

PERFORM ABILITY IN A PUBLIC PRIVATE PARTNERSHIP

DAVID DE ROOIJ

DHV BV

Laan 1914 no. 35 3818 EX Amersfoort

The Netherlands

David.derooij@dhv.com

BEN S. KUIPERS

Erasmus University Rotterdam and Performability

Verhagen Metmanstraat 24A, 2282 GN Rijswijk

The Netherlands

kuipers@fsw.eur.nl

<http://www.performability.nl>

Abstract

For Rijkswaterstaat, the largest public principal for road infrastructure in The Netherlands, working in an alliance is, just like for private parties, a new experience. For this reason several parties, stake- or shareholders as well as independent parties, are observing the development of project A2 Hooggelegen, the first cooperation by means of alliance. These parties mainly are interested in the results in terms of time, money and not at least in the collaborative capacity. Collaboration in the construction industry requires a different mindset, namely with a focus on confidence instead of mistrust.

Project A2 Hooggelegen spends a lot of time on measuring and analyzing both the performance as well as the processes in the collaboration. One of those measures concerns half annually measures on performability. For these measures a model is employed which has been developed by Kuipers (2005). In this model three elements roughly can be distinguished, namely responsibilities, responsiveness and results. Input for above mentioned measure is an internet survey concerning the complete organization. These measures carry a treasure of valuable information on one of the distinguishing aspects of partnering, namely collaborative capacity.

In this paper the results of these measures (data) are analyzed in order to conduct some conclusions on the added value (effectiveness, efficiency, spin off) and critical success for partnering through alliances.

Keywords: public private partnerships, collaboration, changing roles, performability, responsibilities, responsiveness, results, added value.

INTRODUCTION

The construction sector in The Netherlands is changing. This also applies to the public infrastructural works. Dissatisfaction with the traditional way of realizing a project more often results in a withdrawal of public parties in the process from plan raising to realization, using the verb: 'The market, unless...'. This tendency results in a gap between plan raising and realization and in a displacement of responsibilities and opportunities for private parties in terms of their business positions [Kok, 2007, De Ridder, 2006].

In these changing roles parties, with the principals in the frontline, are seeking for new initiatives in relation to organizing construction. One of those initiatives can be found in public private partnerships. In this paper we would like to focus on one of those partnerships, namely road construction by means of an alliance. We are particularly interested in the

collaborative processes taking place between the members of an alliance organization, coming from both public and private parties. We will explore these cooperation issues and their relationship to the performance of such alliance. We will study this by means of a longitudinal survey among the team members of a particular project and relate these to a set of key performance indicators of the project alliance.

Run-off

On November 1, 2007, an agreement has been signed for project A2 Hooggelegen between Rijkswaterstaat, the largest public principal for road infrastructure in The Netherlands, and Trajectum Novum, a private combination of contractors. This project contains the realization of a project concerning the infrastructure on the westside of Utrecht, The Netherlands. In the run-up for the invitation to tender the public principal studied the most suitable form of cooperation for this project. Numerous reasons underlie the decision to start cooperation by means of an alliance with a private party. Most important are:

- The project is particular in terms of time, traffic, phasing and surroundings. An intensive cooperation (shared goals/ win-win) between public and private parties is necessary,
- The recommendations of the parliamentary inquiry after a national collusion scandal in the construction industry which came to light in 2001 concerned among others recovery of trust, transparency and co creation from an own responsibility,
- Good experience with an alliance in the rail sector both on hard (time, money, quality) aspects and soft (cooperation, transparency, trust, etc.) ones,
- Efficient spending of social money (cost control),
- Examining other construction organization forms (pilot/ process innovation); this among others is analyzed by measuring the *performability* in terms of responsibilities, responsiveness (internal relations, external relations and task management) and results (performance and workers satisfaction).

Background

In this project several parties, both public and private, intensively cooperate. The aim contains the realization of the project objectives in an efficient and effective way. For that purpose on the one hand Key Performance Indicators (KPI's; budget, quality, availability, safety, traffic annoyance and image) are appointed in order to create common interests and values, on the other hand project principals are defined (equality, cooperation and balance). The project is special because a busy highway is broadened in an urban environment and under high pressure of time, whereas traffic continues. Meanwhile a very busy connection of Utrecht to the highway is fully reconstructed and moreover several civil constructions and a city road are constructed to open up the subways. The project is complex with regard to traffic, phasing of construction and surroundings. The project also is special because an innovative way of co creation by means of an alliance is chosen in order to join strengths (knowledge, qualities, competences) which is a precondition for success. The mission statement of this project is:

“A2 Hooggelegen will be the example of successfully, together realizing an integrated project for and with the environment”

Organization

The principal and contractors are united in an alliance-like cooperation as respectively public and private partner. In the alliance the design is realized, the environmental matters are looked after and the contract scope is monitored during design and realization.

The actual realization of the project is done by the executing contractor. This is the private combination in the public private partnership.

Project objectives

The project has three objectives. The *primary objective* is to finish the project with a good financial output within the frameworks of the agreement and by excellent performance on a number of core result areas. These core result areas have been translated in the earlier-mentioned KPIs.

The *secondary objective* of the project is to show that an alliance-like cooperation as an organizational form for construction is a successful way of cooperation. The result of this objective should be that the public private partnerships will be used more often for construction cooperation in the future.

Finally the project should fit in the surrounding projects, both with a view to highways and subways. The project organization is responsible for synchronization with these projects.

COOPERATION IN ALLIANCES

Expectations and image formation

In the construction process parties have influence on each other's perception. During the construction process parties interact at several occasions. The structure, the frequency and the aim of these interactions depend on the chosen organizational form. At each organizational form parties create social realities. These social realities are to important level the interpretation of the interaction with each other within (culture, structure, people, technique) and between (characteristics of exchange, power assessment, etc.) the parties. The parties have each their own interests, which are fulfilled in this social reality. In the common aim the realization of these own interests is made possible [Reniers, 2008].

From the principle that the interests of the principal (constructed product versus price) differ from those of the contractor (turnover versus costs), the transaction and the common aim (usefulness) are created. The social reality is fed by experiences from the past within organizations (organization characteristics) and between organizations and leads for its part to so-called sense making. Depending on what occurs in the surroundings, one (unconscious) creates associating points of views or conceptual filters in the construction of a personal reality [De Moor, 1997]. This personal reality (sense making) finally leads to behavior.

If unexpected events occur and parties notice they give different meanings to those events (subjective reality), it is important to cooperate [Hordijk & Van der Vliert, 1983]. By this one can well anticipate on each other's interests and expectations and one can prohibit that social reality (interaction) results in a negative spiral.

With respect to this Chao-Duivis *et al.* [2008] for example mentions a better working climate as an advantage of an alliance. This becomes clear in a close cooperation. A common interest and reciprocal dependence is created. This has been given shape by sharing turnovers and risks and by the principles like equivalence, faith and transparency [Van Helvoirt, 2005].

At the same time Bennet and Peace [2006] notice possible disadvantages of an alliance. These are among others:

- The required cultural change,
- The impossibility of working on a intimate relationship (trust) due to the presence of several suppliers/ clients with multiple shares,
- The lack of time which ends up in superficial relationships. To quick to much is expected,
- The inequality between partners in terms of for example size and role and
- The undermining of partnering by aiming on performance which is easily measured.

Chao-Duivis *et al.* [2008] finally gives several preconditions for a successful alliance. These among others are:

- The will to work different,
- Open communication,
- A horizontal relationship,
- No blame.

A teamwork model for cooperation in alliances

The use of teamwork has grown increasingly popular in organizations over recent decades. Many publications have appeared and revealed the successes that can be reached with teams as the basic unit of the organization (Cohen & Bailey, 1997; Katzenbach & Smith, 1993). By increased cooperation, sharing responsibilities and being held accountable for goals and targets, together with a reduced organizational need for hierarchy and control, teams contribute both to better business performance and the wellbeing of employees (Kuipers & De Witte, 2005; Morgeson, 2005, Kuipers & Stoker, 2009).

However, teams do not become well-functioning entities by themselves. There is more work to it than simply designing teams and picking the right team members (Van Hootegem *et al.*, 2005, Kuipers *et al.*, 2009). High-performing teams demand serious attention to be paid to implementation and consistent development over time. To implement teamwork effectively there is a need to pay attention to both the 'soft' and the 'hard' aspects of teamwork (Kuipers, 2009). Based on an input-process-output model for teamwork and several empirical studies Kuipers (2005, 2009) developed the 3R teamwork model, referring to the responsibilities (input), responsiveness (process) and results (output) of teamwork in organizations.

The output of this model is represented by the R of *Results*. The results of teamwork are central to teamwork – that is because teamwork never should be a goal in itself. Teamwork is especially useful when tasks need to be accomplished or goals need to be achieved that cannot effectively or efficiently be taken care of individually (Cohen, Ledford, & Spreitzer 1996). The first question a company therefore should ask itself is; “what do we want to achieve with teamwork?” Teams can contribute in two areas of performance; business performance and well-being in teams. Specific goals can be formulated in each of these areas, such as quality, productivity and costs as key-performance indicators for the ('hard') business performance, and measures for absenteeism, satisfaction and involvement in the area of the ('soft') well-being of employees (Kuipers & De Witte 2005). Before the implementation of teams or at the start of specific team development activities organizations have to be clear about what results in both areas are required or need to be improved.

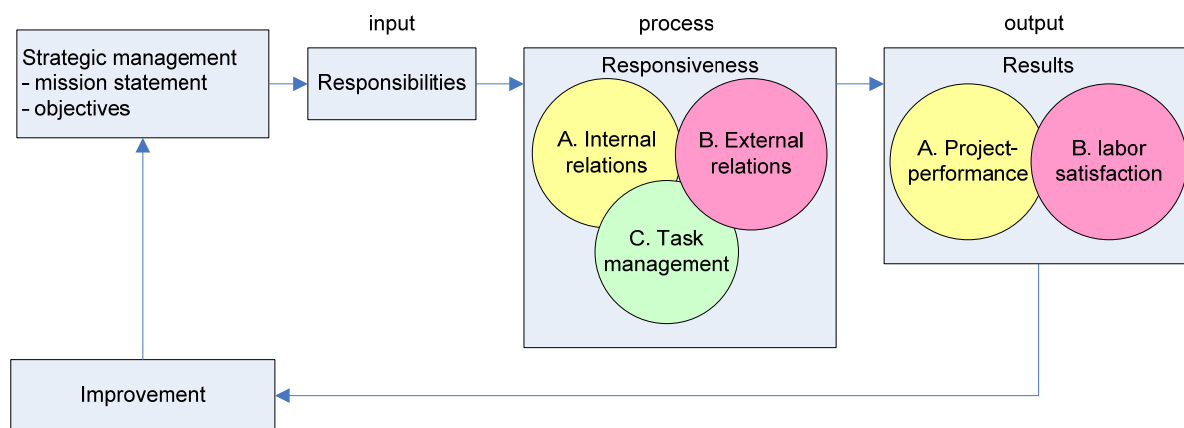
The input of the model is expressed by the R of *Responsibilities*. By responsibilities the framework in which teams operate is defined. The boundaries of this framework are set by defining the tasks and authority of the team. Also, it is shaped by the resources and leadership the team will get to be able to deliver products and services that meet the earlier defined goals. Rules, standards and hierarchy limit the manoeuvring space that teams have to work as relatively independent and pro-active units (Morgan 1993). On the other hand, a lack of clarity and guidance might make the frame for teams too wide and the expectations too high. Teams in such case may struggle too long and eventually “drown”, never being able to perform. Also here there is a need to find a balance; in 'hard' and in 'soft' aspects. Management has to be clear in what it is expecting from teams, by defining goals, tasks and rules, but it also needs to be clear about what teams can expect in terms of support, leadership and resources (Wellins, Byham, & Wilson 1991).

The process in this model is reflected by the final R of *Responsiveness*. Responsiveness is the way teams actually behave and act in reaction to the given framework of responsibilities and goals (Kuipers 2005; Marks, Mathieu, & Zaccaro 2001). These are the developmental

processes by which teams transform the responsibilities into results. Such processes do not occur just naturally but are shaped by the expectations and the support and leadership a team receives. Studies of several hundreds of teams ranging from production and service teams in both commercial and public organizations show three basic processes that express the responsiveness of teams (Kuipers 2005; Kuipers & Stoker 2008):

- Internal relations, or “the way we work together” shows the cooperation between team members, the way they handle conflicts and how they bond as a team by common planning and living up to their common goals.
- Task management, or “the way we organize our work” shows how the team performs its tasks and utilizes its responsibilities.
- External relations, or “the way we deal with our customers and continuous improvements” shows how teams maintain their relationships with (internal and external) customers and suppliers and how they find new ways to improve products and processes.

In this study we will further elaborate on this model for the purpose of studying collaboration (teamwork) and performance under the specific conditions of an alliance.



The principal has a demand which is formulated in the agreement between the principal and the contractor. His main interest is that the value of the product is higher than the price he pays. Besides the contractor has an offer which answers the need of the principal. His main interest is that the price of this offer is higher than the costs to make [De Ridder, 2006a]. Both needs meet in the agreement.

The agreement also anticipates on the construction process by means of a public private partnership. This means that on the one hand principles for cooperation are formulated and on the other hand key performance indicators for creating shared values are defined. The agreement forms the basis for the strategic management. With respect to this the mission statement is formulated and the objectives are made tangible. Besides the further framework is formulated in terms of activities, responsibilities and competences. This framework forms the input for the responsibilities within the project. The project team responds to these responsibilities in terms of internal relations, external relations and task management. In this project the responsiveness is important and subject of research due to the intense public private cooperation in the realization process. Finally the responsiveness results in project performance (hard) and labor satisfaction (soft). In this project the success of the results is measured by conformity with product and process demands, the score on the key performance indicators and the level of job satisfaction. Periodically the Performability Scan results in a snap-shot of the organization which, among others, forms input for the cyclic improvement process of the performance of the organization.

Responsibilities

The framework of the project is analysed in two ways. On the one hand leadership within the project is assessed, on the other hand the workload in terms of clarity and expectations has been studied.

With respect to leadership distinction has been made between task- and person-orientated leadership. Task-orientated leadership concern the 'harder' dimension of leadership where tasks and results are at issue. Person-orientated leadership aims at the 'soft' dimension of leadership. Here development, openness and consultation are at issue. The Performability model assumes that both styles are very important with respect to the assessment of the functioning and performance of teams and individuals. The challenge for a manager is to continuously balance between these styles by directing and developing at the same time direction.

With respect to the workload on the one hand clarity, the degree in which the team has a clear picture of what others expect, is assessed. On the other hand expectations, the degree in which the team must satisfy to several expectations which exclude each other, is studied.

Responsiveness

With respect to the responsiveness, the way the organization anticipates to her responsibilities, in this model distinction is made between internal relations, task management and external relations (Kuipers & Stoker, 2009). These will be explained below.

Task management aims at the way tasks are executed. Three elements are of importance. The first element focuses on the way people are flexible in supporting and replacing each other and on the way of providing each other of the needed information to execute activities. The second element refers to the responsibility and the way decision-making within teams takes place. Finally there is a focus on the way errors and problems are dealt with. Task management strongly contributes to control of costs, quality of the product and improvement of the perception of work.

Task management is measured in five ways. First of all the work communication is assessed. With respect to this the degree in which team meetings are organized and work-related information is shared is measured. A second aspect which is measured concerns the multi-purpose nature in which job flexibility, job rotation and the possibility of supporting and replacing each other when necessary, play a role. Thirdly decision-making plays a role. This is related to the degree in which people feel responsible for common activities and take decisions. Moreover common tasks are assessed. This concerns the implementation of routine supporting and facilitating common activities concerning quality, maintenance and order and decency. Finally performance management is assessed. This refers to the degree in which action is carried out for improvement of the task implementation by the teams, for example by making a common contribution to the results.

Internal relations aims at the relations between the members of the team. Aspects which are important, are the cooperation between the team members and binding activities which contribute to this, giving constructively and motivating feedback and solving tensions before these lead to real conflicts. The result of good internal relations forms the exploitation of present capacity, the reduction of long-term staff absence and an improved work perception. The quality of the internal relations is measured by four criteria. The first concerns giving feedback. For this the extent to which team members assess and evaluate each other in order to motivate and to give constructive feedback is measured. Besides the handling of conflicts and internal cooperation problems and discussing behavior in the team is measured. Also formulating team goals and taking responsibility for the results play an important role. Finally

the degree in which binding activities, such as work, consultation and training a role to play is measured.

External relations focuses on the external relations of the team and improvements made based on external feedback. Aspects playing a role in this, are relation management (with internal and external clients and suppliers), the rate of initiatives and client service and the degree of responsibility for the less obvious tasks. Solid external relations and improvement lead to higher quality of the final product, less short absence and improved perception of work.

External relations is measured based on three criteria. First, maintaining the relationship with clients and suppliers. The second criterion concerns the review on improvement activities. This relates to initiating improvements of process and product. Finally, the professional responsibility has been measured. This concerns the implementation of non-routine supporting activities with regard to own work. With respect to this, tasks concerning quality prescriptions and selection of new team members can play a role.

Results

The result of the cooperation is measured in two ways. On the one hand the motivation of the team members is evaluated, on the other hand the workload in terms of pressure and tiredness.

In case of *motivation* of the team members, aspects like *involvement*, *satisfaction* and *cooperation* play a role. Involvement focuses on the way team members feel personally related to the project organization, her values and work. Satisfaction is about people feeling content with their jobs. Cooperation fixes on the level of satisfaction about the atmosphere and cooperation between different parties in the project organization. In the end, these indications give insight in the attitude of team members regarding to their job and the organization.

With respect to the result, two aspects play a role in case of *workload*. On the one hand is this the pressure, the extent to which the team has enough time, knowledge and skills to meet the expectations. On the other hand is this tiredness, the extent to which team members are tired or demotivated by their work.

RESEARCH SET-UP

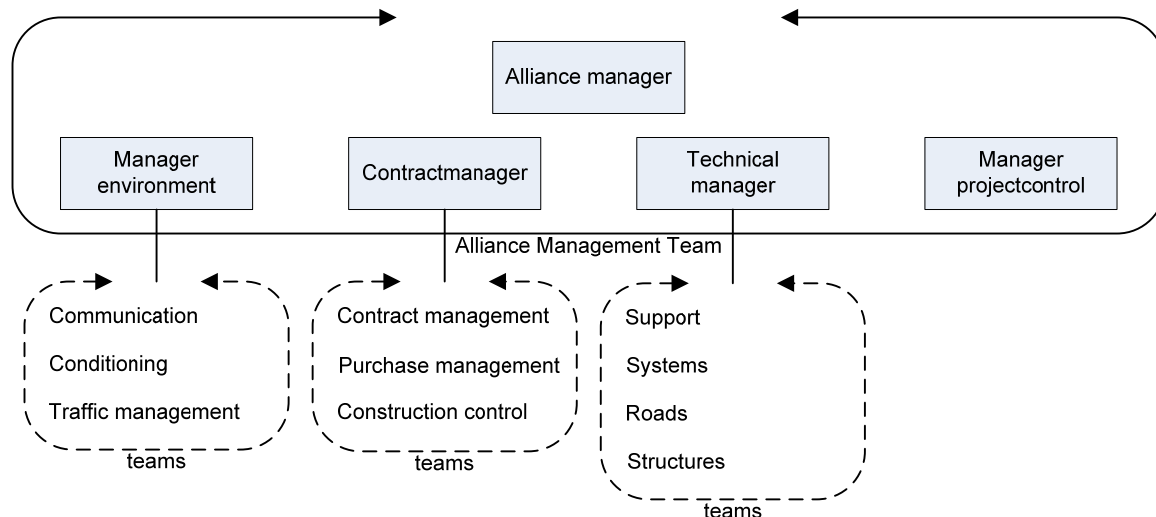
Organizational characteristics

In a period of approximately one year the project organization increased from 15 FTE at the end of 2007 to about 60 FTE (about 100 people). This only includes the public private activities and excludes the construction activities. The project organization is supposed to phase out her main activities during the second half of 2009 remaining a small team during the construction activities which will finish in 2011.

The roots of the employees are multiple and include public parties, contractors, engineering offices and consultancies. Furthermore the organization contains many independent workers.

Method

A first performability scan has been done at the end of 2008. In June 2009 a second scan has been executed. In this paper we focus on the results of the first scan. For the scans the public private organization has been divided in four main teams and the management team. Besides most main teams are divided in several sub teams corresponding to the organization schedule.



The environmental team takes charge of most activities concerning the project environment in terms of communication, traffic management and conditioning activities. This team is focussed on good external relationships. The contract team is engaged with activities concerning the scope of the project and contractual management with suppliers and client. The technical team is mainly responsible for the project design concerning systems, roads and structure, including verification and validation with stakeholders. The team project control finally is mainly focussed on the project control in terms of time, costs, quality and risks.

Measures

Data were obtained in the organization about cooperation and performance. The data about cooperation were collected by means of an internet survey (Performability Scan) among all organization members of the public private cooperation. The Performability Scan consists of 48 items about behavior in the teams concerning internal relations, task management and external relations (Kuipers, 2005; Kuipers & Stoker, 2009).

The survey was conducted first in November 2008 and repeated in June 2009. During the first measurement 82 out of 97 organization members answered the questionnaire (85% response). During the second measure 7 months later 63 out of 88 organization members answered the survey (72%).

RESEARCH RESULTS

Responsibility

The public private cooperation is strongly person-orientated. The focus on the ‘soft’ dimension of leadership (management of expectations, image-formation, openness, etc) is remarkable. Beside the person-orientation of the organization the task-orientation is at least as important. As the familiarity with the common activities of a team decreases, the task-orientation seems to diminish as well. With respect to this there is a challenge for the cooperation.

Moreover it appears that as a team is focused on the stakeholders and shareholders, the chance on contradictory expectations and obscurities increase.

Remarkable finally is the reverse proportionality between the level of task-orientation and the clarity of expectations. The cause could be found in the fact that a focus on the results exposes contradictory expectations and obscurities.

Responsiveness

The more a team is task-orientated, the less work meetings take place. With respect to the responsiveness it occurs that the focus on the internal customer is bigger than the focus on the

external customer. The more interfaces a team has with the surroundings, the better is the score on the assessment on maintaining external relations.

The organization is well able in dealing with internal conflicts. Remarkable is that at the same time giving feedback seems to be difficult. From this we can conclude that the will to solve problems is high, whereas the interaction in the cooperation is handled very carefully at the same time.

Improvement with respect to the process and the product is relatively low assessed. The cause can be found in the fact that this project is realized under enormous pressure of time.

Moreover there is a strong relation between performance management and the level of routine work. The more activities are executed by experience, the more action is taken with respect to task improvement of teams.

The survey also shows that the degree in which a team has shared and explicit values, contributes to planning activities which bind the team. Within teams there is also a strong relation between the exchangeability of tasks and the formulation of team targets.

Results

To all teams it applies that there is a strong relation between the quality of the cooperation and the degree of involvement. There is also a strong relation visible between the degree in which the teams are loaded and the tiredness.

Finally for all teams a relation can be found between the involvement and satisfaction of people.

Performability

There is proportional relation between job communication and the clarity and the unequivocality of expectations.

The degree in which the teams are involved and satisfied, coincides closely with the degree in which there is a clarity of roles, unequivocality of expectations and cooperation problems are dealt with in a good manner.

Furthermore satisfaction within teams strongly coincides with the load and tiredness of these teams.

Development

First of all the results of the second internet survey in June 2009 showed a lower response than the first survey. For the project organization the time pressure has increased which decreases the focus on long term aspects like team development. The results also showed minor changes in comparison to the first survey. On organization level there even are no changes on balance.

After the evaluation of the first survey results every team defined a few development aspects. Some teams improved their responsiveness whereas other teams did not. The difference in development could be explained by the way development aspects are integrated in the activities by the different teams. A repetitive and more constant focus on development aspects leads to a better response in terms of improvement than a one-off action.

Finally the survey results show that improvement with respect to one development aspect leads to improvement on other levels as well.

Reflection on cooperation

Advantages

Chao-Duivis *et al.* [2008] mentions the better work atmosphere as one of the advantages of a tight cooperation. Remarkable is that cooperation (synchronization, joint planning, etcetera) within the organization is considered to be positive and diminishes when the interaction with

stakeholders increases. Also remarkable is that in these teams satisfaction is assessed worse as well as dealing with conflicts with respect to cooperation problems and discussion about behavior. The research also shows that team satisfaction is lower and handling of conflicts with respect to internal cooperation issues is lower. Finally these teams have a less clear view on what others expect of them.

The shared values created by the key performance indicators as well as the project principles may have a positive contribution in the tight public private cooperation.

Disadvantages

Bennet en Peace [2006] mention several disadvantages which could occur in alliances. These are discussed below. The research shows that cultural differences in this public private partnership do not visibly lead to problems. Even more the focus on cooperation and handling conflicts is well assessed.

The surveys show that the more teams are dealing with stakeholders, the more obscurity and contradictory expectations occur. This is a point of interest for the cooperation.

Time pressure has a great influence on the project. The results of the surveys show that increasing pressure on activities result in declining satisfaction and assessment of the cooperation.

The survey results do not show negative effects due to inequality between public and private partners. The project principles and physical integration of the partners could contribute to reducing inequality.

Boundary conditions

The preconditions mentioned by Chao-Duivis et al. [2008], can strongly be found in the survey results. The will to cooperate and to understand each other is clearly visible and the communication is good even though a point of interest is the focus on the person at the cost of the focus on tasks.

Finally a 'no blame' culture is clearly present, which can be concluded from the survey results on handling conflicts. Giving feedback seems to be difficult.

LITERATURE

No guts, no story, het verhaal van de Waardse Alliantie, Betuweroute kennis, ProRail BV, Utrecht, 2005.

Bennet, J. en Peace, S., *Partnering in the construction industry, a code of practise for strategic collaborative working*, Elsevier Science & Technology, 2006.

Chao-Duivis, M.A.B., *Verkenning van mogelijkheden tot toepassing van allianties door Rijksgebouwendienst*, 2008.

Cohen, S. G. & Baily, D. E., "What makes teams work: Group effectiveness research from the shop floor to the executive suite", *Journal of Management*, vol. 23, no. 3, pp. 239-290, 1997.

Cohen, S.G., Ledford, G.E. and Spreitzer, G.M., "A predictive model of self-managing work team effectiveness", *Human Relations*, vol. 49, pp. 643-680, 1996.

- Helvoirt, A. van, *Projectallianties bij grote infrastructurele werken binnen Rijkswaterstaat (Master thesis)*, Faculty of Management of Technology, TU Eindhoven, The Netherlands, 2005.
- Hordijk, J en Vliert, E. van de, *Samenwerken op bouwplaatsen, Technisch rapport A 44-1*, Rotterdam: Stichting Bouwresearch, 1983.
- Katzenbach, J. R. & Smith, D. K., *The wisdom of teams; Creating the high-performance organization* Harvard Business School Press, Boston, 1993.
- Kok, R., *A supply-driven construction industry for transportation infrastructure (Master thesis)*, University of Technology Delft, The Netherlands, Faculty of civil engineering, 2007.
- Kuipers, B.S., *Team development and team performance. Responsibilities, responsiveness and results: a longitudinal study of teamwork at Volvo Trucks Umeå*. RUG (Ridderkerk: Ridderprint), 2005.
- Kuipers, B.S., Performability of work teams: Balancing hard and soft issues. *International Journal for Performability Engineering*, 5(2), 153-166, 2008.
- Kuipers, B.S., Higgs, M.J., Varenik, N. & De Witte, M.C. (2009). The Influence of Myers-Briggs Type Indicator Profiles on Team Development Processes, *Small Group Research*, In press.
- Kuipers, B.S. & Stoker, J.I., Development and performance of self-managing work teams: *A theoretical and empirical examination. International Journal of Human Resource Management*, 20 (2), 399-419, 2009.
- Kuipers, B. S. & De Witte, M. C., "Teamwork: A case study on development and performance", *International Journal of Human Resource Management*, vol. 16, no. 2, pp. 185-201, 2005.
- Marks, M. A., Mathieu, J. E., & Zaccaro, S. J., "A temporally based framework and taxonomy of team processes", *Academy of Management Review*, vol. 26, no. 3, pp. 356-376, 2001.
- Mastenbroek, W., *Conflicthantering en organisatieontwikkeling*, Alphen aan den Rijn/ Zaventem, Samson Bedrijfsinformatie, 1992.
- Moor, W. de, *Stress- en conflictmanagement. Een constructieve benadering*. Houten/ Antwerpen, Bohn Stafleu van Loghum, 1997.
- Morgan, G., "Organizational choice and the new technology," in *The Socio-Technical Perspective*, E. Trist & H. Murray, eds., University of Pennsylvania Press, Philadelphia, pp. 354-368, 1993.
- Morgeson, F.P., "The external leadership of self-managing teams: Intervening in the context of novel and disruptive events", *Journal of Applied Psychology*, vol. 90, no. 3, pp. 497-508, 2005.

Reniers, M.G.C.E., *Ontevredenheid in de Nederlandse bouw (dissertation)*, University of Technology Delft, The Netherlands, Faculty of civil engineering, 2007.

Ridder, H.A.J. de, *Het living building concept: een wenkend perspectief voor de bouw*, PSIBouw, 1^e druk, Gouda, 2006.

Ridder, H.A.J. de, *Collaboration and procurement procedures in the civil engineering industry*, University of Technology Delft, The Netherlands, Faculty of civil engineering, Delft, 2006a.

Van Hootegem, G., Benders, J., Delarue, A., & Procter, S., "Teamworking: looking back and looking forward", *International Journal of Human Resource Management*, vol. 16, no. 2, pp. 167-173, 2005.

Wellins, R. S., Byham, W. C., & Wilson, J. M., *Empowered teams: Creating self-directed work groups that improve quality, productivity and participation* Jossey-Bass, San Fransisco, 1991.