

## **End-user engagement within innovative public procurement practices**

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### **ABSTRACT**

The purpose of the paper is to establish a model of end-user engagement process within innovative public procurement practices. We focus on the way value creation can be enhanced through actively engaging end-users as co-creators of value in public procurement. The study employs intensive single case method where the findings are based on qualitative data gathered on a Public-Private Partnership (PPP) based school property procurement in northern Finland. In the study, focal relationships within public procurement are examined as a triad between procurer, supplier and public service end-user. The existing studies indicate that the end-user of public procurement can be seen rather similar as a competent customer on a private market setting. End-user's value potential doesn't rest only on creating individual user value but also increasing e.g. public service's social, environmental and political value. The end-user engagement activities in the study are identified and categorized according to value co-creation principles of dialogue, access, risk assessment/reflexivity and transparency. Our findings support the existing theoretical understanding according to which most significant end-user value is achieved through interactive dialogue in the design phase of the public procurement project. The most significant advantages of active end-user engagement source from interaction increasing especially the usability of the provided public service. Study results also indicate positive effects of end-user's independent value creation and sensation of involvement to user's individual value experience. Even though the importance of public service end-user has been recognized by researchers and policy makers for some time, there's a genuine lack of commonly acknowledged user engagement tools for both procurer's and supplier's practical implementation. Formed illustration of the end-user engagement process will be further developed within multiple other public procurement initiatives and innovative procurement practices in the future.

*Keywords* – Public-Private Partnership, Public-Private-People Partnership, Value Co-creation, Innovation

*Paper type* – Competitive paper

## INTRODUCTION

The infrastructure and services procured by public sector can be seen as a necessity to preserve society's economic and social structures (Lähdesmäki & Kilkki 2008). During the last few decades public procurement managed with traditional bidding practices has ran into large pressures for change because of notable shifts in the public procurement environment. Noteworthy drivers for the emergence of new public procurement practices include larger demand of public services due to aging, cuts in funding due to scarce financial situation and new services formed by technological advancements (Pekkarinen et al. 2011; Jamali 2007; Krtalic & Kelebuda 2010). Aligned with these changes, various more market-based public procurement tools have been introduced to procurement practitioners ranging from public finance initiatives to various life-cycle models and pre-commercial procurement options. There is still a lot of untapped opportunities in learning across public sector procurement and private sector purchasing (Arlbjørn & Freytag 2012).

Public-Private Partnership (PPP) has been one of the most popular conceptual models on rearranging public purchasing by giving private sector supplier wider responsibility over the procurement process. Common advantages seen for the implementation of PPP practices include improvements in cost-effectiveness, quality, efficiency, risk assessment and transparency throughout the procurement process (Majamaa et al. 2008; Yescombe 2007). In addition to increased procurement performance, co-operation can be seen as a great platform for the discovery of new innovations and market potential. Hence, both policy makers and researchers have taken more and more notice on the substantial potential of public procurement in development of innovations (Aho et al. 2006; Edler & Georghiou 2007). Nevertheless, for practical decision makers the most prominent and often the only criteria for selecting to use an innovative procurement model has been the strict financial situation and public sector's need to avoid additional debt (Yescombe 2007; Krtalic & Kelebuda 2010). Thus one can argue, the views of policy makers and practical procurement units don't often match in the field and there's a lot of potential to develop these innovative procurement tools further.

One of the most significant sources for public procurement innovativeness is the end-user of public services (e.g. Bovaird 2007; Edler & Georghiou 2007). Innovation within the present study is defined as novelty or reform with significant productivity-, economic efficiency- or other value-adding effects on the actor's performance (Yliherva 2006). Innovations are necessary for public sector's better productivity and new more cost-effective operations (Lee, Olson & Trimi 2012); the desire to create new innovations is one of the key drivers behind the utilization of new differentiated public procurement approaches (Edler & Georghiou 2007). As one of the most prominent sources for innovative solutions are market-based procurement practices' end-user interfaces more favorable to the exchange of know-how, information, viewpoints, experiences, cultures and resources (Yliherva 2006).

Even though the end-user involvement has been acknowledged to impact positively to the innovativeness of the organization, only few studies have been carried out on the role of users in the innovation processes of public procurement (Kallio, Lappalainen & Tammela 2013). According to Bovaird (2007), the public procurement practitioners do not always have a clear understanding of who the client actually is and, therefore, do not know whose needs they're supposed to satisfy. As a result of this, neither the industry nor the procurer are capable of properly estimating the possible savings in costs from systemic innovations. Noteworthy is that the motivational effects of mobilizing the resources of user communities may be even more

important in public service improvement than any efficiency gains achieved through purely technical or organizational innovations (Bovaird 2007).

*The purpose of this paper is to depict the end-user engagement process within innovative public procurement practices.* To accomplish this, we employ the theoretical concepts of value co-creation developed within research on buyer-seller relationships within the private sector. Co-creation of value represents one of the core processes through which to achieve sustainable performance in the marketplace (Vargo, Maglio & Akaka 2008). While with traditional public procurement bidding practices, the role of end-user has to a large extent been regarded more as recipient of value delivered, by employing the concepts of value co-creation, we will examine the end-user of public service as an active participant in the value creation process.

Leavy (2012) sees the concept of value co-creation applicable to any part of the value chain and any field of business the only requirement for the implementation being some form of interaction between the actors. Full implementation of co-creation concept requires complete transformation to the company's competence and culture to understand value. End-customer's value experience is generated in all processes that increase the well-being of the customer and form value-in-use in some level (Grönroos & Voima 2013). In the present paper, we employ the value co-creation approaches by Prahalad and Ramaswamy (2004) and Grönroos (2013; 2008) as these suit the context of public procurement particularly well in terms of involving both the supplier and end-user into the procurement actions formerly managed single-handedly by the procurer.

Despite the presence of the end-user perspective in innovation literature and highly differentiated supply-side measures, conceptually little consideration has been paid to benefits originating from user demand so far (Edler & Georghiou 2007; Aho et al. 2006). The systematic process of activating end-users into the public procurement process has not been consistently explored in the existing literature and the terminology on the phenomenon can be seen heavily fragmented into different fields of study from innovation policies (e.g. Edler et al. 2005) to property management (e.g. Majamaa et al. 2008).

By our ultimate decision to employ the term *end-user engagement* in the study, we will emphasize the process as a set of active value co-creation activities. End-user engagement in public procurement isn't only a sequential process of solving and fulfilling the users' needs but a continuous set of actions that aim to expand the role of service end-users by binding them in the value adding process as co-creators of value. The definition is partially alike with terms of *user participation*, *user involvement* and *co-production of public services* which however cover more the intention of end-user co-creation instead of deeper knowledge on the means of it.

To depict the end-user engagement process within innovative public procurement practices, we address the following research questions:

- RQ1: *What is the main requirement for end-user engagement in innovative public procurement projects?*
- RQ2: *What are the value co-creating activities end-user engagement process is formed of?*

To find answers to the research questions defined, we will first examine the existing theoretical knowledge related to new public procurement practices from end-user oriented perspective to

form a preliminary understanding of the structure of focal relationships within innovative public procurement practices. To identify the value creating activities within the procurement process, we then discuss the existing literature on value co-creation adopted from the private sector setting. Next, the method used in the case research is explained and the data gathering processes are portrayed. Third, we'll display the key findings of the case analysis organized according to the tentative research model. Fourth, the paper introduces the end-user engagement model formed. Finally, we will present the conclusions about the study's theoretical and practical contribution as well as implications for further research.

## THEORETICAL BACKGROUND

### Towards innovative public procurement practices

Public procurement doesn't take place in a vacuum and its context is constantly redefined by social, economic and political trends around. One of the current paradigms of public procurement is encouragement to abandon its traditional practices of doing business and to move closer to relationship contracting, partnerships, networks and strategic alliances. (Lawther & Martin 2005.) A widely shared opinion by public procurement experts is that traditional procurement methods and strict control of practices can be harmful by smothering both innovativeness and cost-effectiveness of the procurement projects (Baily 2008: 87). The lead idea behind closer collaboration in public procurement is that no single actor has all the knowledge, overview, information or resources to solve complex and diversified problems encountered (Lawther & Martin 2005). Market-based approach on public procurement opens opportunities both for mobilizing innovation and at the same time better achieving public policy goals and delivering better service to the citizens.

In PPP procurement practice, the supplier carries a larger liability of the procured object or service for a longer period of time also called the life cycle of the procurement. In other words, public sector sets end targets for the outcomes for the procurement, but doesn't define in advance how to reach these goals (Yescombe 2007). Sharing the project responsibilities delivers the best qualities and know-how of both procurer and the supplier, instead of only one party as with traditional public procurement practices (Krtalic & Kelebuda 2010). PPP model has become a worldwide trend especially in large public service infrastructure acquisitions (Ng, Wong & Wong 2013). Within infrastructure projects the larger supplier liability can include planning, financing, maintenance and support services related to the procured property (Krtalic & Kelebuda 2010).

An end-user orientated perspective is to see new procurement techniques as instruments of demand driven innovation policies. The substantial interest of innovation policy writers in development of new public procurement practices can be rationalized by public procurement's immense resources and unused potential in creating innovative solutions. (Aho et al. 2006; Edler & Georghiou 2007). Edler & Georghiou (2007) define demand-side innovation policies as "all public measures to induce innovations and/or speed up diffusion of innovations through increasing the demand for innovations, defining new functional requirement for products and services or better articulating demand". A term used for describing the collaborative process with the service end-user is public services co-production. Co-production can be seen as regular, long-term relationships between professionalized service providers and service users or other members of the community, where all parties make substantial resource contributions (Bovaird 2007).

It has been suggested that PPPs encourage innovative solutions within both public infrastructure as well as service acquisitions (Hoppe & Schmitz 2013). Yet, the needs and desires of end-users get neglected too often in current PPP projects which leads to solutions unsuitable for actual service users generating financial losses to both procurer and supplier in higher adjustment costs and lower life cycle payments caused by user dissatisfaction (Satish & Shah 2009; Ng, Wong & Wong 2013). If PPP method was chosen more regularly on the basis of value gained by the users, then cooperation, commitment and networks would more often be considered as the prime benefits of the model instead of the financial arguments (Lähdesmäki & Kilkki 2008). The early detection of user requirements and needs guides the procurement initiative towards better usability, efficiency and innovativeness from day one (Satish & Shah 2009; Majamaa et al. 2008). In addition to creative mind, users can also bring other resources to the procurement e.g. by positively influencing other users and lowering the public opposition (Bovaird & Loeffler 2012). According to Ng, Wong and Wong (2013) opposing opinions and community resistance are the biggest causes for the failure of unsuccessful PPP initiatives. User's task in PPPs is also to display one's satisfaction and dissatisfaction towards the service offered (Jamali 2007).

### End-user's role in the procurement

From a social-exchange perspective, government organizations need cooperation and compliance from service recipients to meet not only people's material but also their symbolic and normative needs (Alford 2002). Even though the collaboration with users and the surrounding community has been recognized essential for public procurement's success, the resources given to end-user engagement in public procurement projects are often slim (Bovaird & Loeffler 2012). Both Bovaird and Loeffler (2012) and Ng, Wong and Wong (2013) see public services' new image much more user oriented than the traditional view focusing on the dyad between the procurer and supplier. Public sector services are not only created *for* the public anymore, but the trend is to aim for public services created *by* the public. This is partly possible because of the development in assisting IT technology but also because the society of taxpayers are more willing to participate on public services co-creation than before. End-user's value potential can be seen not only in generating individual utility value but also increasing the service's social, environmental and political value (Bovaird & Loeffler 2012). At present, the opinions of users and property owners are not given sufficient consideration in managing innovation (Bovaird 2007). For instance, even when the private supplier is encouraged to gather user's creative contribution in the procurement, the high novelty risks often restrain the ideas from transforming into finished solutions (Hoppe & Schmitz 2013).

In our study, we see the focal relationships within public procurement as a triad between the public procurer, supplier organization and the end-user of the public purchase (Havila, Johanson & Thilenius 2004; Majamaa et al. 2008). The triadic nature of relationships means the existence of an intermediary that has constant contact with both the selling party and the buying party, while at the same time as the selling party and the buying party also have own their direct contact with each other (Havila, Johanson & Thilenius 2004). Especially important for the triadic relationships are social bonds and trust especially at the operational level (Holma 2012).

A rare end-user focused concept following this triadic view on public procurement is Public-Private-People Partnership (4P) model introduced in property management research (Majamaa et al. 2008; Ng, Wong & Wong 2013). The principles of 4P suggest that in addition supplier and the procurer dyad, "*the people*" i.e. the end-user should be considered as a third equal

partner within the procurement process. The definition of people includes all the individuals impacted by or interested about the procurement from the core users of the public property and services to the whole taxpayer community (Ng, Wong & Wong 2013). The perceptions of Majamaa (2008) and Ng, Wong and Wong (2013) about the relationships inside the procurement triad complement each other closely. While the business relationship between the procurer and supplier is considered to be formal and contract driven, the end-user's direct relationships to both supplier and procurer are held informal and proactive (Ng, Wong & Wong 2013). In addition, Majamaa (et al. 2008) sees user-supplier relationship functioning via two different channels: both informally in direct interaction as well as through indirect and more formal interactions transmitted by the procurer party.

Satish and Shah (2009) see the importance of the procurer mostly as a facilitator of PPP projects; all the other cooperation with the user should be left to the supplier that is better qualified for it. Informal and proactive approach to the end-user assures that the procurement fulfills the social needs set down for the project (Ng, Wong & Wong 2013). End-user centric planning should be launched in procurement projects as soon as possible. User participative procedures are especially important in the design phase of the procurement, but they can also add value in the building-, operating- and maintenance stages of the project (Ng, Wong & Wong 2013). Design stage is where the most important decisions affecting the use of the property are conducted; unsuitable resolutions in this phase are very expensive or impossible to repair later in the process (Majamaa et al. 2008).

The idea of end-user as a competent customer is one of the most critical elements in the development of prospering regions and innovative businesses (Johansson 2010). The existing studies indicate that the end-user of public procurement can be seen rather similar as a competent customer on a private market setting (Majamaa et al. 2008). Discoveries made about the public procurement end-user reflect also the definition of von Hippel's (1986) lead user concept; lead users share a wide knowledge about the specifics of the product or service they use intensively on a regular basis and are able to present strong needs that will become general in the marketplace both now and months or years in the future. It is also suggested that lead user interaction may shorten the development cycle time of innovations (Alam 2006). While von Hippel's analysis considers the lead user concept from the private sector manufacturer's point of view, the framework is considered suitable for public sector environment as well (TEKES 2008). Edler and Rigby (2005) divide public service users further to lead users and traditional users. Lead users can be identified from many sections of the organization. Lead users presence is especially important in the development phase of the procurement because of their ability to identify different technologies, user's personal dependencies and the future needs of their own industry better than so called traditional users. This comparison is also a justification on this paper's general use of private sector marketing concepts in the context of public procurement.

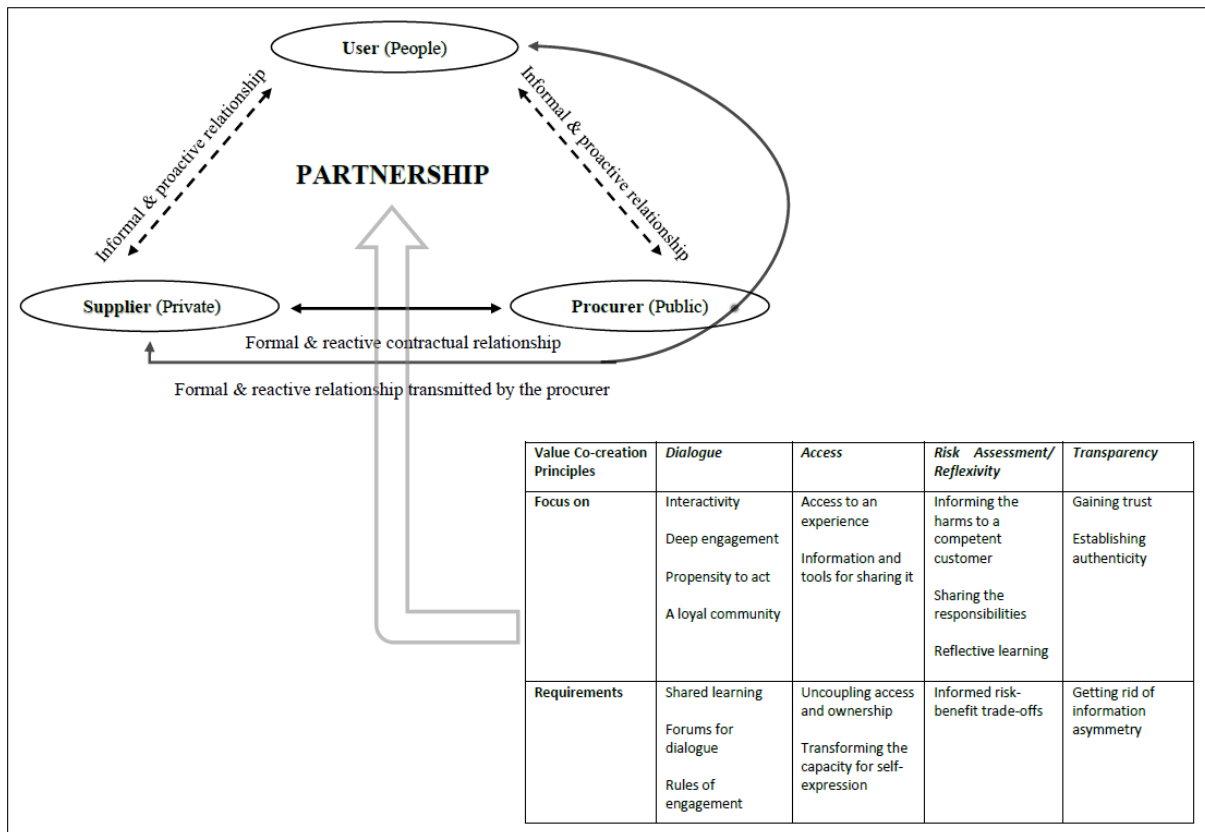
### Principles of value co-creation

The creation of value can be summarized as "core purpose and central process of economic exchange" (Vargo, Maglio & Akaka 2008). Within value co-creation the user's role evolves from value receiver to a partner of co-designing and co-producing the public service procured (Bovaird & Loeffler 2012). In the value co-creation literature covering the private market purchaser-supplier relationship, the market becomes a forum where co-creators of value exchange their unique value-in-use to form most shared value for all parties (Prahalad & Ramaswamy 2004). The uniqueness of value experience means that the value is always born

as a combination of a certain time, place and situation (Grönroos 2008). Obligatory limitation for value co-creation to take place is the generation of value-in-use that is generated in all processes that increase the well-being of the customer in some level and can be both physical, financial, emotional, social and environmental (Grönroos 2008; Nordin & Kowalkowski 2010). Value created in public sector environment can be seen as either user, community, social, environmental or political value (Bovaird & Loeffler 2012). The creation of innovative solutions is directly attached to value co-creation with the end-customer (Lee, Olson & Trimi 2012). Value co-creation related private sector marketing term supporting the former conceptualization of end-user engagement in our study is the concept of customer engagement. According to Sashi (2012) “customer engagement expands the role of customers by including them in the value adding process as co-creators of value”.

Prahalad and Ramaswamy (2004) have suggested a DART model, according to which the four key principles (or building blocks) of value co-creation include 1) *Dialogue*, 2) *Access*, 3) *Risk assessment* and 4) *Transparency*. Achieved value-in-use is maximized through promoting these four principles across all interaction with customers. Our study’s main contribution to the research on innovative public procurement practices lies in utilizing these four value co-creation principles to understand the end-user engagement activities that generate most value for actors in the public procurement triad. Even though value co-creation has been mainly researched within joint activities in dyadic relationships it’s also suitable to apply in triadic relationships especially when the service provider has direct interaction both with the intermediary and the end customer (Nätti et al. 2014). Figure 1 illustrates DART concept’s original focus points and requirements that were used as basis in the empirical analysis of our study to identify and categorize the engagement activities. Figure also displays the tentative framework on the public procurement triad described in the previous chapter.

In the end-user engagement context 1) the input given to dialogue advances the user’s opportunity to share their personal opinions and discuss the usability of their ideas, 2) sufficient access to project information enables users to extend their impact within the procurement from using the public service to independently modifying and expanding it, 3) risk assessment of user engagement process allows the supplier and the procurer to better analyze the ratio between the benefits and risks of the activities and 4) aiming for transparency increases comprehensive openness of the procurement to the user interface. In addition, we want to add the principle of reflexivity (Leavy 2012) into the DART model applied in innovative public procurement setting; future risks assessment within PPPs requires long term commitment from the actors and by cherishing reflexive learning and decision making through the whole project, the procurement organization can better reach the benefits of user’s contribution. Noteworthy is that value co-creation’s four key principles complement each other closely and function in combinations; attention given to one principle increases the value of others as well. (Prahalad & Ramaswamy 2004.)



**Figure 1.** Tentative model on user-engagement within innovative public procurement triad.

## RESEARCH METHOD

An intensive case study approach was adopted to capture in-depth understanding of the empirical example. Qualitative research strategy is particularly relevant in the present study where insights about the studied phenomenon are modest, as qualitative research tends to be exploratory and flexible because of ‘unstructured’ problems (Ghuri & Grønhaug 2005). Case research was recommendable in general as it is fitting to explore the decision making and behaviors in intersectoral relationships (procurer, supplier and end-user) between individuals (Halinen & Törnroos 2005). The empirical analysis is based on interview and secondary data gathered on public school property procurement in northern Finland. The procurement case was selected as it represents a specific innovative procurement case conducted using the PPP procurement practice and in which end-user engagement activities were intentionally emphasized throughout the procurement process. In intensive case research, researchers act as interpreters who both construct and analyze the case giving special focus on the perspectives, conceptions, experiences, interaction and sense-making emerging from the key individuals involved in the process (Eriksson & Kovalainen 2008: 118-119). The study analysis follows abductive research approach as it is carried out through continuous dialectic interaction between existing research and empirical case insight (Dubois & Gadde 2002).

### Description of the case

The studied case represents a medium sized PPP based school property procurement. At the time of the data collection in 2014, the project was on the second year of its 25 year contractual



maintenance phase. The project's total coverage entails about 15 000 square meters of public space and consists of two school buildings and a kindergarten. The agreed PPP contract transfers the responsibilities of designing, building, financing and maintaining the building to the supplier. The procurer city acts as a tenant of the properties owned by the financing bank until 2039 when they have the option to claim the buildings for themselves. The complex set of contractual instruments in the project consists of service contracts, blanket agreements, building contracts, rental agreements, call option agreements as well as subcontracting agreements between the supplier and their own service partners.

PPP model came originally into consideration for the project to avoid additional debt in a financial situation of high investment needs; the municipality might have not been able to procure the properties at all without a market-based procurement option. The initial proposal of utilizing PPP model was later reinforced in the decision making process by procuring expert consulting. Eventual objectives set for the initiative included not only economic goals but also aims related to the end-user needs by improving the usability and quality of the procured properties, promoting innovative solutions, developing the local market and creating genuine partnerships. Procurer's goal to enhance the organization's procurement know-how on innovative market-based procurement techniques has already been utilized in two other PPP based school procurement initiatives in the area.

The final decision on the use of an innovative procurement practice was delayed until after the tendering with four potential supplier candidates. Tendering was conducted according to negotiated procedure as typical for PPP procurements. Bids were evaluated according to their full economic effects the weight of price set at 60 % and quality on 40 %. The winning bid from a major domestic construction company won both price and quality criteria. Besides procurer, supplier and end-user, parties involved in the procurement process include building and decor architects, engineering offices, expert consultants and subcontractors providing food, cleaning, security and maintenance services.

In general, public procurement system in Finland is considered decentralized and only some centralized procurement structures has been established. Public procurement is generally perceived as a tool for supporting public agencies' core activities. Thus, although public procurement as a field is debated, it's mainly on issues such as price and efficiency. (Edler et al. 2005) Also this study's case project in Oulu is considered both the first PPP procurement in northern Finland and smaller scale PPP project in Finland in general.

### Research design

The interview data was gathered through semi-structured, open-ended interviews on relevant key informants in the case project from all three parties of the public procurement triad: procurers, suppliers and end-users. As the primary aim of the study is to generate data which gives an authentic insight into key informants' experiences, the most prominent method to achieve this kind of data is through open-ended interviews (Silverman 2011: 174-179). The principal interview data consists seven key informants deemed most knowledgeable about end-user interaction in the case initiative: two from the procurer organization, two from the supplier company and three from the end-user community (Table 1). Taking into account the large group of end-users eventually operating in the properties, the interviewed users were also chosen because of their role as core-users passing the procurement information to their subordinates and other users of the properties. Interviews conducted lasted between 50 and 90 minutes each. These interviews were subsequently transcribed and analyzed thematically

according to the study’s tentative model presented in Figure 1. The gathering and analysis of new case data was continued in the research process until the point where theoretical saturation was reached; i.e. where the fresh interviews no longer produced new insights (Silverman 2011: 67, 72).

**Table 1.** Case interviews

<b>Actor</b>	<b>Interviewee</b>	<b>Running time</b>
Procurer 1	Procurement Planner	1 h 29 min
Procurer 2	City treasurer	1 h 6 min
<i>Supplier 1</i>	<i>Project manager &amp;</i>	<i>1 h 17 min</i>
<i>Supplier 2</i>	<i>Head of planning</i>	
End-user 1	High school principal	59 min
End-user 2	Kindergarten manager	50 min
End-user 3	Compherensive school principal	50 min

Furthermore, secondary data in the form of documentation was used. The documentary data had been archived by the procurer since the beginning of project’s pre-planning phase. Secondary data used in study consisted the call for bids, winning offer, project reports, property drawings, records of the decision making process as well as memos from all meetings that the end-user was participating in. Interesting additional data on end-user’s independent value creation was also received from statements on the planning proposals documented by the end-users of the high school themselves. Altogether 37 various documents (ca 300 pages altogether) were used as secondary data.

## CASE ANALYSIS

The data indicates that the procurement coalition’s shared willingness to create “usable future school space instead of just walls” originates already from early phases of the procurement planning. The first contact to core end-users took place way before the actual procurement decision had been made and user dialogue was kept lesser only in the information sensitive tendering phase of the procurement. Even though both procurer and supplier assimilated the idea of establishing usability through intimate end-user cooperation, the actual methods and procedures for engagement were planned beforehand very little by both parties. Value-creating user engagement in the case project can be seen largely resulting from intimate personal relationships born between individuals over the time. As a notable deviation from the former PPP literature, interaction in the case initiative took place much more often within multiprofessional groups than in traditional one-to-one encounters. Apart from the tendering phase all common meetings in the project involved at least one end-users’ representative. Thus, the casual discussion in groups functioned both as a channel to share end-user ideas and evaluate viability and costs of these ideas in an efficient manner.

*We talked and decided with the supplier (in the start), that when there’s any decision making that somehow affects the user, we will bring them in to discussion somehow.”(Procurer 1)*

*We wanted to forget the juxtaposition and work together no matter what the situation [...] We're running a common errand here, which unfortunately isn't the case in the traditional public procurement projects. (Supplier 1)*

The structure of relationships in the case project follows closely the lines of the tentative model presented. The procurer's personal relationships to the end-user have become highly intimate and informal over the time. Whereas, the interaction between the end-user and the supplier takes place both through 1) direct and informal personal relations and 2) occasional formal contacts transmitted by the procurer representative. Procurer saw this more formal transmitting channel highly important for their role in redirecting user's and supplier's viewpoints towards shared positive outcomes and ensuring that the end-user gets truly heard through every phase of the procurement process. Although the relationship between the procurer and the supplier was first of all controlled by the PPP contract, also collaboration in the buyer-seller relationship grew over the years much more intimate and informal than expected.

*(Procurer 1) knew what had been agreed upon and was a specific filter between us and the end-user who might have wanted everything that wasn't possible [...] She kind of filtered the knowledge and comments we got from the user interface. (Supplier 1)*

All of the innovative solutions identified in the case procurement originated either from the proposal of the supplier or from a speculative suggestion of the end-user. The most significant innovations are attached to the fundamental positioning of the properties and novel joint use opportunities offered to the end-user communities. These solutions have also enabled closer contact between the high school and the kindergarten enabling unique cooperation and potential pedagogic innovations. Our findings indicate, that 1) user originated innovations had more significance to user's value experience than supplier originated solutions and 2) the innovations that improved usability and functionality most were originated from end-user ideas. Usability of properties was enhanced most by innovative technical solutions of different sizes; also supplier's effort on paying attention to small scale detailing proved as a surprisingly cost-effective way to improve end-user's value experience. End-user's experience on usability of the plans was eventually decisive also for the quality criteria in the bidding phase.

*And that's how it should be, when the interaction is genuine, supplier should be able to catch half a word from the end-user, discuss the approach to it and generate an idea that in a sense is theirs when it's brought to the table. (Procurer 2)*

Substantially interesting new finding in our case analysis was the significance of user's sensation of involvement. To begin with, all three user informants interviewed felt they and their subordinates got heard excellently during the procurement process and had a real opportunity to make a difference. Interestingly, the empirical data shows that even engagement activities and user dialogue that didn't lead to any innovative solutions or better usability of the property had positive influence to the satisfaction experienced by the users. This improvement in user value born even from false sensation of involvement lead again to higher returns for the supplier due to satisfaction based payment mechanisms of the PPP contract. Acknowledging end-user's sensation of involvement can be seen present in all value co-creating engagement activities in the categories of dialogue, access, risk assessment/reflexivity and transparency.

*That (feeling) is really crucial, and that is something we also aim for. Whereas we can't take everything into account, it's important that the users feel that they got everything*

*they wanted. Of course there's individuals with "on-off"-views that judge our work if there's one thing missing. Especially with the second school, it's clear that some people feel that they didn't have enough impact. (Supplier 1)*

## Dialogue

Case findings indicate dialogue related activities as the most significant source of shared value in the end-user engagement process. First preliminary end-user dialogue was launched by procurer already in the pre-planning stage of the project when end-users were given a task to define the functional perimeters needed from the school space to be procured. First dialogue between the supplier and the end-user took place in the negotiation phase where all four potential suppliers were given the opportunity to independently contact the users and modify their plans according to user consultation. Even though the variety of dialogue points within the case procurement was left one-sided as the mutual user dialogue took place almost merely in the group meetings provided, user informants saw interaction in the group form adequate for their contribution in the planning. In addition, our tentative presumption about special attention needed for acknowledging the individuality of end-users didn't eventually play a crucial role in the project; users felt comfortable to share their own individual opinions without significant recognition given to their background.

Providing the end-users sufficient freedom of choice in the case procurement's planning phase discussions can be seen most crucial for the positive effects on the usability of the properties. Even though significant amount of dialogue has taken place also in later building and maintenance stages of the procurement, it's apparent that further the procurement progresses, the less chances there are to adjust procured property according to the user contribution. Dialogue in the maintenance phase of the procurement focuses more on optimizing the quality of support services attached to the PPP's service contract.

*My feeling is that after we got to know each other, we really could debate about matters really openly. (End-user 2)*

*We really got to influence. There was just recently a teacher who said to me: "Could it be they asked about our opinions too much? Would it be better that someone else than the teachers made the decisions?" (End-user 1)*

## Access

In general, the amount of information distributed was seen sufficient for end-user engagement; user informants felt they didn't have use or time for any more information that they were given during the process. The procurement information outside project group meetings was mostly shared through simple e-mail distribution. Even though access to further procurement information through an (industry standard) IT system was given to the user, it didn't eventually deliver a lot of extra value to the end-user experience. Important to point out is that considering the expertise of the end-users was mostly focused on the educational field, property end-users might not be qualified to recognize the potential of novel IT tools (e.g. 3D illustration) in the engagement process.

Our findings indicate that mistakes in user training caused the largest user engagement related problems during the case procurement process. Modern school properties and innovative procurement projects require without exception a certain level of user orientation both in the

operation of the building and the procurement practice used. The data indicates that not enough resources were given to the initialization phase of the high school/kindergarten property finished first. This view was further verified by the finding that encountered problems seemed visibly mended for the user training of the second property leading to an improved user's value experience.

Users' independent value creation proved to have significant importance especially to user-led innovations to be born in the case procurement. A prominent example of user's independent value creation in the case procurement were self-organized school visits and teacher meetings set in motion completely by the core users within their own user community. Especially high school teachers' domestic school visits generated significant value to the project without any specific effort from the procurement coalition. In addition, it's good to acknowledge that the importance of user encouragement was proven quite insignificant in the case procurement in general. Engaged end-users became enthusiastic about responsibilities given to them with very limited systematic pushing. Thus, end-users were competent to recognize the improved usability achieved through their involvement which itself was an adequate incentive to get invested in the engagement.

*They (the end-users) created a culture of commitment themselves. Sure (Procurer 1) and our whole group said that try involve the whole community to the planning, but we didn't give them ready tools for it. They created the good spirit to engage their own crowd there themselves. And without those very people, we wouldn't have had as good results. (Procurer 2)*

#### Risk Assessment & Reflexivity

End-user attached risks identified by the procurer of the case initiative included lack of innovative procurement know-how, contradiction between user wishes and supplier's planning freedom as well as resistance from public officials, local government or the surrounding community. All key informants shared a common view about school environment encountering considerable changes during the 25 year life cycle of the PPP procurement; e.g. change in teaching moving out of the class rooms. In addition to some future flexible building solutions and detailing, supplier of the case procurement can be seen active on responding to user feedback to best of their ability. Most of the risks on procurement life cycle were contractually transferred to the supplier; their capability and resources on responding to user feedback and bearing identified future risks being better than procurer's. For instance, while the supplier was able to replace the underachieving maintenance service provider because of end-user dissatisfaction right after the first year of maintenance phase, the procurer informant felt that with a traditionally owned school property they would have been stuck with a mediocre service contractor for several years to come.

It's worthy to notice that some of the future risks can be also carried by the end-users themselves. Our findings proved the end-users surprisingly conscious and realistic about uncertain future requirements and expenses that they might face to assure the future functionality of the properties. Reflexive implementation of end-user engagement also developed the procurement know-how of the whole procurement consortium; both procurer and supplier of the case procurement have already utilized some of the knowledge gained in other upcoming public procurement projects. The challenges are related on how to conserve the tacit know-how possessed by individual people in the organizational level. In addition, our findings indicate that this know-how on end-user engagement is not bound to only PPPs or

other innovative public procurement initiatives of the procurer or supplier, but the competence gained can be applied to traditional public procurement projects as well.

*If needed, sure I would be part of this again. Again more competent this time [...] I have no complaints about the PPP model. I think it shouldn't matter to the end-user if the property is managed by the (procuring city) or (the case supplier). I'd say that many things run better with the private supplier. (End-user 3)*

### Transparency

Informants see the core relationships within the case project becoming very informal as the procurement has progressed. These intimate relationships can be seen crucial for any value co-creation to take place. Noteworthy is that personal relationships in the case project formed more as a result of continuous interaction over the years rather than requiring a lot of systematic planning. The trust and openness between the core end-users, city's procurement planner and supplier representatives has been an outcome of the same people regularly meeting each other over a long time. It's arguable, if this kind of stability could have been reached in procurement projects with a larger procurer- and supplier organizations conducting the user engagement process. Even though the supplier organization went through more alterations than the procurer city during the different project phases, end-user interviews indicate that keeping few of the supplier representatives as permanent members of the procurement coalition had significant positive effects on the user's value experience.

Even though the case procurement and its novel procurement practice didn't receive a lot of opposition from the larger taxpayer community, project encountered some heavy resistance from the decision makers and officials in the municipal level; an appeal concerning the PPP practice used eventually postponed the beginning of the property's building phase by six months. A significant reason for the lack of opposition in end-user level can be credited to transparency related end-user engagement activities. Even though the procurement organization drafted a PR-plan and put together a few official briefings and bulletins during the process, larger impact on the moderately smooth progression of the procurement is due to transparent interaction with interested end-user community on a more personal level.

*You can't emphasize enough that when the chemistry between people is functioning, also the project advances nicely and you achieve things that you couldn't with combinations of people too different. These kind of (PPP-) projects are not suited for highly task oriented people. (Supplier 1)*

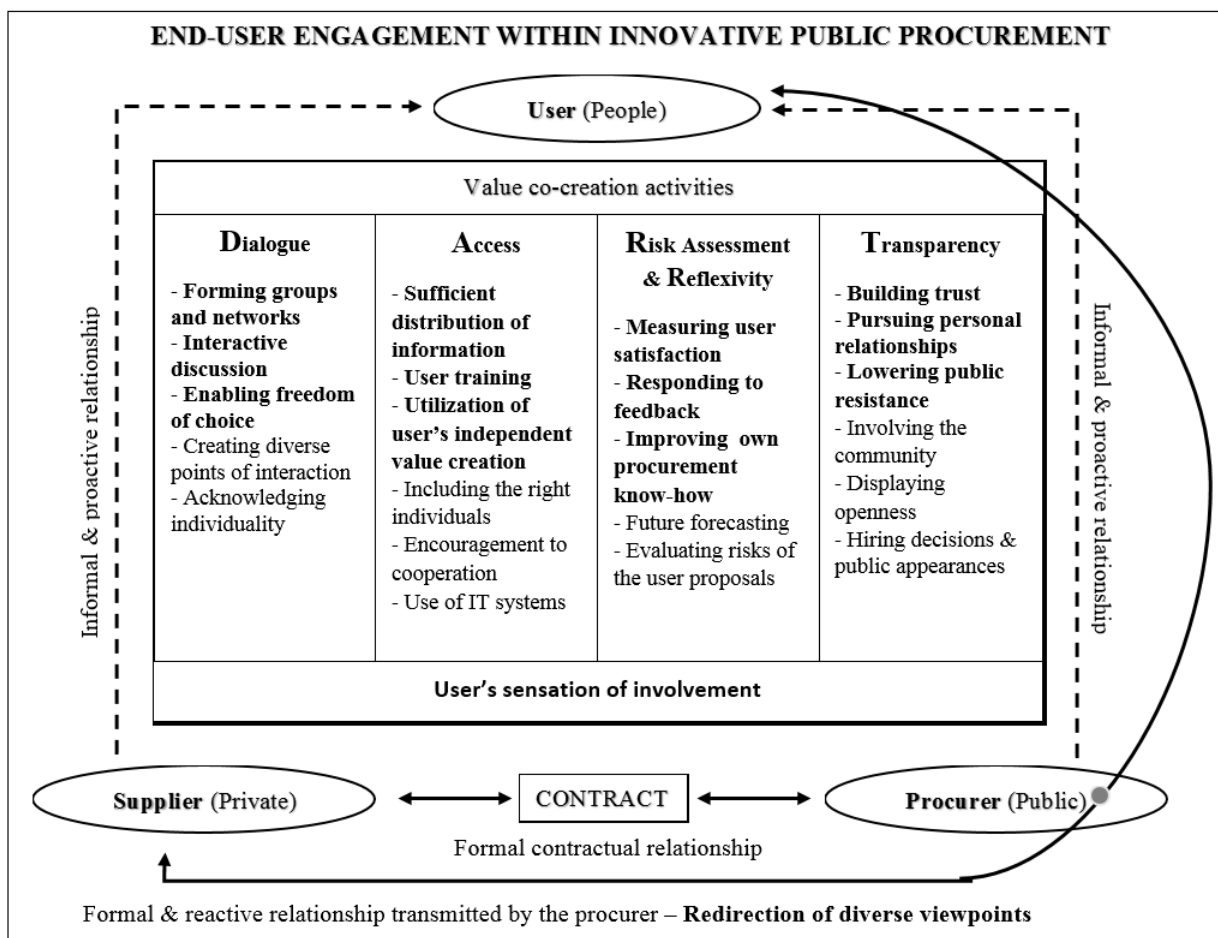
*That is how we constantly had the discussion, not with a certain plan but influencing on a personal level. In practice, not as a procurer to the user, but as a human being to a human being. (Procurer 1)*

### EMPIRICALLY ELABORATED MODEL OF END-USER ENGAGEMENT WITHIN INNOVATIVE PUBLIC PROCUREMENT

Based on the empirical analysis, we propose the next model of end-user engagement within innovative public procurement practices (Figure 2). The core of the model lies in the case procurement specific illustration of value co-creating user engagement activities. First, the activities were identified utilizing both the former literature on innovative public procurement

practices and empirical data gathered from the case procurement. Second, activities were evaluated and categorized according to the four principles of value co-creation DART model (Prahalad & Ramaswamy 2004). The most important activities for establishing value-in-use are highlighted in bold.

The relationships between the actors follow the conceptual theory on 4P-model (Majamaa et al. 2008, Ng, Wong & Wong 2013). One of the lead ideas behind PPP model is that all actors can focus their efforts according to their own best competencies and knowledge. Our view is that by default, 1) public procurer’s responsibility is to supervise the procurement progresses according to the contract, 2) supplier is in charge of delivering the desired property and services and 3) end-user’s task is to share their specialized knowledge on using the public property or service.



**Figure 2.** End-user engagement within innovative public procurement

Based on our analysis, the most vital requirement for end-user engagement is generating value-in-use for the end-user. This value-in-use sources from all activities that add the well-being of the user in some level and can be either physical, financial, emotional, social or environmental (Grönroos 2008; Nordin & Kowalkowski 2010). Most crucial for the user’s individual value experience are the engagement activities that improve the usability of the procurement. Tangible instruments of enhanced usability include user-led innovations, better overall quality

and detailing of the procurement. Usability can also be seen as the most crucial element for determining the user satisfaction of the public property and service and thus the financial success of the procurement supplier. Regarding increased usability as a compulsory requirement for public procurement end-user engagement corroborates Grönroos' (2008) view about practical value-in-use as an obligatory limitation for value co-creation to take place.

*Dialogue* related end-user engagement activities represent direct interaction between end-user and the project's procurer and supplier organizations. By direct interaction, we refer to all value creating processes by which the end-user's and procurement coalition's resources interact through a mutual dialogic process (Grönroos & Voima 2013). The most significant dialogue related activities to reach valuable end-user interaction are 1) *forming multiprofessional groups and networks for open dialogue take place*, 2) *emphasizing interactiveness of discussion* and 3) *enabling end-users sufficient freedom of choice*. Dialogue can be seen as the most important source for the usability of the procured facilities and services.

While dialogue represents direct interaction in the value co-creation process, user engagement activities in *access* category represent indirect user interaction generated. Indirect interaction refers to situations in which the end-user interacts with only the resources provided by the procurer or supplier without reciprocal dialogue taking place (Grönroos & Voima 2013). According to our findings most important access related activities for public procurement practitioners to acknowledge are 1) *sufficient distribution of procurement information*, 2) *comprehensive user training* and 3) *utilization of user's independent value creation*.

Our study indicates that engagement activities in risk assessment/reflexivity and transparency categories have less influence on the value-in-use generated by end-user engagement. Engagement related to the *risk assessment and reflexivity* of the public procurement consists of activities that emphasize the continuity and reactivity of the public procurement. The most important activities to minimize end-user related procurement risks are 1) *the measurement of end-user satisfaction*, 2) *efficient response to end-user feedback* and 3) *continuous improvement of organization's procurement know-how*.

*Transparency* related engagement activities pursue comprehensive openness between the actors in the procurement triad. According to our findings, the most significant activities enhancing the transparency of the procurement towards both core users as well as surrounding taxpayer community are 1) *building trust between the actors* 2) *generating lasting personal relationships* and 3) *lowering public resistance*.

## CONCLUSIONS

This study investigates the nature of end-user engagement process within innovative public procurement practices. The traditional public procurement practices provide limited support for market discussion and the need for more market-based practices for development of innovations has been in the interests of both researchers and public policy makers for some time now. Innovative public procurement methods proposed can be seen as redistribution of responsibilities and risks by enabling new kinds of interaction, information flows and cooperation to be formed within the procurement triad of procurer, supplier and end-user. Even though the importance of end-user's involvement in the procurement process has been largely acknowledged, descriptions on the actual end-user engagement activities conducted by procurer and supplier have been partial. The evidence from our case study reasserts the proposition of informal and proactive approach on user engagement having genuine positive



impacts on innovativeness, customer satisfaction and financial success of the public procurement projects.

The study's underlying idea was to apply value co-creation theory derived from the private sector to the setting of public sector procurement. DART principle (Prahalad & Ramaswamy 2004) was used as a template to illustrate end-user engagement activities in the public procurement environment. Within co-creation the user's role evolves from a value receiver to a partner of co-designing and co-producing the public service procured (Bovaird & Loeffler 2012). As the first sub-research question (*RQ1*) we asked, what is the main requirement for end-user engagement in innovative public procurement projects? On the basis of the study, we argue that the main requirement for value co-creative end-user engagement is the generation of value-in-use through increased usability of the procurement. Crucial to acknowledge is end-user's own independent value creation which can have a significant or even the most essential role on the usability achieved in the procurement interaction. Procurer's and supplier's crucial task here is to facilitate this self-directed value creation by providing the end-user sufficient access on the procurement information needed.

Second, we asked, what are the value co-creating activities end-user engagement process is formed of (*RQ2*)? Our proposal is that the engagement activities revolve around four value co-creation principles of *dialogue, access, risk assessment/reflexivity and transparency*. The evidence suggests the most essential engagement activities for end-user's value experience are related to interactive *dialogue* during the project's planning phase. A noteworthy contribution of this study was that instead of bilateral discussion, valuable end-user dialogue took much more often place in shared encounters with the procurement triad and other interest groups. Besides forming valuable groups and networks, the influential dialogue focuses around emphasizing interactiveness and freedom of choice in all user interaction. Rich dialogue is best supported by giving the users sufficient access to the procurement information and enabling their independent value creation (*access*). Further user engagement activities identified in the study are related to *risk assessment/reflexivity* as well as *transparency* of the innovative procurement. The input given to one activity usually increases the value of other engagement activities as well. Based on the study, we argue, that through these user engagement activities public procurer is able to generate value-in-use that would be difficult or even impossible to achieve in a traditionally organized procurement project.

The main contribution of the research paper lies in gaining a profound depiction of end-user engagement in a particular single case procurement setting. The engagement model introduced will serve as basis for further studies and more generalizable model on the phenomenon in the future. Even though our paper's contribution is most crucial for the specific research fields on public procurement and public sector management, we want to also address the value of user engagement to purchasing fundamentals in all business environments. The study can be seen important also in discovering shortage of certain relationship research concerning the relatively novel innovative public procurement practices. For instance, during the study process it became very apparent that the definition of end-user in the public procurement environment needs further conceptualization. Thus, the concepts of lead user (von Hippel 1986) and traditional user (Edler et al. 2005) mentioned superficially in this paper will serve as a starting point for further studies by the corresponding author.

With the study's practical implications we want to emphasize the importance of user's sensation of involvement in the foreground of the whole engagement process. In conditions where user's individual contribution can't be eventually materialized in final outcomes of the

procurement, even the false sensation of being involved can have positive impact on user satisfaction and e.g. lower the project resistance from the user community. While there's a lot of variance between innovative procurement models and their combinations in use, for actual decision makers and procurement practitioners the most important matter is a mindset that recognizes the possibility for co-creative end-user engagement enabled by the deviating procurement practice. Briefly, a simple practical advice drawn from the key findings of this paper is: "Give the users a voice (*Provide access*) and let them be heard (*Enable dialogue*)!"

The limitations of single-case approach of the present paper leave several interesting opportunities for further study. First, there's space for larger empirical studies consisting of either wider range of similar procurement cases, variety of different innovative public procurement practices or for instance public procurement cases in different EU countries. Second, there's an alluring opportunity to study the future evolvement of the present case procurement's user engagement in the PPP life cycle currently in the early years of its maintenance phase. Third and maybe the most intriguing chance for upcoming studies lies in piloting the user engagement framework further in upcoming public procurement research and case projects. Even though the end-users of the procurement projects hold certain expertise in their own industries, they're not capable of recognizing all opportunities and tools they can be engaged with already available in property and service planning industry. Thus, noteworthy is also the significant potential of new interactive technology and methods (e.g. 3D-modelling) suitable also in public procurement setting; more research testing these novel technological instruments for end-user engagement is needed.

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