> <li>• Einig i inndeling</li> <li>• Stort sett einingspris i utførelsesentreprise.</li> <li>• Møllenberg: blanding av total- og utførelsesentreprise —</li> <li>• Suksesskriterie å kunne skille ut delar av prosjekt og nytte ulike entrepriseformer på desse. Det same gjeld for ytelsesbeskrivingar.</li> </ul>
00.30.40	Incentiv	<ul style="list-style-type: none"> <li>• Klausul i alle kontrakter der entreprenør kan få utvikle eigne løysingar — funksjonen må vere den same. Sparinga blir delt mellom partane.</li> <li>• Blir for lite brukt (Kan det vere grunnar til dette?).</li> <li>• Incentiv kan nyttast uavhengig av entrepriseform.</li> </ul>
00.33.12	Totalentreprise	<ul style="list-style-type: none"> <li>• Så romslige funksjonsbeskrivelsar og rammebetingelsar at entreprenøren kan komme opp med ei løysing og forslag som er optimal i forhold til han sin erfaring og kompetanse. Dettar er poenget med totalentreprise.</li> </ul>
00.34.35	Incentiv	<ul style="list-style-type: none"> <li>• Har hatt på HMS — kan slå veldig skeivt ut. — Gjennom å levere godt på HMS vil du få ein sum eller noko. Problemet er at du uansett skal levere innanfor gjeldande krav, så der er eigentleg ikkje noko å gå på.</li> <li>• Korleis skal pengane (incentiv) fordelast?</li> <li>• Skapar vi eit A- og B-lag?</li> </ul>
00.36.55	Negative incentiv	<ul style="list-style-type: none"> <li>• Tidsfrist — dagbøter</li> <li>• Kva er best? Straff eller premie?</li> <li>• Standardane legg opp til dagbøter (NS8405, NS8406, NS8407)</li> </ul>

Tid	Tema	Innstilling
00.37.53	Tradisjonelle kontraktbestemmelsar	<ul style="list-style-type: none"> <li>• Nyttar alltid NS8405, NS8406 og NS8407 for bygg</li> <li>• NS8401 og NS8402 på rådgivarsida</li> </ul>
00.38.20	Lov om offentleg anskaffelser	<ul style="list-style-type: none"> <li>• Må nytte tradisjonelle bestemmelsar.</li> </ul>
00.39.50	Opportunisme	<ul style="list-style-type: none"> <li>• «Det der er komplisert. Kva er taktisk prising?»</li> <li>• Ynskjer ikkje taktisk prising</li> <li>• Byggherre kan ha gjort taktisk vurderingar med store mengdar som gjev lågar pris — dette motarbeider denne org.!</li> <li>• Entreprenører er veldig opptatt av å få jobben (konkurransesituasjon) — det er riktig at dei må prise seg veldig lågt for å få jobben. Kan difor tenkast at taktisk prising skjer då. Det kan likevel vere positiv.</li> </ul>
00.45. 20	Viktige faktorar i kontraktstrategi	<ul style="list-style-type: none"> <li>• Tydelige rammebetingelser — gjennom kontraktstypen.</li> <li>• Kva ein skal forholde seg til og levere i forhold til.</li> <li>• Ytingsskildringa må vere tydelig</li> </ul> <p>Er ovanståande kriterium oppfylde, så har du kome langt!</p>
00.48.35	Konflikter	<ul style="list-style-type: none"> <li>• Eigne konfliktsløysingsmekanismar</li> <li>• Korleis tilnærme seg konfliktløysing. —Seier ingenting om å hindre at konflikstar oppstår.</li> <li>• Dei meklar for å handtere konflikstar (Org. sin eigen framgangsmåte).</li> <li>• Prøvar å unngå å kome til rettsapparatet.</li> </ul>
00.51.45	Tilrådingar	<ul style="list-style-type: none"> <li>• Eg bør sjå på org. -malane for oppbygging av konkurransegrunnlag (XXXX og XXXX).</li> <li>• Dette er grunnlaget org. bygger på.</li> <li>• Viser korleis org. tilnærmar seg marknaden</li> </ul>
00.55.43	Generelt	<ul style="list-style-type: none"> <li>• «Felles erfaring og kompetanse»</li> <li>• Prøve og feile</li> <li>• Øve seg</li> <li>• Alt må vere skreddarsydd</li> </ul>

