

# DEVELOPMENT OF A RESEARCH PROGRAM ON BEST VALUE PROCUREMENT IN THE NETHERLANDS

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## ABSTRACT

Best Value Procurement (BVP) has been introduced in the Netherlands in 2005. The Ministry of Infrastructure was the first large scale user of this procurement method, showing that it fits European tender laws. The Ministry of Infrastructure used the method for the procurement of € 600 mln roadworks in the so called Fast Track Projects. Since then primarily the public procurement community showed interest in BVP. The method BVP consist of five filters: Project capability, Risk assessment plan, Value Added plan, Interviewing key personnel and Contracting (clarification). Six cases show that the method increases the dominance in the supply market. There are many professionals active in the Netherlands and there have been some 600 tenders using the Best Value Procurement method. This exploratory research into 10 years of Best Value Procurement in The Netherlands shows the possibilities for further academic research.

**Keywords:** Best Value Procurement, The Netherlands, BVP, dominance, public procurement

## INTRODUCTION

In 2002 the government of The Netherlands installed a Parliamentary Inquiry Committee of Construction Fraud to study the fraud cases in the construction industry. The procurement of many projects were influenced by negotiated terms amongst construction firms before and during the tender phase of projects. All these tenders had a price based selection mechanism and low freedom for construction firms to express their expertise in these projects. The Committee came up with three recommendations (Van Leeuwen, 2011):

1. There was a need for harmonization of the procurement policies for public contract authorities.
2. Public authorities should adapt their policies towards more integrated project delivery models, such as Design-Build and Design-Build-Finance-Maintain.
3. Make use of award criteria based on price *and* quality (use of so-called “Economically Most Advantageous Tender; or “EMAT”).

The Ministry of Infrastructure (Department of Public Works and Water Management), applied the recommendations in 2004. The ambition was to award 90% of the tendered contracts on quality and price. As a consequence of this policy, the department decided to use Best Value Procurement (BVP) for the procurement of 6 clusters of road projects in The Netherlands. This so-called Fast Track Program appeared to be the world’s largest BVP program with a combined value of € 600 million. The early phase of the adoption of BVP in the Netherlands is very well documented (Rijt et al, 2011).

Since the start in 2005, the phenomenon Best Value Procurement has been used in many sectors of the industry, in many categories of products and services and by many (groups of) consultants and professionals.

Some examples of industries are building and construction, ICT, pharmacy, insurance and public bodies, like municipalities, provinces, national (governmental) bodies, ministries, water boards. Categories are works like roads, bridges, water purification installations, railway installations and services like cleaning, surveillance, office supplies, security, healthcare and maintenance. The group of Best Value Procurement users in LinkedIn consists of more than 2000 members. The Dutch Association Best Value has over 300 members and had its fourth national conference of two days in 2016. Consulting firm Scenter was the first to adopt the methodology (assisting the Ministry of Infrastructure) and translated the USA based method into Dutch (and adopted Dutch procurement laws). Since then many consulting firms were founded, like Best Value Group (3 professionals), Best Value Experts (6 professionals) and Best Value Europe (network of independent consultants). The Dutch book (in Dutch: prestatieinkoop) is in its third edition and over 10.000 copies have been sold. The book is translated in Polish and Norwegian and will be translated into more European languages.

All these developments were the basis for a scientific group based at the Technical Universities Delft and Twente to start developing research into the phenomenon Best Value Procurement. This paper is a first report of the very exploratory research that has been done in 2015. The aim of this exploration is to come up with a research program, in order to further manifest the procurement methodology in The Netherlands and other countries of Europe.

The paper first elaborates on the research method used so far, including a research question. Next the Best Value methodology is described, followed by an exploratory academic positioning, based on literature. Next is a short overview of the developments through the years 2011 and 2012, to illustrate that the method is developing over the years. Next an evaluation of 6 cases is described, followed by a first idea on the research program. The paper concludes with some limitations, implications for practice and further research.

## **RESEARCH METHOD**

In The Netherlands we are developing an academic research program into the phenomenon Best Value Procurement. Therefore we have conducted an exploratory research consisting of literature research (to position BVP), open interviews and a case study of 6 cases.

The exploratory research question is very simple:

*How has the phenomenon Best Value Procurement evolved since its introduction in 2005 ?*

For research purposes, the sub research question is formulated as follows:

*What should a research program in BVP look like ?*

The aim of the research is to better understand the phenomenon and to improve the methodology and further adopt it to developments in European tender laws.

We are now ready to set up the in depth literature study based on the scientific databases. For empirical exploration we have interviewed 30 professionals in the field, using open interviews, allowing the respondents to elaborate on their specific themes. These interviews are outside scope of this paper. In the case study, 6 cases of the fast track project were analysed.

## **BEST VALUE PROCUREMENT IN THE NETHERLANDS**

Best Value is about selecting a supplier based on his expertise, not on the capacity to fulfil the specifications of a customer. As the suppliers know better how to perform a task (why would you need them if you knew better how to do the job ?), let them explain how they propose to perform the deliverables of the project. The customer sets the (functional) goals, the selected supplier specifies the detailed deliverables.

The Dutch version of the method Best Value Procurement is outlined and described in a Dutch book 'Prestatieinkoop', by Jeroen van der Rijt and Sicco Santema (2013). The method is improved every year. The method has (2015 version) 4 phases, as shown in figure 1.



Figure 1: the four phases in Best Value Procurement in The Netherlands

In phase 1 the whole tender is prepared. This includes goal setting, choosing the formal (European) tender procedure and the way the tender is being published. The associated groups of employees are trained and educated in Best Value philosophy and the procurement officer, leading the team, is selected. The most important Best Value part here is to set out the goal for the project (work or service) and stick to a functional specification of the deliverables. As soon as the team wants to specify in detail, the contracting officer has to reroute the energy. An important part of the preparation is setting the ceiling price. This is the maximum price the customer is prepared to pay.

The supplying market is informed and the tender is published.

In phase 2 the actual selection is done. This phase is elaborated further below. Here an important distinction is to be made. Internationally, in the selection phase the actual scoring (judging) of the proposals is done. Translated in Dutch, this causes discussions, as 'selecting' in Dutch means selecting potential suppliers to join the tender (they have to fulfil certain prequalifying KPI's). The second phase is called in Dutch 'gunningsfase', which can be translated as the phase in which the best supplier is chosen.

In phase 3, the offer of the selected (potential) supplier is clarified, up to a level that the customer understands what is going to happen and how the goals are being reached. If the customer understands all of the offer of the supplier, the contract is awarded.

Then phase 4, the execution follows.

The Dutch way the Best Value supplier is selected is shown in figure 2. Each of the activities is described below. The potential suppliers send in their documents based on the RFP. These documents include (at least) the following factors:

1. Price
2. Project capability
3. Risk assessment plan
4. Value Added plan

The price is checked by the contracting officer (the process manager of the selection). It should be below the ceiling price. If that is not the case, the supplier is excluded from the process. The price is not presented to the selection team that is grading the three written dossiers. This is done to increase the objectivity of the selection team. The price is only known to the contracting officer and disclosed in step 4, the ranking.

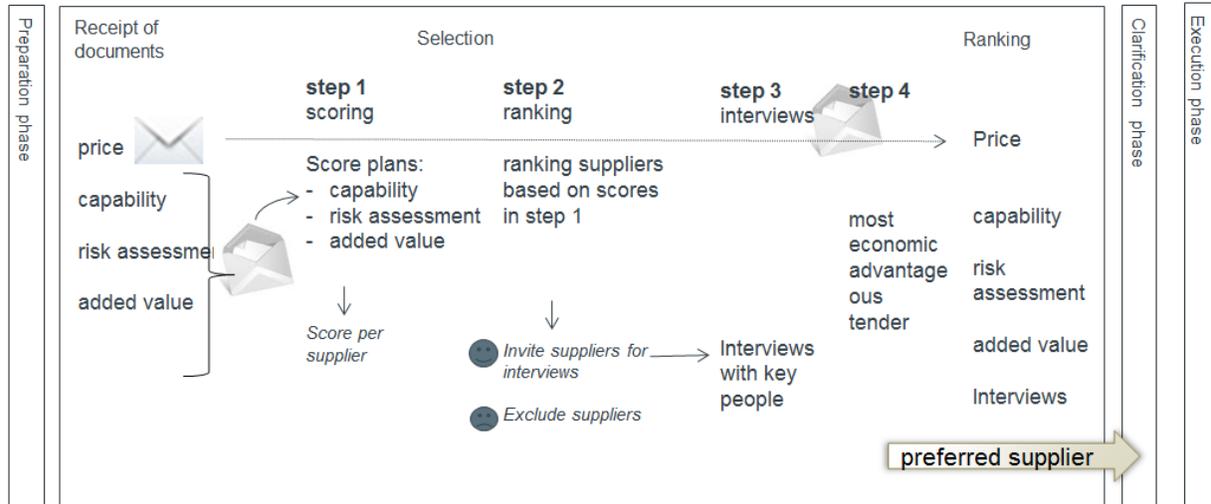


Figure 2: The Dutch selection system as of 2013 (adapted from Rijt and Santema, 2013)

In step 1 the selection team is scoring the three documents, the project capability, the risk assessment plan and the added value plan. In their project capability the suppliers show that they are able to perform the required tasks (being products or services) in order to achieve the goals of the customer. They proof their capabilities with so called verifiable performance information. In practice, this means that there is no need for a first time supplier to enter the competition. You should have done earlier projects to be able to produce performance information.

In the risk assessment plan, the supplier indicates the biggest risk for the project or the service and their applicable risk mitigation measures. Also underpinned through performance information, indicating how these measures have worked out in other situations and why it is working in this current tendered project. The risks should be outside the scope of the supplier, otherwise the risks are showing that the capability of the supplier is not as stated in project capability section. The idea behind this in Best Value is that a supplier has no risk in his expertise (in his core competence) and he should be able to tell the outside risks, experienced in earlier projects.

In the Value Added plan, the supplier further shows his expertise in telling the potential extra's that improve the performance or the project of the service. This means that in this part of the process the supplier can illustrate what competences they have and how they can apply it for the customer to reach his goals. The Value Adds are related to the scope of the tender and improve the delivered performance. Value Adds should not add other work or non related scope, as that might require a separate (European) tender.

The members of the scoring committee first score individually, then a consensus score is realised. A consensus score is not an averaged score. The consensus is used in the ranking, according to the weights that are described in the Request For Proposal (see later).

In step 2, based on the ranking after the scoring of the written documents, the interviews are organised. In the first versions in The Netherlands. only the best three suppliers were invited

for the interviews. This was increasingly criticised in practice, because it means a decision by the tendering organisation and therefore turned down suppliers could start an argument, causing a lot of costs and delays, that are not contributing to the goal of the RFP; selecting the Best Value supplier. In current practice all the participating suppliers are interviewed.

Step 3 is interviewing the key people of the suppliers. The idea behind the interviews is that the customer wants to know who (in person) is going to realise the offered performance. This goes back to the idea that not companies or organisations realise the success (the performance) promised, but people do. Everybody knows that they are working in that organisation, but it is the accountable, responsible employee that does the work, not the organisation. During the interviews, the key personnel get the opportunity to illuminate the real expertise brought to the project. Interviewees tell about the project or the service, with the end result in mind, based on their expertise. The real expert is tested here on the capacity to oversee the whole project (or service) from the end to the beginning. To avoid subjectivity, the knowledge and expertise is scored, not the person him or herself.

After the interviews, the results are added, and the ranking of the suppliers is done (step 4). This can either be done through points or via EMAT (Economic Most Attractive Tender) in which the results are monetarised (based on weights of the earlier shown factors) and added to a fictitious sum of money. The lowest is the winner.

The preferred supplier enters the clarification phase, in which the offer of the supplier is discussed in detail (clarified), until the customer is confident that the supplier can do the job and the contract is closed. If the customer is not confident with supplier 1 (after detailed and intense discussions), he turns to number 2. After the decision is made, the other potential suppliers get their acknowledgement of not being selected and the standstill period starts. After that the execution phase starts.

The paradigm of Best Value Procurement is to minimize the need for technical decision making in the selection process, and maximize the need for the Best Value supplier to prove that he is an expert (ultimo in the clarification phase). This paradigm encourages suppliers to show dominant differential in performance through metrics. The 'risk' in being selected is shifted to the vendors, who are expected to show value through expertise, with verifiable metrics, knowing that experts minimize both risk and cost and maximize quality (see the cases section).

## **EXPLORATORY ACADEMIC POSITION OF BEST VALUE PROCUREMENT**

The complexity of relationships is recently illustrated by the 3894 articles on inter-organizational relationships which were identified by Cao and Lumineau (2015). They identified that, for understanding relationships, scholars mainly use:

- Transaction Cost Economics (Williamson, 1985)
- Social Exchange Theory (Blau, 1964)
- Relational Exchange Theory (MacNeil, 1980).

For the exploratory purpose of this literature research, we shortly describe these three academic streams in the perspective of Best Value Procurement (BVP) and discuss some more recent work on relationship building.

Transaction Cost Economics differentiates between the relationship structures market, hybrid (or bilateral), and hierarchy. For the bilateral structure TCE posits the contractual relationship as source of real economic value (Williamson, 1985). Best Value Procurement uses the expertise of a supplier to draw up the contract and define the relationship. It should be positioned as a form of 'market' as defined by Williamson.

Exploratory conclusion on BVP and TCE: the academic field of TCE should be explored further to better understand the mechanisms that can explain Best Value Procurement in creating transactions between suppliers and customers.

Social Exchange Theory is (in very short) about as 'furnishing benefits to the others' (Blau, 1964, p.16). SET is based on concepts of trust and commitment. Other scholars (Dyer and Singh, 1998; Heide and John, 1992; Morgan and Hunt, 1994) have developed a concept of relational governance based upon Social Exchange Theory. All of these are about the relationship during the execution phase of a relationship, sometimes related to the acquisition or tender phase. Exploratory conclusion on BVP and SET: the academic field of SET is about human related aspects of a relationship. As there are interviews in BVP, the social exchange aspects in that filter could be researched with SET.

Relational Exchange Theory (MacNeil, 1980) with its concept of relational norms. Most of the norms are dealt with separately, although they should be seen in their entirety. Some examples are 'contractual solidarity', the norm of holding exchanges together (MacNeil, 1980, p.52), 'mutuality', this norm calls for a mutual perception of benefit,.. for some kind of evenness (MacNeil, 1980, p.44), 'creation and restraint of power', without shifts in power, ...without restraint from absolute power the other norms would be rendered inoperative (MacNeil, 1980, p.56-57) and 'role integrity', how do parties perceive their roles in the relationship.

In procurement situations, especially tenders, these norms are not applicable, as contact between parties are prohibited (public tenders) or based on negotiations (with its own, not necessarily relation based, norms).

Exploratory conclusion on BVP and RET: Best Value Procurement as described is not warranting the relational norms necessary according to RET for 'modern contractual relations'. Further research could be aimed at the dossier based filters, as they have contractual aspects in it.

Several other studies have taken a dynamic perspective on relationship building (Ring and Ven, 1994, Klein Woolthuis et al, 2005, Zheng et al, 2008). These studies "unveil the dynamic nature of complementarity and substitution" in relationships (Huber et al, 2013) shifting the discussion from 'either/or' to 'and/and'; and revealing "how a balance between contractual and relational relationships can be achieved through a process we call the ambidexterity pendulum" (Cao et al, 2013). Though these studies contribute to the understanding of relationship development and underlying processes, little attention is given to the creation of relationships in the tender phase. Studying Best Value Procurement can add to that body of knowledge.

## **DEVELOPMENTS IN BEST VALUE PROCUREMENT**

Dean Kashiwagi is the founder of Best Value Procurement (Kashiwagi, 2011). His research group at the Arizona State University, Performance Based Studies Research Group (PBSRG)

started with the procurement process in 1992. where both price and quality are valued in the award mechanism. Ideally, price calculates for 25 %, and quality aspects for 75 %.

In The Netherlands the first version of Best Value Procurement method had 6 filters, as shown in figure 3 (based on the system that Dean Kashiwagi had created). To show the evolution over time, the version before 2011 and the 2012 version are briefly discussed.

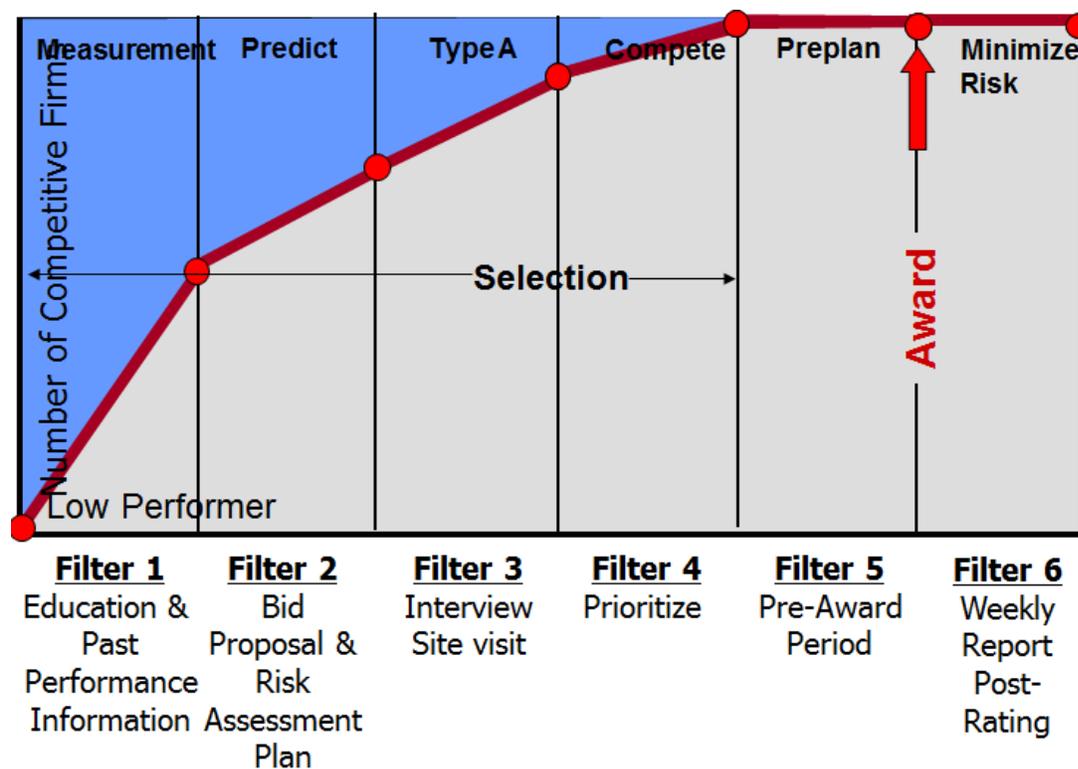


Figure 3: Best Value procurement method before 2011.

The selection was made based on:

1. Past performance information, which gave the customer an idea of the performance of that specific supplier on projects in the past.
2. Risk assessment plan, including mitigation measures. These measures were scored based on the performance information that was provided. This information should indicate how the mitigation measure has been successful in other projects to reduce (or exclude) the effect of the mentioned risk in relation to the goals of the project.
3. Interview and site visit. The interview gave a good impression of the capabilities of supplier's people involved in the project or service. The interview primarily aimed for the discovery of supplier's ability to oversee the project (or service) from beginning to end, including the potential risks and mitigation measures. The site visit was meant to get a feeling on the way of working of that specific supplier, in the idea that the way they operate at another location was going to be the way they will operate for the customer that is looking for a new supplier.
4. Prioritisation is done on the bases of the scores in the earlier filters. Usually, price accounted for 25 %, as the other elements calculated for the rest of the 75 % (eg. Past performance 20 %, Risk assessment 25 % and interview 30 %)
5. The supplier with the highest score was invited for the so called pre-award phase,

indicating that the customer was willing to contract that supplier, if the content of the offer was well understood by the customer. So here the actual contracting was taking place. If the customer was satisfied with all of the explanations and clarifications, the contract was closed and the executing could start.

6. Execution phase, in which the actual project management and risk mitigation is taking place. Reporting is done through the Weekly Risk Report, also showing that risk management is an important part of the project philosophy of Best Value Procurement.

Every year in January, at the USA Best Value Conference in Phoenix Arizona, the updates of the USA methodology were presented. The influence of the European way of procuring and public tendering (based on European law) was visible. An example of that influence is the past performance information, which shifted from customer driven, database oriented evaluation mechanisms, towards supplier based information supporting the claims and measures in the bid materials. It also shifted from the supplier as a company to the project approach (or comparable approach) that was offered in the current tender of the supplier.

As an example of the changes, the method of 2012 is shown in figure 4.

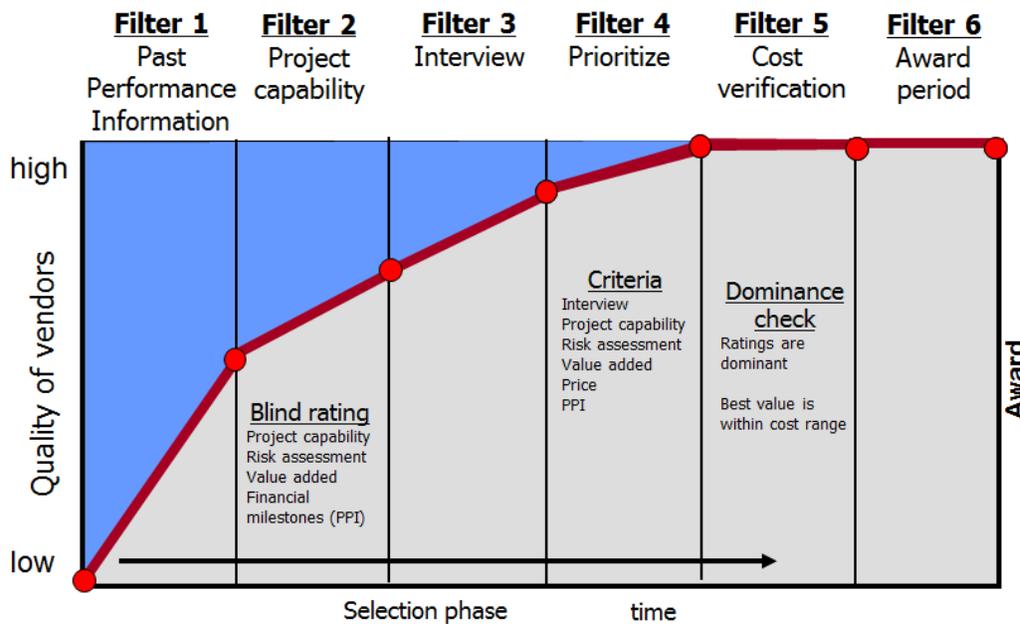


Figure 4: Best Value procurement method of 2012 (based on Kashiwagi, 2012)

For 2012, we see that past performance information is still in. The second filter is now completely dedicated to what is called project capability, consisting of the capability itself, the risk assessment plan and the value added plan. Apart from the double use of the term 'project capability', we now see that filter 2 is completely dedicated to the written part of the tender, the documents themselves. Allowing the customer to judge all of the documents of the (potential) suppliers at the same time. In filter 3, the site visit stopped, as it was considered a threat to objectivity. Although one can tell that an experienced, expert supplier keeps his premises well, the lawyers have indicated that subjectivity in this particular element cannot be excluded, nor made objective. So that one was not taken in account any more.

New in filter 5 was the verification. Before entering into the award phase (creating the contract) the offer of the potential supplier is checked on the financials. In fact Kashiwagi

(2012) created a mechanism called ‘competitive range’. This range was set at 10 % around the average of the price of the potential suppliers. If your price was outside that range, you had to clarify and proof that you could perform at that price level (if it was lower) of why your approach needed the extra money, as compared to the competitors. In The Netherlands this approach has been disputed by lawyers. Their argument was that it is not the discretion of the customer to judge whether a price is right. So that specific part is left out (see fig 2).

## CASES STUDY RESEARCH

In order to test whether the system of Best Value Procurement works, Rijt et al (2011) conducted a case study into the 6 fast track projects. This study consisted of an analysis of existing documentation, and interviews with representatives from the market. Results show support for this method of award, scoring it with an 8 (out of 10). During the interviews a greater weight on quality in the overall assessment was advocated. Interviewees also indicated that extreme scores were not given, indicated as a typical Dutch habit not scoring the highest possibility in a scale. Table 1 shows the minimum and maximum scores for each of the evaluation criteria for the six projects (A-F).

	A		B		C		D		E		F	
	Max	Min										
<b>Risk assessment</b>	7	3	8	3	7	5	8	5	7	4	7	3
<b>Value added</b>	8	5	9	4	8	6	8	5	7	4	9	6
<b>Schedule/planning</b>	7	5	7	5	8	6	8	6	8	4	8	7
<b>Interviews</b>	9	4	9	4	8	5	8	5	9	3	9	6
<b>Number of bidders</b>	5		3		6		5		5		6	

Table 1: minimum and maximum scores in the Fast Track Projects

In the cases a milestone planning was also used in the selection. Table 1 shows dominantly the differences between the highs and the lows. The highs were selected for the jobs. All 6 projects have been awarded to one of the bidders within a period of 5 months. The extra time gained was used in the realisation phase of the projects. Another result was that each of the projects had sufficient bidders (see table 1). This was one of the worries of the Ministry of Infrastructure as the tender capacity at construction firms was low at that time (2009).

Another remarkable result of the research of Rijt et al (2011) was that in 5 out of the six cases, the lowest price was not the winner, showing that in the Best Value system, using EMAT, quality does win over price. In fact in 4 out of 6 cases, the second lowest price won the bid, due to a higher score in qualitative aspects.

Looking at it the other way around, in three cases the highest score on the qualitative aspects was the winner. In the three other cases, the winner had the second or third score on the qualitative aspects.

## FIRST IDEA ON THE RESEARCH PROGRAM

In cooperation with the Dutch Best Value Procurement association and the Technical Universities of Delft and Twente, a scientific research program will be drawn up. There are several aspects to that research program:

- Turn the explorative, qualitative character into a more quantitative approach

- Using large scale interviews and cases
- Define and study the success of the methodology (in relation to project success)
  - Also in relation to other selection methods under European Tender law
- Evolutionary research into the development of the method over the years and the reasons behind the changes (incl. documentation)
- Develop changes and improvements to the method, of parts of it (filters)
- Research on the outcomes of disputes in court
- Research the more social aspects of behaviour of people and parties in the tender phase
- Position Best Value Procurement in the academic field

As means of study we will work with PhD students and MSC graduation projects, providing both longer term research perspectives and shorter term results on specific elements. We have now (2016) already 4 PhD students working on subjects like project success, governance and trust. Some 12 MSC students are looking into subjects like performance metrics, improving the smartness of measures and communication on expectations. They all take a dyadic perspective, looking at both sides of the same coin, supplier and customer. So while the program is being formed, some practical studies are also on their way.

### **LIMITATIONS, IMPLICATIONS FOR PRACTICE AND FURTHER RESEARCH**

This paper has a (very) work in progress status. The limitations are related to that status and are clear. Only exploration is at best a basis for a proper research set up, not to draw firm conclusions. We will do so in our further research, acquiring more data in order to get validated results. Furthermore, the used methodology describes the means that would be gathered in order to address the research question. Extensive literature review will help to find a specific angle and then a way to address problems. Also from practice some angles occur, eg comparison of different procurement systems, comparing countries that implemented the same type Best Value Procurement approach, or investigate whether contracts are realized as proposed by sellers and as expected by buyers (true dyadic perspective). Next to that, IMP Group Theories could be added to the research..

On the other hand, research has to start somewhere and the phenomenon Best Value Procurement deserves research as it is so widely spread in The Netherlands and now also being introduced in other European countries.

The implications for practice of this paper is that the development of the methodology used in The Netherlands is outlined and that the elements used are better described. This will improve the usability of the instruments in the method, in The Netherlands as well as in other countries.

The scientific implication of this paper is very limited, as it is an initiating, explorative research. Nevertheless, it forms the basis for a better documented set up of the research program.

#### **Further research**

The potential for further research is enormous. We have to focus in the coming months and come up with selected subjects, also based on the potential buy in of practice, in order to be able to collect enough data. In any case we will continue to collect data on the evolution of the phenomenon, as described in the first research question and the setting up of the research portfolio (sub research question).

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