

# BEST VALUE PROCUREMENT- EXPERIENCES FROM THE EXECUTION PHASE

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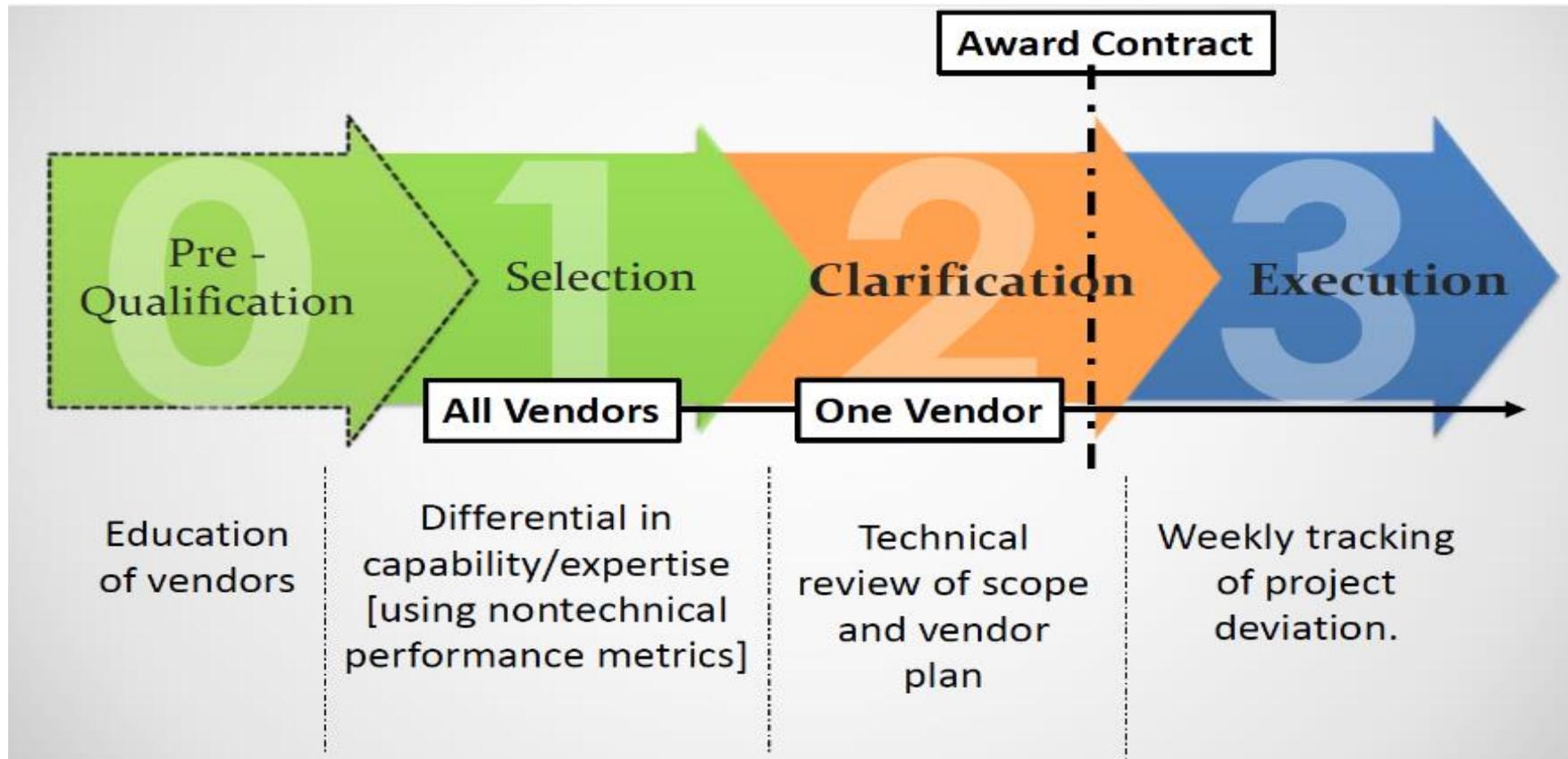
# Introduction

- Statistics given by Statistics Norway (2018) shows a 10% decrease in productivity in the Norwegian construction industry
- Several approaches are applied to turn this trend over, such as partnering and early contractor involvement (ECI)
- There are several approaches for implementing ECI in the public sector and BVP is one of them

# What is BVP?

- BVP is a part of the Best Value Approach (BVA) founded by Dean Kashiwagi in 1991
  - BVA consists of a procurement model, a risk managing model and a project management model
  - The overall purpose of BVP is to identify and select the most suitable vendor (the expert) through simple and dominant information

# BVP phases



# Research questions

- The available research is mainly related to the early phases of BVP
  - minimal research has been done on the execution phase and how BVP can improve the final product
- This paper explores experiences from the execution phase of two Norwegian building projects and addresses the following research questions:
  - How was BVP practiced through the projects?
  - What consequences followed BVP in the execution phase?
  - How should BVP be practiced to improve the execution phase and the final product?

# Research method

- Literature study and two longitudinal case studies
- A longitudinal study consists of continuous or repetitive measures to follow particular individuals over prolonged periods of time
- The two case projects were chosen as they are among the first building projects in Norway using BVP
- The projects were of same size and scope with a conventional project organization

## Case study

- A total of 8 interviews were held with interviewees from both the client and the vendor
- Interviewees were selected based on their involvement in both the procurement and execution phase
- Interview were conducted through in-depth semi-structured interviews based on an interview guide, face-to-face at the interviewee's office
- First interview round were held in October-November 2018 and the second round in March-April 2019

# How was BVP practiced through the projects?

- BVP was practiced quite similar in the projects, and mostly as described in the theory
- Important differences were:
  - Client's maximum price vs. client's maximum budget price
  - Added value

Table 2: Practicing of Best Value Procurement

| Elements of BVP  | Munkerud Kindergarten  | Vollebekk Kindergarten        |
|--|------------------------|-------------------------------|
| <b>Pre-Qualification Phase</b>                           |                        |                               |
| Sponsor  | No                     | No                            |
| Selection and education of core team                     | No                     | No                            |
| External BV expert                                       | Yes                    | Yes                           |
| Pre-qualification  | No                     | No                            |
| Use of all four phases                                   | Yes                    | Yes                           |
| Training of owner  | Yes                    | Yes                           |
| Core document / request for proposal                     | Yes                    | Yes                           |
| Open budget w/ceiling                                    | Client's maximum price | Client's maximum budget price |
| Training of vendor                                       | Yes                    | Yes                           |
| <b>Selection Phase</b>                                   |                        |                               |
| Evaluation criteria in MEAT:                             |                        |                               |
| • Level of expertise                                     | 15%                    | 30%                           |
| • Risk assessment  | 20%                    | 20%                           |
| • Added value  | 10%                    | 0%                            |
| • Interview with key personnel                           | 30%                    | 25%                           |
| • Price  | 25%                    | 25%                           |
| Time-plan  | Yes                    | Yes                           |
| Short listing  | No                     | No                            |
| Multiple grading groups                                  | No                     | No                            |
| Dominance check  | Yes                    | Yes                           |
| <b>Clarification Phase</b>                               |                        |                               |
| Kick-off meeting   | Yes                    | Yes                           |
| Risk management plan                                     | Yes                    | Yes                           |
| Scope document   | Yes                    | Yes                           |
| Elaboration of potential critical sub-contractors        | No                     | No                            |
| Key Performance Indicators (KPIs)                        | Yes                    | Yes                           |
| Letter of intent   | No                     | No                            |
| Contract award meeting                                   | No                     | No                            |
| Vendor involved in framing of contract                   | Yes                    | Yes                           |
| Owner financially responsible for all controllable risks | Yes                    | Yes                           |
| Risk contingency fund                                    | No                     | No                            |
| <b>Execution Phase</b>                                   |                        |                               |
| Weekly risk report                                       | Yes                    | Yes                           |
| Performance measurements                                 | Yes                    | Yes                           |
| Director's report  | No                     | No                            |

# What consequences followed BVP in the execution phase?

- How BVP is practiced in the earlier phases has shown to have a significant influence on the execution phase of the project, and thus also the final product
- Most of the consequences were positive, but some caused a number of challenges

Table 3: Consequences of Best Value Procurement

| Element of BVP                 | Effect  | Consequences for the execution phase  |
|--------------------------------|---|---|
| <b>Pre-Qualification Phase</b> |   |   |
| Use of all phases              | +   | <u>Best Value Procurement becomes a mind-set, rather than a method.</u> Sharing this mind-set leads to a collaborative environment in the execution phase |
|                                | +   | More flexible and demand-controlled communication in the execution phase  |
| Core document                  | +   | More predictable solutions for the client   |
| Open budget w/ceiling          | +   | Fewer change orders and added costs   |
| <b>Selection Phase</b>         |   |   |
| Evaluation criteria            | +   | <u>Higher weighting of quality leads to higher quality</u>  |
|                                | -   | <u>Weighting of price becomes excessive</u>   |
|                                | +   | <u>Added value leads to more innovation</u>   |
|                                | +   | Opens for new and smaller vendors that normally would not get the project   |
|                                | -   | A lack of interviewees from the vendors participating in the execution phase may limit the evaluation of the vendor's project execution performance       |
| +                              | More weight on quality leads to a higher focus on investment and life cycle costs |   |
| <b>Clarification phase</b>     |   |   |
| Kick-off meeting               | +   | Gives the actors a common understanding of the project and leads to increased interaction between the parties   |
|                                | +   | Clarifies playing rules for conflicts and leads to increased construction progress in the execution phase   |
| Risk management plan           | -   | Inadequate periodic control and update leads to low information regarding the overall project risk  |
| Key Performance Indicators     | -   | <u>Inadequate standardization makes it difficult to develop and use KPIs</u>  |
|                                | -   | Difficult to measure innovation and quality in the execution phase  |
| Contract award meeting         | -   | Lack of a contract award meeting may limit the benefits of KPIs and risk management plan in the execution phase   |
| <b>Execution phase</b>         |   |   |
| Weekly Risk Report             | +   | More efficient communication in the execution phase   |
|                                | -   | <u>Causes no reduction in the owners control needs</u>  |

# How should BVP be practiced to improve the execution phase and the final product?

- Important elements when practicing BVP:
  - Education of project participants
  - BV expert
  - Price
  - Interview of key personnel
  - Added value
  - Kick-off-meeting
  - Risk management plan
  - Key Performance Indicators (KPIs)
  - Weekly Risk Reports (WRR)

Table 4: Improvements and measures for future BVP projects

| Element of BVP                    | Measure/improvement   |
|-----------------------------------|---|
| <b>Pre-Qualification Phase</b>    |   |
| Core document                     | A clear and precise core document leads to more predictable solutions for the client but may limit the innovation. Important to early clarify what is more important for the client.  |
| Education of project participants | BVP is a mind-set more than a method. This mind-set must be shared by all participants regardless of project phase. <u>Future projects should have an extensive focus on education in BVP.</u>  |
| External BV expert                | Frequently involve the BV expert. Costs should be covered by the owner, not the vendor.   |
| <b>Selection Phase</b>            |   |
| Price                             | <u>Price should not be a part of the evaluation criteria when the owner's maximum budget is specified.</u> Tenders over the maximum price must be declined.   |
| Time plan                         | May be included as an evaluation criterion when a faster execution phase is desirable.  |
| Dominance check                   | Perform as early as possible to avoid waste of project resources on a non-expert  |
| Interview of key personnel        | <u>Key personnel from the execution phase must be included.</u> The practice will make it easier to evaluate project execution performance and implement the BVP mind-set in the execution phase  |
| Added value                       | <u>Open for vendors to offer Added Value.</u> This will lead to more innovation in the project.   |
| <b>Clarification Phase</b>        |   |
| Kick-off-meeting                  | Establish playing rules for conflicts, trust and an equal understanding of the project scope. Important actions for preventing potential conflicts  |
| Risk management plan              | <u>Periodically control and update of the plan</u> in order to provide an overview of the overall project risk  |
| Key Performance Indicators        | Must be sufficiently clarified and established early in the clarification phase.<br><u>Establish clear indicators for how to measure innovation and quality.</u><br>Formed after guidelines by Horstman & Witteveen (2013).<br>Must be periodically evaluated and updated during the execution phase. |
| Contract award meeting            | Clarify and establish final KPIs and expose all risk factors in the project to achieve a better practice of these elements in the execution phase.  |
| <b>Execution Phase</b>            |   |
| Weekly Risk Reports               | <u>Must be formed to help reduce the client's control needs</u><br><u>Must be completed and sent weekly,</u> whether or not new information has occurred.   |
| Performance measurements          | All actors should measure their own performance in order to gather dominant information for future projects.  |



Thank you for your attention!

Questions?