The implementation of Intra-organizational & Inter-organizational learning in sustainability-focused organization

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Abstract

The growing increase in the scarcity of resources, along with the effect of businesses on climate change and the risk of next generation resources stability, has made sustainable development a main concern in business and a challenge of our time. The business sector is paying more attention to the sustainable development agenda, and a growing number of initiatives have been implemented to address it. Altering the way of doing business and introducing innovative approaches to operations. Intra-organizational and inter-organizational learning resulting from individual, group, and organization learning is one of the tools contributing to sharing, transferring, and creating new knowledge and inventive solutions and practices. Moreover, organizational learning is an essential factor for successful transition into sustainability among organizations committed to sustainable development. It is a key factor in successfully implementing sustainable development. Many studies have approached intra-organizational and inter-organizational learning separately, yet there is still room for further exploration of the practical implementation when it is oriented toward sustainability. This study aims to understand the implementation of intra-organizational and inter-organizational learning oriented toward sustainability using a practice-based approach. In addition to the factors that might affect the learning process when learning is oriented toward sustainability.

A case study research methodology was carried out through semi-structured interviews conducted at the Electrolux Group, a leading global home appliance company in Sweden that operates according to the sustainable development agenda and plays a leading role in the industry. The results showed that the implementation of intra-organizational and inter-organizational learning theoretically follows the five-building blocks learning theory and the 4Is learning process framework with some practical adjustments. Mainly depending on people communicating and reaching out, in a loop of intra-organizational and inter-organizational learning. Meanwhile, operating and following flexible non-strict processes, through continuous dialogue and internal communication between all members, as well as external communication with other organizations. By sharing and transferring ideas and thoughts to build the learning. All of this is supported by effective leadership practices and is reinforced by a solid shared vision.

Keywords: Intra-organizational learning, learning between projects, inter-organizational learning, sustainability, and organizational learning, and by following a chain of citing by looking through the reference lists of the papers and books found.
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1. INTRODUCTION

1.1 Background

The growing increase in the scarcity of resources, along with the effect of businesses on climate change and the risk of next generation resources stability, has made sustainable development a main concern in business and a challenge of our time (Ali, Boks & Bey 2016). According to the Report of the World Commission on Environment and Development - United Nations General Assembly (1987), Sustainable Development was defined “Development that meets the needs of the present without compromising the ability of future generations to meet their own needs”, a concept of considering long term value and preserving of resources for future generation, applying in that sense a huge responsibility on business operations. Silvius et al. (2017) state that sustainable development is a normative expression that mirrors our ethical values and concerns toward society, as the required transformation to more sustainable growth reflects the values that guid our behaviour as society, leaders, and consumers. Thus, to move toward more sustainable societies, the effects that business activities have had and still have on the environment and societies must be considered seriously (Lozano 2014).

To achieve sustainable development, we shall consider social and environmental perspectives, in addition to the profit perspective (Silvius et al. 2017). Then, for an organization to be considered focusing on sustainable development, it must contribute to a more sustainable world. In other words, reaching the balance between people, prosperity, and planet (Wals & Schwarzin 2012). The sustainable development indicators were identified and divided into three pillars: social, environmental, and economics. These three pillars are interrelated, which poses a challenge for organizations to achieve the balance between the three of them (Silvius et al. 2017). Thus, for an organization to be oriented toward sustainable development, it is necessary to build an innovative system that combines redesigning products and reengineering processes and procedures, taking into consideration sustainability aspects (Wals & Schwarzin 2012). At the same time, it must enjoy transparency and ethical behavior that take full responsibility for the impact of its decisions and practices (Silvius et al. 2017).

As the notion of sustainability is ensuring humankind’s long-term well-being, it stresses the need for learning to deal with the interrelation between ecological, social, and economic systems. Taking into consideration multi-level perspectives: local, regional, and global. All of
which is practiced in a high level of uncertainty, and long-term prospects (Siebenhüner & Arnold 2007).

Learning is the response of an organization when faced with new external needs or demands. While sustainable development is one of the challenging demands, this stresses the role of organizational learning in interacting with this challenge (Bianchi et al. 2022). Organizational learning, as a concept of continuous learning built on creativity, innovation, and try, increases the ability to adopt and implement change and handle new circumstances in response to market demands (Lozano 2014). Sustainable development introduced and imposed new elements of knowledge and further reflection to the learning process, such as: a. sustainability knowledge: a developed rational knowledge about the effect of humans and suggested solutions on the natural system; b. transdisciplinary knowledge: covering and integrating different angles of social bodies, comprehending and acknowledging the uncertainty of the long-term impact of human actions, including new norms and values to the system- social justice and equity and ecological protection- and improving the ability to overcome environmental and social problems (Parson & Clark 1995). With the introduction of sustainable development, the organizational learning curve combines two learning factors: organizational and societal. In addition to improving processes and productions, organizations must be aware of and respond to changing societal demands and needs. Making the process more complicated and characterized by unpredictability and uninformed (Zadek 2007). Hence, process, products and quality and control system, even communication dynamics and tools should be reviewed and improved to be aligned, and up to date internally and externally (Siebenhüner & Arnold 2007).

The continuous change in the business market, and the increased demand for applying sustainability aspects in business operations, have put organizations under pressure to improve their abilities to implement new methods to participate in the change (Armenia et al. 2019). One of the most challenging tasks for businesses today is to achieve sustainable development by integrating the social, economic, and environmental dimensions (Molnar & Mulvihill 2003). Hence, achieving sustainable societies requires improving, changing, or replacing old models with new ones that consider sustainability pillars. Considering the protection of natural resources, as well as improving society’s well-being, whether for current or future generations (Lozano 2014). “Sustainable development is a process of change in which the exploitation of resources, the direction of investments, the orientation of technological development, and institutional change are all correlating to enhance both current and future potential to meet
human needs and aspirations” (Silvius et al. 2017, P. 1136). However, companies attempting to implement sustainable development face their traditional operations as deeply challenging, and while the challenges associated with sustainability cannot be handled by existing approaches and require new knowledge. Hence, organizational learning is one of the crucial factors in achieving sustainable development (Siebenhüner & Arnold 2007). Eventually, this will result in changes at both strategic and operational levels and will influence the organization’s culture in many different aspects (Lozano 2014).

Hence, to achieve a successful transition into sustainability within an organization, practicing and comprehending organizational learning is essential factor (Nattrass & Altomare 1999). Organizational learning is key to a successful implementation of sustainable development (Siebenhüner & Arnold 2007). To reach a balanced level of experience, organizations learn from both exploitation and exploration, intra-organizational and inter-organizational learning interrelatedly (Holmqvist 2003). The difference between intra-organizational learning and inter-organizational learning is; Intra-organizational learning is the learning taking place in the organization as a collection of individuals learning and initiatives within organization (Siebenhüner 2017). Inter-organizational learning is the interaction synergy occurring between organizations beyond the organization’s boundaries, which generates diverse learning environments (Mozzato & Bitencourt 2014). In addition, obtains knowledge that cannot otherwise be produced internally, through having a larger pool of resources, including information (Hardy, Phillips & Lawrence 2003). Inter-organizational learning, which is the fourth learning level, in addition to individual, group, and organization, according to Crossan et al. (1995), is one of the organizational learning dimensions occurring between organizations. Defined as a dynamic process that encourages learning through structured and non-structured inter-organizational collaborations (Mozzato & Bitencourt 2014). This result from sharing and transferring knowledge (Easterby-Smith, Lyles & Tsang 2008), which not only contributes to sharing and transferring knowledge, but also to creating new knowledge and innovative solutions and practices (Hardy, Phillips & Lawrence 2003). This, in turn, leads to an increase in the organizations’ performance and creativity (Easterby-Smith, Lyles & Tsang 2008). Ultimately, sustainable development is challenging without innovation driven by an environment that values and encourages learning and change (Molnar & Mulvihiill 2003).

In an attempt to gain a deeper understanding of how organizations learn about sustainability (intra-organizational learning) and how this knowledge is transferred and shared with other
organizations (inter-organizational learning). This study covers the following aspects: The five-building blocks learning theory, which combines intra- and inter-organizational learning (Garvin 1993). The evolvement of the learning process framework 4Is introducing sustainability and inter-organizational learning aspects (Crossan, Lane, & White 1999). In addition, the factors that affect the learning process oriented toward sustainability.

1.2 Problematization

Some studies have approached organizational learning as a factor to improve organizations’ performance and to protect its continuity, not as a critical factor in achieving sustainable development. At the same time, they have left open possibilities for practical implementation methods. For example, according to Goh and Richards (1997), organizational learning is the result of individual and group learning implemented in the organization to affect the performance and enhance the vision of the organization. Based on the organization’s processes, procedures, and practices, the learning is either enriched or impoverished. Therefore, a huge responsibility rests on the organization practices. In addition, according to Real, Roldán, and Leal (2014), any attempt toward improves business performance and increases competitive advantage, must include learning as a key element. Organizations with efficient learning processes enjoy outperforming competitors in the long run. Both Goh and Richards (1997) and Real, Roldán, and Leal (2014) framed the role of organizational learning in increasing performance to achieve organizations’ sustainability (stability), leaving a wide spectrum of possibilities to find the way to institutionalize this implicit knowledge through trial and error, while the process of implementing entrepreneurial learning was unknown (Real, Roldán & Leal 2014). Siebenhüner and Arnold (2007) state that organizational learning was approached from a conceptual framework more than from a practical implementation framework. Basten and Haamann (2018) map different organizational learning theories and several common approaches and frameworks for implementing organizational learning. But it did not conclude an ideal approach for organizational learning implementation.

Similarly, several studies have analyzed some key factors that can positively affect the organizational learning. For example, Bilan et al. (2020) claim that; organization’s capabilities, whether strategic or operational capabilities- corporate governance represented in the board characteristics, size, role- and leadership style within the organization all play a significant role in increasing the organizational learning, and the sustainability (continuity/ stability) of the
organization. Also, Mena and Chabowski (2015), in studying how organizational learning focused on stakeholders could affect the responsiveness of the organization, state that stakeholders’ demand plays a crucial role in affecting the organizational learning process. But both analyzed the factors that can affect organizational learning as a tool to achieve sustainability (stability) for the organization, and kept it open for practical implementation, and did not touch the effect of organizational learning in achieving sustainable development.

1.2.1 Organizational Learning – a key factor for Sustainable Development

Other studies have approached organizational learning from a different perspective as the main factor in achieving sustainable development. However, according to Molnar and Mulvihill (2003), the link between organizational learning and achieving sustainable development was slightly touched, because of the challenges in trying to cover two essentially wide components: sustainability and organizational learning at the same time. Also, Siebenhüner and Arnold (2007) claim that the role of organizational learning in sustainability management has been recognized in most literature, but few have approached the learning dynamics from a practice-based approach. The importance of learning as a tool for developing new methods has been ignored in literature on environmental and sustainability management.

Siebenhüner’s and Arnold’s (2007) present some factors influencing Sustainability-Oriented Learning, and explain the learning mechanism from a conceptual framework, while keeping the implementation process open. Sustainability-Oriented Learning (SOL) a process within an organization where behavioral change is a result of changes in knowledge and values, it is built on reflexive processes, with sustainability as the main framework.

On the other hand, from an inter-organizational learning perspective. According to Easterby-Smith, Crossan, and Nicolini (2000), the field of organizational learning requires further focus on understanding how learning occurs beyond an organization’s boundaries. Understanding the dynamics of implemented interactions between organizations is crucial, as inter-organizational knowledge transfer includes a minimum of two actors/organizations. Moreover, Dyer, and Nobeoka (2000) state that many kinds of organizational learning research approached it from an individual organization perspective, while a high suggestion confirms that organizational learning within a network of organizations might be as important. Mozzato and Bitencourt (2014) highlight the lack of a dominant conceptual approach to studying inter-organizational
learning, which entails the need to broaden the analysis to incorporate the learning process between organizations. This was also emphasized by Dyer and Nobeoka (2000), state that there has been some research on inter-organizational network learning, but few empirical ones. Crossan, Mauer, and White (2011) identify that the field of inter-organizational learning is still in progress and requires further investigation. Easterby-Smith, Lyles, and Tsang (2008) state that due to the complexity of transferring knowledge between organizations, as it happens in a diverse nature of boundaries, culture and processes of the involved organizations, it creates an opportunity for further exploration and investigation of the inter-organizational learning. On the other hand, from a sustainable development perspective, the inter-organizational learning as an interaction between organizations seems to be essential for sustainable development as a society-wide effort. However, few studies have touched on this concept when studying organizational learning (Siebenhüner 2017).

According to Easterby-Smith, Lyles, and Tsang (2008), the increasing confirmation that organizational learning can create competitive advantages for organizations has led organizations to manage many relationships, whether internally or beyond their borders externally. However, according to Holmqvist (2003), although the intra-organizational learning process is the cornerstone for developing the possibility of achieving inter-organizational learning, previous literature has approached each learning process separately. Organizational learning theory lacks a conceptualization that addresses both inter-organizational and intra-organizational learning dynamics and approaches interrelatedly.

From the above literature review, to reach a better understanding of inter-organizational learning, there is a need to examine the implementation of inter-organizational and intra-organizational learning interrelatedly when it is oriented toward sustainability. Based on a practice-based approach enabling a better observation of how people operate in day-to-day operations, how they coordinate and do their work, and how they fill the gap between theories’ knowledge and practice (Corradi, Gherardi & Verzelloni 2010). Moreover, as stated earlier, the dynamic of learning is affected by various factors, either to enhance or to lock it. Therefore, I will include a chapter in this study that covers factors that can affect the learning process when it is oriented toward sustainability.
1.3 Purpose & Research Questions

Inter-organizational learning has been slightly approached from a practice-based aspect in previous research while studying the organizational learning field, specifically in sustainability-focused organization. Intra-organizational learning, the learning happening within the organization, and inter-organizational learning, the learning happening between organizations, are interconnected and play a major role in achieving sustainable development and must be considered and observed together to gain a better understanding of the implementation of intra and inter-organizational learning.

This study aims to get a deeper understanding of the implementation of intra-organizational and inter-organizational learning from a practice-based approach when sustainable development framework is considered. Furthermore, this study seeks to identify the factors that may affect the learning process through a case study of a large multinational organization operating according to sustainable development goals.

For that purpose, the research will be covering two research questions.

**Research Questions:**

- **RQ1:** How intra-organizational and inter-organizational learning is implemented in a sustainability-focused organization?
- **RQ2:** What are the factors that affect learning oriented toward sustainability?

1.4 Delimitations

This study is conducted on only one company in one industry; therefore, the results cannot be generalized. However, the findings can be used in a broader range covering more companies in similar and different industries to determine the ideal approach for implementing intra-organizational and inter-organizational learning when it is oriented toward sustainability. The study can enable other companies to create an advanced environment built on knowledge, deriving the innovation and creativity to overcome the complexity within sustainability, enhancing the learning, and the implementing of new approaches and methods for business operations to achieve sustainable development.
2. THEORETICAL FRAMEWORK

2.1 From Individual to Social Intra- & Inter-organizational Learning

*Individual learning* has been continuously examined as a phenomenon for a long time. In defining the dynamics of the learning process, Haas (1991) states that learning and behavior change occur as a result of changing perceptions and approaches to problem-solving. Learning contributes to the development of new perspectives toward improving business practices to encounter changes within business operations (Hübner 1995). This was supported by Schunk (2012), affirming that learning happens due to experience and practice. Consequently, learning is the ability to behave in a particular way based on knowledge acquisition (Siebenhüner 2017).

*Social learning* is the learning happening beyond individuals’ level, on groups and organizational levels. According to Bandura and Walters (1977), individuals learn from each other within a group and within the organization. The group learning happens through “interpretation” - which is the second process of learning processes according to Crossan, Lane, and White (1999)- and facilitates and makes the learning on the organizational and inter-organizational level happen, through social and individual’s knowledge sharing and interactions (Mozzato & Bitencourt 2014).

The concept of social learning was developed by Siebenhüner (2017), explaining that social learning results from two levels of learning: internal and external learning. **Internal learning** takes place within the organization, changing norms, values, and recognition as a collection of individuals learning and initiatives within the organization. Internal learning is defined by Probst and Büchel (1997) from a process perspective as the process that leads to an organization's knowledge and values alteration, and consequently leads to better problem-solving ability and action capacity. Holmqvist (2003) elaborates further on defining internal learning, stating that it is the learning that happens at the organizational level rather than at the individual or group levels. I interpret Holmqvist’s *organizational learning* as the same as *intra-organizational learning*. Mena and Chabowski (2015) define organizational learning as the evolution and building of new knowledge that enables a change in behaviour. They approach organizational learning from a knowledge perspective, that is organizations accumulate and manage knowledge throughout the activities they are doing and within their culture. Simultaneously, organizational efficiency can be improved by improving employees’ skills. Basten, and Haamann (2018) state that organizational learning happens due to the interactions.
among individuals and what they bring to others and to the organization as a unit, as well as the interactions of the organization with its environment. But, since exploitation through intra-organizational learning enables organizations to improve their knowledge, productivity, and create reliable experiences, this same learning process might also lead to hesitancy in exploring new experiences. This means that what was working in the past may not be relevant in the future. For this reason, organizations must seek to acquire distinct experiences that might be achieved through the exploration of other organizations; *inter-organizational learning* (Holmqvist 2003).

*Inter-organizational learning* that occurs as a result of interactions between organizations and knowledge exchange within the market (Siebenhüner 2017). *Inter-organizational learning* is the learning that occurs between organizations’ individuals as a result of dialogue, social interactions, and shared knowledge reflected in learning within their organizations (MacDonald & Crossan 2010). The possible perception of organizational learning as a mix of intellectual and social processes also affects the place of learning within the structure (Easterby-Smith, Crossan & Nicolini 2000). Hence, the knowledge acquired from inter-organizational learning is also reflected in intra-organizational learning brought about by the variety of knowledge acquired by individuals from interacting with other organizations (Holmqvist 2003). Moreover, because organizations are more than just knowledge hubs, they are collections of interrelated knowledge systems, that are surrounded by and interacting in a larger community. Therefore, rather than aiming to locate knowledge within the organization, the locus of knowing and learning becomes a complex social network that bypasses the organization’s boundaries (Mariotti 2012). Furthermore, considering globalization and digital interconnections, it becomes difficult to perceive organization as a sole unit with definite concrete boundaries. Hence, organizations are perceived as combined efforts resulting from group activities at the confluence of network interests and practices (Easterby-Smith, Crossan & Nicolini 2000). Inter-organizational learning occurs as a result of cooperation between different organizations, whether structured or non-structured cooperation, happens as a result of and is inspired by practical practices resulting from daily activities of persistent interactions between various organizations (Mozzato & Bitencourt 2014). Hence, inter-organizational learning adds a learning level to the three learning levels (individual, group, and organization) presented by Crossan, Lane, and White (1999). At the same time, inter-organizational learning added a fifth process “*Cooperation*” to the learning process framework (4Is) (Mozzato & Bitencourt 2014).
Intra-organizational and inter-organizational learning affect and interconnect with each other, even if inter-organizational learning differs from intra-organizational learning, where the former happens because of organization learning from others’ experience, while the latter happens as a result of creating knowledge within the organization. However, intra-organizational learning supports inter-organizational learning, and the results of inter-organizational learning affect intra-organizational learning (Mozzato & Bitencourt 2014).

2.2 Five-Building Blocks Learning Theory & Inter-organizational Learning

The learning theory of five-building blocks presented by Garvin (1993), explains the process of learning as a critical factor that organizations must consider reaching effective organizational learning. These five blocks listed in Table 1. are: 1. Systematic problem solving, where data is the focus of decision-making 2. Experimentation, organizations follow a trial-and-error approach to examine new knowledge by establishing a research and development department, either by an ongoing program or by a one-time demonstration project to improve the organization knowledge to be contained within the organization. 3. Learning from past experience, building on the lessons learned by a retrospective approach, constantly assessing success and failure, and then bases planning on the organization’s learning history. Moving to the fourth block, 4. Learning from others, searching for best practices, and collecting customer feedback within an open-mind approach to criticize and learn accordingly. The fifth block is 5. Transferring knowledge by sharing knowledge among all members in the organization, making data, reports, and different materials accessible to all members, as well as ensuring training, all of which assist in effective knowledge transfer for better learning.

Table 1. Summary of the Five-Building Blocks

<table>
<thead>
<tr>
<th>Blocks</th>
<th>Key Word</th>
</tr>
</thead>
<tbody>
<tr>
<td>Systematic problem solving</td>
<td>Data</td>
</tr>
<tr>
<td>Experimentation</td>
<td>Trial-and-error</td>
</tr>
<tr>
<td>Learning from past experience</td>
<td>Learning History</td>
</tr>
<tr>
<td>Learning from others</td>
<td>Feedback</td>
</tr>
<tr>
<td>Transferring knowledge</td>
<td>Knowledge Sharing</td>
</tr>
</tbody>
</table>
Iftikhar, Ahola, and Butt (2021) elaborate on the third block and its importance for inter-organizational learning, stating that the learning that happens within a single project is substantial and can be essential for inter-organizational projects. However, it often fades away at the end of the project and is rarely transferred to other projects. Therefore, the lessons learned, and the learning acquired from a project must be communicated in inter-organizational learning. Mena and Chabowski (2015), in approaching how organizations acquire information, in my opinion, combine the five blocks to three blocks, and introduce the inter-organizational learning, which was not addressed in the five-building blocks learning theory. Stating that organizations acquire information in three ways, either from within, which is experiential learning, or from observing others, which is vicarious learning, and/or by communicating with other organizations within the same industry, which is contact learning through communication. I interpret contact learning as the inter-organizational learning; as according to Dyer and Nobeoka (2000), inter-organizational learning is the learning happening between organizations by cooperating with other organizations and observing and importing their practices.

The five-building blocks learning theory provides an approach for intra-organizational learning; however, it slightly touches upon inter-organizational learning and only captures the knowledge share and transfer that could happen within the organization. However, the need to acquire new knowledge and keep on the market track, has led organizations to interact with other organizations through an inter-organizational learning process (Mozzato & Bitencourt 2014). The concept of knowledge share and transfer evolved with the evolution of inter-organizational learning to cross beyond the organization boundaries, defined by Easterby-Smith, Lyles, and Tsang (2008) as an action in which one organization acquires knowledge and learns from another organization. Mariotti (2012) states that knowledge share and transfer is the process in which learning takes place in two directions: how to collaborate and how to create and share knowledge. It occurs as a result of informal and unplanned actions between collaborative organizations (Hardy, Phillips & Lawrence 2003). This was also explained in detail by Janowicz-Panjaitan and Noorderhaven (2008) stating that inter-organizational learning can happen either informally or formally; informally resulting from interaction between boundary spanners of cooperating organizations, which is sometimes resisted by the organization’s management for protecting the organization’s knowledge. Formally, it is encouraged and structured by the organization’s management. However, since there is no guarantee that informal inter-organizational learning happens spontaneously, therefore, in some cases, especially in alliances, management initiates some activities. For example, organizing joint
projects, collaborative events, and training activities, which in addition to facilitating informal learning, can also create opportunities for transferring and sharing knowledge. Nevertheless, before any share or transfer of knowledge between organizations, there must be some sort of strategic alliance between them (Easterby-Smith, Lyles & Tsang 2008).

For this purpose, many tools have been suggested to ease transferring knowledge between organizations, leading to efficient inter-organizational learning. These include socializing activities and exchanging expertise. Regardless of the tools implemented, the main goal is to enhance the interactions between individuals and groups of organizations, which will lead to further and wider knowledge transfer (Easterby-Smith, Lyles & Tsang 2008). The creation of collective knowledge, which happens as a result of organizations’ networks interacting cooperatively to generate inter-organizational practices, is the main purpose of inter-organizational learning (Dyer & Nobeoka 2000).

In this chapter, I presented the five-building blocks learning theory as a complement to the previously presented intra-organizational and inter-organizational learning theories that will be used in the analysis of the case studied. The five-building blocks provided me with a solid foundation to understand how intra-organizational learning happens and what are the sources to build this knowledge in the organization. The flow of the blocks explained in the theory, made me realize that learning is an accumulative process with many channels. From my point of view, I see that the leaning flow presented is a continuous flow with no start or end points, moving in a circular motion between the five blocks, and is eventually stored in the organization’s history. However, several scholars have pointed out the importance of inter-organizational learning in the learning process, being exposed to a larger pool of knowledge resources by interacting with other players in the market. Which I believe is an evolving on the fourth (learning from other) and fifth blocks (transferring knowledge) from the five-building blocks learning theory, widening the theoretical scope by adding inter-organizational learning, that made me pick the theory in the analysis in this study where the scope is intra- and inter-organizational learning.
2.3 The 4Is Framework

The five-building blocks learning theory present a theoretical approach to how intra-organizational learning and inter-organizational learning happen, and how learning is accumulated. However, to gain a deeper understanding of the learning process dynamics, I present the 4Is learning process framework as an analytical framework of the learning process and complement the five-building block learning theory. The 4Is and their evolution by including inter-organizational learning, sustainable development, and stakeholders explain the process of how learning conveys from individual to intra-organizational learning into inter-organizational learning, which is why I believe it is relevant in this study, and it will be used in the data analysis.

The 4Is learning process framework proposed by Crossan, Lane, and White (1999) state that learning has 4 phases over 3 levels, in which the process flows from one level to another. Starts with; 1. Intuition by an individual having a new idea, particularly an individual attitude that is not driven or possessed by the organization. Then 2. Interpretation develops and refines this idea and transforms individual insights through exploitation into concrete wording. Moving from the individual level to the group level, comes 3. Integration occurs at the group level, where knowledge and ideas are shared with other members in the group to reach a shared understanding among workgroups, and coordination actions by members start to take place. Finally, 4. Institutionalization occurs at the organizational level, in this process knowledge is embedded in the organization, and it is included in the system, structure, and procedures. These four processes are related in feed-forward and feedback loops across the three levels. Feed-forward, where ideas flow from individuals to groups to the organization, while what has been learned and stored in the organization transitioned to groups and individuals in the form of feedback (Crossan, Lane & White 1999). Therefore, a main derive is having an individual who is concerned and, in my case, precisely concerned about sustainability and looking for a change “change agent” (Siebenhüner & Arnold 2007). Real, Roldán, and Leal (2014) elaborate on the 4Is framework, stating that two basic types of learning activities stream within the organization, namely Exploration or feedforward, and Exploitation or feedback, and it is only through active interaction that learning can take place. This applies to the three levels of individuals, groups, and organization. Exploration is about trying new knowledge and can take a long time, and the results are uncertain. Exploitation is built on the lessons learned, and the combination of both activities leads to organizational learning built on feedback and feedforward.
Table 2. Summary of the 4Is framework

<table>
<thead>
<tr>
<th>Level of learning</th>
<th>Process</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual</td>
<td>Intuition</td>
</tr>
<tr>
<td></td>
<td>Interpreting</td>
</tr>
<tr>
<td>Group</td>
<td>Integrating</td>
</tr>
<tr>
<td>Organization</td>
<td>Institutionalize</td>
</tr>
</tbody>
</table>

Figure 1. Diagram of the 4Is
Source Crossan, Lane, and White (1999)

2.3.1 The 4Is and Inter-organizational learning

The 4Is learning process framework evolved by including the learning happening between organizations *inter-organizational learning*. Holmqvist (2003) elaborates on the concept of exploration and exploitation by including inter-organizational learning. Stating that by exploiting an organization’s skills, opportunities are created for exploration between organizations. Exploitation is defined as building reliable knowledge, and exploration is defined as acquiring diverse knowledge, both within and between organizations, and they are interrelated through *intra-organizational* and *inter-organizational learning*. Crossan, Mauer,
and White (2011) highlight the need to develop the 4Is learning process framework to include the external context of the organization and the inter-organizational level. As a result, Mozzato and Bitencourt (2014) present a developed framework of the 4Is learning process framework by introducing a fourth level of learning, which is inter-organizational learning, which led to the addition of a fifth learning process to the 4Is “Cooperation” to reflect the dynamics and process of learning that happens between organizations. The five learning processes interrelate and affect each other, from intuition to cooperation, and vice versa. This results in learning at all four levels of individuals, groups, organizations, and inter-organizational. This broaden the 4Is framework to cover both intra-organizational and inter-organizational learning.

Table 3. Summary of the 4Is framework & Inter-organizational learning

<table>
<thead>
<tr>
<th>Level of learning</th>
<th>Learning Activities Stream</th>
<th>Process</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intra-organizational learning</td>
<td>Individual</td>
<td>Exploitation</td>
</tr>
<tr>
<td></td>
<td>Group</td>
<td>Intuition</td>
</tr>
<tr>
<td></td>
<td>Organization</td>
<td>Interpreting</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Integrating</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Institutionalize</td>
</tr>
<tr>
<td>Inter-organizational learning</td>
<td>Inter-organizations</td>
<td>Exploration</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cooperation</td>
</tr>
</tbody>
</table>
2.3.2 The 4Is and Stakeholders

Stakeholders are introduced as a factor in the learning process. Mena and Chabowski (2015) define the organizational learning process from stakeholders’ perspectives aligned with the concept of 4Is. Although, the study examined how organizational learning focused on stakeholders could affect the responsiveness of the organization. However, they explained a process for learning that I believe is similar to the 4Is learning process. **The stakeholders – focused organizational learning** presented four processes for organizational learning built on stakeholder demands and needs. The learning process begins when a new demand from a stakeholder is introduced. 1. Knowledge acquisition, by which the organization acquires information, which I believe is the first I “Intuition” in the 4Is framework. 2. Information Distribution, sharing of acquired information within the organization’s departments and divisions. 3. Information Interpretation, where a shared understanding of the external environment is built among the organization. Information distribution and interpretation are the “Integration and Interpretation” of the 4Is framework. Finally, 4. Organizational Memory,
which in my opinion is the fourth I “Institutionalization” in the 4Is framework. Huber (1991) also defines organizational memory as the process of ensuring that the knowledge acquired is kept within the organization despite time or people passing.

2.3.3 The 4Is and Sustainable Development

Taking Sustainable development into consideration also affects the learning process. While traditional learning within an organization focuses on the process aspect, the sustainability-oriented learning process focuses on concrete changes and outcomes. This should be reflected and introduced as an improvement in operations toward achieve sustainable development. For example, there are new methods and technologies for developing sustainable products, adopting sustainability reporting, and improving the efficiency of resource usage (Siebenhüner & Arnold 2007). Introducing new models requires learning and creativity; however, sustainability-oriented creativity and learning would fade if they stayed within an individualistic frame and did not evolve into an organizational socialistic approach. Hence, organizational learning is a crucial key factor that can break individual knowledge barriers and realize the circulation and sharing of knowledge among all organization levels, as well all as sectors and society dimensions (Lozano 2014). In my opinion, this is basically the implementation of intra-organizational as well as inter-organizational learning.

Bianchi et al. (2022) elaborate on the 4Is framework by introducing environmental aspects and lifecycle management into learning processes and practices. In an attempt to study these four processes of learning when environmental sustainability aspect is considered, in addition to the evolution of lifecycle management practices when sustainability is included. The goal of lifecycle management is to reduce a product’s environmental and socioeconomic costs over the entire life cycle and value chain. The 4Is framework evolved by adding factors that entail and facilitate the introduction of environmental sustainability into the business. Brainstorming was found to be a more advanced definition of “Intuition” in the 4Is framework, where a team gathers and generates ideas that state the institutional demand for environmental sustainability. In the “Interpretation” process of the 4Is framework, the concept of lifecycle management takes place in examining the possibility of implementing ideas within the operation. Adapting was a reflection of the “Integration” in the 4Is framework, as even if these ideas prove to be possible to implement, they should be adopted by the entire group moving toward “Institutionalization”. Finally, the last addition to the 4Is is the Incorporation, where new approved and implemented
approaches toward environmental sustainability are stirring beyond the organization walls to be incorporated with external partners and stakeholders.

**Table 4. Summary of the 4Is framework & sustainable development**

<table>
<thead>
<tr>
<th>Level of learning</th>
<th>Learning process when sustainable development is considered</th>
<th>4Is Process</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual</td>
<td>Brainstorming</td>
<td>Intuition</td>
</tr>
<tr>
<td>Group</td>
<td>Lifecycle management</td>
<td>Interpreting</td>
</tr>
<tr>
<td></td>
<td>Adapting</td>
<td>Integrating</td>
</tr>
<tr>
<td></td>
<td>Institutionize</td>
<td></td>
</tr>
<tr>
<td>Organization</td>
<td>Incorporation</td>
<td>Cooperation</td>
</tr>
</tbody>
</table>

To answer RQ1, a theoretical framework needs to be adopted. Thus, I began this thesis by reviewing the literature on existing learning theories in search of a framework that explains the implementation of inter- and intra-organizational learning, whilst taking sustainable development into consideration. The ‘five-building blocks learning theory’ is an organizational learning theory that combines intra- and inter-organizational learning. In addition to The 4Is learning process framework, which presents an analytical framework to organizational learning and takes into consideration inter-organizational learning and sustainable development in the learning process, are the theoretical framework used in this thesis.

2.4 Factors That Affect Learning Oriented Toward Sustainability

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**2.4.1 Sustainability-Focused Organizational Learning SFOL**

SFOL is a concept defined by Molnar and Mulvihill (2003) as companies trying to achieve sustainability, aiming for a balance between the triple bottom line of sustainable development; economic, social, and environmental performance by making significant changes within their cultural concept. Common factors were found to enhance sustainability-focused organizational learning: *Common vision* about sustainability reinforces and increases the sustainability education, and supports the SFOL, along with continuous training and learning among teams. The concept of training people is considered a tool for enabling organizations to apply the
sustainability approach to operations and realize the involvement and commitment of all people. Organizations must ensure that teams learn about sustainability, where sustainability is the purpose of the entire operation (Armenia et al. 2019). By learning and developing knowledge within the team, the team will foster a framework that enables it to evaluate what falls into sustainable perspectives and what does not (Nattrass & Altomare 1999). However, the most crucial factor in enhancing sustainability-focused learning is the application of system thinking, which focuses on the entire operation rather than individual parts (Molnar & Mulvihill 2003).

The effect of leadership as a factor affecting the SFOL was broadened to encompass the entire team. According to Molnar and Mulvihill (2003), even with the existence of efficient leadership, team engagement is essential to accept change and apply it. This, in turn, imposes a significant role on the middle management. Therefore, for a change to happen and for a successful SFOL, there must be support from senior management committing to sustainability. Commitment to learning was also mentioned by Real, Roldán, and Leal (2014), defining the learning orientation as a combination of individual values that move the organization toward generating new knowledge, and lead to organizational learning. One of these values is the commitment to learning, along with open-mindedness and shared vision. Stressing the role of management in increasing the orientation toward learning was also emphasized by Molnar and Mulvihill (2003), stating that management has a responsibility of creating a culture for sustainable development within the organization. Even though a study examining how sustainability dimensions are considered in the decision-making process concluded that sustainability dimensions are considered on a strategic level more than on daily activity (Silvius et al. 2017). However, support from all levels of the organization is crucial for achieving successful sustainability-focused organizational learning (Molnar & Mulvihill 2003).

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2.4.2 Sustainability-Oriented Learning (SOL)

Siebenhüner and Arnold (2007) identify different factors that affect the sustainability-oriented learning process (SOL). Many factors have been examined in several industries and are categorized in four categories: 1. Structural Factors: reflected in the size of the company and the mechanism of learning, influencing the learning process. 2. Cultural Factors: The norms and values of the organization play a major role in leading and guiding the process of learning. For example, clear statement of sustainability objectives within the mission of the organization simulates and encourages learning toward sustainability, as individual members clearly
understand their contribution to the mission. Communication flow significantly affects the learning-oriented toward sustainability. Supported by a leadership style ensuring that all individuals’ and groups’ initiatives are considered and heard. 3. External Factors: Being conscious of stakeholders’ demand has a considerable consequence on the learning process to meet expectations (Siebenhüner & Arnold 2007). Mena and Chabowski (2015) also emphasize that considering stakeholders helps the organization becomes more closely aware of their demands, and consequently reacts in accordance with this knowledge and feedback. As a result, stakeholder-related knowledge becomes the engine toward acting within the organization to respond causing value building. Learning is dynamic focusing on two angles: internally and externally. Internally, it is based on initiatives and ideas from within the organization. Externally, it is built on understanding consumers’ needs and behaviors. This approach was also emphasized by the results of the research conducted by Silvius et al. (2017), indicating that in considering the sustainable dimensions within the operation, stakeholders’ engagement was crucial in decision-making, as well as the awareness of society’s opinions and points of view. As the learning focuses on environmental concerns stress the inclusion of different stakeholders in the learning process (Bianchi et al. 2022). Of course, there must be a continuous individual initiative coming for individuals “change agent” who are committed and continuously contributing and provoking the learning and knowledge seeking and acquiring (Siebenhüner & Arnold 2007). Moreover, Armenia et al. (2019) adds another factor affecting sustainability-oriented learning. Stating that SOL must be built on previous project lessons learned, whether in terms of decreasing the waste of resources and energy, or in terms of wise and better decisions on where to invest resources efficiently (Armenia et al. 2019).

Both the SFOL and SOL identified different factors that affect learning. However, they shared similar factors: common vision, leadership, and communication. As the notion of sustainability operates at a high level of uncertainty (Siebenhüner & Arnold 2007). A clear vision is required to leading the learning toward one direction, however, it must be supported by an open communication flow that guarantees the flow of information and knowledge. On the other hand, stakeholders’ feedback and engagement in the SOL, is as important as other factors. Because sustainable development deals with multi-level local, regional, and global, includes many stakeholders, all of which are affected by sustainable development goals.
2.4.3 Factors That Affect Organizational Learning

This study focuses on factors affecting learning oriented toward sustainability. However, when reviewing the organizational learning literature, similar factors were noticed, this similarity helped in identify the factors that will be observe while analysing the data. For example, in describing the elements that can enhance learning in an organization, Goh and Richards (1997) state that having a clear and shared vision among all members assists people to understand how they can contribute to and participate in achieving this vision. Supported by leadership practices that encourage learning and create free space for experimentation. The influence of leadership, precisely transactional leadership was also mentioned by Bilan et al. (2020), although the article was about how organizational learning can achieve sustainability (stability) for organizations, and not sustainable development per se, except that it highlighted the role of leadership in the learning process within the organization. Stating that the leadership style increases the ability and capability of organizational learning, which leads to an organization’s sustainability (stability). In addition, the leadership style was mentioned by Siebenhüner and Arnold (2007), one of the factors influencing the learning process within the organization is applying a participatory style of leadership that encourages and inspires individuals to experiment and innovate, which leads to escalating learning and knowledge sharing. Another factor affecting learning, according to Goh and Richards (1997), is an open communication system that allows knowledge share and transfer within an organization. Emphasized by Hübner (1995) stating that efficient information flow within the organization, as well as beyond the organization’s borders, allows for society contribution, puts the organization on the right track to meet expectations, and aligns with changeable demands. Where currently sustainable development is a priority demand. All of these should be practiced in a teamwork context and in group interactions to enhance problem-solving ability, and create an efficient environment for learning, innovating, and accumulating knowledge (Goh & Richards 1997). This reciprocally interacts with organizational learning, as the work environment within the organization influences the ability to learn. At the same time, the work environment will be improved because of organizational learning. Having an environment that encourages innovations, taking risks, and moves beyond the norms and typical standards to create and develop (Hübner 1995). This was also emphasized by Bilan et al. (2020), as the study revealed that an innovative culture positively increases organizational learning, and therefore increases the organization’s sustainability (stability). Eventually, for organizational learning to occur, there must be an incubator environment of innovative culture that fosters learning (Molnar & Mulvihill 2003).
These factors mentioned above, affect intra-organizational learning. While regarding inter-organizational learning, according to MacDonald and Crossan (2010), evolving from individual learning into collective inter-organizational learning occurs when there is a type of interaction happening between individuals in the form of discussion and *dialogue*. Dialogue, is the foundation of inter-organizational learning, and goes beyond a simple conversation to more sustained exploration and generation of thoughts on an inter-organizational level. Of course, this shared inter-organizational learning increases when organizations’ interactions are more structured. Which was emphasized by Beeby and Booth (2000), declaring that the concept of dialogue is the most important evolution in organizational learning and learning organizations theories.

The similarity between SFOL and SOL, reappeared while observing the factors affecting organizational learning. Therefore, in this study, I focused on four main factors: Communication, Leadership, Shared clear vision, and Stakeholders.

*To answer RQ2 and be able to analyze factors that affect learning oriented toward sustainability, I have reviewed the literature in an attempt to identify common factors that affect organizational learning and learning-oriented toward sustainability. Hence in this section I presented Sustainability-Focused Organizational Learning and Sustainability-Oriented Learning, which identify factors affecting learning oriented toward sustainability. I then touched upon some factors affecting the learning process in general to eventually select the common factors for data gathering and analysis.*
2.5 Overview on The Theoretical Framework

The table summarizes the theories presented in the theoretical framework which will be used in the data analysis in this study. On the other hand, the table presents the factors affecting learning oriented toward sustainability. Highlighting similar factors affecting organizational learning in general.

Table 5. Summarizes aspects within the theoretical framework.

<table>
<thead>
<tr>
<th>Theory</th>
<th>Evolving of Theory</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Five- building Blocks</strong></td>
<td>Evolving on the knowledge share and transfer to go beyond the organization’s borders into knowledge sharing between organizations through inter-organizational learning</td>
</tr>
<tr>
<td>- Systematic Problem Solving</td>
<td></td>
</tr>
<tr>
<td>- Experimentation</td>
<td></td>
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<tr>
<td>- Learning from past</td>
<td></td>
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<tr>
<td>- Learning from others</td>
<td></td>
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<tr>
<td>- Knowledge transfer and share</td>
<td></td>
</tr>
<tr>
<td><strong>4Is</strong></td>
<td></td>
</tr>
<tr>
<td>- Intuition</td>
<td>Inter-organizational learning</td>
</tr>
<tr>
<td>- Interpretation</td>
<td>Stakeholder organizational learning</td>
</tr>
<tr>
<td>- Institutionalization</td>
<td>Sustainable Development</td>
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<tr>
<td>- Integration</td>
<td>- Cooperation/</td>
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<tr>
<td></td>
<td>- Stakeholders focused</td>
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<tr>
<td></td>
<td>- Brainstorming</td>
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<tr>
<td></td>
<td>- Integration</td>
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<tr>
<td></td>
<td>- Adapting</td>
</tr>
<tr>
<td></td>
<td>- Incorporation</td>
</tr>
<tr>
<td><strong>Factors that affect the learning process</strong></td>
<td><strong>Sustainability focused organizational learning (SFOL)</strong></td>
</tr>
<tr>
<td>- Leadership</td>
<td>- Common vision</td>
</tr>
<tr>
<td>- Shared vision</td>
<td>- Training and learning</td>
</tr>
<tr>
<td>- Open communication flow</td>
<td>- Purpose of the whole operation</td>
</tr>
<tr>
<td>- Teamwork</td>
<td>- System thinking</td>
</tr>
<tr>
<td>- Innovative environment</td>
<td>- Middle management</td>
</tr>
<tr>
<td>- Dialogue</td>
<td>- Commitment to learn</td>
</tr>
<tr>
<td>- Communication flow</td>
<td>- Leadership</td>
</tr>
<tr>
<td>- Stakeholders</td>
<td>- Cloud migration</td>
</tr>
<tr>
<td>- Middle management</td>
<td>- Communication flow</td>
</tr>
<tr>
<td>- Commitment to learn</td>
<td>- Stakeholders</td>
</tr>
</tbody>
</table>
3. RESEARCH METHODOLOGY

This chapter will present the research methods and approaches that I have followed in this study, along with the approach to data analysis, concluded with the limitation linked to this study.

3.1 Introduction

The purpose of this research is to gain a deeper understanding of the implementation of intra-organizational and inter-organizational learning when a sustainable development framework is considered. Understanding the implementation of organizational learning when it is oriented toward sustainability. In addition to the factors that might affect this learning. To achieve this, I conducted a qualitative single case study on a selected organization and collected data through semi-structured interviews. Then, analyzed it based on the theoretical framework extracted from the existing organizational learning theories presented earlier in this paper.

3.2 Research Design

Since research has significant implications for the field that is being studied. Therefore, researchers in the business and management field must be conscious of the philosophical commitment they relate to the methodology choices they follow during research. Researchers must also be aware of the importance of a good understanding of the field studied (Saunders, Lewis & Thornhill 2019).

The research question aims to develop a better understanding of intra-organizational and inter-organizational learning phenomena. According to Fossey et al. (2002), qualitative research seeks to state a question oriented toward getting a better understanding of the meaning of phenomena and their aspects; qualitative research portrays and clarifies personal experience in relation to social context. Moreover, as stated by Ravenswood (2011), qualitative data is an effective approach for understanding the rationality of a theory. Therefore, I decided to conduct this study using a qualitative research approach.

Among the three paradigms of qualitative research; empirico-analytical, interpretive, and critical research paradigms (Fossey et al. 2002), qualitative research is followed by interpretive philosophy (Denzin & Lincoln 2011). Interpretive and critical research paradigms seek to understand the meanings of human actions and experiences, and to generate accounts of their
meaning from the viewpoints of those involved (Fossey et al. 2002). Therefore, this study will follow an interpretive paradigm, highlighting the findings and understanding them within a theoretical approach.

Moreover, the deductive approach establishes a well-founded methodology without leaving space for alternative explanations to understand the phenomena (Saunders, Lewis & Thornhill 2019). Therefore, in this research, I will follow an inductive approach, observing and analyzing data based on a subjective point of view, which might differ from other observers’ points of view regarding the same phenomena. This case study is conducted on a qualitative method on a small sample, and according to Saunders, Lewis, and Thornhill (2019), inductive approach is more appropriate to construct different insights about the studied phenomena, rather than a deductive approach that is more suitable for a large sample study. Furthermore, although organizational learning as a field is mature and many theories have been established, inter-organizational learning toward sustainability is still new. According to Saunders, Lewis, and Thornhill (2019), when a topic is still to be explored, it is appropriate to follow an inductive approach to allow for more analysis and reflection on the theoretical framework, building on what data reveals, without expectations of theory establishment.

I aim to gain more in-depth knowledge about the implementation of intra-organizational and inter-organizational learning when it is oriented toward sustainability. According to Saunders, Lewis, and Thornhill (2019), an exploratory study intends to get more insight about a phenomenon. Therefore, this study is an exploratory study designed based on semi-structured interviews, leaving space for exploring that topic, more insights, and contributing to knowledge attainment (Fossey et al. 2002). Following a hermeneutic as a theoretical foundation framework, built on an iterative approach toward deeper understanding and more insights. This is followed by an interpretive approach, where there is no final understanding to be achieved, but rather gradual improving knowledge through the engagement with the literature (Boell & Cecez-Kecmanovic 2014).

Finally, according to Denzin and Lincoln (2011), the research strategy represents the methodological connection between philosophy and the choices made to conduct research. This is how the researcher plans to answer the research questions. According to Saunders, Lewis, and Thornhill (2019), experiments, surveys, and case study are the appropriate strategies for qualitative research. However, owing to the limitations of the experimental strategy, variables
are controlled and affect the validity of the results. Moreover, in survey, the results are affected by the number of variables collected (Saunders, Lewis & Thornhill 2019). A case study as a research strategy seeking to understand the dynamics of a phenomena within its single context (Ravenswood 2011), is what I will follow as my research strategy. Moreover, according to Alvesson and Sandberg (2011), organizational phenomena are complicated, multiple factors and multidimensional aspects interrelate in understanding the reality that constructs organization phenomena. Therefore, it is not enough to understand it only by explaining theories; more in-depth digging into the inner works and practicality is required to reach alternative reasoning of comprehending and explaining (Alvesson & Sandberg 2011). A practice-based approach is recommended to explore how individuals react, find solutions for problems, and implement their knowledge in practice (Corradi, Gherardi & Verzelloni 2010).

According to Corradi, Gherardi, and Verzelloni (2010), practice-based studies have been used broadly as a conceptual framework for understanding many organizational phenomena, especially since work dynamics are continuously changing. Therefore, since my aim is to achieve a deeper understanding of the implementation of intra-organizational and inter-organizational learning, and to generate more insights. Hence, I decided to approach an established organization to observe the dynamics of day-to-day implementation and try to find the links between practice and theories. This research is based on a case study strategy following a similar approach as Molnar and Mulvihill (2003) in their case study to understand the experience of implementing sustainability focused organizational learning.

3.3 Data Collection & Sampling

Among the three methods of collecting data in qualitative research; interviews, focus group, and observation (Fossey et al. 2002). According to Saunders, Lewis, and Thornhill (2019), interviews, either unstructured or semi structured, are one of the methods used to collect data in qualitative research to gain a better understanding of the studied phenomena. Moreover, because I highly value personal interaction in collecting data rather than just building on data collected through an anonymous questionnaire, face-to-face interviews allow for more reflections and create a space for my participation in the discussion (Saunders, Lewis & Thornhill 2019). Interviews was my approach to collecting data in this study. However, it was constructed on a semi-structured approach enabling more exploration, and achieving better and deeper understanding, while at the same time having a flexible guide for interviews, allowing for more conversation flow (Fossey et al. 2002).
As qualitative studies allow for a flexible margin of alteration and refinement according to the context (Fossey et al. 2002). I designed semi-structured questions; the questions were constructed on a broad basis to leave a space for refining as the research progresses. At the same time, questions were built on the theoretical framework on which the data gathered will be analyzed, covering all aspects and factors I want to explore, enabling a constructive analysis. An interview guide was prepared (appendix.1) containing a list of open questions categorized into three main categories: introduction, discussion, and conclusion questions. The discussion category was divided into three themes based on the analytical framework I was planning to analyze the data accordingly and based on my research questions: Intra-organizational learning implementation, inter-organizational learning implementation, and factors affecting the learning process. The reason for categorizing the questions was to gain more control during the interview to ensure that the flow of the discussion remains relevant, on track, and to avoid non-relevant details that will not be in any reflection on the subject I am searching for. I tried to cover as many details as possible and topics in the collection of the questions to allow for a more profound understanding and discussion. According to Fossey et al. (2002), qualitative research relatively focuses more on the broad open question, rather than tasting hypotheses. Therefore, I relied on open questions, and avoided “yes” and “no” questions to allow for more contribution from the interviewees and keep the conversation going, leaving room for more understanding and additional worth mentioning points that the interviewees might raise.

The criteria used to select Electrolux Group as the company to conduct this study is; Electrolux group is a global leader in household appliances based in Sweden with many branches globally. Their sustainability report is based on the Global Reporting Initiative (GRI) standards and is reviewed by a third party to ensure the accuracy and completeness of reporting. The organization is also working with the supply chain, as one of the set goals is to drive supply chain sustainability. Among the many awards and global recognition, in 2021, they were recognized for their sustainability leadership with a prestigious “double A” score for climate and water, and as a Supplier Engagement Leader by the global non-profit CDP. Electrolux was one of a few companies to receive top marks for its efforts to tackle climate change, protect water security, and engage with suppliers (CDP is an international non-profit that runs a global disclosure system for investors, companies, cities, states, and regions). The Group’s sustainability framework is “For the Better 2030” setting nine goals with defined 2030 sustainability targets and supported by key performance indicators (KPIs). For example, the organization disclosed in its 2021 annual report under the CO2 emissions target that its
ambition is to achieve climate neutrality by 2050. They are close to achieving the target of 80% reduction in CO₂ emissions for operations by reaching 78% in 2021 compared to 70% in 2020. Finally, they are undertaking many joint projects with other organizations with the same sustainability objectives, which will provide a good opportunity to explore and grasp how inter-organizational learning is implemented in practice.

Regarding choosing the interviewees, Fossey et al. (2002) state that since qualitative sampling is purposive and selective for applicable information falling into answering the research question. Moreover, purposive sampling as a nonrandom non-probability technique, although it does not reflect the entire population and is subjective, it is useful in my case considering the time constraints. In addition, since I am not aiming in this study to generalize the findings, non-probability sampling is the technique used in this study (Etikan, Musa & Alkassim 2016). Therefore, interviewees were selected from different departments, senior management, sustainability team/department, or other departments but were still involved in the sustainability agenda. Of course, with relevant expertise, which will provide valuable insights that contribute to this research. However, I must state that it would have contributed to a better understanding and broader insights if I had the chance to interview more participants from other departments.

The process I followed to get interviews with the organization’s members was based on personal connections. I happened to be introduced to someone working in the organization, so I have prepared a proposal about this study and what I am aiming at research and presented it. Based on this, I obtained the organization’s approval to conduct my study. I was then connected with other members who have the experience and knowledge to provide this study with relevant useful information. I began to approach nominated members and introduced the idea of my research. Of course, communication was via email, where the addresses were provided by the first connection. However, there was a case where the participants felt that their knowledge and field of expertise were not relevant to the research aim and, therefore, nominated other participants. In addition, I could not set time for some participants because of busy schedules. In the end, it was a bit difficult to arrange for more interviews due to time limitations; therefore, my findings were based on the amount of data I had access to through interviews. However, more insights and different points of view were to be grasped, if a wider range of interviews were conducted with different specialties and levels of management, which presents a limitation in my data collection.
According to Fossey et al. (2002), in qualitative research, there is no limitation on deciding the number of participants and interviewees, as I might get enough information from a long-concentrated interview giving a sufficient understanding of the phenomena. However, insights and an in-depth understanding must be guaranteed from the data gathered. Moreover, this study depends on a nonrandom technique, where no criteria rule the number of participants, it is up to the researcher’s decision (Etikan, Musa & Alkassim 2016). In conclusion, I was able to get interviews with five people, where the interviews I conducted provided me with an acceptable level of information. Table 6 summarizes the interviews list.

**Table 6. Interviews List**

<table>
<thead>
<tr>
<th>Department</th>
<th>Management Level</th>
<th>Participant</th>
<th>Language</th>
<th>Duration</th>
<th>Symbol</th>
</tr>
</thead>
<tbody>
<tr>
<td>Circular Solutions</td>
<td>Senior</td>
<td>1</td>
<td>English</td>
<td>46m</td>
<td>R1</td>
</tr>
<tr>
<td>Social Responsibility &amp; Community Investment</td>
<td>Senior</td>
<td>1</td>
<td>English</td>
<td>40m</td>
<td>R2</td>
</tr>
<tr>
<td>Sustainability Team, Development &amp; Collaborations – Sustainability Lead</td>
<td>Senior</td>
<td>1</td>
<td>English</td>
<td>49m</td>
<td>R3</td>
</tr>
<tr>
<td>Sustainability Specialist</td>
<td>Senior</td>
<td>1</td>
<td>English</td>
<td>40m</td>
<td>R4</td>
</tr>
<tr>
<td>R&amp;D &amp; Product Excellence</td>
<td>Senior</td>
<td>1</td>
<td>English</td>
<td>40m</td>
<td>R5</td>
</tr>
</tbody>
</table>

Interviews were conducted through “Zoom”, and “Teams” meetings; choosing these tools was suggested by the interviewees, although I lost a bit from what I can get through a physical interview, where more interactions and gestures may be observed. However, online meetings were effective in terms of time efficiency and scheduling ease. The interviews duration was approximately between 40m and 50m. Having interviews allowed me to follow-up later (Fossey et al. 2002). Therefore, interviews were tape-recorded with the informants’ authorization and then transcribed and sent to the interviewees for final approval, which guaranteed that no information was lost during the conversation. However, to protect the trustworthiness of the study, all records were erased after transcribing and were not shared externally. Also, transcripts
were deleted after the data were analyzed and categorized into themes. Moreover, all interviews were conducted in English as a common language between the participants and me.

At the beginning of the interview, I confirmed to the participants that records and transcripts will be deleted later. Furthermore, I kept all participants anonymous to ensure the confidentiality of the study and to avoid any bias within the interviews, allowing participants to express their thoughts, experiences, and points of view without any constraints. At the same time, I made sure that there was no misunderstanding or miscommunication by double-checking with interviewees my understanding of their answers, and if my questions were understandable for them. Finally, the data were collected at one point in time cross-sectional, as the research question does not require examining changes over time.

3.4 Data Analysis Methods / Techniques

Since qualitative analysis requires generating an understanding of the data gathered that goes beyond coding but further exploring its meaning and pattern, the researcher’s insights are included (Fossey et al. 2002). The data gathered were analyzed using thematic framework analysis and coded, to be categorized into themes that facilitate finding the pattern of the data (Lacey & Luff 2001). Therefore, data will be coded based on the theoretical framework presented in this case study and categorized into three themes based on the research questions: Intra-organizational learning implementation, inter-organizational learning implementation, and factors affecting the learning process.

For the first research question, **how intra-organizational and inter-organizational learning is implemented in a sustainability-focused organization?** I combined these two theories. First, the five-building blocks learning theory presented by Garvin (1993) focuses on systematic problem solving, experimentation, learning from past, learning from others, and knowledge transfer and share. This is because it includes both intra-organizational and inter-organizational learning. Second, I used the 4Is dynamics of the learning process: Intuition, Interpretation, Institutionalization, Integration, and Incorporation (Crossan, Lane, & White 1999). It explains how the learning process evolves from individuals into inter-organizational learning. Simultaneously, it covers the evolution of the learning process when sustainable development is considered. In conclusion, my coding was a combination of both, which was also the basis
for building the interview questions, divided into two themes: intra-organizational learning and inter-organizational learning.

**Table 7. Coding & Themes – First Research Question**

<table>
<thead>
<tr>
<th>Theoretical Framework / Coding</th>
<th>Themes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Five-Building blocks</strong></td>
<td><strong>4 Is + C</strong></td>
</tr>
<tr>
<td>Systematic problem solving</td>
<td>Intuition</td>
</tr>
<tr>
<td>Experimentation</td>
<td>Interpreting</td>
</tr>
<tr>
<td>Learning from past experience</td>
<td>Integration</td>
</tr>
<tr>
<td>Learning from others</td>
<td>Institutionalization</td>
</tr>
<tr>
<td>Knowledge transfer and share</td>
<td>Cooperation/Incorporation</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Level of learning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual / Intra-organizational</td>
</tr>
<tr>
<td>Individual and group / Intra-organizational learning</td>
</tr>
<tr>
<td>Individual and group / Intra-organizational learning</td>
</tr>
<tr>
<td>Intra-Organizational</td>
</tr>
</tbody>
</table>

For the second research question, *What are the factors that affect learning oriented toward sustainability?* I coded the data based on the four common factors I have concluded on my theoretical framework: Communication, Leadership, Shared vision, and Stakeholders, which are the most common factors affecting the learning process, precisely Sustainability-Oriented Learning (SOL).

**Table 8. Coding & Themes – Second Research Question**

<table>
<thead>
<tr>
<th>Theoretical Framework / Coding</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sustainability focused organizational learning (SFOL)</strong></td>
</tr>
<tr>
<td>- Common vision</td>
</tr>
<tr>
<td>- Training and learning</td>
</tr>
<tr>
<td>- Purpose of the whole operation</td>
</tr>
<tr>
<td>- System thinking</td>
</tr>
<tr>
<td>- Middle management</td>
</tr>
<tr>
<td>- Commitment to learn</td>
</tr>
<tr>
<td><strong>Sustainability oriented learning process (SOL)</strong></td>
</tr>
<tr>
<td>- Clear Statement</td>
</tr>
<tr>
<td>- Leadership</td>
</tr>
<tr>
<td>- Communication flow</td>
</tr>
<tr>
<td>- Stakeholders</td>
</tr>
</tbody>
</table>
3.5 Practical Implication of The Methodology

This study was based on an inductive approach that allows for reflections based on revealed data with no expectation of theory building (Saunders, Lewis & Thornhill 2019). However, case study research can provide a roadmap for theory building, likely producing an emergent theory (Ravenswood 2011). Therefore, this research might encourage other researchers to explore more in the field of intra-organizational and inter-organizational learning implementation interrelatedly when oriented toward sustainability, using the data generated in this study for future research.

3.6 Methodology Limitations

This study is based on an interpretive approach that reflects my engagement and understanding of a hermeneutic framework, focusing only on a certain number of relevant publications, depending on my judgment of reaching a saturation point (Boell & Cecez-Kecmanovic 2014). I have selected theories and approaches that I found relevant to my research question in building my theoretical framework and in analyzing the data. Therefore, my findings based on these selected theories impose a limitation on this study, where expanding the theoretical framework might have created various aspects to be added to this study. Moreover, following an inductive approach built on a subjective point of view also implies a limitation of the study being built based on my point of view.

Moreover, as mentioned, the sampling was purposive; having limited access to include more participants within the study cannot generalize the findings being conducted on a small, selected sample. At the same time, since this study is based on one case study, it implies further limitations, as the findings and results might have changed if the study was to cover more organizations and industries. There might be other dynamics of intra-organizational and inter-organizational learning implementation, and other factors to be added, if this study is further elaborated.

Moreover, conducting interviews through zoom is also considered a limitation, as there might be a place for losing body language and gestures that could have been observed in real meetings. All of which does not allow for generalization of to the study findings. Finally, the conclusion of this study is built on my understanding, interpretation, and judgment. The reliability and validity of these findings will be subjected to judgment of reasonableness on the reader’s side.
4. EMPIRICAL FINDINGS

The following chapter presents the findings from the interviews with the participants. Presented based on the three themes: intra-organizational implementation, inter-organizational learning implementation, and factors affecting the learning process, following the codes of the theoretical framework. For the simplicity, the interview respondents are called “R.”

Data were gathered through open semi-structured interviews, as mentioned in the methodology chapter. Five interviews were conducted, recorded, and transcribed. The data were organized so that I could be familiar with it and easier to analyze (Lacey & Luff 2001). Data were coded according to the theoretical framework extracted from the literature review.

4.1 Intra-organizational Learning Implementation

Regarding the learning implementation dynamics, in order to reach a deeper understanding and to answer my research question, how intra-organizational and inter-organizational learning is implemented in sustainability-focused organization, the structure of the chapter will follow the theme I presented in the methodology (intra-organizational learning implementation, inter-organizational learning). Based on the theoretical framework, the structure is as follows:

1. Intra-organizational learning implementation: a. The dynamics of new initiatives, b. Knowledge sharing and transfer about sustainability. 2. Inter-organizational learning implementation. Of course, the questions concerned the learning oriented toward sustainability.

4.1.1 The Dynamic of New Initiatives

In asking about how initiatives start in the organization and the process followed to get into implementation, all respondents agreed that initiatives flow in all directions with no specific processes. For example, from a development perspective, R3 states that there is no strict linear process for initiatives or new ideas; it is a systematic approach to innovation. R3 explains the systematic approach as “present forward and future backward approach”, which is scoping what the future should look like, broad understanding of various potential partners, the surrounding and the players/partners, and understanding what things need to be done through discussions, ideas’ creation and collaborations, and then working backward. When the idea resonated, it is implemented, and the whole team aligns around certain work streams of exploring and
delivering outcomes. However, from Research & Development point of view, R5 states that there is a lot of sustainability development embraced in the R& D division, although it is a business-driven company rather than a product-driven company. But, in the end, there must be a decision on what should be developed in the business.

Moreover, R3 explains that the organization is operating in a wider system, so whatever changes are implemented on products or processes in the organization will subsequently influence the entire system, and to operate effectively, they need to be aware of the consequences.

“Understanding what are the things that we want to do in the future and how is that different from what we do today, and what new things might we chose to do ourselves, and then what new things might we need to work with external partners to develop. So, in sustainability typically you are trying to develop to create a solution that is going to set well within the system.” R3

R1 & R4 indicate that there is no single approach for new needs or new initiatives, as it might be driven by several factors and channels. R1 states that new initiatives might be driven internally either by the departments’ heads initiating ideas, or by internal stakeholders. Alternatively, externally by customer needs, legislation, and competition. R4 explains that it might be driven by technical requirements, consumer demand, new legislation, customers, and b2b relations as initiators. However, both together with R2 agree that initiatives are at all levels: cross-functional, cross-regional level more than just from top bottom, everybody has a saying if ideas are relevant. R2 stresses that the organization is flat, which gives the opportunity for issues and topics to be raised at any level, and since it is flat, when someone is assigned to an area, they have the full authority and space to manage it and it is their responsibility and decision to insure having the right context and bringing along the right people.

4.1.2 Knowledge Sharing & Transfer About Sustainability

In describing the intra-organizational learning, respondents explain the challenges complied with learning about sustainability as it is a complex aspect. However, intra-organizational learning implementation depends mainly on people, although there might be some light
processes, it is eventually driven by people. At the same time, there were different approaches to intra-organizational learning at various levels of the organization.

R3 & R1 explain the challenges in learning about sustainability. R3 confirms that, considering the complexity of sustainability, intra-organizational learning toward sustainability must be systemized. Being said, working toward the best impact for sustainable initiative, but being aware, mindful, and understanding the wider system within which they operate. This means systemized learning: looking at the product as a part of a wider ecological system, and how the product affects the entire circulation of the industry or the operation. Moreover, R1 emphasizes that it is really challenging for the sustainability profession to identify how much knowledge and understanding people have regarding sustainability, and therefore, what aspects must be added to this knowledge, especially for newly joined people. It is important to identify how much they know and what they need to know. As a person might think that the same knowledge they possess is also possessed by others, it is hard to tell how much knowledge others have.

R3, R2 & R1 emphasize that intra-organizational learning is driven by people. R2 confirms that it is about people’s interactions, exchanging ideas, and continuous updates, operating in a light process with a space of freedom to manage the area assigned to the person. Moreover, R1 states that although there are some formal structured process approaches, they mainly depend on people reaching out to each other and setting up meetings to talk and discuss ideas, thoughts, innovations, and so on. Also, R3 states that:

“At the end of the day it is people’s business, individuals have a real power to inspire and creatively come up with ideas, so a passion in individual teams is very much driven by people, and the power of people is very interesting in terms of how you inspire and educate people, how you evolve their thinking” R3.

R5 explains that the learning oriented toward sustainability is more embedded in the line organization, which; in every category within the whole company there is a same set of main development functions representation, this functions group includes people ‘home people’ who can be borrowed by other functions when a new development is required, then teams within other function start to learn. However, when it comes to learning related to new regulations there is a different approach more like training on specific knowledge. While R2 states that:
"I think the learning is in the DNA of the procedures, in the sustainability area, I think you are always learning new things." R2

R1 describes that intra-organizational learning is an ongoing process, starts small and builds up, there must be a starting point, and it does not have to cover all aspects of the topic. But a trial of trying and identifying this will build learning. Then, it should be followed by a materiality assessment and prioritization process to identify what really matters and what is the impact that we are looking to achieve. Meanwhile, R3 explains that for sustainable development to be effective, it is not just about one or two things; there is an entire system of innovations, ideas and things to be explored to understand the way heading.

R2 explains the intra-organizational learning dynamics in structured steps; it starts with identifying a topic in an area that needs to be focused on, then developing an approach, followed by putting processes in place to manage that area, and then operationalizing within the organization’s processes. Later, whoever is managing that area, the knowledge is integrated in the way procedures and safeguards are initially set up.

R5 on the other hand explains intra-organizational learning dynamics, from a different perspective. For example, if a new idea is suggested by a function, region, or even by the center, it will have a short-term effect. However, when this new idea becomes concrete and implemented, other functions can recognize it, then someone else picks it up and puts it into a try. In this way, the intra-organizational learning dynamic starts by learning, exploring, and implementing the same idea. R5 illustrates this intra-organizational learning as a way of competing between functions or regions, by getting ideas from each other and trying them in their area. However, this is not random learning; it is within the organization’s vision framework. Thus, in the end, they learn from each other. Also, R5 states that there are some types of learning projects, which are projects only dedicated and addressed to learning about new regulations and other innovations, then the knowledge accumulated and resulting from those projects is embedded into the process and circulated within the organization.

Whereas R3 explains that there is a lot of internal knowledge sharing between individual functions. For example, if a team acquired new knowledge through a workshop, they bring back those ideas and share them together with the outcomes with the rest of the team. Then a process of defining new challenge areas starts, which will probably lead to changes in the product.
design, or even much more, create a whole new pilot to explore new business models. On the other hand, R3 also mentions the importance of word of mouth in the halls, where knowledge sharing happens as a result of informal chat between people interacting and sharing thoughts during the day.

R2, R1 & R4 emphasize that knowledge sharing occurs between different functions in the organization at a cross-functional level. As R2 mentions, there has been a remarkable loop of intra-organizational learning and feedback along the operation through professional internal networks, and cross-functional interactions. This teaches all of them and leads to institutionalization of the place. Moreover, R1 explains that cross-functional learning is driven by individual initiatives. Knowledge is shared between different functions through regular internal seminars and webinars, organized internally in the organization, as a way to initiate conversations and discussions across functions. If there is an innovation happening in one function, they organize webinars with other functions to explain and present new ideas. Furthermore, R4 explains the dynamics of knowledge sharing through many continuous review and launch meetings, as well as day-to-day meetings, on a cross-functional level where ideas, consumer feedback, and innovations are all discussed.

R2 explains that the main aim of the organization is getting everybody on board and not leaving anybody behind. Therefore, a lot of effort is put into reaching out to all employees and explaining the organization’s agenda. However, there is no concrete training module on sustainability, and it is built on people’s communication and knowledge exchange. For that purpose, a platform is now being constructed for E-learning, which is mandatory for all employees to go over it and explore data. On the other hand, there is a steering group that includes senior managers, where a type of continuous dialogue is held with senior representatives exchanging and sharing knowledge and ideas. Meanwhile, R3 emphasizes that there is constant story telling happening all around the organization as a way to share knowledge.

On the other hand, R4 explains that there is a cross-regional learning built on communication, to exchange ideas and discuss collaboration. Mainly based on people reaching out to each other, when something is done in one of the regions, people from other regions reach out, learn about it, and share it in their functions.

“I mean obviously we communicate with our employees a lot about sustainability” R2
Regarding the learning process between different projects in the organization, R1 explains that they should be able to apply the acquired learning from previous projects to subsequent projects. However, to catch up with the complexity of sustainability, they try to build up existing knowledge and add new knowledge along the way, in a process of continuous attempt at creating impact.

“\textit{What is hard to tackle and is true, is the complexity of sustainability, and that does not mean that sustainability is changing. It just means that you will discover new dimensions}” \textit{R1}.

R3 also states that there are many internal forums to share success stories, through video sessions, where achievements, ideas, and developments are shared as lessons learned with others, whether on a large company level, regional level, or function level. At the same time, there are yearly events called after the organization’s functions. For example, the design day, where the design department is supposed to prepare material to share ideas and developments within the organization and regionally in a continuous intra-organizational learning process.

R5 explains that it is not that projects as such share the learning; rather, it is sharing solutions developed through projects, and then those solutions become the base for the next project. This means that the solutions developed from one project are usually reused as a baseline, and the next project can start to work with what the other has done. At the end of the project, the solutions generated are shared with other projects to build on them and add further.

“\textit{Not really between projects it is more likely walk-in like in the stair, and there is some kind of modular approach, so developed solutions are reused so next projects start with what others have done}” \textit{R5}.

Explaining more, R5 states that in the development process, there is checkpoint feedback where all learning from projects is captured. At the same time, the project manager is responsible for documenting the learning that occurs during the project. This documentation is archived in the organization’s database, where it is available and accessible to everyone, and it is used when planning a new project.
In regards of database storage, R1 & R2 explain that the organization mainly relies on “Teams” and “SharePoint” where there is an archive for each area. For example, if a function is working in an area together with different functions and colleagues, everything is archived in the function space. However, R1 emphasizes, that it is not about storing the data; it is also about having it structured and organized properly to make it accessible and useful, considering the huge amount of data in hand. As having a large amount of data reflects the workflow, but it does not mean that it is relevant to everyone; it must be organized to be efficient and useful; otherwise, it might be a matter of clustering data. R4 also explains that they have a platform that everybody can access, which includes all research and information. However, with the amount of information and data available to date, it is becoming difficult to grasp relevant data.

4.2 Inter-organizational Learning Implementation

All respondents emphasize the importance of interacting with other organizations to share and transfer knowledge, and even build new knowledge about sustainability through different types of activities. Joint projects, conferences, seminars, workshops and so on.

R3 & R2 emphasize the importance of inter-organizational learning as a way to evolve learning beyond intra-organizational learning. R3 states that the organization is on a learning journey with other organizations working toward the same vision and agenda. As even if the organization has a team working on sustainability, and they have so much knowledge, they need to develop this knowledge outside the organization walls. For that purpose, for example, they are implementing many joint targeted projects as pilot projects with other organizations in different domains and aspects, to reach new innovative solutions toward sustainability, and this accumulated knowledge from those joint projects is shared and transferred between both organizations. While R2 emphasizes that, especially with regard to sustainability, one person cannot be an expert in all different aspects, external networking with people and organizations working on the same targets and agenda and interacting with expertise is required, to cover as many angels in regard to sustainability. For this purpose, people working in sustainability try to reach out to peers from other organizations to create opportunities for exchanging knowledge and innovations.

R1 & R3 believe that external interactions with other organizations and stakeholders who share the same vision, aims and work toward the same sustainable development agenda is important
for the learning process. R1 confirms that conferences, seminars, and meetings that teams participate in or even attend, and which are dedicated toward discussing sustainability aspects, are important because it is building an individual learning from a personal development aspect, which will then be reflected on a professional aspect by applying this knowledge to day-to-day operations. Moreover, R3 confirms that the organization conducts many activities with other organizations, such as workshops and conferences, which create an opportunity for the entire team to increase their learning and awareness. The aim of these workshops is to broaden the knowledge and explore best practices, learn from others, and share their knowledge with others, all of which addressed to achieving better operational solutions toward achieving sustainable development.

R4 & R3 explain the dynamics of inter-organizational learning. R3 explains that the organization is a member of a board that contains members from other companies working toward the sustainable development agenda, and they believe that through this cohort of companies’ expertise and interactions, systemized learning is implemented and achieved, as they learn from each other. On this board, they share their perceptions, approaches, and innovations. Furthermore, the organization participates in external forums with other organizations to share developments, innovation solutions, and knowledge, which creates a space for more collaboration and exploration of other practices. Simultaneously, R4 states that the organization participates in public authority hearings to spread knowledge about sustainability, for example, the energy authority. In addition to continuous communication with customers, especially b2b customers, to discuss and exchange knowledge and explore collaboration opportunities. Moreover, they are in the process of creating a sustainability index which will be accessible to use by all Nordic organizations.
4.3 Factors That Affect Learning Oriented Toward Sustainability

As I mentioned in the theoretical framework, and the methodology, data were coded following both the factors affecting Sustainability-Oriented Learning and Sustainability-Focused Organization Learning. However, as mentioned earlier, among many factors affecting the learning process, I focused on four factors, which I found were common factors affecting the learning oriented toward sustainability. The factors are: 1. The role of Communication, 2. The role of Leadership, 3. The impact of Clear Shared Vision, 4. The role of Stakeholders.

4.3.1 The Role of Communication

While asking about the role of communication in the intra-organizational learning process, all replies confirmed that the organization enjoys an open communication flow in all directions, which they believe is the core factor for ensuring information flow within all functions. Especially that the organization, regarding sustainability, bases the work on cross-functional groups covering different dimensions. However, some of the respondents also highlighted the importance of communicating externally, which is not for the purpose of the organization learning per se but for the purpose of educating the customer. As they believe it is important to increase awareness about sustainability and get people on board with them toward achieving sustainable development agenda.

R4 states that the organization enjoys an open communication flow, where it is easy to approach different functions and start a conversation. R3 & R2 confirm that working with sustainability requires a high level of internal communication and interaction. As R3 states, working in sustainability sets a need to work in groups with more functions than in other areas. Therefore, there is continuous cross-functional communication within the organization, depending on the projects under execution. At the same time, because sustainability is the main purpose of the organization, there is always a representative from the sustainability team attending almost all relevant conversations. This increases the understanding and intra-organizational learning about sustainability and keeps sustainability dimensions into consideration and top priority. At the same time, R2 explains that since work in the organization is based on group operations, therefore, constant cross-functional communication and a huge amount of information flows between groups, hence intra-organizational learning is implemented, to set goals and agenda targets within the vision framework.
On the other hand, R1 stresses the role of communication in organizing the data, as there is a lot of information and knowledge within the operation flow. However, organizing this information and communicating it to and with others helps to grasp the important piece out of all the random information and enhance intra-organizational learning.

Moreover, R2 emphasizes the importance of maintaining continuous communication with senior management, as they need to be aware and learn about the development happening in sustainability to be able to make the right decisions. This communication occurs through a sustainability board that contains senior managers of group functions, focusing on different areas together with the CEO as the chairman, meeting regularly to get insights, approvals, and information about the updates.

R2 & R5 stress the importance of external communication in educating people, as R2 states:

“I think from a sustainability perspective, if you are working in this field, you need to ensure that people have a good basic level of awareness of what the agenda covers”

R2.

While R5 stresses the importance of communication for the purpose of conveying what the organization is doing, which helps people pick up and then it grows more. So, communication should also focus on harmonizing and trying to get people on board.

R4 also emphasizes the importance of external communication from a consumer’s perspective, stating that the organization has been searching for ways to communicate and present products in different ways. Following a sustainability thinking in communication promotes sustainability. As an example, having sustainability tips on the products to educate the consumer on the best usage. Also, issued sustainability reports are one of the ways of communicating what the organization is achieving and stands for.
4.3.2 The Role of Leadership

Different roles for leadership were observed in the responses; however, all of them indicate that leadership plays a significant role in thriving and creating a learning environment, as well as in pushing into achieving the organization’s sustainability goals.

R1, R5 & R3 confirm the guiding role of the organization’s leaders. R1 explains that although there are so many individual initiatives and set up processes, these initiatives need direction, and it is not strong enough if it is not supported by top management people, who are leading every function. On the other hand, R1 emphasizes that leaders are also implementing and enjoying change management skills, as there is a lot of change management happening in the organization persuading people to think and act in diverse ways as a result of sustainability aspects.

While R5 emphasizes that achieving sustainable development is a chain of small steps, and having a management group supporting, from all corners and levels of the organization, helps in moving forward along the chain and pushing toward achieving the goals. As there has not been anyone saying that we should not do it, rather always trying to find various ways. R3 explains the leader's role in the final decision, as they are responsible for steering what is practical and doable.

R1, R2 & R4 highlight the high level of engagement of the organization’s senior management toward sustainability as a key factor in intra-organizational learning dynamics. R1 explains that senior management affirmed clearly that sustainability is one of the fundamental purposes and emphasized this statement by taking actions through signing some agreements in relation to sustainability, putting sustainability as a priority for the entire organization, which in return is reflected as a priority for all employees. As well, R4 emphasizes that leaders’ engagement toward sustainability goals, allowed people in the organization to focus their efforts on that agenda, and hence all other activities focus on those goals, including learning, communication, and operation. Moreover, R2 also emphasizes senior management engagement by providing oversights, guidance, and continuous support.

At an operational level, R2 & R3 confirm the role of leaders in the operation by building a learning environment culture that encourages learning and innovation. R2 confirms that leaders in the organization emphasize the identity of the organization as a learning organization, which
means having open-minded leaders who continuously encourage learning and initiatives. Moreover, since social sustainability is about developing a good culture of people leaders, the whole mindset defines “leadership” as being an encouraging supportive leader, building on people’s strength and pushing them up, rather than highlighting their weaknesses and holding people back from exploring. On the other hand, R3 explains that the key role of leaders is to make sure that the whole team gets together, shares ideas, and receives feedback, especially in light of getting people to try something different from what they used to, all of which is built on teamwork, discussion, and supportive leadership.

4.3.3 The Impact of Clear Shared Vision

The organization operates according to the sustainable development agenda and sets its vision and goals accordingly. Based on the responses, having a clearly stated vision is especially important in unifying the effort toward achieving it; however, resources, mainly people, are the main factor in making it happen.

R5, R1 & R4 confirm the positive impact of having a clear vision over the entire operation, including the learning process. R4 stresses that having sustainability in the mission, values, and framework of the organization helped in unifying the effort and directing it toward achieving this vision. However, R1 & R5 both emphasize that having a clear vision is important, but it is not enough if it is not supported by the resources needed to achieve this vision. R5 states that having a vision within the organization makes it stronger and more sustained in the long term because it is shared and embraced by the whole organization. However, even with a clear vision, to be able to achieve it, a support from people within the organization is required to gather efforts and make it happen. Moreover, R1 explains that having sustainability as the main purpose of the organization, which is embraced by almost everyone, guided the entire process including the learning process toward achieving this purpose. However, having a strong ambition vision is one thing, but there must be resources to push this vision through. On the other hand, R1 believes that the sustainability group function has made a fundamental shift because their main responsibility is to drive sustainability. The sustainability group is a group of people distributed over different functions; their main responsibility is to focus on sustainability and ensure that sustainability dimensions are covered and considered in their function, making corrections and follow up. Of course, in collaboration with sustainability’s main team.
R2 approaches the effect of a clear vision from a communication perspective, explaining that having a clear framework and a clear stated vision support communication with external stakeholders, as well as internal stakeholders. It is a kind of unifying language and platform for starting a discussion. At the same time, R2 emphasizes that having a set of clearly defined goals is extremely helpful in getting the commitment of the management, on the one hand, and for all members in the central group sustainability team to get clarity on their drivers and setting the agenda for each goal, on the other hand. As under each goal, there are targets, road maps, commitments, and plans, and they need to be continually revised according to development of the main goals, and the main eventual vision.

4.3.4 The Role of Stakeholders
Stakeholders are the main factor affecting the learning process in the organization stated by all participants, as they engage in continuous discussions with stakeholders and partners, building on their feedback to improve and develop products.

R3 emphasizes that when the organization changed from being a product company to a consumer experience company, understanding the consumer’s changing behavior and preferences. This approach fits well with taking a systematic view of sustainability to understand all various potential collaboration partners, as well as replying to and meeting customers’ expectations, rather than just focusing on product development in isolation of the customers’ needs and demands.

R1 & R4 confirm the importance of consumer feedback. R1 states that the global temperature environment really books the learning ability. As an organization, they need to understand the consumer to be relevant and work according to this understanding, so what matters to the consumer is what matters to the organization. R4 states that they rely mostly on consumer feedback by conducting surveys, consumer insights, taste preferences, data gathering, and starting to develop knowledge to meet requirements and needs. And they rely on b2b customers, through collaboration and continuous discussions.

‘We are invited to customers meeting and that is part of our story telling sustainability for sure’ R4
R2 explains that the sustainability agenda should be built on materiality, which is material for stakeholders. Therefore, understanding the different stakeholder groups is important for monitoring their perceptions and preferences. The agenda’s suggestions are mainly based on stakeholders’ engagement and understanding, as well as understanding the organization’s employees. Because changing the agenda is built on stakeholders and materiality, then this has to be on a continuous basis, as what was not material ten years ago, now it is material, and all is built on continuous feedback from the stakeholders somehow leading the learning process.
5. FINDINGS & DISCUSSION

The purpose of this study is to understand how the intra-organizational and inter-organizational learning is implemented when it is oriented toward sustainability, and what are the factors that affect this learning. In this chapter I will try to answer those two questions by analyzing data gathered presented above, following the theoretical framework presented in the methodology. As well as I will also include my point of view and my observations from what I realized while collecting the data.

5.1 Intra-organizational Learning Implementation

From the data analysis, it is noted that the implementation of intra-organizational learning falls into the five-building blocks learning theory (Systematic problem solving, Experimentation, Learning from past experience, Learning from other, Knowledge transfer and share) by applying the learning process of the 4Is learning process framework (Intuition, Interpretation Interpretation, Institutionalize)

5.1.1 The Dynamic of New Initiatives (Intuition / Interpretation)

The organization has a flat structure, allowing initiatives to be generated from all levels. Individuals, cross-functional, and cross-regional more than just from the top bottom, all initiatives are considered. Having these open doors in the organization for all initiatives encourages intra-organizational learning. From the responses, it was stated that there is no linear approach for initiating new ideas, which is basically a systematic approach to innovation. As explained by the participants, the dynamic followed within the R&D function, is mainly built on present forward and future back thinking. By scoping and understanding the future, discussing, and generating ideas. I believe that it falls in the five-building blocks learning theory (Garvin 1993), mainly the first two blocks but from a wider perspective, because it takes into consideration the entire system that the organization is operating in. The first block, Systematic problem solving, follows systematic thinking built on information and data, but focuses on a wider approach of understanding, taking into consideration two aspects, the organization is operating in a wider system that is affected by and affecting it. Additionally, complexity embedded in sustainability. System thinking, where the focus is on the operation as one unit rather than on individual parts (Molnar & Mulvihill 2003), was obvious when discussing with the interviewees. All responses fell under the idea of having a wide spectrum of thinking, taking into consideration the entire system. The second block, Experimentation, is happening across
the whole organization, precisely in the research and development department. As mentioned by the participants, there are many sustainability development approaches that originate within the R&D function. Intra-organizational learning, as stated by participants, is an ongoing process that starts with small steps, building on trials of trying, identifying, and accumulating knowledge.

In building these first two blocks, I believe that the organization follows the first two processes from the 4Is learning process framework (Crossan, Lane, & White 1999), *Initiation* and *Interpretation*. There is a loop of initiatives and innovative thinking across almost all members trying to create, develop, and improve, accompanied by continuous discussions between teams and groups members. Based on their belief in the importance of sustainability, and their role in leading the change “change agent” (Siebenhüner & Arnold 2007). These initiatives could be generated from different channels and as a result of many varied factors. Internally within the organization, for example, internally driven by the need to develop products and improve criteria following the sustainability standard of production. Externally, for example, understanding consumer needs and demands by conducting surveys and engaging with them (Mena & Chabowski 2015).

The organization is operating in a learning environment, encouraging innovation and supporting creation. Reciprocally interacting with organizational learning, having a learning work environment in the organization, and an incubator environment of innovative culture influences and fosters intra-organizational learning. Simultaneously, the work environment improved as a result of intra-organizational learning. (Hübner 1995; Molnar & Mulvihill 2003). I believe that this encouraging environment, in addition to its flat structure, helped and made it easy for people to create, initiate, and think out of the box. The surrounding dynamic facilitates the creation of ideas and provides a wide space for each one to unleash themselves and think big, which is reflected positively in intra-organizational learning.

*From the above, it seems that the first two processes from the 4Is learning process framework, Intuition and Interpretation, are the learning process applied while building the first two block from the five-building blocks learning theory, Systematic problem solving and Experimentation.*
5.1.2 Knowledge Sharing & Transfer About Sustainability (Integrate/Institutionalize)

Essentially, accumulative learning is integrated within day-to-day operations and activities in the organization and across all levels and dimensions. There is no strict knowledge sharing process to be followed when learning about new topics. Rather, it is an ongoing interaction among people, initiating, creating, discussing, and implementing, mainly depending on people reaching out and communicating.

The respondents emphasized that the knowledge acquired while working on a project is used as a base for the next project, as the outcomes of executed projects are employed for the next projects. I believe this is the third block of the five-building blocks learning theory *Learning from past experience*. In practice, during the project, there is checkpoint feedback, where all the learning from projects is captured and stored. As well as the project manager is responsible for documenting the learning that occurs during the project. Emphasizing building on the lessons learned from previous projects as a factor in enhancing intra-organizational learning oriented toward sustainability (Armenia et al. 2019). The outcomes of projects are shared through regular internal forums presenting ideas and achievements, whether functional, regional, or even at an organizational level. In addition, through yearly events created by the organization and named after functions, it provides a stage for functions to share their achievements. Thus, the valuable knowledge accumulated through projects is explicitly shared and communicated with all departments, ensuring that it does not fade away (Iftikhar, Ahola, & Butt 2021), and it is used for future planning. I believe this is the implementation of the third process from the 4Is leaning process framework *Integration*, where knowledge and ideas are shared with other members in the group to reach a shared understanding among workgroups.

It has been noted that there is a lot of learning from each other in the organization. From responses, there is a loop of intra-organizational learning and feedback, knowledge and information sharing throughout the operations, which occurs as a result of cross-functional interactions as well as cross-regional interactions. For example, if a team acquired new knowledge through a workshop, they bring back those ideas and share them together with the outcomes with the rest of the team. Building by that, the fourth block from the five-building blocks learning theory *Learning from the other*. For this purpose, they rely on different tools, such as seminars, and webinars. At the same time, if an innovation occurs in one function, it is captured by other functions to be tried, implemented, and even developed further in a continuous intra-organizational learning process.
Finally, the organization applies different methods, techniques, and tools to guarantee proper knowledge sharing between all members. For example, the organization created a group called a line organization, which is a group of the main development functions rotated between functions to share knowledge and information. On the other hand, they mainly rely on “Teams” and “SharePoint” where there is an archive for each area, all information, relevant data, as well data resulting from working on a certain project is stored and embedded in the system. This is indeed a reflection of the fifth block from the five-building blocks learning theory Knowledge transfer and share, implemented by the fourth process from the 4Is learning process framework Institutionalization, as all knowledge and information is embedded in the organization in the shape of system and database available and shared among all members. In addition, there is a platform that is accessible to everyone, including all the data and information related to sustainable development. Although, the organization has not built a concrete training module (Garvin 1993; Molnar & Mulvihill 2003; Armenia et al. 2019). However, as a replacement for training, they constructed an e-learning platform that is mandatory and accessible to all employees. All data and knowledge regarding sustainable development are available and accessible.

From the above, it appears that for building the third and fourth blocks from the five-building blocks learning theory, learning from past experience and learning from others. The third learning process from the 4Is learning process framework, Integration is the learning process followed. While the fourth learning process from the 4Is, Institutionalization, is the application of building the fifth block, knowledge transfer and share, where the acquired knowledge is embedded in the organization and included in the system.

Theoretically, the implementation of intra-organizational learning follows the five-building blocks learning theory implemented by applying the 4Is learning process framework. However, in practice, they mainly depend on people’s communication and reaching out, more than following strict structure of learning theories and approaches. As a word of mouth in the halls, can create a learning opportunity, where knowledge sharing happens as a result of informal chat between people. On the other hand, many seminars, webinars, forums, etc., are organized across all levels in the organization to share and transfer knowledge. By building on practical examples and achievements, others can pick up and acquire knowledge and apply it. Having a flat structure along with the learning environment, encourages the intra-organizational learning to occur in all directions and from all corners of the organization. Although they do not execute
any type of formal training, there is a huge internal effort to get everyone on board and on the same knowledge platform. In addition, they are active in workshops, seminars, and other types of learning activities, and then share this knowledge and engage in discussions and conversations, all of which enhance intra-organizational learning. Although there was no clear statement of the process to follow while learning, from the responses, it is noted that they follow the 4Is learning process framework. As participants stated, any learning starts with identifying the area to focus on, creating the process to manage it, then they operationalize it by integrating the idea within the teams in the area, and later implementing and institutionalizing it within the operation.

Lastly, while interviewing people, three points were captured, which are an evolving from the theory: First, the organization implements projects addressed only for learning new regulations about sustainability. The results and outcomes of these projects are embedded within the organization knowledge base to be used during planning and development. Second, they created the “line organization” which is a group of people that includes the main functions rotating between departments whenever there is an innovation. Creating a tool that enhances the information circulation and knowledge sharing in the organization. Emphasizing the idea that the entire learning process is built mainly on people and their interactions and communication. Third, the checkpoint feedback, where the learning resulting from a project is captured and stored, is also an evolving tool from the theory, and created because of the need to capture feedback in daily practice. In conclusion, it was noticed that when it comes to practice, there is always space for more creation that goes beyond theory to meet the organization's goals and objectives.

5.2 INTER-ORGANIZATIONAL LEARNING IMPLEMENTATION (INCORPORATION /COOPERATION)

Inter-organizational learning in the organization is achieved through various types of activities and arrangements. They believe that inter-organizational learning is a key factor in the evolution of intra-organizational learning. For this purpose, they undertake different types of activities. For example, they are executing several joint projects with other organizations to explore and innovate solutions to achieve sustainable development. Moreover, they organize together with other organizations conferences, seminars, workshops, and discussions and
exchanges of knowledge and experience. They also participate in external forums to discuss sustainable development agenda (Iftikhar, Ahola, & Butt 2021; Janowicz-Panjaitan & Noorderhaven 2008). The joint project was a good opportunity for the organization to share knowledge and learn from others’ experiences, which led to increase the creativity and innovation.

At the same time, on an individual level, according to the responses, people in the organization communicate and interact with peers in the same specialty from different organizations-external networking- to share and transfer knowledge, leading to collective knowledge built on interactions. The creation of collective knowledge occurs as a result of organization networks interacting cooperatively to generate inter-organizational practices (Dyer & Nobeoka 2000). On the other hand, they are executing continuous communication with customers, especially b2b customers to exchange knowledge, create collaboration opportunities, and receive feedback. Hence, they implement inter-organizational learning through continuous constructive dialogue, which is the foundation of inter-organizational learning. (Mena & Chabowski 2015; MacDonald & Crossan 2010). These sorts of activities initiated by the organization, or initiated by individuals, are the application and reflection of the dynamics of inter-organizational learning. From my point of view, this is the fifth learning process Cooperation in the 4Is learning process framework when inter-organizational learning is considered (Mozzato & Bitencourt 2014).

Finally, the main implementation of inter-organizational learning is when the organization is a member of a board that includes a group of other organizations. The aim of this board is to share knowledge and innovation at a wider level with others and to develop innovative solutions to achieve sustainable development. More importantly, the organization participates in public authority hearings to spread knowledge about sustainability. I believe this is a representation of the fifth learning process Incorporation in the 4Is learning process framework when sustainability is considered (Bianchi et al. 2022), where solutions and innovations are shared with external stakeholders and partner.

To implement inter-organizational learning, the organization follows the fifth learning process of the 4Is learning process: Cooperation. In addition to Incorporation because sustainability is their top priority. Moreover, from my observation, I can also state that while implementing inter-organizational learning, they also contribute to building the fifth block from the five
building blocks learning theory *Knowledge transfer and share*, but on a wider spectrum by sharing knowledge with other organizations, which will be reflected in intra-organizational learning.

**Table 9.** The implementation of intra- and inter-organizational learning

<table>
<thead>
<tr>
<th>Learning Blocks</th>
<th>Learning process implemented / 4Is</th>
</tr>
</thead>
<tbody>
<tr>
<td>Systematic problem solving</td>
<td>Intuition</td>
</tr>
<tr>
<td>Experimentation</td>
<td>Interpretation</td>
</tr>
<tr>
<td>learning from past experience</td>
<td>Integration</td>
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<tr>
<td>learning from others</td>
<td></td>
</tr>
<tr>
<td>knowledge transfer and share</td>
<td>Institutionalization</td>
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<tr>
<td></td>
<td>Inter-organizational learning</td>
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</table>

5.3 Factors That Affect Learning Oriented Toward Sustainability

5.3.1 *The Role of Communication*

All responses collected from the interviews emphasized the importance of an open *communication flow* at all levels as a tool to enhance intra-organizational and inter-organizational learning toward sustainability. Confirming one of the factors affecting the sustainability-oriented learning SOL mentioned by Siebenhüner and Arnold (2007), where communication was found to significantly affect the learning process. However, different perspectives were noticed in the data gathered from the participants. Some responses focused on internal communication, explaining that the organization is operating in an open communication system, allowing people to communicate and learn from each other. This open communication flow enhanced the learning oriented toward sustainability, as knowledge moves in all directions and at all levels and is available and accessible to everyone. Other responses focused on external communications.

On a functional level, the organization uses several tools to communicate and ensure intra-organizational learning toward sustainability implementation. The work dynamics in the organization are based on group work because they believe that work in sustainability requires working in groups. Therefore, there is a representation of sustainability among almost all
processes and decisions by having a sustainability representative in all functions, communicating and collaborating consistently at a cross-functional level. This leads to tremendous knowledge transfer and sharing across teams and functions, which I believe supports the building of the fifth block of the five-building blocks learning theory *Knowledge transfer and share* (Garvin 1993). Furthermore, the organization extended the perception of communication, not just as a tool for transferring information, but also as a tool for organizing random data and information, to ensure sharing of concrete structured relevant knowledge. Improving communication from just transferring raw data, rather organizing, and structuring communication to be more relevant and efficient. As the amount of data they have regarding sustainable development is massive, they must be organized and structured for efficiency and usability. This approach to data together with the open communication flow were noticeable for me because it not only considers collecting data, but also sharing this data in a very efficient way, saving time and effort which I also consider sustainable implementation.

Communication was not only perceived and implemented at a functional level but also extended to a senior management level. Some responses emphasized the role of communicating with senior management to increase knowledge and keep them up to date of the sustainability progression situation, enabling better decision-making and choices. I believe that this enhances intra-organizational learning. For this purpose, they have a sustainability board that includes all senior managers of group functions, together with the CEO as the chairman of the board meeting on a regular basis. As previously mentioned, the board serves as a communication tool to unify knowledge and achieve better knowledge-based decisions. It is noticed that in the organization, communication flows at all levels, ensuring the presence of sustainability at all levels. Although this approach contradicts the theoretical approach which claims that sustainability dimensions are only considered on a strategic level (Silvius et al. 2017). However, it proved contrary in the organization that having sustainability dimensions communicated at all levels helped the organization to unify the efforts and directions for all members, which was reflected positively in the intra-organizational learning being based on the same cohesive platform.

Some responses focused on the role of external communication, based on the belief that working in sustainability requires not only education at an intra-organizational learning level. But, also educating people about sustainability and what is the sustainability agenda, facilitates getting them on board. This is basically an application of the fifth learning process from the 4Is
learning process *Incorporation*, when all knowledge is shared with external partners and stakeholders. Moreover, they recognize the importance of communicating to people what the organization is doing and which aspects of the sustainability agenda they are covering. Therefore, a huge effort is put in the sustainability report issued by the organization as a tool to communicate with people, as an example of systems improvements toward achieving more sustainable development (Siebenhüner & Arnold 2007). However, the organization took a step further by also educating the consumer following a system thinking covering the whole rather than parts (Molnar & Mulvihill 2003). As in communicating with consumers they are promoting sustainability by having sustainability tips on products to educate the consumer about sustainability and best usage. An evolution of learning when sustainability is considered, taking it from an individualistic to an organizational socialistic approach, circulating and sharing knowledge among all organization levels, as well as all sectors and society dimensions (Lozano 2014).

It is noted that the organization relies heavily on communication throughout the entire sustainability-learning process, using different tools and approaches to ensure that knowledge is shared as much as possible. Which in practice is resulting in enhancing and increasing the intra-organizational and inter-organizational learning, confirming by what was stated in sustainability-oriented learning SOL (Siebenhüner & Arnold 2007) *Communication flow* affects the learning-oriented toward sustainability. This is reflected positively in their operations, as it increases the collaboration between functions, the flow of information, and knowledge sharing. It also ensures continuous involvement and support from the senior management. Noting that there is no singular approach or strict process for communication, an open communication flow moving in all directions is what has been and is still being implemented in the organization, depending on people’s initiatives and interactions in a flexible structure and process.

5.3.2 The Role of Leadership

In discussing the role of *leadership*, the responders perceived it from many different angles. However, they all agreed and emphasized the importance of the leadership role in thriving and leading the intra- and inter-organizational learning process, and influencing the learning oriented toward sustainability SOL (Siebenhüner & Arnold 2007). All responses affirmed the guiding role that leaders are implementing in every function. However, at the same time, it was
emphasized that the engagement and commitment of all people in the organization in the sustainability agenda is a key factor in achieving sustainability-oriented learning. Support from all levels of the organization is crucial for achieving successful sustainability-focused organizational learning SFOL (Molnar & Mulvihill 2003).

Some of the responses emphasized on the importance of the senior management involvement and engagement, as a key factor in the learning toward sustainability, confirming one of the factors mentioned by Molnar and Mulvihill (2003) Commitment to learn, affecting the sustainability-focused organizational learning SFOL. This factor is applied in two ways. First, the management clearly stated and acted toward achieving more sustainable development by signing many agreements to declare that sustainability is a priority for the entire organization. In addition, continuously provides insights for the whole team. I believe that this commitment boosted intra-organizational and inter-organizational learning to focus on sustainability and gathered various efforts around it. Second, the organization is operating in a mindset of consistent confirmation from leaders that the identity of the organization is a learning organization, building a learning culture created and supported by the organization leaders. This learning commitment orientation pushed forward the generation of new knowledge, where the leaders’ role is to create a culture for sustainable development within the organization.

In addition, some responses approached the role of leaders in implementing skills of management change to lead people toward change, since sustainability requires change. Putting a responsibility over the middle management, whereas senior management role is not enough when it comes to functions team management. Confirming one of the factors affecting the sustainability-focused organizational learning SFOL Middle management role (Molnar & Mulvihill 2003). Full support is required from all management levels to achieve sustainable development goals. From my point of view, the involvement of all people in the organization facilitates the implementation of sustainable development, as the effort is distributed, and responsibility is held by every individual toward a common goal of achieving sustainable development.

From a social sustainability perspective, as the organization is trying to cover all the sustainability dimensions, responses emphasized that to achieve social sustainability, the entire organization is built over a “people leaders’ culture”. Supportive leaders who motivate and build on capacity. To achieve sustainability-oriented learning, a participatory style of leadership
ensures that all individuals and group initiatives are considered, and encourages individuals to experiment and innovate (Siebenhüner & Arnold 2007).

In conclusion, the organization enjoys an effective practice of leadership, leading by example, and deriving learning by being committed to the sustainability agenda, putting it as a priority. Moreover, the whole organization applies a high commitment toward learning by creating a learning environment that foster and support learning toward sustainability. At the same time, continuous guidance and support are provided along the way creating a people leaders’ culture. Lastly, leaders also enjoy a good practice of management change, considering that sustainability requires applying change in all aspects. These different roles of leadership practiced in the organization were interesting, as it is not just a solo specific role for each leader. It is a combination of values and practices applied in different ways and at different management levels. Reaching an integrated effort that aims to create a learning incubator embraces all initiatives and pushes people toward more creativity and innovation. This confirms that leadership is indeed a factor that affects the SOL in an organization.

5.3.3 The Impact of Clear Shared Vision

The impact of clear vision as a factor affects both sustainability-oriented learning SOL (Siebenhüner & Arnold 2007), and sustainability-focused organizational learning SFOL (Molnar & Mulvihill 2003). All the participants highlighted that having a clear common vision positively affected the learning process. All of them emphasized that having a clear vision plays a guiding role in directing the effort toward achieving this vision as well as leading the learning process in that sense. On the other hand, some responses found that having a clear vision is a key factor in communication, especially when it comes to communicating externally (which I have already discussed in the role of communication section).

However, all responses stressed that having a clear, solid vision should be accompanied by sufficient resources to push this vision. Support from all levels of the organization is crucial for achieving successful sustainability-focused organizational learning (Molnar & Mulvihill 2003). For this purpose, the organization has an entire established department/ function for sustainability, consisting of a group of people. Scattered among all different functions in the organization ensuring that the sustainability agenda is implemented at a functional level. This
group's main responsibility is to drive sustainability in its function and, of course, in a continuous collaboration with the main sustainability team.

From the above, the organization has a clearly stated vision regarding sustainable development, articulated among all employees, and guiding the intra-organizational and inter-organizational learning process toward achieving it. This was obvious to me while conducting the interviews, as all interviewees explained their sustainable development agenda in a similar way. The goals, objectives, and aims are clear for all of them, as well as the process to achieve them. It was interesting to note that the organization enjoys a unified direction articulated and clearly understood by all members.

It is also worth noting that theoretically having a clear vision contributes to a better understanding among all employees, but it must be supported by organization processes and practices (Goh & Richards 1997). However, in this study, I have not touched upon the processes I am only focusing on the factors that could affect learning, whereas examining the process is outside the scope of this study and might be an opportunity for broadening in further studies.

5.3.4 The Role of Stakeholders

From the responses, the organization believes that the sustainability agenda is built on materiality; what is material to stakeholders is material to the organization. Based on this belief, their main aim is to deeply understand stakeholders and gain their engagement to lead the learning process in order to meet expectations. Emphasizing the role of stakeholders as a factor affecting the SOL (Siebenhüner & Arnold 2007).

For this purpose, they rely mostly on consumer feedback, using different tools such as surveys and test preferences, etc. At the same time, continuous collaborations with b2b customers in order to discuss product development building on customer feedback and requirements. This leads the organization to be closer and more aware of demands (Mena & Chabowski 2015).

Lastly, they have changed the whole mind-set in the organization from being product-oriented to being consumer experience-oriented. This approach supported a systematic view of sustainability to understand different stakeholders. As stakeholder engagement is crucial when sustainability dimensions are considered within the operation, precisely learning focused on
environmental concerns stresses the inclusion of different stakeholders (Silvius et al. 2017; Bianchi et al. 2022). Following in this stakeholders-focused organizational learning process presented by Mena and Chabowski (2015), as an alteration to the 4Is learning process framework when stakeholders are considered in the learning process.

It is interesting to observe that intra-organizational and inter-organizational learning in the organization is implemented in an ongoing flow. Although the learning process is not documented within the organization’s processes and procedures, but the flexibility within the organization allows for learning to happen as they are continuously developing their products to be more sustainable.

At the same time, the noticeable observation is that the main tool to ensure information flow and enhance learning is the communication between people, external organizations, and stakeholders. All communication relies heavily on peoples’ initiative to reach out to one another through open channels and flexible practices. In addition, I observed that a positive work environment within the organization had a positive influence on peoples’ feelings. This leads me to conclude that people are considered the most valuable assets of the organization.

In that sense, having a huge amount of learning built on a loose process probably might be risky, because there is no guarantee that the learning would actually happen without a system. At the same time, having people as the core essential asset for the organization can be both advantageous and disadvantageous. On the one hand, it empowers people and promotes social sustainable development. On the other hand, it might be concerning to rely on people as the main asset without a clear learning process because the degree to which individuals in organizations are committed to learning varies substantially.
6. CONCLUSION

The following chapter concludes theoretical insights as the results of the study, as well it gives suggestions for further research.

6.1 Theoretical Insights

The implementation of intra-organizational and inter-organizational learning theoretically follows the five-building blocks learning theory and the 4Is learning process framework. Of course, with some additions comply with the organization’s culture and context, and which can be implemented in practice. Mainly depending on people communicating and reaching out, in a loop of intra-organizational and inter-organizational learning.

Interestingly, the organization applies the five-building blocks learning theory in a non-sequential order of the blocks. For example, learning from the other, which is the fourth block can occur earlier than the first block, which is systematic problem solving, within a flexible path that moves from one end to the other. Moreover, although communication was not explicitly highlighted in the five-building blocks theory, the results of this study suggest that communication is a paramount factor in the entire learning process. In practice, it is natural for organizations to adjust the implementation of theories according to what mostly serves their culture and context. This does not necessarily lead to negative results, but in contrast, to positive results, as observed in this study.

In addition to the importance of communication discussed above, it is interesting to note how the organization is practicing different types of leadership, although they are operating in a flat structure. Hence, I believe that communication and leadership play major roles in the learning process. Moreover, based on the results of this study and existing theories, solid vision plays a major role in guiding learning. However, this needs to be supported by people’s commitment.

6.2 Suggestions for Further Research

This study contributes to the intra-organizational and inter-organizational learning field, exploring and understanding the implementation of intra-organizational and inter-organizational learning from a practice-based approach when it is oriented toward sustainability. Presented some methods implemented by Electrolux Group to enhance intra-
organizational and inter-organizational learning focusing on sustainability. However, because different companies might use different approaches, the study did not conclude an ideal approach, but presented several approaches proved to be successful in this particular case. The data gathered can be used for further elaboration in future studies to further explore and obtain a deeper understanding of the implementation of intra-organizational and inter-organizational learning when it is oriented toward sustainability.

This study covered the implementation of intra-organizational and inter-organizational learning, analyzed according to the five-building blocks learning theory and the 4Is learning process framework. It also examined four factors affecting the learning process oriented toward sustainability. However, it would be interesting to cover more aspects as an opportunity for further studies, such as including more theories and more factors affecting learning, for example, the changing in process & procedures as a result of sustainability introduction. Also, it would be interesting to elaborate on the exploitation and exploration learning process approach within a sustainability orientation. In addition, there is also an opportunity for more elaboration by including many companies, or even different industries, to obtain broader insights and probably generalizing.
REFERENCES

APPENDIX 1: INTERVIEW GUIDE

1- Introductory questions

a. How is the organizational learning implemented within the organization?
b. How was the introduction of implementing sustainability and following the sustainability agenda?

2- Discussion Questions built on the analytical framework.

a. Intra-organizational Learning Implementation
   - How new initiatives start?
   - How is the dynamic of learning and knowledge sharing about sustainability? (Internally)
   - How is the dynamic of learning between projects? (Internally)

b. Inter-organizational Learning Implementation
   - How is the dynamic of external inter-organizational learning? (Externally)

c. Factors affecting the learning oriented toward sustainability.
   - Do you think there is a role for communication in organizational learning and what is it?
   - Do you think that there is a role for leadership in the learning process?
   - What is the role/impact of having clear vision in the learning process?
   - What is the role of stakeholders in the learning process?

3- Closing questions

a. Is there any information or thoughts/insights you would like to add to help in more understanding about the dynamics of organizational learning?
b. Is there any question you would like to ask about the study?