



Formal bargaining and informal sense making in the competitive dialogue procedure

An event-driven explanation

Mieke Hoezen

Ministry of Infrastructure and Environment, Utrecht, The Netherlands, and

Hans Voordijk and Geert Dewulf

Twente University, Enschede, The Netherlands

Abstract

Purpose – The purpose of this study is to provide insights in how formal bargaining and informal sense making interact and solve problems of understanding between principal and contractor during procurement through the competitive dialogue (CD) of a complex construction project.

Design/methodology/approach – In an in-depth case study, a process approach is taken to study how formal bargaining and informal sense making interact in a discrete set of critical events during negotiations in the procurement stage.

Findings – The critical events show that problems of understanding arise due to risk aversion and differences in expectations by at least one of the parties involved. In most of the events observed, aspects of the project context are behind the development of problems of understanding.

Practical implications – Negotiations develop in either positive or negative cycles. If managers of both the procuring authorities and the contractors are aware of these cycles, they might be able to influence and use them to their mutual benefit.

Originality/value – By studying the dynamics in interaction processes between principal and contractor during the procurement stage obstacles and preconditions for an effective CD are shown.

Keywords Case study, Negotiations, The Netherlands, Project procurement

Paper type Case study

Introduction

In 2004, the European Commission (EC) introduced the competitive dialogue (CD). This procurement method consists of several discussion rounds between the principal and potential suppliers, during which all aspects of the tender can be discussed. The CD procedure aims to align complex demands of principals with possible solutions that contractors have to offer (Hebly and Lorenzo van Rooij, 2006). The CD procedure is meant for the procurement of complex projects, of which technical, legal and/or financial solutions are not objectively specifiable by the contracting authority.

Especially, in early stages of procurement processes of complex construction projects, interorganizational relationships are frequently characterized by relatively high levels of uncertainty. This increases the likelihood of misunderstandings between the principal and the contractor involved, the relationships in which they are engaged and the contexts in which these are embedded (Vlaar *et al.*, 2006). Parties try to interpret their environment in and through interactions with others, thus constructing observations that allow them to comprehend the world (Weick and Roberts, 1993).



These sense making processes are assumed to play a central role during processes of negotiating and contracting (Ring and Van de Ven, 1994, 2000).

Formal bargaining through the CD procedure may function as a means to make sense, enabling participants in collaborative relationships to cope with problems of understanding (Vlaar *et al.*, 2006). It is, however, unclear through which mechanisms formalization of negotiations through the CD-procedure can be conducive to solving problems of understanding. Therefore, the major objective of this study is to provide insights in how formal bargaining and sense making interact, and solve problems of understanding between principal and contractor during a CD procured project.

The theoretical framework used to guide this study is based on the research philosophy that people base their actions on what they believe others mean by their acts (Swanson and Holton, 2005). Therefore, in collecting data within this study the focus is on the subjective views of procuring authorities and contractors on how formal bargaining and sense making interact, and how this interaction is affected by characteristics of the CD procedure. An interpretive philosophy has been adhered to. Through interpretation of the interaction between formal bargaining and sense making, the aim is to come to an understanding of how the two are interrelated. It is doubted whether questionnaires could sufficiently reflect the extensiveness of the real-life situation to understand the true motives of the actors involved, and the aspects that are involved in the interaction between formal bargaining and sense making.

First the theoretical framework is developed on the interaction between formalization and sense making in an interorganizational context. Based on this framework propositions are developed. Second, the research design of the in-depth case study is addressed. Following Bruner (1991), a process approach is taken to study how formal bargaining and informal sense making interact in a discrete set of critical events during negotiations of a CD procured complex construction project. Third, case study results are presented and discussed. Finally, conclusions are drawn.

Theoretical framework

Negotiations consist of a formal part (formal bargaining) and an informal part (sense making), which are dynamically interacting as problems of understanding are identified. Formal bargaining, informal sense making, and their interaction will be further elaborated upon in the following sections.

Formal bargaining

Within the field of micro economics, contracting processes are described as bargaining processes. These processes are aimed at coming to an agreement, whilst the parties involved have partly conflicting interests. Relational development academics identify four mechanisms that occur in bargaining.

First, formal bargaining provides focal points for different streams of on-going activities, giving them meaning and direction. Vlaar *et al.* (2006) show how formal processes focus attention by pointing at order and content of decisions which are to be made; by drawing lines in what is allowed, expected, and possible, and what is not; and by guiding to primary important issues, thus providing parties from getting distracted. Thus, the perceived complexity decreases, since the information on which participants focus their attention is limited (Anand and Peterson, 2000; Daft and Weick, 1984).

Second, when bargaining over possible terms and conditions, parties are forced to make their individual and mutual goals explicit (Blomqvist *et al.*, 2005, p. 501). Vlaar *et al.* (2006) show how the need to articulate the knowledge and assumptions forces people to reflect, cogitate and think deeper. Thereby it helps parties to make knowledge and assumptions which are up to then abstract or tacit, now explicit, simple, ordered and relevant to the situation at hand (Weick *et al.*, 2005).

Third, formal bargaining implies that parties interact and exchange ideas about future tasks and outcomes by conversations and dialogues (Nellore, 2001; Yakura, 2002; Putnam, 2003). Bargaining processes of arguing, listening and working to harmonize differences enable individuals to express their ideas, confront those with beliefs and opinions of others and challenge each other's points of view (Zollo and Winter, 2002). As such, parties come to share and fuse knowledge, assumptions and mental models.

Fourth, the fact that in interorganizational bargaining processes usually several people are involved, compensates for deficiencies in individual thought processes (Katz and Kahn, 1978). Vlaar *et al.* (2006) argue that these bargaining processes therefore are likely to result in more nuanced and consistent pictures of reality, which increases the likeliness of a reliable and predictable decision-making process. Formal bargaining reduces the impact of biases and judgment errors and increases consistency and completeness of cognitive representations.

Informal sense making

Vlaar *et al.* (2006) state, after Blomqvist *et al.* (2005) and McGinn and Keros (2002), that formalization "enables, or even forces collaborating parties to engage in sense making, helping them to create common ground and achieve mutual understanding" (p. 1622). Sense making is a social process during which organization members interpret their environment in and through interactions with others, thus constructing observations that allow them to comprehend the world and act collectively (Weick and Roberts, 1993). During the contracting process, two parties with differing patterns of beliefs and assumptions are to create mutual understanding in order to come to collective action (Maitlis, 2005; Weick and Roberts, 1993).

Whereas in micro economics emphasis is put on the differences in interests between the parties, social psychologists tend to emphasize that problems of understanding could rise because the two parties involved have different backgrounds and work in different cultures, with dissimilar belief systems (Sutcliffe and George, 1998). When two parties intend to work together, they will strive for congruency in views on purpose and expectations of the relationship. Sense making processes are therefore assumed to play a central role in the procurement of a project. These processes form "the primary site where meanings materialize that inform and constrain" action (Weick *et al.*, 2005, p. 409 citing Mills (2003, p. 35).

Weick (1988, 1995) earlier described the sense making process as one of enactment: parties produce part of the environment they face. According to Weick (1995), people take whatever is clear to them, and link it to what is less clear. Sense making is focused on cues which are familiar structures were individuals draw upon "to develop a larger sense of what may be occurring" (Weick, 1995, p. 50). Weick argues that sense making is an on-going process: "Flows are the constants of sensemaking" (Weick, 1995, p. 43). Sense making "involves turning circumstances into a situation that is comprehended explicitly in words and that serves as a springboard into action" (Weick *et al.*, 2005, p. 409).

Retrospection is for Weick (1995) the single most characteristic of sense making. His basic argument is that people act and then make sense of their actions. Sense making is always retrospective because people reflect on what has occurred (Mills, 2003).

Weick distinguishes various ways in which people impose frames on on-going flows (belief-driven sense making: growing meaning) and the ways in which people link frames with cues (action-driven sense making: creating meaning to support actions). On-going flows and cues can be either internal (one's own beliefs and actions) or external (someone else's beliefs and actions). Belief-driven sense making principles cover arguing and expecting, and action-driven principles involve manipulating and committing. This produces four different meaning-development processes (Table I). The result of the sense making process in interorganizational contracting is to understand the transaction, the context of the transaction, the value of it to the other party and to oneself. Shared understanding between the two parties is reflected in mutual beliefs, norms, values and routines.

Interaction between formal bargaining and sense making

When having made sense of new situations, people desire to enact the input to their sense making processes back into their world to reorder it (Weick, 1995, 2001). This might be in the form of having confirmed better understanding of, for example, the other parties' capabilities, management systems, weaknesses and about the context in which the relationship is embedded (Zollo *et al.*, 2002). Vlaar *et al.* (2006) add that understanding could also comprehend the nature and size of the outcome of the relationship; the processes important to come to this outcome; and each other's intentions, actions and behavior. The resulting collective consciousness, common reality, or mutual understanding offers them a unitary basis for action.

Processes of sense making do also propel new formal bargaining processes. These might for example relate to the details of contractual arrangements or to the agenda of the next meeting. These new bargaining processes facilitate new sense making processes, which in turn could improve understanding. The theoretical framework in Figure 1 shows this interaction between formal bargaining and informal sense making during negotiations within a complex context. It is assumed that this interaction can be conducive to solving problems of understanding in procurement. This framework helps understanding discovered patterns in the relationship between pre-contractual negotiation characteristics on the final agreement (Eriksson and Laan, 2007).

	Belief (on-going flows)	Action (cues)
Internal (one's own)	<i>Arguing.</i> Growing meaning by discussing and challenging non-congruent (or even contradictory) beliefs	<i>Manipulating.</i> Creating meaning to justify actions high in choice, visibility and irrevocability, by focussing on congruent beliefs
External (someone else's)	<i>Expecting.</i> Growing meaning by noticing what is congruent with one's own beliefs by adding or connecting new meanings to old meanings	<i>Committing.</i> Creating meaning to explain actions taken to make the "right" things happen, by focussing on congruent beliefs

Source: Based on Weick (1995)

Table I.
Four sense making
principles

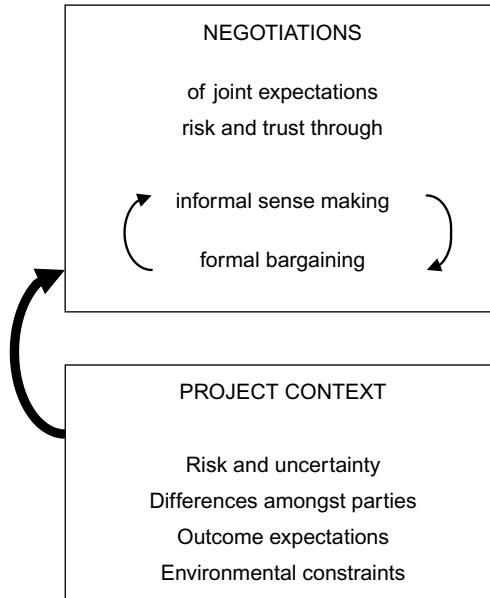


Figure 1.
Theoretical framework

Second, the framework shows the interrelatedness of formal and informal components of negotiations (Bresnen and Marshall, 2000).

The premise in the framework developed is that problems of understanding propel new formal bargaining and sense making processes. Given this view, a contract which is signed can still be renegotiated in new series of formal bargaining and sense making. This leads to:

- P1.* During negotiations the parties involved go back and forth between formal bargaining and informal sense making, depending on whether there is understanding or not.

The CD procedure was intended for procurement activities in complex projects, for which technical, legal and/or financial solutions were not objectively specifiable by the procuring authority. Complex projects can be characterized by high levels of risk and insecurity about what to expect. This project context is therefore included in the theoretical framework. As mentioned by Sense (2012), the socio-contextual environment of a project effects interactions of the parties involved in a project. Following Ring and Van de Ven (2000), it is assumed that important contextual aspects are risk, initial trust levels, outcome expectations and environmental constraints. This leads to:

- P2.* The interaction between formal bargaining and sense making is influenced by aspects of its project context including risk and insecurity, initial trust levels, outcome expectations and environmental constraints.

The propositions form the starting point from where the practice of CD procurement is examined.

Historical background of the CD

Prior to March 2004, three main types of public procurement procedures were used in the EU: the open procedure, the restricted procedure and the negotiated procedure. The open and restricted procedures are two specific cases of a procedure in which a buying party requests bids from suppliers for a certain product or service, evaluates them in a uniform way and gives the contract to the supplier with the most economic bid. Suppliers need to act competitively and the market mechanism is used to ensure the best price (Heijboer and Telgen, 2002). In the negotiated procedure, the contracting authority is free to select appropriate candidates and to consult and negotiate with potential suppliers to adapt received tenders to better meet the specified needs.

Towards the end of the 1990s, the negotiated procedure gained large popularity in the EU. Increasing complexity and changing government roles had led to a strong desire for cooperation. Especially, in the construction industry, both contracting authorities and contractors felt the need to have discussions before a contract was signed about project details, the division of responsibilities and risks and the terms for cooperation. Except with the negotiated procedure, direct communication was simply not possible in the existing procurement procedures. The negotiated procedure had the advantage of direct communication: contracting authorities could consult contractors of their choice and negotiate contractual terms with one or more of them.

Given the perceived need for discussion, a growing number of contracts was awarded using the negotiated procedure, even though it is doubtful they met the criteria for procurement by this procedure. The EC wanted to stop the excessive use of the negotiated procedure but was well aware of both the call for more informal cooperation and the need for flexible procurement procedures in the case of complex projects. At the same time, competition between suppliers has to be preserved. These features came together in a new procurement procedure: the CD. The CD is similar to the early contractor involvement procurement strategy. In both the CD and the early contractor involvement procurement strategy, various solutions are generated and discussed in successive stages of the procedure and one solution is eventually selected (van Valkenburg *et al.*, 2008).

Empirical research design

As mentioned in the Introduction section, it is decided to take a process approach to study how formalization through the CD-procedure and sense making interact and solve problems of understanding between principal and contractor during a CD procured construction project. Process approaches do not focus on entities, but on events (Poole *et al.*, 2000). Therefore, events during procurement of the case project formed the unit of analysis in a single case study. In this section, the case characteristics, data collection methods, and validity and reliability of the case study are discussed.

Case project characteristics

The second Coen Tunnel project in The Netherlands is the first and largest (estimated value €300 million NPV) CD procured service-led infrastructure project in The Netherlands. It involves the maintenance of an existing, 40 year old tunnel and the construction of a second tunnel alongside the current one. The contract for the project is signed in 2008, and the maintenance of the existing tunnel is then transferred to the contractor. The construction stage for the new tunnel started in 2009.

The project is procured through a design, build, finance and maintain (DBFM) contract. The duration of the contract has been set at 30 years, from 2008 to 2036, and consists of construction and maintenance of new infrastructure (construction due for completion in 2013) and renovation and maintenance of existing infrastructure (roads and original tunnel). The service component in this project consists of making available eight traffic lanes passing under the Noordzee Canal. The CD procedure is applied because of the technical and financial complexities of the project.

This project is selected because this is the first large project using the CD procedure that had well thought out structures, and in which the CD procedure was actually used to add new insights to the final legal contract. The project is very well-documented, and access was given to its vast dataset. In addition to the analysis of the data, interviews could be conducted with employees from both the procuring authority and the contractors who took part in the dialogue.

Case study data collection

In performing this case study research, the aim is to uncover the perceptions of the people involved in those contracts and processes. Their perceptions are crucial in understanding the interaction between formal bargaining and sense making. Weick (1995) stresses how interpretation and framing are key elements in sense making processes of the people involved. Their subjective perceptions are crucial in discovering why problems of understanding arise and/or are solved, and how formal bargaining and sense making develop over time. Table II provides a summary of the variables derived from the theoretical framework and addressed in the case study, for which the interviews and the document analysis provided information.

Because access to the project is not allowed before its contract is signed, a real-time field study of the development process is impossible. The study has to rely on archival data and retrospective interviews. First, full access is given to its vast dataset, containing questions that are asked during the CD, the answers, and the changes resulting from those discussions in both the design and the contract. The fact that this complete dataset of the project is accessible enables a detailed reconstruction of its procurement stage.

Variables	Dimensions	Aspects	Source
<i>Negotiations</i>			
Formal bargaining	Focusing attention	Focal points in protocols and agendas	Interviews, complemented with document study
	Articulation, deliberation and reflection	Individual and mutual goals, knowledge and assumptions	
	Interaction	Exchange of ideas, conversations, dialogue	
	Reducing biases, judgment errors, incompleteness and inconsistency	Revision/nuancing points of views, uncovering and elimination of inconsistencies	
Informal sensemaking	Belief-driven	Arguments	Interviews
	Action-driven	Expectations	
		Justifications	
		Focus on few beliefs	

Table II.
The case study variables, dimensions and aspects, and source in the case study

Second, interviews are conducted with employees from both the contracting authority and the contractors who take part in the dialogue. Data is provided by 13 in-depth face-to-face interviews, supplemented by 16 shorter interviews on specialized topics like the specifications, the contract, and considerations with respect to the procurement strategy. The major interviews are held with seven participants from the contracting Agency and six from the market, four of which are held with participants working for the winning consortium, and two for the numbers two and three. All 16 supplementing interviews are held with employees of the Agency (Table III). Each major interview takes one and a half to 2 hours and is guided by case study protocols. The interviews are tape-recorded and transcribed for systematic analysis. In total, the empirical data collection generated 357 pages of interview text, two evaluation reports, four procurement protocols (for each of the stages of the procurement a separate protocol is written), and six versions of the contract (version A, B, C, D, 1.0, and 2.0). All these data are analyzed with the data analysis program QSR NVivo.

Construct validity, reliability and external validity

When designing and conducting the case study, explicitly attention is paid to construct validity and reliability. Construct validity is enhanced in our research by using methodological, theoretical, and data source triangulation. Two research methods, interviewing and document study, are applied to provide insights in the development of the contracting process of the case project. Theoretical triangulation is achieved by combining micro-economic and socio-psychological concepts within the theoretical framework, and using predefined construct definitions of other, well-known researchers for the case study protocols.

Further, by having interviews with several different project participants about similar topics, data triangulation is achieved as well. A draft of the case study report is discussed with participants to the study and with independent researchers, in order to further increase the construct validity of the study (Yin, 2009; Swanson and Holton, 2005). Following Yin (2009), a case study protocol is used and a case study database developed, in which case study notes, documents and interview transcriptions are documented, thus improving the reliability of our study.

External validity refers to the extent to which a study's findings can be generalized to other populations or settings (Swanson and Holton, 2005). It is commonly, but wrongly, believed that one cannot generalize on the basis of a single case (Flyvbjerg, 2006). However, the fundamental processes that this study seeks to explore are not limited to one case, or even to similar cases. External validity is increased by using accepted theory and by providing a valid description of the reality of the case through method and data source triangulation and by the external control of the draft case study report through the key informants.

<i>Role</i>	Type of interview	
	Major	Supplementing
Principal	7	16
Winning contractor	4	–
Losing contractor	2	–

Table III.
Number and type
of interviews and
informants' role

Case study results

In this section, the interaction between formal bargaining and informal sense making when problems of understanding arise are described, based on a process approach. During the procurement process, several events take place. The main events are described in chronological order in Table IV. Several of the events as described in this table are determined by the respondents as being critical to the development of the Coen Tunnel project. Four of them are:

- (1) *Contract version D*. Actual state of existing tunnel and roads.
- (2) *Dispute over delay costs*. Allocation of delay costs.
- (3) *Planned, but postponed financial close*. Problems with financial closure.
- (4) *Results first performance test – 17 penalty points awarded*. Interpretation of a penalty clause.

These critical events are described into more detail in the next sections.

Actual state of existing tunnel and roads

In the contract for the second Coen Tunnel project it is stated that at the day the contract will be signed, the contractor becomes responsible for the state and maintenance of both the existing and the new tunnels and roads (the existing and the new system). During the procurement of the project, this rationale is completely clear to the candidates. There is shared understanding about the ideas of being responsible for the state and maintenance of the systems; of being fined when not meeting the demands; and about the demands themselves. To be able to make up the maintenance plan for the existing system, candidates ask several questions like “What is the current state of the existing system?”; “Which maintenance activities have taken place in the last five years?” and “When has the Agency performed the last inspections of the existing system and could you make the results of these inspections available to the candidates?”. The Agency is not able to answer these questions. It turns out that the Agency’s document management system is poor and the Agency has not enough manpower to dig up all the requested information. The information provided to the candidates is incomplete. The candidates do not understand why the Agency cannot provide this information: they are themselves supposed to have this kind of data available any time, if they would gain the contract. The specifications of their document management system are very clear about that.

Problems of understanding arise, when the actual state of the existing system seems not to meet the Agency’s own demands either (see project context in Figure 4). When the Agency arranges that each candidate is given the opportunity to inspect the existing system, it turns out that the state of this system is below the Agency’s specified demands. So neither the Agency’s document management system nor the state of the existing system does meet the Agency’s own specifications, whilst the future contractor will be penalized when the system will not meet specifications (step 1 in Figure 2). A bargaining process starts, which helps to focus and to reduce mutual prejudices (step 2 in Figure 2). During this process, the candidates go from being upset about the unreasonable demands to making sense of the situation: the Agency has acknowledged that its asset management is unacceptable and that something has to change in the future (step 3 in Figure 2).

Stage	Year	Critical event	Month	Competitive dialogue procedure
Preparations	2004	Governmental agreement: Coen Tunnel contract will be PPP	July	683
		Rewriting of the specs from D&C to DBFM	October	
	2005	Schiphol airport meeting	June	
		Request to participate	September	
Submitting and answering general and confidential questions	2005	Notice to selected participants	October	
		Contract version A	October	
	2006	Moving of one of the legal advisers	March	
		Schemes of actions submitted	April	
		Contract version B	May	
		Participants suggest alternative solutions	June-July	
		Decision: alternatives not allowed for	October	
		Contract version C including final documents	November	
		Risk division fixed at notary	December	
		Bid Delay, further research, evaluation Contemporary preferred bidder	2007	Handing in first products of the dialogue
Handing in final products of the dialogue	March			
<i>Contract version D</i>	March			
Data incident	March			
Final bids	May			
Losing bidders known	June			
Contract version 1.00	July			
Reversion of alignment decision: Coen Tunnel contract not signed	July			
2008	Contract version 2.00			January
	Establishment of changed Alignment decision			March
Financial close	2008	<i>Dispute over delay costs</i>	March	
		Best bidder starts a process against the Agency	April	
		Settlement about delay costs	April	
		Contract close	April	
		<i>Planned, but postponed financial close</i>	May	
		Financial close	June	
		Away-day with the two project teams	June	
		Mutual project start-ups	June	
		<i>Results first performance test – 17 penalty points awarded</i>	September	
		Construction	2009	Construction reflection organization is called in for help
Contractor's project manager leaves for new one	February			

Table IV.
Time line of critical events for the Coen Tunnel project

The Agency does also regain understanding of the situation: why would the contractor have to pay for the Agency's poor asset management? At the end both parties agree that a DBFM is needed and that it would not be fair when the lack of maintenance to the existing system would become the contractor's problem. Therefore, both parties

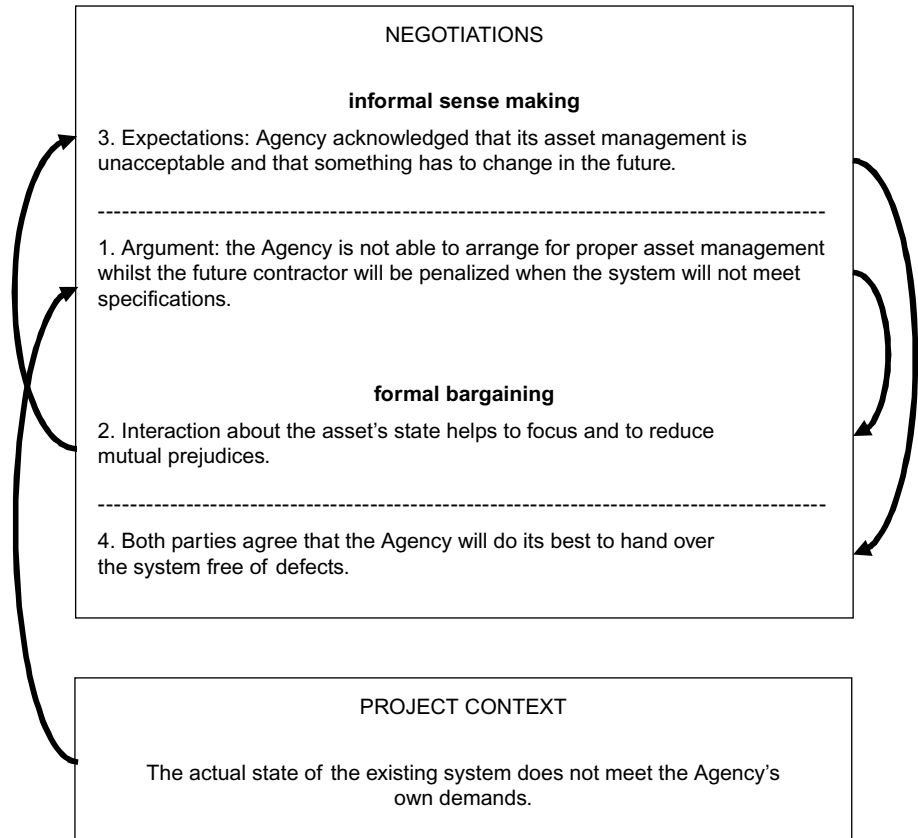


Figure 2.
Negotiation process for
critical event 1

agree that the Agency will do its best to hand over the system free of defects (step 4 in Figure 2). As a result, the contractor is formally given two times five working days to inspect the state of the existing system when the contract is awarded. Then the contractor could apply for lane closures without being fined, to have the existing system meet the Agency's demands.

Allocation of delay costs

A negotiable risk is the risk that the so-called alignment decision will not be accepted in time by the council of state. When this would be the case, the Coen Tunnel project would not be able to start at the expected moment, and thus face delay. When the bids are made, it turns out that the most economically advantageous bid is made by a candidate who does not bear the risk for non-acceptance of the alignment decision. So in version 1.00 of the contract between the Agency and this "contractor-to-be", the risk of delay due to non-acceptance of the alignment decision is the Agency's responsibility.

Problems of understanding rise when the alignment decision is indeed rejected, due to insufficient data to prove that the project will not pollute the air too much. Further research is needed before the council of state is willing to accept a new alignment decision. When the

air quality research is performed and the problem solved, the Agency's internal principal, however, keeps postponing the date of contract close without giving reasons (see project context in Figure 3). The contractor-to-be restarts bargaining and tries to convince the Agency to sign the formal contract (step 1 in Figure 3). Postponing to sign the contract does only make sense to the contractor-to-be in that he figures that the Agency does not want to award the contract at all anymore. Not signing the contract is interpreted as a cheap exit option for the Agency (step 2 in Figure 3). Next to afraid to be left empty-handed, there is a deadline in the contract between the contractor-to-be and his banks, which will end in a few months. Given the credit crunch the contractor-to-be does not want to risk having to go into new bargaining with the banks, since then he would not be able to fulfill his bid.

In an attempt to come closer together, the Agency asks the contractor-to-be what his financial losses were, so that the informal promise of compensation can be formalized in a version 2.00 of the contract (step 3 in Figure 3). The contractor-to-be claims to have a loss of about 10 per cent of his bid price. The Agency does not buy his claim. A new bargaining process starts, in which both the contractor-to-be and the Agency repeat their points of view. The contractor-to-be wants to be compensated for this amount

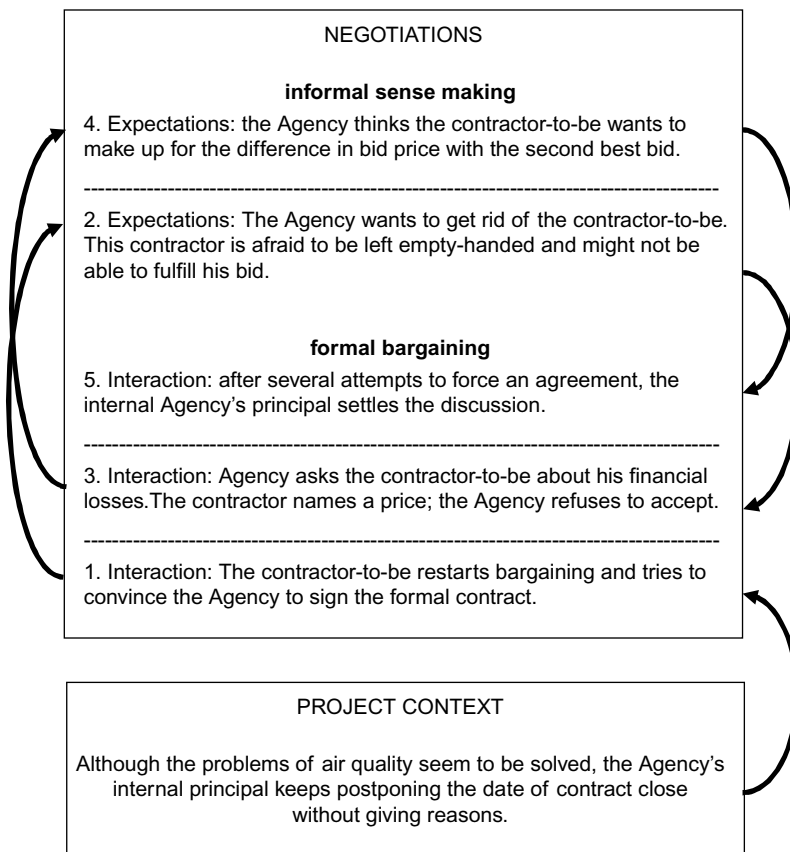


Figure 3.
Negotiation process
for critical event 2

of 10 per cent of the bid price, whilst the Agency refuses to accept more than 2 per cent. The Agency makes sense of the claim by explaining it as a manner for the contractor-to-be to make up for the difference in bid price with the second best bid (step 4 in Figure 3).

Several bargaining conversations are held, but since the Agency does not want to accept the contractor-to-be's claim for losses as a realistic one, the parties do not come closer to each other. The Agency then tries to force an agreement. The contractor-to-be is offered a final offer, containing a sum for financial losses and extra time to do the project, which he can take or leave. Given that neither the offered price nor the offered extra time is sufficient in the eyes of the contractor-to-be, the two parties do not come to an agreement. The contractor-to-be answers to the final offer by starting a lawsuit against the Agency, thus anticipating a response of the Agency's internal principal, knowing that the Agency's reputation is influenced by being sued. And indeed, one conversation at the internal principal's offices is enough to settle the matter in between the 10 and 2 per cent (step 5 in Figure 3). Version 2.00 of the formal contract is then signed in April 2008.

Problems with financial closure

The Agency wants to make the bidders fulfil their bids for one year after the bids are submitted. This fulfilment term of one year has been part of the tender documents and has been agreed upon by all the candidates before they made their bids. However, the best bidder does not expect the Agency needs 11 months after the bids are submitted to reach contract closure. After contract closure, the contractor is formally to be given three months by the Agency to reach financial closure. The best bidder has planned to use the whole three months to negotiate with the banks about its financial agreements. However, when it takes 11 months to reach contract closure, the best bidder (now the contractor) comes into problems. Its financial arrangement with the banks would end in only one month. This means that the contractor has only one month to complete all the financial negotiations with the banks. This has become a problem due to the credit crunch: none of the banks are willing to stand by the agreement beyond the existing end date, and they are negotiating strongly about the terms in the financial agreement. It is also of benefit to the Agency if the contractor achieves financial closure within a month of contract closure. If the financial agreements are not signed before the end date of the financial arrangement, the banks probably start applying much higher surcharges than the contractor has anticipated when bidding. This aspect notwithstanding, the Agency does not consider itself as an interested party in the process to reach financial closure. It looks on the situation as a matter between the contractor and its banks.

Problems of understanding arise when the contractor and the banks turn out to be expecting the Agency to play a more active role. In the build-up to financial closure, the contractor asks the Agency to come and talk to the banks, in order to explain some of the contract clauses in its contract with the contractor so that the banks could better calculate some risks (for example the risk that the Agency would not pay what it owed the contractor) (see project context in Figure 4). In an attempt to make sense of the fact that the contractor and its banks have a more prominent role for the Agency in mind than it has expected to have, the Agency anticipates that the contractor and its banks have plans to renegotiate the contract which has already been signed (step 1 in Figure 4). In the formal bargaining process which follows, the Agency therefore refuses to take the active

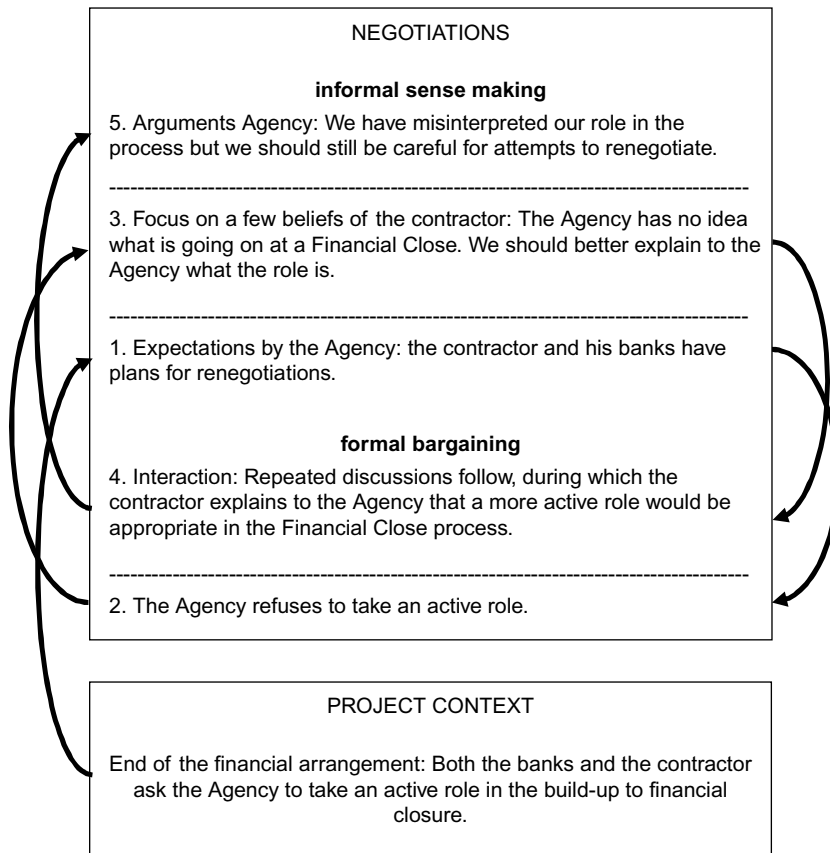


Figure 4.
Negotiation process
for critical event 3

role asked (step 2 in Figure 4). It proposes involving the Ministry of Finance to talk to the banks, and it suggests sending a civil servant with a restricted mandate to witness financial closure. This stance is not understood by the contractor and the banks at all. These parties make sense of the situation by arguing that the Agency probably does not know what its role is.

A new round of formal bargaining begins, during which the contractor explains to the Agency that its role is somewhat different than it thought (step 3 in Figure 4). Given that it is also in the Agency's interest that financial closure is reached on time, repeated discussions follow during which the contractor explains to the Agency that a more active role would be appropriate (step 4 in Figure 4). As a consequence, of non-involvement, failure of the whole project is mentioned as a real possibility. This argument helps the Agency in its sense making process. It makes the Agency realise that it might have misinterpreted its role in the process.

Following this, the Agency takes a more active role but still wants to prevent entering into those feared re-negotiations (step 5 in Figure 4). In practice, this means that the Agency, in the conversation with the banks, only repeats what it has already stated,

and that the civil servant who is sent to financial closure does have a mandate, but only for the contractual documents which has already been sent to the Agency in concept form, and only for the day on which financial closure is planned.

Interpretation of a penalty clause

Three months after contract closure, the contractor is put through the first performance test by the Agency. On some points, the test results are negative: the contractor is not “in control”. The Agency sends the contractor its test findings, in which the negative points are mentioned along with the potential number of penalty points. Up to this point, both parties understand each other. The contractor agrees with the test result, and responds to it with many excuses and promising to do all he can do to gain control before the next performance test. Problems of understanding arise when the Agency decides to award 12 of the 17 potential penalty points, meaning that the contractor is given a penalty of €120,000. This reading of the penalty points table in the reward system is not in line with the manner in which the contractor has interpreted it. Based on the dialogue conversations, the contractor has assumed that penalties will only be given after several warnings. Given that this is the first test of performance, the contractor has not expected any penalty at all.

A process of formal bargaining starts, in which the contractor expresses much anger, stating that the Agency does not act in line with the signed agreements. The Agency responds by saying that the contractor is not in control, and that the contract, which is signed by the contractor, foresees this situation as treated in the penalty points table. According to the reward system, the Agency is allowed to award penalty points, and the Agency is not aware of any norms about warnings before awarding penalty points (step 1 in Figure 5). In its sense making process, the contractor simply focuses on its stereotypical image of civil servants: acting to the letter of the contract, not thinking about the consequences first, contract means contract. The Agency, on the other hand, does not want to be dragged into the sort of situation that existed before the introduction of DBFM contracts, where the Agency has to monitor the work, while the contractor could sit back. The contractor’s response to the penalty points is explained by the Agency as a signal that the contractor is creating a pretext for a situation in which the Agency itself starts monitoring the work (step 2 in Figure 5).

A new formal bargaining conversation starts. The contractor tries to convince the Agency that it has misinterpreted the contract by calling in one of the Agency’s tender managers who has taken part in the dialogue conversations about the reward system. When this does not convince the Agency, the contractor complains: if the contract will always be interpreted like this, he will face penalties every day until he is in control. Although the Agency has considered giving the contractor some time to gain control, it eventually decides not to give in after all (step 3 in Figure 5). The reason for this strict response is the Agency’s expectation that the contractor will not regain control.

The Agency is determined to keep penalising failures until the contractor takes control, and the contractor is as determined to keep fighting the penalties until the Agency becomes less rigid in their interpretation of the contract. Then, the contractor’s project manager gets a new job, and a new project manager takes over. This manager is more direct in his communications with the Agency, and focusses on the project rather than on the contract. As a consequence, the Agency gets the idea that this man will work for the benefit of the project instead of just for the benefit of his company.

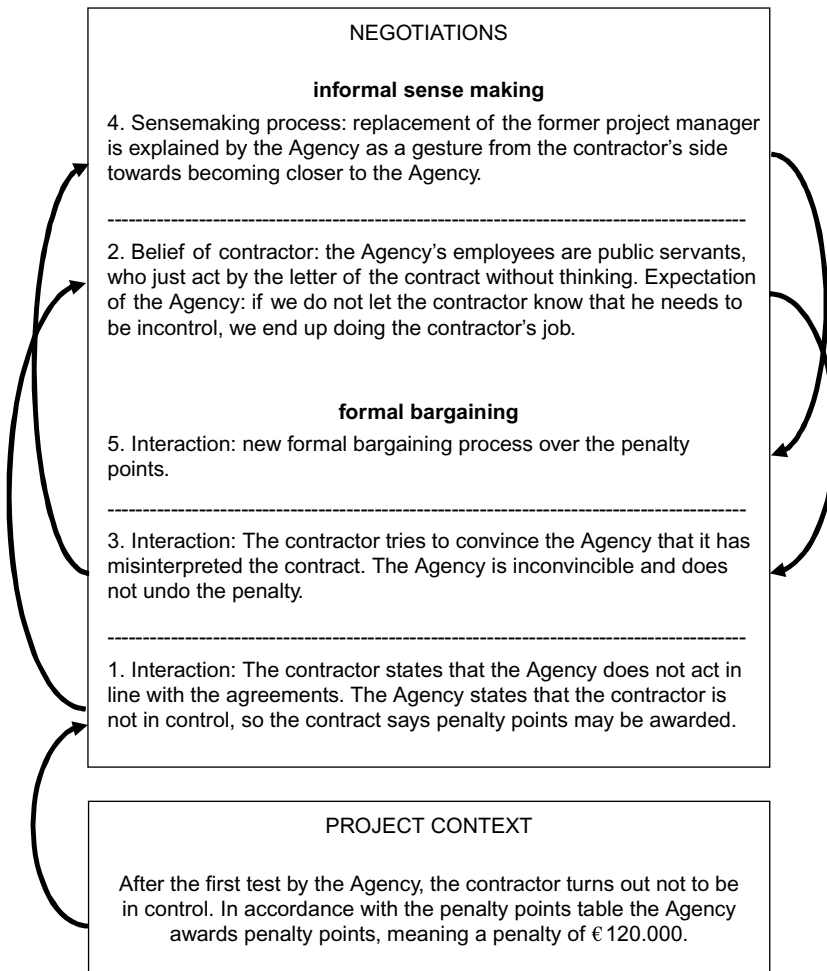


Figure 5.
Negotiation process
for critical event 4

In the Agency's sense making process, the replacement of the former project manager is explained as a gesture from the contractor's side towards becoming closer to the Agency (step 4 in Figure 5). In response to this, the Agency starts a new formal bargaining process. Instead of focusing on the reward system, both parties start to concentrate on the project (step 5 in Figure 5).

Discussion

During the project, both the Agency and the contractors are constantly confronted with actions and situations which are, in general, either congruent or contradictory with their ideas about how things should work. The main determinants in this process are previous experiences with the other party, stereotyping, prejudices and judgments. The Agency's stereotypes, biases and judgments (beliefs) differ for the various candidate contractors:

One of the candidates was formed by old-fashioned contractors, of whom I was not too fond. Another candidate had a team of enthusiastic novices, who really wanted to build the tunnel and who we could see were learning each time we spoke to them across the dialogue table, their learning curve was steep. And then there was a third candidate, who leaned back like: we already know how this type of project should be managed; we have built [another large Dutch project]; we are [name of the candidate], this is how it works, these are our products.

In the case of the final contractor, past experience and prejudices leads the Agency to interpret practically all remarks by the contractor as pretexts for renegotiations. The contractor, on the other hand, repeatedly has reconfirmed the idea that the Agency does not quite understand what comes with constructing a project as large as the Coen Tunnel. These biases largely determine the sense making processes of both parties. Until the contractor's original project manager leaves, the sense making processes develop around negative vicious circles: the actions of the other party are negatively interpreted, thus confirming the biases both parties have developed against each other. Breaking those circles is only possible by the Agency taking deliberate action in response to the "clue" that a new, more cooperative project manager has been appointed by the contractor. The Agency focuses on the belief that non-cooperative behavior harms the project, and on their expectation that the other party shares this belief.

The critical events show that problems of understanding arise due to risk aversion and differences in expectations by at least one of the parties involved. In most of the events observed, aspects of the project context are behind the development of problems of understanding, or lead to identifying differences in understanding. In critical event 1, problems of understanding between contractor and Agency rise, when the actual state of the existing system does not meet expectations of the contractors. The contractors fear that the lack of maintenance to the existing system by the Agency will become their problem. In critical event 2, the Agency postpones the expected date of contract close with the contractor-to-be without giving reasons. The contractor fears to be left empty-handed when the Agency does not sign the contract. In critical event 3, the contractor and the banks turn out to be expecting the Agency to have a more active role. The Agency fears the risk of ending up in re-negotiations of the contract when it plays a more active role. In critical event 4, based on the dialogue conversations, the contractor has assumed that penalties will only be given after several warnings. The Agency, on the other hand, does not want to be dragged into the sort of situation where the Agency has to monitor the work, while the contractor could sit back. These findings support *P2* in which it is assumed that the interaction between formal bargaining and sense making is influenced by aspects of its project context including risk and insecurity, initial trust levels, outcome expectations and environmental constraints.

In response to these problems of understanding, the CD procedure allows for dialogue conversations and direct communication. These interactions can be in the form of formal bargaining started by one party or, alternatively, one or both of the parties will try to make sense of the situation. Most of the critical events show that these interaction processes start with formal bargaining, move on to informal sense making, and then back to formal bargaining and so to informal sense making again. The formal bargaining process helps the participants to reduce complexity and focus each other's attention. For example, when a candidate asks a question about how to interpret a certain contractual clause, this makes the Agency consider a change to its formulation. By discussing the reward system, both the Agency and the contractor have to articulate

the expected effects of specific elements of this system. Deliberation about these effects leads both parties to reflect on both the desired and undesired effects of the system. In some cases this ends up in changes to the system, and in others it means that both parties better understand the effects of several elements in the system. The interactions through which the parties bargain help them in sharing and fusing knowledge, assumptions and mental models, and this aids the sense making process and thus the understanding of each other. These conversations influence sense making processes by reducing prejudices, judgment errors, incompleteness and inconsistencies. The Agency and the candidates confront each other with inconsistencies in reasoning, incomplete assumptions, judgmental errors and prejudices. However, besides reducing existing prejudices and judgmental errors, the conversations also give reasons for new prejudices. This process continues until problems of understanding are sufficiently diminished. These findings support *PI*: during negotiations, the parties involved go back and forth between formal bargaining and sense making on whether there is understanding or not.

Conclusion

In this study, negotiations during a complex CD procured construction project are described in order to find an answer to the question how the interaction between formal bargaining and sense making solve problems of understanding. Analysis of four critical events for the Coen Tunnel case has led to the following conclusions. Problems of understanding arise due to differences in expectations by at least one of the parties involved. Whether it is due to the fear for future problems, not gaining the contract (due a delay in contract closure) or of becoming involved in new negotiations (due to uncertainty/complexity) and monitoring activities, risk aversion determine the actions of the parties.

During procurement, formal bargaining and sense making diminish problems of understanding. The fact that parties meet in person enables them to hold formal bargaining conversations which directly support the sense making process. Formal bargaining through writing, which happens in the more traditional procurement procedures, results in sense making being based on indirect interpretations of what the other party is bringing to the bargaining process. The CD procedure influences bargaining processes by focusing the parties' attention; forcing articulation, deliberation, reflection and interaction; and reducing biases, judgment errors, incompleteness and inconsistencies. The informal sense making process is influenced not only by the results of the formal bargaining, but also by frames and cues already present in the minds of both parties involved in the procurement process. The dialogue within the CD procedure influences these frames and cues. However, the results indicate that given the risk aversion displayed by both the Agency and the candidates, the dialogue conversation which is realised in practice is not as open as intended by the EC. It can be concluded that elements in the CD procedure that encourage risk aversion actions might lead to the dialogue developing less promisingly than hoped for.

It might be worthwhile conducting another case-study using a project that is procured by a team with CD procedure experience, ideally with experienced contractor tender teams as well. The interactions identified in this study are derived from a project with inexperienced teams at both sides of the dialogue table. The occurrence of these interactions are likely to be different in projects that are procured by more experienced teams. Another option would be to examine formal and informal negotiations in projects

procured by other agencies than the Agency which was involved here, in other countries, other areas of building, or projects from outside construction. Furthermore, it could be useful to study how third parties such as subcontractors and stakeholders influence the development of negotiations between a principal and its contractor.

This study shows how interaction processes during negotiations develop in either positive or negative cycles, and how hard these cycles are to break. If managers of both the procuring authorities and the contractors in practice are aware of these cycles and of the processes which play a role, they might be able to influence and use them to their mutual benefit. This latter contribution helps to create more cooperative working relationships and a reduction in failure costs in large complex projects.

In terms of improving the use of the CD procedure in practice, several suggestions can be made. First, both parties could start by looking at opportunities and possibilities to lower their tendencies to avoid risk. One could start with having “real” conversations instead of steering the dialogue on the basis of predetermined questions. Second, opportunistic behavior could be punished, and openness rewarded. As examples, past performance could be taken into account in the selection process, or cooperation made a selection criterion. These two measures are likely to lead to more dialogue, decrease risk aversion behavior, and enhance mutual trust. Furthermore, it is likely that as time goes by, the parties to CD become familiar with the procedure, and gain confidence in how to act and what to expect from the other partner.

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About the authors

Ir. Mieke Hoezen is an advisor and specialist in Market and Procurement of the Directorate-General for Public Works and Water Management of the Dutch Ministry of Infrastructure and Environment. Before she joined this ministry, she was Researcher at the Department of Construction Management and Engineering of Twente University.

Dr Hans Voordijk is an Associate Professor in supply chain management at the Department of Construction Management and Engineering of the University of Twente, The Netherlands. His research and teaching activities focus on supply chain management and ICT in construction. Before he joined the University of Twente, he was project manager at The Netherlands Organization of Applied Scientific Research and Assistant Professor at Tilburg University. He holds a PhD in Economics of Maastricht University. Hans Voordijk is the corresponding author and can be contacted at: j.t.voordijk@utwente.nl

Prof. Dr Geert Dewulf is Professor of Planning and Development and Head of the Department of Construction Process Management at the University of Twente, The Netherlands. Before he joined Twente University, he was a senior consultant on urban planning at The Netherlands Organisation of Applied Scientific Research and Assistant Professor at Delft University of Technology and a fellow at Harvard University. He holds a PhD in Social Sciences of the University of Utrecht.