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Implementing a new procurement strategy: the case of social housing associations

Implementing
a new
procurement
strategy

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Abstract

Purpose – The purpose of this paper is to address the barriers that Dutch housing associations encounter in implementing new procurement strategies.

Design/methodology/approach – Several aspects of purchasing, portfolio management, project delivery and supply management are discussed in relation to the changing role of housing associations as semi-public commissioning bodies in the Dutch construction industry, based on data derived from workshops with six Dutch housing associations.

Findings – Housing associations are adapting their procurement strategy towards a more integrative and performance-based approach to supply management. Due to the complexity of implementing this process, housing associations struggle especially with moving beyond pilot projects, increasing the maturity levels throughout the organisation and aligning new policies with daily practices at a tactical and an operational level.

Practical implications – Increased knowledge of change processes and seeing the potential of maturity models will be valuable for practitioners who are dealing with changes on the work floor.

Social implications – Client organisations are considered one of the key drivers of change in the construction industry. Insights into these particular organisational change processes contribute to the potential of industry reform.

Originality/value – Most studies on collaboration and integration in the supply chain focus on the inter-organisational level or on the supply side, rather than the internal organisation of the client.

Keywords Public procurement, Public sector, Front-end project management, Purchasing maturity, Project organizing, Capabilities

Paper type Research paper

1. Introduction

The construction sector has a significant impact on living standards and the capability of a society to produce goods and services, and to trade effectively (Seaden and Manseau, 2001). Yet, the sector is deemed to be underperforming, resulting in high failure costs and many products that do not meet the performance expectations of the users and/or owners (Winch, 2010). Hence, there is a need to increase the performance of the construction industry. Clients are generally considered the key drivers of increased industry performance and the most

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significant actors in achieving more integration in the supply chain (Briscoe *et al.*, 2004). This is especially true for public and semi-public construction clients, since they account for approximately 40 per cent of the total construction output in western European countries (Vennström, 2008; Winch, 2010). Furthermore, due to their social responsibilities, public and semi-public construction clients are expected to actively contribute to innovating and improving the building sector (Boyd and Chinyio, 2008; Manley, 2006).

Researchers often argue that the construction sector is underperforming due to a lack of integration in their delivery systems (Mesa *et al.*, 2016). It is suggested that more collaborative approaches and a better coordination of the different actors could overcome these problems by, for example, better integrating the client and the supply team around the processes and products of construction (Bowles and Morgan, 2016). Multiple procurement strategies have been introduced to improve performance in the construction industry. Partnering is increasingly seen as a way to enhance collaboration and trust between clients and contractors (Bresnen and Marshall, 2000a, 2000b). This kind of collaboration is also the fundament in alliance projects (Walker and Lloyd-Walker, 2016), which can be considered as the most collaborative way to deliver projects in construction. An important development in partnering is the move towards performance-based contracting (PBC) (Hypko *et al.*, 2010; Hughes and Kabiri, 2013). The key element of this new type of contracting is the emphasis on specifying outputs instead of inputs (Selviaridis and Wynstra, 2015).

In the construction sector, PBC is often combined with integrated project delivery, in which multiple phases of the construction cycle are simultaneously contracted (Salcedo Rahola, 2015; Hughes and Kabiri, 2013). Moreover, construction activities such as maintenance work are increasingly being contracted at a level that extends beyond single projects, for instance through the use of performance-based maintenance framework agreements (Schoemaker and de Bruijn, 2016; Volker *et al.*, 2014). Such new developments in sourcing strategies have multiple potential advantages, but also place great demands on the client organisations and their purchasing maturity. Clients can no longer rely on standardised methods but have to choose delivery methods that suit both the job at hand and the characteristics of the organisation (Love *et al.*, 2008). Furthermore, they have to make decisions beyond the level of a single project or project phase in order to secure the future of their organisations (Too and Weaver, 2014).

Most studies on collaboration and integration in the supply chain focus on the inter-organisational level of the project or on the supply side (Andersen and Rask, 2003; Day and Atkinson, 2004), rather than the internal organisation of the client. Moreover, research on purchasing strategies in the construction industry mainly focuses on the characteristics of a specific type of integrated project delivery method (Salcedo Rahola, 2015; Mesa *et al.*, 2016), rather than the use of several parallel collaborative approaches (Oyegoke *et al.*, 2009). Hence, there is a need to investigate how clients in the construction industry implement these new procurement strategies and what organisational factors influence this implementation process.

This study focuses on housing associations since they represent a group of Dutch clients that are actively implementing new forms of partnering into their procurement strategy. Housing associations have a market share of a third of the entire Dutch housing stock, which makes them the largest social rented sector in the European Union and a dominant actor in the Dutch construction sector (Boelhouwer *et al.*, 2014). Moreover, housing associations are neither frontrunners nor rear guards in the implementation of innovations, but should rather be seen as the early or late majority (Shohet and Straub, 2013). Therefore, the successful implementation of new performance-improving procurement strategies by such client organisations is of decisive significance for the improvement of the construction sector as a whole (Briscoe *et al.*, 2004).

The paper investigates the barriers that housing associations encounter in implementing their renewed procurement strategies. They perceive this reorientation as “new ways of working” within their organisation. The qualitative study is based on six purchasing

maturity workshops, each with a different housing association, and underlying organisational documentation. The following section describes the theoretical background, including changes in the purchasing strategy and their consequences for the client organisation. The research methodology and the case context are then explained. This is followed by results on the changing role, supply management and purchasing strategies. The paper is concluded with a discussion and the conclusions.

2. Theoretical background

2.1 *Procurement strategies in construction*

PBC is one of the most influential developments in project procurement in recent decades (Buchanan and Klingner, 2007). A movement towards PBC is occurring in most manufacturing and service industries and across private and public sectors (Hypko *et al.*, 2010; Sumo *et al.*, 2016). In PBC, the emphasis lies on the specification and evaluation of outputs or outcomes rather than using the traditional, prescriptive method that concentrates on specifying the inputs (Selviaridis and Wynstra, 2015). This shifts additional risks away from the client towards the contractor, thus demanding a different relationship with and possibly a different selection of contractors (Gruneberg *et al.*, 2007; Nullmeier *et al.*, 2016). In addition to the potential benefit of performance improvements, it can also provide a means to improve accountability for public spending for organisations in the public domain (Sparrevik *et al.*, 2018) and a basis to incorporate environmental and societal outcomes into supply chain operations (Selviaridis and Wynstra, 2015).

Within the construction industry, PBC is often intrinsically related to integrated project delivery (Salcedo Rahola, 2015; Hughes and Kabiri, 2013). Delivering integrated projects involves contracts with at least design and construction works at the same time, and possibly also maintenance, operation and finance. The most commonly used type of integrated project delivery in Europe is design-build (DB), in which the design and construction services of a project are contracted by a single entity. This is in contrast to the traditional design-bid-build project delivery model, in which separate entities are contracted for the design and construction works. Most research shows that DB results in shorter lead times, higher price certainty and better communication between the actors involved (van Duren *et al.*, 2015; Oyegoke *et al.*, 2009; Salcedo Rahola and Straub, 2013). Furthermore, the use of performance-based contracts and integrated project delivery allows the client to steer on total cost of ownership (TCO) instead of on initial investment and management, energy and maintenance costs (van der Lei *et al.*, 2012; Olubodun *et al.*, 2010).

Supply chain integration is also emerging within the construction industry. This shifts the focus from project-based deliberations with single buyers towards a multi-project perspective on service delivery within larger partnership agreements (Koolwijk *et al.*, 2018; Broft *et al.*, 2016). Through this increased integration of the client and the supplier organisation in service delivery, the supply chain evolves towards an extended enterprise or quasi-firm beyond the scope of individual projects (Briscoe and Dainty, 2005; Dainty *et al.*, 2001). Many Dutch housing associations consider partnering in the supply chain an important way to improve their efficiency (van Bortel *et al.*, 2013). The concept of supply chain partnering (SCP) refers to firms becoming partners in integrated teams, often for a longer term (Venselaar *et al.*, 2015). An example of this new collaborative approach is the development of a performance-based maintenance framework agreement for a housing block through which maintenance is commissioned to one supplier for a number of years (Vrijhoef, 2011).

2.2 *Consequences for client organisations*

Changes in the procurement strategy of a purchasing agency place great demands on the client organisation. First of all, they necessitate a renewed role of the client within the project

organisation (Hughes and Kabiri, 2013). In the case of PBC, the client role alters from coordination to orchestrating, from close interference to “letting go”. For instance, contractors have to monitor the deterioration processes of building components themselves; it is the task of the client to control and supervise the maintenance by reviewing the performance achievements (Straub and van Mossel, 2007). This is accompanied by the evolvement of procurement towards a proactive, strategic tool for organisations (Hartmann *et al.*, 2012; Úbeda *et al.*, 2015). Hence, PBC requires the choice of contractors to be made at a key level in the organisation. Furthermore, within housing associations the financial mandate needed to enter into long-term agreements is often higher than what is available at the operational level (Straub, 2004).

Moreover, these changes demand better collaboration within the various units of the client organisation that are involved in public procurement (Kamann, 2007). Regarding construction projects, the integrated character of the delivery method requires more cooperation between the organisational divisions involved in new projects and investments and those managing the portfolio and maintenance in particular. Also, a reorientation in the management of supply should be known not only to the management level of the client organisation, but also to the operational staff (Straub, 2004). Commitment to the proposed adjustments, however, often moves “up and down” the different organisational levels and units when implementing strategic changes in client organisations, which can create tension between divisions and levels within an organisation (Venselaar *et al.*, 2015). According to Talbot (2003), contradictions between different levels in an organisation are more evident in the public sector, as difficulties in working with value conflicts between external stakeholders are exposed. It is hard especially for public and semi-public client organisations to draw up plans and budgets, since they operate in a politically driven environment (Schraven *et al.*, 2011). In addition, potential positive effects as part of lifecycle costs are harder to defend than a financially attractive singular tender result (Olubodun *et al.*, 2010).

A renewed procurement strategy towards partnering also calls for employees with different skills. Whereas, for instance, hands-on technicians and engineering draughtsmen are needed for traditional sourcing methods, process managers with a thorough knowledge of procurement and legal issues are more important in performance-based delivery methods (Straub and van Mossel, 2007). The client should also be able to properly draft its performance requirements and be able to execute quality assurance. Furthermore, successfully executing new forms of highly collaborative integrated project delivery requires that participating parties have sufficient knowledge and expertise to collaborate at a deeper level (Walker and Lloyd-Walker, 2016).

In addition, a renewed procurement strategy places different demands on the contractors, and therefore possibly requires a different selection of contractors (Dainty *et al.*, 2001). When using an integrated contract, supplier selection must take place relatively early in the project lifecycle. PBC shifts responsibilities and risks to the contractor (Gruneberg *et al.*, 2007), which the contractor must be able to assess and manage. In addition, the period of collaboration with a contractor is considerably longer in the case of an integrated contract (Winch, 2010). In a performance-based maintenance partnership, for example, the contractor is responsible for performance and customer satisfaction throughout the contract period, which can be as long as 25 years. In addition, because a client makes more use of the expertise and innovation of the market in the renewed procurement strategy, the contractor must play a more proactive and consultative role (Palaneeswaran and Kumaraswamy, 2000; Potter and Sanvido, 1995). The selection of contractors with whom the client wishes to work is thus of the utmost importance, and might differ from the selection of contractors a client would use when using only traditional forms of commissioning.

Because of the longer contract duration and the use of TCO requirements, PBC increases the importance of a long-term vision and overview, for both projects and the portfolio as a

whole (Jerbrant and Karrbom Gustavsson, 2013). A major barrier to change in public commissioning practices is often the lack of such vision and policies, or different interpretations of the available policy by various organisational units or key actors (Hermans *et al.*, 2016; Young *et al.*, 2012). One cannot efficiently contract framework agreements that extend beyond single projects before one has an overview of the total amount of work that has to be conducted and how this work is assigned to market parties (Glas *et al.*, 2017). Furthermore, a clear overview of the portfolio is essential for a client in order to use concepts such as supply chain partnering or framework agreements as a means to improve its commissioning efficiency (Volker *et al.*, 2013).

Finally, being able to share knowledge successfully through interaction between the project and the more permanent organisation is seen as an important capability for organisations (Lundin *et al.*, 2015; Eriksson and Leiringer, 2015). When learning between projects, which are characterised by their temporary and unique character, it becomes more important to consciously emphasise knowledge articulation and codification, since the accumulation of experiences plays a less significant role in the learning processes (Prencipe and Tell, 2001). Project-based learning can be distinguished into different phases of exploratory and exploitative learning (Brady and Davies, 2004). New projects are usually characterised by exploratory learning; the exploitative phase occurs when a number of new projects have been undertaken or when projects terminate, that is, when the experiences and knowledge accumulated in project teams are codified and transferred from project to organisational context (Prencipe and Tell, 2001).

Client organisations thus face multiple organisational changes to which they must be able to adapt (Sporrong and Kadefors, 2014). It is essential to have sufficient manpower, time and patience to properly translate the policy into action. The skills needed to adapt to organisational change are often referred to as dynamic capabilities (Adam and Lindahl, 2017). Teece *et al.* (1997, p. 16) define dynamic capabilities as “the firm’s ability to integrate, build, and reconfigure internal and external competencies to address rapidly changing environments”. In this study, we look at how certain client organisations adapt to changes caused by a reorientation of their procurement strategy and how they deal with the development of the dynamic capabilities that are required to become a mature client organisation in a project-based industry such as the construction sector.

3. Research approach and context

3.1 Dutch housing associations

This study focuses on Dutch housing associations during the implementation of their renewed procurement strategy. Dutch housing associations are not-for-profit “hybrid” project-based organisations, acting between government, market and community (Nieboer and Gruis, 2014). Their main task is to provide decent, affordable housing for lower-income households. As semi-public entities they are regulated by the Dutch government, but they are not obliged to comply with European procurement regulations. This gives them more freedom in their procurement strategy. However, this freedom in a public context means that more deliberate choices have to be made regarding their role as client.

The Dutch social housing sector has been subject to several major changes over the last couple of decades. Following financial liberalisation in the late 1980s and the 1990s, housing associations in the Netherlands became more dynamic and broadened their scope (Boelhauwer *et al.*, 2014). They became more dependent on market activities, which turned out to work quite sufficiently and enabled them to adopt a wider field of operations, including housing in other market segments and additional real estate development activities. This has changed, however, in recent years. The global financial crisis and various political developments and financial scandals have caused Dutch housing associations to revert to their traditional social housing tasks, thereby reversing some of the

developments of the previous few decades (Nieboer and Gruis, 2014). The focus on professionalism, budget savings and efficiency increased, with a reduction in non-housing services and “commercial” development, and a stronger focus on rental housing for low-income households.

The focus on primary social housing tasks is reflected in the procurement strategy of Dutch housing associations. Housing associations are increasingly taking on a more directive commissioning role, including supply chain integration and PBC (Straub, 2009). An important reason to consider new types of contracting is the growth of their portfolios, which can amount to as many as 100,000 dwellings. This growth and the increased focus on professionalism in general make it essential to explore more efficient and effective ways of managing their maintenance processes (Straub and van Mossel, 2007).

Many housing associations are reorienting their procurement strategies. Salcedo Rahola and Straub (2013), for example, concluded, based on the results of their study on renovation projects carried out by social housing associations in eight EU countries, that although DB contracts in renovations were being implemented, it was not a common practice. Descriptive specifications were made for 69 per cent of the renovation projects, and performance-based specifications for 31 per cent. A more recent questionnaire among 146 executive directors of Dutch housing associations indicated that 87 per cent of the associations are working on more innovative ways to collaborate with the supply market. This was done through, for instance, integrated contracts (25 per cent), supply chain integration (34 per cent) or various other procurement pilots (24 per cent) (Aedes, 2015).

3.2 Data collection and data analysis

The findings of this research are based on a series of workshops with six housing associations in the Netherlands (housing associations A–F; see Table I). During these workshops, the organisations used a recently developed maturity model for client organisations operating in the public domain of the Dutch construction industry, namely the Public Commissioning Maturity Model (PCMM) (Hermans *et al.*, 2014; Hermans *et al.*, 2016). All six housing associations are located in the Randstad (the western, busiest part of the Netherlands) and they have between 7,000 and 90,000 dwellings, with a median of approximately 50,000 (see Table I). These housing associations became aware of the PCMM through the network of the university that developed the model and showed interest in the workshop, intending to use it as a tool in the strategic change process of their role as initiator in the supply chain. The outcomes of the workshops provided an insight into the implementation of the aforementioned changes in their procurement strategy and the organisational aspects that influence the implementation of these changes.

The PCMM was developed to raise awareness of the range and width of their strategic procurement tasks. In contrast to many of the other types of maturity models (Brookes *et al.*, 2014; Backlund *et al.*, 2015), the PCMM merely focuses on clarifying discussions and differences within an organisation, rather than comparing the maturity level between organisations. The PCMM contains nine aspects, which are a combination of basic

Case	Area of NL	Number of dwellings (+/–)	Year of workshop
A	Centre	55,000	2015
B	Centre	55,000	2015
C	Southwest	90,000	2015
D	Southwest	50,000	2015
E	Northwest	15,000	2016
F	Southwest	7,000	2016

Table I.
Overview of the cases

organisational competences (such as culture and leadership, portfolio management) and specific issues related to procurement and the “public” nature of public and semi-public construction clients (e.g. public rules of play, stakeholder management). The level of maturity reflects the embeddedness of and systematic approach to each particular aspect within the organisation (see Figure 1). The same model and assessment method were used in all workshops with the housing associations, but the structure of the workshops varied somewhat depending on the preferences of the organisation. Some organisations assessed both the current state and the desired state of the organisation’s competences in two separate half-day workshops, whereas others assessed only the current state. One organisation assessed the current state twice, with different strategic and operational levels within the organisation. Nevertheless, all workshops contained the same elements.

Preceding each workshop, all participants received a short questionnaire and supporting material of the maturity model. Each participant was asked to fill in the maturity model on the basis of his or her personal judgement. The responses were collected and plotted in a maturity model table. Each workshop started with a plenary session, in which the maturity model was further explained. Next, the participants were divided into small groups of approximately four people from different parts of the organisation. Each group was assigned a number of aspects of the PCMM. For each of these aspects they had to assess the maturity level of their organisation and the reasoning behind it. This assessment was carried out through discussion between the group members. To help the participants and to guide the discussion, additional supporting material was drafted with brief explanations of the aspects and the maturity levels and questions that could be answered by the participants. After the assessment of the individual aspects all participants shared their findings in a plenary session, after which the final maturity level of the organisation was agreed upon. This final “group” judgement was compared with the combined previous individual assessment. Differences between the group and individual assessments were discussed in order to find explanations for altered opinions.

The 80 participants in the workshops were all board members or managers primarily engaged in commissioning within the housing associations. In order to get a representative image of the commissioning competences throughout the organisation, the participants were a mix of people engaged in managing the portfolio from a maintenance perspective and those involved in new projects and investments. All discussions were audio-recorded, and the participants were asked to use the think-aloud method during the group discussions. In this method all reasoning and decision-making processes are made by thinking out loud, and the recordings are analysed retrospectively (Ericsson and Simon, 1980).

Furthermore, all participants were also asked to write down the underlying arguments they used to assess the maturity level of their aspects on sticky notes, which were gathered in the second plenary session. For each workshop a report was written by the researchers. The transcripts of the audio recordings of the discussions of the participants, the reports and additional background information on the organisations were coded and analysed in

		State of development regarding professional commissioning in your organisation									
Maturity level	5	Optimised									
	4	Managed									
	3	Standardised									
	2	Repeatable									
	1	Ad hoc									
			Organisational strategy and policy	Culture and leadership	People and learning organisation	Decision models and portfolio	Stakeholder management	Public role	Public rules of play	Interaction with supply market	Managing projects and assignments
			1	2	3	4	5	6	7	8	9
			Aspects								

Figure 1.
The public
commissioning
maturity model
(PCMM)

Atlas.ti, a software programme for qualitative analysis of combined data sources. First, the theoretical framework set out in previous section was used to draw up a list of codes. These codes consisted of the different changes in procurement strategies and the corresponding consequences for client organisations in relation to their maturity level in the different aspects (see Section 2 and Figure 1). Next, patterns were derived from the coded data. These preliminary findings were then compared to concepts from the literature and checked against the data as collected from the workshops. This inductive analysis process led to the identification of six themes, namely procurement strategies, purchasing policy, people and knowledge, supplier management, project and portfolio management, and inter-organisational maturity issues that appeared to be of significant relevance when implementing a new procurement strategy. Each of these themes includes major barriers and drivers for the implementation of a change in the procurement strategy of housing associations and will be discussed in the following sections.

4. Results

4.1 *Procurement practices within the organisation*

The findings showed that all housing associations in our study were actively reorienting their procurement strategy and had to readjust their role accordingly. All organisations were using multiple forms of collaboration with the market, and pointed out significant maturity differences between old and new procurement strategies. As one of the participants in Case A put it, “the new way of working is still insufficiently integrated in the genes of the organisation”. In most situations, the new procurement practices were being applied in experiments or pilots. They tried a new model, such as supply chain collaboration, for a while or for a certain project, and then started experimenting with another type rather soon afterwards. According to several respondents, such experiments followed each other in quick succession, sometimes even without proper evaluation of the experiences gained in the previous experiment.

It appeared that all housing associations were still investigating the best way to incorporate these procurement practices into the rest of their organisation. Frequent struggles, often linked to the interpretation and execution of these new working methods, were observed. One participant, for instance, explained about new dilemmas regarding the shift of responsibilities: “in a way, you give away a piece of power to another, which creates a position of dependence. You will lose some control. [...] The question is, what will be the impact on your organisation?” (Case C). Another participant described a situation in which they had tried to actively influence the outcome of a design and build process after contract closure, which is not supposed to happen with such integrated contracts. Several situations were mentioned in which no shared interpretation was linked to a new working practice, or different interpretations were being used by different actors.

In addition, multiple participants indicated that they frequently revert to old working methods due to time or capacity constraints. “Another way of working, of commissioning, that takes a lot of time. I fear that we choose the familiar, trusted method, because if we are doing this in a new way, do we have enough time for that?” as explained by a participant from Case E. So despite the active reorientation of their sourcing strategies, most of the new procurement practices were still in a pilot phase. They were often being applied on a project basis only, without thorough embeddedness within the rest of the permanent organisation.

4.2 *Purchasing and supply policy*

The results indicate that in response to their changing procurement practices, the accompanying purchasing and supply policies were also under development. It differed per organisation how mature their policymaking process was, but all were actively formulating

and implementing policies related to their renewed role as commissioning agent. Notwithstanding this active approach, several of the housing associations pointed out severe difficulties with the implementation of these new policies. A participant in Case B explained that insufficient attention was being paid to the consolidation of the new policy. In Case D, the dissemination of and familiarity with policies was also a recurrent weak point. Procurement policies, let alone changes to these policies, were not always known by employees. Furthermore, the majority of the housing associations indicated that the purchasing policy was fragmented and spread over various departments. For instance, a participant in Case F said that “every department does it differently, and even within real estate, everyone does it in a completely different way, so no cohesion at all. It is because I am on good terms with a director that we are working on chain collaboration, but that is very odd. You should make such a decision centrally”. So although the housing associations were formulating new policy to address their new roles in the supply chain, they were not yet able to successfully formulate and embed an overarching change strategy upfront in relation to their adjusted procurement practices.

4.3 People and knowledge

Building the knowledge and capabilities of the employees within the housing associations was also a work in progress, to varying degrees. A participant in Case E claimed that “teams are well equipped for the new way of commissioning we strive for”, whereas a participant in Case D said that “knowledge may not always be available yet, but [the] potential [to acquire this knowledge] is available”. Several participants raised questions about the available capacity in relation to the new developments in their organisation. They explained that due to limited capacity, tensions occurred between learning and working. As one of the participants in Case E explained, “[there are] doubts about capacity, therefore [we] opt for the familiar methods, while time is needed to learn procurement strategies. [...] We need to spend more time on learning, time you cannot spend on making.”

Regarding acquiring new commissioning-related knowledge, it was noticeable that in most organisations, learning opportunities were aimed at individuals instead of at the organisation or a department as a whole. Some participants valued the bottom-up training opportunities; however, others were somewhat doubtful, as explained in Case F: “The last time I did an organisation-wide or team-wide training goes back a long time. Then do we really go for it, together?” Furthermore, several participants indicated that the degree to which employees mastered the new working methods varied from person to person: “Some employees are noticeably further in their task maturity than others,” (participant Case A). Moreover, it was notable that in several cases, newly acquired knowledge and experiences were being shared on only a limited basis. Due to limited evaluations, new knowledge often remained within the project or department. In only one organisation did participants say that they were actively sharing newly acquired knowledge with the rest of the organisation. These findings indicate that few of the housing associations in our study fully facilitated the development of the knowledge and capabilities of their employees, despite the project-driven environment calling for an increased emphasis on knowledge articulation and codification.

4.4 Supplier management

The housing associations were primarily aware that their procurement strategies necessitate a different relationship with contractors and, to a lesser degree, that they might need a different type of contractor. They were all actively incorporating renewed collaboration practices with their contractors. Someone in Case A, for instance, explained that they were “increasingly allowing room for the market by means of phased procurement procedures. This provides a better mutual understanding between the parties.

Especially with supply chain collaboration, there is a different relation with the suppliers". Furthermore, the housing associations seemed to feel the need to abstain from the "we-they" model and move towards more collaboration with the market.

Since housing associations in the Netherlands are not obliged to tender, they can make use of long-term partnerships with the same contractors, for instance through service-based framework agreements for maintenance activities. Hence, in two of the six cases, participants complained that they often worked with the same partners, thereby leaving little space for new suppliers and possibly missing out on innovation. The availability of sufficient market knowledge differed per organisation. While one organisation stated that they had great insight into the market situation, participants from two other organisations expressed their concerns about whether they were sufficiently aware of the developments among their current contractors, and whether these contractors should or would remain the same in the future. Furthermore, participants often mentioned that they had insufficient knowledge about the other parts of the supply side, other than market knowledge gained during projects.

4.5 Project and portfolio management

The absence of a clear overview of the portfolio and its related future investment and maintenance works could hinder the usage of concepts through which commissioning activities automatically extend beyond single projects. Hence, most housing associations indicated that portfolio management strategies were available in their organisation. They were, however, often being updated or in need of an update: "Portfolio strategy is in development, hence [it is] ad hoc, and not known to everyone. [That] could very well be different within one to one-and-a-half years" (Case A). A participant from another organisation described it as a "work in progress", and within another organisation it was indicated that although they had a strategic housing-stock policy, they often deviated from it.

This ongoing development is clearly reflected in the comprehensiveness at portfolio level, since a missing link between portfolio management and individual projects were often mentioned. One of the participants in Case E stated: "Currently, it is a constant collection of 'incidents' or one-off things or projects, although they are planned. [They are] not yet clustered, in order to put them on the market in a smarter way". Another participant explained that although they looked at characteristics such as TCO and scenarios at the project level, different decisions were often made within the next project. Furthermore, it was mentioned that sometimes a comprehensive assessment is not carried out because "otherwise, we will not meet the schedule" (Case A).

4.6 Inter-organisational maturity issues

The overall comparison of the individual maturity level assessment before the workshops and the combined group assessment within the workshop generally led to a reduction of the estimated level. This moderation could be explained by an increased insight in the differences between the departments within the organisation in how they executed the role of the commissioner. The strategy of organisations towards their commissioning activities appeared to be less robust than participants anticipated.

Furthermore, several differences in the maturity of the renewed procurement task between parts of the investigated organisations were found. This, for example, related to the differences between the strategic, the tactical and the operational level. Although differences between these levels could be functional, several remarks showed that these differences needed to be reduced. One of the participants in Case D for example explained that "if you look at the triangle of strategic, tactical and operational levels, a lot has happened at the strategic level, which should now be further implemented downwards

[into the organisation]”. It was also said that at the operational level they still had to explain why they were working in a different way, whereas at the management level one was more concerned with the how questions.

Level discrepancies between divisions were also found. In several cases, the real estate department was lagging behind in maturity compared to the maintenance department. In other cases, this difference appeared to be related to project characteristics in general. Overall there was little sharing of experiences between the maintenance department and the real estate department, which could hinder the collaboration between the different divisions of an organisation that is required for integrated project delivery. This indicates that a lack of central policy or integration of such policy throughout the organisation obstructs the successful implementation of a new procurement strategy.

5. Conclusion and discussion

5.1 Reflection and conclusions

To improve overall industry performance several new forms of collaboration have been introduced in the construction industry. These changes have far-reaching consequences for client organisations, which have to adjust their procurement strategy accordingly. Projects are increasingly contracted out in an integrated manner with performance-based requirements. Furthermore, concepts such as total cost of ownership, supply chain integration and framework agreements are increasingly being implemented in the construction industry. Client organisations have to learn how to deal with new procurement practices and these “new ways of working” place great demands on the internal client organisation. For example, clients now have to steer on their service level agreements instead of checking whether the contractor performed the task exactly as agreed upon beforehand. They can no longer control the entire supply chain by themselves and have to find ways to manage the quality in a more general way. New ways of working in procurement also necessitate a more strategic procurement vision and a better overview of the portfolio.

For the housing associations that participated in our study, the transition of their commissioning task towards a more performance-based integrated way of working appeared to be a struggle. They seemed to be combining these new practices with more traditional sourcing strategies, meaning that they had to combine the two into one overarching procurement strategy. Based on the maturity workshop data with six Dutch housing organisations it was found that organisations were seeking the right way to fill their renewed role. Furthermore, they often reverted to old working methods and did not interpret new procurement practices similarly. New procurement practices were often not fully embedded outside the organisational divisions that were directly involved in the pilots, and considerable differences in the maturity of the possibly renewed commissioning task within the organisation were evident. Consequently, the coherence and integration between the different aspects of the procurement strategies seemed to be lacking.

5.2 Discussion

The struggle faced by the workshop participants could have been partly due to the fact that their organisations were still working on the implementation of their new procurement strategy. This was mostly done in pilots and projects. Hence, the willingness to change was present within all six housing associations in our study. Change always creates gaps and contradictions, and client organisations are no exception to this. However, the noticeable struggle could also have been caused by more severe barriers, which can be compared to the internal and external drivers that are mentioned by Walker and Lloyd-Walker (2016) when studying the implementation practices of alliance contracts.

First of all, the findings indicate that although the willingness to renew their procurement strategy was present, the degree to which the housing associations facilitated these changes was limited. New practices were primarily being applied in pilots and experiments, which sometimes followed each other in quick succession. A clear organisational change strategy was frequently absent and policies were often fragmented within the organisation. Similar findings were found in other studies on purchasing change programmes in public or semi-public organisations. Walker and Lloyd-Walker (2016, p. 76) for example also found that “having an effective and appropriate facilitating foundation is necessary but not sufficient without the processes, routines and means to reinforce desired behaviours”. Furthermore, Sporrang and Kadefors (2014) found that within municipalities the absence of a clear organisational policy, or policy that was understood differently by different organisational units or key actors, was perceived as an important barrier to change. Housing associations hardly ever seem to formulate measurable targets and often lack alignment between strategic needs and operational execution (Venselaar *et al.*, 2015).

Furthermore, limited attention was paid to acquiring new knowledge and structurally embedding it in the rest of the organisation. Every time a new working practice is introduced, employees have to acquire new skills. Since new procurement models are being used alongside traditional ones, employees also need to be able to switch between working methods and their accompanying roles. Attention to such knowledge and competences often seemed inadequate. The need for adaptive capabilities was also found in earlier studies on changing client roles (Adam and Lindahl, 2017) and project governance structures (Killen and Hunt, 2013). This lack of capabilities could explain the considerable differences in maturity within the organisations, both between the different levels (strategic, tactical and operational) and between the different departments (development, maintenance and purchasing). Newly acquired knowledge and experiences gained during projects did not become embedded in the organisation, but often remained within the department or project team, which is consistent with learning in other project-based organisations (Eriksson and Leiringer, 2015). This could result in coordination problems, thereby preventing change in working practices, especially since new procurement strategies, such as integrated project delivery, require more collaboration between different divisions of a client organisation.

In order to fully master the new working practices resulting from reorientations of the procurement strategy, a client organisation must move beyond piloting. For many housing associations, and probably also other client organisations in the Dutch construction sector, this implementation process is difficult because it needs to be acknowledged and integrated within the entire organisation and the rest of the supply chain. Especially the inter-organisational aspects of the implementation of the new working methods were underestimated. Implementing supply chain partnering requires increased awareness and acknowledgement of and reflection on intra-organisational dynamics (Venselaar and Gruis, 2016).

Our study highlights the uncertainties and lack of clarity that often accompany a change within an organisation. There is a strong need for a strategic perspective on where one is going together with a clear organisational change policy. Sufficient manpower, time and effort are essential to translate that policy into action (Sporrang and Kadefors, 2014) and to combine the different aspects into one overarching purchasing strategy. So, reorienting a procurement strategy “requires more than a ‘toolbox’ of technical purchasing skills, the use of an ‘n’ step guide for change, or the deployment of external consultants to implement some form of planned sourcing schema” (Day and Atkinson, 2004, p. 266). The specifics of these implementation processes at project-based organisations require a substantial amount of further research.

5.3 Limitations of the study

The housing associations that participated in the workshops were not randomly selected: they participated because they had heard about and were genuinely interested in the

workshops and the maturity model. Most organisations were interested in the maturity model because they were reorienting their procurement strategy in relation to the supply chain and were looking for tools to support them in this change process. This implies that they were already more explicitly thinking about their commissioning role and seeking ways to enhance their professionalism as industry frontrunners. This could have influenced the results of the study. However, the results of our workshops, as well as previous work on organisational maturity at public commissioning agencies (Volker *et al.*, 2013), also indicate that organisations that are more actively working on their maturity levels are more critically aware of their opportunities for improvement. Furthermore, the similarities of our findings to those of previous studies on integrated project delivery and partnering at Dutch housing associations (Salcedo Rahola and Straub, 2013; Venselaar *et al.*, 2015) indicate that the sample was representative of housing associations in the Netherlands.

Due to the qualitative assessment method of the model and its focus on raising awareness, it is not possible to indicate whether mature organisations actually perform better than less mature organisations, as for example Schiele (2007) did. Apart from having to meet their social responsibilities and the legal regulations concerning the maximum rental price per square metre, housing associations in the Netherlands are entitled to run their organisations as they please. Aedes – the Dutch professional agency of housing associations – publishes benchmark figures on average maintenance costs and rental levels to provide transparency to their members and their members' customers. In a follow-up study, these figures could, for example, be included in order to extend the implications of this study towards better insights into the impact of changes in the procurement strategy on the organisational performance.

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