PUBLIC CLIENTS' POSSIBILITIES TO INITIATE SUSTAINABLE CHANGE - EXPLORING TWO SWEDISH CLIENTS' PROCUREMENT STRATEGIES

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Governments and municipalities often have lofty ambitions to reduce their environmental impact and enforce sustainability in the construction industry. With this in mind, it is important to study the ability of public clients to implement these ambitions in practice. Current research suggests that public clients have a strong potential to support change processes. One way of executing this potential is through procurement. Procurement can, and shall, according to the Swedish government, be used as a mean to reduce the environmental impact of the public sector. The purpose of the paper is to explore what implications the procurement strategies of two public clients have for their role as change agent for sustainability initiatives, within construction projects. The study was carried out by qualitative analysis of two cases, one from a Swedish municipality and one from the Swedish Transport Administration. The findings show that public clients do act as change agents at a policy level but struggles with implementing its ambitions in the project phase. Despite sustainability goals and the clients' pledged potential to act as change agents; they do not actually wish to take on all dimensions of a role as change agent. Practical implications from the findings include increased understanding for public clients of their need to engage in the change process on a management level in order to fully act as a change agent.

Keywords: change agents, procurement strategies, public clients, sustainability

INTRODUCTION

Sustainability goals are increasingly emphasized in the construction industry and the Swedish government has significant ambitions to decrease its environmental impact (Boverket 2018). However, many sustainability objectives are still new to the infrastructure construction industry, and it is not evident how they should be operationalized and implemented in the construction supply chain.

Procurement is identified as a tool to meet the Swedish goals for decreased environmental impact (Ministry of Finance 2017). Research has previously showed that public procurement can indeed form a strategic policy tool to reduce the environmental impact, as well as a mean for introducing more sustainable practices and ‘lead the way’ (e.g. Marron 2003, Brammer and Walker 2011).

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Public clients stand for a large part of infrastructure construction. Given their prominent role, attention should be given to how these clients can contribute to change (Ingemansson Havenvid et al., 2016). Clients are often understood to have the characteristics to support change processes (Kulatunga et al., 2011), which can be driven by incremental continuous development or larger transformations in processes and products (Eisma and Volker, 2014). Grandia (2015) suggest that change agents can help increase the focus on sustainability in procurement but identified a gap of in-depth studies on the role of change agents for sustainability in procurement.

This paper focuses on how public infrastructure clients drive environmental performance through their procurement strategies. The objective is to explore how the procurement strategy impacts which actor should, and actually takes, initiatives to drive sustainability change in project execution (in addition to contractual environmental requirements). Two infrastructure cases have been analysed, where the first case consists of two infrastructure projects in a public urban development project, initiated by a municipality. The second case includes two public infrastructure projects by the Swedish Transport Administration. All four projects use some form of partnering contracts and the two cases are related as the two public clients have developed a common policy, General Sustainability Requirements in Contractor Procurement (Trafikverket, 2017).

PREVIOUS RESEARCH

Environmental Policy and Implementing It

Integrating environmental aspects in procurement can be seen as an example of integrated environmental policy (Marron, 2003). However, institutional opportunities for success with integrated environmental policy, and implementation of public policies in general, has often proved difficult. Lafferty (2004), for example, suggests that organisations often misallocate resources and forget to focus on ‘meta policies’ and long-term institutional learning.

When implementing an integrated environmental policy, it is important to increase awareness of the choices made within the organisations (Knights et al., 2014). Otherwise it can be difficult to make balanced decisions and managing potential trade-offs for environmental sustainability, especially when time is limited (ibid.). Brammer and Walker (2011) identifies four factors which influence how public procurement policy translates into practice: perceived costs, familiarity with policies, supplier availability/resistance and organisational incentives/pressures.

Environmental procurement strategies can be split into ‘win-win’ strategies, i.e. sustainable choices cut costs, and ‘win-lose’ strategies, where sustainable choices entail higher costs and therefore may not always be feasible in an ‘financial sense’ (Marron, 2003, Knights et al., 2014). Conflict of interests between the traditional project focus on time and budget and sustainability is one of the barriers facing clients trying to address sustainability issues in construction (Brammer and Walker, 2011, Lafferty and Hovden, 2003, Sourani and Sohail, 2011).

The Public Client as Change Agent

Research proposes that clients and public clients in construction have the characteristics to act as change agents (Boyd and Chinyio, 2008, Eisma and Volker, 2014, Kulatunga et al., 2011). This, since they can be presumed to actively contribute to improve the industry and enhance innovation because of their public responsibilities (Eisma and Volker, 2014). However, Manley (2006) highlights the
fact that construction clients traditionally have shown an inefficiency to induce innovations in their projects.

Depending on organisational level and phase of the project, the public client can use different actions to induce change. As pointed out by Latham (1994), public clients can use policy and procurement as means to request function and quality of the product and thus to act at a policy level and in early project stages. The clients may however also take a more active role during project execution (Kulatunga et al., 2011, Manley 2006, Loosemore 2015). For example, Kulatunga et al., (2011) describes how the client can promote innovation by leading the inter-organisational communication and be at the centre of the project. By being an active client that engages in the project they can promote construction innovation, for example by building strong relationship with other actors, establishing coordination mechanisms and manage information and knowledge (ibid).

The main characteristic of a change agent is to actually make change happen and to turn visions into action (Miller and Lawton 2002). But the change agent concept is wide and various models have been developed to describe the different organisational roles a change agent can take. Caldwell (2003) reviewed the literature on change agents and classified the literature into four models of change agency; leadership, management, consultancy or team development. Depending on the model there are multiple possible actions for change agents, either through the role of an adviser or leader that can envision and support others, or through coordinated programs or operating teams dedicated to change processes at different levels of the organisation (ibid).

The first two in these classifications (i.e. leadership and management models) are relevant when discussing public clients as change agent since it corresponds to the nature of a client as the project manager that integrate various actors and ensure that the project outcome correspond to the client’s goals (Boyd and Chinyio 2008). Caldwell (2003) describes a leadership model of change agency as a sponsor of strategic change through visions and supportive actions. Yet, he stresses that a visionary leader does not per se produce change. In contrast to a ‘leader’ model, a manager as change agent can be classified by the actions of implementing change (ibid).

Finally, it is important to emphasize that the change agent’s role is intricate. Caldwell (2003) stresses that there can be combinations of leadership, management, consultancy and teams that in the end affect the change process. To add to the general difficulties of the change agent role is the system in which public clients act which is highly complex, where it can be difficult to manage public and professional values (Eisma and Volker 2014).

METHOD

The purpose of the paper is to explore what implications the procurement strategies of two public clients have on their role as change agent for sustainability initiatives within construction projects. A case study approach was chosen to achieve a context-dependent (Flyvbjerg 2006) understanding of public clients as change agents in the construction industry, through rich amount of empirical material (Eisenhardt and Graebner 2007). In total 27 semi-structured interviews have been conducted, where general questions regarding project goals, procurement strategies and the roles of the actors in each project have been discussed.
In order to explore the client’s role as change agent analysis were done based on the two theoretical organisational levels in which public clients can act to promote change, as described in the previous literature review (e.g. Kulatunga et al., 2011, Latham 1994). First, on a policy level, procurement strategies were analysed to identify how the public clients aimed to work with sustainability initiatives. Second, in the project execution level, interviews with key participants in four projects were analysed to understand who initiates sustainability goals and actions, and how the formal procurement strategies were implemented and used.

Case Descriptions

The first case, Case 1, includes two infrastructure projects executed between 2015 and 2016 in an urban development project by the City of Stockholm. One project, The Vacuum Waste project, installed automated vacuum waste collection system for the district. The other one, the Gas Works project, performed ground-work including soil remediation as preparation for later building projects. Both projects used different extent of partnering as procurement strategy. The City considers the overall urban development project, which is primarily a residential area, a testbed for sustainable urban development. The project has had a distinct sustainability profile from the start and there are high set goals to minimize the environmental footprint both long-term and during the project execution. As summarised in Table 1, the interview participants include Project Managers and a Procurement Manager from the City as well as Project Managers and Site Managers from contractors and sub-contractors.

The second case, Case 2, consists of two large and complex infrastructure projects by the Swedish Transport Administration’s (STA) in a major Swedish city. Both projects are parts of a mega railroad construction project. The project-specific procurement strategy for Case 2 was based on the STA’s general procurement policy. However, the two projects are so called ECI-project (Early Contractor Involvement) which is a two-stage process where the contractor is engaged on a cost-reimbursable contract in the first stage to further develop the design and a target cost. This forms the basis of a design-build construction contract in the second stage. The ECI model represents the highest level of collaboration in STA’s Common National Strategy for Procurement, and these two are the first ECI contracts at STA. For each project in Case 2, interview participants include Project Managers and a Procurement Manager from STA and Project Managers, Collaboration Managers and Design Managers from contractors as well as consultants; see Table 1 for an overview.

Table 1: summary of interviews per role and case

<table>
<thead>
<tr>
<th>Role</th>
<th>Case</th>
<th>Number of interviews</th>
</tr>
</thead>
<tbody>
<tr>
<td>Client, City of Stockholm</td>
<td>Case 1*</td>
<td>5</td>
</tr>
<tr>
<td>Contractor</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Sub-contractor</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Client, STA</td>
<td>Case 2</td>
<td>7</td>
</tr>
<tr>
<td>Contractor</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Consultant</td>
<td></td>
<td>4</td>
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</tbody>
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*interviews were conducted by a research group including one of the authors
FINDINGS

Findings are structured by case followed by a short comparison. The findings include a summary of the clients’ role in the projects, based on the results from the strategic documents and interviews respectively. Some context of the overarching sustainability ambitions of each client is also presented.

Case 1

The City of Stockholm has a general program with sustainability guidelines and a more detailed strategy for sustainable procurement (Stockholms Stad 2016a). From those guidelines, each urban development project within the City develops its own policy documents from the characteristics of the project. Case 1, with its distinctive sustainability profile, has a sustainability policy document summarising five strategies for sustainable urban development (Stockholms Stad 2016b). The policy includes several requirements for the City, housing developers and contractors. Apart from the General Sustainability Requirements in Contractor Procurement (Trafikverket 2017) several specific requirements and tools were developed to reach the environmental and sustainability goals, as well as enable the implementation. The specific initiatives include a construction logistics centre, a platform for reporting all environmental matters during project execution and a sustainability competence program.

It is clear that the City has taken an initiative to increase sustainability in the urban development project, especially environmental sustainability. The presented aim of the sustainability procurement strategy (Stockholms Stad 2016a) is to initiate and encourage sustainable change and use procurement as a tool. Their goal is to guide, and be a testbed, for innovative sustainable solutions. However, their sustainability goals are presented as ‘guidelines and catalyst’ for sustainable change, where a lot of responsibility to come up with concrete solutions and implement them is placed on the developers and contractors (Stockholms Stad 2016b). The City, as a public client, does not want to direct or manage sustainable change, but rather it seeks to encourage it. Nonetheless, some exceptions have been identified in the studied urban development project. In particular, the construction logistics centre was developed to minimize the environmental footprint. Here, the City’s project management has developed the centre and is responsible for its operation. In addition, all developers and contractors are required to utilise it.

The contractors’ perspectives are interesting to understand; how the City’s efforts to push sustainability initiatives are perceived and implemented in the construction projects. From the findings in the two explored infrastructure projects it becomes clear that the City’s goals to encourage sustainable change are not ‘top of mind’ for the contractors and sub-contractors. The Senior Project Manager from the City describes a difficulty in communicating the goals to all project actors, i.e. main contractors and sub-contractors. This corresponds to the findings on how the interviewed contractors view the project goals. When asked what project goals they thought important and how they work towards them, all interviewed Project Managers and Site Managers focused exclusively on time and money, not one mentioned the sustainability goals.

The construction logistics centre, as one of the City’s tools to implement environmental sustainability, was discussed during the interviews. There was a common understanding among contractors and sub-contractors of the two infrastructure projects that coordinated construction logistics is important in complex
urban development. Still, they did not use the services in their project. They argued that the design of the centre and its services did not fit their infrastructure projects. For example, the centre focused on material transportation to the project sites rather than from the sites, where the latter is more relevant for infrastructure projects with a lot of waste material. It seems that the City did not take the project execution process of an infrastructure project into account when designing the centre.

The project management from the City considered the procurement strategies to increase the understanding of the sustainability goals and enforce the use of developed tools. The city used partnering or ECI contract with contractors in both projects due to the complexity and high uncertainty. The contractors indicate that this benefited the projects, both financially and in order to solve problems together. Still, the compensation form for the two projects lacks incentives, both financial and soft parameters, to work towards the sustainability goals and usage of the developed tools.

**Case 2**

The main purpose of the STA is the long-term infrastructure planning for road traffic, rail traffic, shipping and aviation, as well as for the construction and operation of state roads and railways. They execute their work through policy development and procurement which is aimed to enhance innovation and efficiency by market mechanisms (Ek Östberg 2016). In the context of the STA, the term innovation should be understood in the broader sense i.e. optimization, development and change processes. This overall goal is translated into the STA’s General Procurement Policy, where it is stated that the STA should take a ‘pure client’ role (ibid). STA further has instructions from the Ministry of Enterprise and Innovation to work towards Sweden’s environmental objectives and if necessary, propose measures for environmental development (SFS 2010).

The project-specific procurement strategy of the two projects follows the general requirements on the STA’s proposed role as a ‘pure client’. This implies a focus on function rather than method, thus giving the contractor a possibility to present change as described at the STA’s official website (Trafikverket 2018). The role of the client is to evaluate sustainability initiatives and enable its implementation (ibid). According to this strategy, each contract should be designed in a way that enables change and creates incentives for innovative environment work, to benefit both client and contractor as well as the public good.

The aforementioned joint public client policy on sustainability requirements presents a baseline of procurement requirements that can be altered due to local or project specifics (Trafikverket 2017). According to these requirements the engaged contractor should initiate and lead change within the project, whereas the client has a more controlling role, i.e. to ensure that the environmental requirements made are met by the contractor (ibid). In summary, the STA has a responsibility to act in an environmentally sustainable way and environmental requirements are included in individual contracts. However, in line with the STA’s role as ‘pure client’, sustainability initiatives or improvements should primarily come from the contractor.

When asked, all interviewees argued that ECI, as a form of contract, in some way or another was positive for sustainability. Several interviewees from the client as well as the contractor/consultant side claimed that the early contractor engagement enables different parties, with different skills and competences, to sit down and discuss solutions and ideas. This creates an understanding of the other parties’ roles, driving forces and positions and therefore facilitates creative outcomes. They emphasize that
the mix of professions and competences stimulates and enhances innovative solutions. As a Project Manager for one of the projects describes it, the melange of professions together with a common “best for the project” attitude was considered to enable change. However, this demanded that all parties, including the client, were prepared to invest and engage in the project and sometimes do what could be considered “someone else’s job”. Some interviews with the contractor/consultant indicate that they wish the client to develop organisational tools to work together, in order to facilitate innovation.

The interviews in Case 2 indicate that the contractor is actually taking on the role as an initiator of change. For example, in one of the projects the contractor initiated a change to the design. This turned out beneficial both environmentally and in terms of costs. An assistant Project Manager from the STA and a Senior Design Manager suggested that the STA should apply their knowledge and drive change in order to get results that correlates with the public good, since the driving force of the contractor are foremost financial. They believed that the client could endorse sustainability initiatives, for example new recipes of concrete in order to reduce CO2 for climate calculation. This through the collaborative context and by adjusting the budget in favour of such initiatives or ensure that additional costs related to sustainability initiatives would be STA’s responsibility. As for now, there are no financial incentives purely connected to environmental benefits that the interviewees were aware of. Since the project goals, including the budget, in the ECI contract are set in collaboration with the client some interviewees from the client and consultant side pointed out that this could enable sustainability initiatives that might be more expensive to be included in the project. Yet, in other corresponding client interviews such initiatives were not seen as the ones most prioritized.

**The Two Public Clients as Change Agents**

From their common goal to increase long-term sustainability, the City of Stockholm and the STA has more or less similar ways of reaching these goals through their procurement strategies. They promote change through their procurement strategies which focuses on collaboration between client and contractor. Although, the joint public client policy on sustainability requirements states that the contractors should be innovative and lead design. The roles of the two clients differ in the respect that the STA has an established ambition to be a ‘pure client’, whereas the City of Stockholm urban development project was seen as a testbed for high profile sustainability initiatives. This indicates that the City of Stockholm wishes to take a more prominent role as a change agent with a sustainability profile. The STA encourages contractors to sustainability change and improvements, but only through general goals on innovation and financial incentives.

**DISCUSSION**

From the findings presented in the previous section neither The City of Stockholm nor the STA could fully be considered change agents for sustainability. Whilst they have included sustainability goals in their procurement strategies and a baseline of environmental requirements in their contracts, the clients do not to a significant extent manage or implement sustainability initiatives in their construction projects. According to the findings, these public clients act as change agents primarily at a policy level and during early phases of the project. This can be seen as one type of initiatives taken to create sustainable change (e.g. Ingemansson Havenvid *et al.*, 2016, Eriksson and Szentes 2017, Latham 1994). Later, during the construction phase and
on a project management level, this responsibility is moved to the contractors as a part of a strategy to rely more on market competence and initiative. This, in contrast to actions suggested by Kulatunga et al., (2011) which propose the client to act as a driving force within the project, in order to promote innovation. As explained by Manley (2006), clients have had troubles with promoting change. That is, even if they have ambitions of initiating sustainability they seem to fail at the execution since they do not actively engage in leading the project planning and execution.

The City of Stockholm, in addition to the sustainability goals, puts forward some sustainability initiatives such as the construction logistics centre. Partnering and ECI were used to encourage their contractors to take initiatives for sustainability and implement the overall policy goals in their projects. Despite the aim of closer collaboration, STA in the explored projects mainly kept to their role as a ‘pure client’ and did not specify solutions and designs or took active part in defining them. Thus, although partnering and ECI were found to encourage initiative for change by increased collaboration and gain sharing in accordance with literature (e.g. Eriksson and Szentes 2017) it does not necessary lead to clients assuming roles as change agents. In correspondence with Loosemore (2015) and Brammer and Walker (2011) some of the contractors requested that the client should reduce the risk of innovation by providing a financial, legal and regulatory stable environment in order to give organisational incentives for change to occur. Here, questions regarding the implementation of sustainability initiatives were left to the contractors, which did not seem to prioritize sustainability goals or initiatives. This means, in the end, that implementation processes are left unattended and none of the actors have the right support or incentives for realizing high level sustainability goals. Lafferty (2004) points out that a lack of focus on the implementation process can be an obstacle since the organisation does not fully comprehend how it should adapt. These findings indicate that public clients should consider an increased focus on project engagement and implementation process if they want to ensure that their ambitions are implemented. Otherwise their role as change agent will only reach a policy level and early phases. However, as the experiences with the logistics centre in Case 1 showed, a more active role also requires an understanding of the implementation context to ensure that measures are adequate (Manley 2006).

The change agent’s role is complex and incentives to be a change agent can vary (Loosemore 2015). In addition, the context of public infrastructure clients involves many different requirements (Eisma and Volker 2014). The findings indicate that the public clients’ goals differ between the cases. The City of Stockholm’s urban development has a high sustainability profile and the client aimed to ‘lead by example’ as suggested by Marron (2003). The sustainability initiatives are used as a tool for branding the City. The same incentives do not apply to the STA. The leeway in the procurement laws is tighter in industries with few public actors as major buyers such as in infrastructure (Ek Östberg 2016). In its client role, the STA tries to influence the market and push for efficiency and innovation and sustainability can, in the case of the STA, be seen as an integrated parameter in a general will to endorse change by market mechanisms. Yet, the findings indicate that there are only some forms of change which fall in the win-win category and thus are enhanced by market mechanisms. This is an often-occurring conflict between the traditional project goals and sustainability (Lafferty 2004, Knights et al., 2014). In other industries there may be buyers in the other end requesting qualities related to sustainability. In commercial real estate and residential construction, for example, sustainability practice is more
elaborated much because green building certificates etc. are valued by investors and tenants (Ott and Hahn 2018).

CONCLUSIONS

By combining environmental policy literature with organisational theory of change agents, the paper has explored what implications the procurement strategies of two public clients have on their role as change agent for sustainability initiatives within construction infrastructure projects. The findings show that public clients do act as change agents at some organisational levels and in certain phases of their construction projects. Yet, the study concludes that in the two cases there are no one, neither the public client nor the contractor that fully takes on the role as a change agent for sustainability.

Much previous literature advocates public clients’ potential as change agents. The findings presented here indicate that although public clients may have higher level ambitions to drive development, they do not actually wish to fully take on a change agent role. In the two cases, the clients limited their role to inducing the contractor to take initiatives, but without establishing sharp requirements or incentives in this area. Further, while partnering and ECI were found to increase the collaboration between public clients and their contractors there was still a lack of both active organisational support and collaborative innovation.

Conclusively, sustainability goals set in policies and strategies do not seem to be enough for sustainability change to actually happen, as the implementation process is deemed difficult. Therefore, practical implications from the findings include a recommendation to public clients to extend their role as project managers to comprise activities to promote change to a full extent. This is especially important for sustainability measures that imply higher costs. Focus on financial incentives cannot be considered enough for sustainability initiatives, mainly because this shows to benefit only sustainable change that also reduce (or do not affect) project costs.

Further studies should include exploring cases in other national contexts and cases aiming for sustainability change using other types of procurement strategies and leadership models than the ones presented in this paper. It is also relevant to further discuss the differences between public and private clients to take into account differences in long-term goals and incentives for sustainable initiatives in order to improve implementation of governments’ ambitions to reduce environmental impact.

REFERENCES


Public Clients' Possibilities to Initiate Sustainable Change


