

PAPER • OPEN ACCESS

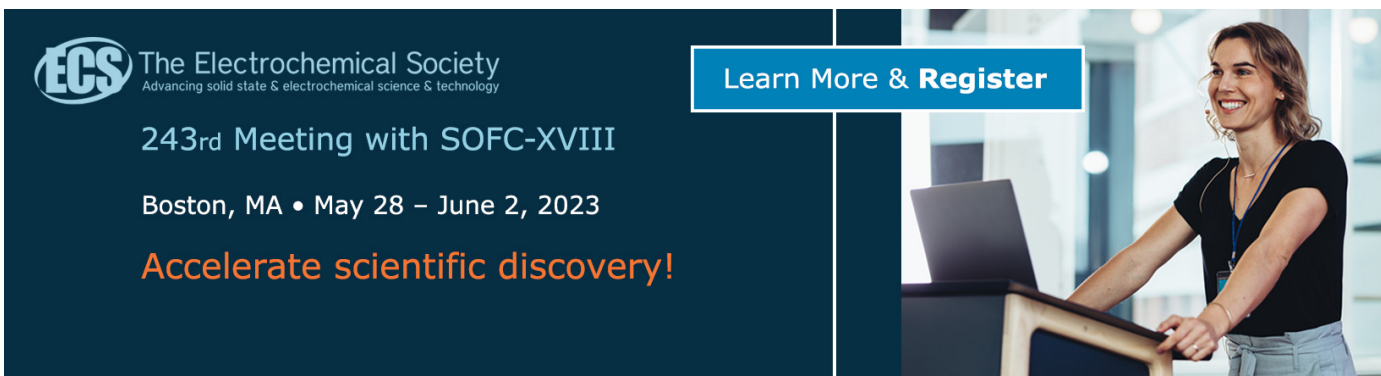
## Addressing sustainability: setting and governing sustainability goals and targets

To cite this article: B Ademi and N J Klungseth 2023 *IOP Conf. Ser.: Earth Environ. Sci.* **1176** 012038

View the [article online](#) for updates and enhancements.

You may also like

- [Conference on Sustainability Science 2018](#)
- [The Sustainability index of the provision of clean water treatment plants \(IPAB\) in supporting SDG 2030 programs for the availability and management of sustainable clean water in Soppeng Regency, South Sulawesi Province, Indonesia](#)  
Emil Azmanajaya, Chaterina A Paulus and Natalia Paranoan
- [Planning sustainable environmental neighborhoods is a step towards the direction of sustainable cities](#)  
Nada Khalifa Mohammed Ali and Zainab Abbas Ahmed



The advertisement features a dark blue background on the left with white and orange text, and a photograph of a woman at a podium on the right. The woman is smiling and looking towards the camera, wearing a black top and a lanyard. The podium has a laptop on it. The background of the photo is a bright, modern interior.

**ECS** The Electrochemical Society  
Advancing solid state & electrochemical science & technology

243rd Meeting with SOFC-XVIII

Boston, MA • May 28 – June 2, 2023

**Accelerate scientific discovery!**

**Learn More & Register**

# Addressing sustainability: setting and governing sustainability goals and targets

**B Ademi<sup>1</sup> and N J Klungseth<sup>1</sup>**

<sup>1</sup> Faculty of Engineering, Department of Mechanical and Industrial Engineering, Norwegian University of Science and Technology (NTNU), Trondheim, Norway

bejtush.ademi@ntnu.no

**Abstract.** Businesses in all kinds of industries, including facility management (FM), are increasingly integrating sustainability into their practices. The integration of sustainability practices involves expanding beyond economic targets to include environmental and social ones. However, this process is challenging for businesses and has not been fully explained by existing research. Consequently, this paper investigates how organizations set and govern their sustainability ambitions and targets. Specifically, this research focuses on identifying relevant goals and targets, selecting and integrating the goals and targets into business operations, and tracking the progress toward them. A case study approach was employed to achieve the paper's intended purpose, and a multinational company from the service industry was analyzed. Ten interviews were conducted, and more than 50 pages of archival data were collected. The results of this study elaborate on the setting of sustainability ambitions and targets and provide a roadmap for this process. The proposed roadmap includes defining sustainability, materiality analysis, goals and targets, and sustainability governance as crucial stages. This study's practical contributions include the process roadmap, which can facilitate organizations' journeys toward reasonable sustainability goals and targets. This outcome benefits all kinds of organizations, including those operating in the built environment and the FM domain.

## 1. Introduction

Businesses are increasingly pursuing economic, environmental, and social sustainability [1]. This includes expanding beyond financial goals and targets to include environmental and social ones to cope with stakeholder needs [2]. Many organizations' ultimate goal is building a sustainable business model (SBM), which is defined as a business model "that incorporates pro-active multi-stakeholder management, the creation of monetary and non-monetary value for a broad range of stakeholders, and which holds a long-term perspective" [3, p409]. This definition contradicts neoclassical economic theory and Friedman [4], who argued that a firm's sole goal is to increase profits. Instead, SBMs go beyond profit maximization for shareholders to deliver value to the environment and society as stakeholders.

Companies are no longer asking *why* they need to become more sustainable; instead, the question is, *how?* [1] They are currently working to define their sustainability goals and targets, measure their progress, and communicate them to stakeholders [5]. Performance measurement can improve the sustainability performance of a business [6]. Although sustainability reporting has been voluntary, there has been an increase in sustainability performance reporting by companies in recent years [7]. This phenomenon has primarily focused on large companies, as stakeholders expect them to disclose



information on environmental, social, and economic (ESG) performance [8]. However, many investors continue to raise important issues, arguing that many sustainability and ESG reports are generic and lack transparent and verifiable information [9]. Current developments in standardization are poised to bring about changes for both organizations in general and for facility management (FM) [12].

Selecting proper sustainability goals and targets, establishing a sustainability governance model, and reporting sustainability performance are challenging for businesses and have not been fully explained by the existing research. Such a challenge is visible across sectors and disciplines, including FM [10]. FM is defined as an “organizational function which integrates people, place and process within the built environment with the purpose of improving the quality of life of people and the productivity of the core business” [11, p2]. Many organizations involved in FM face difficulties in “identifying and measuring the sustainability performance” [10, p259] and therefore fail to have a meaningful impact on the environment and society. Recognizing this challenge, standardizations in FM at the global level have also focused on sustainability, such as through the ongoing work on ISO/TR 41019 Facility Management—The role of sustainability and resilience and ISO/PWI 41030 Facility Management—Performance measurement and management [12].

This paper investigates how organizations set and govern their sustainability goals and targets. A multinational company aiming to be an industry leader in sustainability was chosen for the case study. This study explored the process of defining sustainability goals and targets through 10 interviews and more than 50 pages of archival data. Following up on Klungseth et al.’s [11] call for research, this paper offers practical implications for research, standardization, and business practitioners. Specifically, this study provides empirical evidence of the methods and types of analyses companies apply to define and govern sustainability goals and targets. For business practitioners, this work offers a process roadmap that can facilitate the setting of sustainability goals and targets. The roadmap breaks down the sustainability goal-setting process into subprocesses and activities to offer user-centric guidelines. In doing so, this paper can assist FM managers in a) identifying and measuring sustainability performance, b) integrating stakeholders and users in the goal-setting process, and c) clearly communicating sustainability goals. This directly responds to the main challenges and barriers to implementing sustainable FM practices [13].

The remainder of this paper is organized as follows. First, relevant theories are discussed, and related concepts, such as materiality analysis, are introduced. The methodological approach, specifically the case study, data collection, and analysis processes, is presented in Section 3. The findings are presented in Section 4 and discussed in Section 5. Finally, Section 6 offers concluding remarks.

## 2. Key concepts

This section discusses the stakeholder and legitimacy theories relevant to the study. Furthermore, it elaborates on sustainability, sustainable development, and materiality analysis as critical concepts of this study.

### 2.1. Stakeholder theory

Stakeholders are central to FM and service management, as these disciplines have an overall aim to create value for internal and external stakeholders, including both individual people and entire organizations [14]. Stakeholder theory is an organizational management theory developed in response to a dominating mindset that sees corporations as shareholders’ property, solely responsible for maximizing their outcomes [15]. The theory expands the list of constituencies to include customers, suppliers, and employees, which an organization must consider in value creation. Freeman [15, p46] classified stakeholders as “any group or individual who can affect or is affected by the achievement of the organization’s objectives.” Stakeholder theory suggests that organizations must address and meet stakeholders’ needs and expectations to succeed.

Stakeholder theory helps to achieve sustainability as an organization’s end goal. To “achieve organisational sustainability, contemporary organisations must satisfy a variety of stakeholders, who are all capable of inflicting unacceptable damage on the viability of the organisation if their interests are not

met” [16, p737]. Based on stakeholder theory, organizations define key stakeholders, assess their impact on them, and incorporate their needs into the value-creation process. For instance, in FM, stakeholder involvement is perceived as a remedy to overcoming barriers to implementing sustainability practices [13]. Similarly, organizations must consider the environment and society as their key stakeholders to achieve long-term sustainability.

### 2.2. Legitimacy theory

Legitimacy theory explains why businesses aim to integrate sustainability into core business activities and focus on communicating sustainability performance to stakeholders. Lindblom [17, p2] defined legitimacy as follows:

[A] condition or status which exists when an entity’s value system is congruent with the value system of the larger social system of which the entity is a part. When a disparity, actual or potential, exists between the two value systems, there is a threat to the entity’s legitimacy.

Legitimacy represents a social contract between an organization and society that, if broken, endangers an organization’s license to operate. This definition is broad and flexible and includes social and environmental norms. Putting it into the environmental performance context, legitimacy is defined as the “generalized perception or assumption that a firm’s environmental performance is desirable, proper, or appropriate” [18, p94]. This is particularly important for FM, which aims to improve the quality of life of people and core businesses. The risk of breaking the social contract and concerns about not meeting stakeholders’ expectations make it necessary for businesses to address sustainability and communicate their sustainability performance.

To maintain legitimacy, businesses can strategically change their organizational perception toward sustainability, adapt their activities, and allocate resources accordingly [19]. This includes prioritizing stakeholders’ needs and interests. “Businesses must address and prioritize immediate stakeholders who probably have the greatest impact on the business and show some form of moral legitimacy for their actions” [19, p3743]. This suggests that businesses need to recognize their key stakeholders, perform an impact assessment of their activities in relation to them, and address any potential concerns.

### 2.3. Sustainability and sustainable development

Sustainability and sustainable development are widely used concepts that are often treated interchangeably [20]. Distinguishing the two, sustainable development is a *process* that aims to achieve sustainability as an *end goal* [21]. In the Brundtland Report [22, p383], sustainable development was defined as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs.” The concept of sustainability originates from the science of ecology. It is “the ability of the whole or parts of a biotic community to extend its form into the future” [23, p84].

Economics, society, and the environment have emerged as the three pillars of sustainable development. Brundtland’s definition of sustainable development incorporates economic, social, and environmental aspects as the “three main aims of sustainable development” [24, p58]. Economic sustainability focuses on businesses’ financial resilience and long-term viability, while social sustainability focuses on preserving social capital. Environmental sustainability is “meeting the resource and services needs of current and future generations without compromising the health of the ecosystems that provide them” [25, p5]. Considering these broad definitions, sustainable development represents a significant shift toward understanding the relationship between society, the environment, and economic growth. Therefore, FM has a clear role to play in helping organizations transition to create a sustainable, climate-neutral world, as both FM and sustainability embrace a wider holistic scope [11], including all three pillars of sustainable development. Thus, the role of FM has been “recognized for their important contribution in providing spaces, infrastructure, and services to people and the organizations, to help all professionals acting in the frontline” [11, p2].

#### *2.4. Materiality analysis*

Materiality analyses are used across sectors, including FM, as part of Global Reporting Initiative (GRI) standards and sustainability analyses. Materiality as a concept originates from financial reporting and has recently become central to sustainability assessment and reporting [26]. Materiality in financial reporting refers to the importance or significance of an item. It is used to determine whether an item should be included in a financial report [27]. The threshold for materiality is the point at which an item is deemed necessary enough to be contained in a report. Similarly, materiality in sustainability assessments and reporting helps to rank a broad range of sustainability concerns based on the three pillars of sustainability. The ranking is done considering all relevant stakeholders. Materiality analysis aims to “determine what really matters to company sustainability performance, commitment and strategies” [26, p440]. Hence, it helps companies shape their sustainability strategies to align with aspects that are the most significant to a company and its primary stakeholders.

Materiality analysis is pivotal to GRI standards, the most widely known and accepted sustainability reporting standards. Following GRI guidelines, materiality analyses “should be performed through stakeholder engagement initiatives and strategic consideration of opportunities and risk related to sustainability aspects” [26, p440]. This suggests an outside-in perspective involving all relevant stakeholders in designing sustainability strategies. Stakeholder dialogues help identify relevant sustainability aspects and rank them based on their significance. The materiality concept serves as a threshold for determining aspects that are significant to stakeholders and the company.

### **3. Methods**

This study employed a case study to explore how organizations set and manage their sustainability goals and targets [28, 29]. The study satisfied the three conditions set by Yin [30] for when to use case studies: a) the form of the research question is how, b) the researcher’s control of the behavioral events is not required, and c) contemporary events are the focus. We studied an organizational process outside of our control and aimed to understand how this phenomenon evolves. Ozcan et al. [31] described single cases as ideal in such contexts.

#### *3.1. Case design and selection*

A multinational company operating under the umbrella of a publicly traded conglomerate was assessed in the case study. To ensure the anonymity of the company and the interviewed participants, we used Neptune as a pseudonym for the company name. Neptune operates in the service sector. Neptune has been actively engaged in enhancing sustainability and has been working to integrate it into its business model. Neptune aims to be a front runner in sustainability within its industry. The company recently published its sustainability report independent of its mother company, showing leadership in sustainability.

Neptune was identified during a larger research collaboration with the mother conglomerate, which is also heavily invested in integrating sustainability into its core business. The research project was presented at an online conference focusing on sustainability, and it triggered the interest of the head of sustainability of the mother conglomerate. Reviewing the brand portfolio of the mother conglomerate, Neptune was identified as a relevant case, as it was one of the business units that had progressed the furthest in its sustainability goals and targets. This paper presents and analyzes a small part of this data set. Yin [29, 30] argued that ensuring access to relevant people and documents is a fundamental consideration in selecting an organization for a case study. The head of sustainability acted as the door opener. Following this, the Neptune management team agreed to participate in the project and gave us access to relevant company members and archival data.

#### *3.2. Data collection*

In this study, data were collected through interviews and archival documents. Interviews were the primary source of data. A total of 10 semi-structured interviews were conducted. All interviewees were top managers and ranged from the CEO to business developers. An interview guide was followed during

the conversations. The main topics of the interview guide were sustainability ambitions and goals, business model innovation for sustainability, and stakeholder involvement. The interviews were conducted online using Microsoft Teams, as the data collection was done during the COVID-19 pandemic, when in-person interviews were not an option. Both authors participated in conducting the interviews. The interviews lasted 42–55 minutes and were recorded and fully transcribed. In accordance with the Norwegian Centre for Research Data, General Data Protection Regulation, and Personal Data Act, the authors obtained approval for the research project upfront, inviting participants to participate in the research and fulfilling the requirements by ensuring the interviewees' anonymity in publications. All informants were informed about the research's purpose and their rights before providing their consent.

Archival data were also collected to complement the data from the interviews. Archival data included sustainability reports, presentations, and video materials.

### 3.3. Data analysis

There are two main approaches to analyzing case study data [31]. One is creating thorough descriptive narratives [28], and the other is creating a data structure by coding and categorizing the data into two abstract levels [32]. This study followed the first approach and created a thorough narrative for the case [28, 33]. Such an approach is "very useful for the researcher to develop a deep understanding of the case, to fill in the gaps in the story, and to write a thorough paper" [31, p17]. Specifically, the following steps were performed:

1. The data were coded into main themes by grouping text that belonged to the same theme. The same approach was used for the interviews and archival data.
2. Using the identified themes from Step 1, case "write-ups" were compiled. Interviews served as the primary data, while archival data served to validate the interviews and establish the facts.

## 4. Findings

The findings showed that Neptune has established a structured approach to sustainability, which has led to clear sustainability goals and targets. As a result, in 2022, Neptune published its sustainability report, becoming the first business unit within the mother company to do so independently. Neptune's awareness of sustainability is solid, and many employees are involved and even initiate sustainability-related initiatives.

Neptune has created an ambitious plan and has ambitious targets for sustainability. Neptune's ultimate goal is to fully integrate sustainability into everything it does and to become the most responsible player in the market. The company is attempting to improve the industry's image, as the industry has often been criticized by the media and society. Elaborating on these overarching sustainability ambitions, the communication and sustainability manager stated:

The ultimate goal is to fully integrate sustainability mindsets into each decision we make for the business, which is hard to measure if you have achieved that goal. [...] We would like to be perceived as the most responsible player in our industry, and possibly also outside the competitor arena...maybe be seen as sustainability [industry] lead.

Neptune aims to instill a sustainability mindset in the decision-making process and achieve a sustainable business model.

The following are the findings on setting sustainability goals and targets.

### 4.1. Process of setting sustainability goals and targets

Neptune has worked on defining its sustainability goals and targets and measuring its progress toward them. The process of defining the goals and targets has been lengthy, as it has involved performing materiality and value chain analyses and engaging relevant stakeholders, such as customers, employees, business partners, regulators, media, and owners. This process has included multiple stages, such as defining sustainability, gaining a deep understanding of Neptune's contributions, setting sustainability goals and targets, and establishing the sustainability governance model. The process is elaborated below.

*4.1.1. Defining sustainability.* As a first step, Neptune defined sustainability, its conceptualizations of the idea, and what it means to them. Sustainability as a concept is quite broad, and to many business practitioners, it refers to a business's financial viability. However, to many others, sustainability is all about climate change and humanity's carbon footprint, and few consider sustainability as being made of three pillars—economic, environmental, and social. Neptune focused on developing a broad definition of sustainability in an attempt to determine where it could contribute the most significantly. Going beyond housekeeping aspects, such as garbage sorting or eliminating plastic cups, the company focused on its core products and services and the impact these services have on the environment and society. Providing more context on this point, the business developer of the main product stated:

We want to focus on where we can move the needle. When we first started working with sustainability for real, we had, of course, been working with it for a long time. Still, we recently [hired] a sustainability manager [at Neptune], and things started to happen for real. We talked a lot about how we should have waste sorting in the kitchen and so on, but that did not really move the needle. So, we are focusing on our core product.

Hiring a sustainability manager helped introduce new competencies to Neptune, enhancing the company's opportunities to improve its sustainability performance.

Consequently, the company has come to understand its role in sustainable development and has moved far beyond thinking that sustainability is all about climate change and carbon footprints. Elaborating on Neptune's view on sustainability, the project manager, strategy and business development, stated:

It [sustainability] is a concept that has gradually become part of the company's culture [...] When you think about sustainability in a production plant, it is quite obvious, but for [Neptune], it becomes a bit less graphic what sustainability means. So we started our journey two years ago to really define where we can have more impact. So, I think the organization now is at the point of really knowing what sustainability means for Neptune and understanding how important it is for it to be part of the business and not a silo and far away from the business.

In Neptune's view, the company does not emit heavy CO<sub>2</sub>. This made it hard for the company to conceptualize sustainability. As stated above, sustainability is often hard to conceptualize for companies that are not necessarily heavy CO<sub>2</sub> emitters.

Neptune has established the belief that sustainability is the future and offers many opportunities for future improvements. Expanding on this, the communication and sustainability manager stated:

Everyone, almost everyone within Neptune, believes that sustainability is an opportunity for us. We can grow even more if we can do it even more and express it even more. And it would be a safety net for us in case the industry gets even more regulated...it could mean that we could survive better than the competitors if we focus on having a sustainable long-term business model rather than a short-term one focused on making a lot of money right now.

At this stage, Neptune already understands that due to regulations and demands from stakeholders, integrating sustainability is fundamental to its business model. Beyond that, the company also realizes that sustainability is shaping the future, and there are opportunities for growth and creating a competitive advantage in sustainability challenges.

*4.1.2. Materiality analysis.* Upon defining sustainability and how Neptune affects the environment and society, Neptune conducted materiality analyses, which were Neptune's points of departure toward defining sustainability goals and targets. Materiality analysis served as a tool for identifying, determining, and prioritizing sustainability aspects and topics relevant to Neptune. It started materiality analysis in 2019, performing multiple tasks, such as value chain impact assessment, stakeholder mapping and engagement, and determining and prioritizing relevant sustainability aspects.

The value chain impact assessment focused on the risk and opportunity analysis of the value chain. The process highlighted inputs, operations, sales and marketing, use of services, and the consequences of using these services as five primary segments of their value chain, and each was assessed. For each

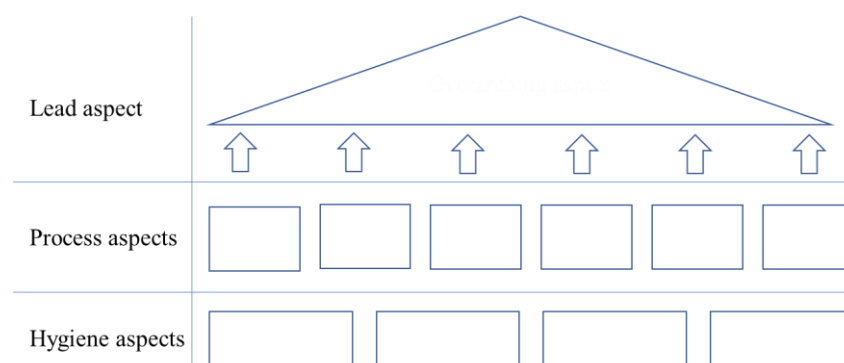
segment, the company set its impact on the economy, environment, and society. Similarly, sustainability aspects relevant to each value chain segment were identified.

Stakeholder engagement and their inputs were critical in the identification of sustainability aspects for Neptune. Using stakeholder mapping tools, Neptune identified the most relevant stakeholders influencing its business. Elaborating on this process, the sustainability report stated:

Mapping stakeholders identified our most important stakeholders based on interest in and influence on our business. The identified stakeholders were users [business partners], employees, regulators, media, and owners. Through a combination of surveys and analysis, we invited employees and users to prioritize the identified sustainability aspects.

These stakeholder dialogues focused on identifying the most important sustainability-related aspects for each stakeholder. They focused on understanding stakeholders' key concerns regarding Neptune's critical business operations and services and tried to integrate them into future developments. Describing the importance of understanding stakeholders' concerns, the VP for business partnerships stated that "to be able to innovate in a sustainable long-term way, you need to understand the stakeholders, and you need to support them in the correct way and have them close to you." Therefore, the integration of stakeholders' needs is crucial for sustainable business development.

Combining results from value chain impact assessment and inputs from stakeholder dialogues, Neptune prioritized and selected the sustainability aspects of focus. The company presented, discussed, and validated results with the management team in a workshop. Sustainability aspects were ranked and prioritized based on the impact assessment internally and considering the stakeholder perspective. In total, Neptune identified 12 sustainability aspects. For confidentiality reasons, only the categorization of these aspects is presented in this paper (figure 1). The selected sustainability aspects were categorized into three levels: lead aspects, process aspects, and hygiene aspects. The lead aspect is in line with the mission and vision of the company and is achieved through the core services Neptune offers. This represents Neptune's overarching sustainability goal. The second level includes process aspects that are directly related to the business processes carried out by Neptune. The third level comprises hygiene aspects, including a working environment where employees can thrive, greenhouse gas emissions, sustainable consumption, and charity. Process and hygiene aspects lead toward achieving the lead aspect.



**Figure 1.** Categorization of sustainability aspects.

*4.1.3. Defining sustainability goals and targets.* Neptune has set long- and short-term goals for each sustainability aspect identified through materiality analysis. First, they set the scope of the sustainability aspect and defined the long-term goals. Second, to manage long-term goals, they set short-term goals that are more specific in nature, measurable, and time-bound. Referring to this process, the communication and sustainability manager at Neptune stated that "when it comes to the sustainability aspects, at the end of the year, it is up to each member responsible for each aspect to define the new targets for each aspect and ensure that the targets are measurable." Therefore, Neptune set specific, measurable, attainable, result-oriented, and time-bound (SMART) goals. This allows them to track



progress toward each aspect and makes it easier for business managers to incorporate them into their individual objectives and key results (OKRs).

The sustainability aspects, specifically the long-term goals, short-term targets, and progress, are shown in figure 2.

Materiality aspect	Long-term goal	Short-term target (Year)	Progress
			

**Figure 2.** The sustainability aspects of long-term goals, short-term targets, and progress tracking.

*4.1.4. Sustainability governance.* The final step is defining the sustainability governance model and assigning ownership to the identified sustainability aspects. The Neptune executive management team oversees and governs sustainability performance. Each sustainability aspect is assigned to a member of management to ensure that those aspects are anchored at the top. Then, they are responsible for pushing them down in the organization and achieving specific targets. Doing so also helps them integrate sustainability into the core of their businesses. Elaborating on this, the partner responsible at Neptune stated:

We defined some broad areas of focus [referring to sustainability aspects]. Then, we assigned the responsibility for each area to different individuals in the Neptune executive team so that our sustainability goals were anchored at the top management and something that they would measure and track themselves on. ... even have them [sustainability goals] tied to their own KPIs [key performance indicators] as opposed to being some initiatives happening lower down in the organization. Then, the management would say: what the hell is this?

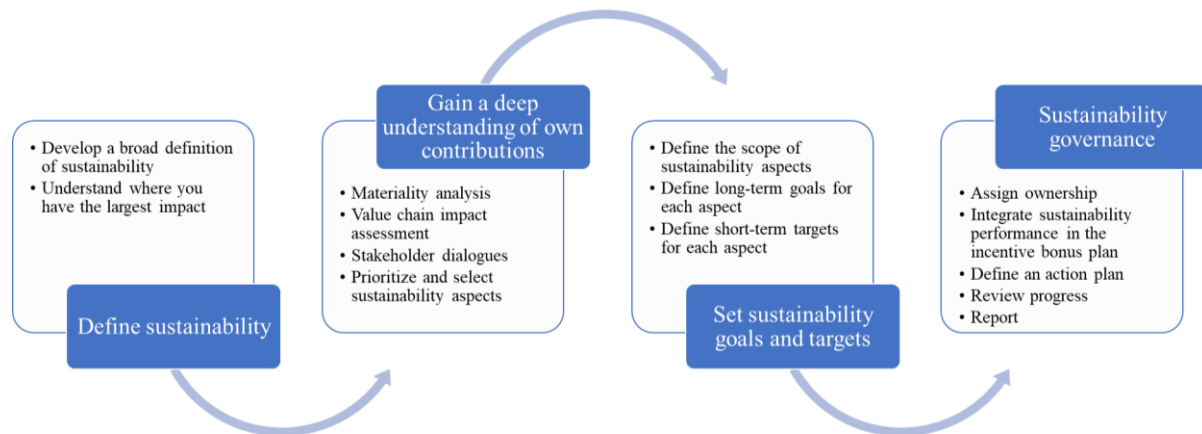
The company wants the executive team to be responsible for the sustainability goals and targets and push them down in the organization. It has also included sustainability goals and targets as part of the bonus system. The CEO at Neptune said, “20% of that bonus [short-term incentive plan] was dependent on sustainability targets.” Therefore, Neptune is using a top-down approach to integrate sustainability goals and targets into key performance indicators (KPIs).

Executive team members in charge of the sustainability aspect are responsible for setting goals and targets for their assigned aspects. They are also responsible for defining an action plan, communicating it to their teams, and evaluating their performance. In this process, they are supported by the sustainability manager.

The sustainability governance model includes a periodic performance review of stated goals and targets. Annual performance regarding each sustainability aspect is evaluated and presented internally and externally. Following GRI standards, Neptune published a sustainability report for 2021. This is a way to share its sustainability ambitions, approach, and performance with all stakeholders.

As part of its sustainability governance, Neptune hired a sustainability manager responsible for formulating and implementing the overall sustainability strategy for the organization. Furthermore, to ensure that sustainability initiatives are implemented throughout all levels of the organization and that people get the opportunity to engage in these efforts, they have established a sustainability community. Members of this community help increase awareness of sustainability and support related actions throughout the organization across the multiple countries in which Neptune is present.

Figure 3 summarizes Neptune's process for defining and managing its sustainability goals and targets.



**Figure 3.** Process for setting and governing sustainability goals and targets.

## 5. Discussion

This study contributes to a better understanding of the process of setting and governing sustainability goals and targets in a company setting. Specifically, this paper offers a process road map (figure 3) representing a strategy for setting and managing sustainability goals and targets by determining the necessary steps and actions. This map can prove highly valuable for FM (and other industries), particularly now that FM has started to develop standards for sustainability performance.

The first step outlined by the roadmap is to define and understand sustainability. The results of the case study showed that businesses must develop a complete understanding of sustainability and know where they have the most significant impact. Sustainability and sustainable development are so broadly defined concepts that business practitioners often need help operationalizing them [20, 21]. Furthermore, the results showed that business practitioners often refer to sustainability solely as financial viability, climate change, or CO<sub>2</sub> emissions and need help integrating the economic, environmental, and social pillars. Consequently, this hinders their ability to understand where they have the most significant impact on sustainability. The most considerable effect comes from the organization's core activities and value propositions rather than secondary ones. Therefore, this study suggests that developing a broad definition of sustainability within the organization first before developing a deeper understanding of where the organization has the largest impact is a reasonable approach.

The second step indicates the need to gain a deep understanding of the organization's contributions to sustainability. This involves performing materiality analysis and value chain impact assessments, engaging in stakeholder dialogues, and prioritizing and selecting relevant sustainability aspects. Materiality analysis helps organizations develop and prioritize proper sustainability strategies [26]. Value chain impact assessments help organizations break down their value chain into segments and assess their specific impacts in terms of economic, environmental, and social sustainability. During this process, stakeholder dialogues are critical. As suggested by stakeholder theory [16], involving stakeholders directly helps organizations develop a deeper understanding of stakeholders' key concerns about an organization's value propositions and essential operations. This enables organizations to have an outside-in perspective in defining sustainability goals and targets. Finally, following the materiality analysis framework [28], organizations must prioritize and categorize key sustainability aspects. The results showed that the lead sustainability aspect concerns the impact of the core value proposition offered by the organization. This speaks to legitimacy theory [17–19], as organizations are heavily concerned with avoiding any potential conflicts that would endanger their existence. Contributing to this lead aspect are process aspects concerned with having a sustainable value chain and hygiene aspects concerned with maintaining a sustainable workplace.

The third step is defining the scope of each sustainability aspect selected in the second step and setting goals and targets. This step is about setting SMART long-term (goals) and short-term (targets) objectives to achieve the chosen sustainability aspects. Consequently, this step aims to help outline an action step to achieve sustainability by making aspects more manageable, tracking progress, and reporting it to stakeholders.

Finally, in the fourth step, organizations must develop a governance model to manage the stated goals and targets. A key component in this step is assigning ownership to each sustainability aspect, and the results suggest that executive team members act as owners. There are already other competing goals and targets, primarily financial metrics, dominating the managerial agenda; hence, a direct push from top management is critical in ensuring that sustainability goals and targets are followed at the operational level. Integrating sustainability goals and targets into the incentive bonus plan also facilitates their prioritization at the operational level. Furthermore, the overseer of each sustainability aspect is responsible for developing an action plan and tracking the progress of the assigned sustainability aspect. Finally, sustainability performance is reported and published annually for dissemination to stakeholders. The results of this study show that communicating sustainability performance to stakeholders is critical to ensure the organization's legitimacy, especially in industries and sectors that are highly regulated.

## 6. Conclusion

In short, this study addressed the following research question: How do organizations set and govern their sustainability ambitions and targets? Employing a case study approach, this paper answers this research question by proposing a process roadmap to facilitate goal and target setting for organizations. This roadmap highlights the importance of understanding what sustainability is, understanding an organization's most significant impacts on sustainability, elaborating on the goal and target prioritizing and setting process, and establishing a proper governance model.

This roadmap aims to inspire ongoing standardization work, offers guidelines for business practitioners, and advances research on sustainability. Furthermore, the provided research results may support continued work on ISO/TR 41019 and ISO/PWI 41030 [12]. The process roadmap intends to help business practitioners identify sustainability aspects to focus on and have a meaningful impact on the environment and society. Specifically, the results of this paper can assist FM managers in a) identifying and measuring sustainability performance, b) integrating stakeholders and users in the goal-setting process, and c) clearly communicating sustainability goals. This responds directly to the critical challenge businesses face in addressing sustainability, as Nielsen et al. [10] and Støre-Valen and Buser [13] identified, in the FM discipline.

Finally, regarding the limitations of this study, the single-case study approach makes generalization of the findings difficult. To overcome this limitation, a more extensive study exploring businesses' journeys toward a sustainable business model, which includes further business units in the same conglomerate, is in progress. Similarly, we call for further qualitative and quantitative research on the topic, particularly research within FM that explores how and to what extent the proposed frameworks of this paper are of help to FM practitioners, FM researchers, and standardization in FM.

## References

- [1] Zollo M, Cennamo C and Neumann K 2013 Beyond What and Why: Understanding Organizational Evolution Towards Sustainable Enterprise Models *Organization & Environment* **26** 241-59
- [2] Hoendervanger J G, Bergsma F, van der Voordt T and Jensen P A 2016 17 Tools to manage and measure adding value by FM and CREM *Facilities Management and Corporate Real Estate Management as Value Drivers: How to Manage and Measure Adding Value* **299**
- [3] Geissdoerfer M, Vladimirova D and Evans S 2018 Sustainable business model innovation: A review *Journal of Cleaner Production* **198** 401-16
- [4] Friedman M 1970 The social responsibility of business is to increase its profits *Foundations of Business Thought* 221

- [5] Schatsky D 2013 *Corporate Sustainability*, ed P Taticchi, *et al.* (Berlin, Heidelberg: Springer Berlin Heidelberg) pp 157-70
- [6] Pucker K P 2021 Overselling Sustainability Reporting: We're confusing output with impact *Harvard Business Review* **99** 134
- [7] Ioannou I and Serafeim G 2017 The consequences of mandatory corporate sustainability reporting *Harvard Business School research working paper*
- [8] Ademi B and Klungseth N J 2022 Does it pay to deliver superior ESG performance? Evidence from US S&P 500 companies *Journal of Global Responsibility* **13** 421-49
- [9] Christensen H B, Hail L and Leuz C 2021 Mandatory CSR and sustainability reporting: economic analysis and literature review *Review of Accounting Studies* **26** 1176-248
- [10] Nielsen S B, Junghans, A and Jones, K 2016, Sustainability. In *Facilities Management and Corporate Real Estate Management as Value Driver*, eds Jensen P A and Van der Voordt T J (1 ed.), Routledge, Oxon, pp. 259-75
- [11] Klungseth N J, Nielsen S B, Da Graça M E A and Lavy S 2022 Research and Evidence-based standards: Research and standards in combined efforts for a sustainable transformation of the built environment. In: *IOP Conference Series: Earth and Environmental Science* **1101** 062039
- [12] ISO/AWI TR 41019 Facility management - The role of FM in sustainability and resilience <https://www.iso.org/standard/68175.html>
- [13] Støre-Valen M and Buser M 2017 Barriers to and challenges of sustainable facilities management practices—experiences from the Nordic countries *Welcome to Delegates IRC 2017* 356
- [14] Danivska V and Klungseth N J 2021 *A Handbook of Management Theories and Models for Office Environments and Services*: Routledge pp 205-19
- [15] Freeman R E 2010 *Strategic management: A stakeholder approach* Cambridge university press
- [16] Garvare R and Johansson P 2010 Management for sustainability – A stakeholder theory *Total Quality Management & Business Excellence* **21** 737-44
- [17] Lindblom C K 1994 The implications of organizational legitimacy for corporate social performance and disclosure. In: *Critical Perspectives on Accounting Conference, New York, 1994*
- [18] Bansal P and Clelland I 2004 Talking Trash: Legitimacy, Impression Management, and Unsystematic Risk in the Context of the Natural Environment *Academy of Management Journal* **47** 93-103
- [19] Crossley R M, Elmagrhi M H and Ntim C G 2021 Sustainability and legitimacy theory: The case of sustainable social and environmental practices of small and medium-sized enterprises *Business Strategy and the Environment* **30** 3740-62
- [20] Ihlen Ø and Roper J 2014 Corporate Reports on Sustainability and Sustainable Development: 'We Have Arrived' *Sustainable Development* **22** 42-51
- [21] Diesendorf M 2000 Sustainability and sustainable development *Sustainability: The corporate challenge of the 21st century* **2** 19-37
- [22] Butlin J 1989 Our common future. By World commission on environment and development. (London, Oxford University Press, 1987, pp.383) *Journal of International Development* **1** 284-7
- [23] Ariansen P 1999 *Towards Sustainable Development: On the Goals of Development — and the Conditions of Sustainability*, ed W M Lafferty and O Langhelle (London: Palgrave Macmillan UK) pp 84-96
- [24] Bradley P, Parry G and O'Regan N 2020 A framework to explore the functioning and sustainability of business models *Sustainable Production and Consumption* **21** 57-77
- [25] Morelli J 2011 Environmental sustainability: A definition for environmental professionals *Journal of environmental sustainability* **1** 2
- [26] Calabrese A, Costa R, Ghiron N L and Menichini T 2017 Materiality Analysis in Sustainability Reporting: A Method for Making It Work in Practice *European Journal of Sustainable Development* **6** 439

- [27] Whitehead J 2017 Prioritizing Sustainability Indicators: Using Materiality Analysis to Guide Sustainability Assessment and Strategy *Business Strategy and the Environment* **26** 399-412
- [28] Eisenhardt K M 1989 Building theories from case study research *Academy of management review* **14** 532-50
- [29] Yin R K 2009 How to do better case studies *The SAGE handbook of applied social research methods* **2**
- [30] Yin R K 2018 *Case study research and applications: design and methods* (Los Angeles: SAGE)
- [31] Ozcan P, Han S and Graebner M E 2017 *The Routledge companion to qualitative research in organization studies*: Routledge) pp 92-112
- [32] Gioia D A, Corley K G and Hamilton A L 2013 Seeking qualitative rigor in inductive research: Notes on the Gioia methodology *Organizational research methods* **16** 15-31
- [33] Meyer C B 2001 A Case in Case Study Methodology *Field Methods* **13** 329-52