



CENTERIS - International Conference on ENTERprise Information Systems /
ProjMAN - International Conference on Project MANagement / HCist - International
Conference on Health and Social Care Information Systems and Technologies,
CENTERIS/ProjMAN/HCist 2018

Competitive Dialogue – experiences with the award criteria

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Abstract

The Competitive Dialogue (CD) is a procurement procedure that was introduced in Norway in 2007. The procedure enables the client to have a dialogue phase with pre-qualified contractors before awarding the contract. When the dialogue phase is over, the client evaluates the tenders based on pre-defined and project-specific most economically advantageous tender (MEAT) award criteria. The purpose of this study is to explore the experience from the use of the award criteria in a project that has used the CD procedure. In addition to an initial literature study and a document study, 14 in-depth semi-structured interviews were carried out. This research investigates the infrastructure project E6 Helgeland South with NPR as a client. The case study indicates that the client finds it demanding to determine suitable award criteria at an early stage. There are uncertainties regarding the weighting of the award criteria and the evaluation process. Both the client and the contractor request more focus on the award criteria at an early phase of the project to align them with the project goal and purpose. This study helps to better understand the influence of the award criteria in the CD procedure.

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Selection and peer-review under responsibility of the scientific committee of the CENTERIS - International Conference on ENTERprise Information Systems / ProjMAN - International Conference on Project MANagement / HCist - International Conference on Health and Social Care Information Systems and Technologies.

Keywords: Award criteria; Competitive dialogue (CD); Early contractor involvement (ECI); Most economically advantageous tender (MEAT); Public Procurement;

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1. Introduction

Based on European legislation, the different procurement procedures that are identified by EU-directive for public works, supply and service contracts are: open procedure (without selection), restricted procedure (with pre-selection, pre-qualification), competitive procedure with negotiation, competitive dialogue (CD), innovation partnership and use of the negotiated procedure without prior publication [1]

The CD procurement procedure was introduced in 2004 by European Parliament Directive 2004/18/EC for particularly complex contracts [2]. Hoezen and Hillig (2008) [3] argue that the CD procedure was introduced to fulfill the need of a new procedure for projects that were becoming ever more complex. According to Haugbolle et al. (2015) [4], the CD procedure enables the client and some pre-qualified contractors to have a dialogue phase discussing all aspect of the contract, including the economic conditions. Throughout this dialogue phase, the contractors develop solutions in close cooperation with the client. When the dialogue phase is over, the client evaluates the proposed solutions and tenders before awarding a contract. The client should evaluate the received tenders on the basis of the award criteria specified in the contract notice and select the most economically advantageous tender (MEAT) [5]. According to Hoezen and Doree (2008) [6], MEAT is always the awarding method in the CD procedure.

The award criteria are at the core of the dialogue phase and are shown to be extremely important in the evaluation of the contractors' tender. However, little research seems to have been carried out on award criteria experiences in the CD projects, and this stands out as the knowledge gap. To fill this knowledge gap, this paper explores the experiences with the use of the award criteria in a project that has used the CD by addressing the following research questions:

- Which award criteria are used?
- What are the experiences from the use of the award criteria?
- How can the use of the award criteria be improved in future projects?

2. Research Methodology

This research was carried out based on a literature study, a document study, and fourteen semi-structured in-depth interviews.

The literature study was carried out in accordance with a literature review procedure described by Blumberg et al. (2014) [7]. It was done primarily to collect secondary data to establish a theoretical framework and to assess the current state of research on the topic. The procedure started with determining suitable search words. The choice of search words was made after reading an internal report made by the NPRA, mapping the procedure. Search words such as competitive dialogue, award criteria, early contractor involvement, etc. were used in search engines Google Scholar and Oria to find relevant literature. Furthermore, citation chaining of the references of these articles was used to find more literature relevant to the study [8].

The NPRA has used the CD procedure on six projects so far. One of these six projects, namely E6 Helgeland South, was studied to answer the research questions. The main reasons for choosing to study E6 Helgeland South are that the dialogue phase of the project was carried out recently, and the project stands out as the biggest infrastructure project in Norway that has used the CD procedure.

In total, fourteen in-depth semi-structured interviews were conducted in line with the prescriptions of Yin (2013) [9]. Three of them were general interviews with client personnel that have involved in the dialogue phase in one of the five projects that have used the CD procedure. The remaining eleven interviews were case specific with key informants from both client and contractors that participated in E6 Helgeland South project. The purpose of the general interviews was to obtain a general understanding of the CD process. All the interviews, except one, were carried out face to face, at the interviewees' office. They were carried out based on an interview guide and lasted between one and two hours. By consent of the respondents, the interviews were recorded, later transcribed and then sent as a summary for approval. The document study was based on internal documents supplied by the respondents from the case; these included tender documents, contract documents, project presentation, the grading of award criteria and evaluation of the solutions. This provided a foundation to understand the specific case, and Yin (2013) [9] puts forward that sources like this corroborate data collected with interviews.

“Good research practice obligates the researcher to triangulate, that is, to use multiple methods, data sources, and researchers to enhance the validity of research findings” [10]. Yin (2013) [9] supports this by stating that a

triangulation of methods helps strengthen findings and allows a more credible and accurate conclusion. In this study, data triangulation was achieved through the use of multiple data sources (interviews with the client personnel, contractors' personnel, and document study) and being multiple researchers.

3. Theoretical Background

3.1. *Competitive Dialogue*

Hoezen et al. (2010) [11] describe the CD procedure as a procurement procedure that consists of several discussion rounds between the client and potential contractors. The purpose of the procedure is that the client gets insight in which solutions the market has to offer by involving the contractor at an early stage. Wondimu et al. (2016) [12] put forward the idea that early contractor involvement (ECI) influence projects in a positive way and their findings show that CD is one of the suitable approaches for implementing it. Wondimu et al. (2016) [13] support this by stating that an organizational integration of contractors at an early phase can contribute to better value for money.

The CD is an innovative procurement tool. It is a less restrictive tendering process that has an impact on the ability of the market to respond with an innovative solution [14]. It gives the contracting parties the possibilities to discuss among other things about sustainability and renewable energy objectives, and the client can ensure its long-term commitments are taken into account [15]. The most discussed disadvantage of the CD procedure is its relatively high transaction costs [16].

According to OGC (2008) [17], there are several stages carrying out CD, but since complex projects often have unique characteristics, there is no standard way to undertake the CD. The procedure used by NPRA is as follows. First, the contracting authority has to settle a competent project group that attempts to chart the project needs. Further, they develop a pre-qualification document including the pre-qualification criteria and a draft tender document with award criteria. The client publishes these documents at Doffin, the Norwegian national notification database for public procurement, and the TED-database. Following this, any contractor can request to participate in the dialogue. The client pre-qualifies the best contractors and invites them to join the dialogue, aiming to come up with a solution that meets the needs of the project. The client must ensure to treat the contractors equally by supplying them with information at the same time, and it is also important to not disclose confidential information concerning the solutions. During the dialogue, the contractors develop the solution they find most suitable to fulfill the requirements of the project, based on the award criteria.

At the same time, the client together with the contractors develop the final tender document; when the client is satisfied with the presented solutions, he or she declares the dialogue as finished. The contractors are then invited to deliver their final tender. This tender is divided into two envelopes, envelope 1 with the solution answering the award criteria, and envelope 2 with a price. The solution in envelope 1 is evaluated up against the award criteria without knowing the price. After the evaluation, the client opens envelope 2 with the price. This envelope system makes it possible to use MEAT as an awarding method.

3.2. *MEAT Award Criteria*

Uttam and Roos (2014) [5] argue that MEAT is the only permitted awarding method applied in the CD procedure. MEAT is the weighted sum of various aspects of a product or service that provides value to the project. It makes sure that other selection criteria will be considered in addition to price by taking quality, environment, and social aspects into consideration [5]. The guidance for the regulation in Norway FOA (2013) [18] supports this by stating that the client has to choose tender based on the best relation between price or cost and quality. It further describes that the awarding of contracts must be based on objective criteria. The criteria should be stated in the announcement or the tender document so that it is predictable and transparent for the contractors regarding what the client will expect and emphasize in the evaluation of solutions.

According to European directives, when a public client awards a tender through the MEAT criteria, the client has to decide the evaluation criteria of the tenders in advance [1]. As Burnett (2009) [19] stated, the better-detailed understanding, the client has on how the project needs might be met, the easier it will be to refine the award criteria

and their weighting. Sebastian et al. (2013) [20] claim that the use of MEAT enables the client to use award criteria that reflect qualitative, technical and sustainable of the submitted tenders as well as price.

The regulation FOA (2016) [21] lists possible award criteria such as quality, price, technical value, aesthetic and functional characteristics, operating cost, universal design and environmental, social and innovative characteristics. The criteria can also include the organization, qualifications, and experiences of the project team. There is often a focus on profitability, customer service, and technical assistance as well as time delivery or completion. “The client is free to decide which award criteria to be taken into account for the awarding and how the criteria should be weighted” [18]. Burnett (2009) [19] claims that the marked require not only disclosure of the weighting of the main award criteria, but also of the sub-award criteria.

3.3. *MEAT evaluation and challenges*

The MEAT evaluation method clarifies the winning chance of the most optimal value-price ratio. It needs other objective aspects (e.g., innovation and sustainability) that can add values to the project than solely the lowest price as an evaluation method. As the aim of MEAT is a value-price optimization, it differs from other tender methods that focus only on price minimization or value maximization. An example of a tender that focuses only on price minimization can be lowest price tender for fixed-requirements, and a tender that focuses only on value maximization can be fixed-price design contest [20].

Point, ratio and price correction system can be used to evaluate MEAT tender. In the point system, all aspects of the tender are converted into points according to an objective calculation reference. In this system, the tender with the highest point becomes the winner. In ratio system, the tender with the highest value/price ratio becomes the winner. Value is calculated by addition of the added value to the basic value. The basic value is the minimum tender requirements and the added value is the tender above the minimum requirements. In a price correction system, the tender with the lowest corrected price becomes the winner. The corrected price is determined by first calculating the added value of each tender above the minimum requirements. Then, the offered price will be adjusted depending on the added value [20].

The client needs to take into account which scaling system to use in the evaluation process. The scaling system has two dimensions. In this evaluation, it is necessary to determine how to use the scale and its span. According to Stevens (1946) [22], there are four scales of measurements: nominal, ordinal, interval and ratio. It is important to choose a scale that is easy to understand and use as well as making the evaluation reliable. The following two scales of measurements will fit for this type of evaluation: The ordinal scale uses comparison and allows ranking the solutions in addition to sorting the data, while the interval scale determines equality of intervals or differences, but not the ratio.

There are challenges to implementation of the MEAT criteria, as the current regulations on public procurement do not specify how the MEAT evaluation procedure should be conducted. According to fundamental principles of public procurements, a client must, in a transparent and foreseeable manner, present the method for the evaluation procedure. However, the identification of MEAT might be a difficult task for the client and they need to consider different aspects like which criteria to use and the way to evaluate these criteria. In addition, it is essential to construct an evaluation model and a way of applying it. Special attention should be given when defining the MEAT criteria. Both over-simplifying and over-complication can have a negative consequence on the project performance. Standardization of MEAT weighting factors is important for the public client [20].

4. Findings and discussion

4.1. *Which award criteria are used?*

At E6 Helgeland South, the client decided to have four main award criteria. They weighted them with a fictive price and a percentage as shown in Table 1, below:

Table 1: Award criteria and their weighting

<i>Symbol</i>	Award criteria	Fictive price/ percentages
K1	Organization and management of contract	NOK 110 mill/41%
K2	Sensitive areas	NOK 70 mill/26%
K3	Technical Solutions	NOK 50 mill/18,5%
K4	Traffic management	NOK40 mill/14,5%

The reason for choosing these award criteria is that the client studied the quality assurance report (QA2-report) with an overview of the project prerequisites, contract strategy, critical success factors and uncertainty analysis. This report together with previous experiences from projects using the CD procedure was the basis for choosing these particular award criteria. The client was most concerned about the how the contractor would plan the organization and management of the project considering its span and size, which lead to K1. K2 deals with sensitive areas to ensure that the contractors know how to handle the complex ground conditions and the uncertainties related to it. The last two criteria are K3 technical solutions with a main focus on solutions that promote efficient, operative and cost reduction. K4 deals with traffic management and how to take care of this throughout the whole contract period.

Each award criteria have different sub-award criteria. The intention with the sub-award criteria is to ensure that the most relevant factors are taken into account in the development of solutions. The value of the four criteria (K1+K2+K3+K4) is in total 270 million, for this case. This amount represents the total score (fictional deduction, not the actual cost) that the contractor can achieve by fulfilling the requirements of the award criteria. If a contractor is not able to develop a solution that meets the minimum criteria, he is not allowed to submit the final offer.

In the evaluation of final tenders, the client had a major attention on performing objective by not letting the dialogue phase influence the evaluation process. They settled a multidisciplinary evaluation group composed of those who were involved in the dialogue phase and someone from their organization that was not a part of the dialogue to ensure the security of an objective evaluation process. All the participants in the group made an individual evaluation of the contractors' solutions; this evaluation was based on how the different solutions were satisfying the award criteria with all its sub-award criteria. Then the average value of each participant was used to calculate the fictional deduction, inspired by the grading system of Norwegian University of Science and Technology (2015) [23].

The award criteria intend to make the client able to award a contract to the MEAT. At the end of the evaluation process, the client calculates which solution supplies the most added values by the following equation:

$$S = T - (K1 + K2 + K3 + K4)$$

S = Competitive price; T = Tender price; K1 = Organization and management of contract; K2 = Sensitive areas; K3 = Technical solutions; K4 = Traffic management. When a solution achieves a high value of the award criteria, it gets a high fictional deduction (K1 + K2 + K3 + K4), and the competitive price (S) then becomes lower. The contractor with the lowest competitive price gets awarded the contract and wins the project.

4.2. What are the experiences from the use of the award criteria?

4.2.1. The client's experiences

The client experience with the award criteria is mainly positive. The award criteria appear to add value in diverse ways. K1 promotes a proper plan for organization and management that can influence time, cost and quality. This plan will reduce the total risk of the project by looking at the engineering, construction, and operation in a context. Working in depth with K2 Sensitive Areas will map the uncertainties, risk level and possibilities regarding the geotechnical conditions at an early phase. To have a focus on K3 Technical solutions may result in a lower project cost because the contractor uses the time to optimize their solution. K4 Traffic Management adds value in making the site safer during the execution phase and facilitates a more efficient construction period.

Despite the positive experiences, the client's personnel identified three major challenges regarding the award criteria. The first one is that it is difficult to determine the award and sub-award criteria in the front end of the project.

The second challenge is determining the award and the weighting of the sub-award criteria. The last challenge is to evaluate the contractors objectively by using these criteria.

The client personnel explained that the determination and weighting of the award and sub-award criteria were challenging. This is because it has to be done at an early stage, during the preparation of the draft tender document phase, while the client knows nothing about the span of the contractor's solutions. They found it also challenging to determine and weight the sub-award criteria early enough to inform the contractors about it. The sub-award criteria tended to evolve throughout the dialogue and their importance likewise.

The other challenge that was identified by the client personnel regarding award criteria was to evaluate the contractor's solutions based on the award criteria. There is no standard evaluation system in the NPRA. In the case project, the client personnel determined a grading system upfront, illustrated in the previous section of this paper. Even though the grading system was straightforward, there were uncertainties amongst the participants in the evaluation group on how to carry out the evaluation. They tried not to compare the solutions to each other but realized that it was troublesome to stay 100% objectively after being in dialogue for several months.

4.2.2. The contractors' experiences

The contractors' experiences are diverse, depending on which contractor that is interviewed. One of the loser contractors pointed out that they found it strange that they were not informed about the weighting of the sub-awarding criteria. They only got the insight on which sub-award criteria to focus on. Since it was no instructions on the importance of the sub-award criteria, the contractor assumed they were equally weighted. This resulted in inefficient use of resources and time. They end up in spending a lot of time and resource on things that do not add value to the project at all.

There was also confusion amongst all the contractors if they were evaluated relative to each other or not. They were unsure if it was enough to fulfill the requirements described in the award criteria to achieve maximum score, or if their solution had to be better than the competitor solutions. This confusion among the contractors was due to the evaluation system was not communicated in the early stages.

One of the losing contractors stated that the solutions ought to be evaluated up against the award criteria and not compared to the other solutions. They thought it should be enough to fulfill the requirements. They explained it with this comparison: if athletes are competing in high jump and if it is required to jump two meters, then it is enough to jump unaided over the horizontal bar. The athletes do not get a better score if they jump 20 cm higher.

The winner contractor had the opposite opinion and thought it should be a relative evaluation where the solutions got compared to each other. Also, there should be one pot of money, not several pots. All the participating contractors should compete in getting the biggest part of this pot. Then the evaluation would be about which solution that fulfills the requirements of the award criteria the most. They found it strange that all the contractors could get the same maximum score of 270 million. If they, in theory, had the same level of performance and got the same fictional deduction then the lowest price would be the only thing counting anyway.

4.3. How can the use of the award criteria be improved in future projects?

OGC(2008) [17] points out that complex projects tend to have unique features. This supports the recommendation for conducting a project-specific determination of the award criteria. Furthermore, on the determination has to be done at an early stage, in the preparation phase. Since the award criteria will vary from project to project the determination shall have a basis in reports like QA2-report and previous experiences in similar types of projects. It is also important to look at the objectives and needs of the particular project before determining the award criteria. The reason for this is that the award criteria are establishing the foundation for the whole dialogue phase. They establish the future of the project by defining which issues to touch during the dialogue, how to map the uncertainty factors and the development of the final tender document etc.

The weighting of the award criteria and its sub-award criteria have to be transparent. This helps the contractors to know how to distribute their resources during the project development phase, dialogue phase. It will be difficult to set the weighting of the sub-award criteria at an early point because their importance and position will emerge through the dialogue. The recommendation will be to determine the weighting of the sub-award criteria during the dialogue

and reveal it consecutively to the contractors. This will save time and resources because it is clearer for the contractor how to prioritize and what to have the main focus on.

There also needs to be a standardization of the evaluation processes to avoid insecurity amongst the participants from both the client and the contractor. Firstly the client must ensure that the project group conducting the evaluation consists of representatives from various professional groups that cover a large field of expertise. The majority of the group shall be those who were involved in the dialogue phase. These persons have insight into the developed solutions, the interaction between the actors, the award criteria, etc. It is essential to include someone with no connection to the dialogue, a neutral party. They do not know the dialogue and will ensure an objective evaluation.

The span of the scale also needs to be defined, 1-3 or 1-10. The goal is that the representatives can give a score that differentiate themselves in a valid way, but the ranking can get unreliable when there are too many points, for it is difficult to decide the value of a 3 compared to a 4 and a 5. The scaling used in this case from 0-4 is considered feasible. With this scale, the solutions get evaluated to be sufficient, satisfactory, good, very good or excellent. The span starts at 0, a sufficient solution; there is no point of having a solution that does not add value. The dialogue shall assure that all the solutions are at this level if not the contractor should not receive an invitation to deliver final tender.

The evaluation of the solutions, in this case, was conducted in a way that all the contractors could achieve a total score of 270 million if they developed an excellent solution fulfilling the requirements of the award criteria. This means that if the contractors perform at the same level and deliver a solution with maximum score, the lowest price would be the factor that counts in the end and becomes a priced base evaluation.

5. Conclusion

This paper set out to answer 1) which award criteria are used 2) what the experiences are from the use of the award criteria and 3) how the use of the award criteria can be improved in the future projects.

The award criteria used in this case project are K1 - Organization and management of the contract, K2 - Sensitive areas, K3 - Technical Solutions, K4 - Traffic management. The criteria are determined based on the needs and objectives of the project. The client used a QA2-report and previous experiences to set these particular criteria. All of the award criteria have several sub-award criteria pointing out which areas to pay extra attention to.

This paper addresses limited research on the award criteria experiences used in CD projects. The client experiences are that it is demanding to both determine and weight the award criteria and its sub-award criteria. Another problem is the lack of a standard way of evaluating the solutions based on the award criteria. The contractors are likewise unsure of how to use their resources when they do not have the information on the weighting of sub-award criteria. They were also confused about how they were evaluated. They requested a clearer approach to if it is a qualification based evaluation or a price based evaluation that will be used. The uncertainties around the procedure and the award criteria seem to reduce the trust level between the client and the contractor.

It is important to have awarding criteria that are aligned with the purposes and goals of the project. Next recommendation is a transparent weighting of the award criteria and the sub-award criteria. Also, the client needs to develop a standardized way of evaluating the solutions. At last, to fully exploit the possibility the CD procedure offers with optimizing a solution, it is advisable to conduct a qualification-based evaluation. To not only award a contract based on lowest price stands out as a golden opportunity for both the client and the contractor. The award criteria make the contractor more suitable to develop a solution based on their competence, experience, strength, and skill. In return, the client gets an optimized solution for their project.

6. Limitations and a guide to future research

The study has some limitations. First, the case study is limited to only one case, which is a Norwegian public infrastructure project, with the Norwegian Public Roads Administration (NPRA) as a client. Furthermore, interviews were only held with the client and the main contractors' personnel. It was not extended to explore sub-contractors, consultants, and operation & maintenance contractors' experience. In future research it will be beneficial to interview these players, such as policy makers, finance department, consultants and operation and maintenance contractors. It is also valuable to look at other sectors like buildings and IT to study their experiences with the CD procedure and award criteria.

The findings in this research shows that further work with the CD procedure will be needed. It is necessary to develop a standard way of evaluating the solutions based on the award criteria. The client also needs to consider the different dimensions of the evaluation; one or several pots, which scale to use regarding its span and how to use the scale, if the solutions shall be compared to each other or not.

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