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Empirical Research Paper

Exploring team members' perceptions of internal sustainability communication in sustainable project management

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ABSTRACT

Organisations increasingly seek to implement sustainability in their processes and practices by the means of projects. Even though research shows that internal sustainability-related communication is essential for this transition, its role in sustainable project management remains fairly understudied. This study addresses that research gap by exploring the ways internal sustainability communication is organised and perceived in the context of sustainable project management. The research is based on a case study of a large infrastructure project in Sweden. Data was collected through semi-structured interviews and internal project documents. The results reveal that there is no uniform understanding of sustainability among project team members and that the different modes of sustainability communication are applied in a way that does not meet project team members' needs. The latter specifically concerns the frequency, used channels and targeted audiences of sustainability communication measures.

1. Introduction

Businesses and organisations are increasingly pursuing the integration of sustainability into their strategies and practices (BSR & Globescan, 2019). This transition towards more sustainable business requires a change in companies' products, services, business models, processes, systems and resources (Tulder et al., 2014). Projects play an instrumental role in implementing these organisational changes (Marcelino-Sádaba et al., 2015), which makes them key enablers of the transition towards more sustainable organisations and thereby a more sustainable society (Marcelino-Sádaba et al., 2015).

The pivotal role of projects in the transition towards sustainability of businesses, organisations and society requires a reconsideration of the way projects are planned, organised, executed, managed and governed (Silvius and Schipper, 2014). As a result, the concept of 'sustainable project management' has gained considerable traction among scholars and practitioners, and is addressed in a growing number of studies (Silvius and Schipper, 2014; Aarseth et al., 2017; Sabini et al., 2019). However, in a reflection on the emerging literature on sustainable project management, [Huemann and Silvius (2017), p. 1069] note that "*sustainability is a concept that is not interpreted or applied in a single generalizable way*". This supports the assertion made by Briassoulis (2001) that sustainability is understood intuitively, but remains difficult to express in concrete, operational terms.

In an effort to address this lack of clarity on a project level, communication has been identified as essential for the development of a shared sustainability understanding, navigating both the variety of interpretations, as well as potential conflicts of values, priorities and interests (Genç, 2017). The development of a common understanding is of particular importance in the context of sustainable project management. For example, Kataria et al. (2013) and Craig and Allen (2013) argue that the transition towards more sustainability can only be achieved through the collective actions of all project members. However, research has found that the mobilisation of all project members towards the common goal of implementing sustainability within the project depends in large parts on the effectiveness of internal communication measures (Kataria et al., 2013; Craig and Allen, 2013).

From a broader perspective, recognition for the important role of communication in sustainable development has grown and evolved into the discipline of "sustainability communication" over the past five decades. The overall purpose of sustainability communication is to introduce a vision of sustainability and a mutual understanding regarding the nature of current sustainability problems, the transformation needed for sustainable development (e.g. norms, values, behaviour) and the

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possibilities to take action (Godeman and Michels, 2011). With regards to the business context, scholars within the discipline of sustainability communication have mostly focused on external CSR communication (Newig et al., 2013), instead of internal communication. However, as it was already briefly touched upon above, there is reason to broaden this focus, since internal sustainability-related communication has been recognised as a crucial element in knowledge-sharing (Craig and Allen, 2013), stakeholder management (Kataria et al., 2013) and employee engagement (Tkalac Verčič and Pološki Vokić, 2017). Internal communication therefore plays an important role in the process of implementing sustainability through projects (Genç, 2017; Kataria et al., 2013).

It can be argued that project team members, as executors of project activities, have substantial influence on the sustainability of those activities (Goedknegt, 2013), which in turn makes them key stakeholders in the process of implementing sustainability in an organisation (Kataria et al., 2013; Craig and Allen, 2013; Duthler and Dhanesh, 2018). It is therefore essential that internal project communication is organised in a way that caters to the needs and interests of project team members (Newig et al., 2013). Despite the widespread consensus on its importance (Craig and Allen, 2013; Kataria et al., 2013; Newig et al., 2013; Kalla, 2005), the role of internal communication in sustainable project management remains an understudied topic (Kataria et al., 2013; Duthler and Dhanesh, 2018). The study at hand seeks to contribute to filling this gap in existing research by exploring project team members' perceptions of internal sustainability communication. More specifically, it aims to add to the understanding of the role of internal communication in implementing sustainability in and through projects. The study evolved around two research questions:

RQ1: In what way is internal sustainability communication organised within a project context?
RQ2: What are project team members' perceptions of internal sustainability communication?

In this study, the perceptions of the project team members are of central importance and this topic is directly addressed by RQ2. However, in order to develop a comprehensive understanding of the project team member's perceptions, the researchers deemed it necessary to gain knowledge of the structure and contextual processes that may construct and influence these. This is addressed by RQ1.

By addressing these two questions, this paper not only contributes to internal communication theories and the discipline of sustainability communication; it also provides a new angle to the emerging academic field of sustainable project management. Moreover, this study is of high practical relevance, as it provides practitioners (specifically those occupied with implementing sustainability in projects) with insights into the role of internal sustainability communication. Based on the research results, this study offers various practical recommendations for the organisation of internal sustainability communication, which are useful in the formulation of communication strategies.

The remainder of this article is structured as follows. The upcoming section two of this article introduces relevant theories, frameworks and concepts with regards to internal communication, sustainability communication and sustainable project management. Section three provides a description of the research strategy of this case-based study, which centres around a large infrastructure project in Sweden. Section four offers an overview of the research findings by providing a description of both the factual situation within the project as well as of the corresponding perceptions by project team members. In section five, the case study's findings are discussed and positioned within the academic debate. Finally, the paper concludes with section six, in which the research results are summarised and recommendations for practice and future research are made.

2. Theoretical framework

The following paragraphs outline the theoretical starting points of this research. All included literature was selected based on its relevance in terms of addressing the research problem and aim.

2.1. Internal communication

Internal communication as a concept is often framed as synonymous with intra-organisational communication (Tkalac Verčič and Pološki Vokić, 2017) and has been conceptualised as a multidisciplinary, multilevel phenomenon that is based on strategy rather than individual skills (Kalla, 2005). Like other types of communication, internal communication involves a sender, a receiver and content, which is transferred through a specific medium. It is to be understood as a management task, which can contribute positively to organisational success (Tkalac Verčič and Pološki Vokić, 2017) and effectiveness (Welch, 2012). It comprises "*all formal and informal communication taking place internally at all levels of an organisation*" [(Kalla, 2005), p. 304], including the exchange of "*of ideas, information, attitudes and emotions*" [(Welch, 2012), p. 3]. As internal communication can take place between members from different parts of an organisation, Zulch (2014) identifies different lines of communication, which are grouped into two main categories: formal and informal communication. Depending on the involved members' positions in the organisational structure, formal communication can be directed downward (from a higher to a lower level of hierarchy), upward (from a lower to a higher level of hierarchy) or horizontally (between colleagues of the same level of hierarchy or between departments) (Zulch, 2014; Tolbert and Hall, 2016). Informal communication on the other hand is independent from the sender's and receiver's formal job title and is distributed through the grapevine or informal social gatherings (Zulch, 2014).

Zulch (2014) states that internal communication is of especially high importance in a project context as it integrates functions like the management of the project's scope, time and cost. However, it is necessary to acknowledge that internal communication can also pose a threat to internal organisational relationships if it is not conducted properly. Its benefits are heavily dependent on whether appropriate messages are distributed in a manner that is useful for and accepted by the receivers (Welch, 2012). Correspondingly, it has been discovered that processes such as consensus-building and the development of a common understanding of specific concepts are more likely to be successful if they are frequently integrated into communication (Lee, 2018). With regards to the different internal communication media, Welch (2012) argues that they should be selected based on their respective controllability, usability and dissemination capability. Most relevant for the research at hand is the factor of dissemination capability, which refers to how content is accessed by the receiver, and makes a distinction between push and pull media. White et al. as cited by Welch (2012), find that employees prefer to receive information via push-dissemination instead of having to seek out and 'pull' the information themselves.

Researchers have proposed multiple approaches to categorising the different methods and channels of internal communication (Welch, 2012; Zulch, 2014). For the purpose of this study, the authors distinguish between written and oral communication, as suggested by Tkalac Verčič and Pološki Vokić (2017). According to their definition, written communication includes mediums such as reports, e-mail, instant messages and content on the intranet, while oral communication covers telephone conversations, video conferences, meetings and other types of face-to-face communication (Tkalac Verčič and Pološki Vokić, 2017). Previous research has found that employees' preferences regarding communication media can vary based on their individual characteristics as well as the specific information or situation in question (Welch, 2012). For example, it has been discovered that written communication via e-mail is more suitable for routine day-to-day exchange of information, while face-to-face interaction is more valuable for discussing

nonroutine, complex content or providing feedback. Additionally, recent data suggests that videoconferencing applications are particularly useful and effective for participatory two-way internal communication (Lee, 2018). Consequently, managers are advised to take their employees' needs and preferences as well as environmental factors (e.g. available resources) into consideration when selecting an internal communication medium (Tkalac Verčič and Pološki Vokić, 2017).

2.2. Sustainability communication

Although sustainability has been approached from a multitude of perspectives in the past, it has most often been described in terms of 'three pillars', which are meant to symbolise the economic, social, and environmental element of sustainability (Purvis et al., 2019). A more nuanced approach can be found in the United Nations Sustainable Development Goals (SDGs). These 17 goals were adopted in 2015 as part of the 2030 Agenda for Sustainable Development and revolve around the most pressing global challenges of our time (UN, n.d.). In this context, it is critical to note that even though these two conceptualisations of sustainability are currently the most popular, they are by far not the only ones available. It should also be taken into account that the subject matter of how to achieve sustainable development is connected to a large variety of conflicts of values and interests from different stakeholder groups. These two factors perfectly illustrate that sustainability continues to be a highly complex and multifaceted concept, which in turn underscores the importance of communication for determining a common understanding of the term and a shared plan of action (Genç, 2017; Fischer et al., 2016; Newig et al., 2013).

Just like the concept of sustainability itself, sustainability communication does not reflect a clearly confined theoretical framework, but rather a concept that has been approached from various angles (Newig et al., 2013). Nevertheless, the discipline of sustainable communication has a purpose of its own. Accompanying the growing awareness of the need for sustainable development from the 1970s onwards, sustainability communication unfolded as an essential instrument therein. For example, German social constructionist Luhmann stated the following in his book about ecological communication, one year before the publication of the Brundtland Report: *"Fish may die, or human beings swimming in lakes and rivers may cause illnesses, no more oil may come from the pumps, and average temperatures may rise or fall, but as long as this is not communicated it does not have any effect on society"* [(Luhmann, 1986), p. 63].

Regardless of where sustainability communication takes place and who participates in the process, it introduces an understanding of the relationship between humans and the environment. According to Godeman and Michelsen this is precisely the task of sustainability communication: *"[…] introducing an understanding of the world, that is of the relationship between humans and their environment, into social discourse, developing a critical awareness of the problems about this relationship and then relating them to social values and norms."* [(Godeman and Michels, 2011), p. 6.]

Newig et al. (2013) propose a typology of three types of sustainability communication: communication *of* sustainability, communication *about* sustainability and communication *for* sustainability. Whereas the first two types refer mainly to the mode of sustainability communication, communication *for* sustainability refers to the purpose of communication. More specifically, communication *of* sustainability is vertical in nature and refers to a mono-directional flow of information with the primary aim to inform about sustainability issues and the secondary aim to achieve some form of engagement (Genç, 2017; Newig et al., 2013). It implies a certain separation between the 'expert' and the 'lay-person' in terms of their knowledge on sustainability (Newig et al., 2013). Within a company or project, corporate sustainability reports, newsletters or mono-directional sustainability training can be considered as communication *of* sustainability. The effectiveness of communication *of* sustainability can be assessed by determining to what degree the target audience has received and understood the sustainability message and perhaps even changed its behaviour or attitudes accordingly (Newig et al., 2013).

Communication *about* sustainability refers to the horizontal exchange of sustainability-related ideas, perceptions and discourses between different actors and groups. Its goal is to develop compatibility between these different ideas and to create a common understanding of sustainability (Genç, 2017; Newig et al., 2013). In that sense, it can be likened to the function of consensus-building within general internal communication (Lee, 2018). Within a company, an interactive sustainability workshop in which employees and managers are encouraged to voice their ideas and opinions about sustainability could be considered a context of communication *about* sustainability. The effectiveness or quality of communication *about* sustainability can be assessed by determining who is included and participating in the discussion and who can influence the process. Another indicator is to assess whether the sustainability discourse in one subsystem corresponds with the discourse in another subsystem (Newig et al., 2013). It can be argued that on an organisational level, different departments or hierarchical levels function as different subsystems.

Communication *for* sustainability has a normative character as it is seen as an instrument to mobilise action towards sustainable goals (Genç, 2017; Newig et al., 2013). Because of its mobilising aim, the effectiveness of communication *for* sustainability can be assessed through the tangible actions towards sustainable development that result from it (Newig et al., 2013). Both communication *of* and communication *about* sustainability can have this transformative purpose. However, not every communication *of* or *about* sustainability is necessarily aimed at societal transformation towards sustainable development. Greenwashing for example, although it can be considered as communication *of* sustainability, is in fact counterproductive to sustainability. Moreover, certain discourses related to communication *about* sustainability may downplay the need for sustainable development (Newig et al., 2013). As the proposed framework by Newig et al. (2013) is deemed useful for distinguishing the different modes of sustainability communication, it will guide the presentation of the findings of the study at hand.

Newig et al. (2013) also describe how these sustainability-related communication types are manifested in various societal subsystems (e.g. politics, law, science, business or education). When taking a closer look at business, it becomes evident that previous research on sustainability communication in that specific societal subsystem has mainly been focused on CSR and corporate communication towards external stakeholders (Newig et al., 2013). However, although external communication of CSR initiatives is important, research has shown that internal sustainability-related communication also plays a crucial role in the process of implementing sustainability *within* an organisation (Genç, 2017; Kataria et al., 2013). For example, Kataria et al. (2013) and Craig and Allen (2013) argue that working towards sustainability requires more than individual efforts from the management. Instead, it should include collective efforts of each member in the organisation. This is only possible, the researchers assert, through effective internal communication. As a result, employees are considered key stakeholders in the process of implementing sustainability (Kataria et al., 2013; Craig and Allen, 2013; Duthler and Dhanesh, 2018) and the impact of a sustainability policy is viewed as being dependent on their capability and engagement (Kataria et al., 2013; Craig and Allen, 2013). In other words, employees are essential as they produce, consume and communicate sustainability knowledge (Kataria et al., 2013).

When businesses wish to engage their employees in the process towards achieving sustainability, it is recommended to develop a strategy for the distribution of sustainability messages throughout the organisation (Kataria et al., 2013; Craig and Allen, 2013; Duthler and Dhanesh, 2018; Quinn and Dalton, 2009). For example, Kataria et al. (2013) studied the role of employees in the implementation of sustainability and the role of internal communication in sustainability-related

knowledge creation and use. They found that it is important to formulate well-defined and pragmatic messages in an easy-to-understand format that is tailored to the employees' needs and knowledge. As these two factors typically vary between employees, they propose to customise sustainability messages for different groups in the organisation (Kataria et al., 2013). However, the researchers do not provide guidelines on how to effectively customise messages, which might pose a challenge in the context of larger projects.

Approaching the issue from a different angle, the study of Quinn and Dalton (2009) aims at distinguishing common denominators in behaviour and practice of leaders that had successfully implemented sustainability within an organisation. Based on their findings, the researchers stress the importance of integrating sustainability communication in everything the company does as well as ensuring consistency between sustainability messages (Quinn and Dalton, 2009). Moreover, both Kataria et al. (2013) and Quinn and Dalton (2009) highlight the importance of engaging all employees, or at least a wide span of employees throughout the organisation, and to encourage them to provide sustainability-related input and ideas (Kataria et al., 2013; Quinn and Dalton, 2009).

Craig and Allen (2013) argue that in order for employees to contribute to the implementation sustainability in the organisation, they must be knowledgeable on the topic and endorse its importance for the company (Craig and Allen, 2013). The researchers argue that it is relevant to examine the sources used by employees to access or share sustainability-related information as it enables communication managers to select appropriate content and channels accordingly (Craig and Allen, 2013).

All in all, the discussed literature suggests that sustainability communication within organisations can serve various purposes and can take on different forms. Moreover, for internal sustainability communication to serve the implementation of initiatives that contribute to sustainable development, it appears to be important that managers acknowledge employees' role as a key stakeholder group. It also seems relevant to consider: 1) consistency in sustainability messages (cf. Kataria et al., 2013; Quinn and Dalton, 2009); 2) the communication channels via which these messages are distributed (Craig and Allen, 2013; Marcelino-Sádaba et al., 2015) who is included in the communication process (Craig and Allen, 2013; Genç, 2017; Kataria et al., 2013; Silvius and Schipper, 2014); and 4) if the message can be customised to suit specific employee needs (Craig and Allen, 2013; Kataria et al., 2013).

2.3. Sustainability and project management

Recognising the role of projects in the transition of organisations and society towards sustainability (Marcelino-Sádaba et al., 2015), it has been argued that this process requires the integration of sustainability concepts also in the way projects are planned, organised, executed, managed and governed (Silvius and Schipper, 2014; Silvius, 2017). This integration is addressed in a growing number of studies (Silvius and Schipper, 2014; Aarseth et al., 2017; Sabini et al., 2019), and 'sustainable project management' is considered one of the most important global project management trends today (Alvarez-Dionisi et al., 2016; Gemünden, 2016).

Sustainable project management is defined as "*the planning, monitoring and controlling of project delivery and* support *processes, with consideration of the environmental, economical and social aspects of the life-cycle of the project's resources, processes, deliverables and effects, aimed at realising benefits for stakeholders, and performed in a transparent, fair and ethical way that includes proactive stakeholder participation*" [(Silvius and Schipper, 2014), p. 79]. This definition reveals that sustainable project management refers to both the integration of sustainability into the deliverable and effects of the project, later labeled as 'sustainability *by* the project' (Huemann and Silvius, 2017), and the integration of sustainability into the project's processes and resources, labeled 'sustainability *of* the project' (Huemann and Silvius, 2017). Sustainability *of* the project requires that the concepts of sustainability are applied to the processes of project delivery, management and governance, including the communication *in* and *by* the project (Pade et al., 2008; Silvius and Schipper, 2019).

2.3.1. Sustainability in project communication

Project communication is one of the identified impact areas of sustainability into project management (Silvius and Schipper, 2014). Following the principles of transparency and accountability, incorporating sustainability into project management processes and practices would imply proactive and open communication about the project that also covers social and environmental effects, both short-term and long-term (Khalfan, 2006; Taylor, 2010; Silvius et al., 2012). Silvius and Schipper (2014), however, conclude that the current standards for project management reflect a more reactive approach to project communication, by focusing on information and communication needs of the stakeholders and emphasizing that the project manager should provide "*only the information that is needed*" [(Silvius and Schipper, 2014), p. 77].

Communication within the context of projects is often associated with project stakeholder management (Eskerod and Huemann, 2013). In fact, up to the fourth edition of the Project Management Body of Knowledge Guide (Project Management Institute, 2009), communication and stakeholder management were considered a single knowledge area in project management. In the emerging literature on sustainable project management, stakeholder management is frequently addressed (Silvius and Schipper, 2014), as stakeholder orientation is one of the concepts related to sustainability (Silvius, 2017). In their seminal article on the influence of sustainability on project stakeholder management, Eskerod and Huemann (2013) apply Freeman's stakeholder theory (Freeman et al., 2007) to project stakeholder management. This results in what Eskerod and Huemann describe as the 'management-for--stakeholders' approach in project stakeholder management, as an alternative for the traditional 'management-of-stakeholders' approach, in which stakeholders are viewed merely as providers of resources (Eskerod and Huemann, 2013). Managing for stakeholders in sustainable project management involves a process of understanding and acting upon the interests, needs and ideas of different stakeholders, which in turn directs communication and engagement activities (Silvius and Schipper, 2019). This process should be integrated in various project processes, including project planning (Mohd Isaa et al., 2013; Silvius and Thomas, 2015).

Despite the fact that the project team members are also important project stakeholders, the lack of distinction between project communication and project stakeholder management biases the attention given to project communication towards external communication. Multiple publications that discuss project communication within the context of sustainable project management (Pade et al., 2008; Silvius and Schipper, 2019; Eskerod and Huemann, 2013), focus on the communication between the project (team) and external stakeholders. Since project members can be considered an important organisational stakeholder (Werther and Chandler, 2011), it is essential to actively engage the members of the project in a way that acts upon their needs and interests. This is why this study takes a stakeholder approach with an employee-centered focus. Even the Worldbank highlighted the importance of internal (team) communication for sustainable project management based on their evaluations of sustainable development projects in which they found that it is important to "*[i]ncrease transparency on key decisions relating to project preparation, design, and operating strategies by the use of open, participatory mechanisms and preliminary steps*" [(Haas et al., 2010), p. 96]. Nevertheless, the current studies on sustainable project management give little attention to the role of internal team communication.

2.3.2. Sustainability in the project life-cycle

All of the phases of a project offer opportunities to integrate sustainability into the project (Silvius et al., 2012). However, the study of Eid (2009) provides evidence that the early phases of a project, such as the planning phase, provide the best opportunity for integrating sustainability in the deliverable of the project. In general, project planning can be described as "*a set of detailed directions to let the project team precisely understand what activities have to be performed, when it should be done, what cost and resources need to be employed for the sake of successfully generating the project deliverables*" [(Yu et al., 2018), p. 3]. When executed properly, project planning plays an important role in aligning team members and informing them on the common project goals, allowing them to develop a better understanding of the project objectives (Eid, 2009). Successful integration of sustainability in project planning processes is therefore critical for the sustainable effect of the project (Mohd Isaa et al., 2013).

No official guidelines exist regarding the integration of sustainability into the practices and processes of project planning itself. Scholars have proposed different perspectives to fill this gap. One such perspective is provided by Mohd Isaa et al. (2013), who developed a framework for successful sustainability integration in the project planning process of construction projects. With special regards to communication, the framework of Mohd Isaa et al. (2013) reveals that repeated communication, including training, for and between all project team members is vital in the project planning process to make sure that the sustainable project goals are accomplished in a cost effective manner (Mohd Isaa et al., 2013).

Similarly, Yu et al. (2018) argue that sustainable project planning in construction and engineering consists of three dimensions: managerial control (the degree to which the project's processes are managed sustainably), risk response (the degree to which sustainability related risks are managed) and work consensus (referring to the degree of effort made to facilitate participation and knowledge-sharing among project members, and to reach a common understanding of and commitment to the project goals). Yu et al. (2018) propose to use these three dimensions as a basis for applying and evaluating sustainable project planning practices. Their study also shows that application of these three dimensions is related to project success in construction engineering projects (Yu et al., 2018).

Although the two perspectives present different angles, they both refer to the role of project team members in project planning. In different ways, they emphasise the importance of the project member's sustainability knowledge, a common understanding of the project's (sustainability) goals and sufficient interaction between the project team members.

3. Research methodology

3.1. Notes on ontology and epistemology

This study is based on the ontological assumption that reality is socially constructed. From a social constructivist stance, the meaning that social actors attach to a phenomenon and their interpretations can be considered as a social reality in itself (Blaikie, 2011; Boeije, 2010). This stance is most explicitly manifested in RQ 2, focusing on how the social actors in this study (the project team members of Project X) perceive the phenomenon at hand (internal sustainability communication). As this study seeks for knowledge on subjective meaning and perceptions, it takes an interpretivist epistemological stance. Qualitative research is considered to be the most appropriate for acquiring this type of knowledge (Boeije, 2010).

3.2. Case study

As this paper sets out to investigate internal communication within the context of a project, a qualitative case-study methodology was selected for the study. Case studies are useful for revealing individual characteristics of a specific organisation (Brown, 2011) while allowing the researcher(s) to become familiar with the case (6 and Bellamy, 2012). Within the case study methodology, the study at hand combines an inductive with a theoretically informed approach to data collection and analysis. This means that the theoretical starting points stipulated above informed certain decisions made during data collection and data analysis, while still allowing for new themes and concepts to emerge from the data. This will be further described in paragraphs 3.2. and 3.3.

The case selected for the study is an infrastructure development project in Sweden, which will be referred to as 'Project X'. This particular case was deemed suitable for the study as its host organisation is a large international consulting company whose focus on sustainability is an explicit part of the expertise they offer as well as their overall business strategy. Project X itself also has high sustainability ambitions, which are reflected in the overall project goals formulated by the client (the Swedish Transport Administration), and associated sustainability requirements. To give an example: of the 18 project goals formulated by the client, 11 are related to sustainability.

In Sweden, the Swedish Transport Administration (referred to in this study as 'Trafikverket' or 'the client') is responsible for infrastructure development. According to Swedish law (Folkeson et al., 2013) and as stated on the website of Trafikverket (2017), an infrastructure project in Sweden has to consist of a preliminary study phase, a preparation phase and a construction phase. Project X constitutes a subphase of the preparation phase, and specifically focuses on where the new infrastructure should be located. Therefore, the deliverable of Project X is a localisation plan, based on a localisation investigation and an Environmental Impact Assessment (EIA). The localisation investigation assignment in itself is estimated to take almost three years and is subsequently divided into four stages: i) a planning stage, ii) an investigation stage, iii) a project development stage and iv) a delivery stage. At the time of the research, Project X is in the transition of the investigation stage to the project development stage.

Besides the long sequence of phases, subphases and stages, Project X is also considered noteworthy in terms of size and complexity. The project has approximately 200 project members from seven different company departments. The project members are not only located in 24 different office locations in Sweden, but also in offices across at least four other countries (Poland, Czech Republic, India, Lithuania). Project X is primarily structured around the two main products (localisation investigation and EIA), but also includes several subproducts, relying on a total of 53 different groups of technical expertise.

In the organisational structure of Project X, there are a total of seven layers of hierarchy from top to bottom: one project leader, the deputy project leader and sustainability coordinator, the investigation and consultation coordinator, two product managers, a subproduct manager, several technical area managers, and numerous regular project team members. The project management group brings together five layers of management, from the project leader to the subproduct manager. The 53 technical area groups are led by one technical area manager each, who are not part of the project management group.

In addition to this structure, there exist specific groups in which project team members with various hierarchical functions cooperate. For example, there is a *sustainability team* of four people, which is responsible for ensuring that the project will meet the client's high sustainability demands. Besides being led by the deputy project leader, this team includes technical area group members and managers. The *staff team* is also led by the deputy project leader and includes project team members with project support roles (planning, finances, risk assessment) as well as the communication manager. The communication manager is part of the staff but also participates in the project management group. Moreover, a task force called the *analysis group,* including higher managers and technical area managers, is put in place to monitor key developments. The organisational structure of Project X is depicted in Fig. 1.

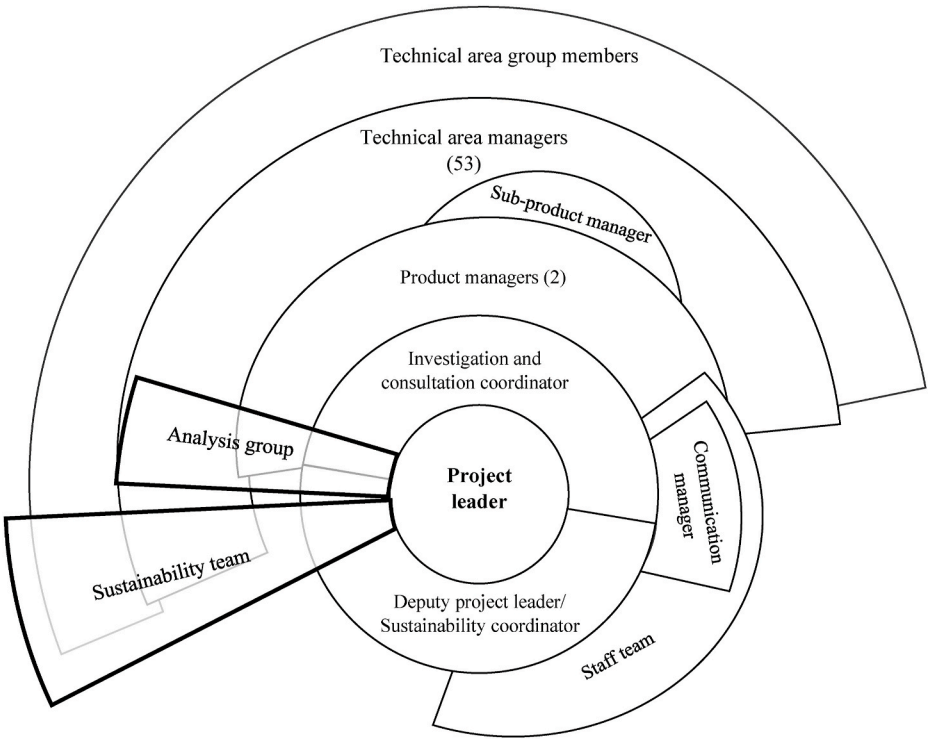

Fig. 1. Organisational structure of Project X.

3.3. Data collection

To fully utilise the potential of the case study methodology, multiple methods should be deployed (6 and Bellamy, 2012; Folkeson et al., 2013). The deployment of multiple methods not only contributes to the comprehensiveness of acquired data, but also to the internal validity of the study by means of methodologic triangulation (Thurmond, 2001). For the specific study at hand, primary data was collected through two methods: semi-structured interviews and a complementary analysis of internal project documents.

3.3.1. Semi-structured interviews

Informed by theories on (sustainability) communication processes, the researchers deliberately chose to send out interview invitations to both project team members and project leaders, and included team members from different organisational departments and geographic locations. As qualitative interviews provide a solid method to collect information about research participants' perspectives and experiences (Boeije, 2010), they were used to examine the perceptions of Project X's team members and served as the main method of data collection in order to answer RQ 2 of this study.

The semi-structured interviews were conducted over a time span of three weeks in April and May 2020 with ten members of the case study project. Because of the restrictions imposed by the COVID-19 outbreak, all interviews were conducted via Skype instead of being held face-to-face. By interviewing project members from various departments and different ranks in the hierarchy, the researchers sought to get an insight into how sustainability communication potentially differed across the different parts of the project's vertical and horizontal structure. The list of interviewees include members from six different technical areas with two out of the ten respondents holding a higher management function within the project. Furthermore, two of the respondents are members of the sustainability team and two are part of the analysis group. In addition to sending interview invitations to all 200 members of the project, two project team members were asked individually for their participation, because their input was deemed highly relevant for the research project. This concerned the communication manager and the deputy project leader (DPLSC), who also has the role of sustainability coordinator. The list of interviewees, including role, department, and date of the interview or contact is included in Table 1. When this article refers to 'general roles' or 'general project team members', this includes staff team members or technical area group members - those project team members who do not have a management role and are not part of the sustainability team or analysis group (see Fig. 1).

In preparation for the interviews, a preliminary interview guide was developed. A list of main themes and follow-up questions was designed and questions were formulated based on existing knowledge and theoretical frameworks from the fields of internal communication, sustainability communication, sustainable project management and organisational structure (Kallio et al., 2016). Subsequently, the interview guide included questions about the interviewee's understanding of the term sustainability and how it relates to Project X, the general flow of communication within the project and in what ways the interviewee communicates about sustainability. In order to increase the reliability of the research results, as well as to evaluate the questions' relevance and phrasing, the interview guide was pre-tested internally, with an expert and by conducting a field-test.

3.3.2. Document analysis

Theoretical concepts from the fields of sustainable project management and (sustainability) communication directed the selection of documents for document analysis. This reflects a theoretical sampling approach (Boeije, 2010; Silverman, 2014). For the purpose of this study, the researchers were granted access to an internal project server with 2000+ internal organisational documents relating to the case study. After three rounds of selection (1: folder selection, 2: document title selection, 3: relevant document selection), 23 documents were selected for document analysis. The sample consisted of a variety of documents, including: project description, memos to client, communication plan, sustainability workshop presentation, language and writing instructions, organisational chart, meeting schemes, et cetera. These documents were analyzed mainly to determine how the communication

Table 1
Respondent list.

Respondent	Type of communication	Role description	Date
Respondent 0	Semi-structured interview	Staff team member	April 21, 2020
	Follow-up conversation		May 15, 2020
	Follow-up Email		May 22, 2020
Respondent 1	Semi-structured interview	Technical area group member	April 22, 2020
Respondent 2	Semi-structured interview	Technical area group member and sustainability team member	April 23, 2020
Respondent 3	Semi-structured interview	Technical area manager	April 24, 2020
Respondent 4	Semi-structured interview	Project finance control	April 27, 2020
Respondent 5	Semi-structured interview	Technical area manager and analysis group member	April 24, 2020
Respondent 6	Semi-structured interview	Communication manager (project management function)	April 24, 2020
Respondent 7	Semi-structured interview	Deputy project leader, sustainability coordinator (project management function), analysis group member	April 27, 2020
	Follow-up conversation		May 15, 2020
Respondent 8	Semi-structured interview	Technical area group member	April 28, 2020
Respondent 9	Semi-structured interview	Technical area manager	May 8, 2020

processes in Project X were organised. Therefore, the document analysis primarily served to answer RQ 1 of this study.

3.4. Data analysis

For this study, data collection was alternated with thematic analysis and (open, axial and selective) coding. This method helps to reveal how a topic is commonly talked or written about. In addition to being appropriate for analysing interview data, thematic analysis is also commonly used to analyze documents (Silverman, 2014; Bowen, 2009). To transform the raw data into findings, code-based thematic analysis was conducted. A code-based analysis means that codes are used to discover themes and categories in the data (Boeije, 2010). The qualitative data analysis software NVivo was used as a coding tool.

In the open coding process, the data was carefully examined and divided into small, specific fragments. All fragments were coded according to the specific topic or process they addressed. The codes were mostly derived from the terms and phrases used by the respondents, known as 'in vivo' codes (Boeije, 2010). The open coding phase resulted in a list of codes, or a coding scheme, that provided further guidance for the analysis process. The axial coding process focused on assembling the coded data back together in new ways and finding connections between the different coded fragments. This included the assembly of coded data around categories, and describing the properties and dimensions of these categories. The axial coding phase resulted in a list of dominant categories and subcategories. In the last coding phase, selective coding, the researchers continued with assembling the data back together. This involved looking for patterns in and relations between the dominant categories in order to develop a conceptual model and answer the research questions.

The data analysis techniques used in this study are indicative of an inductive approach to analysis. However, it must be noted that relevant theoretical concepts from related fields of study were used as guiding concepts in the generation of codes and categories. More specifically, the following theoretical constructs served as overarching themes to group codes and categories together: "sustainability", "sustainability communication", "internal communication" and "project structure and goals". To give an example for theoretically informed coding, the concepts of "communication *of* sustainability" and "communication *about* sustainability" were introduced as their own respective coding category in the axial coding phase. It is further worth noting that the data collection and analysis were applied in an iterative manner. This means that early results of the coding process were utilised to identify focus areas and gaps in information. These gaps were filled by slightly adapting the interview guide, as well as by conducting more document analysis and follow-up conversations.

4. Findings

The following paragraph reports on the research findings resulting from the data collection via interviews and document analysis. In order to answer the formulated research questions, it was deemed essential to first establish the context in which the sustainability communication processes were situated in Project X. For that reason, findings were grouped into three main themes: 1) sustainability in the project, 2) internal communication and 3) sustainability communication. The first theme provides an overview of how sustainability is integrated into Project X and its official goals, which in turn influences the content of internal sustainability communication messages. Secondly, since internal sustainability communication concerns a specific type of internal communication, the organisation of general internal communication processes within the project was examined. Lastly, it was investigated how measures related to communication *of* and *about* sustainability are integrated into the project's processes.

In keeping with the research questions, each theme was further divided into two parts, with the first part providing a description of the factual situation, and the second part focusing on team members' perception of this situation. While findings connected to the factual situation are primarily based on the document analysis, the portrayal of team members' perceptions is grounded in data collected through the semi-structured interviews.

4.1. Sustainability in the project

4.1.1. Description

Regarding the project goals, the project has to take into account a number of project goals formulated by the client, as well as national transport policy goals that serve as overarching end goals for Project X. Besides these two types of goals, Project X has to consider a number of national environmental goals as well as the interests and goals of several regional stakeholders, for example municipalities potentially affected by the infrastructure project. The majority of these goals are related to sustainability. In addition to these formal goals, leading project managers decided - in line with company-wide policy - to employ the SDGs as a common frame of reference for sustainability. However, the SDGs are not positioned as formal goals of the project, meaning that Project X's deliverables will not be evaluated based on their contribution to the SDGs. Nevertheless, the sustainability team is responsible for ensuring that the SDG framework is used within Project X and also has the task of identifying and managing related conflicts.

With regards to individual background knowledge on sustainability, project team members are expected to have completed a company-wide e-learning course on sustainability and to be aware of how their work relates to sustainability aspects in general, and more specifically to the

SDGs. By organising several workshops and seminars, the project management group seems to be putting considerable effort into creating a common project goal vision that includes the SDGs. At the time of study, the project team management had decided to position the SDGs as a common frame of reference for sustainability, but had not provided a clear framework on how exactly to connect them to the remaining project goals or how to integrate them into project team members' work. Nevertheless, project team members are expected to have sufficient knowledge to integrate sustainability into their day-to-day work.

4.1.2. Project team members' perceptions

There is no uniform understanding of the term sustainability among the interviewed participants. Perspectives on sustainability range from the three pillar-model (of economic, environmental and social sustainability aspects) to more practice-oriented understandings (with a focus on innovation, long-term thinking or interdisciplinary collaboration). Nevertheless, most interview participants acknowledge that sustainability is a complex, multi-dimensional concept, which should be approached from a holistic perspective. The different perspectives on the term sustainability are visualised in Fig. 2.

From the collected data, it becomes evident that there are inconsistencies between the sustainability framework that the project management group wants to implement and the project team members' perceptions. Internal documents explicitly state that the sustainability understanding within Project X is supposed to be guided by the SDGs instead of the three-pillar approach. However, only one respondent unpromptedly referred to the SDGs as the framework for their understanding of the term, while the three-pillar approach (of economic, environmental and social sustainability) was mentioned more frequently. Similar to the understanding of sustainability as a concept, there are also differences in how the interviewees' perceive the impact of Project X's sustainability requirements on their individual work activities. While some stated that they could not identify any specific impact, others explained that Project X's sustainability agenda added a new perspective to their tasks and to how they could contribute to the sustainability of the end product.

4.2. Internal communication

4.2.1. Description

The importance of communication for the success of Project X is acknowledged both in the project's formal communication plan, which was developed at the beginning of the project, and by the interview participants. When a new member enters the project, they are supposed to receive an introduction brief, which provides them with an overview of the project and an insight into how the communication processes are structured. Project X's communication plan includes a rough description of the respective appropriate scope, format and channel of communication, as well as instructions regarding the frequency with which certain types of information are supposed to be distributed. Its primary focus is set on one-way downward communication in the form of various meetings, but it does not give a comprehensive overview of the different internal communication lines within Project X. In general, the plan focuses on different types of specific meetings as well as regularly scheduled reports and updates, but does not provide guidelines for day-to-day communication.

As depicted in the communication plan and confirmed by the interviewees, a large proportion of the communication within Project X takes place through meetings, which are held face-to-face or via video-conferencing. The communication plan lists these meetings, which are centered around different areas of the project, involve varying sets of participants and occur with different frequencies. Besides these meetings, most of the internal communication within Project X is conducted via Email, face-to-face interactions, Skype and the Microsoft Teams application. The latter is mainly used for delivering update presentations from the project management group and product managers as well as a biweekly project newsletter from Project X's communication manager.

4.2.2. Project team members' perceptions

There seems to be a good fit between the combination of used communication channels outlined above and the communication preferences reported by the interview participants. Respondents stated that they preferred for oral communication to take place via face-to-face meetings and Skype, as especially the former one allowed for interactive two-way communication. In terms of written communication, most interviewees showed a preference for Emails, especially when used for delivering short messages of little complexity to a large audience. The only detectable discrepancy between interviewees' preferences and the communication channels used in Project X is related to Microsoft Teams. While there is still some hesitancy among interviewees regarding the use of that platform, the communication manager intends to establish it as a more commonly used tool for the transfer of shorter and less formal messages. This follows the main objective of addressing the high amount of Emails that project team members reportedly receive on a regular

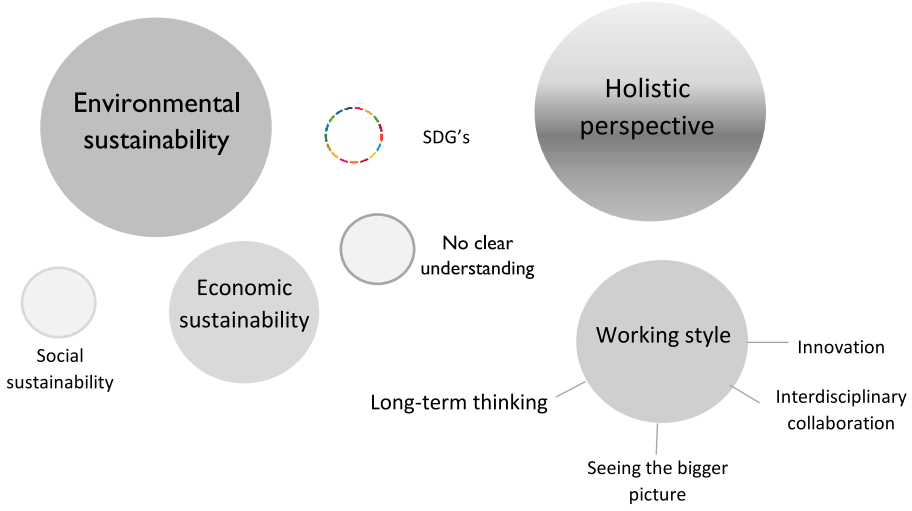

Fig. 2. Project team members' understanding of sustainability.
(Note: The bigger the circle, the more often the respective concept was mentioned).

basis.

Most interview participants perceive the internal project communication processes as participatory. Project X is described as having a flat hierarchy and a working environment in which input from project team members is generally welcome. Nevertheless, interview participants identified a variety of problem areas with regards to Project X's internal communication processes. Firstly, respondents reported a lack of clear and concise communication instructions on who to contact or which channel to use for which purpose. This affirms the observation made above that the communication plan did not provide sufficient guidelines for day-to-day interaction between project team members.

Secondly, the interviewees noted that they had witnessed a lack of information from leading project team members. In a similar context, respondents suggested that there is a need for measures, which would provide each project team member, and especially new entrants to the project, with a better understanding of Project X and its different parts and processes. Thirdly, interview participants implied that the rapid movement of Project X at times leads to untimely responses from communication partners and hinders them to introduce new ideas or to find the right and relevant information quickly enough. Lastly, the interviewees remarked that they would like to see a reduction in the amount of information that is being sent out to them. Correspondingly, they expressed a preference for information that is distributed via push-dissemination and specifically relevant for them and their work.

To conclude, there seems to be a good fit between the used communication channels and the communication preferences of the project team members. However, the interview participants identified some problem areas, particularly with regards to the content, timeliness, and frequency of the communication, as well as the way of distributing information. Paradoxically, the interview respondents reported that they would like to receive more relevant information, while at the same time they expressed a preference for receiving less information in general.

4.3. Sustainability communication

Internal sustainability communication in Project X is generally organised in processes that are separate from the main reporting lines. Throughout the interviews with members of Project X's sustainability team, it became evident that there are two main objectives they are trying to achieve with regards to sustainability communication. Firstly, an emphasis is put on involving all team members of Project X in the sustainability conversation and providing them with a clear overview of the related goals and processes. This shared common overview is framed as the foundation needed for identifying the required sustainable solution for the desired end products. Secondly, and closely connected to the first objective, the DPLSC stressed the importance of ensuring product sustainability, meeting client requirements and building a solid sustainability basis for the following phases of the project.

It was only in a separate, sustainability-specific project document that the researchers could find definitions of what the concepts of sustainability aspects, sustainability assessment and the global sustainability goals mean in the context of Project X. The researchers were able to identify several lines of sustainability communication between different individual project team members or groups. The sustainability team and DPLSC are primarily responsible for and involved in sustainability communication. Sustainability communication is facilitated through a variety of channels, namely Microsoft Teams, face-to-face meetings, workshops and Email. Overall, the research findings suggest that the communication on sustainability-related content to general project team members is primarily conducted through the Microsoft Teams platform and documents stored on the internal server.

In the following, the remaining findings related to sustainability communication will be presented in line with Newig et al.'s (2013) differentiation between communication *of*, *about* and *for* sustainability, which was introduced in section 2.2. of this article.

4.3.1. Communication of sustainability

4.3.1.1. Description. Communication *of* sustainability, which is primarily mono-directional in nature and follows the goal of informing or educating, is organised in several different formats throughout Project X. First of all, it must be noted that project team members do not only receive sustainability-related information exclusively in the context of Project X, but also in their role as employee of Company X. With regards to Project X specifically, project team members receive content related to communication *of* sustainability almost exclusively from the project's sustainability team.

The researchers were able to identify four main ways the sustainability team conducted this type of sustainability communication (introductory presentation; sustainability memo; cooperation with Project X's communication manager to include a section on them and their work activities in the project's newsletter; alignment of the project team members by participating in a variety of meetings). Overall, the processes identified by the researchers as communication *of* sustainability are not organised in regularly occurring formats, but rather as one-off events that only include specific groups, or as information that has to be actively sought out by the individual project team members themselves.

4.3.1.2. Project team members' perceptions. The research data indicates that there are function-based differences with regards to the amount of sustainability information received by project team members. Sustainability information coming from the sustainability team has been primarily targeted at the analysis group and the technical area managers. This is important since those groups are most actively involved in developing and monitoring the end products, which makes integration of sustainability in their work essential. The research data also reveals that project team members in more general project roles, such as staff team members, are not specifically targeted with sustainability information. At the same time, staff team members stated that they do not know how sustainability would affect their day-to-day work activities or do not perceive sustainability as relevant for their tasks.

According to the collected data, project team members should not only participate in the company-wide mandatory sustainability e-learning, but are also supposed to be informed regularly about sustainability issues throughout the project planning phase. However, the research findings reveal a lack of awareness amongst project members with regards to the e-learning. Additionally, project team members expressed that they would like to be informed more often on sustainability aspects of the project, preferably through push-dissemination such as meetings and workshops. One respondent stated that they would expect to need more information on sustainability for future work activities. On a critical note, one respondent stressed that sustainability communication should not be organised separately from general internal communication, as it would imply that sustainability is something in addition to the regular work activities:

> "*If you continuously handle it [sustainability] differently, then people will start to believe it's a different thing […].*"
>
> (R5, April 24, 2020)

The communication *of* sustainability in Project X is not perceived as continuous by project team members, nor did they mention any project-specific sustainability training. All in all, despite the fact that there are some indicators of communication *of* sustainability (through the sustainability presentation and in internal documents) in Project X, the perceptions of the project team members reveal that the way in which the communication *of* sustainability is organised could be improved to better suit their needs. Overall, the research data indicates a desire for more (integrated) project-related sustainability information.

4.3.2. Communication about sustainability

4.3.2.1. Description. Communication *about* sustainability, which mainly refers to a horizontal exchange of ideas and perceptions to create a common sustainability understanding, is organised in two main formats in the context of Project X: a sustainability workshop at the beginning of the investigation stage and subsequent discussions between technical area managers and their specific teams. The workshop followed the aim of creating a common understanding of what the SDGs means for Project X and to prioritise SDGs with regards to their relevance for the project. The participants of this workshop were mostly managers (from different levels). As a means to prevent leaving out any relevant SDGs for Project X, the technical area managers were asked for their input. They had to write about how their technical project work would relate to the SDGs and specify which SDGs would be of particular relevance. To deliver this paragraph, the technical area managers discussed the link between their technical area and the SDGs with their respective technical area group. Subsequently, the draft version of this paragraph was discussed with the sustainability team.

The researchers found internal documents, which mentioned regular 'coaching' of technical area groups as a responsibility of the sustainability team. However, no specific information could be found on how often these coaching sessions take place, who exactly is included and what specific type of content they entail. Instead, sustainability team members stated that if they would receive signs that there is a need to check-in with a specific technical area group regarding sustainability, they would schedule a meeting to discuss the issues at hand.

These research findings reveal that in general, communication *about* sustainability is not organised in a way that facilitates discussion or exchange of ideas about sustainability between general project members on a regular basis. The discussions formally take place on the management level, in specialised teams and only on very specific occasions with the technical area group members.

4.3.2.2. Project team members' perceptions. Respondents that are part of the project management group or the sustainability team, expressed that they discuss sustainability issues regularly in day-to-day meetings. Other project team members expressed that because sustainability is such an inherent part of their job, discussing sustainability comes naturally and therefore occurs in a more implicit way. Nevertheless, other research findings present a reason to believe that communication *about* sustainability could be facilitated more. Some project members stated that besides the discussion regarding the SDGs for the memo, the theme has not been explicitly addressed in conversation. Similarly, several project members expressed that they would like to participate more often in interactive meetings to exchange knowledge regarding sustainability. Generally, the interview participants stated that an interactive setting would help them learn more about sustainability, as exemplified by the following statement made by one of the respondents:

> "*You really learn when you talk and sit down and develop ideas together. And that's where you really add value, sustainability value, when you come up with a solution together, at the same place, in the same room.*"
>
> (R1, April 22, 2020)

However, organised interdisciplinary sustainability discussions are mostly facilitated for project team members in the project management group or in specialised teams, rather than for general project team members. This corresponds with the finding that project team members perceive a general lack of communication *about* sustainability.

4.3.3. Implications: communication for sustainability?

The previous discussion leads to the conclusion that there is a perceived lack of sufficient sustainability communication in Project X and that some of the organised sustainability communication processes are perceived as unsatisfactory by project team members. To provide a condensed overview, the main findings regarding sustainability communication processes in Project X are illustrated in Table 2 below. However, regardless of its intensity or frequency, the primary aim of sustainability communication within Project X is to implement

Table 2
Main findings related to sustainability communication in Project X.

Overarching goals of the sustainability team: 1. inform and involve all members in the project's sustainability processes | 2. ensure product sustainability and meet client requirements			
Mode of Sustainability Communication	How was it organised?	How was it perceived?	Recommendations
Communication ***of*** sustainability (primarily mono-directional, vertical communication with the goal of informing or educating)	Combination of project-specific and more general, company-wide information Main formats/ occurrences: 1. Introductory presentation 2. Sustainability memo 3. Dedicated section in project's internal newsletter 4. Alignment through meetings	Project-specific information mainly came from the sustainability team; there was a lack of awareness of the mandatory e-learning Information asymmetry between members from different functions	1. Favour push- over pull dissemination 2. Increase frequency and continuity of communication ***of*** sustainability within the project 3. Integrate communication ***of*** sustainability into the regular, pre-existing communication processes and structures
	Information was primarily distributed through meetings, internal documents and Google Teams → focus on pull dissemination	Desire for more sustainability-related information preferably distributed via push dissemination	
Communication ***about*** sustainability (horizontal exchange of ideas and perceptions to create a common sustainability understanding)	Main formats/ occurrences: 1. Sustainability workshop 2. Discussions related to the SDG paragraph for the sustainability memo	Desire for more communication ***about*** sustainability in interactive settings	1. Facilitate interdisciplinary exchange in interactive settings (e.g. through workshops or coaching) 2. Include members from all functions in the discussion
	Processes were organised in an irregular manner and were usually targeted at small, specific groups	Discussions about sustainability almost exclusively included project members in management functions or specialised subgroups	
Communication ***for*** sustainability (communication processes are mobilizing towards sustainable development)	The sustainability communication processes in Project X are considered communication ***for*** sustainability as they are not stimulating unsustainable behaviour. More (tailored) communication ***of*** and ***about*** sustainability is needed to reach the full potential of communication for sustainability.		

sustainability in the project, with the end goal of meeting the client's sustainability requirements. This corresponds to 'communication *for* sustainability' due to its objective of societal transformation towards sustainable development. Communication *for* sustainability can be assessed through the actual actions undertaken towards sustainable development. Realizing the desired impact of communication *for* sustainability depends on the effectiveness of communication *of* and *about* sustainability. However, for Project X it can be argued that more (tailored) communication *of* and *about* sustainability is needed to reach the full potential of communication *for* sustainability.

5. Discussion

Luhmann already hinted in 1986 that communication plays a pivotal role in achieving sustainable development (Luhmann, 1986). The study at hand aimed to unravel the organisation and perceptions of this essential process within the specific context of Project X. The following section presents propositions which emerged from the study's results, positions the research findings in the academic debate and relates them to previous studies.

Proposition: Internal communication is perceived more positively if it is disseminated in a manner that fits the specific message, and employees recognize it as relevant for their tasks.

To start with, in terms of general internal communication processes respondents stated a preference for content that is distributed via push-dissemination and relevant for the specific receiver. This finding supports literature stating that employees have a preference for push-media (Welch, 2012) and stressing the relevance of tailoring communication to different groups of employees based on the relevance for their job (Kataria et al., 2013). Respondents stated to have a preference for certain communication types, depending on the aim and task of the communication. For short, clear-cut messages relevant for a large audience, Emails were preferred. When the task at hand demanded more interaction, the respondents showed a preference for face-to-face meetings and Skype. This is in line with the findings of Welch (2012) who states that employees prefer different channels for different types of communication tasks.

Proposition: Establishing a common understanding of sustainability among project members in the project planning phase supports the successful implementation of sustainability in a project.

As stated earlier, Project X has completed the project planning stage and is currently in the transition of an investigation stage to a project development stage. Previous studies have stressed the crucial role of the project planning phase for team alignment and developing a common understanding of the project's sustainability goals (Mohd Isaa et al., 2013; Yu et al., 2018). Mohd Isaa et al. (2013) specifically stress the importance of continuous communication and training for all project team members in achieving this. Therefore, it can be considered problematic that there is no uniform understanding of sustainability in Project X and that it is not clear how the common frame of reference for sustainability (SDG's) would relate to the work of project team members.

In fact, there is literature stressing the importance of communication in implementing sustainability (Genç, 2017; Kataria et al., 2013; Mohd Isaa et al., 2013) as well as the importance of employees as key stakeholders in the process of sustainability (Kataria et al., 2013; Kataria et al., 2013; Craig and Allen, 2013; Duthler and Dhanesh, 2018). Consequently, there is reason to believe that the diverse understanding of sustainability, the unawareness of the project's sustainability strategy and the perceived lack of sustainability communication among the project team members hinders the sustainability implementation of Project X. Despite these critical notes, the sustainability communication processes in Project X are considered communication *for* sustainability (i.e. mobilizing towards sustainable goals) (Newig et al., 2013), as they are not stimulating unsustainable behaviour.

Proposition: The successful implementation of sustainability in a project can be promoted by developing sustainability communication processes that engage all project team members and take their needs into account.

When viewing the study results from the managing-for-stakeholders approach proposed by Eskerod and Huemann (2013), it can be argued that the organisation of sustainability communication within Project X does not correspond with the interests, needs and ideas of one of the key stakeholders in the project: the project team members. For example, interview respondents perceived that there could be more communication *of* and *about* sustainability within Project X. What is more, the research findings support literature stressing the relevance of engaging all employees in sustainability communication (Kataria et al., 2013; Craig and Allen, 2013; Quinn and Dalton, 2009) and the importance of frequent communication *about* sustainability (Quinn and Dalton, 2009). However, the findings provide reason to be critical about assessing the quality of communication *of* sustainability by merely looking at the knowledge of the receiver and how they understood the sustainability message, as proposed by Newig et al. (2013). The research findings show that project team members can develop sustainability knowledge in other ways than by communication *of* sustainability in a project, for example through pre-existing knowledge. This might mislead the proposed quality assessment.

6. Conclusion

6.1. Answering the research questions

The research presented above sought to explore the ways in which internal sustainability communication is organised and perceived by project team members in the context of sustainable project management. Document analysis was employed to identify the ways in which internal sustainability communication is organised within Project X, while data stemming from the semi-structured interviews was used to study project members' perceptions. From a social constructivist ontological viewpoint, the project team members' perceptions and interpretations can be considered as a social reality in itself, hence they are of central importance in this study.

As stated earlier, before analyzing how sustainability communication in Project X is organised and perceived, the researchers deemed it relevant to first establish three contextual factors of Project X that could be of influence: 1) the official sustainability goals and strategy, 2) how the term sustainability is understood among the project team members and how it is integrated in their daily work and 3) how the general internal communication is organised, and how it is perceived by the project team members.

With regards to sustainability in Project X, three essential findings were identified. Firstly, Project X's high ambitions with regards to the integration of sustainability aspects, as demonstrated by its formal and informal goals, are not congruent with the lack of sustainability communication perceived by project team members. Secondly, no uniform understanding of the sustainability concept could be detected among project team members and even though the SDGs are conceptualised as the project's sustainability frame of reference at the project management level, this is not common knowledge among the respondents. Lastly, the sustainability goal integration within Project X is portrayed as a complex process, which is still ongoing at the time of study. Project team members seemingly do not have access to an easily comprehensible overview of this process, which affects their general understanding of sustainability in the context of Project X.

The internal communication within Project X is generally perceived as participatory with a flat hierarchy. Nevertheless, there is a perceived deficiency of clear instructions for regular day-to-day communication

between project team members. Additionally, respondents reported a lack of information from the project leadership as well as a lack of a common baseline understanding of Project X's processes. Generally, the channels used for internal communication are in line with the detected project team members' preferences, which vary depending on the type of information at hand. However, there is an overall desire for a reduction in the amount of distributed information. Instead, respondents stated a preference for content that is distributed via push-dissemination and relevant for the specific receiver.

The analysis with regards to the sustainability communication in Project X provides the most direct answers to the research questions. With regards to the organisation of internal sustainability communication in general, this study argues that first of all, sustainability communication is treated separately from regular internal communication in Project X. Moreover, sustainability communication is primarily targeted at specialised groups or technical area managers. General technical area group members rely on their managers to distribute the information to them. Project team members in more general project roles, such as staff team members, are not specifically targeted with sustainability information.

Specifically zooming in on communication *of* sustainability, the following results stand out. Interview respondents expressed that they would like to receive sustainability-related information more frequently. Regarding the channels through which sustainability information was distributed, the analysis shows that sustainability communication in Project X is mostly provided through pull-media, whereas project team members expressed a strong preference for push-media. This shows that while the channels for internal communication generally suit the needs of the project team members, this is not the case for sustainability information.

The findings regarding communication *about* sustainability depict a similar picture. Discussion and knowledge exchange related to sustainability is mainly centered around two specific occasions. Besides these two occasions, members of the project management group and specialised teams have discussions on sustainability on a regular basis, whereas there are no indicators of interdisciplinary discussions organised for general project team members. In terms of frequency, interview respondents perceive a general lack of communication *about* sustainability. With regards to the communication channels, several project members would like to participate more often in interactive meetings to exchange knowledge regarding sustainability.

All in all, the research findings reveal that the organisation of sustainability communication is not answering to the needs and preferences of the project team members. This discrepancy primarily concerns: 1) the frequency of sustainability communication, 2) the channels used for sustainability communication and 3) the targeted audience of sustainability communication. Moreover, the results of the study do not only help to describe the organisation and perceptions of sustainability communication, they also reveal a discrepancy between the purpose of sustainability communication as declared by the sustainability team on the one hand, and the actual organisation as well as project team members' perception of sustainability communication on the other hand. The sustainability team aims at providing all project team members with a common frame of reference of sustainability, meeting the client's sustainability requirements and building a solid sustainability base for the following stages and phases of the project. However, the analysis of the conducted interviews and documents shows that sustainability communication is not organised in a way that leads to such a common sustainability understanding. The fact that the project's sustainability goals were not evaluated as part of the project's performance may likely have contributed to this.

Finally, it can be concluded that the results of this study do not only support and oppose findings from previous studies, they also add new knowledge to several academic debates. First of all, this study provides a new perspective to the under-researched field of sustainability communication, as it positions the discussion specifically in the field of project management. Moreover, by describing how sustainability communication is organised and perceived in an early phase of the project, it provides a new angle to the field of sustainable project management, specifically with regards to project processes (in this case: management of project team members as key stakeholders and internal communication processes). Finally, it contributes to the field of internal communication by adding knowledge about the internal communication processes in a project context as well as employees' perceptions and preferences regarding internal communication.

6.2. Limitations

The main limitation of this study is related to language. Whereas the native language of one employee was English, the native language of the nine other interviewees was Swedish. Since the researchers did not speak Swedish with fluency, all interviews were conducted in English. Similarly, since Swedish is the working language of Project X, all internal documents used in the analysis had to be translated from Swedish to English. Therefore, it needs to be acknowledged that some terms or phrases were possibly not translated with complete accuracy or that certain statements made by the interviewers or the interviewees were phrased or interpreted differently than originally intended.

A second limitation identified by the researchers is the fact that the interviews were conducted on a voluntary basis. This means that the interview participants presumably already had a general interest in the topic and therefore potentially a more pronounced opinion or knowledge on it than the average project team member. In addition, due to the COVID-19 context, the researchers were not able to meet the interview respondents physically and the semi-structured interviews were conducted via Skype. This could have had an influence on the building of rapport between the interviewees and interviewers (Boeije, 2010; Silverman, 2011, 2014). The researchers attempted to manage this limitation by making sure that 1) the researchers and the research project were introduced in project meetings before the interview invitations were sent; and 2) the researchers made sure that there had been personal Email contact between the researchers and the interview respondents before conducting the interview. All in all, the researchers deem the above mentioned limitations within reason and are convinced that their impact does not have a substantial effect on the results of this study.

6.3. Recommendations

To test and possibly generalise the results of this study, further research on the topic area is necessary. The findings of the study at hand may serve as a starting point for future research projects aiming towards the development of a more comprehensive understanding of sustainability communication in the context of sustainability projects. In this regard, the researchers propose the following potential research questions: *What are factors contributing to effective sustainability communication? To what degree should strategic sustainability communication be integrated with general internal communication strategies?* And *Is there a correlation between the quality of sustainability communication in the project and the inclusion of sustainability related performance goals in the measurement of the project's performance?* What is more, further research is recommended on the relation between sustainability communication and decision-making as well as on communication on sustainability-related project goals and work tasks.

In addition to its contribution to the academic discourse, this study also has practical implications for the integration of internal sustainability communication within the setting of sustainable project management. First and foremost, the research findings indicate that sustainability communication should be integrated into regular internal communication processes instead of setting up separate sustainability-specific communication formats. This reduces the amount of different messages received by project team members and supports the positioning of sustainability as a naturally integrated element of their work

activities. Secondly, it is recommended to facilitate inter-departmental exchange, incorporate informative presentations and training opportunities, conduct workshops and to provide project team members with regular updates to sustainability-related progress being made on the management level. Moreover, project team members should be provided with clear and concise communication instructions, which also specify who they are supposed to contact.

Further, to increase the overall awareness and engagement for sustainability within a project, sustainability communication should target all project team members, even if they are not personally involved in the technical sustainability-related work tasks. When and where possible, sustainability messages should be customised to fit the specific receiver's pre-existing knowledge and needs. Finally, these recommended activities and communication processes should commence in the early phases of the project, preferably in the project planning phase.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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