



**THE ROLE OF THE SDGS AS WELL AS THEIR CO-BENEFITS
 AND TRADE-OFFS IN STRATEGIC DECISION-MAKING**

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ABSTRACT

Our planet faces serious economic, social, and environmental challenges. Businesses recognize that environmental benefits can go hand in hand with achieving economic gains. The Sustainable Development Goals (SDGs) provide a framework to adapt a company's business practices to the world's most pressing challenges for sustainable development. Relationships between the SDGs can be interdependent, and reaching one SDG can contribute to another, but the relationship may not be applicable vice versa. The purpose of this qualitative research was to find out how companies deal with the co-benefits and trade-offs between SDGs in their strategic decision-making process. In this single case study, semi-structured interviews were conducted with employees from Evonik Industries, a chemical company from Germany. The results indicated that companies still struggle to implement the SDGs in their strategies. A company can counteract this problem by developing an innovative method to integrate the SDGs into their business practices, thus playing a pioneering role for other companies towards implementing the SDGs.

Keywords: sustainable development, Sustainable Development Goals (SDGs), strategic decision, strategic decision-making



INTRODUCTION

"Do not take this planet for granted – it is the only one we have" (UN News, 2018).

The solution to our planet's severe economic, social, and environmental problems is one of the main tasks of the present generation and its willingness to hold leaders and decision-makers accountable (UN News, 2018).

The sustainability paradigm in decision-making processes is the key to enable a viable future for all. Sustainable development is defined as "[...] *development that meets the needs of the present without compromising the ability of future generations to meet their own needs.*" (WCED, 1987: 43). The growing awareness of emerging generations and the negative consequences of human influences on the world are driving this paradigm shift. This changed mindset led to a movement that unites all kinds of voices and leads to demonstrations for pursuing real and meaningful sustainable action. Over four million activists in more than 150 countries worldwide stand together and *"[u]nite behind science"* (News - FridaysForFuture, 2019). Overcoming the climate crisis is one of the main tasks of the 21st century (Sanson & Burke, 2020).

This demand for change poses significant challenges for politics, society, and the economy. It raises the question of how companies can incorporate sustainable actions into their companies without resolving into greenwashing, so-called *"purely symbolic practices"* (Blome, Foerstl & Schleper, 2017: 1). Businesses realize that achieving environmental benefits can go in concert with achieving economic gains. The interdependency of economic, environmental, and social standards increasingly plays an essential role in companies' strategic decision-making and business practices. To act on the path towards sustainable development, individuals, businesses, governments, and society must make decisions considering short- and long-term effects or outcomes (Klauer, Manstetten & Schiller, 2013). Companies can relate to sustainability by integrating Corporate Social Responsibility (CSR) in their core business or engage in sustainability reporting to demonstrate their sustainability efforts and to create transparency (European Commission, 2001). Businesses can also refer to the introduced Sustainable Development Goals (SDGs), which provide a framework to align business practices towards addressing the world's urgent sustainable development challenges (United Nations, 2015).

In 2015 the United Nations (UN), currently 193 Member States, declared the SDGs to be an international framework for the planet and its inhabitants, which are to be implemented by 2030, corresponding to their abilities (United Nations, 2015). The ambitious vision of the SDGs



is to achieve a sustainable future for present and future generations. Seventeen goals¹, including 169 sub-targets, address the worldwide greatest challenges we confront, including the ones identified with "poverty, inequality, climate, environmental degradation, prosperity, and peace and justice" (United Nations, 2020).

Companies have a significant impact on sustainable development, on the one hand, as a provider of solutions and, on the other hand, through their adverse social and environmental external effects (Sala, Ciuffo & Nijkamp, 2015). Rather than taking a narrow, short-term, and profit-oriented approach, companies can base their engagement on their impact and align their core business strategies with the SDGs (Nilsson et al., 2018). Therefore, companies need to consider the SDGs not only in their strategic decision-making process but also in business practice. Strategic decision-making processes deal with the effectiveness of how decisions are evaluated and implemented by the company (Mintzberg, 1976). Reaching the SDGs, managers need to consider the various aspects of sustainability during their strategic decision-making process and include them in their strategies and practices at the company, business, and functional level (Bonn & Fisher, 2001). The challenge for companies is to overcome trade-offs and realize co-benefits between the diverse SDGs and to achieve their application in their daily activities. Relationships between the SDGs can often be interdependent, and reaching one SDG can contribute to another, but the relationship may not be applicable vice versa (Nilsson et al., 2018). Businesses should be aware that the wrong application of the SDGs can result in the company's loss of added value. Companies may have to compromise between SDGs, which means sacrificing one aspect of an SDG to improve in another if not both can be fully achieved at the same time (Bowen et al., 2011).

To the best of our knowledge, it is still unclear how the different SDGs play a role in a company's strategic decision-making process. Therefore, this research project aims to answer the following research question:

How can the SDGs, including their co-benefits and trade-offs, play a role in a company's strategic decision-making process?

In order to contribute to the research gap, a qualitative single case study is proposed. For this purpose, semi-structured interviews were conducted with employees from different departments of a company. Evonik Industries, a chemical company from Germany, was selected for

¹ For further details see Appendix A.



this research. As a pioneer in the application of the SDGs, the company may set an example for other businesses to pursue the SDGs as well. The purpose of this study is to find out how the company deals with the co-benefits and trade-offs between the SDGs in its strategic decision-making process.

Within the frame of this research, this paper is structured as follows. First, the relevant theory will be discussed, providing a common understanding of the research field, followed by a description of the methods applied, the presentation of the findings, and finally, the discussion of the results as well as the conclusion.

THEORETICAL FRAMEWORK

Sustainable Development Goals

The Agenda 2030 for Sustainable Development, accepted by every United Nations Member State in 2015, provides a joint proposal for the harmonization and success of the individual and the planet today and in the future (United Nations, 2020). At the heart of the Agenda are the 17 SDGs, a demanding call for activity by all nations worldwide. The Agenda 2030 expresses the Member States' determination to "*protect the planet from degradation, including through sustainable consumption and production, sustainably managing its natural resources and taking urgent action on climate change, so that it can support the needs of the present and future generations*" (United Nations, 2018).

The idea behind the SDGs includes goals such as ending poverty and hunger in all its forms and dimensions and ensuring that all people can fully exploit their potential in terms of dignity, equality, and a healthy environment (United Nations, 2015). At the same time, the SDGs motivate corporations and governments alike to take immediate action against climate change and environmental degradation so that the planet can meet the needs of present and future generations. According to the United Nations (2015), the resources needed to implement the Agenda 2030 will be mobilized through a revitalized "Global Partnership" for sustainable development, based on a spirit of enhanced global solidarity, focused on the needs of the poorest and most vulnerable nations. This should involve all countries, stakeholders, and people (United Nations, 2015).

"The SDGs are integrated and indivisible and balance the three dimensions of Sustainable Development: the economic, social, and environmental" (United Nations, 2020). The integration of these three dimensions urgently requires a new paradigm, as not only do income and



other social gaps continue to grow, but also the planet's boundaries are violated, and humanity is increasingly endangered (Weinberger, Rankine, Amanuma, Surendra, & Van Hull, 2015). As stated by the United Nations (2015), the integrated nature of the SDGs is crucial to achieving the goals of the new Agenda, which should change the world for the better.

The SDGs aim to *"establish a direct link between global goals on the one side and the operationalization of the human rights agenda and local sustainability (or CSR) on the other side"* (Verboven & Vanherck 2016: 165). The applicability of the SDGs is universally considered in developing as well as in industrialized countries. The private sector plays one key role in implementing the SDGs. According to Scheyvens, Banks, and Hughes (2016: 372), *"the private sector has particular strengths in implementing the SDGs, including innovation, responsiveness, efficiency and provision of specific skills and resources"*.

SDGs in businesses

Companies can develop and implement new technologies and solutions to address the world's most urgent sustainable development challenges by implementing the SDGs (United Nations, 2015). Today, society expects businesses to be environmentally mindful and socially respectful rather than economically viable (Frantz, 2017). Ki-Moon (2020) emphasizes that *"[b]usiness is a vital partner in achieving the Sustainable Development Goals. Companies can contribute through their core activities, and we ask companies everywhere to assess their impact, set ambitious goals, and communicate transparently about the results"*.

The SDGs are presented independently of each other (Nilsson, Griggs, & Visbeck, 2016). While their diversity and scale may seem prohibitive, in practice, the SDGs are often interdependent in socio-ecological systems. Progress towards one goal can drive or influence several others. According to Nilsson et al. (2016), every company should interpret the SDGs in the context of their national circumstances and their level of development, so the degree of implementation of different companies could vary. Differences in geography, governance, and technology make it challenging to compare the state of integration and use of the SDGs. It is difficult if companies try to check off the SDGs one at a time or integrate them individually, for example, due to the lack of resources. Before implementing the SDGs, businesses should be aware that the wrong application of the SDGs can result in the company's loss of added value (Nilsson et al., 2016). Therefore, the advantages and disadvantages of the SDGs implementation should be weighed in advance.



The pursuit of integrated research and decision-making to promote measures to achieve the SDGs depends on understanding the interactions between the SDGs, both negative ("trade-offs") and positive ("co-benefits") (Nilsson et al., 2018). Relationships between SDGs can often be path-dependent, and reaching one SDG can contribute to another, but the relationship may not be the other way around (Nilsson et al., 2016). According to a study by Pradhan, Costa, Rybski, Lucht, and Kropp (2017: 9), "*attainments of SDGs will greatly depend on whether synergies can be leveraged and trade-offs identified and tackled*". The achievement of the SDG Agenda will strongly depend on whether the identified co-benefits between the goals can be utilized. Besides, the highlighted compromises, which could be obstacles to the SDGs' achievement, need to be negotiated and not just structurally influenced by changes in current strategies (Pradhan et al., 2017).

Following the Business and Sustainable Development Commission (2017), companies should have the courage to break new ground and pursue an economic model that is not only low-carbon and environmentally sustainable. At the same time, it should alter poverty, inequality, and lack of financial access to new market opportunities for smart, progressive, and profitable companies. These complex challenges require the full and focused attention of governments, civil society, and business. As stated by the Business and Development Commission (2017), companies should not only include the SDGs in their strategic planning, innovation, and business development but in all their day-to-day activities, to bring the business into line with the SDGs. This approach extends the business plan of companies, encourages decisions and investments that bring long-term benefits in the course of the sustainability trend (Business and Development Commission, 2017). Therefore, in every sector, innovative management methods are crucial to support the holistic integration of the SDGs into strategic decision-making (Howard-Grenville et al., 2017).

Sustainability in strategic decision-making

As stated by Harrison (1996: 47), "*[s]trategic decisions are based on the relationship between a particular organization and its external environment.*". Generally, a strategy determines the fundamental long-term goals and objectives of a company and adopts procedures with the allocation of resources that are necessary to achieve these goals (Chandler, 1962). A decision is defined as a moment in an ongoing process of evaluating alternatives to achieving a goal, where expectations of a particular course of action cause a decision-maker to choose the one that is most likely to achieve the goal (Harrison, 1996). Therefore, strategic decision-making as a

process focuses on the measures that lead to and support the strategy (Chandler, 1962). It is a series of actions and dynamic factors that begin with identifying an action stimulus and end with a specific obligation to act (Mintzberg, 1976). The strategic decision-making process deals with how effective decisions are linked to the company and how they are validated and implemented (Mintzberg, 1976).

Decision-making implementations are closely related to the decision-making process (Harrison, 1996). Every decision-making process should be based on a sufficient analysis of problems and goals, followed by a comprehensive collection and analysis of information and the search for the best alternative to achieve these goals (Jann & Wegrich, 2007). This includes the analysis of costs and benefits of different options and the final selection of the procedure. Hence, measures must be implemented, and results evaluated against the goals and adjusted if necessary (Jann & Wegrich, 2007).

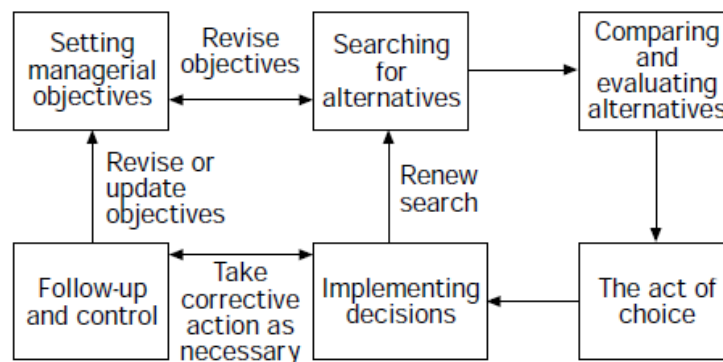


Figure 2: Decision-making process (Harrison, 1996)

The decision-making process (see Figure 2) begins by setting goals that, without exception, require the search for information from which several alternatives can be developed (Harrison, 1996). These alternatives are compared and evaluated based on applicable criteria, and the alternative that offers the greatest promise of achieving the goals is usually selected. The selected alternative is then implemented using existing structures, systems, and processes and then subjected to follow-up and control procedures to ensure a result that is compatible with the initiated goals (Harrison, 1996).

In order for companies to achieve their sustainability goals, managers must consider the various aspects of sustainability during their strategic decision-making process and include them in



their strategies on the company, business, and functional level (Bonn & Fisher, 2011). A problem for companies is the fact that environmental measures are not clear and, therefore, offer both opportunities and challenges (Kleindorfer, Singhal, & Wassenhove, 2009). Businesses need to figure out how to balance competing priorities by evaluating short- and long-term effects and making decisions under uncertainty. Hence, *"[t]hey need to deal with complex and multifaceted projects that require taking the interests of different stakeholders into consideration"* (Bonn & Fisher, 2011: 6). Today's business leaders must take greater responsibility towards future generations and their needs, the environment, and profits (Arora & Rovenpor, 2018). Companies run the risk of causing low morale, skepticism, and poor performance if they fail to keep pace with the growing concerns and demands of the next generation of managers. Long-term commitment to sustainability requires that decision-makers address sustainability concerns in all decision-making processes, especially when there is significant tension between economic, environmental, and social considerations (Bonn & Fisher, 2011). Dealing with these tensions by focusing on long-term sustainability results, not short-term financial gains, will convey decision-makers that sustainability is an essential part of the company's strategy.

Porter and Kramer (2006) argue that strategic investments in sustainability should do more than just improve public image. Instead, they should lead to innovation, opportunities, competitive advantages, and ultimately to long-term sustainable development. Nevertheless, top managers often formulate and implement sustainability strategies without aligning them with organizational ones (Ahmed & Sundaram, 2012). The difficulty is integrating sustainability into the strategic decision-making process (Vandaele & Decouttere, 2013). Therefore, innovative management methods for companies in every sector are crucial to support the holistic integration of sustainability goals into strategic decision-making (Howard-Grenville et al., 2017). To remain competitive and successful, companies must accept the transition to sustainability and incorporate sustainability into their processes, strategies, and long-term visions (Calabrese, Costa, Levialdi & Menichini, 2019). Despite the recognized importance, it is still unclear how sustainability, and the SDGs, in particular, can play a role in a company's strategic decision-making process.

METHODOLOGY

Research Design

As previously highlighted, this research aims to gain an in-depth insight into the role of the SDGs, including their co-benefits and trade-offs, in the strategic decision-making processes



within a company. Since the research question is of open-ended, exploratory nature, it is appropriate to adopt a qualitative method (Denzin & Lincoln, 2000; Gephart, 2004). Hence, a qualitative approach was proposed, carried out in the form of a single case study. The format of a case study provides an ideal framework to go into depth with single cases and simultaneously enables finding collective learnings (Lapan, Quartaroli & Riemer, 2012). In this case, a single case study especially enables a more profound exploration of the strategic decision-making processes within a company regarding the implementation of the SDGs. The aim is to learn from the participants' wealth of experience since they are experts who are actively involved in the field.

Context

The chosen case represents an international company, Evonik Industries AG, with headquarter in Essen, Germany, operating in the chemical industry sector. Evonik is one of the world's leading specialty chemists (Evonik Industries, 2020). The company operates in more than 100 countries worldwide and generated sales of €13.1 billion and an operating profit (adjusted EBITDA) of €2.15 billion in 2019 (Evonik Industries, 2020). Evonik goes far beyond chemistry and creates innovative, profitable, and sustainable solutions for customers. *"Around 50 % of the sales generated by [their] chemical segments come from products that make a measurable contribution to improving the resource efficiency of their applications"* (Evonik Industries AG, 2020). More than 32,000 employees work together for a common purpose: they want to improve life every day. Evonik started recording its positive contributions that its products have created to achieving the SDGs in 2017 (Evonik Industries AG, 2020). Thereby, they found that several of their products with a verified sustainability benefit are indeed drivers of growth for Evonik. Evonik was chosen for the single case study as it represents an excellent example of implementing the SDGs and can provide interesting insights for companies with the same ambition.

Data collection

The data for this research was collected through four semi-structured interviews and archival data. A semi-structured approach leads to a relatively open conversation between the researcher and interviewee with space for further insight (Breidenstein et al., 2015). This research focused on four employees with strategic responsibilities as well as those working in the Sustainability Department concerning the implementation of the SDGs. A detailed description of the participants of the case study can be found in the following Table 1.

Organizational focus	Position	Duration of Interview
Evonik Industries AG	Head of Corporate Responsibility	00:26:25 minutes
Evonik Industries AG	Corporate Responsibility	00:32:05 minutes
Evonik Nutrition & Care GmbH	Vice President of Sustainable Development Evonik Nutrition & Care	00:27:54 minutes
Evonik Industries AG	Consultant in Corporate Responsibility Relations	00:46:17 minutes

Table 1: Interview participants overview

The interviews were held online between April and May 2020, recorded, and transcribed accordingly and ranged in a timeframe of around 25 to 45 minutes. These interviews were conducted via video-calls, by the researcher and representatives of the case study firm. Multiple employees were interviewed to avoid prejudices, such as confirmation bias, system reasoning, or over-consciousness (Gudmundsson & Lechner, 2013). The main advantage of personal interviews is that they involve direct contact between researchers and respondents and eliminate non-response rates. Audio recordings and transcripts of the interviews were made after receiving the respondents' written consent². All participants had the opportunity to withdraw from the research at any time and, for ethical and confidential reasons, were only represented with their job title. Some questions have been prepared so that the researcher can guide the interview to connect with the research objective³. These questions focused on the respondent's job description, the company, and the role of the SDGs in their strategic decision-making processes. This should lead to a relatively open structure with much space for further development and create an accurate database to take different perspectives into account (Gudmundsson & Lechner, 2013). This research aims to collect and obtain relevant and high-quality data and not only focusing on the quantity of data. It is based on the concept of theoretical sampling. This method is distinguished by the systematic examination and simultaneous evaluation of the material (Götzö, 2014). Theoretical sampling indicates that data collection and evaluation are not considered separately but represent related processes (Clarke, 2012). The goal is not only to make a wide range accessible but also to create a research framework where detailed data on the material and potentially excluded aspects can be obtained (Clarke, 2012). Additionally, ar-

² For further details see Appendix B.

³ For further details see Appendix C.



chival data for this research was collected through the Sustainability Report 2019 of the company and its homepage. These secondary data sources were used to triangulate the interviews to improve the internal validity and reliability of the case study.

Analysis of the data

The analysis of the data began as soon as there was data available. Here it will be stressed how the obtained datasets were handled and how it was made accessible. For this research, an abductive method of analysis was applied where first, second, and third-order codes were derived (Gioia, Corley & Hamilton, 2013). An abductive analysis is a methodical approach towards the analysis of the data aimed at complementing theoretical constructions (Bell, Bryman & Harley, 2019). This approach focuses on the development of atypical and unexpected empirical observations against the background of existing theories. This method requires a continuous cycle of dual fitting data and theories. Abductive reasoning is a theoretical prediction based on the interplay of current hypotheses and evidence when irregularities or unexpected results occur (Gioia et al., 2013). When current theories take full account of empiric observations, the researcher has confirmed the existing theory. This approach implies three coding phases: open, axial, and selective coding (Gioia et al., 2013). The first step (open coding) is used to identify relevant topics within the material and establishes comparability between the different interviews. The second stage (axial coding) extracts the gained information from their chronological order and enables a thematic order and thereby creates new links between previously unrelated data. In the third step (selective coding), the here found results will be compressed in core categories (Strauss & Corbin, 1999)⁴. Once the data was coded, conclusions were drawn regarding the research question. The key responses in terms of relevance that overlap among participants were considered significant. The conclusions were critically evaluated and linked to the previously discussed theories regarding the SDGs, their role in businesses, and sustainability in strategic decision-making.

FINDINGS

Sustainability at Evonik

Evonik Industries AG is one of the world's leading specialty chemical companies (Sustainability Report 2019, 2020). As a requirement for Evonik's future success, sustainable business practices, and responsible behavior are key elements of their business model. The company

⁴ For further details see Appendix D.



supports its sustainability efforts across the value chain in intense interaction with its stakeholders. Evonik's manufacturing processes and the products and services they provide also take into account the supply chain and the product benefits for both suppliers and their customers. Furthermore, the company has seen a growing demand for products that display the right balance between cultural, ecological, and social factors. Evonik's sustainability areas include Strategy and Growth, Governance and Compliance, Value chain and Products, Environment, Employees, and Safety. Currently, Evonik is actively implementing its recent Sustainability Strategy 2020+. Some of the main aspects are the incorporation of sustainability into strategic management processes, the carbon pricing for all projects, and ambitious goals for reducing CO2 emissions as well as the development of global water management. As part of this strategy, the SDGs were integrated into the company's sustainability goals for the first time (Sustainability Report 2019, 2020). Before that, the SDGs were only listed separately on the company's homepage or the special SDG report.

Evonik's first response to the SDGs framework was quite positive as they saw them as *"very hands-on and very practical and very pragmatic."* (Head of Corporate Responsibility). Evonik has included the SDGs in its processes because the initiators of the SDGs also emphasized that these goals can not only be achieved by the countries alone but that companies make a significant contribution to achieving the SDGs. In their opinion, the SDGs *"[...] should be such guidelines that should pave the way to better participation in prosperity and economic development for the whole world."* (Consultant in Corporate Responsibility Relations). Evonik began to document the vital impact generated by their products and services to the SDGs in 2017 and *"[...] in the first step [...] we just tried to explain our impact on each and every one of those SDGs [...]"* (Head of Corporate Responsibility). Evonik further continued to develop an in-depth analysis of the SDGs over the next years. The company evaluated which products and services it offers and how they can be linked to the specific SDGs. If a particular SDG has a significant positive or negative impact on or by Evonik, the goal is relevant for the company. In order to decide which SDGs are relevant for Evonik, the company additionally takes into account the assessment of their external stakeholders and the results of their materiality analysis of their business processes. Subsequently, the most relevant SDGs for the company are Responsible Consumption and Production (Goal 12), Climate Action (Goal 13), Good Health, and Well-Being (Goal 3), as well as Clean Water and Sanitation (Goal 6) (Evonik Industries AG, 2020) (see Figure 3). These relate to the *"importance for our business in terms of turnover and strategy and growth ambitions [...]"* (Head of Corporate Responsibility). As Evonik states

in their Sustainability Report 2019 (2020), "[m]ore than 80 percent of our sales already make a positive contribution to achieving the SDGs and around 60 percent have a positive effect on the four SDGs identified as being particularly relevant for Evonik."



Figure 3: Visualization of Evonik's group relevant SDGs (Evonik, 2020)

Furthermore, the case study participants emphasized that the workforce of Evonik mostly responds positively to the SDGs and tries to incorporate these goals into the business processes. Nonetheless, it is still a question of personal mindset to what extent the SDGs are included in the company's strategic processes, since "[a]s long as you have a separate sustainability strategy in your company, you have not actually got where you should be." (Consultant in Corporate Responsibility Relations). The company's Management Board currently sees no need to merge the sustainability strategy with the corporate strategy. Until now, there is still a separate sustainability department that deals with the implementation of the SDGs and tries to integrate them into corporate processes.

SDGs in strategic decision-making

According to the participants in the case study, the SDGs currently only play a secondary role in the strategic decision-making processes at Evonik. It is still challenging for the company to implement the SDGs into their business strategies and quantify their impact generated towards the SDGs. As stated by the Vice President of Sustainable Development Evonik Nutrition & Care, "[t]he SDGs directly do not have a large role [in the strategic decision-making processes of Evonik], it is more the sustainability topics, where we believe we can make a difference. Moreover, they, of course, relate to the SDGs.". When making individual decisions, the company does not always use the SDGs to evaluate different options and make specific decisions.



Nevertheless, as stressed by the participants, Evonik is aware that its corporate practices can have a critical effect on the SDGs in some ways. For all portfolio evaluations, Evonik ensures that the SDGs are integrated into the evaluation process as a fixed factor.

A company always has to make decisions about compromises in business processes that regard synergies and trade-offs. Evonik, for example, produces animal feed for agriculture. Though, there is currently a debate about the extent to which meat should still be accepted in society at all. Evonik thus has to deal with conflicting views. In this case, these trade-offs are not made at the SDG level, but at a specific topic level. According to the respondents, these decisions are usually made at a level of detail that is not discussed in the SDGs. The SDGs do not yet reflect any precisely measurable criteria for companies and how they can be integrated into the company's decision-making process.

Assessment of the SDGs

In order to integrate the SDGs in their strategic making process, Evonik identified which SDGs were most relevant for them. Regarding the Portfolio Sustainability Assessment (PSA) of the World Business Council for Sustainable Development (WBCSD), Evonik has developed a methodology based on qualitative and quantitative criteria to identify relevant SDGs for their company (see Figure 4).

For the assessment of this method, particular attention was paid to the sub-targets of the 17 SDGs. Of course, Evonik is aware that they should not just report the positive effects of their company on the SDGs. Based on the insights of their materiality analysis, the company first looked at the results of their sustainability analysis for each product, linked this to their strategic growth behavior, completed by the statements from stakeholder dialogues. An SDG is relevant for Evonik if there is a significant positive or negative impact on or by them. This impact may be either absolute or relative (i.e., as opposed to the influence of an equivalent product in place). Evonik does not just analyze the SDGs separately or makes a specific business decision that pays off for a specific SDG. The point is that every solution or product the company develops goes through an evaluation phase, and the SDGs are an integrated fixed factor. This enables the company to see where there are positive and negative effects on certain SDGs along the value chain and beyond their processes. For co-operating companies that were defined on the Product-Application-Region-Combination (PARC) level, the value chain's positive and negative effects were also identified. In a stepwise approach, the related PARCs were evaluated on

the level of revenue and corporate strategies (including their growth engines and product development areas). Additionally, the company took into consideration the opinions of their external stakeholders and the findings of their materiality analysis.

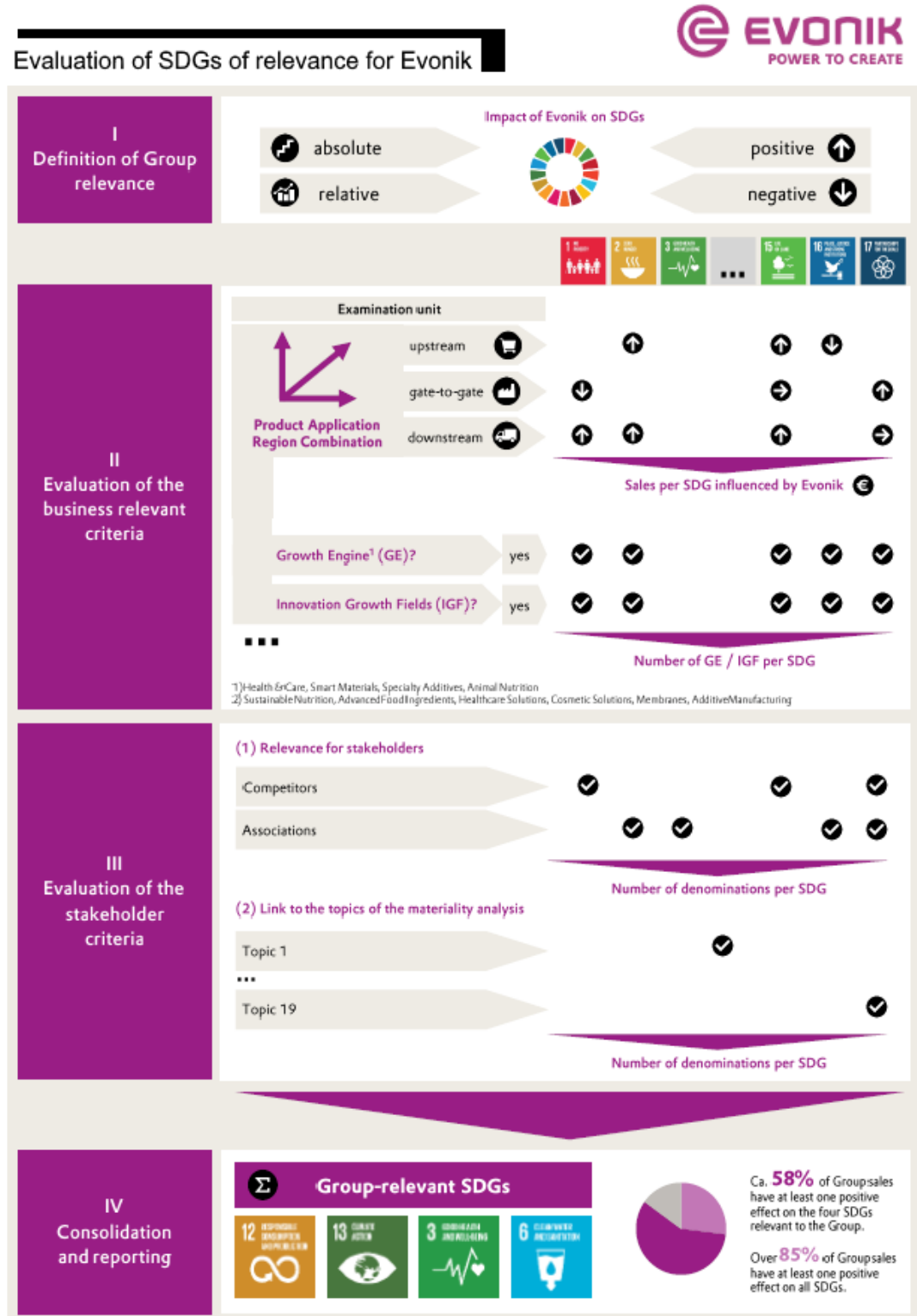


Figure 4: Visualization of Evonik's methodology to identify group relevant SDGs (Evonik, 2020)

According to the Head of Corporate Responsibility, "[y]ou cannot just simply choose one SDG that you like better than the other, but it is really the question of what is material to your specific business.". Concerning Evonik's strategic decision-making process, the company has to prioritize different SDGs (Head of Corporate Responsibility). Using its developed methodology, Evonik created a ranking of the most significant SDGs. These are now the four group-relevant SDGs (the SDGs relevant for the company). In the order of their ranking, these are SDGs 12, 13, 3, and 6 (see Figure 3).

Evonik is aware that they want clarity about the materiality of sustainability issues. This means that they take into account the relevance for their stakeholders and their business concerning sales, costs, and infection neutralization of assets as well as the possible effects of these. The participants' statements emphasized that they deal carefully with sustainability issues, make conscious decisions, and only consider the SDGs relevant for the company.

Synergies between SDGs

Until now, as highlighted by the participants of the case study, Evonik has so far not considered synergies between SDGs concerning their strategic decision-making processes. On the other hand, they have noticed that there can even be some conflicts or trade-offs between multiple SDGs. If there is, for example, "*SDG 1, fighting hunger in the world and you have an SDG like water consumption, that may be a conflict of interest between the goals, those targets.*" (Head of Corporate Responsibility). According to the interviewees, Evonik's focus is not on synergies between the SDGs, but on how the SDGs affect the company in terms of sales and tangible business effects. As stated by the Employee in the department of Corporate Responsibility, "[...] it can, of course, be that different product classes contribute to both one SDG and the other SDG.". In this case, it should ideally be a positive contribution in both cases, but these can still not be considered as synergies between different SDGs.

Furthermore, "[Evonik] already knows that there are many interdependencies or that one leads to the other. But there are no, no very specific considerations about it now [...]" (Consultant in Corporate Responsibility Relation). However, according to the Vice President of Sustainable Development Evonik Nutrition and Care, "*we look at synergies between different organizations*" rather than between SDGs. Even though there may be dependencies and synergies between the various SDGs, Evonik has not yet actively included these synergies in its strategic decision-making processes.



Difficulties towards implementing the SDGs

Evonik had to deal with several difficulties when integrating the SDGs into its strategic decision-making processes. First, the company struggled to balance the various SDGs. The respondents mentioned that the individual SDGs themselves are not problematic, but that the balance between them is particularly challenging, also regarding the trade-offs. Second, the company struggled to integrate the SDGs into its decision-making processes, as many SDGs, even at the target level, were not specific enough to be implemented. This was caused by the fact that, according to the respondents, the SDGs are more intended for policymakers and governments. It is, therefore, difficult to transfer some of the SDGs to the company level. This makes it challenging for companies to integrate the SDGs and requires companies to design their own implementation methods. Third, it was a constant struggle for Evonik to show the effects of its solutions on the SDGs at the consumer or primary level. This was because Evonik is at the top of the value chain and works more in business to business markets. As a result, Evonik, for example, does not always have an overview of the extent to which other actors in its supply chain are implementing sustainability. However, they want to change this in the future. Nevertheless, the implementation of the SDGs in the strategic decision-making process is still difficult, since they were not created based on the specific application by businesses.

Future Development

The future of Evonik's strategic decision-making processes will not only involve integrating the SDGs into their business processes. The company will increasingly discover that external stakeholders, investors, and capital markets respond quite positively to their actions. At the moment, the discussion about sustainable finance is also about the SDGs being the currency that will be known in all industries. According to the interviewees, there is a good constellation of SDG goals and SDG indicators. However, the SDGs still lack precise guidelines for companies to implement in their business processes. According to the Vice President of Sustainable Development Evonik Nutrition & Care, "[...] *what would need to happen is, SDGs would need to have more business-relevant indicators which then could be connected to the non-financial disclosure of businesses.*". It is therefore essential that "[...] *there will be a continuous review [of the SDGs]*" since it cannot be said that the company can focus on the same group-relevant SDGs at all times (Corporate Responsibility Employee). Evonik's goal for the next reporting is that they can quantify their contribution to the respective SDGs and, of course, in particular to their group-relevant SDGs.



DISCUSSION

Results

This research aimed to generate knowledge on how the SDGs, including their co-benefits and trade-offs, play a role in a company's strategic decision-making process. The SDGs should enable businesses to create and incorporate new technologies and strategies to tackle the world's most pressing sustainable development issues (United Nations, 2015). Nevertheless, the achievement of the SDGs depends fundamentally on the perception of the relations between the SDGs, both negative ("trade-offs") and positive ("co-benefits"), and how they are integrated into a company's strategic processes (Nilsson et al. 2018).

The SDGs as an orientation tool

The case study demonstrated that it is still difficult for companies to understand how the SDGs can be integrated into the strategic decision-making processes and how they can be set into relation to each other. However, the results of the interviews indicated similarities in the initial response to the integration of the SDGs in Evonik's business processes. Among other things, it was highlighted that the idea behind the SDGs, to align their business practices to tackling the world's most pressing challenges for sustainable development, is already being implemented in the company (cf. United Nations, 2015). Evonik is mainly concerned with sustainability and tries to integrate the SDGs into its business processes from the beginning. This also goes in line with Frantz's (2017) argument that today's society expects companies to be environmentally conscious and socially respectful and not just economical. Companies must act sustainably and integrate this into their strategic processes to be able to participate in the market actively. Managers need to recognize the various aspects of sustainability during their strategic decision-making process and incorporate them into their strategies at the company, business, and operational level (Bonn & Fisher, 2011). As it turned out, Evonik initially focused on all SDGs and tried to show their impact on the SDGs on the products and services they offer. A broader approach towards integrating the SDGs might be more specific to the sustainability context, in which the SDGs could act as a kind of orientation tool. Therefore, this research contributes to the literature on sustainability in strategic decision-making processes (cf. Harrison, 1996). The SDGs could be seen as part of an ongoing process of evaluating alternatives to achieving a goal, where expectations of a particular course of action cause a decision-maker to decide which SDG is most likely to achieve the respective goal. Therefore, strategic decision-making as a process, including the group-relevant SDGs, could focus on the measures that lead



to and support the strategy (cf. Chandler, 1962). The group-relevant SDGs could help companies set future goals, including how they affect the SDGs before making decisions or determine general priorities before the decision-making process begins.

Specifying group-relevant SDGs and developing measurable SDG criteria

Nevertheless, as the investigated case highlighted, the SDGs are very general and do not contain precise instructions on how they can be implemented by companies in their strategies. Therefore, it is difficult to specify what impact the company can have on each SDG and how the business decisions can help achieve the SDGs. In existing literature regarding the integration of sustainability in the strategic decision-making processes of a company, it is also argued that top managers often formulate and implement sustainability strategies without aligning them with organizational ones (Ahmed & Sundaram, 2012). It seems challenging to integrate sustainability into the strategic decision-making process (Vandaele & Decouttere, 2013). The results of this research are in line with this argument as it was also pointed out that Evonik had trouble integrating the SDGs. That is why the SDGs only play a secondary role in the strategic decision-making process. Therefore, as stated by Howard-Grenville et al. (2017), innovative management methods for companies in every sector are crucial to support the holistic integration of sustainability goals into strategic decision-making. Making the effects of sustainability measurable can be aligned with the literature on strategic decision-making. However, it is argued that this is difficult. The real problem for organizations is that the effects of environmental measures are not entirely clear and can offer both opportunities and challenges (Kleindorfer et al., 2009). Companies must, therefore, figure out how to balance competing priorities by assessing short- and long-term effects and possibly making decisions under uncertainty. The generated results show that Evonik began developing its own methodology to determine which SDGs are relevant to the company, including measurable criteria. It could certainly be an advantage for the company that they only filter out their group-relevant SDGs since they do not run the risk of ticking off the SDGs one by one like other companies (cf. Nilsson et al., 2016). Evonik may, therefore, only deal with the integration of the other SDGs superficially. In this way, an extra step in the strategic decision-making process may be to decide which SDGs fit the business most (cf. Jann & Wegrich, 2007). With their established methodology, Evonik can also evaluate the extent to which they have negative and positive influences on the respective SDGs and how they can relate this to their strategic decision-making processes.



Evaluating SDGs synergies and trade-offs

According to current theories, the achievement of the SDGs is mostly dependent on whether synergies can be used and compromises identified and addressed (Pradhan et al., 2017). However, it is also interesting that synergies between the SDGs currently do not play a significant role at Evonik and that the interviewees only specify conflicts between the SDGs. This could be related to Evonik's decision-making process, as they are currently focusing on determining the respective impact on the group-relevant SDGs rather than taking a closer account of the co-benefits between them. Furthermore, Evonik concentrates on how the SDGs can support the company in terms of turnover and business effects. The focus, in this case, might be more on selecting specific SDGs rather than on how different goals can be combined. Therefore, the study complements the literature on the SDGs by emphasizing that while there may be synergies between them, it is challenging for companies to use and integrate them into their strategic decision-making process actively (cf. Kleindorfer et al., 2009).

The results generated show that Evonik is focusing on finding synergies between organizations in implementing the SDGs in their strategic decision-making process, which is also highlighted in the previously elaborated literature (cf. Harrison, 1996). This could indicate that the company needs to act more broadly than to focus on the individual organization and its decision-making to find synergies between different SDGs. Current strategic decision-making literature argues that the focus of a company should be on an inside-out rather than an outside-in approach (Harrison, 1996). The company's idea may be that it wants to have an impact on their external environment and the SDGs, but that these in return can affect them or help them to implement the SDGs in their business strategies. This could result in a process that can not only help the company alone but also involve other actors and enable a continuous exchange between them.

Continuous evaluation of the SDGs

In addition, Evonik's strategic decision-making process to integrate the SDGs may be less linear, as suggested in the strategic decision-making literature (cf. Harrison, 1996). It is more of an ongoing assessment, as it became clear throughout the case study that no one-off decision about the SDGs can be made. This might be because Evonik is in the process of specifying which positive and negative contributions they make to the SDGs. It is also questionable whether Evonik will always adhere to its group-relevant SDGs, as the corporate structure and the economic situation could change continuously. The integration of the SDGs into strategic

decision-making is, therefore, not a linear process with only one goal, but rather a continuous evaluation that can be adapted at any time.

Recommendations

In the current discourse, it is still unclear how companies can effectively align the SDGs with their strategic decision-making processes. In order to gain a better understanding of how companies can integrate the SDGs into the strategic decision-making process, the following framework was created (see Figure 5). It is intended to be a guide for international companies that want to act more sustainably and implement the SDGs in their processes. The model derived from the concept by Harrison (1996) and was extended based on the results of the case study.

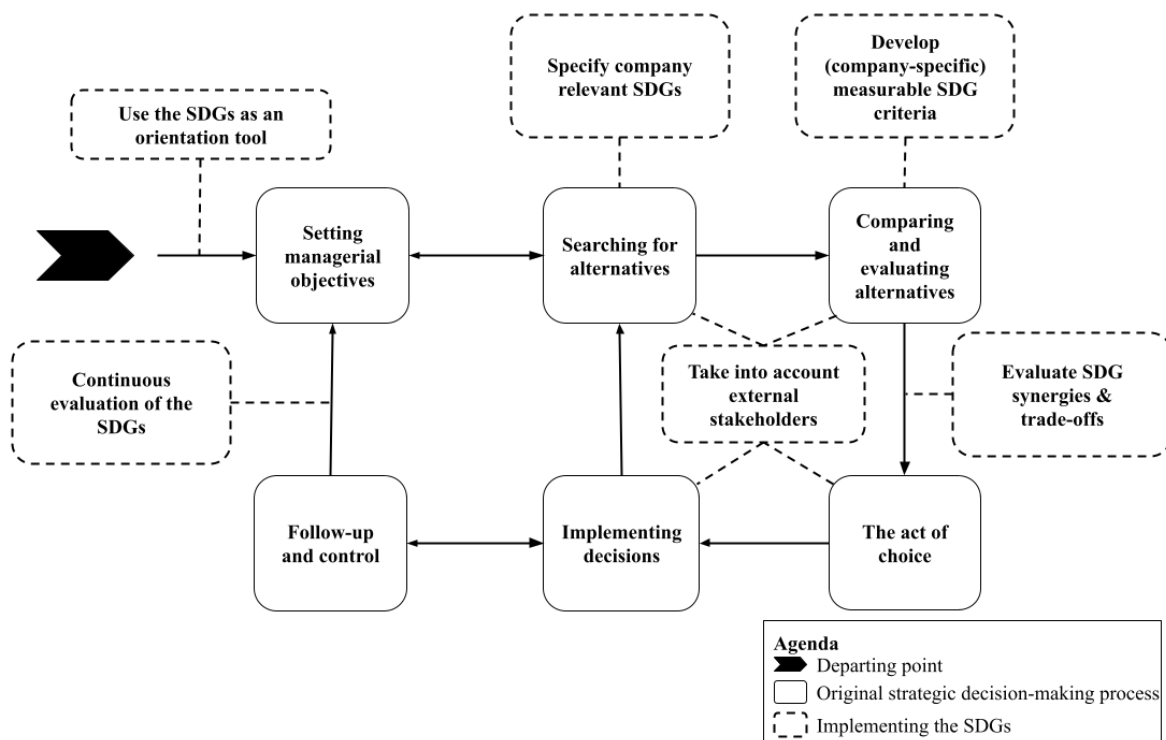


Figure 5: Visualization of the strategic decision-making process including the SDGs (Own illustration)

According to the developed model, in the first step of the decision-making process, where the SDGs are integrated, companies should familiarize themselves with the targets of the SDGs and use them as an orientation tool towards setting managerial objectives. This enables them to evaluate all SDGs aspects before focusing on specific objectives. Afterward, convincing alternatives and possible implementations for current strategic decision-making processes should be discussed, and group-relevant SDGs can be determined simultaneously. Specifying group-relevant SDGs of the company might make it easier for them to indicate negative and positive impacts they have on the respective SDG. External stakeholders should also be in-



cluded in this strategic decision-making process since they are also decisive for its implementation. In addition, external stakeholders can also influence the integration of the SDGs in relation to the decision and how it will later affect the company. Subsequently, a company can develop company-specific measurable SDG criteria to ensure the group-wide implementation of the SDGs and compare and evaluate arising alternatives. Before choosing which decision to implement, a company should evaluate the synergies and compromises between the group-relevant SDGs to ensure that it has considered possible outcomes, positive and negative. Nevertheless, these should be evaluated throughout the whole process. Once the decision has been made in the process, the implementation is followed up and controlled. Finally, with every decision implemented, the SDGs should also be re-evaluated whether the company could contribute to others or whether the goal has changed concerning the group-relevant SDGs. However, this step should be considered throughout the process. By integrating the SDGs into their strategic decision-making process, a company can align its business practices with the achievement of the SDGs and incorporate sustainability into its processes.

Limitations and Future Research

This research also faced some limitations that have to be taken into account and can be reconsidered and possibly developed in future research. The results presented are limited due to the specificity of the analysis. In terms of the research method, it must be acknowledged that possible results that stem from a small sample of one case cannot be generalized per se and therefore limits the proposal (Harry & Lipsky, 2014; Thompson, 2011). However, this is by design because theoretical samples are tailored to an in-depth and pragmatic analysis (Bryant, 2009). Based on the concept of Grounded Theory by Götzö (2014) and Clarke (2012), theory and practice can be linked by focusing on individual experiences and knowledge of the individual.

Further, within the company itself, it was only able to investigate four perspectives. Therefore, the answers could vary across further actors from different departments within an international company. The small number of interviews is partly due to the outbreak of COVID-19 since, in this case, possibly additional participants had to set other priorities. It also limited the ability to conduct the interviews face-to-face. Nevertheless, given the temporary circumstances, the selection of online interviews opened up new opportunities to bridge the geographical distance. However, this research aimed not to reach a high level of generalizability but to provide other scholars with an initial foundation of the chosen topic and provide informative value for practice (Johnson, 1997).



Future research could, therefore, examine how a company can benefit from the integration of the SDGs, for example, by maximizing profits or gaining a competitive advantage. It could also be examined how companies could work together to achieve the SDGs, how thus more transparency can be created along the entire value chain and to what extent the SDGs are implemented within all parties involved.

CONCLUSION

This qualitative research, in the form of a single case study, examined how the SDGs, including their co-benefits and trade-offs, play a role in a company's strategic decision-making process. After reviewing the available literature on the SDGs, their role in companies, and their integration into strategic decision-making, the analyzed case highlighted some surprising results.

The study emphasized that there are certain obstacles for companies to implement the SDGs in their strategies. A possible reason may be that the SDGs were not specifically designed for companies and do not contain any explicit business-related criteria for their implementation. Therefore, it is still difficult for enterprises to recognize synergies between the SDGs. By developing innovative methods and using them to integrate the SDGs into their decision-making processes, a company can contribute to the implementation of the SDGs throughout the business. Thus, the enterprise can better quantify co-benefits and trade-offs between the SDGs. In this case, Evonik emphasized the extent to which it can contribute to individual SDGs and work with its external environment towards integrating the SDGs into its strategic decision-making processes.

This research provides other companies with valuable insights for the integration of the SDGs into their strategic decision-making processes by addressing the most important challenges and possible solutions for the SDGs practical implementation.



REFERENCES

- Ahmed, M. D., & Sundaram, D. 2012. Sustainability modelling and reporting: From roadmap to implementation. *Decision Support Systems*, 53(3): 611–624.
- Arora, P., & Rovenpor, J. L. 2018. Sustainable Decision-Making: Moving Beyond People, Planets, and Profits. *Handbook of Engaged Sustainability*, 1-2: 113–138.
- Bell, E., Bryman, A., & Harley, B. 2019. *Business research methods*. Oxford: Oxford University Press.
- Blome, C., Foerstl, K., & Schleper, M. C. 2017. Antecedents of green supplier championing and greenwashing: An empirical study on leadership and ethical incentives. *Journal of Cleaner Production*, 152: 339–350.
- Bonn, I., & Fisher, J. 2011. Sustainability: the missing ingredient in strategy. *Journal of Business Strategy*, 32(1): 5–14.
- Bowen, K. J., Cradock-Henry, N. A., Koch, F., Patterson, J., Häyhä, T., Vogt, J. & Barbi, F.. 2017. "Implementing the 'Sustainable Development Goals': Towards Addressing Three Key Governance Challenges—Collective Action, Trade-Offs, and Accountability." *Current Opinion in Environmental Sustainability*. Elsevier B.V. doi:10.1016/j.cosust.2017.05.002
- Breidenstein, G. et. al. 2015: Ethnografie. *Die Praxis der Feldforschung*. 2. Edition. Konstanz. München.
- Bryant, Antony (2009). Grounded theory and pragmatism: The curious case of Anselm Strauss. *Forum: Qualitative Social Research*, 10(3).
- Business & Sustainable Development Commission. 2017. "Better Business Better World." *Better Business, Better World*, 119. http://report.businesscommission.org/uploads/Better-Biz-BetterWorld_170215_012417.pdf.
- Calabrese, A., Costa, R., Levialdi, N., & Menichini, T. 2019. Integrating sustainability into strategic decision-making: A fuzzy AHP method for the selection of relevant sustainability issues. *Technological Forecasting and Social Change*, 139: 155–168.
- Chandler, A. D. 1962. Strategy and Structure: Chapters in the History of Industrial Enterprise. *The Journal of Economic History*, 23(3): 348–349.



- Clarke, A. 2012. *Situationsanalyse: Grounded Theory nach dem Postmodern Turn*. Wiesbaden: VS Verlag für Sozialwissenschaften.
- Denzin, N. K. & Lincoln, Y. S., 2000. *Handbook of Qualitative Research*, Sage, Thousand Oaks.
- European Commission. 2001. "Green Paper: Promoting a European Framework for Corporate Social Responsibility." *Commission of the European Communities*, 1-34.
- Evonik Industries AG. 2020. *Leading Beyond Chemistry*. <https://corporate.evonik.com/en/company/>, May 11, 2020.
- Evonik Industries AG. 2020. Sustainability at Evonik. *We accept responsibility*. <https://corporate.evonik.com/en/responsibility/cr-at-evonik>, May 22, 2020.
- Evonik Industries AG. 2020. *The United Nations Sustainable Development Goals*. <https://corporate.evonik.com/en/responsibility/sustainable-development-goals>, May 22, 2020.
- Evonik Industries AG, 2020. *Sustainability Report 2019 - Leading Beyond Chemistry*. Corporate.evonik.com. https://corporate.evonik.com/Downloads/Corporate/BPK/Evonik_Sustainability_Report_2019.pdf, June 12, 2020.
- Frantz, D. 2017. The Business Case for the Sustainable Development Goals. Huffpost.com. <https://www.huffpost.com/entry/the-business-case-for-the-sustainable-development-goals>, February 27, 2020.
- Future of our planet hinges on action by today's youth – UN deputy chief | UN News. n.d. *United Nations*. United Nations. <https://news.un.org/en/story/2018/11/1026371>, March 11, 2020.
- Gephart, R. P. 2004. From the Editors: Qualitative Research and the Academy of Management Journal. *Academy of Management Journal*, 47(4): 454-462.
- Gioia, D. A., Corley, K. G., & Hamilton, A. L. 2012. Seeking Qualitative Rigor in Inductive Research. *Organizational Research Methods*, 16(1): 15–31.
- Götzö M.. 2014. Theoriebildung nach der Grounded Theory. In: *Methoden der Kulturanthropologie*. Bern.
- Gudmundsson, S. V. & Lechner, C. 2013. Cognitive Biases, Organization, and Entrepreneurial Firm Survival. *European Management Journal*, 31(3): 278–294.



- Harrison, E. F. 1996. A process perspective on strategic decision making. *Management Decision*, 34(1): 46–53.
- Harry, B. & Lipsky, M. 2014. Qualitative Research on Special Education Teacher Preparation. In M. McCray, T. Brownell, & B. Lignugaris/Kraft (Eds.), *Handbook of research on special education teacher preparation*, 445–460.
- Howard-Grenville, J., Davis, J., Dyllick, T., Joshi, A., Miller, C., et al. 2017. Sustainable Development for a Better World: Contributions of Leadership, Management and Organizations. *Academy of Management Discoveries*, 3(1): 107–110.
- Johnson, Joy L. 1997. Generalizability in Qualitative Research. Excavating the Discourse. In: Morse, Janice M. (ed.): *Completing a Qualitative Project*. Thousand Oaks, 191–209.
- Klauer, B., Manstetten, R., Petersen, T., & Schiller, J. 2013. The art of long-term thinking: A bridge between sustainability science and politics. *Ecological Economics*, 93: 79–84.
- Kleindorfer, P.R., Singhal, K. & Wassenhove, L.N.. 2009. "Sustainable Operations Management." *Production and Operations Management*, 14 (4). Wiley: 482–92. doi:10.1111/j.1937-5956.2005.tb00235.x.
- Kolk, A., Kourula, A., & Pisani, N. 2017. Multinational enterprises and the Sustainable Development Goals: What do we know and how to proceed? *Transnational Corporations*, 24(3): 9–32.
- Lapan, S. D., Quartaroli, M. T., & Riemer, F. J. 2012. *Qualitative research: An introduction to methods and designs*. San Francisco, Calif: Jossey-Bass.
- Mintzberg, H., Raisinghani, D. & Theoret, A. 1976. "The Structure of 'Unstructured' Decision Processes." *Administrative Science Quarterly*, 21 (2). JSTOR: 246.
- Nilsson, M., Griggs, D., & Visbeck, M. 2016. Policy: Map the interactions between Sustainable Development Goals. *Nature*, 534(7607): 320–322.
- Nilsson, M., Chisholm, E., Griggs, D., Howden-Chapman, P., Mccollum, D., et al. 2018. Mapping interactions between the sustainable development goals: lessons learned and ways forward. *Sustainability Science*, 13(6): 1489–1503.
- Newsletter For Future. n.d. *FridaysForFuture*. <https://fridaysforfuture.org/news>, March 11, 2020.



- Porter, M.E. & Kramer, M.R. 2006. Strategy and society: the link between competitive advantage and corporate social responsibility. *Harvard Business Review*. 84 (12): 78–92.
- Pradhan, P., Costa, L., Rybski, D., Lucht, W., & Kropp, J.P. 2017. "A Systematic Study of Sustainable Development Goal (SDG) Interactions." *Earth's Future*, 5 (11). John Wiley and Sons Inc: 1169–79.
- Sala, S., Ciuffo, B., & Nijkamp, P. 2015. "A Systemic Framework for Sustainability Assessment." *Ecological Economics*, 119 (November). Elsevier B.V.: 314–25.
- Sanson A.V. & Burke S.E.L. 2020. Climate Change and Children: An Issue of Intergenerational Justice. In: Balvin N., Christie D. (eds) Children and Peace. *Peace Psychology Book Series*. Springer, Cham
- Schaltegger, S., Beckmann, M. & Hockerts, K. 2018. Collaborative Entrepreneurship for Sustainability. Creating solutions in light of the UN sustainable development goals. *International Journal Entrepreneurial Venturing*, 10 (2): 131–152.
- Secretary-General's remarks at "Making 2015 a Historic Year" dinner [as prepared for delivery] Secretary-General. n.d. *United Nations*. United Nations. <https://www.un.org/sg/en/content/sg/statement/2015-01-23/secretary-generals-remarks-making-2015-historic-year-dinner-prepared>, March 11, 2020.
- Scheyvens, R., Banks, G., & Hughes, E. 2016. The Private Sector and the SDGs: The Need to Move Beyond 'Business as Usual.' *Sustainable Development*, 24(6): 371–382.
- Strauss, A., & Corbin, J. 1999. Basics of Qualitative Research: Grounded Theory Procedures and Techniques. *Contemporary Sociology*, 21(1): 138.
- Thomson, S. B. 2011. Qualitative research: Validity. *JOAAG*, 6(1): 77-82
- United Nations. 2015. "Transforming Our World: The 2030 Agenda for Sustainable Development. United Nations Sustainable Knowledge Platform." *Sustainable Development Goals*: 1–40a.
- United Nations*. 2020. About the Sustainable Development Goals - United Nations Sustainable Development. <https://www.un.org/sustainabledevelopment/sustainable-development-goals>, February 12, 2020.
- United Nations*. About the UN Global Compact | UN Global Compact; <https://www.unglobalcompact.org/about>, February 26, 2020.



- Vandaele, N., & Decouttere, C. 2011. Sustainable R&D Portfolio Assessment. *SSRN Electronic Journal*. <http://doi.org/10.2139/ssrn.1974873>
- Verboven, H., & Vanherck, L. 2016. Sustainability management of SMEs and the UN Sustainable Development Goals. *Uwf UmweltWirtschaftsForum*, 24(2-3): 165–178.
- Wegrich, K., & Jann, W. 2007. Theories of the Policy Cycle. *Handbook of Public Policy Analysis Public Administration and Public Policy*, 43–62.
- Weinberger, K., Rankine, H., Amanuma, N., Surendra, L., & Van Hull, H.V. 2015. "Integrating the Three Dimensions of Sustainable Development: A Framework and Tools." *United Nations Publication*. www.unescap.org.
- World Commission on Environment and Development (WCED). 1987. *Our common future*. Oxford: Oxford University Press.
- Wu, Z., & Pagell, M. 2010. Balancing priorities: Decision-making in sustainable supply chain management. *Journal of Operations Management*, 29(6): 577–590.

APPENDIX A: Overview of the SDGs



Figure 1: Sustainable Development Goals (United Nations, 2015)

APPENDIX B: Consent Form

CONSENT FORM

Your Consent and Understanding to Participate in a Case Study

Dear _____:

You are invited to take part in an interview as part of a master thesis, delivered within the master program Sustainable Entrepreneurship at Campus Fryslân, University of Groningen.

The interview has the purpose to conduct research aiming at identifying how the company deals with the co-benefits as well as trade-offs between the SDGs in their strategic decision-making process.

By consenting to this interview, you acknowledge and agree to the following:

- For the purpose of conducting research, the interview will be recorded, transcribed and analyzed. Recording and transcription will not be used for any other purpose besides conducting the research. The recording will be deleted after transcribing the text.
- The transcript of this interview will be submitted to you for review and approval prior to its submission.
- The transcribed data will be anonymously stored on a secure drive.



- The interviewer can use your interview as input to investigate how the SDGs can play a role in a company's strategic decision-making processes.
- The results of the research will be used in a Master Thesis in the master Sustainable Entrepreneurship of Campus Fryslân and will be presented on the Campus Fryslân Circular Minds Conference.
- The participant has the opportunity to withdraw from the research at any time.
- The names of the participants will not be published. The participants will be identified with their function.

This interview is supported by the student's professor (University of Groningen, Campus Fryslân).

Interviewee Name: _____

Business Name: _____

E-Mail Address: _____

Signature: _____

Date: _____

Student Name: _____

Signature: _____

Date: _____



APPENDIX C: Interview Guide

Introduction

1. What is your position in the company?
2. How would you describe what you do exactly?
 - a. What is your role in the strategic decision-making of the company?
 - b. Can you describe a strategic decision at Evonik in which you recently participated?

About the SDGs and the company

3. What was Evonik's initial response to the SDGs?
4. How does a company go about addressing such a large number of goals and targets?
Do you have to prioritize, or should you engage with all of them?
5. What is the role of the SDGs in Evonik's strategic decision-making process?
6. What is the role of the SDGs in Evonik's goal setting?
 - a. Are some SDGs prioritized over others in Evonik's goal setting?
 - b. Does Evonik look for synergies between the SDGs in its goal setting?
7. When making a strategic decision, do the SDGs play a role when choosing between different alternatives? Are sometimes alternatives chosen that prioritize particular SDG goals over others?
8. Can you describe a strategic decision in which the SDGs played an important role?
9. What do you think about the criticism that they can be difficult for businesses to navigate and translate?
10. How has Evonik taken practical steps in support of the SDGs?
11. Are there any SDGs that are particularly promising for the business? Which ones?
12. And do you recognize any of the SDGs as particularly problematic?

Outlook

13. How do you think the SDGs will play a role in future strategic decisions at Evonik?
14. Do you think some SDGs will play a more important role than others in future strategic decisions and when yes which ones?
15. Are there any unspoken thoughts? Is there anything you would like to add?

Thank you for your time.

APPENDIX D: Coding overview

Sustainability Report & Homepage Evonik	
Quotes	
About the Company	
General Information	"Evonik is one of the world's leading specialty chemicals companies."
Sustainability areas of action	Strategy & growth, Governance & compliance, Value chain & products, Environment, Employees, Safety
SDGs and Evonik	
General introduction	"In 2017, we started to document the positive contributions made by our products to achieving the SDGs and publish them on our website."
Assessment of the SDGs	"In fall 2015, the General Assembly of the United Nations adopted 17 Sustainable Development Goals (SDGs), which it aims to achieve by 2030 through a collaborative partnership between governments, industry, and society. For a number of years Evonik is intensely dealing with the SDGs. In 2017, we therefore started to systematically examine and present the contribution made by our products to achieving the SDGs. In the course of this, it became clear that many of our products with distinct sustainability benefits are also clear growth drivers. In 2018 we have developed our own methodology based on qualitative and quantitative criteria supporting us to identify the most relevant SDGs for the Group."
	"[...] in 2018 we developed our own methodology to identify the SDGs that are especially relevant for Evonik."
	"In this context, we paid special attention to the sub-targets of the 17 SDGs. A SDG is relevant for us if there is a significant positive or negative influence on or by Evonik. For the businesses defined at the Product-Application-Region-Combination (PARC) level, we have determined the positive and negative impacts along the value chain. In a multi-step process, the relevant PARCs are weighted on the basis of sales and corporate strategy (inclusion in our growth engines and innovation growth fields). We also take account of the views of our external stakeholders and the results of our materiality analysis."
- relevant for Evonik	"An SDG is relevant for us if there is a significant positive or negative influence on or by Evonik."
- business relevant criteria	"We have developed a multi-step weighting process to determine Evonik's influence. Our entire portfolio has been divided into product-application-region combinations (PARCs). We have analyzed the value chains for these PARCs (upstream, gate-to-gate, downstream) in relation to the SDGs and their sub-targets to see whether there is any positive, neutral or negative influence on or by Evonik. PARCs that influence the SDGs along the value chain and are part of one of Evonik's growth engines or innovation growth fields were also taken into account for each of the SDGs."
- criteria of particular relevance for external stakeholders	"Other criteria used in this process were the significance of the SDGs for key Evonik stakeholders and the results of our materiality analysis."
- consolidation and reporting	"SDG 12 Responsible consumption and production, SDG 13 Climate action, SDG 3 Good health and well-being, SDG 6 Clean water and sanitation"
	"More than 80 percent of our sales already make a positive contribution to achieving the SDGs and around 60 percent have a positive effect on the four SDGs identified as being particularly relevant for Evonik."
Strategic Decision-Making and the SDGs	
Relevance of the SDGs	"We are always aware that our business activities can have critical impacts in some cases."

Interview 1	
Quotes	
About the position in the company	
Position of the interviewee	"I am heading Evonik's Corporate Responsibility Department for five years now"
Role in the strategic decision-making process	"[...] it is our turn to just access the benefits, ähm, the effects of our products and solutions in the market."
Fields of action regarding sustainability in the company	"And we do this in four different fields of action. One and the most prominent is just making the effects of sustainability measurable. And second is to make those effects visible then, not in terms of communication but more in terms of taking part in relevant ratings and rankings. Our third field of action is business integration. So, not just knowing about sustainability facts but integrating those, ähm, methodologies into business and business steering. And last but not least, the fourth action field is networking, so, sharing knowledge and best practices internally as well as with other companies and in-dustries."
SDGs and Evonik	
Introduction of the SDGs	"Back then when the Sustainable Development Goals came out it was hard to tell in how far they would differ from the Millennium Goals that we had so far."
	"And soon it was a quite positive surprise when we saw how much more effects momentum these SDGs gained over the years. And then trying to, you know, play around with the SDGs ourselves and seeing how it is related to our business. We found it very hands-on and very practical and very pragmatic."
	"[...] but it's part of the truth that the SDGs influence our business as well, that is one thing."
	"And first, you look at how this evolved, you will see that in the first step when we first dealt with the SDGs, we just tried to explain our impact on each and every one of those 17 SDGs in the first step. And then in the second step were this materiality analysis and then found the four SDGs that are the most important for our business in terms of turnover and strategy and growth ambitions and so on."
SDGs in strategic decision-making	
Integration of the SDGs	"The first thing that we as a company have to do is just to translate this into business action, which is a bit different from the government affairs there."
	"[...] integrate this into your steering pro-cesses, into your strategy process."
Priorities of the SDGs	"[...] you must have priorities within the SDGs, otherwise they are definitely useless. So, I mean the SDGs standing for themselves are quite good, but they are addressing countries and states, government, not companies."
Synergies between the SDGs	"I guess there are not really synergies to the SDGs, in fact quite frankly there are even some conflicts between several SDGs. And the mothers and fathers of the SDGs were quite aware of this fact."
	"For example, if you take SDG 1, fighting hunger in the world and you have an SDG like water con-sumption, that may be a conflict of interest between the goals, those targets."
	"So, it is not so much about the synergies, but it is about the question, how do several SDGs relate to your business in terms of turnover and concrete business effects. That is why you cannot just simply choose one SDG that you like better than the other, but it is really the question of what is material to your specific business. And that's not something to just voluntarily choose form, but it is something that you can read from your sales numbers and process routines."
Choosing between different alternatives	"It is not just that we do a strategic decision by assessing the SDGs and then boiling down, trigger down to a certain decision, but it is more that, within the single categories, that we use in our strategy process the SDGs are one fixed factor. So, for all the portfolio assessment that we do, we make sure that the SDGs are integrated into this process."



	"I mean it is one thing is that it is not a one-way street it's not just us as a company having effects on the SDGs, but it's a part of the truth that the SDGs influence our business as well, that is one thing. And the second is that we have to take into account that there are positive and negative effects. So, it is not that easy and needs a closer assessment of these points. And being really true to yourself and not just claiming to be, you know, a savior for some aspects and hiding that you have maybe negative aspects in other categories."
Assessment of the SDGs	"That is why you cannot just simply choose one SDG that you like better than the other, but it is really the question of what is material to your specific business. And that's not something to just voluntarily choose form, but it is something that you can read from your sales numbers and process routines." "[...] whatever solution or product we're coming up with, we are going through an as-sessment stage and at the end claiming this product [...] is class A, B, C or D. Depending on its sustainability ranking. And doing so the SDGs are one major factor. So, where we just see where are positive and negative effects on certain SDGs along the value chain not just within our own processes."
	"[...] there is a framework for that that we developed together with other major chemical companies on the platform of WBCSD, the World Business Council Sustainable Development. That framework is called PSA, Portfolio Sustainability Assessment. The idea behind this is that you classify your whole portfolio in a number of product classes or as we call them product application, region combinations. So, you look at a certain product, a specific application, a certain region. And then you have a, you know, single categories spanning from regulatory requirements, customer needs average compared to benefits compared to average products in the markets, SDGs benefits or internal standards, things like that and yeah each and every of those eighth single categories then is analyzed separately. And in the end, you get to the classification of, you know, A products to B products at least, classifying the sustainability performance of what we do."
	"That's a standardized part of our strategic decision-making. Because on that, on the basis of that methodology we can now say that about 30% of our portfolio products are those A products with a proven sustainability benefit that is above average in the market."
Difficulties	"[...] it is always a matter of really the balance that you get to and it's not that one SDG is problematic or more change-driven in itself."
Further Outlook	
Role of the SDGs in the future of the company	"[...] because I mean it's not just the point that we integrate that in our processes, but what we will see more and more is that the outside world and investors and the capital markets try to react to this quite positively. And the whole discussion that we now have around sustain-able finance goes to this direction that the SDGs are the currency that we have in all industries. And portfolio managers investors will start to have a closer look at companies' contributions to the SDGs." "As long as we stay within the business we are in today, ahm, then I guess over the next foreseeable future our focus and our priorities in terms of SDGs will remain more or less the same." "[...] we would like to see a conversion of different methodologies of just measuring the sustainability impacts of companies to make this com-parable amongst markets and industries. And I guess the SDGs can be quite helpful to pick up and so I guess the more companies and the more parties even/or especially on the part of the capital markets, ahm, join the SDGs train the better it is to us."
Achievability of the SDGs until 2030	"I mean it's, the first I guess yes I think it is possible, that is one thing. And I guess it's good to regard them as feasible otherwise you would lose faith which is a bad thing. But I mean if you have a closer look it's not just the 17 goals but it is 169 sub-targets and I mean in a realistic way I am not sure if we will really, you know, achieve all of those 169 goals, but the more important thing is that with the SDGs the whole development is heading towards the right direction. And I guess that most of the goals are achievable and will be achieved in 2030 yes."

Interview 2	
	Quotes
About the position in the company	
Position of the interviewee	"[...] december 2018 I switched to corporate responsibility. So I'm a good year now in the area of relations." "[...] so we call ourselves corporate responsibility relations, um, that means one main topic is clearly the preparation of the sustainability report, where I am actively involved or responsible, especially for the environmental, safety issues and also marginally social engagement."
Role in the strategic decision-making of the company	"So we are from the function or the division of the area, we are [...] divided so that we have the group or the strategy department, corporate responsibility strategy and the area of relations. And as the names already say, um, let me say, the development or the analysis on the basis of which one may then make determined strategic decisions again, um, is more in the neighboring department, but we are of course already working hand in hand as an area Hand. But I would not say now, especially my person, that in the past year where I was there I made some strategic decision, strategically relevant in the sense of corporate for the group."
SDGs and Evonik	
Role and relevance of the SDGs	"In this respect, this is clearly supported by the group and, um, you can absolutely find it in the group-relevant SDGs. We developed it according to a certain methodology or determined the group-relevant ones, which we did not come up with, but ultimately adhered to the, um, PSA method from the World Business Council, i.e. from the WBCSD the portfolio Sustainability Assessment. And derived from this, we ultimately made a sustainability analysis, where SDGs are also queried or the contribution, positive or negative contribution to the SDGs is also queried." "So basically we looked at the 17 SDGs, we were able to determine four, we were able to determine four relevant ones and on them, that is clearly our priority."
SDGs in strategic decision-making	
Synergies between the SDGs	"To be honest, I don't know at the moment that we are taking this into account." "So I think it can of course be that different product classes have a contribution to both one SDG and the other SDG. Ideally, a positive contribution in both cases, um, but those are still not synergies that can be drawn from it. So at the moment I would negate that we are at least not completely on the screen."
Example including the SDGs	"[...] well if you now, so we have SDGs 3, 6, 12 and 13, uhm as group-relevant with 13 also climate protection. Um, and of course our new climate strategy is clearly paying off. So, as I said, saving CO2 emissions, climate neutral by 2050, so we are clearly committed to this, precisely to the Paris climate agreement." "And in this respect precisely this 2050 that we also notify there. Um, exactly, as I said, we want to reduce Scope 1, Scope 2 emissions by 50% by 2025. Also the Scope 3 emissions, i.e. the emissions of the upstream value chain, um, so our primary one is our raw material backpack, so to speak, that we carry around with us. We also want to reduce emissions by 15% by 2025, um, and yes, in that respect, I would say that the SDGs certainly played a role."
Critique regarding the implementation of the SDGs	"So I wouldn't necessarily say that the companies, yes, that a company can navigate the SDGs, but let's say the SDGs are important to the economy, for the companies to set a framework. And, uh, a framework that you can sort of orientate yourself as a company. And, um, that's what I think is extremely important in order to simply, um, have the direction, the horizon where to go." "And I think it takes a little time, I think you have to, we still learn a lot from year to year or continuously. And, um, I think that's a continuous development process that you go through, so that's certainly not something that you can implement from now on just like that, but that's a very clear process."
Difficulties	"Yes, um, overall I would think everything that is very far in the upstream value chain. So if it really is, let's say palm oil. Where does our palm oil come from what we might use? Um, to really understand which plantation, um, the palm oil comes from, which ultimately ends up in our product is extremely difficult. And also the topic I say, compliance with human rights. Of course we have our social policies and everything and we also have a very detailed, very precise auditing process for our suppliers. But this in turn only affects our direct suppliers, with whom we have direct contact, but which happens maybe five levels or more in advance and, so to speak, eludes our access a bit, so it becomes difficult, it is simply difficult to be transparent to get in part or to somehow get on data at all. And I think that's easy, yes that's still a problem right now, um, really understanding what is happening somewhere in the beginning of the supply chain."
Further Outlook	
Role of the SDGs in the future	"[...] how our products, so to speak, pay into the SDGs, um, I would say there will be a continuous review. We don't have the focus right now, let's say that we now say we want to be at six or eight SDGs somehow in two years or so. Um, but in principle it is of course the case that all SDGs are important to us and we, as it were, named the top four again. Of course, you also have to see that it doesn't get easier the bigger you draw the circle of relevant SDGs."
Reaching the SDGs until 2030	"[...] yes I believe that we then so overall I believe that we are not there yet. So that's all, we're on the right track, yes, we have the topic on the screen, we have integrated it into our sustainability analysis, that's all, um, it's all good for now, I say now. But I don't think you should let it go and you have to push the topic further. So I don't think you can be careless and say ok we now have the four relevant ones and now things are going on somehow, but you have to question yourself again and again and, um, probably also in the group as a whole, because they also simply provide more transparency." "So I think overall or after what I have also noticed, I also believe that the nations are ultimately obliged to take care of it, um, we are still at the beginning, I think. I think that's a very ambitious goal and, um, I think the economy as a whole needs to step on the gas to do that. I'm afraid that it may not work completely."



Interview 3	
Quotes	
About the position in the company	
Position	"I am Vice President of Sustainable Development Evonik Nutrition and Care."
Role in the strategic decision-making process	"My job is to, ähm, ensure that sustainability-driven risks and opportunities are considered in the strategic decision making of nutrition and care businesses. And in order to do this, I work for the analysis of our present and future business portfolio. And I also connect to stakeholders outside Evonik to understand what sustainability aspects will be important in the future."
	"[...] strategic decision-making is, comes down to where do you invest capital or as a chemical company this is often an investment into fixed assets so manufacturing sites, expansion of capacity, capacity for new products. It's the capital investment into acquisitions and is the assignment of R&D budgets, through specific innovation topics."
SDGs and Evonik	
Integration of the SDGs	"Positive, but I believe what is helpful for Evonik is to have a common reference on what sustainability means."
	"[...] we arrived at [the relevant] SDGs by analyzing all of Evonik's businesses which is very diverse and condensed to some [...]."
SDGs in strategic decision-making	
Role of the SDGs	"I think the SDGs directly don't have a large role, it is more the sustainability topics, where we believe we can make a difference. And they, of course, relate to the SDGs."
Priorities of the SDGs	"[...] we do prioritize. We are very conscious that as Evonik we want to have clarity on the materiality of sustainability topics. If I say materiality, I mean relevance for our stakeholders, relevance for our business in terms of affecting sales, costs and infecting neutralization of assets etc., reputation and the third dimension is can we make an impact. So is our business impact relative to the problem the world has or to the solution it needs, large enough to move the needle. And this means we make a conscious selection, we are on sustainability topics, we drive forward, and this also means we have the ähm, we translate them only to some of the SDGs, not to all of them."
Synergies between the SDGs	"No. We look at synergies between different organizations [...]."
Trade-offs between the SDGs	"Usually, we have to make choices about trade-offs. But these trade-offs are not made on the SDG level, they are made on the specific topic level. And usually, these trade-off decisions are made on a level of detail which is not addressed in the SDGs."
- specific example	"So, I'll give you one specific example. When we talk about what sustainable agriculture means. Yeah, I think in SDGs 2 there is a target about sustainable agriculture and sustainable food production. So, we have an animal nutrition business, this means we make iterative and solutions for life stocks. And we are in the mids of the discussion how much meat you should eat, how should animals well be raised, then there is a conflict of interest between animal welfare and resource efficiency. So, how much animal products do you get per feed, because feed consumption drives the utilization of valuable land, water etc. for these animals-based products. So, at these levels, we managed trade-offs and we had to make decisions. It's at a much more granular level than on the SDG level."
	"[...] we mention them wherever we can. We try to show our impact on the ones that we have identified as relevant for Evonik."
Difficulties	"Even though many SDGs especially, also on the target level are not very specific for companies to steer their businesses. So many of the SDGs are more formulated for government and policymakers. And the business aspect is not always easy to transcribe for some SDGs."
	"Even though I must say we struggle with this because we are in a B2B company. So, we make additives for people who make something, they again make something and that ends up at the consumer side. Yeah. So, we are fairly high up in the value chain. So, for us it is a continuous struggle to show the impact of our solutions, on the consumer level, on the consumption level or on the primary, let's say on the agriculture, natural resource level yeah."
	"Evonik as a chemical company we are energy intensive so we have a certain footprint, but usually our products do a lot of good in specific applications and we need to quantify these applications, these benefits or if they do negative things, we need to understand that as well. And these acquire from us a high effort to understand impacts within specific value chains. And we will have to do it on the agriculture side, we would have to do that in the building side, ähm, yeah if we make additives for adhesives which go into construction, ähm, and in construction, we will have an impact on the energy efficiency of housing. So that is a long distance to walk to quantify these impacts. And I think the understanding in quantifying them, we then also have to do this work, and we have to say, ok where is the world today, where does it need to be and how can we contribute to this with our solutions."
	"I think the business world is much more complex than the SDGs could consider. So, therefore, I feel confident with the ones we have identified, and I don't think we need any more to focus on. I would, ähm, and the situation would be very different if you would talk to a company that is maybe in a specific industry segment. A cosmetic company or a company on a, a food company. They have, ähm, a much clearer focus than a chemical company, having so many different industry segments."
Further Outlook	
Role of the SDGs in future strategic decisions	"I think we will have a refinement discussion. So, people will realize that we will have not achieved our 2030 ambitions for the SDGs. And then the question is what does policy do about it? What does that mean in terms of regulatory changes and also what do investors and businesses think about it? And what does that again mean for Evonik?"
	"[...] presently there is a lot of work of businesses to understand how they can reduce carbon footprints of products and solutions across the entire supply chain because all the businesses control only a little piece of the 130 ultimate carbon footprint and we all need to work together to reduce that."
Future development of the SDGs	"[...] I think there is a good constellation of SDG targets and of SDGs indicators. And if you look at the indicator list, very little of them are really suitable for businesses. So, what would happen for, what would need to happen is, SDGs would need to have more business-relevant indicators. So, what would happen for, what would need to happen is, SDGs would need to have more business-relevant indicators which then could be connected to the non-financial disclosure of businesses."
	"And that link needs to be established and it, so far it is not established. That leaves a lot of room for interpretation on how to translate the SDGs to the business and we have the SDGs, they rest in our portfolio evaluation, but how to really quantify that, that is still work in progress. And that has to do with the limited relevance of the so far accepted indicators for businesses."

Interview 4	
	Quotes
About the position in the company	
Position of the interviewee	"[...] I am a consultant in the area of corporate responsibility relations and this is, so to speak, the department here in the area that deals with sustainability reporting, i.e. internal and external presentation and the communication of sustainability issues."
Fields of action regarding sustainability in the company	"Environmental aspects, employee aspects and rights, safety standards, GRI, ratings and rankings, socially responsible investments, networks"
	"As long as you still have a separate sustainability strategy in a company, you haven't actually got where you should be."
SDGs and Evonik	
Introduction of the SDGs	"The SDGs are the follow-up to the Millennium Goals in 2016, or at the end of 2015. I'm not exactly sure, they were recognized by the United Nations and many other countries, not only to have the issue of poverty on the screen worldwide, but to really enable better fair development worldwide, which also treats nature somewhere sustainably and does not function too exhaustively. These should be such guidelines that should pave the way to better participation in prosperity and economic development for the whole world."
	"And we also developed some nice images, such as an SDG poster, where we had assigned products to certain SDGs, but said yes, of course it can't be that somehow. And then we developed it further next year. Of course we can not, it was already clear to us relatively quickly, just pick out the good aspects, but we have to say people, honestly, we are a very energy-intensive company. We are a very large emitter of emissions, and I am also a large consumer of water."
	"Indeed, so we also have the experience that many colleagues who have nothing to do with sustainability at all, but who have seen it before, who say that they think that's great, that's right and let's go in that direction let's think so. That is a question from Mindset."
	"Yes, they are goals that are actually aimed at states, but also at each of us. And, of course, especially for companies that have the power, so to speak, to have the power to help states achieve these goals. Because a state alone cannot judge it, you have to say very clearly. So Ban Ki Moon made it very clear that companies have a duty. And overall I think, if I could perhaps say that in summary, I think that overall the mood regarding the SDGs is very positive and very affirmative in the workforce."
SDGs in strategic decision-making	
Integration of the SDGs	"Of course, we not only stayed at the level of the 17 goals, but we also went much deeper and looked at the 169 sub-goals. In a very first approach, we looked at what products do we have? What contributes to what?"
	"[We] also included the SDGs in our sustainability report, our fields of action, which represent the essence of the respective topics from the materiality analysis. And these fields of action are the headings of our chapters in the sustainability report."
	"Indeed, so we also have the experience that many colleagues who have nothing to do with sustainability at all, but who have seen it before, who say that they think that's great, that's right and let's go in that direction let's think so. That is a question from Mindset."
Priorities of the SDGs	"[...] a ranking of the most relevant then emerged and these are now our four group-relevant SDGs, and in the order of their ranking they have become the SDGs 12, 13, 3 and 6."
Synergies between the SDGs	"That is difficult now, we already know that there are many interdependencies or that one leads to the other. But there are no, no very specific considerations about it now, as far as I know."
Assessment of the SDGs	"That was the typical first attempt to map things to these goals, which you already have in the company."
	"We have developed a methodology. We have done that again internally with us. We looked at the sales from the sustainability analysis for each product and then tried to split these sales into positive and negative influences on the respective SDGs."
	"And we have linked this with our strategic growth cores, the fields of innovation growth, and we have linked this with statements from our stakeholder dialogues, i.e. things that, as it were, have also been incorporated into our materiality analysis as findings."
	"They are integrated into this PSA, as an additional criterion for what I scan, we have a positive or a negative contribution."
	"If we have the results of the sustainability analysis, we can filter for each criterion individually. Then we can say that we contribute in terms of sales and that is a counter-calculation of negative and positive. We contribute so much to SDG 12, or we contribute so much to SDG 6. That is our goal for the next reporting."
Difficulties	"That is a question from Mindset. The other one says that's total nonsense, we don't need that. However, that would be the least I would think. And the colleagues from the operational business often have these things on their screens, so to speak, but many of them, in turn, don't know what to do with them because, of course, they say yes, but those are goals that address and say to international communities push it a bit away from you, so according to the motto yes, but what should we do there? It's politics, it doesn't affect me at all."
Further Outlook	
Role of the SDGs in the future of the company	"That is our goal for the next reporting. That we can really quantify what our contribution to the respective SDGs and, of course, in particular to our four group-relevant SDGs is."
	"[...] many companies, i.e. the colleagues with whom we exchange ideas, are all concerned about how to develop this further? How do you get a real grip on these things? At the end of the day, one would also have to say that we want to make at least as much and as much sales in this and the field, and so much growth. And that is exactly the transition that you actually have to manage, that you can go into traditional good business in these good businesses and invest differently, and of course start with research and development and of course start innovating and aligning your thinking differently."
	"But I don't think any company or market participants will in the long run avoid following these strategic guidelines, which I believe are the SDGs, in a way."
	"So, to be honest, the SDGs are a long, long journey."
Achievability of the SDGs until 2030	"So I think it will be very difficult because the pace is too slow, so I would always compare it to climate change. The SDGs and climate change are super important issues, somehow everyone has on their screen. But the companies are, and maybe we are personally each of us, we are too hesitant, we are too slow. I think it would take a different pace, a different dynamic to actually achieve the goals in this short period of time."
	"The mindset is probably the most important thing for all of these topics."
General Outlook	"It's all related, it is all related. Climate risks are like BlackRock and Larry Fink or Bloomberg, who wrote a letter to the world's CEOs, that climate risks are always investment risks. This will affect everyone and every company."