

The role of governmental stakeholder engagement in the sustainability of industrial engineering projects

Role of
governmental
stakeholder
engagement

77

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Abstract

Purpose – The aim of this research was to understand how governmental stakeholder engagement facilitates the sustainability of industrial engineering (IE) projects. A model for governmental stakeholder engagement activities is presented.

Design/methodology/approach – The authors relied on a single-case study of a mining project in Northern Europe, where a novel collaboration and engagement approach with governmental stakeholders was piloted in the project's front-end phase. The analysis focused on the collaborative practices through which the IE project investor engaged governmental stakeholders during the project's front-end phase and how the engagement contributed to solving challenges in the early planning and permitting process and achieving project plans that balanced economic, social and environmental aspects.

Findings – The findings show how four collaborative engagement practices reduced uncertainty and equivocality related to the legal sustainability requirements, enabled the development of sustainable design solutions and overall accelerated the permitting process without compromising the quality of final project plans.

Practical implications – The findings can be used to plan governmental stakeholder engagement and understand related challenges that need to be overcome. The study highlights the need to develop established practices and guidelines for governmental stakeholder engagement.

Originality/value – This study complements prior research on stakeholder engagement and project sustainability by developing an understanding of how governmental stakeholder engagement can be a key mechanism enabling the sustainability of IE project's end product. This research contributes to stakeholder theory by elaborating on a new stakeholder role, intermediary stakeholder.

Keywords Project sustainability, Stakeholder engagement, Governmental stakeholder, Engineering projects, Front-end loading

Paper type Research paper



1. Introduction

Industrial engineering (IE) projects (e.g. mining, power plant, production plant projects) are engineering- and technology-intensive capital projects of private sector investors, and they are characterized by long time horizons, irreversible commitments, uncertain and turbulent environments and high probabilities for failure (Florice and Miller, 2001). The general aim of IE projects is to deliver a technical solution, such as a mine or production plant, that produces tangible products for sale with an objective to make profit for the project investors, at least eventually. The previous means that IE projects are different from other types of projects like construction, IT, public sector, military development, art and monument projects that might have also more intangible and societal objectives and whose purpose is not to produce tangible products for profit (Merrow, 2011). Conceptually, by IE projects we mean capital projects (Suprpto *et al.*, 2016) of private sector investors (Merrow, 2011) that require substantial front-end expenditures, have high levels of risks and skewed reward structures in the case of success and, once implemented, are of little use outside their original intended purpose (Miller and Lessard, 2001). The sustainability, i.e. harmony between ecological, economical and social sustainability (Elkington, 1997), of IE projects is essential (Silvius, 2017), especially because these projects and their outcomes have the potential to have a great impact on the surrounding societies, economies and environments (Merrow, 2011).

Due to their potential for significant sustainability impacts, IE projects are extensively regulated by governmental stakeholders, such as permitting authorities and regulatory agencies (Prno and Slocombe, 2012; Kokko *et al.*, 2015). We adopt the definition of Sallinen *et al.* (2011) and define governmental stakeholders as those actors who oversee and serve societal and governmental interests in projects and act in an intermediary position between government and project (Sallinen *et al.*, 2011). Governmental stakeholders oversee and control project implementation (especially regulative framework), and while they do not have their own interests (Fassin, 2009), they ensure that society's broader economic, social and environmental needs are fulfilled (Sallinen *et al.*, 2011). For example, in mining projects, it is a standard requirement that governmental stakeholders conduct successful environmental impact assessment (EIA) and social impact assessment (SIA) that focus on identifying the consequences that the proposed project may have for the environment, individuals, organizations and social macrosystems (Becker, 2001). These assessments may lead to additional requirements, which can have a significant impact on project cost and scheduling (Söderholm *et al.*, 2015).

There are a significant number of definitions for sustainability, but most scholars agree that sustainability emphasizes the need to balance economic, environmental and social goals (Aarseth *et al.*, 2017). In addition, sustainability can encompass technological issues, especially relevant to IE projects of which technological solutions must sustain operations for several decades with optimal maintenance and resource efficiency (Laurence, 2011). By considering technological issues together with environmental and economic aspects, process design and operation throughout the whole life cycle can be optimized (Azapagic, 1999). Sustainability in project management includes two perspectives, sustainability of projects and by projects, where the latter encompasses the sustainability of the project's end product and the former focuses on the sustainability of the project implementation and management processes (Silvius, 2017). In this study, we adopt the four sustainability dimensions (economic, environmental, social and technological) as our definition of sustainability. We also focus primarily on the sustainability *by* project perspective because IE projects' outcomes and future operations have significant long-term sustainability impacts (e.g. environmental impact of the project product over its life cycle) that project investors and governmental stakeholders need to address carefully already in the front-end phase, long before any impacts have been realized, being an extremely difficult task subject to many challenges.

Engaging governmental stakeholders, especially in the feasibility studies and early planning activities of IE projects (i.e. the front-end phase), is a key mechanism in ensuring the sustainability of and by IE projects and also the overall project performance and success, for example, by decreasing the costs associated with institutional exceptions (Orr and Scott, 2008; Ghassim and Bogers, 2019). For instance, according to Laurence (2011), a major reason for prematurely closed mines relates to the challenges of not achieving sustainability in economic and resource efficiency dimensions. Moreover, Laurence noted that implementation of sustainable project planning practices, including governmental stakeholder engagement on economic and resource efficiency dimensions in addition to the safety, environmental and social dimensions, would have helped to prevent these closures and decrease the amount of futile work while having an overall positive impact on society, both socially and environmentally. While governmental stakeholder engagement is crucial for the sustainability outcomes of IE projects, the focus of previous studies has mainly been on the sustainability impacts of IE projects (Shen *et al.*, 2010; Marcelino-Sádaba *et al.*, 2015). Sustainable project planning practices, including governmental stakeholder engagement, have however received less research attention. Governmental stakeholders play a key role in setting project sustainability objectives and in ensuring and controlling that they are achieved. The sustainability of IE projects thus requires greater collaboration between investors and governmental stakeholders (Laurence, 2011; Marcelino-Sádaba *et al.*, 2015), yet the current literature does not yield sufficient understanding of collaborative practices between the two actors. Therefore, a more thorough understanding of the collaborative processes and practices between the investors and governmental stakeholders is central for ensuring the sustainability of IE projects.

To this end, the aim of this study was to achieve a better understanding of how governmental stakeholder engagement in the early life cycle phases of IE projects facilitates project sustainability. For this purpose, we formulated the following research question: *How does governmental stakeholder engagement during the front-end phase of IE projects facilitate project sustainability?*

To address the research question, we employed a qualitative single-case study (Eisenhardt, 1989), the case being a mining project located in Northern Europe. The aim of the study was to understand challenges during the early planning and permitting process and how collaborative engagement practices facilitated enabling project plans that are economically, socially, environmentally and technologically optimal.

The rest of the paper is organized as follows. First, we provide a brief literature review on stakeholder engagement and project sustainability, with a focus on governmental stakeholders and IE projects, to develop a framework of collaborative engagement practices for the empirical analysis. Then, we introduce our empirical research process, including information of the case context, data collection and data analysis. Thereafter, we explain the empirical findings, followed by a discussion section that outlines the theoretical contribution and practical implications. We conclude the paper by discussing the research limitations and future research ideas.

2. Theoretical background

2.1 Role of governmental stakeholders in IE projects

IE projects such as mining projects are an important source of wealth and employment; however, they are associated with environmental, social, and economic sustainability development challenges (Azapagic, 2004). IE project investors thus experience pressure to leverage innovation, for example, by engaging other stakeholders, in order to balance the environmental, social, and economic sustainability of their operations (Klewitz and Hansen, 2014). In general, stakeholder engagement enables investors to acquire external knowledge that supports innovation efforts and outcomes, further enhancing their capability to develop sustainability-oriented project plans (Ghassim and Bogers, 2019). Investors need to manage

sustainability risks in an appropriate way to obtain support and acceptance from governments, governmental organizations, and local communities (Krzemień *et al.*, 2016). For example, Laurence (2011) stated that if a mining project succeeds in achieving and demonstrating all dimensions of sustainability, it enables the optimization of the life of the mine, the maximization of the benefits for surrounding society, and wider acceptance for the mining industry. Thus, engaging governments and governmental organizations and addressing their sustainability concerns early in IE projects is vital (Azapagic, 2004).

Governments and governmental organizations greatly affect the success of large IE projects, and their role in coordinating the relationships between different stakeholders (e.g. investors and society) is beneficial (Zhai *et al.*, 2020). Sallinen *et al.* (2011) suggested the term *governmental stakeholder* for these influential organizations that base their influence on the regulative framework. In IE projects, governmental stakeholders oversee the proper implementation of regulative frameworks and overall control project implementation (Fassin, 2009). The role of governmental stakeholders is crucial during the front-end phase of IE projects because they provide guidance through policies, laws, and regulations, balance the interests of other stakeholders, and define industrial specifications (Shen *et al.*, 2010). By definition, stakeholders have a stake (e.g. interest, claim), but governmental stakeholders do not have their own claim *per se* (Fassin, 2009); instead, they represent other stakeholders' (e.g. government, the public, communities) interests and seek to ensure that society's broader needs related to economic, social, and environmental impacts are fulfilled (Olander and Landin, 2005; Sallinen *et al.*, 2011).

Stakeholders are often seen as either opponents or proponents of projects (Walker *et al.*, 2008). However, Mitchell *et al.* (1997) stated that stakeholders have dynamic roles, meaning that their characteristics and influence change over time. Typically, governmental stakeholders are depicted as barriers to IE projects, thus having a restraining influence on projects. For example, governmental stakeholders can limit projects' resources, enact regulations and laws that impact projects, and issue responsibilities and requirements regarding project implementation and execution (Olander and Landin, 2005; Fassin, 2009). However, they can also be enablers, providing valuable contributions and knowledge related to, for example, sustainability requirements and industry best practices (Sallinen *et al.*, 2011, 2013). For instance, governmental stakeholders can facilitate the information flow between an IE investor and other stakeholders, providing valuable information for the investor as well as for society about the project (Campbell, 2007; Sallinen *et al.*, 2013). Governmental stakeholders can also allow investors to participate in shaping the regulative framework and to help ensure that a project meets the relevant sustainability requirements (Campbell, 2007; Fassin, 2009).

Although governmental stakeholders restrict, limit, approve, set objectives, and prioritize IE projects, Sallinen *et al.* (2013) stated that governmental stakeholders do not have a genuine interest in hindering IE projects' development, but they want to guide IE projects in the right directions. That is, when private investors understand and obey governmental stakeholders' requirements and regulations early on, they are likely to do the right things the right way from the beginning; thus, the work for governmental stakeholders becomes easier (Sallinen *et al.*, 2013). This also means that an IE project will likely be feasible at the end of planning and receive the necessary permits for implementation. However, governmental stakeholders are in a difficult position because while there are benefits to collaborating with private investors in IE projects, they must also stay objective and impartial toward investors and ensure that society's (not investors') interests are fulfilled (Winch, 2004; Sallinen *et al.*, 2011).

2.2 Stakeholder engagement practices

We approached stakeholder engagement in our IE project context as consisting of investors' managerial practices by adopting Greenwood's (2007, pp. 317–318) definition. Thus, by

stakeholder engagement, we mean IE project investors' practices (i.e. activities, arrangements) that are used to involve governmental stakeholders in IE projects' activities. Previous stakeholder theory and research on stakeholder engagement have identified various kinds of engagement practices that define the communication and interaction opportunities between the respective stakeholders. For example, investors can rely on traditional practices such as press releases, media outreaches, articles, notifications, emails, leaflets, bulletins, websites, and public hearings (Lehtinen *et al.*, 2019; Lehtinen and Aaltonen, 2020). In this approach (also known as stakeholder debate), investors seek to influence governmental stakeholders and their behaviors through one-way communication (cf. Lehtimäki and Kujala, 2017). Investors opting for this mode are likely driven by the instrumental value of governmental stakeholder engagement, and they will defend their agenda to governmental stakeholders and see them as barriers to achieving their own goals (cf. Kaptein and Van Tulder, 2003; Kujala and Sachs, 2019).

The abovementioned traditional practices that focus on one-way communication from investors to governmental stakeholders without interaction and stakeholder debate are not appropriate in the IE project context for governmental stakeholder engagement. The reason is that these practices do not enable the exchange of ideas (i.e. two-way communication), which means that the information flow from governmental stakeholders to IE project investors is hampered, decreasing opportunities for co-creating sustainable IE project outcomes (cf. Lehtinen and Aaltonen, 2022).

In turn, more collaborative practices, such as information events and seminars, workshops, social media platforms, and virtual collaborative spaces (Lehtinen and Aaltonen, 2022), facilitate collaboration between investors and governmental stakeholders. Investors can rely on these practices to establish a two-way communication and negotiation process with governmental stakeholders where viewpoints and issues are discussed constructively to find compromises, win-win scenarios, and mutually beneficial outcomes in general (cf. Lehtimäki and Kujala, 2017). In stakeholder theory, this concept is also known as stakeholder dialogue, where organizations focus on empathic collaboration through two-way communication and give a voice to stakeholders and genuinely listen to their concerns (Kujala and Sachs, 2019). Investors adopting collaborative practices are likely driven by the normative grounding of stakeholder engagement because they seek to exchange ideas constructively to co-create value with governmental stakeholders (cf. Kaptein and Van Tulder, 2003).

The abovementioned collaborative practices that focus on two-way communication and stakeholder dialogue are generally appropriate in the IE project context for governmental stakeholder engagement. The reason is that collaborative practices enable the exchange of ideas, and the information flows well between governmental stakeholders and investors, increasing opportunities for co-creating sustainable IE project outcomes (cf. Lehtinen and Aaltonen, 2022). This indicates that valuable information about the regulative framework and society's sustainability needs are delivered properly to investors, and they can actively participate in shaping the regulative framework to fit both parties' needs, thus facilitating meeting the sustainability requirements that can lead to optimizing the entire project and acquiring necessary permits.

Generally speaking, previous stakeholder theory and research has acknowledged the strengths of collaborative practices and stakeholder dialogue, also in the project context, in engaging and creating value with stakeholders (Bebbington *et al.*, 2007; Lehtinen and Aaltonen, 2022). However, collaborative practices and dialogue also include challenges in the IE project context because organizing stakeholder engagement practices successfully is a difficult task both in theory and practice (Lehtinen and Aaltonen, 2020). For example, devising collaborative practices and engaging in stakeholder dialogue are often not the core capabilities of IE project investors, who have to invest a lot of time and energy in them, which

is difficult since resources for these activities are often scarce (Di Maddaloni and Davis, 2018). Additionally, collaboration between investors and governmental stakeholders is controversial since governmental stakeholders must remain objective and impartial toward investors.

Due to the above challenges, governmental stakeholders sometimes rely on informal activities and act in so-called gray areas when it comes to collaboration. This is supported by existing evidence and theory that suggests that informal communication plays a significant role in collaborative practices for developing trust and building deeper relationships that help achieve the intended outcomes (Chakkol *et al.*, 2018). For example, governmental stakeholders and investors can initiate informal meetings and private discussions that can help solve challenges (Zhai *et al.*, 2020). These informal activities facilitate knowledge sharing between investors and governmental stakeholders and enable the reduction of inconsistencies and the development of mutual understanding (Sallinen *et al.*, 2011).

2.3 Analytical framework for the empirical research

Based on the above-described theoretical concepts, we developed an analytical framework for our empirical study, which is depicted in Figure 1. In our empirical research, we focused on identifying and defining relevant collaborative practices because previous stakeholder theory suggests that they are appropriate for investors to engage governmental stakeholders in the front-end phase of IE projects to achieve project sustainability. In studying collaborative practices, we focused on understanding the role of stakeholder dialogue, as suggested by previous theory, and sought to gain an understanding of how interaction and communication between investors and governmental stakeholders in collaborative practices enable overcoming challenges in the front-end phase and thus facilitate achieving sustainability by the project. In the front-end phase, the sustainability by the project means that the approved IE project plans predict that the project's design solutions and end products are optimized for technological, economic, and environmental feasibility, and that the project's future operations activities are socially feasible (e.g. acceptance from surrounding society).

3. Research process and method

3.1 Research design

We employed a qualitative embedded single-case study (Yin, 2015). The main unit was an IE project during its front-end phase, and the embedded unit was a collaborative

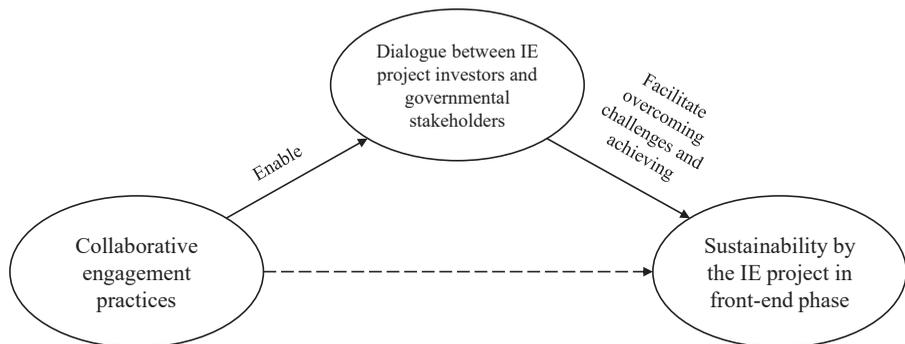


Figure 1. Analytical framework explaining how collaborative engagement practices enable sustainable project outcomes in an IE project's front-end phase

Source(s): Author's own work

engagement practice. Our case research followed theory elaboration and abductive logic of reasoning (Ketokivi and Choi, 2014) because we utilized the framework derived from stakeholder theory and reconciled it with our empirical findings to unravel contextual idiosyncrasies, thus elaborating on previous theory and understanding of IE project sustainability. We believe that an in-depth single-case study can yield a powerful and persuasive example of the relationship between governmental stakeholder engagement and IE project sustainability (see, e.g. Siggelkow, 2007). Our single-case selection was guided by an unusual case rationale to demonstrate how unusually collaborative engagement practices can advance the sustainability of IE project's end product. Unusual case rationale refers to an extreme case that deviates from theoretical norms or even everyday occurrences and it can reveal insights that ordinary cases may not reveal (Yin, 2015, p. 52). We were fortunate to identify an IE project, a mining project located in Northern Europe, where the investor utilized a novel and even unusual approach for a more extensive engagement of governmental stakeholders in the front-end phase. The novel approach differed from traditional engagement approaches with governmental stakeholders, where governmental stakeholders are kept at a distance due to their regulatory role (e.g. through traditional engagement practices), but in this case, the investor opted for an approach that included collaborative practices.

3.2 Case context

The investor currently produces nickel, zinc, cobalt, and copper, and the aim of the project is to expand the operations to a new ore deposit in Northern Europe. The project's pre-feasibility studies and environmental impact assessment process were started in 2020, and the investor aims to complete the project by 2027. The budget for the project is roughly estimated at several hundred million euros. The main challenges in the project are to combine the extensive exploitation of the deposit with an environmentally, economically, socially, and technologically sustainable way of operations and coordinate well the permitting and project planning processes. Figure 2 presents the main phases and events of the front-end phase of the case project.

National legislation plays a crucial role in the relationship between IE project investors and governmental stakeholders, especially in the permitting process. In the case context, the national environmental permitting legislation was updated in 2017 to include a new, clarified framework related to advance guidance meetings. Advance guidance meetings (collaborative practices) constitute the new engagement approach. These meetings can be organized between the investor of an IE project and governmental stakeholders with the purpose of enabling two-way communication during the front-end phase. However, the new legislation does not offer clear instructions on how to organize advance guidance meetings. As a result, several details are still lacking related to how the collaboration in these meetings can be

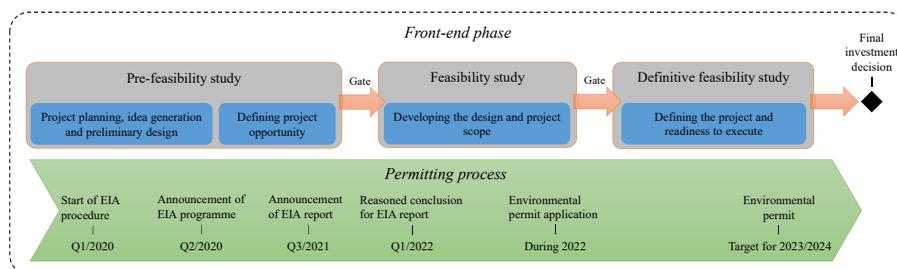


Figure 2. Main phases, events, and activities in the case project's front-end phase

Source(s): Author's own work

carried out. In principle, governmental stakeholders can, for example, give guidance and instructions for the details of the permitting processes, discuss the schedules of the process, identify important issues/challenges that investors should consider, and share best practices. The idea behind the new meetings is to improve the quality of permit applications and the chances of achieving the schedule objectives of the permitting process, reduce the need for supplementation requests, and ultimately achieve a more feasible and sustainable project. Advance guidance meetings are, however, not mandatory, but can be organized when the investors require guidance. Still, governmental stakeholders are not allowed to compromise their impartiality and give an unfair competitive advantage to the investor of a particular project, and they cannot make any binding promises.

The case project investor relied on the advance guidance meeting framework to engage governmental stakeholders more closely in the front-end phase to develop plans for a feasible and sustainable project. The investor engaged representatives from three governmental offices (see [Figure 3](#)) in informal and confidential discussions. Governmental stakeholders had not been previously engaged this extensively in IE projects, so the approach was new to both the investor and governmental stakeholders. In the advance guidance meetings, governmental stakeholders shared best practices, commented on draft plans and their feasibility, and highlighted acute sustainability issues related to project's end product.

3.3 Data collection

We collected data through observations in two project meetings (advance guidance meetings) and two workshops and through seven semi-structured interviews. We also organized several informal meetings with the case project's actors during this research to present and discuss initial research results. Our data collection took place during the pre-feasibility study phase of the front-end phase (see [Figure 2](#)). The details of the data collection are summarized in [Table 1](#).

We participated in two advance guidance meetings and made direct observations of the phenomenon in real time, as suggested by [Yin \(2015\)](#). The meetings lasted for three hours each, and they included both investor and governmental stakeholder representatives. The investor organized these meetings to discuss project specifics and related issues with governmental stakeholders. In these meetings, we observed how communication and interaction took place between the investor and governmental stakeholders and what the central challenges were, and we came to conclusions about how governmental stakeholder engagement was implemented in these meetings. Observations were thus interpretative in nature ([Martinsuo and Huemann, 2021](#)), as our aim was to interpret how the governmental

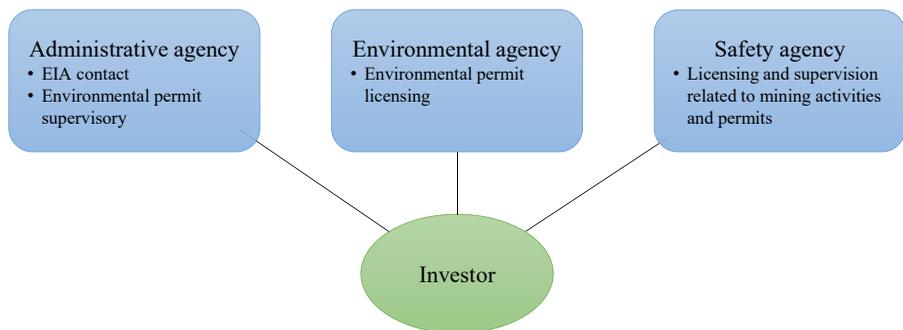


Figure 3.
Engaged governmental stakeholders and their roles/activities in the case project

Source(s): Author's own work

Type of data collection	Number of participants	Interviewee or workshop participant	Date and length
Semi-structured interview	4	<ul style="list-style-type: none"> Investor: CEO, head of design department, two project managers 	5.15.2019 2 h
Semi-structured interview	5	<ul style="list-style-type: none"> Investor: CEO, sustainability manager, head of design department, project manager Environmental agency: environmental specialist 	9.6.2019 3 h
Semi-structured interview	1	<ul style="list-style-type: none"> Investor's environmental consultant: environmental engineer 	12.20.2019 2 h
Semi-structured interview	2	<ul style="list-style-type: none"> Investor: sustainability manager, head of design department 	1.8.2020 3 h
Semi-structured interview	3	<ul style="list-style-type: none"> Investor: head of design department, head of mining engineering Design and consulting company: water management designer 	2.13.2020 3 h
Semi-structured interview	3	<ul style="list-style-type: none"> Investor: sustainability manager, head of design department, head of mining engineering 	4.24.2020 2 h
Semi-structured interview	3	<ul style="list-style-type: none"> Investor: sustainability manager, head of design department, head of mining engineering 	5.13.2020 1 h
Workshop	25	<ul style="list-style-type: none"> Investor: sustainability manager, head of design department Administrative agency: environmental specialist Environmental agency: environmental specialist Safety agency: mining specialist Industrial experts from various companies 	10.16.2019 3 h
Workshop	40	<ul style="list-style-type: none"> Investor: sustainability manager, head of design department, project managers, designers Investor's environmental consultant: environmental engineer Investor's potential suppliers and contractors: CEOs, sales, and design managers Administrative agency: environmental specialist Environmental agency: environmental specialist Safety agency: mining specialist Industrial experts from various companies 	12.9.2019 5 h
Meeting	6	<ul style="list-style-type: none"> Investor: sustainability manager, head of design department Investor's environmental consultant: environmental engineer Administrative agency: environmental specialist Environmental agency: environmental specialist Safety agency: mining specialist Industrial experts from various companies 	1.15.2020 3 h
Meeting	8	<ul style="list-style-type: none"> Investor: sustainability manager, head of design department Investor's environmental consultant: environmental engineer Design and consulting company: water management designer Administrative agency: environmental specialist, water management specialist Environmental agency: environmental specialist Safety agency: mining specialist 	2.18.2020 3 h

Table 1.
Details about data
collection: interviews,
meetings, and
workshops

Source(s): Authors' own work

stakeholder engagement process unfolded in real time and how it contributed to sustainable project outcomes in the planning. The meetings were recorded and transcribed, and then memorandums were made, which participants could comment on and correct afterward.

Additionally, two general workshops related to collaboration issues in national IE projects were organized. The first workshop lasted for three hours and had 25 participants, including both investor and governmental stakeholder representatives, and industrial experts from various companies. The goal of the workshop was to identify and discuss challenges in the early phases of IE projects, especially those related to environmental permitting processes. The second workshop lasted for five hours and had 40 participants, including both investor and governmental stakeholder representatives, potential suppliers and contractors of the case project investor, and industrial experts from other companies. The goal of the workshop was to explore collaborative methods, such as Last Planner, and discuss initial project design and planning principles and how to advance them collaboratively. At least two researchers took detailed notes during the workshops.

Finally, we organized seven semi-structured group interviews focusing on understanding stakeholder engagement and communication activities between investors and governmental stakeholders including both investor and governmental stakeholder representatives. The interviews lasted a total of 16 h. We had predefined themes with guiding questions in our interview protocol, but we allowed the discussions to flow naturally and to be shaped by the interviewees. The themes related to (1) challenges in permitting and project design processes, (2) challenges in knowledge sharing and collaboration, (3) how governmental stakeholder engagement can be done, (4) how early interaction and communication between investor and governmental stakeholders can help solve challenges of the permitting and project design processes, and (5) the restrictions/boundaries of organizing governmental stakeholder engagement. In addition, details related to sustainability issues (scope/technology, environmental, budgeting/financing, and social issues) were discussed. At least two researchers took detailed notes on the interviews, and interviewees were allowed to read and suggest any corrections or additions.

3.4 Data analysis

The data analysis followed qualitative content analysis steps: familiarization with the data, generation of case descriptions, outlining initial ideas, and conventional content analysis (Hsieh and Shannon, 2005). The analysis focused on identifying the typical challenges and impediments in the early planning and permitting process, the practices through which IE project investor engaged governmental stakeholders in the case project's early front-end phase, and how dialogue between the two facilitated solving challenges and impediments that then enabled fluent permitting processes and sustainable project planning outcomes. In the beginning of the data analysis, the first author reviewed the data to form an overall understanding of the case and phenomenon. Then, the first author wrote a case description and concurrently formed initial ideas about the findings, which were commented on by other authors.

In the conventional content analysis, we first developed descriptive, empirical level phrases from the data about the study phenomenon. The phrases contained information about typical challenges and impediments in the project front-end phase that hamper achieving sustainability by restricting and hindering the interaction and communication between the investor and governmental stakeholders, and how the interaction and communication between investor and governmental stakeholders happened. In the second phase, the descriptive phrases were categorized into two main groups, the first related to the main issues/challenges in the front-end phase (Challenge group), and the second related to the collaborative engagement practices (Collaborative engagement practice group).

The Challenge group included 53 initial codes, and the Collaborative engagement practice group included 32 initial codes. The Challenge group was evaluated, and only challenges related to achieving sustainable project outcomes were included (16 codes). The final Challenge codes were then categorized under four themes by comparing their similarities and differences: uncertainty related to project objectives and goals, mutual understanding, permitting process, and design solution options. The Collaborative engagement practice group codes were evaluated for similarities and differences, and the 32 initial codes were consolidated (10 codes) and categorized under four main practices: early engagement, continuous engagement, informal engagement, and engagement in technological issues.

Finally, we drew connections between the four collaborative engagement practices and the four challenge themes. In the interest of theory elaboration (Ketokivi and Choi, 2014), we utilized the derived analytical framework to understand how collaborative engagement practices enabled dialogue between the two actors and how the dialogue then facilitated overcoming the challenges and ultimately supported the development of sustainable project plans in the case context. Focusing on the dyadic relationships between each challenge and practice, we derived four propositions that explain how governmental stakeholder engagement facilitated the achievement of project sustainability during the front-end phase of the case project.

4. Research findings

The coding hierarchy related to the Challenge group and the Collaborative engagement practice group are summarized in Tables 2 and 3, respectively. In the following subsections, we will elaborate each collaborative engagement practice and draw a connection to the respective challenge theme to demonstrate how the collaborative engagement practices mitigated the challenges. By using these four collaborative engagement practices in the way we propose, project investors can improve the sustainability of the project product over its life cycle.

4.1 Early engagement

The first collaborative engagement practice, early engagement, refers to the early engagement of governmental stakeholders to mitigate the challenges caused by uncertainty of project goals and objectives that exist, especially in the beginning of the front-end phase.

According to the participants of one of the two workshops, there exists a lot of unpredictability and waiting related to, for example, governmental stakeholders' comments and instructions about sustainability requirements, which have to be considered in early project planning. The experienced project manager stated that *"typically project plans and design are not accurate enough for the permitting process when it should be started."* Starting the permitting process is difficult if the available information includes uncertainties and deficiencies and if it is not certain which technological solutions can be feasible and sustainable. In one of the interviews, a representative from an environmental agency stated that *"advance guidance meetings are beneficial, and they can be organized early in this project when there is a need."* However, investors should be active in organizing them, as stated by the same representative in one of the two workshops: *"Investors underestimate the demandingness and duration of the permitting process, and they do not always know early in the project what they are actually going to do and what are the related impacts."* Investors often do not allocate enough resources and time, and they start activities late that might cause challenges and delays if the right issues are not investigated on time during the EIA process, meaning that additional work must be done later and/or as new information is available.

Table 2.
Challenge group
coding hierarchy

Themes	Empirical challenges in current processes that prevent the sustainable outcomes
Uncertainty related to project objectives and goals	<ul style="list-style-type: none"> • There is excess waiting time related to, for example, comments and decisions • There is lack of communication between actors • Project plans and design are not accurate enough when permitting process is started • Demands and duration of the permitting process are underestimated • Uncertainties during EIA that may affect delays or additional work later
Mutual understanding	<ul style="list-style-type: none"> • There are problems in how to coordinate work processes • Governmental stakeholders speak their own jargon • Investors do not always know what they want
Permitting process	<ul style="list-style-type: none"> • The permitting process is considered to be long and challenging • Not clear what should be investigated and included in the permitting related documents • There might occur information supplementation requests that require new studies • Investors consider permits as enablers of project financing too often
Design solution options	<ul style="list-style-type: none"> • Non-optimal solution is required, and there is no time to find a better solution • New solution does not fit into permit without change work • Environmental impacts can be bigger than initially estimated • It is overall challenging to find optimal solutions

Source(s): Authors' own work

For the abovementioned reasons, the case project investor organized advance guidance meetings early to start a dialogue with governmental stakeholders about project requirements, sufficient accuracies of information, and potential challenges of the project. In the meetings, governmental stakeholders and investor had early discussions about sustainability requirements, timetables of the permitting process, actions that take time and are required for the project to be feasible, and actors who should be involved in the process and when they should be involved. The investor's head of the design department stated that *"Organized meetings supported us and there could be more meetings later to help in project development."* Early dialogue enabled the investor to start activities on time, and conduct more precise investigations concerning the most critical issues. Common interests are the preconditions for a successful dialogical communication process. It is in the interests of both the investor and the governmental stakeholders that the EIA report and environmental permit application contain all necessities. However, governmental stakeholders emphasized that they may help the investor to understand what must be done and how to get the permits, but they must follow the protocols, meaning that they cannot in any way compromise their impartiality.

Based on all of the above, we propose:

- P1.* Engaging governmental stakeholders early in an open dialogue about project-specific issues reduces uncertainties in project scheduling and uncertainties arising from the legal requirements. Open dialogue increases predictability, meaning that the project investor can better evaluate the sustainable feasibility of the project's end product early on.

Practices	Empirical level engagement practices
Early engagement	<ul style="list-style-type: none"> Discussions between investor and governmental stakeholders can be started as soon as there is initial starting point for the project and there is something to discuss It is the investor's responsibility to choose issues to be discussed and organize meetings with governmental stakeholders who decide which organizations and individual members participate Early engagement of governmental stakeholders and discussions about requirements, accuracies of information, and potential challenges enable the investor to create realistic expectations and to be able to start related preparation in time that mitigates the need for changes later in the project
Continuous engagement	<ul style="list-style-type: none"> Advance guidance meetings can be used to build mutual understanding and are very helpful if they work as intended, but good practices still need to be developed Mutual understanding can be reached if there are enough collaborative activities, and they are started early enough
Informal engagement	<ul style="list-style-type: none"> Informal meetings in which an investor presents the aims of the project, and the governmental stakeholders provide sufficient accuracies of information and advice on essential issues which can decrease the chances of delays and supplementation requests Informal meetings to facilitate information sharing and support in achieving a good environmental permit application that does not require complements
Engagement in technological issues	<ul style="list-style-type: none"> The interconnection between project design and EIA and environmental permit processes is usually limited, but it is possible to organize meetings to facilitate the integration of these issues and the discussion of technological solutions and related guidance and recommendations Engagement of governmental stakeholders in the discussions about design solutions enables the selection of the best and most safe solutions together and helps to avoid situations in which more optimal solutions that do not comply with the permit conditions are found after acquiring the permit Open discussion between the investor and governmental stakeholders when the technical design is almost ready supports the investor in selecting the most optimal solutions

Source(s): Authors' own work

Table 3.
Collaborative
engagement practice
group coding hierarchy

4.2 Continuous engagement

The second collaborative engagement practice, continuous engagement, means that there is continuous interaction with governmental stakeholders throughout the front-end phase. Continuous communication with governmental stakeholders supports the development of mutual understanding and decreases the equivocality of project plans.

A typical issue in the front-end phase is that the investor and governmental stakeholders do not have a common language and terminology, hindering the development of mutual understanding. For example, as a participant from one of the two workshops explained, *"Finding common practices and language between actors is hard, and it takes time."* Another participant stated that *"Communication between actors is not always working, governmental stakeholders speak their own jargon, and there is a lack of best practices about how to do things and organize fluent permitting process in earth works industry."* There is a clear need for more established practices for environmental permitting and possible appeal processes because it is not always clear to the investor what the requirements are and what all the issues are that affect schedules. According to the governmental stakeholders, investors can have a continuing dialogue with them, and it is considered beneficial, but they must keep their

participation within reasonable limits. However, it is not only about investors not understanding governmental stakeholders, but vice versa, as illustrated by this comment from a representative of an administrative agency: “Investors do not always know what they want.” That is, governmental stakeholders sometimes find it hard to understand the investor and advise on how and which legal requirements affect the project and its schedules. Another challenge regarding mutual understanding is that the investor might act solely through consultants who function as a negotiator/arbitrator, and so governmental stakeholders may find it unclear what the investor wants to achieve.

For the abovementioned reasons, the investor engaged in a continuous dialogue with the governmental stakeholders to promote mutual learning and find a common language so that misunderstandings could be avoided, and uncertainties resolved. Starting the governmental stakeholder engagement early (P1) and continuing it throughout the front-end phase (P2) gives the two parties time to get to know each other and build mutual understanding. In the case project, both the investor and governmental stakeholders stated that it was beneficial to discuss continuously because this facilitated uncovering issues, such as those related to water management, which might have gone unnoticed otherwise and caused problematic issues later in the process.

Based on all of the above, we propose:

- P2. Continuous engagement of governmental stakeholders in an open dialogue decreases equivocality of project plans and facilitates mutual understanding about project scheduling and legal requirements and their impact on the project’s end product’s sustainable feasibility. Mutual understanding then enables the investor to prepare feasible project plans that consider sustainability issues.

4.3 Informal engagement

The third collaborative engagement practice, informal engagement, means that the investor engages governmental stakeholders in informal meetings to receive guidance and to discuss the feasibility of the project plans. The purpose of these informal meetings is to mitigate the challenges related to integrating the project planning and permitting process that otherwise prevent achieving environmental sustainability.

The permitting process happens in parallel with early project planning (see Figure 2) and takes a long time, meaning that it must be started early, even though the project plans and design are still very incomplete. However, over the time it takes to complete the plans, there might have been changes to the initial design and plans on which the permitting process was based. If there are major changes in the project design during the permitting process, it is likely that the investor will be obliged to complete and announce a new EIA, which again takes a lot of time. The complexity of the permitting process is illustrated by the following quote from the investor’s sustainability manager: “It is not always sure what has to be investigated and included in the permitting related documents.”

The investor organized informal meetings with governmental stakeholders to receive information about water management and land usage issues, laws, and other requirements related to the water management plan. Investors need to consider these issues in the EIA and thus need the information to start related actions early enough. In one of the interviews, the project manager from the investor argued that the typical challenge is that “governmental stakeholders many times request changes and clarifications after the environmental application has already been submitted and they have had time to familiarize themselves with the application.” In turn, a representative from the administrative agency advised that “the investor should present the essential information unequivocally in the environmental permit application so that it is clear what is sought with the application, or we must ask further clarifications.” This means that, for example, graphs and load charts must be comprehensible

and technical details have to be precise. In addition, a representative from an environmental agency argued in one of the two workshops that typically there are challenges related to the environmental permit application documents, and investors should, for example, hire their own experts and start many permitting related activities earlier. The person added that *“Some investors see a permit only as a decision that enables the financing of the project. Why are things not handled as required by their importance?”* All the above illustrate the challenge of starting the permitting process early with incomplete plans and insufficient information of the project’s technological design issues and emission and effluent estimations, which also affect the implementation and evaluation of sustainability.

The investor wanted the project design and permitting processes to be better synchronized in the project to enable timely inputs. To do so, the investor organized informal meetings with governmental stakeholders to create goodwill and a shared view of reality as well as to discuss the project and the progress of project design and permitting processes openly. In addition, governmental stakeholders provided information on the required EIAs and the right timing to organize workshops with external stakeholders. The informal meetings clarified the situation for the investor and enabled it to understand what resources are needed minimizing the chance of delays and the need for supplementation requests in the permitting process. In one of the advance guidance meetings, a representative from the safety agency argued that *“We discussed about right things today . . . now we understand them better, and it helps to prevent challenges later.”* However, it is important that there is a clear objective even for informal meetings, and there cannot be too many of them because of the workload.

Based on all of the above, we propose:

- P3. Informal engagement of governmental stakeholders enables receiving guidance and discussion of the sustainable feasibility of project plans and related end product. Informal, open dialogue in these meetings helps achieve better alignment of the project’s technological design and permitting processes and schedule optimization for different activities with timely, up-to-date inputs.

4.4 Engagement in technological issues

The fourth collaborative engagement practice, engagement in technological issues, refers to the practice where the investor presents technological design solution options to which governmental stakeholders comment, give non-binding recommendations, and share best practices. This resolves problems in choosing optimal design solutions.

Governmental stakeholders might sometimes require a generally acknowledged technological solution that is not optimal techno-economically and/or environmentally in the IE project in question. However, these tend to happen too late in the front-end phase, and it becomes impossible to find a more appropriate technological solution and to demonstrate that it is environmentally as good or better than generally acknowledged. For example, the investor’s head of the design department said that *“In one earlier project, governmental stakeholders required a specific structure, but we knew it was not good. If we had discussed about the issue earlier, we could have looked for a better solution with a chance to get a permit for it.”* The environmental consultant also highlighted this issue: *“if a better solution is found after an environmental permit is acquired, there might be a need for changes in the permit even if the new solution was environmentally as good or better than the original solution to which a permit has been obtained.”* Usually, equipment suppliers are not chosen early, and because of that, the estimated layouts or emissions can change after the selection, again influencing the permitting process. The investor organized a workshop and invited the potential contractors and suppliers as well as governmental stakeholders to discuss the project and especially its technical issues, such as dam options for water management. In the workshop, a

representative from the safety agency offered a reminder that “*In the meetings that are organized under the formal EIA process, new ideas and solutions cannot be discussed and shared in optimal way.*”

The investor engaged governmental stakeholders in technological issues by presenting initial project plans and some of the main technological design options in the workshops and meetings. The governmental stakeholders had knowledge about the best available technologies, best practices, and environmental and societal issues, so they were able to highlight several important issues to consider and give suggestions about what to investigate during the EIA process and what would be required related to different technological design options. For example, the governmental stakeholders offered detailed guidance on how to make area reservations for certain functions, what must be considered when planning the location of mineral processing and gangue areas, and what has to be considered when developing water management solutions (e.g. dams, and related environmental issues). According to governmental stakeholders, it was also in their best interest that the design solutions would be optimal and that changes would not be needed. Through this collaboration, the investor was able to identify how to achieve the economically, technologically, environmentally, and socially best solutions that governmental stakeholders could accept.

Based on all of the above, we propose:

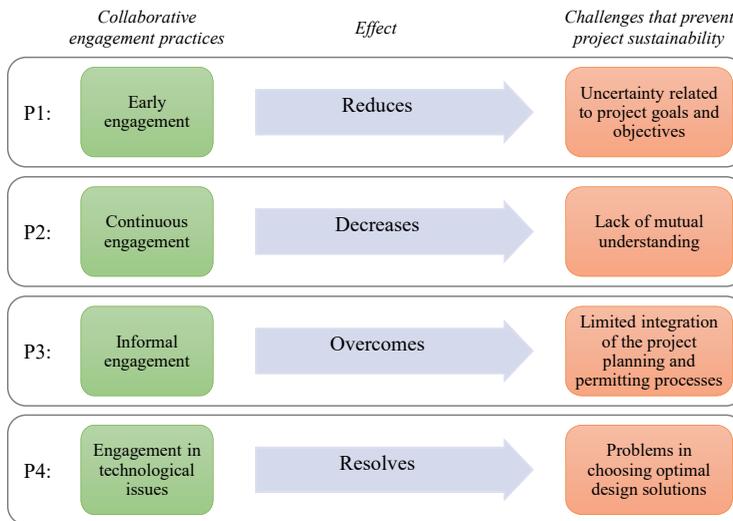
- P4. Engagement of governmental stakeholders in technological issues and their feasibility enables governmental stakeholders to provide non-binding recommendations and share best practices about various design solution options. The information received from governmental stakeholders enables the investor to avoid change works and develop economically, technologically, environmentally, and socially best solutions.

4.5 Summary of the empirical findings

Based on the empirical analysis, we formed four collaborative engagement practices to address the four identified key challenges that prevent project end product’s sustainability. In addition, we derived four propositions explaining how governmental stakeholder engagement facilitates the achievement of project sustainability by improving the collaborative process between investors and governmental stakeholders during the front-end phase of IE projects. We propose that early engagement reduces the uncertainty related to project goals and objectives, continuous engagement decreases lack of mutual understanding, informal engagement overcomes limited integration of the project planning and permitting processes, and engagement in technological issues resolves problems in choosing optimal design solutions. [Figure 4](#) summarizes the relationship between each identified collaborative engagement practice and the related key challenge it addresses.

5. Discussion

The findings of this study support previous notions that while governmental stakeholder engagement, especially in the front-end phase, is vital for the sustainability of IE projects (e.g. see [Azapagic, 2004](#); [Fassin, 2009](#)), there are several challenges, as identified in the case study, that complicate the process of engaging governmental stakeholders and achieving sustainable project outcomes and end product. These challenges are related to the uncertainty of project goals and objectives, lack of mutual understanding, limited integration of the planning and permitting processes, and problems in choosing optimal design solutions. One root cause of the challenges is the impartial role of governmental stakeholders (e.g. see [Sallinen et al., 2011](#)). As illustrated by our case study, the governmental stakeholders



Source(s): Author’s own work

Figure 4. Collaborative engagement to facilitate achieving project sustainability during the front-end phase of IE projects

regulated, monitored, and granted permits but could not give any binding promises or perform actions that could be considered “consulting” because that could compromise their impartiality. While the governmental stakeholders gave advice and recommendations to the investor, they were unable to be part of the project’s governance and make decisions together with the investor. Essentially, the governmental stakeholders of the case study were external stakeholders, as they did not have a contractual relationship to the project (Winch, 2004) and were not enfranchised as they did not have decision rights in the project (Gil and Fu, 2021). Nevertheless, the governmental stakeholders were invaluable resources and information providers for the project, legitimizing their claimancy rights (see McGahan, 2021) over the sustainability value of the project, as they represented the interests of the government and the general public in respect to economic, environmental, and social issues.

The case study findings also showed that more extensive collaboration was possible due to the advance guidance meetings framework. It enabled new kinds of meetings between the investor and governmental stakeholders, including more open dialogue. The governmental stakeholders gave guidance and instructions about the details of the permitting processes, discussed the schedules of the process, identified important issues/challenges that the investor should consider, and shared best practices. Overall, the governmental stakeholders were valuable contributors to the project, a phenomenon which has also been recognized in previous research (Campbell, 2007; Sallinen *et al.*, 2013). Essentially, the advance guidance meeting framework enabled the four collaborative engagement practices (early engagement, continuous engagement, informal engagement, and engagement in technological issues) that contributed to solving the identified key challenges related to achieving sustainable project outcomes, as summarized in the propositions. The four practices improved the quality and schedule of the permitting process, reduced the need for supplementation requests and change works, and ultimately facilitated the achievement of an economically, technologically, environmentally, and socially feasible design. It is also worth mentioning that the fluent engagement process was found to decrease the governmental stakeholders’ workload, meaning that the four

practices did not only create value for the investor, the general public, and government, but also for the governmental stakeholders directly. This was due, for example, to early contribution from governmental stakeholders in the design and permitting processes, which guided the investor in the right direction and supported to reduce mistakes, misunderstandings, changes, and governmental stakeholders' requests for additional information from the investor. The advance guidance meeting framework and related new legislation did not yet offer clear guidelines and established practices on how to organize the engagement process and researchers supported in organizing and facilitating the meetings. The need for guiding practices relates to a recent study commissioned by the respective state that identified development needs in the advance guidance meeting framework, including the need for more meetings in the front-end of IE projects, clear instructions on the process, and established practices for organizing the process (Rinne *et al.*, 2017).

Typically, governmental stakeholders are considered as external (Winch, 2004; Aaltonen *et al.*, 2008), secondary (Clarkson, 1995) or non-business stakeholders (Cova and Salle, 2005). We focused on governmental stakeholders in the context of the IE project and sought to understand their role in more detail. The case study highlights that although governmental stakeholders were external to the project, there was some permeability in the project governance. Kujala *et al.* (2020) argued that external stakeholders can also be active agents in contributing to projects, and when they are engaged in a way that they can contribute and are motivated to do so, it increases the likelihood of project success. That is, while the governmental stakeholders were neither enfranchised nor internal stakeholders (e.g. see Winch, 2004), the advance guidance meeting framework and the four practices allowed for timely contributions from the governmental stakeholders. Therefore, these governmental stakeholders cannot be considered exclusively as external stakeholders. This resonates with earlier observations in project stakeholder research, where project governance is not completely an open or closed system with clear boundaries for decision-making, but includes some degree of permeability (Lehtinen *et al.*, 2019). However, in our case study, the governmental stakeholders were not able to be transformed into internal stakeholders and make actual decisions, but they were somewhere in between the internal–external division. This suggests that the dichotomy of either external or internal stakeholders might not be sufficient, but a third term, for example, *intermediary stakeholders*, would be required to characterize the role of governmental stakeholders in the case project. The new intermediary role and permeability of governance relate to adaptive governance arrangements in new stakeholder theory (McGahan, 2021), where governance structures are not designed for stability but rather to meet the changing requirements of the context. The adaptive governance structure in the case study was a crucial enabler for successful governmental stakeholder engagement.

In addition, the findings of this study support and elaborate on previous notions in stakeholder theory regarding the strengths of collaborative engagement practices and stakeholder dialogue (Kaptein and Van Tulder, 2003; Bebbington *et al.*, 2007; Lehtimäki and Kujala, 2017; Kujala and Sachs, 2019; Lehtinen and Aaltonen, 2022). The findings demonstrate how the four identified collaborative practices were platforms for two-way communication and enabled genuine dialogue between investor and governmental stakeholders. In summary, the case study findings indicate that the dialogue achieved the following: (1) mutual understanding and common vocabulary about legal requirements, (2) reduction of equivocality and uncertainties in the project planning, (3) timely focus on the right issues with the right precision level, (4) alignment and synchronization of the project's technological design with the permitting process, (5) avoidance of change works and need for supplementation requests, and (6) development of economically, technologically, environmentally, and socially optimal solutions.

6. Conclusion

The purpose of this study was to explore how governmental stakeholder engagement facilitates the achievement of project sustainability during the front-end phase of IE projects. The case study findings comprise four propositions and a related model (Figure 4) that explain how four collaborative engagement practices and dialogue between the investor and governmental stakeholders of the case project overcame challenges that would have otherwise prevented sustainable project outcomes and end product.

6.1 Summary of theoretical contributions

This study makes four contributions. First, the findings contribute to research on project sustainability in the context of IE projects (Shen *et al.*, 2010; Laurence, 2011; Sallinen *et al.*, 2011, 2013; Marcelino-Sádaba *et al.*, 2015) by offering a new understanding of governmental stakeholder engagement practices that help overcome typical challenges impeding sustainable project end product, thus facilitating achieving sustainability in the front-end phase of IE projects. Second, the study contributes to stakeholder theory and research by elaborating on a new stakeholder role, *intermediary stakeholder*, that operates between the internal and external stakeholder division, having implications for the adaptive governance structure of IE projects. Third, the findings regarding the role of external facilitators in enabling dialogue between stakeholders highlight the need to better distinguish between two-way communication and genuine dialogue in stakeholder theory (cf. Bebbington *et al.*, 2007; Kujala and Sachs, 2019). Fourth, the findings regarding the role of external facilitators in governmental stakeholder engagement contribute to project stakeholder research and theory by elaborating the systematic approach to organizing external stakeholder engagement (Lehtinen and Aaltonen, 2020) in the IE project context with the idea of using external facilitators that help establish dialogue and organize governmental stakeholder engagement in a systematic manner.

6.2 Managerial and policy implications

IE project investors can utilize the developed model (Figure 4) to plan governmental stakeholder engagement activities. The model offers an understanding of the central challenges that need to be overcome and also what kinds of collaboration activities with governmental stakeholders can help do so. In addition, IE project investors should keep in mind that collaboration can be difficult with governmental stakeholders due to their impartial role. As projects are unique, investors and governmental stakeholders in each project should discuss how to create a mutually efficient engagement process that enables the different dimensions of sustainability to be achieved. As stated by both the investor and governmental stakeholders in this study, there is a need for better dialogue and the potential for improvement. This relates to the fact that the advance guidance meeting framework and related new legislation enabled dialogue and coordination between project planning and permitting processes, but this did not yet offer clear instructions on how to organize such meetings, implying that many details were still missing regarding how the investor could engage governmental stakeholders and what the rules of collaboration were. Thus, it is advised that before established practices and instructions are created, IE project investors seek out external facilitators (researchers or other stakeholders with experience/know-how) to support the interaction process with governmental stakeholders over the front-end phase. IE project investors should also be prepared to make a governance structure to allow the governmental stakeholders' timely contributions.

6.3 Research limitations

There are naturally some limitations to this research. The first relates to the single-case design where the case is embedded in a specific institutional context, meaning that the

engagement process is likely different in other contexts, hindering transferability of the findings. National legislation sets boundaries on how governmental stakeholders do their work, and this affects the engagement process and the two-way communication between the stakeholder groups. However, our findings (developed themes) focus on general issues derived from a specific context, and we hope that these ideas are of use in other contexts as well. Another limitation relates to conventional content analysis; if the context is not understood completely, it can lead to failures in identifying key categories, and the findings may inaccurately represent the data (Hsieh and Shannon, 2005). To mitigate this limitation, we engaged in the project intensively for a long period and used multiple data sources for triangulation purposes. Lastly, qualitative data are subjective and can contain biases, such as post hoc rationalization of interviewees. To mitigate this, we organized group interviews and interviewed different personnel and stakeholders with various roles to construct as objective an understanding of the case as possible.

6.4 Future research ideas

We believe that the adaptive governance structure of IE projects and stakeholder roles includes several questions that connect to project sustainability, which are worth exploring in future research. First, it would be valuable to study how governmental stakeholders are enfranchised in different IE projects and different institutional contexts. Moreover, research on enablers and barriers to engaging governmental stakeholders with collaborative practices is needed to understand the current limitations and required regulatory changes. It would be particularly beneficial to study whether legislation sets the boundaries or whether it is in fact something else, such as established practices and policies and the presumption that engagement is not possible because the role does not allow it. Another interesting question is how enfranchised governmental stakeholders co-develop sustainable IE project solutions together with investors, how that should be organized efficiently and how it affects the projects' current processes. For example, how do investors and governmental stakeholders make joint decisions, and how does this affect project sustainability? Lastly, a topic worth exploring in more depth is the role of intermediary stakeholders and how stakeholders with multiple roles should act.

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