

## 6 Work floor experiences of construction partnering in the Netherlands. Comparison of three case studies.

### Author's notes

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*Obviously, this last article I wrote heading towards the end of the research. For myself I called this 'the overarching article'. In first instance, I attempted to write an article that described all the lessons that I learned throughout the years that combined all the experiences that I went through last years. That was quite a challenge and quickly I realized that I had given myself an impossible assignment. I realized that there is no final conclusion that covers everything. There is no final sentence, nor is there a set of sentences that incorporates all the lessons that can be learned by experience. After all, the way I learned the lessons was not by reading an article either.*

*I stayed in touch with some participants of all three cases. Therefore, I know a little about what happened after I finished the cases. I hear stories of successes, and I also hear stories that suggest less successful aspects as well. For example, it is still a struggle to measure the successes and measure the performances of the client as well as the contractor. What I heard from a student who did a graduation study at one of the client organizations in the case study, is that they experiment with Key Performance Indicators. However, the Key Performance Indicators seem biased towards evaluating the contractor instead of the successfulness of the client. This is of course merely one interpretation of the situation, but from this perspective the client still dominates the contractors, and the underlying antagonistic relation has not changed yet. In another case, I hear that initial managerial interventions have been cancelled and the ambitions to work with SCP have been downsized. In all cases I hear about project leaders and other colleagues, that change their job within or outside the organization. They have other functions and tasks. One important respondent in this study quit his job and as far as I know, he is traveling the world.*

*Recently I talked to a few professionals of one the cases about Total Cost of Ownership, which was a new term in this organization. They just started using Discounted Cash Flow method to calculate going concern value of one of more assets over the exploitation period of a building. I was surprised, because I assumed that they already did that. At least, it seemed logical to me. It was just a spontaneous conversation, and*

*I did not check whether may be others in the organization already used Discounted Cash Flow methods. What I attempt to describe, is that organizations are in ongoing transformation. It is never finished and new terminology that influences people's actions and awareness arise, while other 'hypes' end. This overarching article is an interpretation of what happened in a certain time slot at a certain place.*

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## § 6.1 Abstract

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This research aims at understanding daily work floor experiences of project leaders of Dutch housing associations who try to apply the principles of SCP. By comparing three cases it was found that: 1) despite the attention, engagement, and effort put into applying the principles of SCP, there are no indications that this lead to fundamental and structural improvement of intra- and inter-organizational collaborations. 2) intra-organizational relationships are just as important as inter-organizational relationships when it comes to implementing principles of SCP. 3) integrative activities are conducted and perceived as not rational, chaotic, contradictory, not finished and/or not followed up. Although the results may provoke practical managerial interventions, we recommend not to come to that kind of managerial interventions too quickly. Instead, we recommend getting actively involved in complex responsive processes that constitute the forming of SCP. In this way, cooperating with supply chain partners becomes a matter of a dynamic and personal process of development, rather than a managerial problem that is abstracted from daily work practice.

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## § 6.2 Introduction

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Effective and efficient collaboration in the construction industry have been object of research for decades (Bygballe et al. 2010, Hong et al. 2012). Supply chain partnering (SCP) is considered as an alternative for long and expensive procurement strategies that are based on lowest bid of the contractor. SCP can be considered a buzz word and there are many related concepts, including supply chain collaboration, supply chain integration, and construction partnering. Each concept may pinpoint a subtle difference, but in daily work practice, the terms are used interchangeably. Rather than a specific form of collaboration, SCP and its related terminology captures the overarching

idea of an alternative working method. This new method emphasizes collaboration over traditional procurement methods. *The Construction Industry Institute (1991)* defined partnering as “a long-term commitment between two or more organizations for the purpose of achieving specific business objectives by maximizing the effectiveness of each participant’s resources. This requires changing traditional relationships to a shared culture without regard to organizational 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”.

Supply chain partnering (SCP) promises more effective and efficient collaboration. However, so far, it appeared to be impossible to measure the results of applying SCP in a quantitative way, but based on the attention that has been paid to this topic in the work field as well as among scholars, there appears to be a shared trust and belief in the benefits of SCP to construction project outcomes among participants and scholars. Despite decades of experiments in the field and research by scholars, it is questionable to what amount SCP really is adopted. *Fernie and Tennant (2013)* conclude that the adoption level of SCP in the UK is low. *Smyth (2010)* concludes that improvement in the UK construction sector are not carried out in a sufficiently rigorous way for continuous long-term improvement. *Gottlieb and Haugbølle (2013)* conclude that the effort that has been put to apply SCP in the Danish construction industry only met the expectations to some extent.

A reason that despite the attention that has been paid to SCP, the adoption of SCP remains low, might be a lack of understanding of what goes on at work floor level. As *Phua (2013)* argues, an individual-level of analysis in construction partnering studies is scarce. That means that most construction partnering research, so far, is abstracted from direct experiences of professionals in the field. Individual experiences are averaged away. Therefore, there is little insight in what happens at operational level of applying SCP and too little understanding of what professionals in the field experience when they apply SCP. Instead of a helicopter view, they must take a worm’s eye view, and study emergence at the micro-level. According to *Eriksson (2015)* deeper and more detailed knowledge about how various management practices work and affect each other are critical to successfully implement and achieve integration (*Eriksson, 2015*).

This focus on daily work floor practices alludes to the understanding of SCP as an emergent practice, that has gained attention among scholars (*Bresnen, 2007; Bresnen, 2009*). Instead of a planned strategy implemented from the top down, SCP as an emergent practice results in the continuous, communicative interplay of practitioners in the field, which *Stacey (2011)* calls “complex responsive processes”. Studying SCP

as an emergent concept means that the focus shifts from the design of the strategy to the application of the strategy. As an emergent concept, the abstract ideas of SCP are shaped through the ordinary, daily work floor practices of professionals, such as project leaders, calculators, planners, and building site workers. According to *Mintzberg et al. (1997)*, to study an emergent strategy, one must look back and identify patterns created throughout time. So, when adopting an emergent perspective, managers (as well as scholars) should focus on describing and reflecting on what people already do, instead of prescribing what people should do. In understanding the emergence of SCP, work floor professionals and their daily work actions matter greatly. However, existing construction partnering research rarely considers typical, daily work situations seriously.

Recently, several studies sporadically give insight in what goes on at operational level (e.g. *Ellegaard and Koch (2012)*, *Gottlieb and Haugbølle (2013)*, *Jefferies et al. (2014)*, *Sandberg and Bildsten (2010)*, *Taggart et al. (2014)*, *Zimina et al. (2011)*). For example, *Ellegaard and Koch (2012)* observed that a department of purchasing forced project managers to work with specific suppliers. Communication consisted of “handing over written directives, rules, and procedures” which limited interactions between people and departments (*Ellegaard and Koch, 2012*). Relational integrative elements like solidarity, obligation, respect, trust, and mutuality were absent. Despite instructions, some project managers did not agree with the purchaser’s instructions, and “decided to use other suppliers despite the directive” and “buy their components elsewhere” (*Ellegaard and Koch, 2012*). These dynamics lead to a strategy in use that was clearly not intended, but one that emerged through a very specific, local personal and non-rational interplay of individuals and departments. However, the amount of such studies that do give insight in what happens in daily work life at operational level is relatively small. The studies concern different types of construction projects in different countries, focusing on various project phases and parties. Therefore, the studies do provide little ground for comparison.

To conduct an individual level of analysis, and produce research that is coherent and not anecdotal, ethnographic, phenomenological and or narrative research approaches can be conducted. *Pink et al. (2013)* argue that more ethnographic research approaches should be conducted in the construction research. This type of research differs significantly from other construction partnering research, because it taps into ordinary daily work life, and provides a less abstract image of what goes on in daily work life at a building site. However, in their work produced so far, their focus seems to be on the realization phase of construction, while applying SCP concerns other construction phases as well.

Construction partnering studies that view SCP as an emergent practice are scarce but necessary to understand how SCP is applied at work floor level. Without insight into how people give shape to such an abstract concept, managerial interventions remain a wild guess and most likely won't improve the situation. Therefore, in this paper, we compare three case studies on project leaders that work for Dutch housing associations and who try to apply the principles of SCP to better understand work floor experiences of implementing SCP.

We chose to focus on the project leaders of Dutch housing associations, because they are important in translating the abstract strategy of SCP into daily actions. Besides, Dutch housing associations own 2.4 million units in the Netherlands, or about one-third of the total housing stock ([www.aedes.nl/feiten-en-cijfers/woning.html](http://www.aedes.nl/feiten-en-cijfers/woning.html), 2017, March 31). As one of the largest client organizations, they dominate the Dutch construction sector and are very likely to influence their partners whenever they attempt to implement SCP principles. Dutch housing associations also own large quantities of similar assets that need to be renovated and maintained, so SCP is more likely to be implemented easily.

The paper is structured in six sections. The next section ([section 6.3](#)) provides a theoretical framework for the study, followed by the research approach, tools, and techniques used for gathering and analyzing the data in [section 6.4](#). [Section 6.5](#) describes similarities and differences between work floor experiences in the three cases studies. In [section 6.6](#), the results are discussed and grounded in literature. [Section 6.7](#) details the conclusions of the study.

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## § 6.3 Theoretical framework

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This research focuses on the work floor experiences of professionals in Dutch housing associations who attempt to apply the principles of SCP. The adequacy of any research depends largely on the lens used to analyze the data gathered. The lens used for this paper is based on the theory of complex responsive processes (Stacey, 2011). This theory argues that organizations become what they become through an interplay of individuals, rather than through a designed strategy, blue print, or other deliberated plan. According to Stacy (2011), in this local interplay “the population-wide patterns of organization and strategy both desired and realized” emerge.

The theory of complex responsive processes, has been used in organizational studies and it is based on the idea that patterns emerge from daily work floor practices (Stacey, 2011). Therefore, it seems an appropriate theoretical framework (or 'lens') to understand SCP as an emergent process. To explain the theory, it is useful to first describe some of the 'other' perspective on organizations: 'systemic ways of thinking about organizations', which is considered the dominant way of thinking about organizational dynamics (Stacey, 2011).

Systemic management theories assume that an organization is shaped by strategies, plans, programs and direction, developed by the managers of the organization, that boil down through the hierarchy of the organization. Systemic management thinking assumes that organizations can be guided 'from a helicopter view', in an objective and rational way. In this way, (managing) organizations seems relatively straight forward. Difficulties and failures in implementing strategies can either be blamed on the strategy itself or on the implementation process.

However, various scholars have adopted other ideas about development of human society and behavior within society and organizations. Stacey (2011) argues that organizational reality is more complex than systemic management theories imply. Complexity theory considers strategies, plans, programs, and directions etc. (from now on simply called strategies) as a first gesture to which work floor professionals might respond. Meaning of the strategy does not lie in the strategies itself, but in the processes of gesture-response made with the strategies (Stacey, 2011). As soon as a strategy is introduced, work floor professionals give their own meaning to it.

Processes of gestures and response can be experienced as chaotic, messy, unruly, capricious, intuitive and unpredictable. Still, in that apparent chaos of interactions, patterns can emerge (Homan, 2013, Stacey, 2011). Complexity theory is about processes of gesture-response and the patterns that emerge from these daily interactions by work floor professionals. When SCP is understood as an emergent practice, it means that the strategy of partnering gets its shape by interplay between local individuals. Therefore, the way in which people collaborate changes constantly and highly depends on time, place and local circumstances.

It is argued that it is difficult to fully accept complexity and involve that complexity and consequences into academic research. Opponents of complexity theory might suggest that complexity is used too easily in arguing that nothing is predictable and therefore no precise scientific results are possible. Without denying the difficulties of complexity theory, this purpose of this paper is not to convince readers that complexity theory is 'the one and only truth about analyzing organizations'. Rather, it is used as a framework

that provides a fresh perspective in a research community that is mainly dominated by a systematic view on organizing.

Thus, the lens of organizational development because of ongoing complex responsive processes in daily work practice was used as a perspective to gather and analyse our data. Using this lens results in narratives about practices at work floor level. Using this lens provides a deeper and more detailed knowledge about how various management practices work and affect each other. Using this lens may also lead to incoherent and anecdotal research. According to Eriksson, “there is a need for conceptual and empirical research that is comprehensive by addressing several dimensions, yet detailed in the investigation of how specific dimensions interact” (*Eriksson, 2015*). Therefore, *Eriksson (2015)* developed a framework that allows researchers to ground a detailed investigation into dimensions of SCP. We will use this framework in this study to compare the detailed investigation and in order to further explore the utility of the framework.

Strength, scope, duration, and depth are the four dimensions of the SCP framework developed by *Eriksson*.<sup>1</sup> First Eriksson considers the strength of integration. The strength of integration is related to “the extent to which integrative activities and technologies are utilized” and concerns the joint utilization of practical and tangible tools. This includes the formulation of joint objectives and follow-up meetings, the use of joint offices and joint ICT-tools. Utilizing these tools may be identified in domains of internal, supplier and customer integration, according to *Eriksson (2015)*. Second, Eriksson continues with explaining the dimension ‘scope’, which concerns “the number and nature of supply chain partners and their interdependencies” (*2015*). Third, the duration of integration concerns both the length of the relationship over a series of projects and the timing of the involvement of a single project. Fourth, the depth of integration concerns who performs the activities, such as top-management, middle managers, engineers, or production personnel on the shop floor. One drawback of using this framework is that it deals with high abstractions, which diminishes the detail of the direct experiences. There is a danger of averaging away the different interpretation of each party, but it is exactly those differences that may highly influence the success of the collaboration. However, when a micro-level is adopted, more details are available that make it easier to understand the daily work experiences and the individuals’ motivation why they behave as they do.

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Eriksson uses the synonymous term “supply chain integration” instead of “supply chain partnering.”

Using Eriksson's four dimensions is useful in studying work floor experiences of professionals who aim to apply the principles of SCP from a micro-level of analysis, but it does not provide a complete picture. For one, assessing the dimensions depends on the perspective of the assessor. For example, in *Ellegaard and Koch's* case study of the purchaser who dictated suppliers (see introduction), some project managers "decided to use other suppliers, despite the directive" (2012). Assessing Eriksson's dimension of scope in this example becomes problematic because it is difficult to pinpoint the nature and interdependencies of the partners in this example. Secondly, it is questionable whether "forcing a project manager to use a specific supplier" is part of the dimension of "strength of integration" and related to the utilization of practical and tangible tools. A third difficulty is that the framework implies a static, fixed situation, yet local situations are often dynamic. In the case that was described by *Ellegaard and Koch* it is imaginable that the situation develops over time (or even during a project). So, assessment results constantly change. Despite these difficulties, we applied Eriksson's framework for our SCP case studies because it provided a structure for more detailed observation and we try to evaluate the dimensions as such and contribute to the development of the framework.

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## § 6.4 Methodology

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### Ontological and epistemological assumptions

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The ontological standpoint of this research is that every perception of reality is a social construct. That means that each notion of reality is temporary and context dependent. Reality is constructed in the experience of individuals. Epistemological standpoint is that humans can know this social construct only from their own personal and limited frame of reference. Because, a person can only have limited access to the phenomenon itself, multiple constructions of reality are possible. Individuals may undertake actions to expand and nuance their frame of reference, but nobody is able to stand outside their frame of reference. That means that this research presents an interpretation of a social construct. The social construct of interest in this study is 'the implementation of SCP by project leaders that work for Dutch housing associations'.

This study consists of three main phases. First, three cases are selected. Second, three case studies are conducted in a linear order. Third, the cases are compared and synthesized. Each phase is explained in the rest of this section.



## Case selection

**Table 6.1** shows an overview of the three case studies and their characteristics, listed linearly. The first and second case studies were reported and published as peer-reviewed articles. The third case study was accepted as a conference paper for the ENHR-conference in September 2017.

	CASE STUDY 1	CASE STUDY 2	CASE STUDY 3
Number of living units (houses, apartments, studios).	30,000	60,000	10,000
Number of employers	Approximately 400	Approximately 800	Approximately 100
Time of collecting data	March '12 – Sept '12	Feb '13 – Oct '13	June '15 – Feb '16
Phase of implementing SCP	Beginning	Beginning	Beginning
Participants	(1) our main respondent was a project leader from the client organization.	(7) project leaders and (8) other employers from the client organization.	(11) participants from the client organization and the contractor.
Gathering data	(7) interviews (33) observation journals	(15) interviews (23) observation journals	(11) interviews (6) observation journals
Analyzing data	Created narrative and milestones with key respondent	Inductive analysis at sentence level; Nuanced findings with observations	Inductive analysis at sentence level; Nuanced findings with observations

**TABLE 6.1** Facts and figures of the three case studies

The number of assets differs between each case study. The housing association in the first case study owns approximately 30,000 living units, which is considered large in the Netherlands. With approximately 60,000 living units, the housing association in the second case is one of the largest in the Netherlands. The housing association in the third case study, with only 10,000 living units, is categorized as medium, but since its organizational structures were comparable (among other favorable aspects), we accepted the size difference and included it in the study.

In choosing the three case studies, we looked for favorable aspects. In each one chosen, the participants were at the beginning phase of implementing SCP, with several managers in strategic positions and several project leaders interested and willing to apply its principles. We also looked at the willingness of the participants to cooperate as respondents. In each case study, the researcher experienced a high level of willingness to cooperate among all respondents, an enthusiasm about participating, and passion in the interviews.

## Gathering and analyzing data in each case study

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The main method of gathering data was through conducting open, semi-structured interviews. **Table 6.1** shows an overview of the number of interviews that were conducted in each case study. The semi-structured interviews were based on two main, open questions, as suggested by *Creswell (2007)*:

*“What have you experienced in terms of applying principles of SCP?”*

*“What context or situations have typically influenced or affected your experiences?”*

The interviews were combined with spontaneous and planned observations to increase our understanding of what was said and to capture (for example) a sarcastic tone of voice. One planned observation involved the researcher attending a team meeting that was often discussed negatively by respondents. Although the observations clearly enriched the data, the reports were not used for formal analysis.

In all three case studies, the researcher verified her findings with the respondents. In the first case study, this was done one-on-one, with the primary respondent. In the second and third case studies, the researcher organized a presentation with several respondents to present key findings and conclusions and provide an opportunity to respond. In the presentation, the researcher followed the line presented in the published articles (case 1 and 2) and the research report (case 3). There were no significant differences between the researcher’s and the respondents’ interpretations of a situation in any of the cases. The researcher was surprised that the respondents were very open for reflections, even if the results were not particularly in their favor.

Although the methods of gathering data are similar in each case, they differed in two ways: 1) the number and variety of participants increased, and 2) the level of the main researcher’s active participation decreased. As **Table 6.1** shows, in the first case study, we used data gathered from one project leader. In the second case study, we used data collected from a group of project leaders. In the third case, we used data gathered from a group of project leaders as well as data from individuals from other roles within the supply chain. As expected, the expanded number and variety of participants provided new insights in each case study.

We approached each case as an independent study, and analyzed data inductively, using respondents to verify our findings. We took several, different steps for each case to create a narrative and draw conclusions from raw data. In the first case study, we created a narrative with the primary participant that identified several milestones by generally coding and identifying the main themes in a plethora of details. In the second

case study, the main steps also entailed general coding. In the third case key-interviews were used for coding at sentence level, and the other interviews were used to refine the initial coding. In all three cases, the participants' responses played a major role in verifying our findings. In the first and second case, the feedback by peer-reviews helped refine the scope of the analysis. Treating all three case studies independently resulted in two published peer-reviewed articles and a conference paper.

In analyzing the data of the three independent case studies, we took a holistic approach. Each participating project leader had several different projects that he or she managed at the same time (only one project leader was female). Usually, there are no black-and-white differences between projects that are SCP or not. Some project leaders stated, "We have always worked following SCP-principles." In the same organization, other colleagues said, "I have zero experience with SCP." Our goal was to gain an understanding of their daily work floor experiences as they attempted to apply the principles of SCP, but that notion of "attempting to apply SCP" became very broad. Also, the interpretations and perception of what SCP is and is not differed widely. We decided not to exclude interviewees who stated they had "zero experience" because the boundaries between SCP and non-SCP situations were too wide to assess in a rational way.

### Synthesizing cases

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The most challenging part of synthesizing cases, as is also discussed by *Noblit and Hare (1988)*, is retaining the uniqueness and holism of our previous interpretations of the project leader's experiences. The cases were grounded in everyday life of the project leaders, and we aim to maintain that in the synthesis of the cases. This phase of comparing and synthesizing the cases could be conducted in two ways. One way is accumulating the knowledge that was gained in the three cases. This is, according to *Noblit and Hare (1988)* a rather positivistic approach of handling the knowledge gained in field studies, and leads to abstraction drawn away from the direct experiences that we were interested in.

The other way, as *Noblit and Hare (1988)* consider favorable, is that synthesizing interpretative cases should be a different interpretative study in itself. Following the argument by *Noblit and Hare (1988)*, the three narratives that were created in earlier phases of this research should be input for creating 'the synthesis of interpretative research', or a 'meta-narrative'. The main action in putting together the various studies, is finding key 'metaphors', which *Noblit and Hare (1988)* use as synonym for 'themes, perspectives, organizers, and/or concepts'. This involves creating a list of key metaphors, phrases, ideas, and/or concepts, and juxtapose them. This results in an initial assumption about the relationship between the cases. In this way, the particular is protected, holism respected, and comparison enabled (*Noblit and Hare, 1988*).

In this study, we used *Eriksson's (2015)* four dimensions as the starting point of our comparison, and thus we conducted what *Noblit and Hare (1988)* argue a somewhat positivistic approach. Although this research is not grounded in the positivistic research traditions, this approach was chosen, because Eriksson proposes to use the dimensions as an answer to the need "for conceptual and empirical research that is comprehensive by addressing several dimensions, yet detailed in the investigation of how specific dimensions interact" (*Eriksson, 2015*). Although, according to *Noblit and Hare (1988)* this is a rather positivistic approach to combine interpretative studies, this approach was also chosen to test the utility of the framework. It is an experiment to combine the rather static and fixed dimensions with the dynamic work floor experiences that this research is interested in.

As *Noblit and Hare (1988)* suggest, the narratives that were created in the three cases already represented an interpretation. Inevitably, synthesizing interpretative studies, is an interpretation as such. However, reusing raw data would have led to a re-interpretation, which was not ideal since we had already verified our original interpretations with the respondents. For this reason, we decided to use the end products (two peer-reviewed articles and a research report) as our main source for comparison and reverted to our raw data only when necessary.

Synthesizing the cases was a highly iterative process and took, as *Noblit and Hare (1988)* suggest. On one hand, we attempted to show project leaders and managers an alternative interpretation of their own reality and we think that this insight leads to different practical interventions by both project leaders as their managers. On the other hand, this synthesis of insight in practical work floor experiences is also useful for other qualitative researchers in the construction partnering field, because it will provide a framework for more investigation in other subsectors and other contexts.

### Case results

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This section describes the case study results, structured using *Eriksson's (2015)* four dimensions. This research did not focus on quantifying or qualifying the effectiveness of SCP, so ranking "successfulness" was not possible. The work floor experiences as described are neutral, although readers may not experience them that way. As human beings, we will naturally develop opinions about the cases and participants, and how they operate. However, the aim of this study is to *understand* daily work floor experience, not *judge* them. So, it's helpful to suspend judgement and consider any personal opinions as an opportunity for self-reflection.

## Assessing the first dimension of SCP: strength

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*Eriksson's* dimension of strength concerns the degree of integrative activities employed (2015). From the micro-level perspective, this dimension is complicated to assess. Every activity involves communication, which is inherently integrative. Every time people communicate, they integrate, so listing integrative activities would mean listing all communication. This clearly is impossible. Further, different people experience situations differently. Even the same situation may be experienced differently by different people. Determining whether 'an activity is integrative' is a highly subjective manner. Despite those difficulties, and with the awareness that we highly abstract from daily work practice, this section follows three subcategories inspired by *Eriksson (2015)*: partner selection, pricing and other formal and informal integrative activities.

The first subcategory provided by *Eriksson (2015)* is partner selection. In the first case, it was unclear for the project leader how co-makers were chosen and the selection criteria used. He said, "Co-makers are put forward by the person in charge" and believed that the "size of the co-maker's organization" is used as a selection criterion, because they are more likely to "survive the crisis" (data gathered in 2012). The project leader had some "question marks" about this process of selecting partners. "That discussion is always there, but the real problem is never identified. [...] We collaborate with many good co-makers, but other good co-makers never get the opportunity to work with us. That does not feel right."

In the second case study, the department of maintenance and renovations had been recently reorganized. Part of the reorganization was the development of a new department of purchasing. One of the tasks of this department was to develop a system to select contractors. The relation between project leaders and employers of this department seemed to be perceived by some project leaders as a problem. As one of the project leaders suggested, "Purchasing took over some tasks that we previously did ourselves. Now we have to go to someone to ask, 'can we work with...?' and that makes no sense to me at all. It feels like an extra chain within the supply chain". However, the department of purchasing was still in development, and we observed two project leaders who created non-official selection procedures. They said they forgot to involve the department of purchasing. It is not sure whether the purchasers were aware of that.

In the third case, the project leader and the contractor had collaborated on three projects and felt that indicated successful supply chain partnering. However, for each project, the contractor had to go through a procurement process. The commercial manager of the contractor party clearly had the intention to become a preferred partner. Later, it appeared that there was no intention to stipulate this formally. For each new project, the client organization kept selecting partners by using a "soft"

procurement process. In a conversation with respondents from the housing association and the contractor party, the managing director of the housing association said he receives “the most beautiful videos and brochures that cost a lot of money,” but never asked for those products. For this reason, contractors were asked to present themselves in a maximum of 3,000 words. However, one contractor’s planner involved in those selection procedures said this was a problem, because “to produce 3,000 words, you have to do research for 80 pages. [...] Throughout those selection procedures we do something that we think that you want to see, and we put consultants on that. Then we come together and find out that you expected something completely different.” One remarkable observation is that in all cases a policy of procurement prevailed.

The second subcategory was pricing. In all three cases, with all respondents, conversations about pricing were rather incoherent and chaotic. One reason for this could be that the topic of pricing involves many subtopics, such as open book accounting, developing standard price lists, reducing organizational costs, etc. Many of these subtopics were discussed in the interviews, but there seemed to be no common agreement about one or more specific subtopic. All project leaders agreed that SCP is about reducing cost (most felt by about 20%), but there was no agreed understanding of what those specific costs were. One project leader said he asks this question recurrently, but it never gets answered. He continued, “It should be answered by the person that sets this target because he knows what he is talking about.” However, it is not clear who that target setter is.

Another example of confusion about the subtopic pricing comes from a calculator who was in an educational program. To graduate, he studied differences of costs between a building team system and an SCP system. He is clearly proud of this study and learned a lot by conducting it. He talked about this with two of his colleagues, but they never read the thesis. The researcher asked him whether he is interested in presenting his findings to his colleagues. The calculator responded, “I am not sure I am the right person for that. I think an external specialist would be way better to do that. I mean, I talked about it with many people, that is more my cup of tea, rather than presenting it.”

In the third case, there appeared to be a general concern regarding how competitive prices could be guaranteed when a client works with a preferred partner. A commercial manager of the contractor party said, “As long as we have to participate in those selection procedures, you will see that our general costs will remain higher. If we become preferred partners, the general costs will decrease. The only thing is that you have to start this.” However, as appeared later, participants from the client organization do not intend to make this contractor a preferred partner.

## Assessing the second dimension of SCP: scope

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According to Eriksson (2015), scope concerns the number and nature of supply chain partners and their interdependencies. From the project leader's micro perspective, the number and nature of supply chain partners is large, diverse, complex and dynamic. The exact team composition (inter- as well as intra-organizational) was not always completely clear. Acting in this complex web of individuals with different agendas was complicated. One of the project leaders said he sometimes feels "like a ping-pong-ball."

An example of vague team boundaries in the first case concerns the internal client. The project leader mentioned that he worked for an internal client, a supply chain partner, although it is highly questionable whether the project leader was aware of that at that moment. This internal client was never actively involved in developing and co-creating the project plans. For one project, the project leader and the contractors managed to develop a project plan in a way that they considered a form of SCP. The project leader showed the plans to the internal client. The internal client responded laconically to it, as if he did not realize the amount of time invested in the plan. Not only was the project leader angry about this attitude, he was also worried about how the contractor would respond to this internal client's reaction.

In the second case study, we observed similarly vague project team boundaries. One example concerned the relation between project leaders and the department of forecasts. One project leader explained that he would like to plan projects with the contractor for the forthcoming years, but forecasts do not provide overviews about the work that needs to be done. He said, "We reach and we pull, but nothing is coming." When an employer of the department of forecasts is asked what his experiences with SCP are, he stated that he delivers a list of projects that need to be done yearly, and "it may not sound nice, but how these projects are established, whether it is in a SCP construction or not, I don't care that much." Thus, we cannot assess whether this purchasing department falls within the scope of this case of supply chain partnering.

Concerning scope in the third case study, a group of four people identified themselves as "a successful supply chain". This group consisted of employers from the housing association as well as the contractor. Despite their perceived successfulness as a team, interviews with individual members revealed that one member tended to "fall back into old behavior," meaning "he tried to control the contractor too much". One respondent (on the contractor's side) said that the way this person works is "just really bad". So, even though the boundaries of this subgroup appear clear, it is questionable to what extent the person who "falls back in old behavior" is truly part of it. This case shows that the number, nature, and dependency between the project leader and other individuals in the supply chain are not based on rationally designed structures, but rather on emotional, arbitrary, and capricious aspects.

## Assessing the third dimension of SCP: duration

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Concerning duration, Eriksson (2015) distinguishes between a) length of the relationship and b) timing of involvement. We added an extra subcategory, c) the duration of (parts of) the project. We added this because it appeared to be a recurring theme in our data. Again, from the perspective of the client's project leader, the length of relationships with supply chain partners is complicated to assess, since a project leader has many relationships (internal and external) to manage. Also, the intensity of the relationship varies constantly, depending on the phase of the project. For example, throughout a renovation project, a project leader builds a relationship with an external project leader of a contractor's organization. When the project ends, the informal relationship does not necessarily end as well. Perhaps there is not much communication in between projects, but that does not mean that there is no relationship. The regional Dutch construction market is relatively small, and most project leaders work with the same external professionals several times, even when they are not preferred partners.

The first sub-criterion is the length of relationship. In all three cases, there is no formal intention that the relationship between the client's project leader and the contractor's project leader will last for more than one project and a procurement policy prevailed. However, in each case, the project leaders stated that when the project succeeds, it is likely that the contractor will be selected for another project in the future.

The second sub-criterion is the timing of involvement. As mentioned, in the first case, the project leader and the contractor are in a phase of developing different scenarios with different technical interventions and different budgets. It is unclear if there already is a maximum budget (provided by the internal client) and what that budget is. In the second case, according to the project leaders, the contractor's time of involvement varies. One project leader stated that the contractor gets involved "when everything is already decided". Another project leader organized a "soft procurement" as an opportunity for the contractor to present ideas. In the third case, a similar system of soft procurement is used. In most projects, the rough outlines of the technical interventions and a budget for the project appeared to be predetermined. However, throughout the project, ideas for other (significant) technical interventions may arise and affect the budget. If that happens, the project manager has to go through a formal intra-organizational procedure to secure the extra budget. This is similar to procedures in the second case. For example, in the second case, a project leader works on a replacing the roof of a building complex. According to this project leader, the new tiles remain for at least 50 years. Working with the contractor, they have the idea of isolating the roof at the same time. This can be perceived as a success since one of the aspects of SCP is that the client desires to get technical input and knowledge from the contractor.



It would be “a missed opportunity” to not isolate the roof while the tiles are placed. However, as the project leader reported, “in this organization, it is black and white. Isolating is done in another department. If your project is not in that department’s portfolio, it will not be done”. The project leader tried to change this, but couldn’t get through, saying he attempted to “increase awareness among the right people, but that is all one can do”.

The third sub-criterion is the duration of (parts) of the project. We did not measure the exact project duration because the uniqueness of each one made measuring and (comparing) too complex. However, it is remarkable that the maintenance phase was not involved in developing project plans in any case. Maintenance responsibilities were never turned over to the contractor’s organization. The total cost of ownership was not a topic that was considered in any of the cases. For this reason, we assessed the project duration as one project. In the first and second case, a shared concern was whether implementing SCP decreased project duration. In the first case, the BIM-sessions were expected to be or experienced as tedious. The groups are big, consisting of many different co-makers. Discussions fly off in all directions. The project leader struggles with how he should lead in these types of meetings. One project leader wants another project leader to feed him ideas, so he does not want to guide the conversation too much. On the other hand, he does not want the BIM-sessions to be tedious. In the second case study, we observed a similar dynamic. The recent re-organization raised a lot of dust within the organization. Many of the interviewees mentioned searching for who is responsible for what in this new situation. Also, many interviewees experienced an increase in organizational bureaucracy. Sometimes it leads to long processes of simple tasks, such as sending a simple information letter to tenants. This letter must pass several parties, such as the project leader, the contractor’s project leader, the secretary for the last spelling check and the repro. In the first as well as the second case, several interviewees expected the duration of these parts of the process to decrease when the dust settles and they acclimate to the new situation. In the third case study, the participants were satisfied and experienced decreases in project duration. One reason for the shorter project duration was they got used to working with each other, and the team of building site workers did not change in each project.

### **Assessing the fourth dimension of SCP: Depth**

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The fourth dimension of depth is about who performs the activities. Obviously, similar to the difficulty with assessing the other dimensions, all communication is integration, and so this dimension is complicated to assess from the micro-perspective we chose. In the first case, for example, it is tempting to indicate the introduction of the BIM-software as an important integrative activity. After all, the project leaders quickly began to discuss and organize BIM-sessions, which seemed different than their usual way

of organizing a project. Buying software is relatively easy, compared to the complex responsive processes that followed in using the software. The involvement of the managing director who bought the software was limited to the actual implementation process. On the one hand, the introduction of BIM-software was influential, but on the other hand, it was the users who formed the situation. The collaboration between the project leaders and their partners formed the BIM-session as such. We cannot make a list of all the integrative activities because we would have to list all communication that constitutes the situation as it is.

From a more distant perspective, the project leaders experienced that hierarchical levels supported the ideas of SCP, but often they did not experience actual support from those hierarchical levels. In all three cases, the project leaders perceived that some managers are not involved in their ongoing daily practice. In the first case, peer-to-peer reflection sessions were organized, but according to a project leader, they were not very successful. He felt that the ideas mentioned were cut off and that some people were sending too many while the others had to listen. Later in this case study, the project leader's team manager organized walk-in consultation hours, but the project leaders did not make use of that.

In the second case study, project leaders also felt that they couldn't discuss certain topics in team meetings. They explained that the team leader "frustrates instead of facilitates" and added that team meetings are "worthless." One project leader said that when he tries to discuss certain topics, the team leader tells him "to stop whining."

In the third case, the managing director supported the ideas of SCP. However, one project manager said he experienced frustration because the director, "advocates the advantages of SCP all the time [...] but requires evidence, a sort of bench mark, that we do we not pay too much. [...] I was hoping that he would write down the spirit of how we work and transform it into a policy." This project manager observed that some people in his organization still have the freedom to do it in their own particular way.

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## § 6.5 Discussion

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When we look at narratives from the three cases, we find several similarities. None of the project leaders worked with preferred partners (by-passing expensive and time-consuming procurement and selection procedures) in any case, and there is no indication that this will change in the future. In all three cases, it was expected that

applying SCP would reduce costs, but there was no agreement as to what those costs were specifically. In general, pricing and cost remained a complex topic, and all project leaders referred to different aspects of this topic. Formally, the duration of relationship with the contractors was one project only. Informally, the respondents acknowledged that they expected to cooperate again with most of the contractors in the future. One reason for this could be the limited size of the regional market. The maintenance phase was not involved in the collaboration in any of the cases. The contractor's timing of involvement varied between projects. However, in all cases, the outlines of the project, such as approximate budget and main technical interventions, were predetermined, and difficult and time consuming to change. Implementation of SCP (especially when applied for the first time in a project setting) was not perceived as something that necessarily leads to shorter duration of (parts of) the project. In all three cases, the managing directors of the departments of renovation supported SCP. However, the managers' actual involvement in daily work practice was limited. Moreover, the support did not lead to changes in the formal strategy for the other departments in the organization outside the department of renovation and maintenance.

*Fernie and Tennant (2013)* raise the issue of SCP non-adoption, observing some progress at the individual level, but collectively "they do not represent a substantive adoption of supply chain management in construction." Related, *Eriksson (2008)* indicated a lack of change in organizational policy, and observed that, "although clients wish to increase cooperation with clients [...], their intentions do not have any bearing on their procurement and project management procedures." According to *Eriksson (2008)*, the reasons for this may be unawareness or the individual decision maker may not have strong enough incentives to start new and less familiar procurements. The cases show that project leaders can experiment with different and less familiar procurement procedures, but the experiments seemed to be one-off, lacking follow-up actions. The individual experiences do not seem to effect other organizational levels. As *Hermans et al. (2014)* suggest, rethinking organizational strategy and policy is at the heart of his maturity assessment model for client organizations and SCP can be part of that. There is no reason to assume that SCP is a part of an increasing maturity of the client and that the strategy reaches beyond progress at the individual level.

The data show that intra-organizational dynamics influence the local implementation of SCP just as much as external relationships. For that reason, professionals in the field should take the intra-organizational supply chain as seriously as the inter-organizational supply chain if they want to make a change. Existing literature about SCP pays much attention to inter-organizational relationships (as shown by e.g. *Badenfelt, 2011; Bresnen, 2010; Fulford and Standing, 2014*), while intra-organizational relations often remain underexposed (an example of an exception is *Ellegaard and Koch, 2012*). An explanation for this underexposure is provided by *Eriksson (2015)*, who argues that

internal client functions may well be perceived as more external to the project, whereas external suppliers are internal to the project. Although perceiving dynamics this way is understandable among practitioners, it might be not ideal. Another overarching observation is that integrative activities (including all communication that takes place) are often contradictory, unfinished and not followed up. The cases show many examples. In all three cases, project leaders are stimulated by their managers to work according to the principles of SCP, but the managers simultaneously restrict them by not changing the organization's procurement policy. On the one hand, project leaders ask for a contractor's input. On the other hand, if a contractor proposes an idea, the project leader has to go through a formal intra-organizational process to secure the budget for it.

In constant, ongoing complex responsive processes people make sense of abstract ideas such as SCP (which comes from managers, but also from other external sources), but within these processes, a strategy such as SCP is formed at the same time. According to Stacey (2011), it is an illusion to blame the problems such as mentioned in this article on poor communication. Referring to the sender-receiver model of communication, Stacey (2011) warns managers to try to reduce noise and "get it right," arguing, "the meaning of communication lies in the social act of communicating, rather than in the gesture itself. There is no point in blaming each other for poor communication because when individuals perceive it failing, they have to carry on exploring what is meant. That is the very nature of communication."

Lastly, a few notes about the use of Eriksson's (2015) four-dimension framework are discussed. The main difficulty of using predetermined dimensions to compare cases is that what goes on at the work floor is chaotic, dynamic, unruly, capricious, unfinished, and messy and that character does not seem to fit well with the structured and static predetermined dimensions. For example, the framework suggests evaluating integrative activities, but from an individual level of analysis, every communication can be understood as an integrative activity. It is impossible to list and assess all communication. Another example is that some individuals see themselves as part of the supply chain, while others don't see those individuals as part of the supply chain. It is questionable whether the internal client in the first case falls in or outside the scope. These types of ambiguities make it more complicated to assess the experience with help of the dimensions. An extensive degree of communication with a large number of supply chain partners forms the emergent SCP strategy. The communication is chaotic, contradictory, unfinished and not followed up. This researcher's experience is that in using the framework there is a danger that the process of abstraction from direct experiences accelerates, compared to an inductive analysis. But in the end, it is not so much the framework, rather how the framework is utilized that determines the level of abstraction. Using the four predetermined dimensions, could be considered as a somewhat positivistic approach,

but the actualization of this approach is still highly interpretative. Further, the value of utilizing the framework might not be solely in the result of the assessment. The value also lies in the process of assessing and structuring the work floor experiences. That process is a useful activity to understand what goes on at work floor level. The considerations in the process of assessing reveal details that are necessary to understand what happens at work floor level and are therefore useful in the context of this thesis.

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## § 6.6 Conclusions

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The purpose of this research was to understand the daily work floor experiences of Dutch housing association professionals who attempt to apply the principles of SCP. Comparing the experiences of project leaders in three case studies resulted in three core insights. (Although neutral, the findings may not be perceived so by respondents or readers of this article.) By comparing the cases we found that: 1) despite the attention, engagement, and effort put into applying the principles of SCP, there are no indications that this lead to fundamental and structural improvement of intra- and inter-organizational collaborations. 2) from a micro-perspective, intra-organizational relationships are just as important as inter-organizational relationships when applying the principles of SCP. 3) integrative activities are sometimes conducted and perceived as contradictory, unfinished and not followed up.

This study may provoke practical ideas for improvement, such as: involving departments, changing work processes, or stimulating more efficient communication (by offering courses, for example). From a traditional management perspective, these practical solutions seem easy, but we don't recommend implementing them too quickly, for any of the three cases. As this research showed, it is not the strategy, but the complex responsive processes that caused undesired situations to arise. There is no step-by-step managerial plan to overcome perceived problems. Instead, we recommend getting involved actively and asking, "what is it that I do, and how does that contribute to this situation?" Answering this question might lead to a change in personal behavior, and so a change in responses and patterns that emerge from these complex responsive processes. In this way, rather than a managerial problem abstracted from daily work practice, cooperating with supply chain partners becomes a dynamic and personal process of development, or as *Stacey (2011, p. 330)* puts it, "an ongoing iteration of the selves of the interdependent people." We believe that seriously considering ordinary daily work floor experiences is a way to cope with this ever-changing world.

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