Industrial Marketing Management 104 (2022) 51–67

Contents lists available at ScienceDirect

Industrial Marketing Management

journal homepage: www.elsevier.com/locate/indmarman

Market dialogue in public procurement: Buyer-supplier interfaces and relational abilities

Anne-Maria Holma [a], Maren Wiktorin Østensen [b,*], Elsebeth Holmen [b], Luitzen de Boer [b]

[a] University of Vaasa, School of Management, Kokkola University Consortium, P.O. Box 700, FI-65101 Vaasa, Finland
[b] Department of Industrial Economics and Technology Management, Faculty of Economics and Management, NTNU – Norwegian University of Science and Technology, Trondheim, Norway

ARTICLE INFO

Keywords:
Public procurement
Market dialogue
Buyer-supplier interaction
Buyer-supplier interface
Relational abilities

ABSTRACT

Previous studies have suggested that public procurement promotes transactional and standardized interfaces between public buyers and suppliers. The use of more interactive and translational interfaces in market dialogues during the pre-tender phase of public procurement has received limited academic interest. Based on a multiple-case study, this paper aims to address this research gap by focusing on public buyer-supplier interfaces and the buyer's and the suppliers' abilities to interact during market dialogues. Thereby, we contribute to the literature on public procurement and supplier management. First, we enrich the interface framework by showing that interaction can be achieved in market dialogues and highlighting that the dialogues do not necessarily feature only one interface but may contain a configuration of interfaces varying by interface type and sequencing. Second, we elaborate on the subdimensions of the public buyer's and the suppliers' relational abilities, which influence the buyer-supplier interfaces obtained through the market dialogue. We offer implications for organizing market dialogues in public procurement.

1. Introduction

Public procurement concerns the acquisition of products and services by public organizations for public use (Uyarra & Flanagan, 2010) and amounts to about 12% of the gross domestic product of the countries in the Organization for Economic Co-operation and Development (OECD, 2019). Public procurement is increasingly used to drive economic growth and achieve policy goals such as delivering sustainable outcomes, developing SMEs, and unlocking innovation. To achieve these goals, practitioners and researchers have paid increasing attention to the importance of early interaction between the public buyer and potential suppliers (Alhola, Salo, Antikainen, & Berg, 2017; Kelly, Marshall, Walker, & Israilidis, 2021; Pelkonen & Valovirta, 2015; Semple, 2015). The pre-tender phase of public procurement offers opportunities for public buyers to interact with potential suppliers because this phase is less strictly regulated in the public procurement directives (McKevitt & Davis, 2015). During this phase, the public buyer can organize market dialogues (Alhola et al., 2017), enabling interaction between the public buyer, suppliers, and other stakeholders.

Market dialogue is covered by EU directives specifying that interaction should not distort competition and should be conducted according to nondiscrimination and transparency principles (Directive 2014/24/EU, 2014). Market dialogue can consist of different interaction episodes, such as market sounding, bidder conferences (OGC, 2006), "Meet the Buyer" conferences (McKevitt & Davis, 2014), annual supplier days, supplier conferences (Torvatn & de Boer, 2017), and technical dialogues (Keränen, 2017b). Through market dialogue, a public buyer can communicate their unmet needs (Pelkonen & Valovirta, 2015), and suppliers can provide feedback and influence the buyer in developing tender specifications (McKevitt & Davis, 2015). Such dialogues are important because prior research has identified problems related to buyers' tender specifications, such as weak demand management, over-specification, and numerous changes made to the specifications (Roodhooft & Van den Abbeele, 2006) that may be alleviated by market dialogue.

Despite the importance of market dialogue, the characteristics of buyer-supplier interaction in the market dialogue of public procurement have received scant attention in research. The literature tends to take an overall perspective on public procurement and focus on tendering (e.g., Heijboer & Telgen, 2002; Uttam & Roos, 2015) while neglecting the

* Corresponding author.
E-mail addresses: anne.holma@univaasa.fi (A.-M. Holma), maren.ostensen@ntnu.no (M.W. Østensen), elsebeth.holmen@ntnu.no (E. Holmen), luitzen.de.boer@ntnu.no (L. de Boer).

https://doi.org/10.1016/j.indmarman.2022.04.004
Received 25 January 2021; Received in revised form 23 March 2022; Accepted 6 April 2022
Available online 26 April 2022

buyer-supplier interaction that unfolds before such tendering. According to Torvatn and de Boer (2017), the phase before tendering allows for interactive interfaces between the public buyer and the suppliers, while the tendering phase features a specified or standardized interface. They briefly refer to Norwegian practice but call for more in-depth empirical research.

This paper builds on the interface framework by exploring the degrees to which the buyer and the suppliers relate to each other's contexts (Araujo, Dubois, & Gadde, 1999) and their abilities (Araujo, Gadde, & Dubois, 2016; Bjerhammar & Elbe, 2018) to interact in the market dialogue. The aim is to conceptualize buyer-supplier interfaces during market dialogue in the pre-tender phase of public procurement and explain the connection between capabilities and interfaces. "Capabilities" refers to the abilities of the buyer's and the suppliers' employees to participate in market dialogue and to develop interfaces that, in turn, enable the development of the procurement processes and services. Furthermore, as market dialogue involves several suppliers, we are interested to find out where (Abrahamsen, 2016), that is, at which level (dyadic or network) interaction occurs.

Public procurement can contribute to innovation when an *innovation-friendly* environment that permits knowledge exchange and learning is created. Even though market dialogue is primarily associated with Public Procurement for Innovation (PPfI) which "occurs when a public organization places an order for the fulfilment of certain functions (that are not met at the moment of the order or call) within a reasonable period of time through a new or improved product" (Edquist, Vonortas, Zabala-Iturriagagoitia, & Edler, 2015 pp. 6–7), the focus of our study is on "regular public procurement which is carried out in such a way that new and innovative solutions are not excluded or treated unfairly" (Edquist et al., 2015, p. 7). Thus, the primary aim in such procurements is not to buy something that "does not yet exist" (Uyarra & Flanagan, 2010, p. 127), but to develop the procurement processes and existing services. This requires the ability to rethink the procurement process (Knutsson & Thomasson, 2014), and draws attention to practices and competencies that *enable* innovative solutions (Uyarra, Zabala-Iturriagagoitia, Flanagan, & Magro, 2020), which adds value to public services (Guarnieri & Gomes, 2019). PPfI has gained considerable academic interest, even though much of today's public procurement is still completed routinely without specific innovation intentions (Lember, Kattel, & Kalvet, 2014). The most often cited examples of procurement-related innovation concern secondary products of "regular" procurement, instead of conscious attempts to innovate (Uyarra & Flanagan, 2010). Yet, few studies focus on market dialogue interaction in the context of regular public procurements. Furthermore, extant empirical studies show that the outcomes of the dialogues do not always fulfil their aims. For example, Keränen (2017a) reported on buyer-supplier dialogues that did not help in preparing proper tendering reports and initiating healthy partnerships, and Holma, Vesalainen, Söderman, and Sammalmaa (2020) found that the suppliers' full potential to take part in the service specification was not used in the market dialogues.

To use market dialogue, the public buyer needs to dedicate time and resources and have the appropriate capabilities to articulate needs and collect information and process data from suppliers (Valovirta, 2015). Hence, market dialogue interaction places demands on the capabilities of public buyers and suppliers to gain a mutual understanding of the service requirements, an issue which has only been addressed conceptually and as a sub-function of public organizations' capability to conduct PPfI (Valovirta, 2015). We know little about the relational capabilities buyers and suppliers need to create mutually beneficial market dialogue interaction. Therefore, aided by a multiple case study design, we explored market dialogue interaction between a public buyer and potential suppliers in the context of sub-national level procurement (municipal and county level) to find out how buyer-supplier interaction can be developed to enhance the development of the services and procurement processes. Innovation is less likely to occur due to conscious policy at the sub-national level, but more likely as a by-product of regular procurement activities (Lember, Kalvet, & Kattel, 2011). Our empirical study focused on procurement processes in which public buyers applied market dialogue and asked the suppliers to provide pre-existing solutions of regular procurements in an improved way (Knutsson & Thomasson, 2014). The majority of public procurement research takes the buyer's perspective, while the supplier perspective is much less common in public procurement research. Furthermore, most papers with a supplier perspective use secondary data from buyer surveys (Kelly et al., 2021). However, to get a comprehensive picture of market dialogue interaction, we collected data from both the buyers and the suppliers that took part in the market dialogues. We aim to answer the following research questions:

- How can the interfaces between the public buyer and the suppliers during market dialogue interactions be characterized?
- Which capabilities are important for the development of mutually beneficial market dialogue interactions?

This study contributes to public procurement and supplier management research. First, this study enriches the interface framework (Araujo et al., 1999; Araujo et al., 2016) and highlights that buyer-supplier interaction in market dialogue does not necessarily feature one interface but may be modelled as a configuration of multiple interface types. The configuration of interface types is based on two dimensions: i) the *sequence* of interfaces occurring in market dialogue, as the market dialogue may comprise several interaction episodes, and ii) the degree to which each interface in a sequence of episodes is *pure* (i.e., identical to one of the four basic types (Andersen & Gadde, 2019; Araujo et al., 1999; Araujo et al., 2016; Sundquist & Melander, 2020)) or a *mix* of several interfaces. Thus, interactive buyer-supplier interfaces can be obtained in the market dialogue of public procurement. Second, we identify sub-dimensions of the public buyer's and the suppliers' abilities that influence the buyer-supplier interfaces chosen and obtained during market dialogue interactions. Our study was conducted with public buyers involved in improving the existing services they procure, as well as the processes of regular procurements resulting in the procurement; however, the findings are transferable to the PPfI context.

This paper is organized as follows. Section 2 presents the conceptual background and analytical framework based on the interface framework and the buyer's and suppliers' relational abilities. Section 3 explains the research methodology. Section 4 presents the two empirical cases. Section 5 presents the findings of the case analyses. Section 6 discusses and conceptualizes the findings from the two cases. Section 7 concludes the paper and offers managerial implications and research opportunities.

2. Conceptual background

2.1. Public buyer-supplier interaction and buyer-supplier interfaces

Traditionally, buyer-supplier interaction in the public sector has been considered arms-length and transactional (Lian & Laing, 2004). Furthermore, long-term relationships and trust are considered difficult due to culture, regulations (Erridge & Greer, 2002), and competitive tendering processes hindering relationship continuity (Bygballe, Jahre, & Swärd, 2010; Waluszewski & Wagrell, 2013). The difficulties of developing long-term buyer-supplier interaction pose a challenge for innovation, in particular (Axelsson & Torvatn, 2017; Melander & Arvidsson, 2020) and procurement processes and service development, in general (Valovirta, 2015).

However, during the last decade, we have witnessed a shift in public procurement from a transactional and regulative approach to a strategic focus which emphasizes sustainability and innovation (Grandia & Kruyen, 2020; Oruezabala & Rico, 2012) and begets more strategic and interactive approaches to buyer-supplier interaction in public procurement. As a result, academic studies have focused on organizational arrangements that enable interaction between public buyers and suppliers,

such as public-private partnerships (Keränen, 2017a, 2017b; Torvinen & Ulkuniemi, 2016; Waluszewski, Håkansson, & Snehota, 2019), public-private cooperation (Leite & Bengtson, 2018; Nissen, Evald, & Clarke, 2014), and public-private innovation relationships (Arlbjørn & Freytag, 2012; Munksgaard, Evald, Clarke, & Damgaard, 2017). Furthermore, new procurement procedures have been introduced (Torvatn & de Boer, 2017), for example, innovation partnerships and practices that take a more relational approach, such as early *buyer-supplier interaction* through market dialogue (Alhola et al., 2017).

To grasp buyer-supplier interaction in the market dialogue of public procurement, we rely on the framework developed by Araujo et al. (1999), where *interfaces* are conceived as resource contact points created in buyer-supplier interaction (Araujo et al., 1999). Interfaces have also been used to describe coordination and involvement across firm boundaries (Andersen & Gadde, 2019). Araujo et al. (1999) presented four types of interfaces: (i) standardized, (ii) specified, (iii) translation, and (iv) interactive. The different interfaces arise due to the interactivity between the buyer and supplier (Araujo et al., 1999), represent different forms of involvement, and provide the buyer with different possibilities for accessing the supplier's knowledge (Andersen & Gadde, 2019). In the following section, we describe the four interfaces and how they relate to the public procurement context, in line with our focus on services in the empirical study.

In a *standardized interface,* the supplier does not need insight into the user context, and the buyer does not need to consider the supplier's context and resources. A standard service is purchased, and no adaptations are required between the buying firm and its supplier, or between the producing and using sides of the relationship (Håkansson & Axelsson, 2020). There is no or limited involvement between the buyer and supplier, and the interaction is at arm's length (Andersen & Gadde, 2019; Sundquist & Melander, 2020). Due to the transactional relationships, public procurement has been argued to hinder "thick" interaction between buyers and suppliers (Waluszewski & Wagrell, 2013) and feature standardized interfaces (Håkansson & Axelsson, 2020).

In a *specified interface*, the buyer gives precise directions regarding the service, leaving suppliers with restricted possibilities to influence the specifications and develop the service (Araujo et al., 1999). For example, traditional public procurement imposes detailed specifications and careful evaluation of tenders in terms of preferred criteria and costs to ensure the best value for taxpayers' money and the fair treatment of competing suppliers (Pelkonen & Valovirta, 2015). Information goes primarily from the public buyer to the supplier, as in the open and restricted procedure in public procurement (Torvatn & de Boer, 2017).

In a *translation interface,* the buyer describes the service's required functionality rather than giving detailed specifications. Functional specifications require substantial internal interaction in the buying organization and a higher degree of supplier involvement (Araujo et al., 2016). The supplier has some freedom in translating the functional specifications and may suggest new solutions that fulfil the buyer's needs while simultaneously providing productivity and innovation gains (Araujo et al., 1999). Studies of PPfI underline functional specifications as beneficial for innovation because suppliers can use their creativity and suggest alternative solutions to the buyer's need (Edler & Georghiou, 2007; Edquist & Zabala-Iturriagagoitia, 2012).

An *interactive interface* allows open dialogue between the buyer and the supplier. Together, the buyer and supplier consider each other's contexts and direct and indirect costs for both parties. The supplier learns about the buyer and takes on more responsibility, and may also exploit experiences from interfaces with other buyers to increase innovation (Araujo et al., 1999). The supplier is thus given the freedom to propose alternative solutions and new technologies to create value for the procuring organization (Valovirta, 2015). The interactive interface provides the highest-potential benefits of the interfaces, as it represents opportunities for mutual adaptation (Andersen & Gadde, 2019), but is also more resource-demanding (Araujo et al., 1999). Torvatn and de Boer (2017) distinguished between the different phases of buyer-supplier interactions in public procurement and argued that, while the tender phase applies a standardized or specified interface, pre-tender phase interaction may allow for translation or even interactive interfaces. Table 1 summarizes the definitions of interfaces.

2.2. Capabilities to interact: relational abilities

With increasing supplier involvement in public procurement, buyers and suppliers may be required to develop their capabilities. Research on capabilities required for managing buyer-supplier interaction is substantial (see e.g. review by Forkmann, Henneberg, & Mitrega, 2018), and different terms are used for capturing such capabilities; for example, "relational capability" (Lorenzoni & Lipparini, 1999); "alliance capability" (Kale, Singh, & Perlmutter, 2000); "networking ability" (Håkansson, 1987); "cooperative competency" (Sivadas & Dwyer, 2000); "interaction capabilities" (Johnsen & Ford, 2006); and "collaborative capability" (Schreiner & Corsten, 2004). However, most research is conducted in business-to-business contexts and focuses on capabilities obtained from continuous interaction in relationships (Gadde & Snehota, 2019). Few studies of supplier relationships management capabilities include the relationship initiation phase (Forkmann, Henneberg, Naude, & Mitrega, 2016; Mitrega, Forkmann, Ramos, & Henneberg, 2012; Mitrega, Forkmann, Zaefarian, & Henneberg, 2017). In the public procurement context, research on capabilities takes mainly the SMEs' perspective, investigating their capabilities and barriers to participate in public procurement (e.g., Di Mauro, Ancarani, & Hartley, 2020; Flynn & Davis, 2017; Johnsen & Ford, 2006; Woldesenbet, Ram, & Jones, 2012).

However, research on the capabilities needed in the market dialogue of public procurement is lacking. Market dialogue is essential for the buyer to assess the suppliers' capabilities and for suppliers to understand the buyer's needs (Alhola et al., 2017; Holma et al., 2020; Keränen, 2017b). Therefore, to understand the prerequisites of interfaces in market dialogues, the capabilities of both the buyer and the suppliers need to be understood, as shown in the study by Bjerhammar and Elbe (2018) in a product development context. Araujo et al. (2016) linked learning, interactive capacity, and interactive capability evolving from the interplay between interface type, organizing principles, and technology strategy. Still, their study relied on a historical survey and did not specify the types of capabilities required for the different interfaces. We contend that buyer-supplier interfaces are influenced by a variety of capabilities that are discussed below.

We use *relational ability* as a common denominator for different types of capabilities that buyers and suppliers need to possess to develop mutual understanding and knowledge exchange in market dialogue interactions, as well as the required capacity in terms of time and

Table 1
Definitions of interfaces.

Interfaces	Definition
Standardized interface	Corresponds market transaction. The buyer and supplier do not need insight into the other's contexts and resources (Araujo et al., 1999; Torvatn & de Boer, 2017).
Specified interface	Corresponds to traditional subcontracting. The buyer wants a customized solution and gives precise directions regarding the service, leaving suppliers with restricted possibilities to develop the service (Araujo et al., 1999; Sundquist & Melander, 2020).
Translation interface	The buyer describes the service's required functionality rather than giving detailed specifications; the supplier translates functional needs to form a solution (Araujo et al., 1999; Sundquist & Melander, 2020).
Interactive interface	The buyer and supplier develop jointly the specifications of what to exchange. Both the supplier and buyer contexts are considered when deciding on the use of resources (Andersen & Gadde, 2019; Eriksson, Hulthén, Sundquist, Fredriksson, & Janné, 2021).

resources. *Interactive capability* concerns the skills and knowledge regarding how to interact with business partners (Araujo et al., 2016); it includes competencies such as communication, trust, and commitment (Park & Lee, 2015). For suppliers, relational ability can refer to the ability to communicate with, engage, and influence public buyers (Flynn & Davis, 2017). For a buyer, it is essential to organize internal collaborations between functions and processes concerning the supplier (Araujo et al., 2016). For example, a lack of coordination in internal processes may prevent suppliers from contributing to and profiting from exchange initiatives (Ellegaard & Koch, 2012). Interactive capability can be generic (Araujo et al., 2016) or particular to a specific counterpart (Araujo et al., 2016; Håkansson, Ford, Gadde, Snehota, & Waluszewski, 2009). The buyer learns how to interact with suppliers and manage different interfaces from their experiences (Araujo et al., 2016).

The buyer's and suppliers' *interactive capacity* concerns the time and resources that the firms invest in mutual interaction (Araujo et al., 2016). The buyer's interactive capacity will influence the interface used because translation and interactive interfaces are more resource-demanding (Gadde & Wynstra, 2017). Interactive capacity may be restricted by a firm's organization of internal functions and processes (Andersen & Gadde, 2019).

For the buyer, *demand ability*, i.e., the ability to instruct the supplier about the type of offering they should develop (Ford, Gadde, Håkansson, and Snehota (2011), is essential. Bjerhammar and Elbe (2018) divided demand ability into specification and description ability, pointing out that how needs are expressed, and what type of interface is applied, are intertwined. *Specification ability* relates to the buyer's ability to describe objective qualities, which can be expressed in numbers, standards, and blueprints (Bjerhammar & Elbe, 2018). *Description ability* is needed to verbally describe subjective qualities that relate to our senses and perceptions (i.e., needs and requirements other than those used for explaining objective qualities) (Bjerhammar & Elbe, 2018).

To understand the buyer's requirements, the supplier needs *problem-solving abilities*, defined by Ford et al. (2011, p. 25) as "[the] ability to design, develop, or assemble an offering from different sources that will provide a solution to a customer's problem." Problem-solving ability is a function of translation and interpretation abilities (Bjerhammar & Elbe, 2018). *Translation ability* can be related to the translational interface, and it involves the suppliers' de-codification of a formal specification when the buyer relies on the supplier's problem-solving capability. *Interpretation ability* refers to the ability to realize and develop what the buyer requires without formal specification, but by interpreting informal descriptions (Bjerhammar & Elbe, 2018). Interpretation ability is important for understanding tacit knowledge (Kale et al., 2000). Table 2 summarizes the concepts discussed in this section.

2.3. Analytical framework

Based on the literature reviewed, we suggest an analytical framework that combines the buyer-supplier interface framework and relational ability. While the interface framework has been chiefly applied to relationships in private-sector contexts (e.g., Andersen & Gadde, 2019; Lind & Melander, 2019), it has also proved useful for describing and explaining public procurement (Håkansson & Axelsson, 2020; Torvatn & de Boer, 2017).

We expect that both the choice and handling of the interfaces depend on the buyer's and suppliers' relational abilities, comprising different subdimensions, as shown in Fig. 1. The public buyer needs interactive capacity and capability, as well as the ability to inform suppliers about the service in market dialogue. Suppliers need interactive capacity and capability, as well as problem-solving ability, to understand the buyer's requirements. In interactions through different interfaces, learning is expected to occur that further develops relational ability (Araujo et al., 2016). In our study, however, we focused on the dependency between the choice and handling of buyer-supplier interfaces and buyer's and suppliers' capabilities.

Table 2
Definitions of abilities.

Abilities	Definition
Relational ability	Different types of capabilities are important for mutually beneficial buyer-supplier interaction, as well as the required capacity in terms of time and resources (Araujo et al., 2016). Relational ability comprises different types of capabilities/abilities, which are listed below.
Interactive capability	The skills and knowledge regarding how to interact with business partners (Araujo et al., 2016; Flynn & Davis, 2017; Park & Lee, 2015).
Interactive capacity	The time and resources that the buyers and suppliers invest in mutual interaction (Araujo et al., 2016; Gadde & Wynstra, 2017).
Demand ability	The buyer's ability to instruct the supplier about the type of offering they should develop (Ford et al., 2011).
Specification ability	The buyer's ability to describe objective qualities, which can be expressed in numbers, standards, and blueprints (Bjerhammar & Elbe, 2018).
Description ability	The buyer's ability to verbally describe subjective qualities that relate to our senses and perceptions (other than objective qualities) (Bjerhammar & Elbe, 2018).
Problem-solving ability	The supplier's "ability to design, develop, or assemble an offering from different sources that will provide a solution to a customer's problem." (Ford et al., 2011, p. 25).
Translation ability	The supplier's de-codification of a formal specification when the buyer relies on the supplier's problem-solving capability (Bjerhammar & Elbe, 2018).
Interpretation ability	The supplier's ability to realize and develop what the buyer requires without formal specification, but by interpreting informal descriptions (Bjerhammar & Elbe, 2018).

3. Research methodology

To conceptualize supplier interfaces in the market dialogue of public procurement and explore public buyers' and suppliers' relational abilities, we conducted a qualitative and explorative multiple case study (Yin, 2017). As case studies allow for investigation of a phenomenon in its setting and context (Dubois & Gadde, 2002; Eisenhardt, 1989), it was suitable for our study, since the public procurement context sets the frame for the buyer-supplier interaction in the market dialogue. Moreover, a multiple-case study enables us to study how a phenomenon performs in different environments (Stake, 2006) and can provide a better understanding of patterns in the interplay between the phenomenon and different contexts (Aaboen, Dubois, & Lind, 2012). According to Stewart (2012), multiple case research typically looks toward practice when generating theory and is a valuable part of public sector researchers' method repertoire.

Multiple case studies begin by recognizing a concept or idea behind the cases, which, in the present study, was market dialogue. We selected two cases: the Catering Service Case from the Finnish context and the Ferry Service Case from the Norwegian context. The cases were part of two different research projects.[1] When discussing our research, we found that both cases captured market dialogue but with different interactivity and outcomes. We did not select the cases to highlight the impact of national contexts (Stewart, 2012) but rather due to their similarity and rarity. Early buyer-supplier interaction, such as market dialogue, is generally discussed in the context of PPfI; its use in regular procurement is quite rare, albeit increasing.

Though a multiple case study method is inherently comparative, this may mean that the cases are chosen for their similarities rather than their differences (Stewart, 2012). From the outset, we knew that the underlying motivations for applying market dialogue in Finland and Norway are similar: in both countries, there are increasing demands to bring down public sector costs and, at the same time, improve the

[1] The "Smart Procurement" project in Finland and the "Shared Value Creation through Innovative Public Procurement" project in Norway.

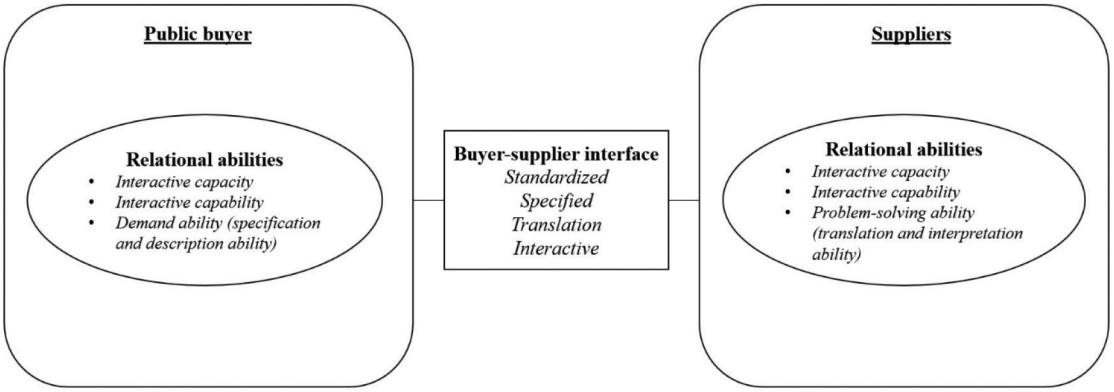

Fig. 1. Analytical framework.

quality of public services and procurement processes (Erridge & McIlroy, 2002). Furthermore, the European Union regulations imposed on public procurement apply in both countries. In both cases, the buyer published the guiding notices in the national and international tender databases to invite suppliers to join the market dialogue. However, in the Catering Service Case, the market dialogue did not follow a planned process of activities. In contrast, the Ferry Service Case market dialogue followed a planned set of activities with assistance from an intermediary.

3.1. Data collection

In the two research projects, multiple methods were used for collecting data (see Table A.1 in the Appendix). In the Catering Service Case, two researchers collected data over three years through interviews, observation, workshops, and document studies. The primary source of information in the buyer organization was the Procurement Unit (PU). The interviews with the PU members were thematic and conversational, focusing on organizing the market dialogue episodes and buyer-supplier interaction during the episodes, whereas the interviews with suppliers were semi-structured. The supplier interview topics were related, for example, to the suppliers' expectations and perceptions of market dialogue interactions, the outcomes of the market dialogues from the buyer's and the supplier's perspectives, market dialogue arrangements, and the supplier's prior market dialogue experiences. All potential suppliers were interviewed after the market dialogue interactions, and the selected supplier was also interviewed after the tendering. The supplier interviewees were managers or directors of large firms or CEOs of small firms. In addition to the interviews, workshops were organized with the buyer, and the researchers observed buyer-supplier interaction during the different market dialogue episodes. All the interviews were recorded and transcribed, and notes were taken during the workshops and the observed interaction episodes.

In the Ferry Service Case, four researchers collected data over 1.5 years from interviews, workshops, and document studies. Interviews were performed with Procurement Team (PT) members and a steering committee member in the county municipality-owned organization (CMO), the Innovation Procurement Intermediary (IPI),[2] a supplier, and a sub-supplier. Two interviews with a PT member and a steering committee member were conversational and thematic, addressing topics such as the background for organizing the market dialogue, market dialogue episodes, considerations, buyer-supplier interaction during market dialogue episodes, and the procurement process. We drew on three interviews from master students' thesis about the Ferry Service. The interviews covered topics such as the background of the procurement and steps in the market dialogue and procurement, considerations about the market dialogue, involved actors, and the outcomes of the market dialogue and procurement. The interviews with the supplier and sub-supplier were semi-structured and covered topics such as the supplier's engagement in the market dialogue and tender and the supplier's experiences with market dialogue interactions. The interviews with the PT members, a steering committee member, and the IPI were recorded and transcribed. Notes were taken during the interviews with the supplier and the sub-supplier. In addition, workshops on market dialogue interactions were arranged with PT members in CMO and other public organizations, during which notes were taken.

In both cases, documents related to the market dialogue and tenders, such as invitations to the market dialogue, programs of market dialogue episodes and RFQ documents, provided valuable secondary data.

3.2. Data analysis

Following a systematic combining approach, the data analysis was characterized by going forward and backwards abductively between the data, theoretical framework, and analysis (Dubois & Gadde, 2002). Therefore, the data analysis involved several iterative steps in which some phases leaned more toward induction, while others had a more deductive approach (Järvensivu & Törnroos, 2010).

First, the data were used to develop rich case descriptions of the two cases using the narrative approach (Langley, 1999) to describe the market dialogue episodes. The two main authors wrote extensive case descriptions and created tables (see Tables 3 and 4) and figures of the relevant themes concerning the market dialogues. The authors also arranged workshops to present and compare the cases. This part of the analysis aimed to improve the researchers' understanding of each other's cases and to overcome the moderation problem, i.e. when the primary research "instrument" (the researcher) varies from one case to the next (Stewart, 2012).

Second, we referred to the literature to look for theories that could be used to conceptualize market dialogue interactions. The initial analysis directed us to adopt interfaces as an analytical framework. We analyzed each case deductively based on the interface framework. The relational ability perspective emerged as suitable for explaining the differences in buyer-supplier interfaces and was, therefore, added to the analytical framework. Hence, as the analysis progressed, the analytical framework was modified several times, in line with the systematic combining approach (Dubois & Gadde, 2002).

Third, we conducted within-case analyses of the Catering Service and Ferry Service cases, enabling the unique patterns of the cases to emerge (Eisenhardt, 1989). We split the market dialogue into different

[2] The innovation procurement intermediary (IPI) was established in 2010 to enhance innovations and the development of new solutions through public procurement. Since then, the program has provided operational assistance to public buyers and, based on their experience, has developed a template for activities that can be used in public procurement's pre-tender phase.

Table 3
Case description: Catering Service.

Motives for market dialogue	- To develop the pre-tender phase of the procurement process - To acquire insight from potential suppliers to develop tender documents and catering services - To build relationships with potential suppliers			
Suppliers and characteristics	- Five suppliers participated in the market dialogue: three large multi-sector companies, of which one was the incumbent catering provider, and two were small local catering entrepreneurs - Competitive environment among suppliers			
Market dialogue episodes	*Information session* - The PU invited potential suppliers and others interested in an open session. - The aim was to inform about the forthcoming tender. - The main themes included the service's planned content and scope, the contract length, required qualifications, social responsibility, quality assurance, tendering schedule and publicity, and the concealment of confidential information. - The suppliers were not involved in the discussion. - The session helped suppliers decide on their engagement in tendering.	*Technical dialogue* - The suppliers could sign up for face-to-face technical dialogues to obtain more information. - The aim was to discuss the service more in detail and involve the suppliers. - Confidential conversations between the PU, the customer (the welfare unit), and one supplier at a time - Before the dialogues, the PU sent suppliers further information related to forthcoming tendering, preliminary service specifications, and some questions that the PU wanted to discuss, such as how to measure the quality of the services. - PU presented the RFQ draft developed during the internal needs assessment in cooperation with different stakeholders. - Some suppliers put forward new ideas, while others did not.	*Written commenting* - PU distributed a detailed RFQ to suppliers. - The aim was to let the suppliers check the details of the RFQ to avoid misunderstandings and ensure feasible contract terms. Potential suppliers could pose questions on the final RFQ. - The PU used the electronic notification database, strictly followed equality principles, and distributed a compilation of answers to all suppliers. - Suppliers raised questions related to the details of the RFQ that needed clarification, such as the strict sanctions in the RFQ draft, and the PU adjusted them according to the suppliers' comments. - Minor adaptations were made to the final RFQ.	*Site visits* - PU organized group tours for suppliers to see municipal kitchens. - The aim was to provide the suppliers with an opportunity to see how the municipal kitchens operate., - PU decided on the timing of these group presentations. - Not all suppliers could participate.
Time	1.5 h	1.5 h per technical dialogue	2 weeks	Passing through the kitchens
Resources	- PU and some representatives from the municipality	PU - Customer (the welfare unit) present in 3/5 technical dialogues	- PU - Internal customers (kitchens) were contacted in situations where the PU could not answer the questions	- PU -Some of the municipal kitchens

interaction episodes (i.e., four episodes in the Catering Service and three in the Ferry Service (see Tables 3 and 4). We focused on describing, explaining, and making sense of the interactions in each episode for the different cases (Miles, Huberman, & Saldaña, 2014), and the within-case analysis was structured according to the analytical framework. We identified quotes and procurement data from the interviews and documents that identified the patterns for the supplier interface and relational ability (see Tables A.2 and A.3 in the Appendix). The detailed analysis of the interaction in market dialogue episodes revealed gaps in our theoretical framework. For example, we understood the importance of organizing the episodes in a way that enables reaching the intended outcome. We also noticed that the buyers were well aware of the legal frames for the market dialogues, which, in the Catering Service case, was inhibiting mutual interaction. Thus, we returned to the theories, added organizing and procedural capabilities to the analytical framework, and suggested separating them.

Fourth, a cross-case analysis was conducted. We used the analytical framework (see Fig. 1) as the basis for the case comparison (Aaboen et al., 2012) to improve our understanding and explanation (Miles et al., 2014). We condensed the data into tables (see Tables 5 and 6), and used them to capture the supplier interfaces' general patterns and differences in relational ability between the cases. This helped conceptualize buyer-supplier interfaces in the market dialogue and explain supplier interfaces based on the buyer's and the suppliers' relational abilities.

We took several measures to ensure validity. First, we relied on several evidence sources to ensure construct validity: the buyers' and suppliers' personnel and documents used in market dialogues (i.e., invitations, programs, etc.). This enabled us to investigate market dialogue from both sides of the interacting dyads (Dubois & Araujo, 2007). Second, we applied different types of triangulation (Denzin, 1978). We discussed the findings from each case in workshops with public buyers. In the Catering Service case, the researchers discussed the study's results in workshops with the municipality; in the Ferry Service case, the researchers discussed the results with the CMO and other public organizations. These discussions functioned as credibility checks (c.f. Hartmann, Roehrich, Frederiksen, & Davies, 2014). Third, two researchers attended most interviews to take notes, and these notes were compared after the interviews (c.f., Yin, 2017). Fourth, a draft of the research report on the Catering Service case was sent to the PU's personnel and the selected supplier for comments. The research report on the Ferry Service case was sent to the CMO for comments.

4. Case descriptions

In the following sections, we present the contexts of the two empirical cases.

4.1. Catering service

The Catering Service Case concerned a Finnish municipality's catering service procurement. In 2014, the municipality started an outsourcing process for all of its catering services previously provided in-house. The procurement was divided into four segments of 25% each. For this paper, we focused on one of these that concerned meal deliveries for particular groups (i.e., persons with disabilities, senior citizens, and drug addicts). The municipality's PU was authorized to take care of the tendering on behalf of the customer: the municipality's welfare unit. The procurement group consisted of a service manager representing the PU, a project manager, and a lawyer. The pre-tender phase started in autumn 2014, and the request for quotation (RFQ) was published in spring 2015. The three-year contract came into force in August 2015. The market dialogue included four episodes: information session, technical dialogues, written commenting, and site visits. Table 3 describes the market dialogue episodes.

Table 4
Case description: Ferry Service.

Motives for Market Dialogue	- To use the pre-tender phase more actively to obtain better procurement for all parties involved - To inform potential suppliers about the tender and a future large tender, as the tender was to be short term, and to get to know about suppliers' capacities - To reduce the uncertainty of the CMO by helping suppliers learn about the CMO and the tender. The CMO had experienced appeals on contracts and wanted to reduce this risk in future tenders		
Suppliers	- The supplier market was highly competitive with few suppliers - Four suppliers participated in the dialogue conference and technical dialogues, and a sub-supplier in the dialogue conference		
	Dialogue conference	*Technical dialogues*	*Written commenting*
	- The PT invited potential suppliers to an open dialogue conference to inform them about the forthcoming tender of the ferry transit service and a future, related tender. - Before the dialogue conference, suppliers were provided with information about the agenda, questions, and process. - The CMO, the county, a municipality, and the IPI directed information to suppliers in the dialogue conference. - Suppliers obtained information about the ferry transit, details regarding the tender, contract issues, the parts of the tender that the suppliers could influence, the strategic importance of the procurement, how to organize market dialogue, suppliers' opportunities to give feedback, and prospects concerning the municipality. - Dedicated time for suppliers' questions and comments (questions specified by the PT) - Suppliers could comment and ask questions.	- The suppliers could sign up for one-to-one technical dialogues. - The PT provided a set of questions to address in the meetings. - The PT informed the suppliers that their comments could be used to shape the RFQ. - Four meetings were arranged with four suppliers. - The technical dialogues were discussions between the PT and one potential supplier, taking place face-to-face or by telephone. - The themes discussed included the contract type, the quality criteria, and the type, level, and share of incentives to use in contract and user requirements. - The PT identified cost drivers. - Insights from suppliers were used to develop the RFQ draft.	- Based on feedback from suppliers, the RFQ draft was adjusted and improved. - The PT arranged a written commenting process by publishing an RFQ draft, providing it for potential suppliers to comment (to avoid mistakes and unreasonable specifications). - Suppliers (in writing) raised a few comments and questions. - The PT interpreted the limited number of comments as a good sign of having effectively incorporated suppliers' comments from the dialogue conference and technical dialogues into the RFQ. - Suppliers' comments were used to finalize procurement documents.
Time	5 h	1.5 h per technical dialogue	2–3 weeks
Resources	- The PT and other representatives of CMO were present at the dialogue conference. - The IPI supported the planning of market dialogue and presented it at the dialogue conference.	PT	PT

4.2. Ferry service

The Ferry Service Case concerned the CMO's procurement of a ferry transit service. The county municipality issued the CMO a mandate regarding procurement, specifying cost restrictions and adaptations for the future procurement of two ferry transit services in one tender. Typically, the contract duration for these services is eight to ten years, but the procurement was adjusted for the future procurement of two ferry sections in one tender. Therefore, the length of the contract was two years. The tender preparations started in the autumn of 2014, and the RFQ was published at the start of 2015. The PT carried out the market dialogue and tender. The PT consisted of the project manager, a representative responsible for operations, a ferry specialist, and a consultant. An IPI was involved in the preparations and suggested organizing a market dialogue with potential suppliers. The market dialogue consisted of three episodes: a dialogue conference, technical dialogues, and written commenting. Table 4 provides more details on the market dialogue episodes.

5. Cross-case analysis

In this section, the findings of the within-case and cross-case analyses are organized according to the main themes in the analytical framework: buyer-supplier interfaces and relational abilities.

5.1. Buyer-supplier interfaces

The case analyses revealed that the market dialogue did not feature one buyer-supplier interface, but a mix of interfaces, as the market dialogue was found to consist of several market dialogue episodes. In the following section, we present four findings on buyer-supplier interfaces in market dialogues.

First, the analysis revealed that *market dialogue episodes with the same purpose can have different interfaces*, for example, the plenary sessions (i.e., an information session in the Catering case and a dialogue conference in the Ferry case). The Catering Service's information session featured a *specified* interface, as the PU mainly informed suppliers about the service and the tendering, which helped them decide whether to participate in the tendering, but did not involve the suppliers in the information session. The dialogue conference in the Ferry Service was *translational, with elements of an interactive interface*, where suppliers were provided with insight into the ferry service and its context. Suppliers were more involved than in the Catering Service, as they were given the opportunity to ask questions and give feedback to the PT by the end of the dialogue conference. Suppliers were, to some extent, involved and provided the PT with insight into their concerns, for example, about the contract type, but not concerning details of suppliers' resources. One of the PT's members said the following about the dialogue conference:

> "They (the suppliers) did not say that much; it was very general. What they have a clear opinion on is the contract type." (Ferry Service, PT member 1).

Second, we noticed that *single market dialogue episodes can be a combination of buyer-supplier interfaces* (i.e., one episode can contain several interfaces). For example, the technical dialogues in the Ferry Service featured a combination of *translational* and *interactive interfaces*; they enabled supplier involvement and buyer insights into the suppliers' context. These meetings were considered by the PT to unfold as dialogues, where the PT received information from the suppliers regarding the questions distributed before the dialogues but also enabled the suppliers to ask questions and clarify aspects with the PT, showing elements of the interactive interface. The involvement of suppliers in the technical dialogues was described as follows:

> "[…] the technical dialogues are the most open meetings you can have with them (suppliers) […] we had thorough discussions about all the questions we had." (Ferry Service, PT member 1)

Table 5
Case analyses of supplier interfaces.

Catering Service				
Market dialogue episodes	Information session	Technical dialogues	Written commenting	Site visits
Interaction level	Network	Dyad	Network	Network
Pure/ combination	Single	Combination	Single	Single
Interface	*Specified*	*Standardized and translation with elements of an interactive interface*	*Specified*	*Specified*
	- Suppliers could, to some degree, relate to the municipality's welfare context. - The buyer received no insight into the suppliers' context. - Low degree of supplier involvement.	- The buyer gave detailed service requirements - Suppliers were given more insights into the service context, but some suppliers did not have enough understanding of the buyer's context. - PU gained insights into some suppliers' service contexts but not into others. - Some degree of supplier involvement.	- Some suppliers influenced the tender. - Some suppliers perceived that written commenting was unproductive because of the fixed RFQ, which limited the suppliers' possibilities of suggesting changes. - Low degree of supplier involvement - Adaptations to the RFQ were relatively small.	- Suppliers could, to some degree, relate to the municipality's context. - Low degree of supplier involvement - Not all suppliers could participate because of timing and physical distance.
Ferry Service				
Market dialogue episodes	Dialogue conference	Technical dialogues	Written commenting	
Interaction level	Network	Dyad	Network	
Pure/ Combination	Combination	Combination	Single	
Interface	*Translation with elements of an interactive interface*	*Translation and interactive*	*Specified*	
	- Suppliers gained insight into the tender and buyer's context. - Mostly, buyers provided information about their needs. - Buyers gained some general insight into suppliers' contexts (e.g., contract-type preference). - Some supplier involvement and general comments by suppliers.	- Buyer setting the agenda of the discussion via questions (functionality of what is to be exchanged) - The buyer acquired insight into suppliers' capacity and knowledge (e.g., capacity and cost drivers). - Suppliers discussed risks and unravelled questions and challenges regarding the tender. - Supplies were involved.	- Suppliers gained insight into the RFQ draft. - Some questions raised by suppliers. - Low degree of supplier involvement.	

In the Catering Service's technical dialogues the PU presented the suppliers the RFQ draft with detailed service requirements (Pelkonen & Valovirta, 2015), which indicate a *standardized interface* (Araujo et al., 1999) that did not encourage the suppliers to become involved in the dialogues. Some suppliers tried to put forward new ideas, but some did not understand the buyer's context sufficiently. However, for the written commenting, in both cases, the buyer applied a *specified interface* that allowed the suppliers to propose changes. However, the sequential interactions in the tender database restricted deeper interaction.

Third, the case analyses show that *the sequence of different interfaces* in market dialogues can differ. The market dialogue episodes in the Catering Service and the Ferry Service had different sequences (see Table 5). In the Ferry Service, the interaction unfolded from translation/ interactive to specified, whereas in the Catering Service, the sequence emerged from specified to a combination of standardized/translation/ interactive, and then back to the specified interface.

Fourth, the case analyses revealed that the *interaction level* (i.e., dyadic vs. network level) in the market dialogue episodes had consequences for the buyer-supplier interface. In both cases, the interface and the suppliers' willingness to share ideas differed between plenary sessions with several suppliers present (i.e., the information session and the dialogue conference) and meetings between the public buyer and one supplier (i.e., technical dialogues). In episodes unfolding at the network level, suppliers were more restricted in what they shared in their competitors' presence, specifically regarding sensitive business information. When the interaction unfolded at the dyadic level, we observed that suppliers were more willing to share ideas and provide insights into their contexts. However, both the public buyers knew of these challenges, but they reacted differently. In the Ferry Service, the PT solved this problem by organizing the dyadic and network-level episodes differently, whereas the PU in the Catering Service accepted that there would be no discussion in the network-level episodes. The following quotes illustrate the difference between buyers' perception of the suppliers' willingness to share information in a market dialogue episode unfolding at the dyadic compared to network level:

> "We had the technical dialogues where you get much more […] I asked specific questions to each of them (suppliers) […] in order to receive feedback on it and to take it into account when forming the tender documents. You get answers when you ask." (Ferry Service, PT member 2)

> "The information session is more about us telling them about the forthcoming tendering; no one will discuss there, anyway." (Catering Service, PU, Service Manager)

Table 5 summarizes the supplier interface types in the different market dialogue episodes for the cases.

Table 6
Required abilities and their subdimensions for market dialogue interaction in public procurement.

Actor	Ability	Subdimension	Description
Public Buyer	Relational ability	Interactive capacity	Time and resources for interaction in market dialogue episodes
		Interactive capability	Knowledge and skills of how to create interactive interfaces in market dialogue episodes and use suppliers' knowledge in forming the RFQ
		Demand ability	Specification of service needs and context
			Description of the required service quality
		Organizing ability	Knowledge of designing market dialogue episodes facilitating relational exchange and trust
			Creating a trusting atmosphere to enhance knowledge exchange
	Procedural capability		Knowledge in choosing when to, and skills in how to, organize market dialogue interaction within public procurement
Supplier	Relational ability	Interactive capacity	Time and resources (expertise) to interact with the public buyer
		Interactive capability	Knowledge and skills in interacting in market dialogues
			Willingness to share information (level and trust)
		Problem-solving ability	Translating the buyer's service needs into solutions
			Interpreting quality elements

5.2. Relational ability

This section elaborates on *dimensions* and *subdimensions* of the public buyer's and the suppliers' relational ability identified through the case analyses (see Tables A.2 and A.3). In the initial analytical framework, the public buyer's relational ability comprised interactive capacity, interactive capability, and demand ability. Through the case analyses, we identified additional subdimensions of the relational ability: *organizing capability* and *procedural capability*. These were added to the framework to capture the public buyer's ability to orchestrate mutual development with suppliers in market dialogues, and to design processes that obey the public procurement regulations. No alternations were made of the suppliers' relational ability.

5.2.1. Interactive capacity

In both cases, the public buyer organized the market dialogue episodes and decided on the timing and form of the interaction. Thus, the buyer needed sufficient *interactive capacity* to meet the suppliers' expectations and the aims of the market dialogue. In the Catering Service, the suppliers remarked that too little time was devoted to the market dialogue episodes, making it difficult to achieve translational and interactive interfaces. The lack of time influenced the supplier involvement, for example, in the information session, where the PU did not make time for suppliers' questions and comments, resulting in limited insights into the suppliers' concerns. Similarly, in written commenting, suppliers would have needed more time to read the extensive RFQ documents with appendices to be able to pose relevant questions. One of the suppliers commented on the limited time for interaction:

> "The RFQ came only a couple of weeks before […] just to read through it would have required a few experts working days with full hours."
>
> (Catering Service, supplier)

The case analyses showed that including different internal functions in the market dialogue episodes was important for involving and accessing the suppliers' knowledge and for suppliers to understand the service context. Involving the internal customer (i.e., the municipality's welfare unit in the Catering Service and the operations of the Ferry Service) in the market dialogue of the procurement process was critical, as the customer had more detailed knowledge of the service and its end users. In the Catering Service, the customer was only involved in three out of five technical dialogues. According to the suppliers who did not meet the customer, this hampered the value of the interaction, which indicated the public buyer's limited interactive capacity for organizing internal functions (Araujo et al., 2016).

The PT outlined the involvement of different internal functions to provide several benefits in the Ferry Service case, such as distribution of the risk of procurement (not making the procurement dependent on one employee) and development of service competence. At the dialogue conference in the Ferry Service case, the IPI gave a presentation on market dialogues in public procurement and opportunities for suppliers to interact with the public buyer. This provided the PT with extra capacity and capabilities at the dialogue conference.

As the buyer was responsible for the market dialogues, the suppliers' interactive capacity was, to some extent, dependent on the buyer's capacity to organize the market dialogue episodes. For example, in the Catering Service, the time allocated to prepare for the market dialogue episodes was either unrealistic (e.g., the too-late announcement of site visits) or too demanding (e.g., reading an extensive number of pages to comment on the RFQ), making it difficult for the suppliers to use their resources efficiently. Furthermore, because the suppliers did not obtain detailed information about the content of the dialogues in advance, the suppliers did not know who would be the right experts to participate in the technical dialogues. The lack of information also made it difficult for the supplier to decide on how (much) to prepare for the dialogues, making poor use of the suppliers' resources. The following quote illustrates how the suppliers' interactive capacity was dependent on the public buyer's interactive capacity:

> "There should be some idea of what the agenda will be, what is to be developed, and so on; then we could do some homework beforehand." (Catering Service, supplier)

5.2.2. Demand and problem-solving abilities

The analyses revealed that, for suppliers to understand the service needs and context, the buyer needs *specification ability* to sufficiently describe the service and that a lack of *description ability* can prevent the development of the services. For example, in the information session, the PU provided information about the catering service, yet the PU did not clarify which issues the suppliers could influence and which were fixed. Proposing development targets based only on the information session would have required an unprecedented *interpretation ability* from the suppliers (Bjerhammar & Elbe, 2018).

The PU organized technical dialogues to allow deeper discussion of the needed catering services. The PU provided the suppliers with an RFQ draft that included the detailed requirements of the services, thus showing its *specification ability* to quantitatively describe the service requirements but not its *description ability* (Bjerhammar & Elbe, 2018) to express how suppliers could contribute to developing service quality. The PU tried to stimulate discussion on the quality requirements. Still, with no experience of collaborating with the buyer, the new suppliers had difficulties interpreting the requirements to develop the service quality (Bjerhammar & Elbe, 2018). In such a standardized interface with detailed service specifications, the suppliers could not use problem-solving abilities; it was enough to prove to have the required resources to provide the service (Bjerhammar & Elbe, 2018). Due to a prior relationship with the buyer, the incumbent supplier was in the best position to translate the buyer's needs in terms of the services. The incumbent supplier outlined that:

> "Because we are the incumbent supplier […] we know the challenges of the service provision." (Catering Service, incumbent supplier)

However, despite its specific position, the incumbent supplier did not have enough problem-solving ability to interpret how the services could be developed. As a result, after being re-selected, the supplier could not unlearn the established routines and continued to provide services almost identical to those before the tendering.

Contrary to the Catering Service, the PT in the Ferry Service demonstrated its *specification ability* by communicating to suppliers which elements they could comment on and influence, thus enabling supplier involvement. The CMO considered it important to have a draft of the RFQ ready before the dialogue conference, clarifying the aims and how the suppliers' knowledge would be used, which could be adjusted after the interaction episodes with the suppliers.

5.2.3. Interactive capability

To facilitate mutual understanding of the buyer's and suppliers' contexts, and the purchased services, the buyer and suppliers need an *interactive capability* to be activated in two-way market dialogue interaction. This means that the buyer must process and assess the suppliers' knowledge and ideas against agency needs and policy goals (Valovirta, 2015). The PU in the Catering Service did not sufficiently apply the suppliers' knowledge, resulting in less-interactive interfaces (standardized, specified, and translation). In contrast, the PT in the Ferry Service was attentive and used the information provided by suppliers, wanting to create trust in the process and to listen to the suppliers when forming the RFQ. Applying the suppliers' knowledge when drafting the RFQ, a tender for which several suppliers could bid was achieved. The following quotes illustrate the PT's attentiveness to using the information from suppliers:

> "When we invite the suppliers to give feedback, we also need to use it."
>
> (Ferry Service, PT member 1)

> "[…] This is a two-way game."
>
> (Ferry Service, PT member 2)

Reflecting on the Ferry Service, the PT believed that the interaction in the market dialogue episodes reduced the risk of disputes, as it created a mutual understanding of the suppliers' risk factors and cost drivers, making it easier for the PT to adjust the RFQ and for suppliers to price the service.

Interactive capabilities are also important for suppliers, as they need to provide knowledge about their context to the public buyer. All suppliers involved in the Catering Service case perceived pre-tender interactions with private sector buyers as more interactive; the suppliers took the opportunity to pose questions, and they perceived being listened to. The open tendering procedure in public procurement usually leads to one-way communication, where the suppliers answer the buyer's questions. One of the suppliers noted that:

> "Always, when the open procedure is used, everything is fixed in advance, so you just rigorously answer the questions in the RFQ; you are not able to develop services there (in market dialogue)." (Catering Service, supplier)

Thus, the suppliers do not perceive the lack of interactivity in market dialogue to depend only on the buyer's insufficient interactive capacity but rather on the procurement procedure and how the buyer deals with the regulations imposed.

5.2.4. Organizing capability

Organizing capability concerns the public buyer's ability to develop episodes that enhance relational exchange and create trust; this was identified as important for achieving translation and interactive interfaces in market dialogue episodes. For example, in the Ferry Service, the PT adjusted the questions according to whether the interactions were at the network level (i.e., where competitors were present) or in one-to-one interactions with suppliers. Issues addressed during the dialogue conference were modified to engage suppliers, but did not encourage sharing knowledge about the suppliers' resources and capacities that, instead, were discussed during the technical dialogues. The following quote illustrates the PT's awareness of what should be addressed in different market dialogue episodes:

> "We were aware of what questions were suitable for dialogue conferences and those that were suitable for the technical dialogues." (Ferry Service, PT member 1)

In the Catering Service, the PU did not expect the suppliers to discuss in the network level interaction; thus, the information session was designed to consist mainly of one-way information exchange.

The analyses also revealed that the buyer can gain support from an external intermediary organization that can provide "know-how" for organizing market dialogues. In the Ferry Service, the IPI assisted the PT in planning and organizing the market dialogue, acting as an intermediary (Edler & Yeow, 2016). Through the IPI, the PT could draw on learning effects (Araujo et al., 2016) from organizing market dialogues, enabling the PT to build capabilities for future market dialogue processes. This influenced the PT's *interactive capability* and *organizing capability* for arranging market dialogues by improving its resources for, and knowledge of managing, such dialogues with interactive interface elements.

5.3. Procedural capability

In addition to the relational ability, the case analyses showed that public buyers need *procedural capabilities* to organize market dialogue episodes within the public procurement regulations while achieving the aim(s) of the market dialogue. The cases showed that both buyers were concerned with observing the nondiscrimination and transparency principles in market dialogue interactions, for example, by allocating equal time to each supplier in the technical dialogues and posing the same questions to suppliers. In the Catering Service, a lawyer always took part in the market dialogue interactions to ensure that the regulations were followed.

The buyers were also careful in sharing information that was revealed in the technical dialogues:

> "In the technical dialogues, we made a memo. In those memos, there may have been some business secrets, but they stayed with us. When we made summaries of those memos, there are no individual supplier comments, we delete those (business secrets). These summaries are delivered to all suppliers taking part in the technical dialogues" (Catering Service, PU, Service Manager).

> "All of this (the interaction and procurement processes) needs to be structured because it can be checked" (Ferry service, PT member 1).

> "It is so that the procurement process needs to follow the public procurement regulations, and there are limited possibilities for late involvement. We need to have stakeholders early involved to have a good process" (Ferry service, PT member 1)

However, the overly-strict following of regulations in market dialogue episodes (e.g., Pelkonen & Valovirta, 2015) lead to more formal interaction. For example, the PU in the Catering Service had expertise in procurement procedures and followed the regulations but did not have knowledge of and experience with organizing relational exchange in the market dialogue episodes. Therefore, the PU failed to create a trusting atmosphere in the dialogues that could have enhanced the suppliers' involvement. The following quote illustrates the formality of the interaction with suppliers in the market dialogue:

"I have good cooperation (with the service manager of the PU), we talk openly, but when the tendering begins, we do not talk at all. These occasions (market dialogue episodes) are so uncommunicative." (Catering Service, incumbent catering supplier)

"Because of the fear of the market court, they (the buyer) is too careful" (Catering Service, supplier)

Thus, overemphasizing public procurement regulations and principles can create an atmosphere that does not enhance relational exchange but rather impedes discussion and interactive interfaces.

6. Discussion

In this section, we answer the research questions and discuss the findings. We suggest a revised analytical framework, incorporating our empirical findings: the buyer's organizing capability, procedural ability, the type of service, and the use of intermediaries (see Fig. 2).

6.1. Configuration of interfaces and level of interaction

The first research question asks: *How can the interfaces between the public buyer and the suppliers during market dialogue interactions be characterized?* Our findings illustrate that the market dialogue in public procurement can consist of several interaction episodes. Therefore, market dialogues can feature not only a single buyer-supplier interface but also a set or a configuration of interfaces. The configuration is based on two dimensions: i) the sequence of interfaces in the different market dialogue episodes, and ii) whether each of the market dialogue episode interfaces is "pure" or a "mix" of different interface types. This corroborates the finding by Lind and Melander (2019) that buyer-supplier interfaces in technological development projects in a private context can be "pure" or "mixed" (a combination of several interfaces). Our findings also support the suggestion by Torvatn and de Boer (2017) that pretender market dialogues allow for translational and interactive interface types, and thus contrasting the argument that buyer-supplier interfaces in public procurement can only display standardized interfaces (Håkansson & Axelsson, 2020).

Furthermore, an important finding of this study is that the interaction level, referring to *where* the interaction unfolds (Abrahamsen, 2016), influences the buyer-supplier interface and explains some of the difficulties in achieving interactive interfaces in settings where several suppliers are gathered. Instead, the dyadic level is more favourable for interactive and translational interfaces. Therefore, the public buyer must consider the framing modes it uses when organizing interaction with one or more suppliers (Holmen, Håkansson, & Pedersen, 2003).

6.2. Buyers' and suppliers' abilities

The second research question concerns: Which capabilities are important for the development of mutually beneficial market dialogue interactions? Together, the cases showed that different subdimensions of the public buyer's and suppliers' relational abilities influenced the interfaces in the market dialogue episodes. In the following sections, we discuss the different abilities and their subdimensions required for market dialogue interactions in public procurement and summarize them in Table 6.

6.2.1. Public buyer's relational abilities

Concerning the public buyer's relational ability, the subdimension *interactive capacity* refers to the time and resources that the buyer devotes to interaction in the market dialogue. The cases illustrated that insufficient time in the market dialogue episodes makes it difficult to achieve translational and interactive interfaces, as there is little time for suppliers to be involved. In terms of resources, our study confirmed prior findings of including internal actors in the procurement process (Andersen & Gadde, 2019; Ellegaard & Koch, 2012; Sundquist & Melander, 2020) and, specifically, in the early phases of the process (Holma et al., 2020; Torvinen & Ulkuniemi, 2016). Internal customers (i.e., public units responsible for the service) and the end-users of the service know the service needs. This can be used to improve the communication of procurement needs and, thus, enhance the public buyer's specification and description abilities. The presence of internal customers during market dialogue episodes can ensure that the internal customer's needs are communicated well, adding interaction openness and creating trust (Araujo et al., 2016).

Interactive capability concerns the buyer's knowledge of how to interact with suppliers (Araujo et al., 2016) in market dialogue episodes. Our study emphasizes the importance of this capability, which captures the public buyer's ability to use the information retrieved from suppliers in the market dialogue when developing the RFQ. Thereby, the public buyer not only enables translational and interactive interfaces to be established between the public buyer and the suppliers, the public buyer can also create trust in the market dialogue and procurement process. This can potentially improve the service, as well as increase competition between suppliers in the tender phase. This capability is essential for PPfI, where buyers can use the information from suppliers to assess

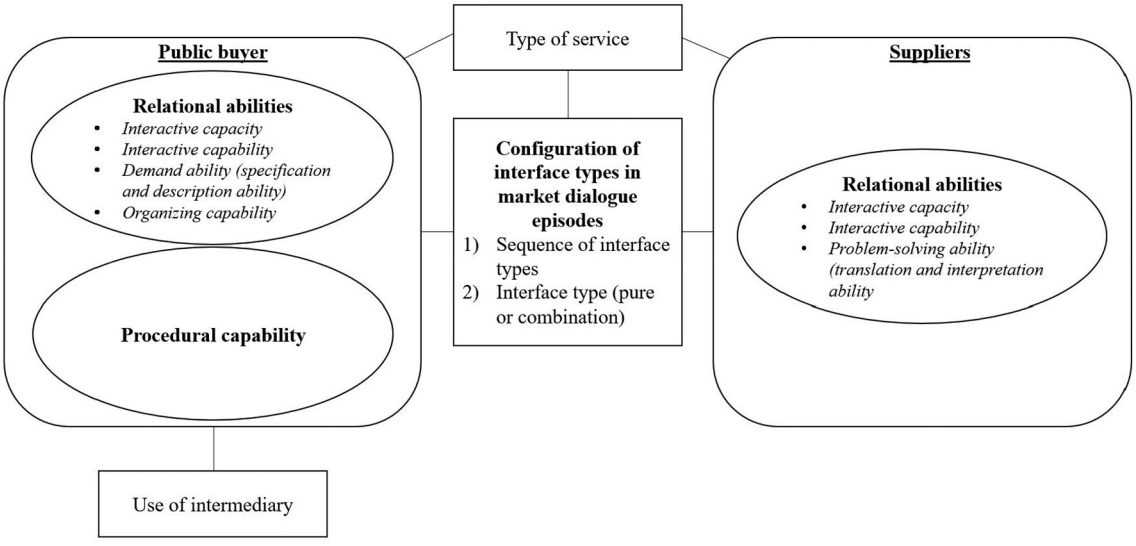

Fig. 2. Revised analytical framework.

service development and the type of public procurement procedure to apply in the tender phase.

In addition to the subdimensions of the public buyer's relational ability identified in previous literature (Araujo et al., 2016; Bjerhammar & Elbe, 2018), we identified *organizing capability* as an additional subdimension of the public buyer's relational ability. *Organizing capability* involves arranging market dialogue episodes that enable relational exchange and create trust. Organizing capability is necessary for bringing about translational and interactive interfaces in the market dialogue that enable the public buyer "to interact with suppliers to communicate agency needs, collect market information, and engage with them […]" (Valovirta, 2015, p. 73). As discussed earlier, our study shows that the public buyer must adjust the questions and aims to the type of market dialogue episode and the level where the interaction occurs (i.e., dyad or network).

Over time, "firms learn how to interact with specific suppliers, learn how to manage different categories of interfaces and learn, indirectly and vicariously, from their suppliers' experience with other customers" (Araujo et al., 2016, p. 18). Thus, through experience from organizing market dialogues, public buyers can develop their relational ability for market dialogue interaction.

6.2.2. Public buyer's procedural capability

To organize market dialogue episodes with buyer-supplier interaction within the public procurement regulations, the public buyer's *procedural capability* was identified as an additional and important capability. The public buyer needs to be competent in dealing with the technical and administrative requirements that public procurement regulations and principles pose on market dialogues, similar to the findings of suppliers' capabilities of participating in tendering processes (Flynn & Davis, 2017). For example, market dialogues need to be open for all suppliers who want to participate; suppliers need to be given the same information, posed similar questions, and provided equal time. However, the empirical findings show that overly strict interpretations of the regulations can hamper interaction and result in specified interfaces rather than translational and interactive interfaces.

6.2.3. Suppliers' relational ability

The suppliers' *interactive capacity* was found to be, to some extent, dependent on the public buyer's interactive capacity, as the public buyer decides on the form and timing of interactions in the market dialogue. Our cases illustrate that the time the public buyer allocates to market dialogue episodes and the information it provides beforehand influence the resources (e.g., time, number and type of personnel) suppliers devote to market dialogue interaction. Thus, if the public buyer aims to develop the service through translational and interactive interfaces in market dialogue episodes, a prerequisite is to dedicate sufficient time and resources to, as well as provide information beforehand of, the market dialogue to enable suppliers to dedicate sufficient interactive capacity.

Suppliers' *interactive capability* involves their knowledge of how to interact with the public buyer during market dialogue. Depending on the type of service, multinational companies, SMEs, and local startups with different experiences and capabilities may participate in the market dialogue. Specifically, being a small supplier in public procurement is regarded as a liability (Flynn, 2017). SMEs and startups may lack the experience necessary to interact with a public buyer. Therefore, the buyer should pay attention to the limited relational abilities of the SMEs and the limited resources they can allocate to participating in market dialogues. The buyer should also consider the specific position of incumbent suppliers that may participate in the market dialogue. Our findings show that, due to the experience gained with the particular buyer, the incumbent supplier may have built the capability to interact with the specific buyer (Araujo et al., 2016; Håkansson et al., 2009) and other advantages due to its expertise in providing the tendered service (Atkinson, 2020). However, incumbent suppliers may have become so familiar with the customer organization that they find it difficult to suggest how to improve the services (Selviaridis, Spring, & Araujo, 2013). Thus, the buyer's interactive capability should be generic, but also adapted to different types of suppliers, and specific to particular suppliers (Araujo et al., 2016).

6.3. Features of the service

The research findings show that different abilities and types of interfaces are required to specify needs related to different services (Wynstra, Axelsson, & Van Der Valk, 2006). Thus, the buyer's *demand ability* is essential when using the suppliers' expertise to develop the service (McKevitt & Davis, 2014). Gaining a mutual understanding of how to develop services when qualitative aspects are important requires a better *description ability* and more interactive interfaces, as revealed by the Catering Service, where the buyer lacked description ability and could not engage the suppliers in renewing the service. Consequently, in PPfI, description abilities are imperative for communicating the required service quality. For standardized services, however, a *specification ability* may suffice.

Our cases show that the buyer's demand ability and the service features affect the suppliers' problem-solving ability. For example, *translation ability* may suffice if the service is standard, whereas *interpretation abilities* are required when developing services, specifically in PPfI. Examples of services with high-quality requirements are municipal catering provisions, which involve intangible aspects such as the quality and taste of food and more environmentally friendly and comfortable ferry services. An example from another context, where the buyer's specification ability and the supplier's translation ability play a significant role, is printing services for offices. However, people-intensive services, such as health care services, require description ability from the buyer and problem-solving ability from the supplier, because of the qualitative elements of the service. For example, in elderly care, the personnel's education, including knowledge of the individual needs of the older people, and the personnel's empathy ability are central.

6.4. Use of intermediaries

Our findings reveal that the buyer's relational ability to arrange market dialogue interactions consists of several, highly intertwined (cap)abilities. For example, organizing *interactive* market dialogue episodes and articulating *qualitative* procurement needs requires organizing capabilities and description abilities. With arms-length and transactional relationships prevailing in public procurement (Lian & Laing, 2004; Valovirta, 2015), a public buyer may have insufficient relational abilities to design and handle the configuration of interfaces needed in market dialogue. In such cases, the public buyer may rely on borrowing or buying the interactive capacity and capability of intermediaries that offer market dialogue services. Our empirical findings showed the intermediary could support the public buyer in the market dialogue and improve their *interactive* and *organizing capabilities*. However, in our cases, we did not find an intermediary to support the supplier side. Examples of organizations and/or programs providing support to public buyers are PIANOo (Dutch Public Procurement Expertise Centre) in the Netherlands, Hankintakeino (Competence Center for Sustainable and Innovative Public Procurement) in Finland, and PPPI Service center (national competence centre for innovation procurement) in Austria.

Several studies in public procurement have highlighted the importance of such organizations (Edler & Yeow, 2016; Keränen, 2017b; Rainville, 2021; van Winden & Carvalho, 2019) who can influence the design of interfaces in the market dialogues and train the public buyer to improve their relational ability. For example, Edler, Georghiou, Uyarra, and Yeow (2015) argue that suppliers score the relational abilities and practices of public buyers lower than those of private-sector buyers. As Keränen (2017b, p. 208) noticed: "The dialogue between the buyer and suppliers should rest on a friendly and trustful atmosphere that enhances honest discussion about procurement terms and allows the development

of new, unanticipated solutions that meet public organizations' and society's needs." Besides having different experiences concerning relational abilities, public and private actors differ in many ways, which can motivate the use of an intermediary to create a network between public actors over the long term (Dóra & Szalkai, 2020).

Waluszewski et al. (2019, p. 1128) highlight that buyer-supplier interaction "has to be actively organized by the counterparts around each party's internal resources and activities" to benefit both sides of the exchange interface. However, unlike the private sector, in public procurement, the buyer is responsible for organizing the market dialogue, and the suppliers may take for granted that the buyer has the legitimate power to manage the market dialogue interaction. Working together, the intermediary could activate the suppliers to participate in the organizing, adding interactivity to the market dialogue from the very beginning, while the buyer could use its procedural ability to ensure that the public procurement regulations are observed.

7. Conclusion and contributions

This article conceptualized buyer-supplier interfaces during the market dialogue of public procurement and explained the connections between the public buyer's and the suppliers' relational abilities and the buyer-supplier interfaces. Previous studies have argued that interaction is hindered (Melander & Arvidsson, 2020; Waluszewski & Wagrell, 2013) or limited in public procurement (Uyarra, Edler, Garcia-Estevez, Georghiou, & Yeow, 2014). However, our study provides empirical evidence that interaction can occur between public buyers and potential suppliers before competitive tendering in the context of regular public procurement. Thus, we responded to calls for more research on buyer-supplier interaction before the tendering phase (Torvatn & de Boer, 2017).

7.1. Theoretical contributions

Our study contributes to supplier management as well as public procurement research. First, previous studies have addressed how various interfaces can be used for managing different relationships (Araujo et al., 1999) and how interfaces can change over time in settings with private sector buyers and suppliers (Andersen & Gadde, 2019; Boes & Holmen, 2003). We enrich the interface framework (Araujo et al., 1999) by showing that buyer-supplier interaction in market dialogue does not feature a single interface, but rather a configuration of interfaces. The configuration of interfaces captures i) the sequence of interfaces in market dialogue episodes and ii) the purity of the interface in each episode (i.e., the interface is pure or a mix of several interfaces), thus corroborating the findings by Lind and Melander (2019) in public procurement settings. Second, we elaborated on the subdimensions of the buyer's and the suppliers' relational abilities and showed how these influence buyer-supplier interaction and interfaces in the market dialogue of public procurement. We separated procedural capability from organizing capability for two reasons. Firstly, because procedural capabilities involve the ability to choose when to use which type of interface, including knowledge *how* to organize market dialogues as well as knowledge *when* (and *when not*) to organize such dialogues. Secondly, to highlight the importance of creating a trustful atmosphere. Procedural capabilities are essential for observing public procurement regulations. However, they need to be supplemented by organizing capabilities to bring about relational exchange. Although the link between buyer-supplier interfaces and relational abilities is not new (Araujo et al., 2016), we considered this in a "public buyer-private supplier" setting. Finally, intermediary organizations with knowledge and experience in market dialogue interaction can supplement the public buyer's relational ability to organize market dialogue episodes.

7.2. Managerial implications

This study has several implications for practitioners. First, by becoming aware of the possibilities in market dialogue, public buyers can bring about public buyer-supplier interaction. Such interaction can enable the public buyer to utilize the suppliers' knowledge of available or pending solutions in the market and improve the conditions for different suppliers' participation in public procurement. Second, our study illustrated that market dialogue may comprise different interfaces between the public buyer and the suppliers. Hence, when organizing market dialogue, the public buyer needs to design a combination of buyer-supplier interfaces in and across market dialogue episodes that ensures valuable interaction. Third, public buyers often have limited capacity and capability in organizing interaction. Not only may few employees have interaction experience, but also their experience may be limited, with little of their time allocated to supplier interaction. When public buyers' relational abilities do not suffice, intermediary organizations can supplement the public buyer when conducting market dialogue episodes in public procurement. Additionally, suppliers with limited experience of interacting with public buyers can benefit from using external experts to learn how to benefit from engaging in market dialogue interaction. Spring and Araujo (2014) suggest that a mismatch between the capabilities of buyers and suppliers leads to entrepreneurial opportunities for intermediaries who can bridge these gaps.

7.3. Limitations and further research

We suggest further research in four directions. First, it would be interesting to understand how different types of suppliers (i.e., large, SMEs, start-ups, local, international, etc.) approach market dialogue activities and the opportunities and challenges they experience regarding relational abilities. Second, our study showed how an intermediary organization helped the public organization organize the market dialogue. However, the intermediary's assistance may not always be absorbed and translated into action by the public buyer, whose ability to absorb and process the knowledge depends on its absorptive capacity (Cohen & Levinthal, 1990). Further research could focus on understanding how public organizations develop absorptive capacity, enabling them to renew public procurement practices. Additionally, we encourage longitudinal research that investigates how public organizations develop their relational ability over time and the interplay between intra- and inter-organizational elements that constitute the evolving, dynamic organizational capabilities. Third, while our study did not identify the intermediary to support the supplier side, we encourage further research to understand how intermediaries can improve suppliers' capabilities to interact in market dialogue interactions, such as through competence increasing seminars. Finally, our revised framework could be applied in different procurement contexts, for example, in PPfI and in private procurement, to discover differences and similarities across contexts.

Acknowledgements

The financial support of the Finnish Funding Agency for Technology and Innovation, TEKES (from 1st of January 2018 Business Finland) for the project TOPNETS (40049/14) and the Regional research fund for Mid-Norway for the project 256965 is gratefully acknowledged. The authors would also like to thank the anonymous reviewers for their useful comments.

Appendix A. Appendix

Table A.1
Data collection methods.

Interviews			
Catering Service	In-depth interviews with PU and municipality personnel	Eight interviews: 30–180 min	June 2014 – Nov. 2017
	Semi-structured interviews with potential/selected suppliers	Eight interviews with five suppliers: 30–60 min	Sep. – Oct. 2015
Ferry Service	Semi-structured interviews with CMO personnel	Four interviews with two PT members and a steering committee member: 60–120 min	Apr. 2016 – May 2017
	Semi-structured interviews with a potential supplier and sub-supplier	Two interviews: 60 min	Nov. 2016 – Jan. 2017
	IPI	One interview: 50 min	Mar.–Apr. 2017
Workshops			
Catering Service	The municipality, PU personnel	four workshops	June 2014 – Nov. 2017
Ferry Service	CMO, IPI, other public organizations	three workshops	Apr. 2016 – Feb. 2017
Document Studies			
Catering Service	Initial and final RFQs; contract draft, service definition; service process descriptions; quality assessment; pre-prepared material for technical dialogues		
Ferry Service	Prior information notice; contract notice, notice of contract award; annual reports, press releases; pre-prepared material for dialogue conference; questions regarding the preliminary RFQ		
Observations			
Catering Service	One information session (90 min); five technical dialogues (90 min each)		Sep.–Dec. 2014

Table A.2
Case analyses of public buyer's relational ability and procedural capability.

	Pattern	Sub-pattern	Illustrative case evidence
Interactive capacity	Sufficient time for interaction	- Insufficient time for reaching aims in market dialogue (Catering Service). - Sufficient time for reaching market dialogue aims (Ferry Service). - Market dialogue was pressed on time (Ferry Service).	"I thought about asking something [in the information session], but time was short." (Catering Service, supplier 3) "[…] the project [Ferry service] had to live with risk related to time […] we used all available time to complete this." (Ferry service, Project member 1)
	Coordinate and involve different internal functions	- Lack of customer involvement (Catering Service). - Collaboration across internal functions: competence development of service and distribution of risk among personnel (Ferry Service).	"From the customer's side, there are so many operations that it is very difficult to obtain information." (Catering Service, Service Manager) "I have the feeling that the customer did not understand how much this [a change in delivery process] requires. I am not sure if the Service Manager [head of PU] was able to tell or if she understood." (Catering Service, supplier 1) "[…] Through the dialogue conference and technical dialogues, we were building competence in those who were going to be responsible for the contract." (Ferry Service, Steering committee member)
	Intermediary providing additional resources	- IPI involved in planning of market dialogue and presenting in dialogue conference (Ferry Service).	IPI presenting in dialogue conference about market dialogue in public procurement and the possibilities for suppliers (Ferry Service, Program dialogue conference) "I contacted IPI and asked for their help in this procurement." (Ferry service, PT member 1)
Specification ability	Provide sufficient and adequate information about service needs and context	- Information about the tender and service was provided, but not what suppliers could influence, focus on details (Catering Service). - Providing information, aims of tender and service, and what supplier knowledge that is interesting for the buyer (Ferry Service). - RFQ draft developed in advance of market dialogue (Ferry Service).	"There should be some idea of what the agenda will be, what is to be developed, and so on; then we could do some homework beforehand." (Catering Service, supplier 1) "Those goals were clearly communicated to suppliers in the dialogue conference." (Ferry Service, PT member 1) The PU was pleased with the minor corrections that the suppliers made to the RFQ draft (Catering Service, workshop with the PU). "We experience that the clearer we are in terms of what we are asking for, the better they [suppliers] are in giving advice […] When you have done a good analysis of the objectives, you can communicate better what you want to achieve." (Ferry Service, Steering committee member)

(*continued on next page*)

Table A.2 (*continued*)

	Pattern	Sub-pattern	Illustrative case evidence
Description ability	Provide information for suppliers to understand quality elements of service	- PU lacked description ability, not informing suppliers about subjective qualities of the service (Catering Service).	"Of course, always when it is possible, we can make suggestions, but if we do not have excellent information about the subject of the tendering, then it is difficult […]" (Catering Service, supplier 2)
Interactive capability	Knowledge and skills of how to interact with suppliers	- PU could not use suppliers' input to a degree that satisfied suppliers (Catering Service). - PT was attentive in using suppliers' knowledge (Ferry Service). - PT used suppliers' knowledge to adjust RFQ, such as the timetables (Ferry Service). - PT had limited knowledge of how to use suppliers' knowledge (Catering Service).	"We suggested some quality criteria that would have been useful to take into account […] In the final RFQ, our suggestions were not included." (Catering Service, supplier 5) "[…] we got a full score in the technical dialogues. We were able to identify the cost drivers, and we were able to build a contract or a strategy around this that made us stick to the budgets." (Ferry Service, PT member 1) PT used suppliers' knowledge to adjust RFQ, such as the timetables (Ferry Service).
Organizing capability	Organize market dialogue episodes in line with aim and interaction level	- Adjust questions to market dialogue episode (Ferry Service). - No intention to organize market dialogue episodes according to interaction level (Catering Service).	There is no point in using time on questions that they answer in the technical dialogues […] There is no point in asking questions that they do not want to answer in the dialogue conference. Then you get nothing." (Ferry Service, PT member 1) In the information session, the buyer asked the suppliers questions, even though they knew that the suppliers will not discuss in the presence of competitors. (Catering Service, workshops, observations)
	Intermediary providing knowledge and training in organizing market dialogue	- IPI supported the preparations for the market dialogue (Ferry Service).	"We made it [dialogue note] in the user group […] then we worked very closely in some meetings with IPI." (Ferry Service, PT member 1) IPI about market dialogue "It [market dialogue] does not need to be because they are buying some new or improved solution, but could be that they need more bidders [suppliers] and to mobilize the market. These are also reasons to arrange market dialogue. When we guide and support them, we go through the reasons for doing it. So, they need to think through—why we are doing this." (Ferry Service, IPI)
Procedural capability	Organize market dialogue according to the principles of public procurement	- PU had procedural and public procurement knowledge (Catering Service). - The suppliers were provided an equal amount of time in the technical dialogues (Catering Service and Ferry Service). - The suppliers were asked the same questions in the technical dialogues (Ferry Service).	"I always make sure that if they [suppliers] tell something about their own functions, so why take the risk to tell it further?" (Catering Service, PU, Service Manager) The same questions were distributed in the invitation to the market dialogue available in the guiding notice published on the national tender database (Ferry service, dialogue note).

Table A.3
Case analyses of suppliers' relational ability.

Subdimension	Pattern	Sub-pattern	Illustrative case evidence
Interactive capacity	The public buyer frames suppliers' time for interaction.	- Suppliers' time for interaction was decided upon by the public buyer (Ferry Service and Catering Service). - Suppliers were given equal amount of time for interaction in technical dialogues (Ferry Service and Catering Service).	"Each of them [suppliers] had not been given that much time [in technical dialogues]." (Ferry Service, PT member 1)
	Suppliers' devotion of resources partly depend on information from the public buyer.	- The public buyer's limited information about the agenda for the market dialogue episodes limited the suppliers' resources. Suppliers did not know what type of expertise was needed in the dialogues and whom to send there (Catering Service).	"Some central issues [about the forthcoming technical dialogue] could be collected in a document and sent to everyone [suppliers], such as the names of those taking part [in the technical dialogue]." (Catering Service, supplier 5) "Supplier A came with two [employees], while the others [suppliers] came with one." (Ferry Service, PT member 1)
Translation ability	De-codification of formal specification.	- Understand demands to reduce the risk of the tender (Ferry Service). - Ability to translate the buyer's requirements (Catering Service).	"Understand demands. This reduces the risk and it is about understanding what the public buyer requires." (Ferry Service, notes from supplier interview) "[…] everything is fixed in advance, and you just answer rigorously to the questions in the RFQ." (Catering Service, supplier 2)
Interpretation ability	The ability to realize and develop what the buyer requires.	- Incumbent supplier was in the best position to translate needs, whereas the others had limited understanding of the development targets (Catering Service).	"We know the difficulties [in meal deliveries], how it works in daily life, resources and other things." (Catering Service, supplier 1)
Interactive capability	Knowledge and skills of how to interact with public buyer.	- Suppliers providing knowledge to public buyer about risk factors (Ferry Service). - Traditionally the buyer takes the initiative to interact. The suppliers are used to buyer-led interaction and accept it (Catering Service).	"In the technical dialogues, the supplier could ask questions about what they were unsure about." (Ferry Service, notes from supplier interview) "They [suppliers] were interested in informing." (Ferry Service, Steering committee member) "It is easier in the private sector [tendering]; this is much stiffer [public tendering]. (Catering service, supplier 4) "It works better in the private sector to have open and ongoing discussion before the [tendering] process (Catering service, supplier 2)

References

Aaboen, L., Dubois, A., & Lind, F. (2012). Capturing processes in longitudinal multiple case studies. *Industrial Marketing Management, 41*(2), 235–246.

Abrahamsen, M. H. (2016). Researching business interaction: Introducing a conceptual framework and methodology. *IMP Journal, 10*(3), 464–482.

Alhola, K., Salo, M., Antikainen, R., & Berg, A. (2017). Promoting public procurement of sustainable innovations: Approaches for effective market dialogue. In K. V. Thai (Ed.), *Global public procurement theories and practices* (pp. 59–82). Cham: Springer International Publishing.

Andersen, P. H., & Gadde, L.-E. (2019). Organizational interfaces and innovation: The challenge of integrating supplier knowledge in LEGO systems. *Journal of Purchasing and Supply Management, 25*(1), 18–29.

Araujo, L., Dubois, A., & Gadde, L.-E. (1999). Managing interfaces with suppliers. *Industrial Marketing Management, 28*(5), 497–506.

Araujo, L., Gadde, L.-E., & Dubois, A. (2016). Purchasing and supply management and the role of supplier interfaces. *IMP Journal, 10*(1), 2–24.

Arlbjørn, J. S., & Freytag, P. V. (2012). Public procurement vs private purchasing: Is there any foundation for comparing and learning across the sectors? *International Journal of Public Sector Management, 25*(3), 203–220.

Atkinson, C. L. (2020). Full and open competition in public procurement: Values and ethics in contracting opportunity. *International Journal of Public Administration, 43*(13), 1169–1182.

Axelsson, B., & Torvatn, T. (2017). Public purchasing in an interactive world. In H. Håkansson, & I. Snehota (Eds.), *No business is an island: Making sense of the interactive business world*. EBSCO Publishing.

Bjerhammar, L., & Elbe, J. (2018). A conceptualization of suppliers' and buyers' abilities in product development: Cases from the retail industry. *IMP Journal, 12*(3), 413–426.

Boes, H., & Holmen, E. (2003). Changing supplier-customer interfaces in design construct contracts. In *Paper presented at the 19th Annual ARCOM Conference 2003*.

Bygballe, L. E., Jahre, M., & Swärd, A. (2010). Partnering relationships in construction: A literature review. *Journal of Purchasing and Supply Management, 16*(4), 239–253.

Cohen, W. M., & Levinthal, D. A. (1990). Absorptive capacity: A new perspective on learning and innovation. *Administrative Science Quarterly, 35*(1), 128–152.

Denzin, N. K. (1978). *The research act: A theoretical introduction to sociological methods*. New York: McGraw-Hill.

Di Mauro, C., Ancarani, A., & Hartley, T. (2020). Unravelling SMEs' participation and success in public procurement. *Journal of public procurement, 20*(4), 377–401.

Directive 2014/24/EU. (2014). *Directive 2014/24/EU of the European Parliament and of the council of 26 February 2014, Article 40 C.F.R.*

Dóra, T. B., & Szalkai, Z. (2020). The impacts of a new type of actor as an intermediary in public–private collaboration in health-care prevention. *Journal of Business & Industrial Marketing, 36*(3), 420–435.

Dubois, A., & Araujo, L. (2007). Case research in purchasing and supply management: Opportunities and challenges. *Journal of Purchasing and Supply Management, 13*(3), 170–181.

Dubois, A., & Gadde, L.-E. (2002). Systematic combining: An abductive approach to case research. *Journal of Business Research, 55*(7), 553–560.

Edler, J., & Georghiou, L. (2007). Public procurement and innovation—Resurrecting the demand side. *Research Policy, 36*(7), 949–963.

Edler, J., Georghiou, L., Uyarra, E., & Yeow, J. (2015). The meaning and limitations of public procurement for innovation: A supplier's experience. In C. Edquist, N. S. Vonortas, J. M. Zabala-Iturriagagoitia, & J. Edler (Eds.), *Public procurement for innovation* (pp. 35–64). Cheltenham, UK: Edward Elgar Publishing.

Edler, J., & Yeow, J. (2016). Connecting demand and supply: The role of intermediation in public procurement of innovation. *Research Policy, 45*(2), 414–426.

Edquist, C., Vonortas, N. S., Zabala-Iturriagagoitia, J. M., & Edler, J. (2015). *Public procurement for innovation*. Cheltenham, UK: Edward Elgar Publishing.

Edquist, C., & Zabala-Iturriagagoitia, J. M. (2012). Public procurement for innovation as mission-oriented innovation policy. *Research Policy, 41*(10), 1757–1769.

Eisenhardt, K. M. (1989). Building theories from case study research. *Academy of Management Journal, 14*(4), 532–550.

Ellegaard, C., & Koch, C. (2012). The effects of low internal integration between purchasing and operations on suppliers' resource mobilization. *Journal of Purchasing and Supply Management, 18*(3), 148–158.

Eriksson, V., Hulthén, K., Sundquist, V., Fredriksson, A., & Janné, M. (2021). The role of public actors in construction logistics: Effects on and of relational interfaces. *Construction Management and Economics, 39*(10), 791–806.

Erridge, A., & Greer, J. (2002). Partnerships and public procurement: Building social capital through supply relations. *Public Administration, 80*(3), 503–522.

Erridge, A., & McIlroy, J. (2002). Public procurement and supply management strategies. *Public Policy and Administration, 17*(1), 52–71.

Flynn, A. (2017). Re-thinking SME disadvantage in public procurement. *Journal of Small Business and Enterprise Development, 24*(4), 991–1008.

Flynn, A., & Davis, P. (2017). Explaining SME participation and success in public procurement using a capability-based model of tendering. *Journal of public procurement, 17*(3), 337–372.

Ford, D., Gadde, L.-E., Håkansson, H., & Snehota, I. (2011). *Managing business relationships* (3 ed.). Chichester: John Wiley & Sons Ltd.

Forkmann, S., Henneberg, S. C., & Mitrega, M. (2018). Capabilities in business relationships and networks: Research recommendations and directions. *Industrial Marketing Management, 74*, 4–26.

Forkmann, S., Henneberg, S. C., Naude, P., & Mitrega, M. (2016). Supplier relationship management capability: A qualification and extension. *Industrial Marketing Management, 57*, 185–200.

Gadde, L.-E., & Snehota, I. (2019). What does it take to make the most of supplier relationships? *Industrial Marketing Management, 83*, 185–193.

Gadde, L.-E., & Wynstra, F. (2017). Purchasing and supply management: On strategic roles and supplier interfaces. In H. Håkansson, & I. Snehota (Eds.), *No business is an island: Making sense of the interactive business world* (pp. 67–86). UK: Emerald Publishing.

Grandia, J., & Kruyen, P. M. (2020). Assessing the implementation of sustainable public procurement using quantitative text-analysis tools: A large-scale analysis of Belgian public procurement notices. *Journal of Purchasing and Supply Management, 16*, Article 100627.

Guarnieri, P., & Gomes, R. C. (2019). Can public procurement be strategic? A future agenda proposition. *Journal of public procurement, 19*(4), 295–321.

Håkansson, H. (1987). *Industrial technological development: A network approach*. London: Croom Helm.

Håkansson, H., & Axelsson, B. (2020). What is so special with outsourcing in the public sector? *Journal of Business & Industrial Marketing, 35*(12), 2011–2021.

Håkansson, H., Ford, D., Gadde, L.-E., Snehota, I., & Waluszewski, A. (2009). *Business in networks*. UK: John Wiley and Sons.

Hartmann, A., Roehrich, J., Frederiksen, L., & Davies, A. (2014). Procuring complex performance: The transition process in public infrastructure. *International Journal of Operations & Production Management, 34*(2), 174–194.

Heijboer, G., & Telgen, J. (2002). Choosing the open or the restricted procedure: A big deal or a big deal? *Journal of public procurement, 2*(2), 187–215.

Holma, A.-M., Vesalainen, J., Söderman, A., & Sammalmaa, J. (2020). Service specification in pre-tender phase of public procurement - a triadic model of meaningful involvement. *Journal of Purchasing and Supply Management, 26*(1), 1–18.

Holmen, E., Håkansson, H., & Pedersen, A.-C. (2003). Framing as means to manage a supply network. *Journal of Customer Behaviour, 3*(2), 385–407.

Järvensivu, T., & Törnroos, J.-Å. (2010). Case study research with moderate constructionism: Conceptualization and practical illustration. *Industrial Marketing Management, 39*(1), 100–108.

Johnsen, R. E., & Ford, D. (2006). Interaction capability development of smaller suppliers in relationships with larger customers. *Industrial Marketing Management, 35*(8), 1002–1015.

Kale, P., Singh, H., & Perlmutter, H. (2000). Learning and protection of proprietary assets in strategic alliances: Building relational capital. *Strategic Management Journal, 21*(3), 217–237.

Kelly, S., Marshall, D., Walker, H., & Israilidis, J. (2021). Supplier satisfaction with public sector competitive tendering processes. *Journal of public procurement, 21*(2), 183–205.

Keränen, O. (2017a). Dynamics of the transition process towards partnership thinking in centralized public procurement. *Industrial Marketing Management, 65*, 86–99.

Keränen, O. (2017b). Roles for developing public–private partnerships in centralized public procurement. *Industrial Marketing Management, 62*, 199–210.

Knutsson, H., & Thomasson, A. (2014). Innovation in the public procurement process: A study of the creation of innovation-friendly public procurement. *Public Management Review, 16*(2), 242–255.

Langley, A. (1999). Strategies for theorizing from process data. *Academy of Management Review, 24*(4), 691–710.

Leite, E., & Bengtson, A. (2018). A business network view on value creation and capture in public-private cooperation. *Industrial Marketing Management, 73*, 181–192.

Lember, V., Kalvet, T., & Kattel, R. (2011). Urban competitiveness and public procurement for innovation. *Urban Studies, 48*(7), 1373–1395.

Lember, V., Kattel, R., & Kalvet, T. (2014). *Public procurement, innovation and policy*. Berlin: Springer.

Lian, P. C. S., & Laing, A. W. (2004). Public sector purchasing of health services: A comparison with private sector purchasing. *Journal of Purchasing and Supply Management, 10*(6), 247–256.

Lind, F., & Melander, L. (2019). Organizing supplier interfaces in technological development. *Journal of Business & Industrial Marketing, 34*(5), 1131–1142.

Lorenzoni, G., & Lipparini, A. (1999). The leveraging of interfirm relationships as a distinctive organizational capability: A longitudinal study. *Strategic Management Journal, 20*(4), 317–338.

McKevitt, D., & Davis, P. (2014). Supplier development and public procurement: Allies, coaches and bedfellows. *International Journal of Public Sector Management, 27*(7), 550–563.

McKevitt, D., & Davis, P. (2015). How to interact, when and with whom? SMEs and public procurement. *Public Money & Management, 35*(1), 79–86.

Melander, L., & Arvidsson, A. P. (2020). Getting innovation out of interactions in the public procurement context. *Journal of Business & Industrial Marketing, 35*(12), 2051–2065.

Miles, M. B., Huberman, A. M., & Saldaña, J. (2014). *Qualitative data analysis: A methods sourcebook* (3rd ed.). Thousand Oaks, California: Sage Publications.

Mitrega, M., Forkmann, S., Ramos, C., & Henneberg, S. C. (2012). Networking capability in business relationships—Concept and scale development. *Industrial Marketing Management, 41*(5), 739–751.

Mitrega, M., Forkmann, S., Zaefarian, G., & Henneberg, S. C. (2017). Networking capability in supplier relationships and its impact on product innovation and firm

performance. *International Journal of Operations & Production Management, 37*(5), 577–606.
Munksgaard, K. B., Evald, M. R., Clarke, A. H., & Damgaard, T. M. (2017). What is in it for me: Firms strategizing for public-private innovation. *IMP Journal, 11*(1), 72–90.
Nissen, H. A., Evald, M. R., & Clarke, A. H. (2014). Knowledge sharing in heterogeneous teams through collaboration and cooperation: Exemplified through Public–Private-Innovation partnerships. *Industrial Marketing Management, 43*(3), 473–482.
OECD. (2019). *Government at a glance 2019*. Paris: OECD Publishing.
OGC. (2006). Early market engagement. Retrieved from https://procurement-forum.eu/resource/download/42/OGC_Early_Market_Engagement.pdf.
Oruezabala, G., & Rico, J.-C. (2012). The impact of sustainable public procurement on supplier management—The case of French public hospitals. *Industrial Marketing Management, 41*(4), 573–580.
Park, C., & Lee, H. (2015). Value co-creation processes—Early stages of value chains involving high-tech business markets: Samsung–Qualcomm semiconductor foundry businesses. Journal of Business-to-Business Marketing, 22(3), 229–252.
Pelkonen, A., & Valovirta, V. (2015). Can service innovations be procured? An analysis of impacts and challenges in the procurement of innovation in social services. *Innovation: The European Journal of Social Science Research, 28*(3), 384–402.
Rainville, A. (2021). Stimulating a more circular economy through public procurement: Roles and dynamics of intermediation. *Research Policy, 50*(4), Article 104193.
Roodhooft, F., & Van den Abbeele, A. (2006). Public procurement of consulting services. *International Journal of Public Sector Management, 25*(3), 203–220.
Schreiner, M., & Corsten, D. (2004). Integrating perspectives: A multidimensional construct of collaborative capability. In *Complex collaboration: Building the capabilities for working across boundaries*. Emerald Group Publishing Limited.
Selviaridis, K., Spring, M., & Araujo, L. (2013). Provider involvement in business service definition: A typology. *Industrial Marketing Management, 42*(8), 1398–1410.
Semple, A. (2015). *Guidance for public authorities on public procurement of innovation* (1st ed.). ICLEI: Procurement of innovation platform.
Sivadas, E., & Dwyer, F. R. (2000). An examination of organizational factors influencing new product success in internal and alliance-based processes. *Journal of Marketing, 64*(1), 31–49.
Spring, M., & Araujo, L. (2014). Indirect capabilities and complex performance: Implications for procurement and operations strategy. *International Journal of Operations & Production Management, 34*(2), 150–173.
Stake, R. E. (2006). *Multiple case study analysis*. New York: Guilford Press.
Stewart, J. (2012). Multiple-case study methods in governance-related research. *Public Management Review, 14*(1), 67–82.
Sundquist, V., & Melander, L. (2020). Mobilizing resources in product development by organizational interfaces across firms, units and functions. *Journal of Business & Industrial Marketing, 36*(2), 307–323.
Torvatn, T., & de Boer, L. (2017). Public procurement reform in the EU: Start of a new era? *IMP Journal, 11*(3), 431–451.
Torvinen, H., & Ulkuniemi, P. (2016). End-user engagement within innovative public procurement practices: A case study on public–private partnership procurement. *Journal of Industrial Marketing Management, 58*, 58–68.
Uttam, K., & Roos, C. L. L. (2015). Competitive dialogue procedure for sustainable public procurement. *Journal of Cleaner Production, 86*, 403–416.
Uyarra, E., Edler, J., Garcia-Estevez, J., Georghiou, L., & Yeow, J. (2014). Barriers to innovation through public procurement: A supplier perspective. *Technovation, 34*(10), 631–645.
Uyarra, E., & Flanagan, K. (2010). Understanding the innovation impacts of public procurement. *European Planning Studies, 18*(1), 123–143.
Uyarra, E., Zabala-Iturriagagoitia, J. M., Flanagan, K., & Magro, E. (2020). Public procurement, innovation and industrial policy: Rationales, roles, capabilities and implementation. *Research Policy, 49*(1).
Valovirta, V. (2015). Building capability for public procurement of innovation. In C. Edquist, N. S. Vonortas, J. M. Zabala-Iturriagagoitia, & J. Edler (Eds.), *Public procurement for innovation* (pp. 65–86). Cheltenham, UK: Edward Elgar.
Waluszewski, A., Håkansson, H., & Snehota, I. (2019). The public-private partnership (PPP) disaster of a new hospital–expected political and existing business interaction patterns. *Journal of Business & Industrial Marketing, 34*(5), 1119–1130.
Waluszewski, A., & Wagrell, S. (2013). Public purchasing policy as innovation killer. *The IMP Journal, 7*(1), 1–11.
van Winden, W., & Carvalho, L. (2019). Intermediation in public procurement of innovation: How Amsterdam's startup-in-residence programme connects startups to urban challenges. *Research Policy, 48*(9), 1–11.
Woldesenbet, K., Ram, M., & Jones, T. (2012). Supplying large firms: The role of entrepreneurial and dynamic capabilities in small businesses. *International Small Business Journal, 30*(5), 493–512.
Wynstra, F., Axelsson, B., & Van Der Valk, W. (2006). An application-based classification to understand buyer-supplier interaction in business services. *International Journal of Service Industry Management, 17*(5), 474–496.
Yin, R. K. (2017). *Case study research and applications: Design and methods* (6 ed.). Thousand Oaks, CA: Sage Publications.