
Changes Required to Sustain a Best Value Environment

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The BV environment was introduced into the Netherlands in 2004. By 2008 testing was being done by a partnership between Arizona State University and Scenter (private entity led by Sicco Santema). In 2010, the \$1B fast track projects were procured by the Rijkswaterstaat, using the Best Value Procurement. By 2015, instead of the BV approach being treated as just another option, NEVI, the Dutch professional procurement group (third largest procurement group in the world) designated the Best Value Procurement as one of the main stream procurement approaches, and hired a full time Director to guide their Best Value Procurement training programs. However, in three major areas: IT delivery, professional services and the medical arena, buyers and larger-traditional vendors were having difficulty adapting to the approach. The BV approach utilizes the expertise of experts to replace the need for owner management, direction and control (MDC). However, a stumbling block occurred, when a “Best Value” vendor was selected, but did not have their detailed plan as a baseline from which they could identify risk that was outside of their control, their risk mitigation plan, and a simple way to create transparency to help the client/user. This is a case study that shows how the Best Value Approach was requiring a paradigm shift with both the user and the vendor, which neither party was well-prepared for.

Keywords: Best Value, transparency, Netherlands, risk management, Rijkswaterstaat

Introduction

In the early 2000s, the Netherland construction industry was beset by a large scale case of vendor/contractor collusion (Doree, 2004). Several Dutch construction visionaries had heard the industry structure explanation from the Performance Based Studies Research Group (PBSRG, Arizona State University), and realized that the cause of the collusion was not the vendors’ criminal/malicious intent but the minimization of the contractor’s profit margins to an extent that threatened their sustainability. PBSRG used the Construction Industry Structure (CIS) model (Figure 1) to identify that low performance, non-transparency and collusion was the result of the owner’s use of management, direction and control (MDC) to minimize the risk of non-performance. It was a form of micromanagement of the supply chain that increased the number of managers and decreased the number of expert contractors. It created an environment of MDC which increased project time and cost deviations and minimized vendor profits.

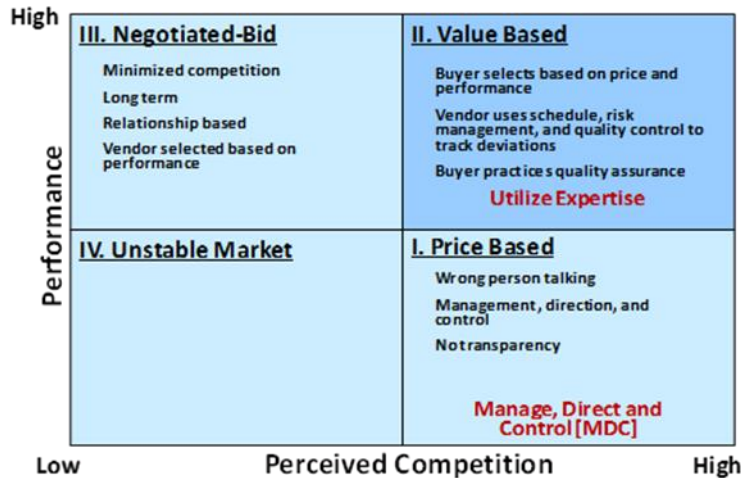


Figure 1: Construction Industry Structure (CIS) model.

In 1991, as a dissertation at Arizona State University introduced a performance based procurement system (Kashiwagi & Badger, 1991), which has since been renamed to the Performance Information Procurement System (PIPS) to differentiate it from the other performance based procurement systems that were being used (Goodridge, D. Kashiwagi, Sullivan & J. Kashiwagi, 2007). PIPS was different because of the following characteristics (Kashiwagi, 2011; Kashiwagi, 2014b):

1. It used no management, direction, and control (MDC).
2. It replaced MDC with the utilization of expertise.
3. It identified that the experts had no technical risks.
4. It defined that the only risk that experts had was the risk that they did not control.
5. The PIPS structure forced experts to create transparency to minimize the risk that they did not control.
6. It proposed that experts, who knew what they were doing, minimized project cost, and increased vendors' profit.

The Best Value Approach utilizing PIPS had three phases:

1. Selection phase.
2. Clarification phase (also called pre-award phase).
3. Execution phase.

In 2008, small procurement tests were run by Scenter, using the Best Value Approach (D. Kashiwagi & J. Kashiwagi, 2011; Koreman, 2011; Van de Rijt, Hompes & Santema, 2010) (licensed from ASU). In 2010, the first large scale test, the \$1B Rijkswaterstaat "fast track" projects to widen the major roads in central Netherlands, was ran using the Best Value Approach. The BV approach was used simply because there was no way to deliver the required construction using the traditional approach in the directed 3 to 5 years (traditional Rijkswaterstaat delivery would take 12 years). At that time, the Dutch called it Best Value Procurement, or BVP, due to the name of the ASU technology called the Performance

Information Procurement System or PIPS. The results included (PBSRG, 2013; Van de Rijt & Santema, 2012; Van de Rijt, Witteveen, Vis & Santema, 2011):

1. 15 out of 16 projects were completed within three years instead of the projected 10 projects.
2. Procurement costs and transactions of the owner and the contractors was reduced by 50%.
3. The construction time on the projects was reduced by 25%.
4. It was confirmed that 90% of all cost and time deviations were caused by the owner.

The positive results led to the following:

1. NEVI, the Dutch professional procurement group, licensed the Best Value (BV) Performance Information Procurement System (PIPS) technology from Arizona State University (ASU) and started educating and certifying procurement personnel and consultants.
2. The procurement personnel focused on the selection phase or procurement part of the process. The pre-award or clarification phase was not perceived as important (even though it was highly emphasized by the founder Dr. Dean Kashiwagi).

Best Value Procurement (BVP) became a “buzzword” in the Dutch procurement. Various authors have published numerous Best Value books in the Netherlands, and the books are now being translated into the native languages of the Norwegians and the Polish people. The interest in becoming certified with a BV PIPS A+ certification and an A certification has increased. The number of Dutch experts who have attended the annual Best Value Certification Conference in Tempe, Arizona, has tripled over the last five years (Kashiwagi Solution Model, 2015). However, there are a few challenges faced by the Best Value movement. The Dutch are a consensus people and traditionally have a strong tendency towards the “trust” model. They first utilized the BVP as a selection/procurement model, and trusted the identified Best Value vendor to perform (by observation because the clarification period was not done or done improperly). Only after two or three years, did the Dutch begin to understand that the BV approach was not a trust model. The next big challenge was that the visionaries who first championed and tested BVP were procurement personnel. They did not realize that even if they eliminated MDC from the procurement role, MDC was the traditional project management model. They also did not realize that if procurement was to be successful with the BV approach, they would have to redefine the role of the procurement personnel and their function and also change the paradigm of the project manager who represented the client/owner. From hindsight, it seems very simple and clear. The Dutch would have to change:

1. Their culture of consensus, trust and assumption that everyone is an expert.
2. Minimize the decision making that procurement personnel had done for the owner for years.
3. Change the procurement function to be accountable for a procured service until final delivery.
4. Change the “silo-based” organization who passed the product “over the wall” to a transparent, efficient and effective supply chain.

5. Change the project management model from MDC to identification and utilization of expertise.

Trust-Based Model

The Dutch BV implementers were identifying expertise in the selection phase and then used a “trust” based approach in the execution phase. However, the BV approach does not utilize trust. Instead, it encourages owners/buyers of services to “not trust” the vendors. The BV approach uses a series of selection filters to identify a potential Best Value vendor, which is followed by a clarification or pre-award phase to ensure the identification and utilization of expertise. The Dutch implementers were attempting to utilize the expertise of the vendors using a “trust” model without executing the clarification phase to create transparency to mitigate risk. Most of the early implementers did not run the clarification phase due to their focus on selection and their trust of the selected vendor.

Client/Owner Decision Making

The greatest risk to the Best Value Approach is that for many years the client/owner was managing, directing, and controlling the vendors (MDC). This resulted in the vendors being:

1. More reactive.
2. Not utilizing their expertise.
3. Being silo based (acting in a win-lose, position of leverage, using the contract to control the vendor).
4. Larger vendors were already very bureaucratic. A bureaucratic client with the same bureaucracy created a non-transparent, lose-lose, reactive, relationship based environment, which the larger vendors felt very comfortable with.

After many years of the vendors experiencing the owner’s price based traditional MDC environment, the biggest risk became:

1. Vendors not changing and acting in a reactive, bureaucratic approach.
2. Vendors not being able to identify and utilize their own expertise in their organization.
3. Vendors not understanding the level of expertise required to do a project.
4. Vendors who were not experts attempting to respond to clients/owners requirements as experts.

The Best Value Approach became one where the clients decided who was the best vendor, instead of the best vendor creating transparency by showing their higher level of expertise with performance metrics and lower costs. This was a huge challenge for the Dutch BV groups who did not understand the theoretical impact of decision-making and trust. The decision makers did not realize that once they decided who the Best Value was based on their own technical understanding and decision making (and not dominant performance metrics provided by the vendors), that the liability and accountability of the vendor was minimized. This increased the risk of the projects to the owner.

Problem Facing Procurement Personnel

When the BV approach was first utilized in 2008, the approach was called Best Value Procurement by the Dutch. It was utilized by procurement personnel to select the Best Value contractor (Koster-Robard, 2012; Plehn, 2011; Van der Heijden & Van de Rijt, 2011; Van Abeelen, 2012; Van Hes, 2013; Van Hulzen, 2011; Van Veenendaal & Witteveen, 2011). After selecting the Best Value vendor, procurement then turned the awarded vendor to the user's project management personnel to manage, direct, and control. The procurement personnel were in a silo, and the project management personnel were in their own silo. Both silos were making decisions and managing, directing and controlling (MDC). In many instances, the Best Value vendor reverted to the traditional reactive behavior. The visionary procurement personnel realized that if BV was to work, the traditional procurement model would have to be changed. The procurement personnel would not only be responsible for selection but also for the clarification period and the weekly risk report that tracked a project to completion. This was not easy to do because it changed the job description and responsibility of the procurement personnel. It requires a structural organizational change, and a change in responsibilities.

Project Management Model of MDC

The Dutch BV experts (procurement personnel) faced the following challenges:

1. The procurement and project management personnel are in silos.
2. The project management personnel who deliver the project and manage the delivery of the project both use a management, direction, and control (MDC) model.

The procurement personnel using Best Value Approach identifies expertise and experience using decision making and trust, then turned over the Best Value vendor to the project management group. The Best Value Approach has a structural safety catch, the clarification phase that forces the expert vendor to (Kashiwagi, 2014b):

1. Have a detailed schedule from beginning to end.
2. Simplify technical detailed schedule into a milestone schedule so that all other stakeholders can understand the project deliverables without technical expertise.
3. Have a milestone schedule integrated with a cost schedule.
4. Have milestones described by metrics that everyone could understand.
5. Ensure milestones represent the project deliverables that everyone has understood and can understand.

The clarification phase uses characteristics of experts that make it difficult for a non-expert to successfully achieve. Experts are defined by the following (Kashiwagi, 2014b):

1. Clearly identify the required deliverable in terms of metrics.
2. Identify it in terms that non-expert stakeholders can understand.
3. Work from the end deliverable to the beginning in terms of time, resources, and cost.
4. Have no technical risk.

5. They identify risk that they do not control, and mitigate the risk through transparency (simplifying the complexity so all stakeholders can see into the future and do not cause risk).
6. Experts think less, make very few decisions, and can see a project before they do it.

The clarification period is run with the procurement personnel because the results of the clarification period become a major component of the contract that is signed between the owner and the Best Value vendor. The project management personnel also participate in the clarification period because they are the owner's representative in accepting the deliverable from the Best Value expert. If the clarification period is run correctly, it integrates the owner's procurement and the project management personnel, breaking down the silos, utilizes the expertise of the Best Value vendor, minimizes decision making due to the transparency provided by the expert vendor's complete plan that includes the roles of not only the vendor but also of all stakeholders that will participate in the delivery. The clarification phase is the most critical component in ensuring that expertise is utilized to minimize project cost and maximize project value and performance.

Evolution of the Understanding of the Best Value Approach in the Netherlands

The Best Value Approach went through an evolution in the Netherlands (D. Kashiwagi & J. Kashiwagi, 2011; Van de Rijt & Santema, 2012; Kashiwagi, 2014b):

1. First, the Best Value Procurement.
2. Second, the Best Value Approach with the clarification phase.
3. Third, using the Best Value Approach utilizing metrics.
4. Lastly, the owners and vendors learning how to utilize expertise in their own and in other organizations.

The evolution of the Best Value Approach is currently changing the procurement model and the procurement function, from the selection of Best Value vendor and then tossing the vendor to project management, to the responsibility of ensuring that the Best Value vendor is capable of and delivering the Best Value deliverable that they were contracted to deliver. The Best Value expert is using the clarification period and a weekly risk report that tracks the milestone schedule to create transparency so that project management can assist in the vendor being successful. The need to trust is minimized due to the transparency, which clearly identifies roles and accountability. The evolution has taken eight years to change the paradigm, roles, and utilizing expertise to create the transparency needed.

Case Study of Hanze University of Applied Sciences

Founded in 1798, the Hanze University of Applied Sciences (Hanze UAS) in Groningen is the oldest university of applied sciences in the Netherlands. With a student population of over 26,000 and approximately 3,000 staff members, it is the largest university of applied sciences north of the Netherlands. The name Hanze UAS relates to a once driving force in terms of business and trade. The Hanze UAS is respected internationally as a knowledge institute in

which applied research and innovation are integrated in the academic curricula of the institution (Bos, 2012).

The main focus of Hanze UAS is to contribute to the large scale, interdisciplinary programs of Healthy Aging and Energy. Hanze UAS aligns the educational process and research with these two focus points. Some facts & figures about Hanze University of Applied Sciences, Groningen include (Hanze University of Applied Sciences, 2012):

1. Largest university in northern Netherlands with 26,566 students
2. 5 centers of applied research and innovation
3. 2 centers of expertise
4. More than 50 professorships, 70 degree programs and 17 master programs
5. 3,113 employees

Hanze UAS was first introduced to the BV approach in 2011. With the help of BV expert, Sjoerd Posthuma from Scenter, Hanze UAS was able to implement three projects. At the beginning of 2012, Hanze UAS decided their internal knowledge was sufficient to begin self-implementation (Bos, 2012). Since 2011 the university has awarded 7 BV proposals in both services and implementation projects totaling to more than 16 M Euros (Hanze University of Applied Sciences, 2015).

One of the first of these projects at Hanze UAS was a multi-functional printing service, which showed positive results including (See Table 1 and 2):

1. Less than 1% deviation in costs for a 1.4M Euro contract.
2. 0% deviation to schedule (includes implementation).
3. Performance metrics on quality measured and tracked by vendor.

Table 1	
<i>Multi-functional printing service performance metrics</i>	
Performance Criteria	Results
Start date contract	9/1/2012
Initial budget of project	€ 1,399,010
Initial Contract duration (days)	2555
Current Duration of Implementation (Days)	1125
Euros over budget	€ 9,653
% Deviation in cost	0.69%
% due to client	0.15%
% due to supplier	0.17%
% due to other	0.37%
% Deviation in schedule	0.00%

Table 2

<i>Multi-functional printing service quality metrics</i>		
Project Performance	2014	2015
# of Hanze UAS personnel Surveyed	2500	1239
Overall Score	7.4/10	6.8/10
Quality of Equipment	7.6/10	7.54/10
Availability	7.6/10	7.32/10
Maintenance and function	6.8/10	6.4/10

Due to the previous success with Best Value, in 2012 the Hanze UAS decided to use the Best Value Approach on an IT project procuring an integrated telephone services. Unlike the printing services project, the telephone services project ran into many difficulties due to the mindset of using Best Value solely as a procurement tool.

The project was selected due to the need for a unified communications platform at Hanze UAS. The UAS wanted to unify voice and video calls, simplify web conferences, and make it easy to switch between different forms of communications. The goals for the Telephone services were:

1. Increase the customer satisfaction of users of the telephony services.
2. Realize an optimal accessibility of the organization, departments and individual users.
3. Unburden the organization Hanze UAS in non-core service activities.
4. Optimize and manage the direct and indirect costs.

Of the 27 parties, which showed interest in the project, only three turned in submittals. Of the three, Vendor A was identified as the prioritized Best Value vendor due to the fact that:

1. Vendor A had received higher scores than the competitors in 2 of the 4 selection criteria (Project Scope and Interviews), while scoring the same on the other two selection criteria (Risk Assessment/Value Added and Planning).
2. Vendor A was one of the two vendors whose price was below the maximum budget, additionally their price was competitive.

Vendor A moved on to the clarification period in February 2013. During this time, the vendor showed multiple indicators that they could not perform all the requirements of the clarification phase (A. Bos, personal communication, March 1, 2015):

1. Award date was postponed twice. Finally, completion of clarification phase was 90 days after clarification kick-off meeting.
2. The vendor's key personnel were changed during this time.
3. Problems in the approach of the vendor were identified and not clearly resolved.
4. The client realized that the vendor had never performed the proposed approach or scope before.
5. Vendor A was unable to create a simple schedule and performance metrics for client personnel.

Despite the vendor's inability to fulfill all the clarification phase deliverables the client made the decision to proceed trusting in the vendor's expertise. By the end of 2014 during the execution of the project, the client realized that the vendor would not be able to meet the client's expectations of higher performance of an integrated communication system. Due to the incomplete clarification period which was done, the user experienced issues and increased risk throughout the execution of the project including incidents such as (A. Bos, personal communication, March 1, 2015):

1. On June 25, 2013, the interdepartmental meeting of facilities shared their worries about the organizational impact of the implementation. It is not clear to client facility stakeholders what the implementation program was and how it worked.
2. On July 3rd, 2013 the Board of Directors of Hanze UAS determined the implementation plan was not clear. Vendor A asked to work out a detailed plan which is presented on August 12th, 2013.
3. On May 2014, the implementation was initiated with accessibility of users less than before, major technical issues which result in no accessibility and increased complaints by users to 769 incidents within a period.
4. On November 2014, a survey of personnel of the Hanze UAS showed that employees were not satisfied (Table 3). Of 292 responses 60% rate Lync lower than a six (scale of 2-10), 63% totally do not agree that the attainability has improved, and 55% do not agree that their colleagues are better attainable.
5. On November 24, 2014, the Board of Directors of Hanze UAS decided to dismiss Vendor A from their expert role, but continued to use them as a supporting vendor with Hanze UAS personnel to take the lead in project implementation.
6. On January 30, 2015, it is concluded that the vendor's weekly reporting system does not have any meaning and there was a need for the client to identify a clear plan on how to finish the project.

With the project still incomplete, it resulted in the client taking on the role as the project lead and incurring increased costs and delay to the project (see Table 3 and 4).

Table 3

Telephone Services

Criteria	Result
Initial duration of project (implementation)	133 days
Initial budget of project	€ 4,356K
Contract duration	4 years
% Deviation in schedule	91.86%
% due to client	42%
% due to supplier	42%
% due to other	8%
% Deviation in cost	11.63%
% due to client	11.63%
% due to supplier	0%
% due to other	0%

(Hanze University of Applied Sciences, 2015).

Table 4

Telephone Services Quality Metrics

Project Performance	11/1/2014	Q2 2015
# of Hanze UAS personnel Surveyed	292	357
Rates services with < 6	60%	-
Totally do not agree that the attainability has improved	63%	-
Totally do not agree that their colleagues are better attainable.	55%	-
# of key personnel of supplier replaced	3	-
# of mobile (smart) phones that are not used	800	-
Overall Customer Satisfaction survey Q2	-	5.6 / 10

(Hanze University of Applied Sciences, 2015).

In reviewing the Best Value Approach of Hanze UAS on the integrated telephone project with the Best Value Approach of the procurement professionals of the Netherlands, there seems to be parallels. In learning the Best Value Approach, both the Dutch overall effort and Hanze UAS learned the following lessons concerning the clarification phase (D. Kashiwagi & J. Kashiwagi, 2011; Van de Rijt & Santema, 2012; Kashiwagi, 2014b):

1. Ensure vendor's expertise and ability to do the project instead of trusting the expertise of the vendor.
2. Verify vendor's expertise by the clarification phase deliverables (detailed schedule, performance metrics, simplified milestone schedule, defined deliverables, etc.)

3. Paradigm shift required on both the client and vendor side.

Due to this project, Hanze UAS saw the importance and evolved to use Best Value as more than just a procurement approach but a way to utilize expertise through the clarification phase and use of metrics. The vendor also learned that they had to change their paradigm to perform in the Best Value environment. The authors have since met with the vendors marketing and project management personnel, and they have realized the need to identify and utilize expertise is key in their company's BV efforts. Hanze UAS also realize that the BV effort can be controlled from the vendor side if the project management and marketing personnel are made available. Hanze UAS effort has been surprisingly successful. By taking the lessons learned from the telephone services project and implementing this shift in paradigm to the rest of their projects, the results have been dominant (Hanze University of Applied Sciences, 2015):

1. 7 outsourced projects/services
2. Over 12.3M Euros awarded with 1.51% deviation in costs (Table 4 and 5).
3. Deviation to schedule of 1.05% (Table 4).
4. University savings of 5M Euros, based on the awarded price compared to the maximum budget.
5. Decreased client costs due to utilization of expertise:
 - a. Audio visual resources project, decrease in maintenance cost by 24% and budget by 17%-55% (Table 6).
 - b. Travel Agency project, decrease in bookings by 52K Euros (45%) saved in travel bookings (Table 7).
 - c. Printed Matter Services, Cost of management services decrease by 100% (Table 8).
6. High performance and quality measured and tracked by the vendors and not the client (Tables 4, 5, 6, 7, 8, 9 and 10).

Table 5

Overall Hanze UAS Performance Metrics with Lessons Learned	
Performance Metrics	Overview
Total # of Projects	7
Initial budget of project	€ 18,696,533
Euros over budget (Million)	€ 558,992
% Deviation in schedule	13.96%
% due to client	6.32%
% due to supplier	6.17%
% due to other	1.46%
% Deviation in cost	2.99%
% due to client	2.72%
% due to supplier	0.01%
% due to other	0.26%

Table 6

Break of Hanze UAS Project Performance

Performance Metrics	VOIS – implementation Osiris Phase 1	VOIS – implementation Osiris Phase 2	Audio Visual Resources	Travel Agency	Printed Matters Services	Managed Service Provider	VOIS – implementation Osiris Phase 3
Total # of Projects (Product & Service)	Project	Project	Service	Service	Service	Service	Project
Current Duration of Implementation	119	699	940	868	852	395	273
Date of Award	1/21/13	1/21/13	3/5/13	5/16/13	6/1/13	9/1/14	1/1/15
Initial budget of project	€ 3.40M	€ .78M	€ 2.01M	€ .63M	€ 2.25M	€ 5.13M	€ 1.01M
Initial Contract duration (days)	105	678	1460	1142	1142	730	333
Days delayed	8	21	0	0	0	30	0
Euros over budget (Million)	€ 45,354	€ 114,386	€ 0	€ 0	€ 26,100	€ 0	€ 0
% Deviation in schedule	7.57%	3.10%	0.00%	0.00%	0.00%	4.11%	0.00%
% due to client	7.57%	2.10%	0.00%	0.00%	0.00%	0.00%	0.00%
% due to supplier	0.00%	1.00%	0.00%	0.00%	0.00%	0.00%	0.00%
% due to other	0.00%	0.00%	0.00%	0.00%	0.00%	4.11%	0.00%
% Deviation to Budget	13.33%	14.59%	0.00%	0.00%	1.16%	0.00%	0.00%
% due to client	0.00%	14.59%	0.00%	0.00%	1.16%	0.00%	0.00%
% due to supplier	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
% due to other	13.33%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

Table 7

Audio visual resources

Project Performance	PTH 2014 period 2	PTH 2015 period 1
Way the supplier takes care of our business needs	6.9 / 10	8.1 / 10
Availability audio visual	98.85%	98.97%
Deliveries within norm	78.80%	78.05%
Customer satisfaction	9.65	9.56
Maintenance costs	-24.26%	-24.26%
Deviation on budget	-16.97%	-55.22%

Table 8

Travel Agency

Project Performance	2015
# of travel bookings	513
Full-service booking	485
Self-service booking	28
Euros worth of bookings	€ 294,357.87
Full-service booking	€ 112,618.93
Self-service booking	€ 4,399.00
# of User Complaints	3
Full-service booking savings	€ 11,789
Self-service booking savings	€ 40,600

Table 9

Printed matter services

Project Performance	2015
User satisfaction survey (8 months after implementation)	7.6
Costs department management reduced	100%

Table 10

Managed Service Provider

Project Performance	2015
% of managed hired workers	88%
% of undesirable conduct	33%
Average grade rating based on external command execution	6.4
% of local externals	87%

Table 11

VOIS – Implementatie Osiris

Project Performance	06/2015	09/2015
Continuity of teaching logistics Uptime Osiris	99.75%	99.85%
Permanently meet accountability requirements	100%	100%
Operations in control	n/a	95%

Conclusion

The Best Value (BV) effort in the Netherlands has changed from a BV procurement system to a BV approach to delivering services. This has required the following paradigm shifts:

1. The Dutch culture of consensus, trust and assumption that everyone is an expert to a culture of “no trust.”
2. Minimize the decision making of the procurement personnel.

3. Change the procurement function to be accountable for a procured service until final delivery.
4. Change the “silo-based” organization who passed the product “over the wall” to a transparent, efficient and effective supply chain.
5. Change the project management model from MDC to identification and utilization of expertise.
6. Use performance metrics to measure the expectation of performance, the actual performance before a change, and the performance after the implementation.

The change in paradigm must be understood by not only the owners, but by the vendors. They need to:

1. Be able to identify and utilize expertise in their own organization.
2. Be able to understand a requirement from the end to the beginning, putting in place a detailed plan utilizing a milestone schedule that identifies the costs, the deliverables, and the risk that cannot be controlled and a risk mitigation plan.
3. Be able to utilize metrics to create transparency for the non-expert stakeholders.

The Dutch Best Value (BV) effort has also identified the need to change the:

1. Traditional risk model, where risk is on every project, and can be transferred from one party to another to a model of utilizing expertise which have no technical risk and who uses transparency to minimize risk that they cannot control.
2. The project management model which needs to identify the deliverable in terms of metrics that everyone can understand, and allow the experts to plan back to the beginning to identify time, resources and costs required to deliver the project requirements.

The case study is one of the few that show the evolution of the BV PIPS delivery system in the Netherlands. It shows that paradigm shifts take time, regardless of how simple the process may seem. It also shows how huge a change the BV PIPS approach makes in the delivery of services. More documentation of tests are required to further refine the approach in the delivery of services.

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