

5 Towards successful partnering in housing refurbishment - an assessment of six Dutch dyads

Chapter 5 reports the experiences of six dyads of housing associations and construction and maintenance companies using partnering in construction. The study was carried out in the first year of a two-year knowledge exchange project that took place in parallel to the studies reported in Chapters 3 and 4. Over the course of the project, one more dyad joined, which explains the difference of one dyad compared to other chapters of this thesis.

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Abstract

Supply chain partnering is seen as one method of handling the need for more efficient and transparent building processes. Although it has received considerable attention from practitioners and researchers, supply chain partnering is still in its formative phase within the construction industry. There have been a number of studies that focus on 'success factors' in partnering, but relatively few studies have focused on whether and how these factors are applied in practice. Moreover, almost no studies have been completed into supply chain partnering in housing refurbishment projects. An assessment was made of the partnerships between six Dutch housing associations and general contractors, on the basis of the success factors identified in literature: trust, leadership, partner capabilities, commitment, conflict resolution, coordination and communication. The conclusion is that most of these factors play a role, although there are considerable differences in the way in which the dyads used these factors in their partnering process. Conflict resolution techniques and coordination measures have not yet been developed. This may be due to the experimental stage of the dyads and/or the level of trust within the dyads, but it also implies a risk for the further development of the partnering process, should conflicts arise.

Keywords: Contractor, Housing association, Partnering, Refurbishment, Trust

§ 5.1 Introduction

More than a decade ago, several reports were drawn up calling on the construction sector to change its methods of working. Egan in the UK (1998) and Tang in Hong Kong (2001) concluded that the fragmentation of the construction sector, as well as limited investment in R&D, were preventing the construction sector from innovating and providing quality that would meet the standards of the 21st century. Reports in Australia and Singapore came to similar conclusions (Dulaimi *et al.*, 2002). In the Netherlands, a similar report “Van raad naar daad” (from advice to action) was written in 2004 by the “Regieraad Bouw” (Management Council for Construction). It aimed “to stimulate and maintain a momentum of change in the construction sector so that it can again carry the designation of healthy, transparent, and innovative” (Regieraad Bouw, 2004). These reports paved the way for an ample body of literature on process innovations such as partnering (Bygballe *et al.*, 2010). The majority of literature on partnering focuses on new-build, with some papers focusing on housing (e.g. Hong-Minh *et al.*, 2001; Barker and Naim, 2008). Literature on partnering in housing refurbishment is scarce, although the refurbishment of the existing building stock is an important issue, partly because it is perceived as a crucial factor in achieving targets for reducing CO₂ emissions by national governments (e.g. Murphy and Meijer, 2011). Moreover, to meet the changing demand for housing, we will have to rely increasingly on the existing housing stock, since the production of new dwellings is only a fraction of the existing stock and has fallen significantly in recent years (Thomsen and Vander Flier, 2009).

In many cases, the construction process for housing refurbishment is more complex than new construction. It is necessary to take account of an existing situation where every dwelling has its own characteristics. Moreover, the projects are very often located in urban contexts, which can lead to logistical constraints and in many cases people are still living in the dwellings that need to be refurbished. Depending on the extent of the renovation that is planned, steps also need to be taken to ensure that the households continue to have a decent place to live. In the case of radical refurbishment work, they will have to move to another dwelling temporarily. For more minor refurbishments, households can stay in their dwellings but disturbance must be reduced to a minimum. Another issue that can complicate the continuity of production is the tenure of the dwellings. Due to major differences in preferences and usage in the owner-occupied sector, achieving a continuous production flow is not easy for a contractor. In this respect, the rented sector is a better starting point in which to gain experience with partnering in housing refurbishment. The Netherlands has a building stock of 7.2 million dwellings, of which 32% are owned and maintained by housing associations. In 2012, 381 housing associations owned an average of 6,300 dwellings each (www.cfv.nl). The largest housing association owns approximately 80,000 dwellings. Thus, the Dutch housing association sector provides relatively favourable

conditions for supply chain partnerships and continuous production flows, because it includes many dwellings, in many series of relatively homogeneous properties, which are owned and managed by professional organisations. Furthermore, housing associations are increasingly aware of the expected benefits of a better end product and a more efficient building process through supply chain partnering. Over recent years, housing associations have already begun to develop supply chain partnerships in new-build, maintenance and refurbishment, although traditional procurement processes are still used for the majority of projects (e.g. Straub, 2009; Aedes, 2009; Vernieuwing Bouw, 2010).

The further development of supply chain partnering in the Dutch housing association sector, as well as the construction sector more generally, will benefit from the evaluation of successful examples. Many factors have been described in the literature as important for success in partnering in construction, focusing on various aspects of the partnering process. For example, Lönngren et al. (2010) describe success factors that are based on a successful production process. A literature review by Wong et al. (2005) sums up factors that relate to the collaboration between partners: trust relations, equity of benefits sharing, effective communication, and competent management. Chan et al. (2004) list the requirements that must be met for partnering to succeed in the Hong Kong construction industry. Chen and Chen (2007) and Black et al. (2000) have elaborated on 19 partnering success factors. Kim et al. (2010) provide an overview of the success factors and prove that there is consensus in the literature on these factors. They also show how the success factors need to be interpreted and evaluated. The success factors are: leadership, commitment, coordination, trust, communication, conflict resolution techniques and partner capabilities (Kim et al., 2010). Little attention, however, has been given to the questions of whether and how these factors are actually put into practice. Do clients and contractors consciously employ these factors to increase the likelihood of successful partnering? And how do they promote the establishment of success factors such as effective coordination, trust, leadership and communication?

This study aims to help fill the knowledge gap in the literature as well as the more general research gap that focus on supply chain partnering in the context of housing refurbishment. By doing this, the partnering processes of six dyads of Dutch housing associations and their contractors were evaluated, focusing on the way in which these dyads have encouraged the establishment of success factors, employing a framework adapted from Kim et al. (2010).

In the following section, the dyads involved in the study are described, as well as the way in which the partnering processes were assessed. The various success factors identified by Kim et al. (2010) are then discussed. Next, the approaches taken by the dyads in relation to each success factor are described. The final section includes the conclusions and implications for practice.

§ 5.2 Methodology

To gain insight into how the success factors are used in the practice of supply chain partnering in housing refurbishment projects, the approaches of dyads of Dutch housing associations and general contractors are compared with literature on partnering, with the work of Kim et al. (2010) providing a general framework for evaluation. The housing associations and general contractors were participating in a knowledge exchange project, in which they carried out a pilot project in a partnering setting in the period 2011-2012 and shared their experiences in plenary sessions which took place every 4-6 months. They were supported by researchers for theoretical underpinning. In addition to the dyads of clients and contractors, the supply chains involved other parties and sub-contractors. However, they were not involved in setting up these dyads. The data presented in this paper were gathered from the six dyads.

To investigate how the dyads dealt with the success factors for partnering, interviews were held with representatives of the housing associations and contractors. The interviews took place between May and September 2011. The housing associations and the general contractors were interviewed separately, so a total of twelve interviews are reported in this paper. In most of the interviews, a project manager and a strategic manager (mid-level or senior management) were present. Together, they were able to answer questions on both projects and organisation. The aim of the interviews was to chart the first experiences of working in an integrated supply chain. Although a semi-structured approach was used in the main part of the interview, the first question was an open question: the interviewees were challenged to say whatever they wanted about the notion of partnering. This question was introduced to establish the general position of the interviewees in relation to partnering. These opinions were therefore not biased or influenced by the questions posed during the interview. The discourses were analysed in order to create a picture of the mind-set of the interviewees. The answers from the semi-structured part of the interview were transcribed and sent to the interviewees for approval. Following their approval, the transcriptions were used as an input for the synthesis and conclusions.

§ 5.3 Case descriptions

To provide a context for this study, this section will provide additional information on the cases. The data was retrieved from company brochures and websites as well as during the interviews themselves.

The housing associations involved in the exchange project own between 4,000 and 80,000 dwellings. The general contractors involved have a turnover of up to €325 million and employ between 100 and 400 people. Two of the contractors started out in maintenance work and later widened their scope to include refurbishment work. In the case of the other contractors, most of their turnover comes from new-build, especially housing.

The projects carried out by the dyads were all housing refurbishment projects, dealing with several types of dwellings: in three projects, apartments were being renovated; in two projects, terraced houses; and in one project a combination of apartments and single room units for students. In the remainder of this paper, all types of dwellings are referred to as 'rental units'. The smallest project consisted of 60 rental units, while the largest concerned 310. In total, 990 rental units were renovated. The total building costs (without additional costs and/or taxes) for the projects involved were over €31 million, which represented an average investment of nearly €32,000 per rental unit, with a range from €20,000 up to €80,000 per rental unit. The main goals of the refurbishment activities were to extend the lifespan of the units, improve the social quality of the units and their surroundings and improve the energy efficiency of the units. The activities consisted of improving the building envelope technically and in terms of energy consumption, improving the building installations and renovating the kitchen, bathroom and/or toilet. Five projects were carried out with dwellings in an occupied state. In only two of the projects were the activities so intrusive that the rental unit was temporarily unavailable for living. In this case, the tenants were offered other dwellings during the refurbishment.

The numbers and types of companies involved in the partnerships and the project delivery methods used were different in each project (see Figure 5.1). In all the projects, the parties involved included at least one housing association and one general contractor.

In one project (Housing Association 1), collaboration began after a design-bid-build (DBB) process (Salcedo Rahola and Straub, 2013) for which the housing association drew up detailed project specifications. In contrast with the usual DBB approach, this process included an extra phase after the bidding and selection to optimise the design before it was implemented. Three projects (Housing Association 2, 3 and 5) followed a design-build (DB) approach (Salcedo Rahola and Straub, 2013), in which the general

contractor was commissioned to carry out the project based on their good relations with the housing association, which had been built up over previous projects. The housing association and general contractor decided which of the specialised contractors should be included in the partnership, based on the specialities needed to carry out the project.

In two projects, the work was carried out by consortia on the basis of a design-build approach. For the first consortium (Housing Association 4), the housing association had drawn up performance-based requirements relating to matters such as budget, planning and energy-performance levels. The consortium that met these requirements most closely and proposed the most attractive project was selected for partnership. For the second consortium (Housing association 6), the consortium was selected on the basis of its vision of what the project would look like after the refurbishment work. The housing association involved in that project had only provided a few details, such as the location and number of units. It had challenged consortia of architects and general contractors to provide a plan and an indication of the estimated costs.

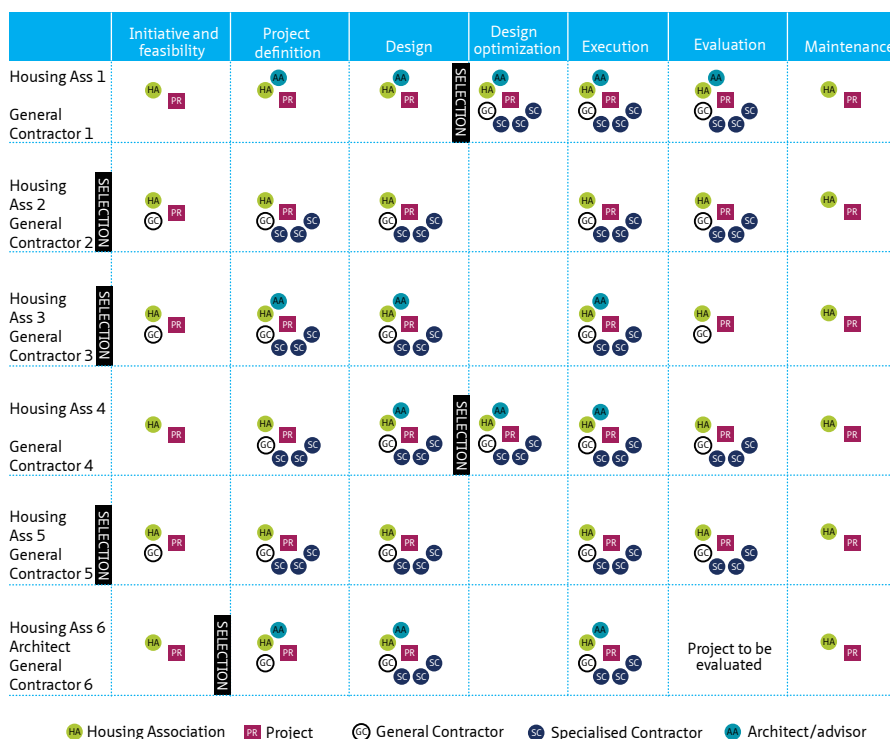


FIGURE 5.1 Schematic overview of construction processes and partners involved

§ 5.4 Mind-set

As stated in the introduction, several governmental documents have called for greater transparency and innovation in the construction sector. Although these subjects were mentioned by the interviewees, they did not seem to accord them the highest priority. According to their responses to the notion of partnering (see Table 5.1), this has more to do with either process-related topics, which are coded as 'Collaboration' (8x), 'Partner quality' (7x) and 'Effective use of knowledge of partners' (7x), or with output related topics, coded as 'Efficiency of building process' (7x). Interestingly, 'Trust' was not mentioned often, although it is generally acknowledged to be a crucial success factor in partnering.

TOPIC	NUMBER OF TIMES MENTIONED		
	Total	HAs (n=6)	GCS (n=6)
Collaboration	8	4	4
Efficiency of building process	7	4	3
Partner quality	7	3	4
Effective use of knowledge of partners	7	2	5
Transparency	6	2	4
Positive feeling about partnering	6	4	2
Product quality	5	4	1
Attitudes of team members	4	2	2
Goal setting	4	3	1
Trust	3	3	0
Innovation	1	1	0

TABLE 5.1 Concepts mentioned in relation to the notion of 'partnering', Total per Housing Association (HA) and General Contractor (GC)

§ 5.5 Success factors

§ 5.5.1 Trust

A central theme in many definitions of partnering is trust. Some of these are shown in Table 5.2. Trust has also been identified by authors such as Kim et al. (2010) as one of the factors that is essential for successful partnering (see also, for example, Akintoye et

al. 2000 and Wong et al. 2005). A rather metaphoric description of the importance of trust in partnering was given by Wong et al. (2005): “Trust is regarded not only as the glue that holds partners together, but also the lubricant that aids project completion”. Wong et al. (2005) have drawn up a list of 14 attributes of trust in construction partnering. They conclude that “to cultivate trust among the contracting partners, the critical factors are to perform competently and communicate openly and effectively”.

Trust can relate to the selection of the construction company by the housing association. It is important to note that public procurement rules do not apply to Dutch housing associations because they are private entities in the eyes of the EU. Although most of the housing associations have the same objectives for choosing supply chain partnering, such as efficiency and cost reduction (Chao-Duivis and Wamelink, 2013), the supply chains are brought together in three different ways: firstly, as a direct relationship, secondly through a ‘consortium approach’ and thirdly through a traditional ‘lowest-bid tendering approach’.

SOURCE	DEFINITION
Kim et al. 2010, p. 188	A supply chain partnership is a strategic alliance to achieve business advantage and exclusive goals by paying attention to critical success factors such as organizational commitment, co-ordination, leadership, trust, communication, conflict resolution, techniques and resources.
CII, 1991 in Hong-Minh et al., 2001, p. 50	Partnering is a long-term commitment by two or more organizations for the purpose of achieving specific business objectives by maximising the effectiveness of each participant’s resources. This requires changing traditional relationships to a shared culture without regard to organization boundaries. The relationship is based upon trust, dedication to common goals, and an understanding of each other’s individual expectations and values. Expected benefits include improved efficiency and cost-effectiveness, increased opportunity for innovation, and the continuous improvement of quality products and services.
Lambert et al., 2004, in Kim et al., 2010, p. 188	A supply chain partnership is a tailored business relationship based on mutual trust, openness, shared risk, and rewards to create business performance.
NAEC, 2004 (Denmark)	Partnering is a type of collaboration in a construction project based on dialogue, trust, openness and with early participation from all actors. The project is carried out under a mutual agreement expressed by mutual activities and based on mutual economic interests.

TABLE 5.2 table 5.2 Definitions of partnering containing the success factor ‘trust’

The direct relationship was used in three projects. This approach is associated with a high level of trust (Lau and Rowlinson, 2009), because a comparative selection between two or more companies has not taken place. In these cases, trust between the partners of the dyad has generally been established during earlier projects. The second approach; that of a consortium, encourages trust primarily on the contractor’s side of the chain. Under this approach, which has been used in two projects, the work is

contracted to a group of partner firms that have collaborated to develop a joint solution that meets the project requirements set by a housing association. These groups are referred to as 'consortia' in line with the definition of Gruneberg and Hughes (2006: 10): "A consortium is defined as an arrangement between several firms, in which each firm contributes an equity stake in the form of risk capital or payment in kind in order to qualify as a member. Remuneration of consortium members may be calculated as a share of the net profits of the consortium."

The consortia were selected on the basis of pre-established selection criteria, such as their experience in that particular type of project, their attitude towards supply chain integration and the clarity of their vision for the project. In one of the projects, the selection of the partner was based on the lowest bid, and consequently, trust was deemed to have been relatively low at the start of that project.

The amount of information about the project that was known prior to the selection of the partner can be considered as another indicator of trust between partners. The less information that is available, the more trust partners need to have in each other's abilities before committing themselves. In the three projects with a direct relationship between client and contractor, no information was known at all, and even the construction project was chosen afterwards. In both the situations involving the selection of a consortium, the housing associations had provided project information in the form of a programme of requirements that the consortia would need to fulfil. The programme of requirements included the characteristics of the dwelling that had to be renovated and the year of refurbishment.

§ 5.5.2 Leadership

In a partnering process, the involvement of leaders or managers at the senior level of an organisation is very important. According to Kim et al. (2010) "Leadership influences performance by allocating resources; further, leadership involvement symbolises a company commitment that encourages trust among partners". And "to enhance firm partnerships, leaders modify organizational goals, policies, and cultures. It helps to change employee skepticism".

'Leadership' is used widely by the project participants. In all the housing associations and general contractors, senior management supported the partnering approach. These leaders expressed their support in various ways in the different organisations. In every construction company, the directors were involved directly in the partnering project. The senior management of the housing associations remained removed from the process, but approved this method of working based on official and informative

reports by the project leaders involved. In two of the projects, the project structure was defined in such a way that the hierarchical setting of the company (director vs. project leader) was visible, meaning that a steering group and a working group were created. The steering group had to ensure that the success factors were addressed by the working group and they also took the framework decisions relating to budget limits, timeframe and project activities; the working group, meanwhile, was responsible for actually developing the success factors and for planning and carrying out the project within the boundaries set. In the other four projects there was no steering group – work group structure.

§ 5.5.3 Partner capabilities

“Partner capabilities are regarded as a fundamental component for maintaining partnerships. To maintain partnerships, participants should ensure that they deliver their specialised roles, an excellent innovation capability, and sociability. (...) Partner resources and capabilities should be included in a set of selection criteria” (Kim *et al.*, 2010). Here, ‘partner capabilities’ refers to all the partners involved in the construction supply chain: subcontractors and consultants. Manufacturers of building components and installations had no role as a partner in the supply chain. The assessment of partner capabilities is handled differently in every project. The subcontractors and consultants are able to join the supply chain if their capabilities correspond to the selection criteria laid down by the dyad. The use of these selection criteria increases the probability that the construction process will progress without any relational issues in the supply chain caused by uncertainty about partners (Lau and Rowlinson, 2009). The sub-contractors involved were carefully selected by five of the dyads. The subcontractors were known by at least one of the parties and the housing association had the final decision on whether subcontractor would be accepted. The housing association that used a lowest-bid approach at the start of the partnership stated that it did not pay particular attention to the selection of subcontractors by the construction company.

Moreover, in order to start the collaboration on the right foot, most of the partners, both housing associations (4 out of 6) and general contractors (4 out of 6) specifically selected the individual team members that were thought to be capable of working in an integrated supply chain approach. The competences that were found to be important for this were primarily social skills, being among others: collaborative, open-minded and service-oriented.

§ 5.5.4 Commitment

“Commitment is described as the partner’s willingness to continue the partnership. Effective partnerships depend on strong commitment to realise complementary, but unique goals. Commitment helps to avoid potential conflicts among partners. Long-term commitment enables partners to improve their confidence in the investment and the mutual advantages of SCP” (Kim *et al.*, 2010).

Commitment is clearly present in the dyads studied, because it is already implicit in the continuation of an established relationship. Commitment can also be shown by expressing an intention to continue the relationship. In the interviews, such intentions were indeed expressed by the interviewees; however, no concrete arrangements had been made yet. “High levels of commitment are expressed through different types of financial investments, the number of limited partners, or the number of projects. There is a strong positive relationship between the commitment and performance of SCP” (Kim *et al.*, 2010). The commitment of three dyads consisted of time invested in training employees in, for example, lean planning. One dyad planned extra meetings for team-building purposes. Moreover, in three projects, including the consortium-based projects, the building partners had invested time in developing a sound approach to the project prior to signing a formal contract. This means that they were working at their own risk, because the final plans had yet to be approved by the supervisory board. In these cases, the creative power of the consortia was used to convince the board of the quality of the work.

All partnering arrangements focus only on one project, the project at hand, and no agreements that were unrelated to the project were made. This could be partly due to the fact that for many housing associations, this was their first explicit attempt at supply chain partnering in a housing refurbishment project. Nevertheless, some respondents specifically stated that supply chain partnering should not necessarily imply automatic collaboration over a series of projects, partly in order to maintain the opportunities for competition during the selection phase of projects. Others, by contrast, were inclined to state that the full benefits of supply chain partnering can only be achieved if a partnership is built up over several projects. Furthermore, in two projects housing associations have made known their intention to commission the general contractor with the relevant maintenance work too, and in one of those projects a maintenance company played an advisory role in the consortium, thus extending the scope of the partnership beyond solely the refurbishment process.

§ 5.5.5 Conflict resolution

“Conflict resolution techniques are important in partnerships because the distinct companies in a partnership maintain their own characteristics and some conflict is likely to occur. Some researchers explored traditional approaches, such as coercion, domination, and hierarchies (Maheshwari *et al.*, 2006). Others suggested alternative approaches, such as joint problem solving and mutual adjustment programs (Mohr and Spekman, 1994). Many studies agreed that the alternative approaches are better than the traditional approaches because the traditional approaches resulted in negative impacts, such as a decreased level of trust and communication” (Kim *et al.*, 2010).

When asked directly whether they had agreed on any conflict resolution techniques, none of the dyads was able to name any. However, all the dyads stated that they were working with contracts. These were based on the conventional situation in which the housing association has a contractual relationship with the general contractor. Subcontractors then have a contractual relationship with the general contractor, rather than with the housing association. In one of the consortium projects, the housing association was looking for a different contracting formula, but they had not succeeded yet in finding one. As such, all the dyads were working in a hierarchical context, which is generally seen as a traditional approach to conflict resolution (Kim *et al.*, 2010). In this context, the housing association (the party that is paying for the work) has the last word. However, all the dyads stated that they held meetings with all project members every 2-3 weeks. These frequent meetings help to identify and resolve problems at an early stage, preventing potential problems in the relationship (Kadefors, 2004). In one project, the hierarchy was strengthened by the housing association’s stated position that it would only begin paying for work in the plan development phase after the project was given the green light by the supervisory board of the housing association. This implied that the general contractor would have to bear a considerable share of the risks in the plan development and design phases of the project.

§ 5.5.6 Coordination

“Coordination refers to a range of tasks that a partner expects the other to perform. Coordination requires organisational efforts to change processes, culture, and systems. Successful partnerships must share compatible values because unmatched culture, systems, and business objectives could be obstacles to success. Identifying clear goals and tasks helps participants not only to concentrate on their own responsibility, but also to be more actively involved in the partnership” (Kim *et al.*, 2010). The interviewees were asked whether they had shared their expectations concerning

the project in the early phases of the design process. As Lau and Rowlinson (2009) pointed out: "Expectation is one of the components of trust relations". Transparency in expectations makes it possible to identify shared interests and by enhancing these, the parties can work more efficiently, because they will not waste time bridging the expectations gap with their partners. Although establishing and reinforcing shared expectations can improve the effectiveness of the design process, this subject was not discussed during the early phase of most of the projects. In only one project did both the housing association and the general contractor state that expectations had been discussed, agreed on and incorporated into a description of four main goals of the project. These four descriptions had become so familiar that the members of the consortium knew them by heart. There were two projects in which both partners claimed that expectations would be agreed in due course. In one other project, the partners both stated that no common expectations had been formulated.

The partnering relationship can also be influenced through documents that describe the project requirements. In all the projects, the housing associations demonstrated trust in the general contractors and drew on their capacities by involving them in establishing project requirements. These were all performance-based and took the form of a programme of requirements. In no project did the housing association require the construction companies to work to a rigid technical description of the work in material terms. In order to establish a stable partnership, the coordination of internal processes cannot be overlooked. Almost all respondents had experienced this necessity in some way or another, because many Dutch housing associations have established a tendering policy in order to work transparently. In many cases, this has resulted in a statement that they will put construction work out to public tender. Those housing associations that already had a direct relationship with a particular contractor were obliged to convince the supervisory board that they wanted to work together with that contractor because this would have particular benefits.

One housing association mentioned difficulties when additional information was needed from a department other than the project department. Normally, the project department would request information, but now it was an 'outsider' - the construction company - that was requesting the information. One construction company stated that it had completely restructured its organisation, no longer taking the traditional approach but focusing on collaboration and transparency. Every employee had been assessed on partnering-related competences, and these competences had become part of the employee development cycle.

§ 5.5.7 Communication

“Communication is an essential component in successful partnerships, since it can assist participants in establishing the requirements of performance, adapt to changes in partner expectations, avoid potential conflicts, and reduce the level of uncertainty. An environment for opening communication can be created by installing an information system, adjusting cultural differences, and providing a feedback process” (Kim *et al.*, 2010). In three projects, a start-up meeting was held. These meetings help the partners to agree on how they should work together in the best possible way (Kadefors, 2004). The sessions were independent of the project and two of them had a mainly educational character, for example how to set up lean planning. Only one of the three start-up sessions focused specifically on the social aspect of team building, in addition to addressing educational and project-related matters. This session was held at a location outside the participant’s offices, which promotes a focus on team-building without any distractions from the participants’ daily work (Harback *et al.*, 1994). The meeting included an evening meal and some time for socialising, which proved a valuable way of adding to the team-building process.

Collaboration in the projects was further enhanced through agreements on how to communicate within the project team, because communication is one of the elements that sustains a good relationship (Lau and Rowlinson, 2009). All the dyads stated that they held regular meetings every two or three weeks at which the progress of the project was discussed. Four dyads made use of ICT applications for better communication, such as a shared e-mail account to which a copy of all correspondence between the partners was sent, or a web-based platform where all project-related information and correspondence was recorded.

§ 5.6 Discussion

The projects described involve dwellings with diverse characteristics, as well as a diverse range of refurbishment activities, partners and starting points. This made it impossible to make an assessment of which partnering approach suits each type of project best.

What is clear is that ensuring all the success factors are handled satisfactorily requires intrusive paradigm shifts. This requires an emphasis on management support. Together with one consortium project where the selection procedure was initiated by the director, the two projects in which the leaders were involved in the partnering

process via steering groups appear to be more ambitious and innovation-oriented than the other three projects. One could conceive of these as the more successful partnering projects.

Because the projects and partnering approaches are different, so are the pricing and budgeting arrangements. Price is, of course, one of the most important points to be agreed on. All housing associations were transparent about their budget and clearly stated that they expected their partners to carry out the project within the financial boundaries that had been set. This lent stability to the partnerships, because it defined the outline of the project and expressed trust in the sense that the housing association trusted the partners to look carefully for a solution within the budget, rather than claiming extra costs for the changes (Kadefors, 2004). The general contractors in turn were, when asked, willing to ensure openness in the tenders they received from their subcontractors to prove to the housing associations that the price offered in the overall tender was the best offer. This open book strategy creates “perceptions of relative equity” (Kadefors, 2004), improving the sense of trust between the partners. The way in which the dyads arrived at a final project price differed widely. One dyad worked with a ‘price book’ in which standard prices were defined for all the activities that had to be carried out. It was not yet clear how they would deal with unforeseen costs. Another dyad agreed on a final price that had been established through close cooperation between the housing association, the general contractor and three other major project partners. In order to cover unforeseen costs, a ‘risk pot’ was set up out of which these costs could be paid. The money in the pot was contributed by all partners, including the housing association. If at the end of the project there was still money in the pot, this would be returned to the partners. A third dyad was in discussion about whether such a risk pot would be of benefit. In this case, the housing association in particular was sceptical, because the work was commissioned by a consortium that was fully responsible for the design and execution of the project. The housing association therefore felt that the consortium should also bear a share of the risk of unforeseen expenses. Yet another option for determining the final price of the project was for the housing association to make clear that the contractor’s profit was fixed, no matter what might happen during the course of the project. Any unforeseen costs would have to be covered by money-saving alterations in the project. Since these pricing arrangements were discussed extensively and agreed on prior to the execution phase, price was not a subject for discussion during the execution phase. Consequently, meetings during the execution phase focused on more important matters: progress on the project. This is a topic that is of interest to the workmen, unlike financial disputes. As a result of this, their work satisfaction increased.

It is worth noting that during the interviews, statements relating to the positive working environment were heard frequently. These remarks revealed the state of mind of those involved in the construction process and the seven success factors described in this paper as derived from Kim et al. (2010): trust, leadership, partner capabilities,

commitment, conflict resolution, coordination and communication. Although trust is presented as a success factor in its own right, at this point, the conclusion of Bresnen and Marshall (2002) seems more appropriate. They state: “Rather than being simply a case of applying certain tools and techniques, developing an effective partnering approach results from a complex and dynamic process in which informal processes are just as important as formal mechanisms”. Having analysed the approaches of all six dyads, it becomes clear that trust, as an informal mechanism, should indeed be considered more as an overarching phenomenon which is indispensable in any partnering process. Theoretically the six ‘instrumental’ success factors can be identified in the way that they are discussed in the literature, but without trust between the partners (the seventh factor), the partnership will be doomed. In other words, if partners trust each other, it is much more likely that a partnership will successfully incorporate all the other success factors to some extent.

§ 5.7 Conclusions

Although supply chain partnering in construction has been encouraged by government and sector organisations, it remains at an early stage of adoption for the purposes of housing refurbishment projects in the Netherlands. The six dyads of housing associations and contractors involved in this study can thus be considered frontrunners. And it is exactly at this early stage of development that parties can learn from one another’s experiences. The focus of this research was on whether and how housing associations and their contractors have actively managed the factors that are considered important for successful partnering. The wide range of approaches has provided insight into how the success factors for partnering in construction can be developed and managed in practice. However, not all factors have been addressed and neither are they always addressed in the most effective way, so improvement is needed. Factors that demonstrate a high level of compatibility with recommendations from literature are as follows: leadership, all projects enjoy the support of senior management; communication, all projects hold frequent meetings and in three projects ICT tools are also used to improve communication; and partner capabilities, five of the six dyads stated that they have looked specifically at the quality of partners by selecting known parties or by applying selection criteria. One factor that seems in need of improvement is coordination. Not every dyad has clearly expressed goals, which is an important part of establishing a shared understanding. On the other hand, working together in the plan development phase and ensuring openness regarding budgets and subcontracting gives a good impression of the intentions and capabilities of the partners. Another factor that deserves attention is commitment. In three of the six projects, there is evidence of commitment in the sense that the partnerships

have grown from an existing relationship. However, few agreements have been made concerning the maintenance phase and all the partnerships are restricted to the current project. Of course, this situation could change as the projects develop and trust is built up. Conflict resolution techniques also remain underdeveloped. The fact that conflict resolution techniques and coordination require further attention may be a reflection of the still experimental nature of these dyads or indeed of the level of trust within the dyads, but it does imply some risk for the further development of the partnering process, should conflicts arise in the future. It has become apparent that the dyads are constantly dealing with trust issues, with these being an inevitable theme in the establishment of any partnership, whether at a conscious or a subconscious level.

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