

DOCTORAL THESIS



INTERNATIONAL DOCTORAL SCHOOL

Doctoral Programme in Social Sciences

Profitability and Sustainability – How to achieve the United Nations' Sustainable Development Goals (SDG) from an economic perspective by 2030

Author:

Tugce Uysal

Supervisors:

Prof. Dr. Dr. habil. Eric Frère

Prof. Dr. Ann-Katrin Voit

Herten, September 2025

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THESIS SUPERVISORS' AUTHORISATION FOR THESIS SUBMISSION

Prof. Dr. Dr. habil. Eric Frère and Prof. Dr. Ann-Katrin Voit, as Supervisors of the Doctoral Thesis 'Profitability and Sustainability – How to achieve the United Nations' Sustainable Development Goals (SDG) from an economic perspective by 2030' by Ms Tugce Uysal in the Doctorate Programme in Social Sciences, **authorise its submission**, given that it meets the required conditions for its defence.

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A handwritten signature in blue ink, consisting of a stylized 'E' followed by a flourish.

Prof. Dr. Dr. habil. Eric Frère

Prof. Dr. Ann-Katrin Voit



ABSTRACT

This dissertation investigates the strategic integration of the United Nations' Sustainable Development Goals (SDG) within German DAX-listed companies, focusing on the interplay between profitability and sustainability. Motivated by the urgent global challenge of climate change and the need for decarbonization, the study explores how businesses can contribute meaningfully to SDG 13 (Climate Action), SDG 8 (Decent Work and Economic Growth), and SDG 5 (Gender Equality) while maintaining economic viability. Employing a mixed-methods approach, the research combines quantitative corpus analysis of sustainability reports from ten DAX companies (2021–2023) with qualitative insights from semi-structured expert interviews. The corpus analysis reveals significant variability in SDG mentions, suggesting that while some companies use the SDG framework substantively, others treat it as a symbolic communication tool. The qualitative interviews further highlight organizational challenges, including inconsistent implementation across departments, limited data maturity, and regulatory burdens, particularly in relation to the Corporate Sustainability Reporting Directive (CSRD). Findings underscore the importance of embedding sustainability into corporate culture, governance, and strategy. While regulatory frameworks like the CSRD catalyze ESG integration, success depends on leadership commitment, cross-functional collaboration, and the ability to reconcile short-term profitability with long-term sustainability goals. The study also emphasizes the role of organizational diversity, employee engagement, and innovation in driving sustainable transformation. The dissertation concludes that achieving the SDG by 2030 requires a paradigm shift from profit maximization to value optimization. Companies must move beyond siloed ESG efforts and adopt holistic strategies that align financial performance with environmental and social impact. Future research should explore the effectiveness of emerging international frameworks, such as ISO 53001 and ISSB, and the evolving influence of political dynamics on corporate sustainability agendas.

RESUMEN

Esta tesis doctoral investiga la integración estratégica de los Objetivos de Desarrollo Sostenible (ODS) de las Naciones Unidas en las empresas alemanas que cotizan en el DAX, centrándose en la interacción entre la rentabilidad y la sostenibilidad. Motivado por el urgente desafío global del cambio climático y la necesidad de descarbonización, el estudio explora cómo las empresas pueden contribuir de manera significativa al ODS 13 (Acción por el clima), al ODS 8 (Trabajo decente y crecimiento económico) y al ODS 5 (Igualdad de género), al tiempo que mantienen su viabilidad económica. Empleando un enfoque de métodos mixtos, la investigación combina el análisis cuantitativo del corpus de los informes de sostenibilidad de diez empresas del DAX (2021-2023) con los conocimientos cualitativos obtenidos de entrevistas semiestructuradas a expertos. El análisis del corpus revela una variabilidad significativa en las menciones a los ODS, lo que sugiere que, mientras que algunas empresas utilizan el marco de los ODS de forma sustantiva, otras lo tratan como una herramienta de comunicación simbólica. Las entrevistas cualitativas ponen de relieve además los retos organizativos, entre los que se incluyen la aplicación inconsistente entre departamentos, la madurez limitada de los datos y las cargas reglamentarias, en particular en relación con la Directiva sobre la divulgación de información corporativa en materia de sostenibilidad (CSRD). Los resultados subrayan la importancia de integrar la sostenibilidad en la cultura, la gobernanza y la estrategia corporativas. Si bien los marcos normativos como la CSRD catalizan la integración de los criterios ESG, el éxito depende del compromiso de los líderes, la colaboración entre funciones y la capacidad de conciliar la rentabilidad a corto plazo con los objetivos de sostenibilidad a largo plazo. El estudio también destaca el papel de la diversidad organizativa, el compromiso de los empleados y la innovación en el impulso de la transformación sostenible. La tesis concluye que para alcanzar los ODS en 2030 es necesario un cambio de paradigma, pasando de la maximización de los beneficios a la optimización del valor. Las empresas deben ir más allá de los esfuerzos aislados en materia de ESG y adoptar estrategias holísticas que alineen los resultados financieros con el impacto medioambiental y social. Las investigaciones futuras deberían explorar la eficacia de los marcos internacionales

emergentes, como la ISO 53001 y el ISSB, y la influencia cambiante de la dinámica política en las agendas de sostenibilidad corporativa.

KEY WORDS

Sustainable Development Goals, Corporate Sustainability, Environmental, Social, Governance (ESG), Corporate Sustainability Reporting Directive (CSRD), Sustainability Reporting, Organizational Transformation, Stakeholder Engagement

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‘There is no business on a dead planet.’ David Ross Brower
(1912-2000).

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ACRONYMS AND ABBREVIATIONS

COP, Communication on Progress

CSR, Corporate Social Responsibility

CSRD, Corporate Sustainability Reporting Directive

ESG, Environment, Social, Governance

EHS, Environment, Health, Safety

HLPF, High-Level Political Forum on Sustainable Development

HR, Human Resources

MDG, Millennium Development Goals

SDG, Sustainable Development Goals

UN, United Nations

UNCED, UN Conference on Environment and Development

UNEP, United Nations Environment Programme

WCED, World Commission on Environment and Development

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I – INTRODUCTION

I - INTRODUCTION

Sustainability has become an omnipresent concept in contemporary discourse, yet its significance extends far beyond a mere trend. The necessity of sustainable practices is fundamental to the long-term survival of humanity and the preservation of our planet. Unsustainable actions, whether at the level of individuals, corporations, or nations, inevitably contribute to global crises. The financial crisis, the displacement of populations, and the COVID-19 pandemic all serve as stark reminders of the consequences of unsustainable decision-making. Exploitative labor practices, environmental degradation, the disruption of natural ecosystems leading to zoonotic disease transmission, and the vulnerability of interconnected economic and financial systems to natural disasters all underscore the far-reaching impact of unsustainability. These crises do not remain confined to their points of origin; rather, their repercussions extend to societies worldwide, regardless of who initially contributed to their emergence. Sustainable practices are essential to safeguarding global stability, mitigating crises, and ensuring the well-being of future generations. The exponential growth of human impact on ecosystems necessitates an urgent course correction, either by deliberate action or at the cost of severe economic and environmental consequences. Given the critical nature of sustainability, it must be approached as an integrated framework rather than a set of isolated issues. Addressing environmental challenges without considering social equity is inadequate, just as prioritizing economic growth while postponing environmental responsibility is unsustainable. Any approach to sustainability must, above all, respect the Earth's ecological limits. By exceeding planetary boundaries, we disrupt the delicate equilibrium that sustains human life, thereby jeopardizing long-term societal resilience. The importance of sustainability will continue to intensify, demanding innovative and systemic solutions. Many emerging enterprises are already pioneering sustainable products, mobility solutions, and resource-efficient technologies. Meanwhile, corporations are increasingly compelled by regulatory frameworks and political mandates to engage with sustainability in a meaningful way. Environmental policies and sustainability are inextricably linked, reinforcing the need for coordinated action at political, social, and corporate levels. The interconnections between planetary

boundaries, financial stability, climate change, biodiversity loss, and public health crises demonstrate that a fundamental shift is necessary. To secure our collective future, we must proactively adopt sustainable practices across all sectors of society, economically, politically, and socially.

For a long time, actions of humans on our planet were characterized by the question “what do I want?”. Now and in the future, however, the question “what can we still afford?” is increasingly taking center stage. It is not only the scientists behind the planetary boundaries concept, for example, who see biodiversity loss as one of the greatest threats to humanity. In January 2020, the World Economic Forum defined biodiversity loss as one of the five “top risks” of the coming decade in its Global Risk Report 2020. The report also shows that for every dollar invested in biodiversity protection, five dollars’ worth of damage is avoided (World Economic Forum, 2020). For the first time in the history of the Global Risk Report, long-term risks related to biodiversity degradation and climate change dominate in 2020 because they have very negative effects and a high likelihood of occurrence. Consequently, biodiversity crises and climate change are the drivers of economic crises (*ibid.*).

Another striking example is that climate change is one of the main drivers of refugee movements. Climate refugees are those who are forced to flee due to disasters and other weather events (Ida, 2021). A World Bank report for example, estimates that Sub-Saharan Africa, South Asia, and Latin America could face a total of more than 140 million internal climate-related migrants by 2050 due to droughts, crop failures, rising sea levels, and storm surges (Rigaud et al., 2018). In fact, the Institute for Economics and Peace projects that at least 1.2 billion people could be displaced by climate-related events by 2050 if natural disasters occur at the same pace as in recent decades (Institute for Economics & Peace, 2020). Climate-related events in this context are climate changes, such as warming global temperatures, which in turn increase the likelihood of weather-related natural disasters such as droughts, enhance the intensity of storms, and lead to wetter monsoons. For example, more than 581,000 deaths from natural disasters have been recorded in the Asia-Pacific region since 1990. Earthquakes have claimed the most lives in the region with more than 319,000, followed by storms with 191,000 (*ibid.*). It is unpredictable how many climate migrants will exist because places that suffer from climate change are also often affected by conflict situations, political instability, low

levels of economic development, and human rights abuses which makes it difficult to establish a direct causal link between the movement of people and the environment (United Nations University, 2015). The environment, including the effects of climate change, is usually one of several factors that play a role in a person's decision to leave their home. Moreover, much of the movement that is directly attributable to climate events occurs within a country (e.g., from rural to urban areas) rather than across international borders. This movement is often not officially documented (ibid.). However, the World Bank approximates that climate change is now the leading cause of displacement worldwide (Rigaud et al., 2018). In this regard, it is also interesting to note that climate migrants are not legally considered refugees under international refugee law. In the media and by advocacy groups, climate migrants who are on the move due to drought, floods, and storms are often referred to as “climate refugees”. The term “refugee” has a very specific meaning and refers to “[...] well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group or political opinion [...]”, according to Article 1, 1951 Refugee Convention (United Nations Human Rights, 1951). Under this convention, people who leave their country for climatic reasons cannot be considered refugees because the convention does not recognize the environment as a cause of persecution (United Nations University, 2015).

However, the impact of climate change on people's livelihoods is so severe that they see no other perspective. But the hardest hit is those who lack the means to flee. Countries with a combination of low adaptive capacity, vulnerable geography, and fragile ecosystems (such as small island states) will face the question of whether to stay or go. However, it is often the poorest and most vulnerable who do not have the means or ability to leave their homes (United Nations University, 2015). The plight of women is particularly noteworthy. Women are often in a precarious situation and have less access to resources, be it money, land, education, or health. Furthermore, they are often in the role of provider or bear the burden for their families (Harvey, 2023). Most environmental migrants are likely to come from rural areas, as their livelihoods often depend on climate-sensitive sectors such as agriculture and fisheries. However, climate-induced migration from urban areas is also possible as sea-level rise affects densely populated coastal areas (United Nations University, 2015). Rising sea levels in

countries such as Bangladesh and Vietnam, for example, are causing coastal and delta regions to be flooded more frequently and arable land to be destroyed by the salty water (Cornwall, 2018).

In addition, the world is warming faster today than at any time in history. Simplified said, greenhouse gas emissions are covering the Earth and thus retaining the sun's heat and this leads to global warming and climate change. Warmer temperatures are changing the pattern of weather and upsetting the balance of nature (United Nations, n.d.). Globally, net emissions of greenhouse gases from human activities increased 43 percent between 1990 and 2015. Carbon dioxide emissions, which account for about three-quarters of total emissions, increased 51 percent during that period (United States Environmental Protection Agency, 2022). mainly through fossil fuels, such as coal, oil, and gas. These are the largest contributors to global climate change, accounting for nearly 90 percent of all carbon dioxide emissions (United Nations, n.d.). The majority of global emissions come from transportation, electricity generation, and other forms of energy production, and use (United States Environmental Protection Agency, 2022). Additionally, fossil emissions include the quantity of carbon dioxide from industrial processes such as cement and steel production but exclude land use change, deforestation, soils, or vegetation (Ritchie, Roser & Rosado, 2020). There is still a way out through concerted action, including global efforts to reduce greenhouse gas emissions. Combined with sound development planning at the country level, the number of people who need to move due to climate change could be reduced by up to 100 million people (Rigaud et al., 2018). Climate change and the economy are interconnected, as environmental and social issues can contribute to global economic challenges. With the beginning of industrialization, environmental pollution reached a new dimension. About 250 years ago Europe experienced the time of industrialization. It is also known as the "Industrial Revolution" and began in Great Britain, Germany, other European countries, and the USA (Meyer, Schüller-Ruhl & Vock, 2022). The age of the Industrial Revolution is characterized by an enormous development of technology and science, a significant increase in productivity, and a profound change in economic, social, and demographic conditions. In 1769, Watt enhanced the steam engine, revolutionizing energy production by reducing dependence on water, wind, human, and animal power. It led both to a considerable improvement in the extraction of coal as a

source of energy and in its use in production (Meyer, Schüller-Ruhl & Vock, 2022). The Industrial Revolution was accompanied by a profound change in the entire economic system, too (Göbel, 2000, p. 11). This affected the change in the modes of production. Factory production enabled industrialization on a large scale due to technical and technological innovation because manual labor was mechanized and factories developed from manufactories (Meyer, Schüller-Ruhl & Vock, 2022). With industrialization, however, problems developed that had never been known before. The problems associated with the emergence of commerce and trade and an increase in the population, gave rise to new kinds of problems. Emissions, which were still relatively unproblematic in village structures, quickly reached previously unknown dimensions in the large agglomerations. Industrialization led to a further deterioration of the local environmental situation in the cities. Exhaust gases from the growing number of coal-fired steam engines and emissions from the metallurgical and chemical industries increasingly polluted the air, which had a negative impact on people's health (Kiger, 2021). These circumstances were effectively politicized and internationalized triggered by two formative events in the early 1970s. The first event was "The Limits to Growth" study commissioned by the "Club of Rome" and published in 1972. Given the growth of the world's population at the time, the rapid increase in resource consumption and the rapid rise in environmental pollution, this study called into question sustained economic growth and linked this to the question of the future of humankind (Meadows, 1972). Second, in June 1972, the United Nations Conference on the Human Environment was held in Stockholm, the first conference of its kind to address environmental problems generated by human activities (DeSombre, 2006, p. 22f.). As a result of this conference, the United Nations Environment Programme (UNEP) was founded (Najam, 2005). Furthermore, the World Commission on Environment and Development (WCED) published the report "Our Common Future" in 1987, which developed a vision of sustainable development as it is understood today and in this dissertation. The Brundtland Report states that critical global environmental problems are mainly the result of severe poverty in the South and unsustainable consumption and production patterns in the North. It thus calls for a strategy that brings together development and the environment (Brundtland, 1987, p. 49f.). This is encapsulated in the now common term sustainable development, defined as "humanity has the ability to make development sustainable to ensure that it meets

the needs of the present without compromising the ability of future generations to meet their own needs" (ibid., p. 15). Another milestone of the public debate economy and environment was the UN Conference on Environment and Development (UNCED) in Rio de Janeiro in 1992. During the 11-day meeting, economic development, poverty reduction, and the preservation and protection of the Earth's ecological systems were promoted (United Nations, n.d.). A major achievement of the summit was the Climate Change Agreement, which in turn led to the Paris Agreement in 2015. The agreement is a legally binding international treaty on climate change adopted by 196 parties at COP 21 in Paris, with the goal of limiting global warming to well below 2, preferably 1.5 degrees Celsius, compared to pre-industrial levels (Denchak, 2021). At the beginning of the new millennium, in 2000, high-ranking representatives from 189 countries came together for what was then the largest summit meeting of the United Nations. The former UN Secretary-General Annan presented a roadmap for implementing the Millennium Declaration, a statement of values, principles, and objectives (Bettelli, 2019). Eight concrete development goals were to be achieved by 2015, the so-called Millennium Development Goals (MDG). This established a frame of reference for international development policy comprising four fields of action: advancing peace, security and disarmament, elimination of poverty, protecting the common environment, and promoting democracy, human rights, and good governance (UN General Assembly, 2001, p. 55). The MDG consisted of eight overarching goals for which clear and verifiable targets were set for the first time (United Nations, 2015, p. 4-7):

1. Eradicate extreme poverty and hunger
2. Achieve universal primary education
3. Promote gender equality and empower women
4. Reduce child mortality
5. Improve maternal health
6. Combat HIV/AIDS, malaria and other diseases
7. Ensure environmental sustainability
8. Develop a global partnership for development

To build on successes, draw lessons from experience, and continue collective efforts, the international community adopted new global development goals in

2015: The 2030 Agenda for Sustainable Development Goals (SDG). In addition to the Paris Agreement in 2015, the United Nations adopted the Agenda 2030, a joint roadmap for “transforming the world” in the same year. Agenda 2030 includes 17 Sustainable Development Goals that balance economic, environmental, and social sustainability. The 17 SDG and 169 targets represent a more detailed agenda than the MDG. Not only do they include a greater number of goals and targets, but they are based on human rights, governance, justice, and equity (Bettelli, 2019).

These are considerably broader in scope than the MDG and include economic and social goals, as well as environmental and human rights goals. It is now up to countries that have agreed to take action, 193 countries have committed to translating the SDG into more equitable economic, social and environmental policies. Corporations now face the great challenge of generating sustainable development with their actions without neglecting profitable growth. The global economy is under pressure. Politicians are calling for a more climate-friendly world. Society, especially younger generations, demand political and legal frameworks to implement transformation for a more sustainable, equitable world. The above examples show that it is time to act now. The SDG call on politics, business, and society to pool their potential to jointly master the challenges of our time. Thus, the SDG also set new standards for responsible and future-oriented entrepreneurship. They present companies with new challenges and at the same time offer them the opportunity to position themselves, open new business areas, and contribute to sustainable development (Purtik & Jörg, 2017). The SDG became established as a conceptual frame of reference for sustainability at the level of the UN treaty states. An economic analysis is currently missing in literature, moreover, there is little research and insight into the specific role of the private sector plays in achieving the Sustainable Development Goals. However, some companies are beginning to relate their activities to one or more SDG. In some corporate sustainability reports, the SDG are explicitly used as a reference and the first financial companies are launching fund products whose performance is measured by their contribution to the SDG. Their motives are still insufficiently explored. A new study based on a survey of sustainability reports of the 2,000 largest listed companies worldwide concludes that the SDG are currently used by companies superficially and less as real benchmarks. Instead of implementing meaningful actions, reference to SDG tends to be made symbolically and as a declaration of

intent, without actually drawing any corporate consequences. Similar to membership in the Global Compact, engagement with the SDG initially pays dividends in terms of corporate reputation (Van der Waal & Thijssens, 2020). The United Nations (UN) is calling for a deeper, faster, and more ambitious response to drive social and economic change. This is necessary to meet the 2030 goals, according to its progress report (DeWinter-Schmitt, 2020).

This dissertation examines various aspects of business in relation to the 17 Sustainable Development Goals. This dissertation uses the ESG Global Monitor Report as the baseline for selecting the SDG with the greatest economic leverage in the DAX index. The report and its methodology are explained in more detail in chapter 2.2. The following three SDG were mentioned most frequently by the DAX companies in their sustainability reports in 2022, which is considered as the baseline for this dissertation (Hofstetter & Diegelmann, 2022):

- Goal number 13: Climate Action with 74%,
- goal number 8 Decent Work and Economic Growth with 72%,
- goal number 5 Gender Equality with 69%,
- and goal number 9 Industry, Innovation, and Infrastructure with 69%.

The research question of the dissertation is: How does business manage to consider profitability and sustainability as an interplay to ensure sustainable development with Sustainable Development Goals? The achievement of the 17 Sustainable Development Goals emphasizes the importance of profitability intertwined with sustainability rather than the constant pursuit of maximizing profit. This dissertation maintains a comprehensive perspective, recognizing that Planet Earth is our shared habitat, and actions taken in one region can impact distant areas. Consequently, through informed actions and deliberate choices, individuals have the capacity to minimize their ecological footprint and contribute to efforts aimed at mitigating climate change.

1.1. INITIAL SITUATION AND RELEVANCE OF THE TOPIC

Why are the Sustainable Development Goals relevant today? Corporations focus on financial profitability and maximizing shareholder value but at the same time, they must consider environmental and social factors that could impact business success in the future. On the one hand, sustainability alone is no guarantee

of success because profitability ensures the existence of companies and contributes to a country's gross domestic product. On the other hand, business models and investments must be profitable, environmentally friendly, and socially responsible at the same time in order to save the company's long-term survival and "to ensure that it meets the needs of the present without compromising the ability of future generations to meet their own needs" (Brundtland, 1987, p. 15). Therefore, sustainability may require investing in a company's long-term profitability today, even if costs are incurred that will only pay off later. That is why, according to the UN Agenda 2030, the three topics of environment, society, and economy are on an equal footing. Profitability is an integral part of sustainability and not a contradiction in terms. Moreover, long-term profitability and sustainability offer the opportunity to challenge previous definitions of corporate success. For example, companies can contribute to a better life by creating new jobs in clean energy sectors and by phasing out fossil fuels (Klein, 2015, p. 10). However, the initial situation is little climate-friendly and leaves a lot of room for maneuver to the private sector, according to Klein (2015, p. 19): "The three policy pillars of this new [globalization] era are familiar to us all: privatization of the public sphere, deregulation of the corporate sector, and lower corporate taxation, paid for with cuts to public spending. Much has been written about the real costs of these policies – the instability of financial markets, the excesses of the super-rich, and the desperation of the increasingly disposable poor, as well as the failing state of public infrastructure and services. Very little, however, has been written about how market fundamentalism has ... systematically sabotaged our collective response to climate change, a threat that came just as this ideology was reaching its zenith". A change in thinking must take place to prevent irreparable damage and pave the way for a more sustainable future without neglecting profit. The SDG can serve as a supporting tool toward a paradigm shift from profit maximization to value optimization. First, an examination of the impact of human activities on the environment helps to understand the basis for the establishment of the Sustainable Development Goals. Second, the brief outline focuses on the effect of climate change on the global economy.

When discussing contemporary climate change, the term refers to alterations that are primarily induced by human activities. In the meantime, there is hardly any doubt in science that humans contribute decisively to the greenhouse effect

and climate change. The CO₂ content of the Earth's atmosphere has not been as high as it is today for thousands of years. The Earth is permanently changing, which is a natural process. For example, on the planet Earth exists the natural greenhouse effect when the sun sends short-wave radiation to the Earth. On the Earth's surface, it is transformed into long-wave radiation and reflected back again. When these long-wave rays hit a barrier, such as the glass roof in a greenhouse, they are reflected back. This is a completely natural process in which a certain percentage of the radiation gets back into space, while the other part is reflected and thrown back to Earth (Harms & Franck, 2020). This happens due to a natural protective layer: The gas layer of the atmosphere, which also contains natural carbon dioxide (CO₂), does not let the long-wave radiation through and sends it back to Earth. Without this natural greenhouse effect, the average temperature on Earth would be minus 18 degrees Celsius, making life impossible. The right amount of CO₂ and other greenhouse gases determines our climate and if the content of these gases increases, the atmosphere heats up too much (ibid.). Since the beginning of industrialization, however, greenhouse gases have increased sharply, which is why we also speak of the anthropogenic greenhouse effect (Harms & Franck, 2020). Unfortunately, this effect has consequences that humans causes and nature finds difficult to cope with. When did humans begin to interfere with natural environmental processes? Some experts point to a layer of radioactive material in the ground. The atomic bombs of Hiroshima, for instance, and numerous weapons tests have left these traces indelibly all over the world. Others see the beginnings of the transformation in global warming since the Industrial Revolution or define it in terms of a layer of microscopic plastic particles that can be found all over the Earth since the 21st century at the latest (Charisius, 2019). However, a 2019 study of the scientific journal *Science* concludes that the anthropogenic influence on the Earth began earlier. More than 250 archaeologists from the ArchaeoGlobe project present evidence that planet-changing human influence not only began much earlier than previously thought, but also occurred much more extensively, even before humans practiced agriculture and animal husbandry on a large scale (Stephens et al., 2019). Autoren und Jahr nennen conclude this from millennia-old legacies of human activity all over the world, which had long been discovered but no one has ever compiled all these data points as densely as they have in the current research. Scientists had rather considered the findings from the various continents

on their own (ibid.). The archaeological meta-analysis shows that land use by mankind left almost no traces until roughly 3000 years ago. People living before that essentially subsisted on hunting and whatever they could gather. Only gradually did agriculture begin to shape the landscapes. Early farmers began to cut down trees to make room for fields and pastures. The collected archaeological evidence shows how agriculture spread across the planet over the millennia, while hunting and gathering became less and less important for subsistence. These developments are not only evident in landscapes around the globe, but are also documented by bone finds that bear witness to the beginnings of purposeful livestock breeding (Charisius, 2019; Stephens et al., 2019). Since 2000, controversial discourse has developed around the concept of the Anthropocene in science and the public. It is shown to what extent different narratively structured stories serve to create social and political meaning (Dürbeck, 2018). The term “Anthropocene” refers to a new geological age in which humankind has the dominant geophysical influence on the Earth system and from which human responsibility for the future of the planet is derived (ibid.). In 2000, the atmospheric engineer and Nobel laureate Crutzen and the biologist Stoermer introduced the Anthropocene term into the environmental science debate, in order to grasp the serious effects of anthropogenic, i.e., human-influenced, climate change on a planetary scale (Crutzen & Stoermer, 2000). At the same time, the concept contains a call to redefine humankind’s position in relation to nature and in the cosmos and to deal responsibly with limited natural resources (Dürbeck, 2018). Anthropocene is intended to signal that the Holocene, the warm period that lasted for nearly twelve millennia with relatively stable environmental conditions that made the emergence and development of human civilization possible in the first place, has come to an end. What remains are the threats to the world posed by humanity, addressing the ethical responsibility for reducing further environmental degradation and the survival of human civilization (Dürbeck, 2018).

Consequently, the world has entered a geological epoch, in which human activities play a central and threatening role in the fundamental Earth dynamics (Sachs, 2012). As the number of humans on our planet grows, our impact becomes more and more visible and the global economic growth per person is increasing due to the growing world population. The United Nations estimates the number of people on Earth at about 300 million 2,000 years ago. That grew to about 500 million

in the following 1,500 years. In 1804, humanity cracked the one billion mark. It took 123 years to double that figure. In just 47 more years, world's population doubled again. In 2022, 8 billion people are living on the planet and the world's population will grow to nearly 10 billion by 2050, according to the United Nations (United Nations, 2022). At the same time, more than half of the world's population lives in cities. Cities grow with the world's population and new urban areas are emerging. In addition to human-induced problems, however, large cities are also threatened by natural hazards, such as heat waves, droughts, hurricanes, floods, and earthquakes. Such events wreak havoc even in industrialized countries and have a particularly strong impact where many people live in one space (Frietsch, 2019). According to Frietsch (2019), cities are the most radical transformation of the Earth but their land consumption is not the real problem. What is problematic is providing for the inhabitants, especially in developing countries (ibid.). Food and water have to be fetched from the surrounding countryside and often the infrastructure cannot keep up with the increasing number of inhabitants. This is conspicuous in the supply of water and energy, as well as the disposal of waste and sewage. The result is slums with inadequate hygiene and inhabitants who often live below the subsistence level. Nevertheless, the rural exodus continues unabated in many countries. The growth of cities also affects the wider environment. Excessive water withdrawals cause entire cities like Mexico City to sink by the meter or permanently deprive the surrounding countryside of vital water. Moreover, huge amounts of wastewater make the available drinking water unusable in some cases. If the groundwater level in coastal cities sinks due to overuse, the drinking water is in danger of becoming salinized by seawater intrusion (ibid.).

At the same time, our impact is not growing in a linear way but is exhibiting what is known as the "Great Acceleration", beginning around the middle of the 20th century. Since the 1950s, there has been a dramatic increase in human activity in many respects, unprecedented in history. Great Acceleration sets socio-economic megatrends alongside twelve ecological megatrends. This illustrates the impact of human activity on the life-giving ecosystems of our planet. It should be noted that the post-1950 changes in the Earth system are highly dependent on changes in global economic processes (Steffen et al., 2015). Moreover, scientists fear that human intervention in the environment is bringing our planet dangerously close

to so-called tipping points. As defined by the Intergovernmental Panel on Climate Change (IPCC), a tipping point is a “critical thresholds in a system that, when exceeded, can lead to a significant change in the state of the system, often with an understanding that the change is irreversible” (Hoegh-Guldberg et al., 2018, p. 262). When such tipping points are reached in the Earth system, it transitions to a new state that is also stable. The change can then neither be stopped nor reversed (Fischer, 2022, p. 64f.). Such a tipping point is reached, for example, when 20-25% of the Amazon rainforest has been cleared. If this happens, the remaining forest dries out and no longer produces rainfall essential for agriculture in the US, for example. To date, 17% of the Amazon rainforest has been cleared and the trend continues unabated (Fischer, 2022, p. 65f.). The main causes of deforestation in the past were the extraction of arable land and the use of the wood. Today, they are reasons of a profitable nature. Forest areas are being cleared on a large scale in Asia, South America, and parts of Africa to gain cultivation areas for soy, palm oil, wheat, or sugar cane (Frietsch, 2019). In addition, there is damage to forests, for example through the extraction of raw materials for the production of wood and paper, which are used in the manufacture of products such as furniture or pulp (Schulz, 2023). On the one hand, forests serve as CO₂ reservoirs and oxygen producers and therefore are essential for life. On the other hand, deforestation in the form of slash-and-burn agriculture produces a considerable amount of carbon dioxide, which places an additional burden on the Earth's atmosphere. Cleared areas warm up much faster than forested areas, which in turn has a negative impact on the climate (Fischer, 2022, p. 66; Frietsch, 2019). Moreover, community forests worldwide are being converted into privatized tree farms and nature reserves so that their owners can collect so-called “carbon credits” (Klein, 2015, p. 8). Last but not least, biodiversity is irretrievably disappearing with the forests (Frietsch, 2019). Approaches to conserving forests have so far yielded only isolated successes. In the northern hemisphere, the loss of forests has come to a halt in some countries, and some are even recording moderate growth. However, this cannot compensate for overexploitation in other areas, such as the loss of tropical forests, which have the greatest biodiversity on Earth (ibid.). The destruction of (tropical) forests, and thus the destruction of biodiversity, is driving the acceleration of climate change to the point of reaching tipping elements that shake our entire climate system. Biodiversity is coming under increasing pressure from climate change. We have

already dramatically exceeded two limits, that of species extinction and that of inputs of nitrogen and phosphorus, as artificial fertilizers in agriculture (Fischer, 2022).

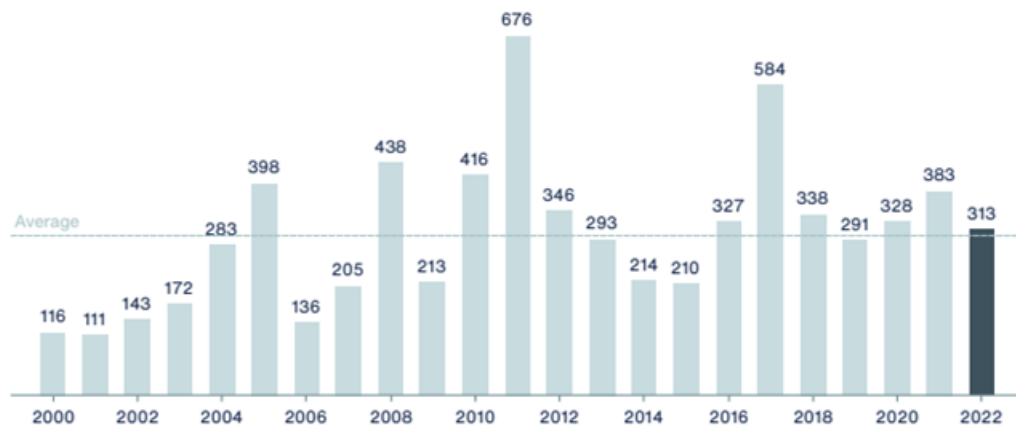
When did the human impact on the planet become a political issue? Since 1990, the United Nations Development Programme (UNDP) has published an annual Human Development Report (HDR). The HDR presented a new method of measuring human development by combining indicators of life expectancy, education levels, and income into a composite development index (Macmillan, 2009, p. 154). In this context, human development must be viewed holistically and encompasses all aspects of development, including economic growth, social investment, and empowerment. It also includes ensuring basic needs and social safety nets, as well as political and cultural freedom. It is a process of building people's capabilities to enjoy long and healthy lives, possess knowledge, and have access to the resources needed for an adequate standard of living (ibid.). People are always placed at the center of all aspects of the development process. The HDR is intended to illustrate that people and their capabilities should be the decisive criterion for assessing a country's development, not economic growth alone. The objective is stated in the introduction to the first report in 1990 as follows, "people are the real wealth of a nation. The basic objective of development is to create an enabling environment for people to enjoy long, healthy and creative lives. This may appear to be a simple truth. But it is often forgotten in the immediate concern with the accumulation of commodities and financial wealth" (United Nations Development Programme, 1990). Back in 2008, the United Nations Development Programme highlighted the impact of increasing climate crises on the world's most vulnerable people in its Human Development Report 2007/2008. Under the title "Fighting Climate Change: Human Solidarity in a Divided World", the program examined adaptation strategies and options for action and made recommendations. However, a decade after the first Human Development Report, the climate-related effects are perceived to a greater extent. The Earth is experiencing more hot days and fewer cold days, which can lead to water shortages, droughts, health problems like heat stroke, and even death (European Commission, 2022). Heat waves will probably become more frequent and last longer. The number of frosty days will decrease, and droughts are likely, especially in continental areas. Sea levels will continue to rise (Harms & Franck, 2020) and the

lack of rain can be a cause of destructive forest fires. For example, the western United States experienced the deadliest and most devastating wildfires in terms of property damage in U.S. history (European Commission, 2022). So why were the recommendations not followed? Many indications underline the allegation, among others the financial crisis in 2007 and 2008. The Human Development Report 2008 was unable to establish a causality between individual climate events and global warming but there certainly has been a link between climate change and extreme climate events, according to Kamp (2008). For example, Bangladesh, India, and Pakistan experienced temperatures that were five to six degrees Celsius above the regional average in 2005. Monsoon storms and floods displaced more than 14 million people in India and seven million in Bangladesh in 2007 (ibid.). She also reports on faster melting glaciers in the Himalayas and the link between poverty and increased vulnerability to the impacts of climate risks. Economist Stern published "the Stern Review" on climate change in 2006 and pointed out that there was still time to avoid the worst impacts of climate change, if they had taken strong action (Stern, 2006). New global temperature records were set in 2024, making it the warmest year to date. Extreme weather events such as heatwaves, droughts and floods increased, highlighting the urgent need for effective Climate Action. These developments have a significant impact on agriculture, health and infrastructure and increase the pressure on policy makers to implement sustainable solutions (Kersting, 2025). However, the CO₂ content of the Earth's atmosphere has not been as high as it is today for thousands of years, (United Nations Development Programme, 2007, p. 2f.), the Arctic permafrost is melting 70 years early (Green, 2019) and the Amazon rainforest is close to the tipping point, which causes dramatic climate changes in a short period of time and can be irreversible as explained above.

The next paragraph briefly describes the relationship between climate change and global economy and why the SDG are relevant. The Sustainable Development Goals were created in the first place to address the most pressing challenges of our time together. The SDG provide worldwide guidance for addressing the global challenges facing the community of nations. The aim is to better protect the natural foundations of life and our planet everywhere and for everyone, and to safeguard people's opportunities to live in dignity and prosperity across generations. The 17 goals address ecological, economic, and social aspects of sustainable development.

Consequently, the goals are addressed to politics, civil society, the economy, science, and every individual (Rodriguez, 2021). The SDG represent the urgent demand for international frameworks because climate change impacts affect all countries regardless of their political boundaries. The Paris Climate Agreement therefore states that adaptation to climate change is a global challenge. However, little attention has been paid to this international dimension of adaptation. So far, the impacts of climate change have mostly been considered and studied only within national boundaries (Peter, Guyer & Füssler, 2020). However, depending on the extent of its global interconnectedness and interaction with other vulnerable countries, a country may be indirectly affected to varying degrees by the international impacts of climate change. This applies to both developed and developing countries. These international impacts of global climate change may be of particular relevance to countries that are highly interconnected with the global economy (ibid.). Furthermore, the “Global Risk Report” commissioned by the World Economic Forum 2020 ranked climate change as the greatest threat to the global economy (World Economic Forum, 2020). According to Kikstra et al. (2021), economic output worldwide could fall by 37 percent by the end of the century (p. 19) which would be more than double the decline during the Great Depression of 1929 (Bischoff, 2021). The direct material losses caused by environmental disasters can be measured. Hurricane Katrina, for example, which hit the east coast of the USA in 2005, cost the equivalent of around 130 billion euros. The cost of the European heat wave in the summer of 2003, which among other things caused crop failures, was around 13 billion euros, while the flooding of the Elbe in Germany in 2002 cost around 10 billion euros (ibid.). AON's “Catastrophe Insight” report shows that weather extremes have caused ever greater damage over the past 20 years. On average, the global community pays around 210 billion US dollars each year for damage caused by extreme weather.

Figure 1: Global Economic Losses from Natural Disasters (2022 \$ bn).



[source: AON, 2023, p. 14]

Stern (2006) reported that the cost of stabilizing the climate would be significant but manageable and delay would be dangerous and costlier. Between 1970 and 1979, around 711 extreme weather events were recorded worldwide, with damage estimated at the equivalent of 150 billion euros (Bischoff, 2021). From 2000 to 2009, there were 3536 such disasters with estimated costs of 800 billion euros (ibid.). Moreover, warmer weather is associated with falling labor productivity when the heat makes it impossible to carry out outdoor activities or process certain materials. Low water in rivers can also paralyze production facilities that rely on the cooling liquid. At the same time, energy demand is rising to cool offices and server farms (Bischoff, 2021). When rivers burst their banks, factories as well as technical infrastructure such as airports, highways, and cities are threatened. The direct economic damages for material losses, the growing energy demand, and the safeguarding of drinking water can at least be roughly estimated. However, it is unclear how to measure indirect impacts in economic terms, such as shrinking biodiversity or the health consequences for people. Moreover, these expenditures depend strongly on the extent of climate change, such as a two-degree or five-degree increase in temperature over the course of the century. Other issues include sea level rise and its consequences. Depending on how much greenhouse gas we continue to emit in the future, there are various scenarios, each of which is fraught with uncertainty (ibid.). However, the average temperature will continue to rise and any measures to curb a further rise will cost money. This is precisely where the trade-off between profitability and sustainability is crucial. The World Economic

Forum assumes that the global economic damage caused by climate change would cost the world up to 18 percent of its economic output by 2050 (Marchant, 2021). Swiss Re Institute (2021) estimates around 10% of total economic value from climate change by mid-century while a study by Kikstra et al. (2021) published in 2021 outlines a different picture. Depending on the severity of climate change, it could devour between 6 and 51 percent of global gross domestic product by 2100 (p. 5f.). They take into account that environmental disasters can also have long-term effects on a country's economy. Countries do not always recover quickly from fatal events. Sometimes, comprehensive measures are needed that will have costs for decades to come. The fluctuations in the forecast values illustrate how many uncertainties are inherent in quantitative economic forecasts. However, it is indisputable that all models forecast a collapse of the global world economy. SDG can help the private sector to tackle causes or actions to protect the environment in order to limit further warming of our planet and ensure sustainable development. This can only be done at great financial cost, but it is preferable to the presented costs of the effects of climate change. In the end, the worst effects of global warming will not hit Europe or the USA in the short term but the countries of the global South (Swiss Re Institute, 2021). Above all, the economies of South and Southeast Asia are the most vulnerable to the physical risks associated with climate change. On the other hand, they would also be the countries that stand to gain the most if the world and the global economy succeed in slowing the rise in temperature. Many advanced economies in the Northern Hemisphere are less vulnerable because they are both less exposed to adverse developments in weather patterns associated with climate change and have better resources to cope (ibid.). Swiss Re Institute (2021) also describes that Asia could be most affected by transition risks. Transition risks can manifest themselves, for example, in large shifts in asset values and higher costs of doing business as the world shifts to a low-carbon economy, for example, which can have significant financial and economic impacts. Poorer countries in particular lack the money to prepare themselves against the expected economic impacts of global warming or to adapt to the changing conditions (Bischoff, 2021). However, climate risk affects everyone living on the planet Earth, which is why mitigating it with decisive actions should be at the top of every agenda. But this will require more than what is promised today (Swiss Re Institute,

2021). Both the public and private sectors must work together to accelerate the transition to a net-zero protocol.

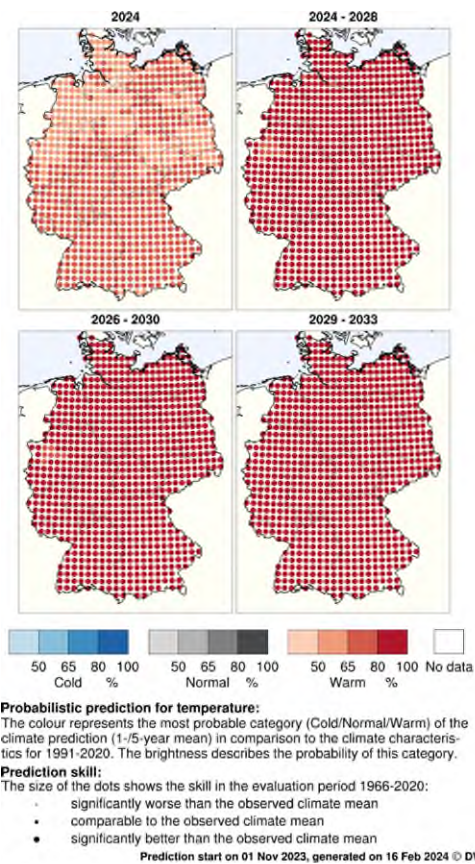
In summary, the evidence of human impact and economy on the planet is obvious. Companies need to move beyond "business as usual" and focus on building sustainable business models for long-term success. Examples of weather-related anomalies triggered by climate change-induced extreme weather conditions threatens housing, destroys crops, and livelihoods, and deprives people of the opportunity to live safely and peacefully. Already, resource scarcity, such as water shortages, is increasingly leading to conflicts. Rising sea levels threaten island states and coastal regions. Water shortages, salinized soils, or soil erosion are driving more and more people from their homes. Droughts make fields and fields infertile, while rainfall becomes heavier and more unpredictable. There are more cyclones sweeping over islands and coastal regions. More than ever, global developments such as climate change, economic growth, resource consumption, terrorism, war, and international refugee movements need global discussions and solutions. However, many debates are currently moving back to national and regional reactions and perceptions why the SDG represent an urgent demand for international frameworks.

1.2. PROBLEM STATEMENT

The presented effects of human activities on the environment show that actions for improvement are necessary. The dramatic increase in CO₂ emissions since the industrial revolution and the devastating effects of human activities on the global climate have profoundly changed the Earth's system. Climate change represents one of the most pressing challenges of the 21st century, with significant implications for global ecosystems, economies, and societies. The growing urgency to mitigate the effects of climate change has prompted international consensus on the need for sustainable development practices that focus on reducing carbon emissions. As a result, decarbonization has become a critical strategy in global business efforts to limit global warming and its associated risks. The relevance of this topic lies not only in its environmental impact but also in its potential to reshape industries, influence economic growth, and drive policy innovation worldwide. Despite widespread recognition of the dangers posed by climate

change, the global community continues to face significant challenges in effectively addressing the issue. The transition to a low-carbon economy is complex, involving various stakeholders, from governments and corporations to civil society. Recent global temperature records indicate the necessity for effective Climate Action and encourage policymakers to consider implementing sustainable solutions. The 1.5 degree limit is of great importance. In the Paris Climate Agreement of 2015, most countries in the world agreed to keep global warming well below two degrees compared to pre-industrial times and to limit it to 1.5 degrees if possible. Otherwise, many scientists are concerned that the consequences of global warming will be almost impossible to control. These are becoming increasingly evident in the form of heavy rainfall, flooding and even forest fires, as is now the case in the USA (Kersting, 2025). The following graphic shows the forecasts for the climate.

Figure 2: Forecasts for the Climate in Germany.



[source: Deutscher Wetterdienst, 2024]

Decadal climate predictions forecast trends for the next several years in Germany, bridging the gap between seasonal predictions and long-term projections. The graphics display predictions as maps or time series with corresponding prediction skills, determined by comparing predictions for long-term periods (1961/1966–2017 for 1-/5-year means; 1979/1984–2017 for sea precipitation) to observed variability. A three-color traffic light code or dot-size system indicates if the prediction skill is better, comparable, or worse than the reference prediction. As can be seen from the chart, the outlook for Germany is dismal. According to the EU climate change service Copernicus, 2024 could be the warmest year since records began, on average a good 1.5 degrees warmer than in pre-industrial times (Jahn & Kersting, 2024). Wind power and solar energy alone will not be able to stop global warming in time. According to the British newspaper “The Guardian”, 77 percent of 380 IPCC scientists expect an increase of at least 2.5 degrees by the end of the century, 42 percent expect three degrees or more. The tropical regions would then be uninhabitable for humans (Carrington, 2024). The urgency is changing the debate on climate protection. New, more radical and previously almost unthinkable proposals are gaining weight. For example, the Christian Democratic Party in Germany is backing a new generation of nuclear power plants. Additionally, German parties are now considering CO₂ capture and storage as a method to address climate change (Jahn & Kersting, 2024). However, companies in Germany are changing their strategy for dealing with climate change. Until now, many companies have focused primarily on reducing their CO₂ emissions. Now they are increasingly trying to adapt to the consequences of global warming. They are investing in ships that can still sail despite low water levels, in flood protection and new cooling systems for offices and factories (Krapp et al., 2024). Key challenges include aligning economic growth with environmental sustainability, ensuring equity in the distribution of resources and opportunities, and overcoming political and economic barriers to decarbonization. This dissertation seeks to explore the interconnectedness of profitable sustainable growth, social inclusion and environmental protection, focusing on the role of decarbonization in achieving global warming targets and contributing to sustainable development.

Furthermore, the increasing importance of sustainability in the financial sector and the growing financial impact of natural disasters on insurers. Banks are

increasingly taking environmental, social and governance (ESG) criteria into account in their lending decisions. This development is being driven by regulatory requirements and the growing awareness of sustainable financing. However, the integration of ESG factors poses a challenge, particularly with regard to the collection and evaluation of relevant data. Many banks rely on estimates or proxy data, which can lead to inaccuracies. Nevertheless, the strategic use of ESG data offers competitive advantages as it makes it possible to create sustainable value and actively shape change (Osman, 2024). In 2024, natural disasters such as hurricanes, storms and floods caused an estimated USD 140 billion in insured losses worldwide, an increase from USD 106 billion in 2023. This increase underlines the serious impact of climate change, which is leading to more frequent and intense weather events. The US was particularly affected by Hurricanes Helene and Milton. Total losses, including uninsured losses, amounted to USD 320 billion. Munich Re emphasizes the increasing consequences of climate change and warns that no one is safe from its effects (Schier, 2025). Consequently, the financial sector faces the challenge of integrating sustainability criteria into its business models while at the same time managing the increasing risks posed by climate change. For banks, this means incorporating ESG factors into lending decisions while ensuring accurate data. Insurers are faced with increasing loss amounts from natural disasters, which underlines the need to accurately assess climate risks and take appropriate precautionary measures.

The motivation behind this dissertation stems from the urgent need to develop actionable insights that can guide global efforts toward decarbonization and sustainable development. As the 2030 deadline for the Sustainable Development Goals approaches, it becomes increasingly important to understand how various sectors can contribute to these goals while maintaining profitability and fostering social equity and environmental protection. The objective of this dissertation is to analyze the effectiveness of current strategies of German DAX companies, identify best practices, and recommend actions that can harmonize economic growth with environmental protection and social equity. Addressing climate change requires coordinated international efforts, guided by frameworks like the United Nations' Sustainable Development Goals. These frameworks provide a roadmap for aligning global priorities, fostering cooperation among nations, and setting measurable targets for progress. The need for such frameworks

is underscored by the global nature of climate change, which transcends national borders and necessitates collective action. This dissertation examines the three most mentioned Sustainable Development Goals (SDG) by German DAX companies. SDG 13 Climate Action emphasizes the need for urgent action to combat climate change and its impacts, with a particular focus on reducing carbon emissions and enhancing resilience to climate-related hazards. SDG 8 Decent Work and Economic Growth promotes sustained, inclusive, and sustainable economic growth, full and productive employment, and decent work for all. This goal is crucial in the context of decarbonization, as it challenges the traditional growth models reliant on fossil fuels. Lastly, focus SDG 5 Gender Equality is integral to achieving sustainable development, as it ensures that all individuals, regardless of gender, have equal opportunities to contribute to and benefit from economic and environmental progress. Achieving the selected SDG requires organizations to adopt innovative strategies, build partnerships, and integrate sustainability into their core operations. This section will explore the necessary organizational frameworks, governance models, and collaboration mechanisms to successfully meet these global goals.

With these facts in mind, companies around the world continue to have a negative impact on the environment, while research attempts to generate solutions or recommendations for action. Eisenmenger et al. (2020) have taken a critical reflection on the SDG from a socio-ecological perspective and have concluded that the SDG prioritize economic growth over sustainable resource use. Polasky et al. (2019) studied the role of economics in analyzing the environment and sustainable development. They conclude that economics must be more involved in finding solutions for sustainable development. "Major on-going changes in earth systems could cause potentially large negative consequences for human well-being. How to reduce poverty and address rising inequality in the face of these environmental changes raise important social and economic aspects" (ibid.). They further suggest devoting efforts in common understanding of the "environmental, social, and economic dimensions of sustainable development, which will require greater integration of economics, social sciences more generally, and the natural sciences" (ibid.). There is a need for faster integration of sustainable development into the core of these disciplines. Collective human action is needed to steer the Earth system away from a potential threshold and stabilize it in a habitable state. This

includes decarbonizing the global economy, enhancing carbon sinks in the biosphere, behavioral change, technological innovation, new governance arrangements, and changing societal values (Steffen et al., 2018, p. 8252).

1.3. MOTIVATION, OBJECTIVE AND STRUCTURE

The motivation for this dissertation arises from the critical and time-sensitive challenge that climate change poses to the world. As the effects of global warming become increasingly apparent, there is an urgent need for robust strategies to mitigate its impact. The United Nations calls for a more sustainable world and addresses every individual. Decarbonization, as a primary method of reducing greenhouse gas emissions, has emerged as a vital component of global efforts to combat climate change. However, the path to a decarbonized economy is fraught with complex challenges, including balancing economic growth, ensuring social equity, and overcoming political and technological barriers. This dissertation is motivated by the necessity to bridge the gap between the urgent demand for Climate Action and the practical realities of implementing such actions on a global scale. It seeks to contribute to the understanding of how decarbonization can be effectively integrated into economic growth models without compromising the other pillars of sustainable development, namely social inclusion and environmental protection.

The objective of this dissertation is to provide a comprehensive analysis of the role that listed German companies plays in achieving the Sustainable Development Goals (SDG), particularly SDG 13 (Climate Action), SDG 8 (Decent Work and Economic Growth), and SDG 5 (Gender Equality). By investigating the interplay between these goals, this study aims to identify strategies that can harmonize profitable economic growth with the urgent need to reduce carbon emissions, promote social equity, and protect the environment. To achieve this objective, the dissertation will employ a mixed-methods research approach, combining quantitative corpus analysis of sustainability reports with qualitative content analysis through semi-structured interviews with key stakeholders of listed German companies. The research will focus on understanding how organizations are currently addressing these SDG, identifying best practices, and proposing actionable recommendations for enhancing their contributions to global

climate goals. In essence, the dissertation aims to contribute valuable insights that can guide policymakers, businesses, and international organizations in aligning economic and environmental priorities. The ultimate goal is to support the global transition towards a sustainable, low-carbon economy that is inclusive and equitable, paving the way for a more resilient future.

This dissertation sees Polasky et. al paper as a foundation and aims to build on it to further explore the economic dimension from a private sector perspective in terms of achieving the SDG, which includes environmental and social aspects. Until now, there is a research gap in how to involve the economic dimension in achieving the SDG until 2030. Therefore, this dissertation assumes that there is no concrete analysis on the role of the private sector in achieving the United Nations' SDG. How can the private sector in Germany contribute in achieving the goals of the United Nations and which concrete actions can be taken? The United Nations (UN) is calling for a deeper, faster, and more ambitious response to drive social and economic change. This is necessary to meet the 2030 goals, according to its progress report (DeWinter-Schmitt, 2020). It seeks to first evaluate perceptions of sustainability in the private sector using existing literature and research. The aim is to show the effects of economic actions and to present consequences when humans or companies interfere with ecosystems. As described above, this active intervention is the beginning of global crises and counterproductive for sustainable development. Additionally, three of the 17 SDG and their sub-goals are analyzed to determine specific economic contributions.

The guiding assumption of this dissertation is that currently profit beats sustainability and SDG remain as a communication tool. Rather than testing a formal hypothesis, this dissertation is guided by the analytical proposition that, in current corporate practice, profitability tends to take precedence over sustainability objectives and that the Sustainable Development Goals are frequently employed as a communicative or symbolic reference rather than as a deeply embedded strategic framework. This proposition is explored through an exploratory mixed-methods design, combining quantitative frequency analysis with qualitative contextual interpretation and expert interviews. This assumption is supported by the argument that as long as non-sustainably produced products remain inexpensive, sustainability will remain largely a matter of lip service. For instance, the products that are least expensive to manufacture and acquire often have the most significant

and detrimental effects on the environment. Notable examples include fast fashion and single-use plastic (Bish, 2021). As the Harvard Business Review noted in 2011, “higher costs to the planet do not translate into higher prices for customers. That’s because companies are rarely obligated to pay for the full price they have to pay for the world” (Chouinard et al., 2011). Desirable would be the binding, legislative definition of the internalization of costs. When environmental and social costs would have to be included in the price of every product, non-sustainable products would be so expensive that they could hardly survive on the market (Fischer, 2022). In addition to laws and regulations, tax policy interventions would also be a method of achieving this goal. On the economy level, desirable would be not only not to act negatively, but positively, i.e., to make entrepreneurial decisions in such a way that we do not allow ourselves to be exposed to critical boundary violations or the tearing of target values (ibid.). Sustainability must not be an “add-on” or mere ornament to business as usual. On the contrary, sustainability must be at the beginning of every entrepreneurial decision and be the benchmark for all decisions in the company. Companies that have understood this not only behave in an ethically correct manner, but also have a better chance of positioning themselves for the future (ibid.). Ecosystems provide these services to us for free. However, we can still calculate how valuable they are. The most recent calculation of the economic value of global ecosystem services was for 2011, and in that year the value of ecosystem services was at least \$125 trillion (Costanza et al., 2018). By comparison, that year’s global gross national product was USD 68 trillion (Worldmeter, n.d.).

However, these findings assume that sustainability will become more important and decisive for the purchase of a good for companies or consumers in the future than the cheaper price. Despite the role consumers inhabit, this dissertation will focus on listed companies, primarily on the DAX index. In regard to the 2030 Agenda, the member states of the United Nations have designed a roadmap to “transform the world for the better” in terms of a sustainable transformation of society, the economy, and the environment. The complex thing is, all the goals are rooted in and depend on each other. Therefore, while the dissertation focuses on the economic dimension, it does not ignore the environmental and social dimensions. Because in the end, economic sustainability

refers to practices that support long-term economic growth without negatively impacting social, environmental, and cultural aspects of the community.

The given hypotheses form the basis for the research question of this dissertation: How does business manage to consider profitability and sustainability as an interplay to ensure sustainable development with Sustainable Development Goals (SDG)?

To answer the research question, the dissertation begins by establishing the initial situation and the relevance of its topic, emphasizing the global importance of addressing climate change and decarbonization. It outlines the critical problem statement, which centers on the urgent need to tackle global warming and transition to a low-carbon economy. This chapter also delves into the motivation and objectives driving the research, providing a clear rationale for the study. Finally, it concludes with a detailed structure and outline of the dissertation, offering a roadmap for the reader. The second chapter explores the United Nations' Sustainable Development Goals (SDG) as a global framework for addressing pressing environmental and socio-economic issues. It begins by discussing the necessity for international frameworks to coordinate global efforts. The chapter then narrows its focus to three specific SDG: Climate Action (Goal 13), Decent Work and Economic Growth (Goal 8), and Gender Equality (Goal 5). Each of these goals is analyzed for its selection and measurability. The chapter concludes by examining the organizational requirements essential for achieving these SDG, highlighting the need for strategic alignment and collaboration across various sectors. This chapter serves as the basis and initial understanding of sustainability in the economic context. The third chapter explains the empirical methodology, which is the mixed-methods approach. It outlines the mixed-methods approach employed in the research, combining quantitative and qualitative analyses to provide a comprehensive understanding of the subject. The quantitative research component involves a corpus analysis, where sustainability reports are assembled, tokenized, and analyzed for frequency to gauge the emphasis on "climate", "economic growth", and "diversity". The qualitative aspect focuses on content analysis through semi-structured interviews, targeting profitable sustainable growth. It covers sample selection, interview processes, transcription, and evaluation. Both quantitative and qualitative sections emphasize the importance of quality criteria to ensure robust and reliable results. The chapter ends with a summary of the

research, encapsulating the findings and insights gained from the methodologies employed. The forth chapter presents the results of the research, focusing on the intersection of profitability and sustainability. It identifies key aspects that successfully harmonize three core elements: profitable sustainable growth, social inclusion, and environmental protection. The findings are then translated into actionable recommendations, offering practical steps that various stakeholders can take to advance the achievement of the SDG, particularly in the context of Climate Action and economic development. The fifth chapter, the dissertation delves into a critical discussion on the findings and their implications for the future. It considers the progress made towards the 2030 targets set by the United Nations, evaluating the challenges and opportunities that lie ahead. The chapter discusses the broader implications of the research results for policy, business, and society, and it reflects on the potential paths forward to achieve the SDG. The final chapter provides a concise conclusion, summarizing the key findings of the dissertation and their significance. It reflects on the progress towards decarbonization and the fulfillment of the SDG, offering a forward-looking perspective on what needs to be done in the coming years. The outlook section discusses potential future research directions and the evolving landscape of global sustainability efforts, emphasizing the ongoing importance of aligning economic growth with environmental and social goals.

II – UNITED NATIONS AND ITS SUSTAINABLE DEVELOPMENT GOALS

II - UNITED NATIONS AND ITS SUSTAINABLE DEVELOPMENT GOALS (SDG)

At the The Sustainable Development Goals (SDG) represent a global framework established by the United Nations (UN) to address the most pressing challenges facing humanity and the planet. At the World Summit on Sustainable Development in New York in September 2015, the United Nations (UN) General Assembly adopted the 2030 Agenda, a joint roadmap for “transforming our world” (United Nations General Assembly, 2015, p. 1) with an ambitious agenda aiming to eradicate poverty, protect the environment, and ensure peace and prosperity for all by 2030. This chapter delves into the origins, structure, and implementation mechanisms of the SDG, while also exploring the progress, challenges, and criticisms associated with this global initiative.

The SDG are the culmination of decades of international cooperation and evolving development paradigms. The concept of sustainable development gained global prominence with the 1987 Brundtland Report, which defined it as development that meets the needs of the present without compromising the ability of future generations to meet their own needs. This report laid the foundation for the 1992 Earth Summit in Rio de Janeiro, where the concept was formally introduced into the international policy arena. The Millennium Development Goals (MDG), established in 2000, were the first comprehensive global attempt to address issues such as poverty, hunger, and disease. While the MDG succeeded in galvanizing international efforts and achieving notable progress, their scope was limited to eight goals, and their focus on developing countries was critiqued for being too narrow. The SDG Agenda, also called Agenda 2030, has come into force on January 1, 2016, with a term of 15 years, replacing the eight Millennium Development Goals. Unlike the MDG, the SDG encompass a broader range of issues and apply universally to all countries, recognizing the interconnectedness of social, economic, and environmental dimensions of development. The Agenda 2030 includes countries of the global South and the global North, whereas in contrast, the MDG were drafted predominantly by member states of the Global North, the world’s leading development institutions, to promote the development

of the Global South (United Nations, n.d.). Goals included halving extreme poverty rates, curbing HIV/AIDS, or ensuring universal primary education by 2015 (MDG Monitor, 2017). According to the United Nations, the MDG are considered the starting point of an ambitious development of the Agenda 2030.

Figure 3: The Millennium Development Goals.



[source: Millenium Development Goals, .n.d.]

For 15 years, the MDG provided the guiding framework for all UN agencies, national governments, and civil society institutions engaged in development policy. Although progress has been made in some areas, it is unfortunately not possible to speak of full implementation of the goals. In addition to widespread criticism of the indicators for achieving the goals, the successes and failures are very unevenly distributed in a global comparison (Kamau et al., 2018, p. 27). For example, some regions were able to halve the number of people living in extreme poverty, whereas this goal was missed by a wide margin in other regions and therefore could not be achieved from a global perspective (Deutsche Gesellschaft für die Vereinten Nationen, n. d.). However, the Millennium Development Goals did not recognize the multidimensional character such as the factors that contribute to global poverty, including war, political instability, climate change, discrimination, and social inequality (Köhler, 2015, p. 247). Further, they criticized the disregard for stakeholder input, gender equality was limited to access to education for women, and the goals addressed a limited number of health issues and only talked about achieving primary education (Bettelli, 2019). In contrast to the earlier development decades, the MDG were strongly limited to the social level.

Political structures were not questioned, and systemic issues were not asked (Köhler, 2015, p. 247). Moreover, at the international level, unequal trade relations, exploitative global value chains, and the systemic failures of international investment and financial policies have not been addressed (ibid.). Nevertheless, the goals were able to help make international development cooperation efforts more coherent hence they have become an important gauge of the successes and failures of global development engagement (Deutsche Gesellschaft für die Vereinten Nationen, n. d.).

The United Nations is working with governments, civil society, and business to build on the momentum created by the MDG (United Nations, n.d.). At the heart of the Agenda 2030 is an ambitious set of 17 goals for sustainable development, which are explained by 169 sub-goals and 231 unique indicators (United Nations Statistics Division, 2017), designed to be integrated and indivisible, balancing the three dimensions of sustainable development: economic growth, social inclusion, and environmental protection. The goals address a wide array of global challenges, including poverty (Goal 1), hunger (Goal 2), health and well-being (Goal 3), quality education (Goal 4), gender equality (Goal 5), clean water and sanitation (Goal 6), and Climate Action (Goal 13). Each goal is accompanied by specific targets, which provide a more detailed framework for action. For example, Goal 1 includes targets to eradicate extreme poverty (measured as living on less than \$1.25 a day), implement social protection systems, and ensure equal rights to economic resources. Indicators are then used to monitor progress towards these targets, allowing for data-driven assessments and policy adjustments. The SDG call on politics, business, and society to pool their potential to jointly master the challenges of our time. Consequently, the success of the SDG depends on everyone joining in, not just states and organizations, but every single person (United Nations General Assembly, 2015, p. 1). Moreover, the SDG set new standards for responsible and future-oriented entrepreneurship. They present companies with new challenges and at the same time offer them the opportunity to position themselves, open new business areas, and contribute to sustainable development (Purtik & Jörg, 2017). 193 UN countries have committed to implementing the Sustainable Development Goals by 2030, including Germany, which serves as the focus country in this dissertation.

Figure 4: The 17 Sustainable Development Goals.



[source: United Nations, n.d.]

The idea of the SDG has quickly gained ground because of the growing urgency of sustainable development for the entire world. Almost all the world's societies acknowledge that they aim for a combination of economic development, environmental sustainability, and social inclusion, but the specific objectives differ globally, between, and within societies. Certainly, as yet, no consensus regarding the tradeoffs and synergies across the economic, environmental, and social objectives has been agreed. Still, a shared focus on economic, environmental, and social goals is a hallmark of sustainable development and represents a broad consensus on which the world can build on (Sachs, 2012).

The year 2023 marks the halfway point of the 2030 Agenda. The 17 Sustainable Development Goals formulated therein are to be achieved by 2030, government delegations report annually on progress to the UN High Level Political Forum. However, Voluntary National Reviews have been showing for years that no country is currently on track to meet them. At the SDG Summit in September 2019, the Heads of State and Government stated that the 17 goals cannot be achieved if the trend in their implementation remains unchanged (United Nations High-Level Political Forum, 2021). This statement clearly indicates the necessity for closer collaboration between business and politics. On the other hand, since their adoption, there have been notable strides towards achieving the SDG. For instance, the global poverty rate has continued to decline, access to clean water and

sanitation has improved, and there has been progress in gender equality and education. The Paris Agreement on climate change, adopted in 2015, also marked a significant step towards addressing environmental sustainability, aligning closely with Goal 13. However, progress has been uneven, and many challenges persist. The COVID-19 pandemic, for example, has significantly set back progress on several goals, particularly those related to health, education, and economic growth. Additionally, issues such as inadequate financing, policy incoherence, and insufficient political will have hindered the full realization of the SDG. The interconnected nature of the goals also means that failure in one area can impact progress in others, necessitating a holistic and integrated approach to implementation.

The SDG, while widely praised for their comprehensive and inclusive approach, have also faced criticism. One major critique is the ambitious scope of the goals, which some argue is unrealistic given the timeframe and resources available. The sheer number of goals and targets has been seen as potentially overwhelming for governments, particularly those in developing countries with limited capacities. Furthermore, the voluntary nature of the SDG, while promoting country ownership, raises concerns about accountability and enforceability. The reliance on national governments to self-report progress may lead to inconsistent and overly optimistic assessments. Critics also argue that the SDG, while promoting sustainability, do not adequately challenge the underlying economic systems and power structures that contribute to global inequalities and environmental degradation. Effective progress must be made, otherwise there is a risk that the 17 goals will not be achieved. It is evident that the contribution of business is indispensable, as Ban Ki-moon, former Secretary-General of the United Nations, states in his speech at a United Nations forum in 2015: “Governments must take the lead in living up to their pledges. At the same time, I am counting on the private sector to drive success”. Mr. Ban continued: “First, companies need to do business responsibly and then pursue new opportunities. In short, companies must not make our world’s problems worse before they try to make them better” (United Nations News, 2015). Developments since 2015 show that the interplay between politics and the economy is more important than ever, as they count on each other. The SDG represent a bold and comprehensive vision for global development, reflecting the interconnected nature of social, economic, and

environmental challenges. While significant progress has been made, the journey towards achieving these goals by 2030 remains fraught with challenges. The ongoing commitment and collaboration of all stakeholders, such as governments, international organizations, civil society, and the private sector, will be essential in overcoming these obstacles and ensuring that the vision of a more just, sustainable, and prosperous world becomes a reality. The regressions with regard to sustainable development show that there is an urgent demand for international frameworks, which is outlined in the next chapter.

2.1. THE URGENT DEMAND FOR INTERNATIONAL FRAMEWORKS

The 2030 Agenda, as well as the Paris Agreement, should serve as guiding framework at national and global levels to realign policies and programs in line with the Agenda 2030's motto "leave no one behind". The state governments must therefore see the business community as a partner in achieving the goals and actively involve it in the development and shaping of the sustainability strategy to bundle potential and jointly develop forward-looking ideas and approaches to solutions (Purtik & Jörg, 2017). The SDG have been established as a conceptual frame of reference for sustainability at the level of the UN treaty states. Global action and international standards are essential to stop climate change. The SDG provide worldwide guidance for tackling the global challenges facing the community of nations. The aim is to better protect the natural foundations of life and our planet everywhere and for everyone, and to safeguard people's opportunities to live in dignity and prosperity across the generations (Rodriguez, 2021). At the political level, they provide the framework for action by policymakers, and government delegations report annually on progress to the UN High Level Political Forum. In Germany, the German Sustainability Strategy has been in place since 2016 and is based on the 17 Goals. Likewise, most of the German states have developed their own sustainability strategies. In addition, more and more municipalities are aligning their framework of action for sustainable urban development with the 17 Goals and breaking them down to the local level (*ibid.*). However, despite the emphasis on inclusion in the SDG and the broad participatory process, there are no specific mechanisms to ensure inclusion in

national-level processes. Ultimately, actual impact depends on this, as the SDG are a form of “governing through goals” (Kanie et al., 2017). Rather than setting legally binding commitments, as in the case of the Kyoto Protocol, the SDG rely on countries voluntarily outlining how they will pursue and report on each of the goals. Countries have considerable flexibility in how they implement the Sustainable Development Goals. Adopting the SDG can then lead to changes in approaches to development or sustainability, but it can also serve to legitimize goals and policies that are already in place (Horn & Grugel, 2018). Actual change depends on how the SDG are interpreted, prioritized, and implemented in each national context. Inclusivity as a guiding goal of the 2030 Agenda can only be achieved if different perspectives are considered, in particular, those that are often marginalized in other political processes, such as businesses in different industries. Initiatives of international communities such as the United Nations and its SDG are often harbingers of national green policy regulations. However, regulatory requirements in sustainability have been steadily tightened in recent years and companies are facing far-reaching requirements.

There were already approaches before the Paris Agreement to help raise awareness of the role of non-financial aspects and risks. Since 2009, e.g., listed stock corporations in Germany have been required under the German Commercial Code to include non-financial information on environmental and employee issues in the management report, but only to the extent that it is relevant for understanding the course of business or the situation (Federal Environmental Agency Germany, 2022). The post-Paris Agreement period saw a rapidly increasing intensity in the development of political-legislative activities. They aimed to integrate sustainability into financial sector activities with a focus on core business and related reporting and disclosure by financial institutions. However, this was also a new field for the legislative institutions, which required corresponding preparatory work and planning to identify suitable regulatory measures. Today, it is no longer financial ratios that determine corporate value, but also ESG issues. Therefore, financial markets need to evaluate the risks and opportunities that arise for individual companies from non-financial metrics. This leads to a significant demand for high quality information. Investors and other capital providers want global standards for sustainability disclosure that meet their information needs (IFRS, 2021). Currently, there are popular reporting regulation, frameworks,

standards, and ratings that are used for sustainability reporting, which are outlined below. Regulations are legally binding requirements for the implementation of sustainability measures and transparency, while frameworks provide structure and a set of principles. Standards define the content, i.e., detailed requirements for the content that should be reported on for each topic. Ratings are an external assessment of sustainability activities, performance, and transparency, mostly considered by the capital market and financial institutions.

Table 1: Selected ESG Reporting Regulations, Frameworks, Standards, and Ratings

Regulations	Frameworks	Standards	Ratings
•Non-financial Reporting Directive (NFRD) •Corporate Sustainability Reporting Directive (CSRD) •EU Taxonomy •German Supply Chain Due Diligence Act •EU Supply Chain Act	•Task Force for Climate-related Financial Disclosure (TCFD) •Science Based Targets Initiative (SBTi) •United Nations Global Compact (UNGC) •Sustainable Development Goals (SDGs)	•International Financial Reporting Standards (IFRS) •European Sustainability Reporting Standards (ESRS) •Global Reporting Initiative (GRI) •Sustainability Accounting Standards Board (SASB)	•Intititutional Shareholder Service ESG (ISS-ESG) •Morgan Stanley Capital International ESG (MSCI-ESG) •Sustainalytics •EcoVadis •Dow Jones Sustainability Index (DJSI) •Carbon Disclosure Project (CDP) •Financial Times Stock Exchange for Good (FTSE4Good)

[source: own representation]

The table shows that there is a wide range of ESG reporting regulations, frameworks, standards, and ratings but significant in this context is the regulation of the EU Non-Financial Reporting Directive (NFRD). In 2018, all EU member states adopted the NFRD Directive into their national law (Anderson, 2023). It requires capital market-oriented, large companies with more than 500 employees to publish information on environmental, social, and governance issues such as human rights, combating corruption and bribery as part of the management report or a separate report (ibid.). This is no longer just about presenting the non-financial factors influencing the value of a company, but also about indirectly controlling behavior. The increased transparency obligations are intended to motivate companies to take

targeted measures in the social and environmental areas. Nevertheless, the decision to collect this data and the choice of the applicable standard rest with the companies. To date, companies have had the autonomy to select the standard that most effectively aligns with their requirements. The market for sustainability standards covers different key areas, from international regulations to sector-specific standards to more nationally oriented regulations with different focuses. It has since become apparent that the variety of possibilities is not specific and comprehensive enough. The aspects to be considered are interpreted in different ways and there is no provision for a well-founded review of the reporting. Results are hardly meaningful and comparable, as shown by a study commissioned by the Federal Environmental Agency Germany, for example (Lautermann et al., 2021). Consequently, as of 2023, there is no global uniform standard such as the International Financial Reporting Standard (IFRS) for financial reporting. Today's financial accounting standards are highly regulated, unlike standards for sustainability accounting. However, the transparent disclosure of sustainability information by the law implementing the EU Non-Financial Reporting Directive will be tightened by the CSRD (Corporate Sustainability Reporting Directive) from 2024. Consequently, the flexibility ends at least for companies in Europe that will have to prepare an extended sustainability report in the future according to the European Sustainability Reporting Standards (ESRS). The valid EU Taxonomy defines for the first time at European level what sustainable economic activities constitute. The sustainable design of global supply chains as well as their monitoring has been required in Germany since January 2023 by the Supply Chain Act (LkSG). An additional guideline at European level is the CSDDD (Corporate Sustainability Due Diligence Directive). Lastly, frameworks and standards have different focus points, raising the question of whether they measure what they are intended to. This overview indicates that there are various frameworks and standards, some voluntary and others mandatory. The issue of what they measure and whether they accurately reflect sustainability in industries could be considered a potential area for future research.

“Voluntary reporting frameworks and guidance have prompted innovation and action, although fragmentation has also increased cost and complexity for investors, companies and regulators”, according to the IFRS (2021). They continue to argue the proven demand that “many investors and regulators have called on

the IFRS Foundation to build on market-driven initiatives and leverage its experience in creating accounting standards used in more than 140 countries to provide financial markets with globally comparable reporting on sustainability issues" (IFRS, 2021). A first approach of an international framework is the International Sustainability Standards Board (ISSB). Given the many different frameworks and standards of norms and criteria for companies to disclose to external stakeholders how climate change impacts their business, G20 leaders at the UN Climate Change Conference COP26 in 2021 advocated for the creation of a new International Sustainability Standards Board (ISSB) (Jones, 2021). The ISSB is an independent, private sector body that develops and approves IFRS Sustainability Disclosure Standards and operates under the oversight of the IFRS Foundation (International Sustainability Standards Board, 2023). The ISSB consists of 14 members with each three members from the Asia-Oceania region, Europe, the Americas, one member from Africa, and four members from any area (Deloitte IAS Plus, 2023). The main requirements for membership are relevant professional experience and competence. Under the IFRS Foundation's charter, the ISSB has full responsibility for all technical sustainability-related matters, including full sovereignty in the development and execution of its work program (ibid.). Since competence and experience are paramount, the question here is how the former CEO of Danone can be a member when Danone has had to deal with greenwashing in many cases now and in the past (Freiwah, 2023; McVeigh, 2023). This constellation is questionable and would require further investigation, as it could lead to the loss of trust and questionable decisions on the composition of the members and reputation of the ISSB. How serious are its members about the basic principles of sustainability, when they experienced cases of greenwashing in the past? A report should create a high level of transparency and move industries to check their own business processes for sustainability. This standard could finally mean that companies can no longer report at will. Although ESG reporting is not the central topic of this dissertation, the ISSB and its implementation present a research gap that warrants closer investigation in the future. Fortunately, members from different industries, sectors, and politics are involved, which enables a fusion of perspectives, however, sustainable decision-making requires different organizational aspects, which is discussed in chapter 2.3.

While the ISSB will complement the ESRS, the SDG remain a voluntary reporting framework. It is the responsibility of companies to include SDG criteria and report on them regularly. There is an urgent demand for international frameworks why approaches as the ISSB are needed. However, legal regulations have greater leverage than voluntary instruments. Since the Paris Climate Conference in 2015, financial market regulation has increasingly sought to incorporate sustainability aspects and risks, giving sustainable finance momentum. The realization manifested itself at the political level that a transformation of our way of doing business toward less climate-impacting emissions and more sustainability is urgently needed. Unlike their predecessors, the Millennium Development Goals, the SDG explicitly call on all businesses to use their creativity and innovation potential to meet the challenges of sustainable development. While all governments have agreed on the SDG, success in implementing them will largely depend on the actions and cooperation of all stakeholders. Opportunities are that the SDG open up the possibility for companies to develop and implement solutions and technologies to address the world's most pressing challenges for sustainable development. The SDG cover a wide range of sustainability issues such as poverty, health, climate change, and environmental degradation that are also relevant to business and therefore allow their strategies to be linked to global objectives. Companies can use the SDG as a framework to shape, manage, communicate, and report their strategies, goals, and business activities (SDG Compass, n.d.). However, the International Organization for Standardization (ISO) is translating the implementation of the United Nations' Sustainable Development Goals into a management system standard. The ISO 53001 standard "Management Systems for UN Sustainable Development Goals – Requirements" is being developed by the ISO project committee and is due to be published by fall 2025. In addition to sustainability reporting, the aim is to enable organizations to demonstrate the achievement of their sustainability goals through appropriate certification once the standards have been adopted and a corresponding certification offer is available. The existing ISO management system standards, such as ISO 50001 Energy Management System or ISO 14001 Environment Management System, already contain various references and requirements relating to sustainability aspects, including environmental, health and energy aspects. With ISO 53001, these are now being supplemented by a comprehensive standard that is

intended to cover all factors relevant to sustainability. ISO 53001 is intended to specify the requirements for a “Sustainable Development Goals Management System” to support sustainable development in companies. This comes into play when an organization wants to document and expand its activities with regard to the implementation of the SDG. In addition, such an SDG management system is recommended for organizations that wish to manage their corresponding activities in a systematic manner. As a result, the SDG management system should contribute to improving the sustainability performance of organizations, fulfilling compliance obligations, achieving selected sustainability goals, and gaining and maintaining the trust of stakeholders in the future viability of the organization. Last but not least, the standard also focuses on the economic success of the organization (DGQ, 2024).

German companies, particularly those that are large or publicly traded, are subject to specific sustainability reporting obligations. These obligations have evolved with both European and national regulations. The Non-Financial Reporting Directive (NFRD), formally known as Directive 2014/95/EU, was adopted by the European Union in 2014 to enhance corporate transparency and accountability regarding non-financial and diversity information. This directive amended the existing Accounting Directive (2013/34/EU) and mandated that certain large companies disclose information on environmental, social, and governance (ESG) factors (European Parliament, 2014). Specifically, the NFRD applies to large public-interest entities with over 500 employees, including listed companies, banks, and insurance companies. These entities are required to include in their annual reports a non-financial statement containing information on environmental protection, social responsibility and treatment of employees, respect for human rights, anti-corruption and bribery, and diversity on company boards (European Parliament, 2014). The directive emphasizes the disclosure of policies pursued by the company in relation to these matters, including due diligence processes implemented, outcomes of these policies, principal risks related to these matters linked to the company's operations, and non-financial key performance indicators relevant to the particular business (ibid.). In Germany, the NFRD was transposed into national law through the “Gesetz zur Stärkung der nichtfinanziellen Berichterstattung der Unternehmen in ihren Lage- und Konzernlageberichten” (Law to Strengthen Non-Financial Reporting by

Companies in Their Management and Group Management Reports). This legislation obligates large companies that are public-interest entities to include non-financial statements in their annual reports, thereby increasing corporate transparency in social and environmental aspects (DFGE (Institut für Energie, Ökologie und Ökonomie), 2017).

The CSRD, which is the updated and more comprehensive version of the NFRD, significantly expands the scope of sustainability reporting for EU companies. The CSRD Directive (EU) 2022/2464, adopted by the European Parliament and the Council on December 14, 2022, aims to strengthen and harmonize the disclosure of sustainability information by certain undertakings. It amends four EU directives to support the EU's environmental, social, and economic objectives, such as the Green Deal, the Biodiversity Strategy, and the Action Plan on Financing Sustainable Growth (European Parliament, 2022).

It might apply to public-interest companies (over 500 employees), which are already subject to the NFRD and to all large companies, that are not presently subject to the NFRD starting in 2024 for reports in 2025. However, in February 2025, the European Commission introduced the “Omnibus” package, aiming to reduce regulatory burdens on businesses while maintaining the EU's sustainability objectives. This initiative proposes significant amendments to key sustainability legislations, including the Corporate Sustainability Reporting Directive (CSRD), Corporate Sustainability Due Diligence Directive (CSDDD), Carbon Border Adjustment Mechanism (CBAM), and the EU Taxonomy Regulation. The European Financial Reporting Advisory Group (EFRAG) is in the process of revising the ESRS. A proposal for the revisions is expected to be available by the end of October 2025. As of April 3, 2025, the European Parliament voted to delay the implementation of certain sustainability reporting rules, providing time to renegotiate exemptions, particularly for smaller businesses. The proposed changes are subject to approval by the European Parliament and EU member states, with discussions ongoing (Abnett, 2025).

Under the CSRD, companies must report on a wider range of sustainability topics, such as climate-related disclosures aligned with the EU Taxonomy, impact on biodiversity, circular economy practices, human rights policies and practices, and social factors, including diversity and inclusion (European Parliament, 2022).

Companies subject to the CSRD must also disclose how their activities align with the EU Taxonomy Regulation, which provides criteria for determining environmentally sustainable economic activities. This is essential for investors who need to assess the sustainability of companies they invest in. The EU Taxonomy Regulation is a cornerstone of the European Union's strategy to promote sustainable investment and achieve climate neutrality by 2050. Enacted in 2020, it establishes a unified classification system to identify which economic activities can be considered environmentally sustainable. This framework aims to guide investors, companies, and policymakers in making informed decisions that align with the EU's environmental objectives (European Parliament, 2020). Key Objectives of the EU Taxonomy Regulation are the definition of Environmentally Sustainable Activities, which sets clear criteria for activities that contribute substantially to one or more of six environmental objectives:

- Climate change mitigation
- Climate change adaptation
- Sustainable use and protection of water and marine resources
- Transition to a circular economy
- Pollution prevention and control
- Protection and restoration of biodiversity and ecosystems

By providing a clear and consistent framework, the taxonomy helps prevent the mislabeling of investments as environmentally friendly, ensuring that sustainability claims are credible and verifiable. Lastly, the regulation mandates that companies disclose the extent to which their activities align with the taxonomy's criteria, thereby increasing transparency for investors and other stakeholders (ibid.).

In addition to EU requirements, companies in Germany can voluntarily adopt the German Sustainability Code (Deutscher Nachhaltigkeitskodex (DNK)). The DNK is a set of principles and criteria that companies can use to report on their sustainability performance. It is particularly used by SMEs but is also applicable for larger companies to communicate their sustainability efforts. For public companies, Germany's Stock Corporation Act includes provisions on reporting ESG factors in the management report, which also aligns with EU reporting standards (Deutscher Nachhaltigkeitskodex, n.d.). Lastly, if a German company is involved in financial services, it must comply with SFDR (Sustainable Finance

Disclosure Regulation). The Sustainable Finance Disclosure Regulation, officially known as Regulation (EU) 2019/2088, is a European Union regulation that aims to enhance transparency in the financial services sector regarding sustainability. Effective from March 10, 2021, the SFDR imposes mandatory disclosure requirements on financial market participants and financial advisers, focusing on how they integrate environmental, social, and governance (ESG) factors into their investment decisions and advisory processes (European Parliament, 2019). The regulation mandates that financial market participants disclose how sustainability risks are integrated into investment decision-making and the impacts of their investments (*ibid.*). The SFDR is part of a broader EU sustainable finance framework and interacts with other regulations, such as the EU Taxonomy Regulation. While the SFDR focuses on disclosure requirements, the Taxonomy Regulation provides a classification system for environmentally sustainable economic activities. It also aligns with the Corporate Sustainability Reporting Directive. The CSRD expands the scope of non-financial reporting requirements, complementing the SFDR's objectives by enhancing corporate transparency on sustainability matters (Barral, 2023).

2.2. SELECTION AND MEASURABILITY OF CHOSEN SDG

This chapter explains the selection of specific SDG as the foundation for this dissertation and addresses their measurability. This precedes the SDG reporting of DAX companies discussed in the third chapter.

This dissertation uses the ESG Global Monitor Report as the baseline for selecting the SDG with the greatest economic leverage in the DAX index. The ESG Global Monitor research aims to measure transparency in the non-financial reporting of large public interest companies listed in the world's leading stock indices (Hofstetter & Diegelmann, 2022). Non-financial reporting differs in several ways from other forms of ESG communication such as websites, blogposts, or magazines. For example, non-financial reports are regulated to some degree in most countries. They also combine quantifiable and qualitative information that is auditable and relates to a clearly defined time period. Furthermore, they address both shareholders and stakeholders and show how companies create shared value in society. Since in some cases the fiscal year does not coincide with the calendar

year, the last available report is therefore always included in the sample (ibid.). The reports are analyzed by a team of 14 analysts, all of whom have an academic background and are well trained in either financial and non-financial reporting or content analysis. The collected reports were analyzed by using the revised GEM ASSAY™ evaluating the following topics (ibid.):

- ESG Strategy & Corporate Purpose
- Reporting Frameworks
- Reliability
- Materiality
- Stakeholder Engagement
- Targets, Measures
- Board Commitment
- Governance & Corporate Citizenship
- Climate Change Commitment
- GHG & Roadmap to Net Zero
- Water, Pollution & Waste
- Supply Chain Transparency
- Diversity and Inclusion

Each coder is presented with a subsample of the research set. Prior to coding, coders are familiarized and trained with the GEM ASSAY™ by performing a test run of the questionnaire with a defined report of the sample. In this way, misunderstandings can be eliminated from the outset and similar understanding can be ensured among all evaluators. During the fieldwork, daily meetings allow all coders to discuss questions and uncertainties and share their experiences (Hofstetter & Diegelmann, 2022). The GEM Assay™ also examines societal aspects, in particular the companies' contribution to global goals such as the Paris Climate Agreement or the SDG. The following three SDG were mentioned most frequently by the DAX companies in their sustainability reports in 2022, which is considered as the baseline for this dissertation (Hofstetter & Diegelmann, 2022):

- Goal number 13: Climate Action with 74%,
- goal number 8 Decent Work and Economic Growth with 72%,
- goal number 5 Gender Equality with 69%,
- and goal number 9 Industry, Innovation, and Infrastructure with 69%.

The analysis of sustainability reports from DAX companies in 2022 highlights the prioritization of specific Sustainable Development Goals, with Climate Action (SDG 13) receiving the most attention (74%). This strong focus aligns with global and European regulatory pressures, such as the Corporate Sustainability Reporting Directive (CSRD), EU Green Deal, and Agenda 2030, pushing companies to address climate risks, decarbonization, and carbon neutrality targets. Following closely, Decent Work and Economic Growth (SDG 8) at 72% reflects corporate commitments to fair labor practices, employee well-being, and sustainable economic performance. The emphasis on Gender Equality (SDG 5) and Industry, Innovation, and Infrastructure (SDG 9), both at 69%, underscores the increasing importance of social sustainability and innovation-driven resilience. Gender diversity, particularly in leadership, remains a key priority due to regulatory frameworks like gender quota laws, while investments in innovation and infrastructure support long-term economic and environmental sustainability. Overall, the statistics suggest that DAX companies are aligning their sustainability strategies with both regulatory requirements and stakeholder expectations, emphasizing Climate Action, responsible economic growth, and social progress. However, the relatively lower representation of other SDG raises questions about whether certain sustainability areas, such as biodiversity (SDG 15) or responsible consumption (SDG 12), are receiving adequate attention.

While four SDGs were initially identified, the subsequent analysis focuses on three SDG (SDG 13, SDG 8, and SDG 5), as they exhibit the highest reporting frequency and strongest empirical relevance across both the corpus analysis and interview data. The fourth SDG was not pursued further due to limited analytical depth and overlap with the remaining goals.

The Global ESG Monitor, recognized as a leading think tank for corporate sustainability, did not release a report in 2023 but did publish one in 2024. While 73% of companies explain how their goals contribute to the climate agreement, the integration of the SDG often remains undeveloped. Although 84% of companies provide general information on the SDG, the allocation of the SDG mentioned often does not match the topics classified as material. 100% of companies have a material topic in the area of climate (SDG 13), which also includes the energy sub-topic (SDG 7), but only 71% take the opportunity to present this as a contribution to society as

a whole in connection with the associated SDG (Diegelmann & Hofstetter, 2024). It is also noticeable that the sub-topics prioritize SDG that have a direct business and regulatory impact: Climate Action (SDG 13) and economic growth (SDG 8) take center stage, while social and environmental goals such as “No poverty” (SDG 1) are neglected. This raises the question of whether some companies actually understand the Agenda 2030 as a holistic framework or merely use it as an instrument to fulfill their economic interests (Diegelmann & Hofstetter, 2024). It is precisely the question that will be answered in the mixed methods research during this dissertation.

The 2030 Agenda “encourage[s] member states to conduct regular and inclusive reviews of progress at the national and sub-national levels” (United Nations, 2015, p. 33). The review of the implementation status of the SDG is called SDG monitoring. It is the central tool for tracking sustainability policies and tracking progress on the SDG. To measure the broad sustainability goals, the international community of states has agreed on a total of 169 sub-goals that provide an action plan for achieving them (United Nations Statistics Division, 2023). 231 globally applicable indicators measure progress on each of these sub-goals, which were developed by the Inter-Agency and Expert Group on Sustainable Development Goal Indicators (IAEG-SDG) of the United Nations Statistical Commission (UNSC) (ibid.). These indicators can change over the years: “According to the Resolution, the indicator framework will be refined annually and reviewed comprehensively by the Statistical Commission [...] The global indicator framework will be complemented by indicators at the regional and national levels, which will be developed by Member States” (ibid.). Measuring progress requires developing consensus on qualitative indicators that are applicable in different contexts (Bizikova, Pintér, & Denton, 2016), such as a corporate sustainability strategy that addresses different SDG. Something similar is also noticeable at comparing countries. The Sustainable Development Reports reflect the annual assessment of the progress of all UN Member States toward achieving the Sustainable Development Goals. To ensure that countries regularly inform each other about their progress and exchange information, the United Nations invites them to the annual High-Level Political Forum on Sustainable Development (HLPF) in New York, a UN body for coordinating global sustainability policy (United Nations High-Level Political Forum on Sustainable Development, n.d.).

Before the meeting, member states can submit a Voluntary National Review of their national implementation status and present it at the HLPF (ibid.). The emphasis is on voluntary, which is the first significant insight of this dissertation. As it is a voluntary submission of the review, the commitment to pursuing the SDG by countries and companies may vary. However, each country is responsible for the exact selection of indicators, the collection of data, and the establishment of a monitoring system. This means countries can decide for themselves which of these indicators to use for monitoring an SDG. Therefore, a variety of different monitoring approaches can be found around the world (Forum Umwelt und Entwicklung, 2021), making comparability among countries difficult. Consequently, the Sustainable Development Solutions Network (SDSN) and the Bertelsmann Stiftung developed one possibility of comparability and have published the global SDG index and dashboards since 2016. The methodology has been peer-reviewed (Schmidt-Traub et al., 2017) and verified by the Joint Research Centre of the European Commission in 2019 (Papadimitriou, Neves, & Becker, 2019). To enable better analysis of country and regional contexts and improve policy relevance, SDSN has also developed regional and subnational SDG indices and dashboards in collaboration with numerous partners (ibid.). The indicators were selected based on five criteria (ibid.):

- Relevance to monitoring the achievement of the SDG,
- statistical adequacy,
- timeliness,
- data quality,
- and coverage.

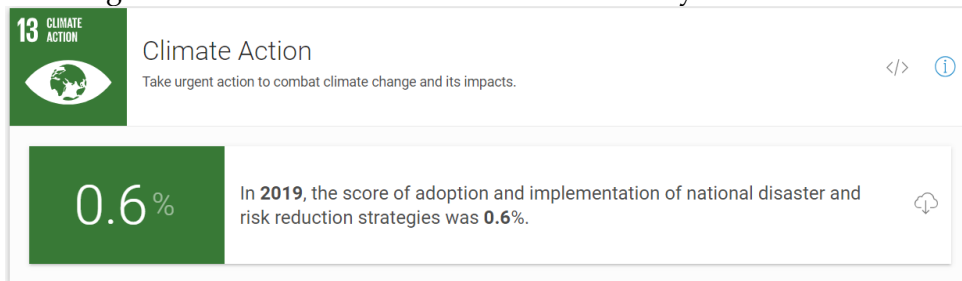
The Joint Research Centre of the European Commission states that “the fact that the goals are universal and diverse makes aggregation into a single number quite difficult from a statistical standpoint. The SDG Index is the first composite measure of its kind to track progress on the SDG at the national and global levels” (Papadimitriou, Neves, & Becker, 2019). States are encouraged to provide robust data for these global indicators but to choose indicators at the national level that fit their respective national specifics and objectives. The challenge at country level is that monitoring and evaluating the progress of each SDG will pose challenges for local and subnational authorities. This is due to the numerous economic, social, and

environmental differences between cities, which make it difficult to apply the same indicators globally. Since the SDG must be implemented to a significant extent at the local level, city-specific indicators are required (Woodbridge, 2015). However, although the aggregate figures presented in the United Nations SDG Reports provide a way to track progress, the situation of individual countries within a given region or among population groups can vary significantly from regional averages. Aggregate figures for all regions also obscure another reality: the lack of adequate data in many parts of the world to assess national trends and to inform and monitor the implementation of development policies (United Nations, 2022, p. 62). Given that this dissertation is centered on Germany's progress in relation to the Sustainable Development Goals (SDG), an international comparison would be beyond its scope.

Germany states in their Voluntary National Review 2021 that “[...] The Federal Government has included civil society, business and science in the process of the development of the German Sustainability Strategy as well as in the dialogue process accompanying the preparation of its voluntary national report. The transition to a sustainable Germany can only succeed if understood as a joint endeavor.” (United Nations High-Level Political Forum on Sustainable Development, 2021). However, the recent cross-country research by the Bertelsmann Stiftung and SDSN shows, no country is currently on track to achieve all 17 SDG by 2030, even within the group of OECD countries (Bertelsmann Stiftung/Sustainable Development Solutions Network (SDSN), 2018). In Germany, e.g., the monitoring of the 2030 Agenda is carried out by the German Sustainability Strategy. It is the central instrument for tracking and reviewing national sustainability policy (German Federal Government, 2021, p. 11). With the adoption of the SDG, it was revised and transferred to the German Sustainability Strategy in 2016, which has since been aligned along the SDG. Every two years, indicator reports on the progress of the SDG must be submitted as part of the sustainability strategy (Forum Umwelt und Entwicklung, 2021). To measure the implementation status and progress in achieving the goals, the German government has agreed on 72 national indicators. Data collection is carried out by the Federal Statistical Office “Destatis”. Every two years, the Federal Statistical Office presents an indicator report summarizing the results and measures of national SDG monitoring. The German government's states in its sustainability strategy 2021 that it is closely

monitoring the development of these indicators is not enough to put development on the right track (Forum Umwelt und Entwicklung, 2021). However, particularly rapid, and effective action is required to be able to curb the undesirable developments. The German Indicator Report 2021 shows that more than a third of the 72 indicators are moving either too slowly or even against the desired direction (ibid.). They are so-called “off-track indicators”, indicators for which the targets set are unlikely to be achieved. It is evident that the selection of indicators has a decisive influence on how the implementation status of the SDG is perceived. As a result, different measures are derived depending on the perceived implementation status. The monitoring of the German sustainability strategy, which has been designed so far, shows considerable deficiencies. The indicators are for the most part not congruent with the international SDG indicators, various sub-goals are not covered by the small number of indicators and the target values are set too low in many places. For example, the official SDG indicator database of the UN Statistics Division shows only one indicator for Goal 13 in Germany in 2022, although there are 8 international and 2 national indicators.

Figure 5: One Indicator for Goal 13 in Germany in 2022.



[source: United Nations Statistics Division, 2023]

This case is not unique to Germany. Many countries around the world are struggling to integrate the SDG into their policies. Different challenges also lead to different indicators which is why comparability is hardly possible and the SDG indicator database of the UN Statistics Division shows different indicators for different states. Moreover, the International Institution for Sustainable Development (IISD) criticizes the development of the indicators. Indicators must monitor actual changes over time and measure the state of resources, why it can be difficult to generate consistent data for at all levels (Bizikova, Pintér, & Denton, 2016). In addition, the SDG Report 2022 shows that progress has been made in the

availability of internationally comparable data for monitoring the SDG, as the number of included indicators in the global SDG database increased from 115 in 2016 to 217 in 2022 (United Nations, 2022, p. 4). However, significant data gaps remain in terms of geographic coverage and timeliness. This makes it challenging to fully capture the pace of progress toward implementing the 2030 Agenda (ibid.). A notable example is goal 13 “Climate Action”. Although DAX companies mention goal 13 most frequently, only about 20 percent of countries have data on it (Bizikova, Pintér, & Denton, 2016). First, 231 indicators are too many and will lead to overload, especially in non-wealthy countries, as they do not have the institutional capacities and resources for data collection. Bizikova et al. also believe that proxy data should be used to at least establish a benchmark when SDG indicators are not available. Even wealthy countries are not fully capable of collecting the data for the SDG (ibid.). Further, the indicators must cover key dimensions of a comprehensive sustainable development framework. The SDG do not recognize the importance of socioeconomic and environmental conditions, according to the IISD. For example, there are no government indicators for SDG 13, “Climate Action” (Bizikova, Pintér, & Denton, 2016). For this dissertation, however, there is no other choice but to compare the German Indicator Report.

The next subchapters review the developments of SDG 13, 8, and 5 at national level. A complete overview of the global indicator framework for the Sustainable Development Goals and targets of the 2030 Agenda for Sustainable Development for SDG 13, 8, and 5 can be found in appendix 1. Typically, Germany's Federal Statistical Office publishes this report yearly, with the previous edition released in 2022. Consequently, The future targets is defined as part of the policy framework in force at the time of analysis and serves as a benchmark for evaluating ambition levels rather than as a claim about actual target achievement. If the 2023 report was delayed or unavailable by May 2025, it may affect perceptions regarding Germany's reporting on the Sustainable Development Goals. As a result of the unavailability of the 2023 indicator report by May 2025, the measures and charts presented are limited to the years 2021 and 2022. These are the same ones that have been mentioned most frequently in the DAX companies, which raises the question of the extent to which business has contributed to improving these SDG.

2.2.1. Sustainable Development Goal 13 “Climate Action”

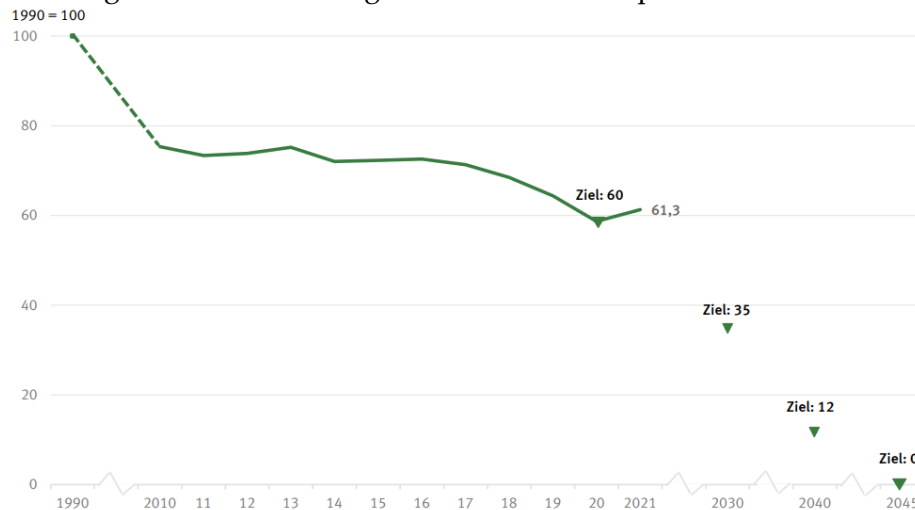
The measurability of SDG 13 is crucial because it involves tracking progress toward specific targets and indicators related to addressing climate change and its impacts. Measuring the success of these efforts is essential for accountability and ensuring that the world is on track to mitigate climate change effectively. The introduction has shown that the world needs to take urgent action to slow down global warming and to decrease energy-related CO₂ emissions. However, the SDG report 2022 of the United Nations shows that our window of opportunity to avoid climate catastrophe is closing rapidly, additionally, climate change is called as humanity's “Code Red” warning (United Nations, 2022, p. 20). Although the goal is to limit global warming to below 2 degrees Celsius compared to pre-industrial levels, temperatures are increasing every year (ibid.). Countries must submit plans for Climate Action, known as Nationally Determined Contributions (NDCs). The world is unlikely to achieve the 2030 Agenda without the actions to reduce greenhouse gas emissions (Bettelli, 2021). Using fossil fuels, deforestation, and animal husbandry, humanity is increasingly affecting the climate and temperature on Earth. In particular, the economy plays a key role. With a share of 37.7 percent, energy production was the largest cause of energy-related CO₂ emissions worldwide in 2021 (Crippa et al., 2022). Compared to 2019, total energy and heat generation was responsible for a quarter of global greenhouse gas emissions (Nagiller, 2019). If nothing changes and the temperatures continue to rise, disasters will increase approx. 40% to 2030, sea level will rise to 30-60cm by 2100, drought will be reason for displacing 700 million people by 2030, and coral reefs will die off completely when the world reaches 2°C (United Nations, 2022, p. 20). “However, current national commitments are not sufficient to meet the 1.5 °C target. Under these commitments, greenhouse gas emissions are projected to increase by almost 14 per cent over the next decade” (ibid., p. 52).

SDG 13 “Climate Action” includes 5 targets and 8 indicators (United Nations Statistics Division, 2023), which can be found in appendix 1, that provide a framework for measuring progress. These targets are designed to address various aspects of climate change mitigation and adaptation. The German Statistical Office compiles the actual developments for the individual indicators into its indicator report. 2 indicators contribute to SDG 13 in the Germany's indicator report 2022:

1. Reducing greenhouse gases (13.1.a)
2. International climate financing for the reduction of greenhouse gases and adaptation to climate change (13.1.b)

The following analysis presents greenhouse gas emission developments up to the most recent verified reporting period available at the time of data collection. It serves as a historical baseline for understanding long-term emission trajectories rather than a real-time assessment. Considering the first indicator, the German government's target in 2021 was to reduce greenhouse gas emissions in Germany by at least 40% by 2020 and 55% by 2030 compared to 1990 levels. Greenhouse gas neutrality was to be achieved by 2050 (Statistisches Bundesamt (Destatis), 2021, p. 110). The German government set new ambitious goals for 2022, including reduction of greenhouse gas emissions by at least 65% by 2030, 88% by 2040 compared to 1990 levels, and greenhouse gas emissions neutrality by 2045 (Statistisches Bundesamt (Destatis), 2023, p. 116). Looking at the development from 2015 to 2021, the indicator did not show a stable development. In 2015 and 2016, the emission levels of greenhouse gas emissions increased slightly by 0.3 percentage points each. However, since 2017, they decreased significantly, by 5.7 percentage points in 2020. The 2020 target was thus achieved with a reduction of 41.3%, however, this is due to declines in transportation and industrial production during the Corona pandemic. In 2021, greenhouse gas emissions increased again by 2.6 percentage points.

Figure 6: Greenhouse gas emissions development since 1990 in Germany.



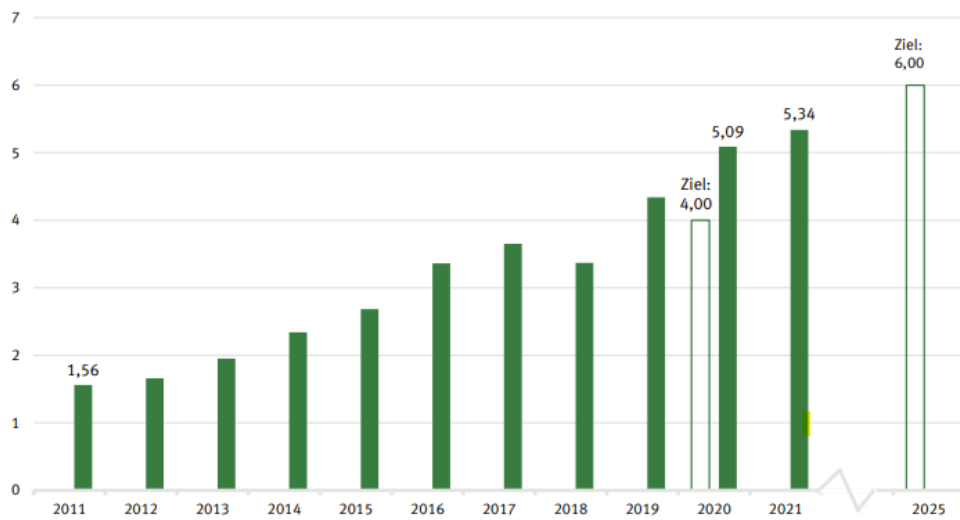
[source: Statistisches Bundesamt (Destatis), 2023]

In the long term, preliminary emissions data show an overall decrease of 38.7% compared to 1990. If the trend of the last five reporting years continues, achieving the 2030 target of 65% is not possible. The government's former target of a 55% reduction in greenhouse gas emissions by 2030 would also not be achieved if the trend were to continue (*ibid.*, p. 117). Although the trend is moving in the right direction, a gap of more than 20 percent remains.

The second indicator, “international climate financing for the reduction of greenhouse gases and adaptation to climate change” covers the financing of measures to reduce greenhouse gases, adapt to climate change, and climate-related measures to preserve biodiversity and protect forests. The measures are primarily carried out in developing and emerging countries and are financed from German budget funds (Statistisches Bundesamt (Destatis), 2023, p. 118). The German government intends to increase its international climate financing to six billion euros from budgetary funds by 2025, tripling the 2014 target of two billion euros. In the decisions that accompanied the Paris climate agreement, reaffirmed the 2009 pledge by developed countries to collectively contribute \$100 billion from 2020 to 2025 from public and private sources mobilized through public funds to for climate change mitigation and adaptation in developing countries (*ibid.*, p. 119). In 2021, 5.34 billion euros were pledged or made available from German budget funds for international climate financing to reduce greenhouse gases and adapt to climate

change. Compared with the previous year, when climate financing amounted to 5.09 billion euros, this represents an increase of 4.9%. The indicator's target of six billion euros by 2025 is expected to be met if current trends continue.

Figure 7: German payments primarily to developing and emerging countries for climate financing.



(source: Statistisches Bundesamt (Destatis), 2023)

The original target of four billion euros by 2020 was already achieved in 2019 with payments of 4.34 billion euros. In addition, 18% (€971 million) of climate finance in 2021 was provided through multilateral channels. Of this amount, 268 million euros can be attributed to Germany based on the climate-related shares of German contributions to multilateral development banks, the Global Environment Facility, and the International Fund for Agricultural Development. Germany provides the remaining 703 million euros via multilateral institutions and contributions to international climate funds (ibid.) The target for this indicator has been achieved but more ambitious targets cannot be ruled out by 2030.

2.2.2. Sustainable Development Goal 8 “Decent Work and Economic Growth”

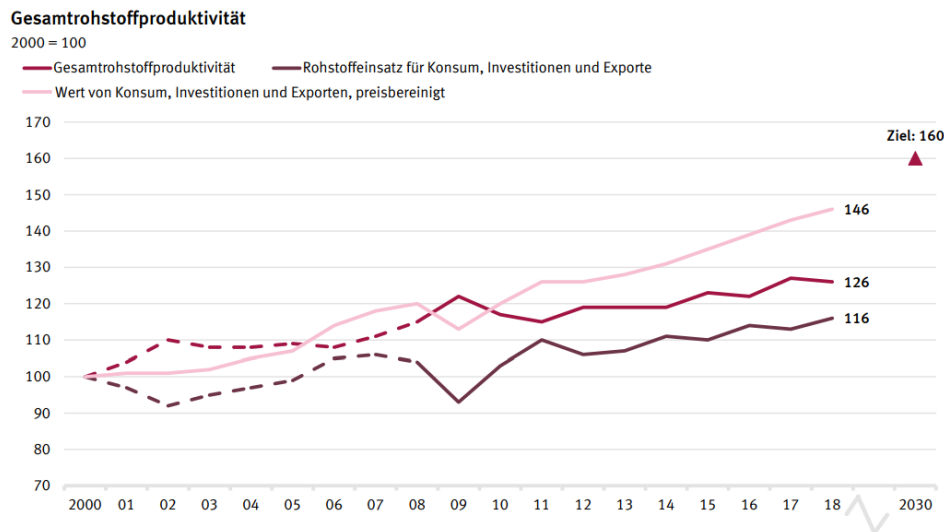
The second most frequently mentioned SDG in the reports of DAX companies is SDG 8 “Decent work and economic growth”. Sustainable Development Goal 8 is

to “promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all” (United Nations, n.d.) and includes 12 targets and 16 indicators (United Nations Statistics Division, 2023), which can be found in appendix 1, but 6 indicators contribute to SDG 8 in the Germany’s indicator report (Statistisches Bundesamt (Destatis), 2021, p. 62-75; (Statistisches Bundesamt (Destatis), 2023, p. 68-81):

1. Resource conservation – using resources sparingly and efficiently with the indicator “total raw material productivity” (8.1)
2. Government debt – consolidating public finances and creating intergenerational equity with the
 - a. “government deficit” indicator (8.2.a)
 - b. “structural deficit” indicator (8.2.b) and
 - c. “debt level” indicator (8.2.c)
3. Providing for the economic future – creating good investment conditions and maintaining prosperity in the long term with the “ratio of gross fixed capital formation to GDP” indicator (8.3)
4. Economic performance – increasing economic output in an environmentally and socially compatible manner using the “gross domestic product per inhabitant” indicator (8.4)
5. Employment – Increase employment level with the “employment rate” indicator (8.5.a, b)
6. Global supply chains – enabling decent work worldwide with the “members of the textile alliance” indicator (8.6)

Two indicators are explained in more detail as examples. The first indicator is defined as the value of consumption, investment and exports (price-adjusted) in relation to the raw material input for consumption, investment, and exports (Statistisches Bundesamt (Destatis), 2021, p. 62).

Figure 8: Total factor productivity in Germany from 2000-2018.



[source: Statistisches Bundesamt (Destatis), 2023]

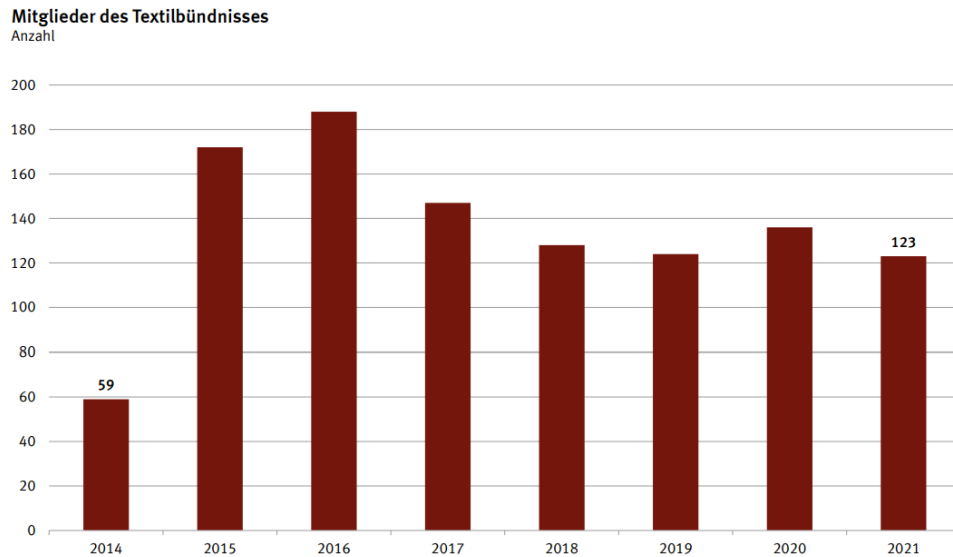
Due to the rising demand for raw materials, raw material deposits are increasingly being developed worldwide in areas of the world that are particularly sensitive to human influences. For this reason, the German government already set itself the goal in the German Resource Efficiency Program “ProgRess” in 2016 that overall raw material productivity should continue to rise. In the years 2000 to 2010, total raw material productivity already increased by an average of around 1.6% per year. Such a positive trend is to be continued until 2030 (ibid.).

The target corresponds to maintaining the trend of the years 2000 to 2010 with an average increase of around 1.6% per year. Total raw material productivity (red line) is defined as the value of consumption, investments and exports (price-adjusted) (light red line) in relation to the raw material input for consumption, investments and exports (dark red line). The time series for total raw material productivity and raw material input were corrected from 2010 due to methodological changes (Statistisches Bundesamt (Destatis), 2023, p. 68). To calculate this indicator, it is necessary, among other things, to determine the mass of all raw materials required for the production of imports. The calculation of this figure, known as imports in raw material equivalents, is based on a complex model that uses data from various official and non-official sources. The value of the indicator increased by 26% between 2000 and 2018. This increase is due in particular to the growth in the numerator: the value of the last use (domestic consumption and domestic investment as well as exports) increased by 46% in the

comparison period (ibid., p. 69). Although domestic raw material extraction fell moderately between 2000 and 2018, the mass of imports in raw material equivalents rose at the same time, resulting in an overall increase of 16% for the denominator of the indicator. The year 2009 should be seen as an outlier due to the particular economic situation in the European financial market and economic crisis. In 2010 and 2011, investments and exports as well as the associated use of raw materials increased noticeably again, so that 2011, total raw material productivity was back at the 2008 level (Statistisches Bundesamt (Destatis), 2023, p. 69). Since then, total raw material productivity has tended to rise, although it has also stagnated or fallen slightly in the meantime. At the current margin, the value of the indicator increased by 5 percentage points in 2017 compared to the previous year, only to register a slight decline of 1 percentage point in 2018. Overall, total raw material productivity increased by 9 percentage points in the period from 2010 to 2018. Its average annual growth was therefore around 0.9% and thus below the German government's target path (ibid).

The second exemplary indicator “Global supply chains – enabling decent work worldwide with the “members of the textile alliance” indicator” shows the number of members of the Partnership for Sustainable Textiles (Textiles Partnership).

Figure 9: Number of members of the Partnership for Sustainable Textiles (Textiles Partnership).



[source: Statistisches Bundesamt (Destatis), 2023]

The Textiles Partnership has full, advisory, and associate members. Ordinary members are further divided into the so-called stakeholder groups of business, trade unions, non-governmental organizations, standard organizations, and the German government. A standard organization is an organization that offers or develops non-commercial standards for sustainable textiles. Membership of the Textiles Partnership is voluntary and takes place by joining (Statistisches Bundesamt (Destatis), 2023, p. 80). The multi-stakeholder initiative “Partnership for Sustainable Textiles” was founded in fall 2014. The Textiles Partnership aims to improve the social, ecological, and economic framework conditions in the production countries. Therefore, the number of members of the Textiles Partnership is to be significantly increased by 2030. In its founding year of 2014, 59 members joined the Textiles Partnership, including 26 companies. By the end of 2016, the number of members had more than tripled to a peak of 188, including 133 companies. Since the introduction of the mandatory creation of action plans (roadmaps) in 2017, there have been both exclusions and several withdrawals from the Textiles Partnership. On the one hand, members were excluded for failing to meet their reporting obligations. On the other hand, members withdrew due to the effort involved or insufficient relevance. At the end of December 2021, the total

number of members was 123. 26 of the original 59 founding members (period October to December 2014) were still members of the Partnership for Sustainable Textiles by the end of December 2021, with the German government now only being counted as one member instead of three compared to 2014. On average over the last five years, the number of members has moved in a negative direction (ibid., p. 81). With this decline, it should be noted that since 2020, companies in the Textiles Partnership have been obliged to fulfill their responsibility to implement due diligence obligations along the supply chain. This includes the analysis and prioritization of social and environmental risks in the supply chain as well as the derivation of targets and measures to avoid or mitigate these risks. Every two years, member companies must report on the status of their implementation of due diligence obligations (ibid.), which could be an indication for the declining number of participants.

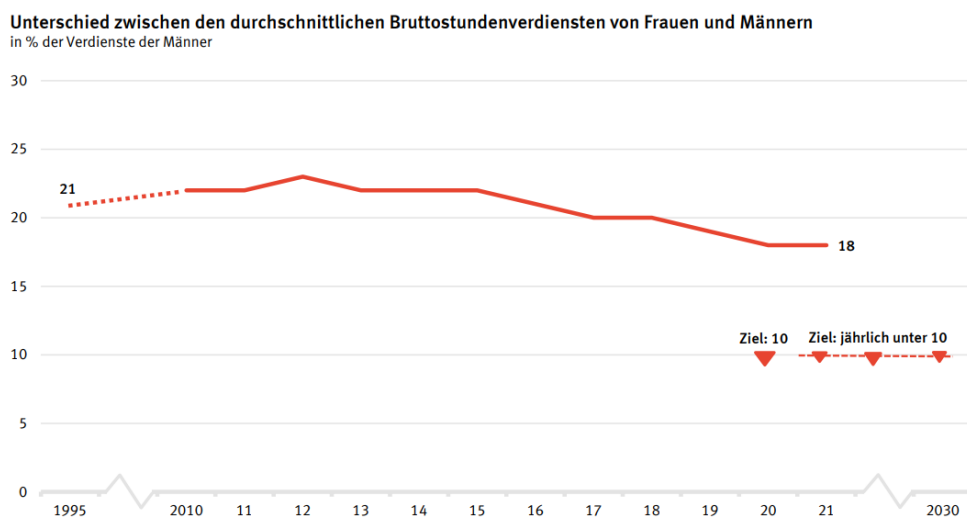
2.2.3. Sustainable Development Goal 5 “Gender Equality”

The third most frequently mentioned SDG in the reports of DAX companies is SDG 5 “Gender Equality”. Sustainable Development Goal 5 is to “achieve gender equality and empower all women and girls” (United Nations, n.d.) and includes 9 targets and 14 indicators on an international level (United Nations Statistics Division, 2023), which can be found in appendix 1. 5 indicators contribute to SDG 5 in the Germany’s indicator report (Statistisches Bundesamt (Destatis), 2023, p. 46-55):

1. Pay gap between women and men – Difference between the average gross hourly earnings of women and men (5.1.a)
2. Women in management positions in the economy – Proportion of women in management positions (5.1.b)
3. Women in management positions in the federal civil service – Proportion of women in management positions (5.1.c)
4. Fathers' participation in parental allowance – Proportion of children whose fathers received parental allowance (5.1.d)
5. Vocational training for women and girls through German development cooperation – Women and girls who have been reached by vocational training measures of German development cooperation (5.1.e)

Again, two indicators are explained in more detail as examples. The first indicator shows the difference between the average gross hourly earnings of women and men as a proportion of the average gross hourly earnings of men (Statistisches Bundesamt (Destatis), 2023, p. 46).

Figure 10: Difference between the average gross hourly earnings of women and men in Germany.



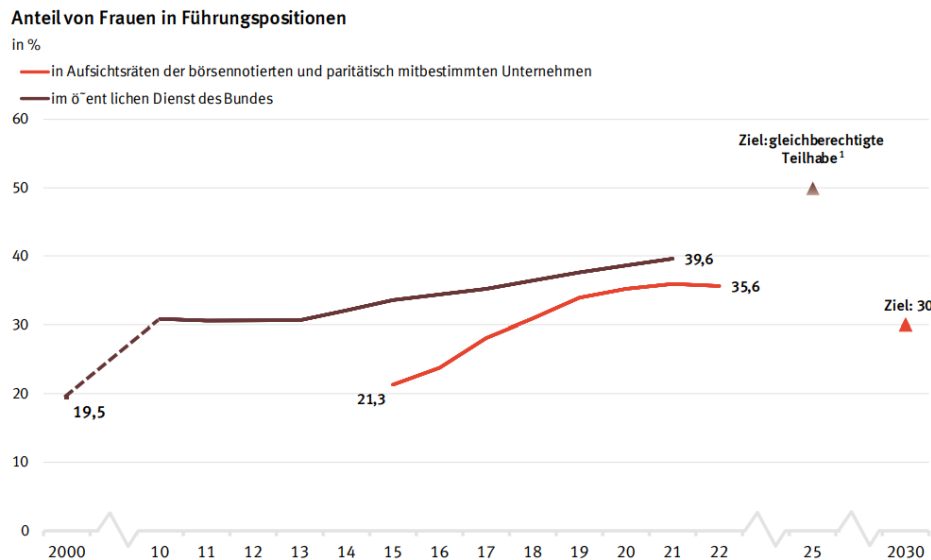
[source: Statistisches Bundesamt (Destatis), 2023]

In modern working societies, wage differences between women and men are a sign of social inequality. The reduction in wage differences is an indicator of progress towards equality. The German government has therefore set itself the goal of reducing the pay gap to 10% by 2020 and maintaining this level until 2030 (ibid.). The indicator presented here shows the unadjusted gender pay gap. It is based exclusively on the average gross hourly earnings in relation to each other. The unadjusted gender pay gap (GPG) also includes the pay gap that is attributable, for example, to different occupations, sectors, qualifications, or employment histories of women and men. According to the figure above, women earned an average of 18% less per hour than men in 2020 and 2021. The data for 2015-2019 has been corrected, while the data for 2020-2021 is provisional (Statistisches Bundesamt (Destatis), 2023, p. 46). The target of reducing the unadjusted GPG to 10% by 2020 was therefore not achieved. If the trend of the last five years continues, it is to be

expected that the target will not be achieved by 2030 either. Over a longer period of time, Germany has seen a slow but steady decline in the unadjusted GPG. At 23% in 2012, this was still 5 percentage points higher than in 2021 (Statistisches Bundesamt (Destatis), 2021, p. 46f.). Investigations into the causal factors of the GPG are carried out every four years on the basis of the detailed results of the earnings structure survey. Results are currently available for 2018. The factors that determine the pay gap are subject to long-term structural change processes and are therefore relatively stable over time. 71% of the pay gap between women and men is due, among other things, to the fact that women are more likely to work in sectors, occupations and performance groups where pay is lower. Women are also more likely than men to work in mini-jobs or part-time (Statistisches Bundesamt (Destatis), 2021, p. 46f.). In a European comparison, preliminary results are mainly available up to 2020. The unadjusted GPG in Germany has been consistently above the European Union average since 2010. Of the 25 EU countries for which data is available for 2020, only Latvia (22%), Estonia (21%) and Austria (19%) have an even higher gender pay gap. The countries with the smallest gender pay gaps in gross hourly earnings across the EU were Luxembourg (1%), Romania (2%), and Slovenia (3%) (ibid).

The second exemplary indicator shows the proportion of women on the supervisory boards of listed companies and companies with parity co-determination (red line). The second sub-indicator “proportion of women in management positions in the federal public sector (dark red line)” is not considered, as this dissertation is limited to companies.

Figure 11: Proportion of women in management positions in the federal public sector (dark red line).



[source: Statistisches Bundesamt (Destatis), 2023]

Women are just as qualified as men and yet are underrepresented in management positions in the German economy, especially in top management. The same applies to the proportion of women in management positions in the federal civil service. By 2030, the proportion of women on the supervisory boards of listed companies and companies with parity co-determination should therefore be increased to 30%. In the federal civil service, equal participation of women and men in management positions is to be achieved by 2025 in accordance with the Second Management Positions Act (FüPoG II), which came into force on August 21, 2021 (Statistisches Bundesamt (Destatis), 2021, p. 48).

The indicator records the proportion of women on supervisory boards of stock corporations and partnerships limited by shares with more than 2,000 employees as well as European companies (SE) and listed companies with parity codetermination. The publications of listed and equally co-determined companies, which are evaluated by the association "Frauen in die Aufsichtsräte" (FidAR), which in English means women into the supervisory boards, and published in so-called Women-on-Board-Indices, serve as a data basis (Statistisches Bundesamt (Destatis), 2023, p. 49). In January 2022, the average proportion of women on the supervisory boards of these companies was 35.6% (January 2015: 21.3%). The target

proportion of 30% was already achieved in 2018, twelve years before the deadline set in the German Sustainability Strategy. However, the figure for 2022 marks the first albeit slight decline in the share since 2015. In accordance with the German Act on Equal Participation of Women and Men in Leadership Positions, at least 30% of all newly elected supervisory board positions at the aforementioned companies must be held by women since 2016 (*ibid.*). The majority of companies in Germany and the majority of management positions in the economy are not considered with the underlying definition of the indicator. The reporting group specified by the definition currently comprises 101 companies. The almost 1,600 supervisory board positions examined by FidAR to date represent a small proportion of the 882,000 managers according to the 2018 earnings structure. The figures make it clear that only a portion of the management positions in a company is represented by looking at the supervisory bodies (Statistisches Bundesamt (Destatis), 2023, p. 49).

Overall, the German Forum for Environment and Development criticizes that the small number of indicators in the German sustainability strategy does not allow a comprehensive picture of the implementation status to be drawn. This means that important topics are not illuminated and a distorted picture of the implementation status is given. Not only is the selection of indicators in the sustainability strategy insufficient to reflect the SDG, but also the target setting for many indicators is not ambitious enough to bring about real change and achieve the goals of the 2030 Agenda (Forum Umwelt und Entwicklung, 2021). The example of Germany shows that the lack of congruence among indicators makes the German Sustainability Strategy in its current form an inappropriate SDG monitoring tool (*ibid.*). Some companies are beginning to relate their activities to one or more SDG. In some corporate sustainability reports, the SDG are explicitly used as a reference and the first financial companies are launching fund products whose performance is measured by their contribution to the SDG. Their motives are still insufficiently explored. A new study based on a survey of sustainability reports of the 2,000 largest listed companies worldwide concludes that the SDG are currently used by companies superficially and less as real benchmarks. Instead of implementing meaningful actions, reference to SDG tends to be made symbolically and as a declaration of intent, without drawing any corporate consequences. Similar to membership in the Global Compact, engagement with the SDG initially pays dividends in terms of corporate reputation (Van der Waal & Thijssens, 2020). The

requirements necessary to achieve the SDG are presented in the next chapter. However, this chapter shows that a holistic approach is necessary to achieve the SDG by 2030. Lack of consistent measurability of the SDG as well as insufficient collaboration between government, business and society lead to missing data. Achieving the United Nations' Sustainable Development Goals from an economic perspective by 2030 is a complex challenge that requires coordinated efforts from governments, businesses, and civil society.

2.3. ORGANIZATIONAL REQUIREMENTS FOR ACHIEVING THE SDG

Achieving the Sustainable Development Goals is a complex and multifaceted challenge that requires a concerted effort from governments, businesses, civil society, and individuals. The human factor is crucial to the success of the SDG, as they are inherently linked to human well-being, behavior, and choices, and often require changes in individual behaviors. So far, progress toward achieving the 17 SDG has been discouraging. According to a UN mid-term review in 2023, there has been no improvement or even regression in more than 30 percent of the goals. If things continue as they are, more than 700 million people will still be hungry in 2030 (United Nations, 2023, p. 14). However, it is still difficult to obtain reliable data for all 169 destinations. The challenge has already been analyzed in chapter 2.2. Despite much progress, there are still significant gaps in geographical coverage, timeliness, and disaggregation. Less than half of the 193 countries have internationally comparable data on several SDG of a cross-cutting nature (for example SDG 5, 13 and 16). Closing data gaps is one of the important upcoming tasks for the United Nations.

2.3.1. Politics and Business

Politics and business play integral roles in achieving the Sustainable Development Goals by 2030. In the years between 2020 and 2023, the Covid-19 pandemic, the war between Russia and Ukraine, its global impact, and climate-related disasters further slowed down the implementation of the 2030 Agenda. In some cases, development progress has even been reversed. According to Guterres, UN Secretary General of the United Nations, the impact of these disasters on developing countries is exacerbated by an unjust global financial system (United

Nations, 2023, p. 55). This is short-term oriented, crisis-prone, and increases inequalities. The report is based on a preliminary evaluation of around 140 of the 169 sub-goals for which data is available. It shows that the global community is on track for only 15 percent of the global development goals. Although progress has been made on around half of the targets, this is not enough to achieve the SDG by 2030. For more than 30 percent of the goals, there has been no change or even regression compared to 2015. For example, SDG 5 Gender Equality, which is mentioned third most frequently by the DAX companies: At the current rate, it would also take almost 300 years to eliminate gender inequalities in legal protection and abolish discriminatory laws (*ibid.*, p. 22).

Governments have the authority to enact laws, regulations, and policies that can drive sustainability. They can set targets, establish incentives, and mandate reporting requirements related to the SDG. Companies, however, must comply with these regulations and adapt their strategies to align with government policies. They can also engage in public policy advocacy to shape regulations that promote sustainability. Governments control public spending and budgets, including funds allocated for sustainable development projects and initiatives. The United Nations state that the 17 SDG must become a guiding star that shapes national policies, budgets, institutions, and long-term national development planning (United Nations, 2023, p. 48). However, although Germany is committed to keeping the goals on the international agenda, 15 percent less will be earmarked for development cooperation in the next federal budget (Hasselbach, 2023). Companies, on the other hand, can contribute financial resources through investments, philanthropy, and partnerships with governments to support SDG-related programs and projects. Chapter 3 analyzes what DAX companies are investing to contribute to the SDG they mention in their sustainability reports.

Collaboration between politics and business is critical for several reasons in different sectors, e.g., innovation and technology, which is related to SDG 9 (Industry, Innovation and Infrastructure). In times of crisis, Winkeljohann, Chairman of the Supervisory Board of the German pharmaceutical company Bayer, relies on companies that focus on innovation and transformation in these difficult times (Matthes & Fröndhoff, 2024). He continues in an interview with the *Handelsblatt* that “these are stronger afterwards than before” (*ibid.*). However,

Germany is slipping dramatically in various innovation indices (Faems, 2021; Moebert & Schumann, 2023; Singh, 2021). Many companies are massively cutting back on innovation and next investments will no longer be made in Germany (Matthes & Fröndhoff, 2024). An innovation-oriented industrial policy that considers the technology fields, in which Germany should be strong in the future, is necessary. However, this would require a change in tax policy in Germany. For example, the German Federal Minister called for a corporate tax reform in 2024. "I can also see that, overall, we have corporate taxation that is no longer competitive and investment-friendly enough internationally", he said in an interview with the German newspaper "Welt am Sonntag" (Dams et al., 2024). The state can help by creating the right framework conditions. This also includes being open to innovation when it comes to data protection. New guidelines can make it more difficult for companies to develop innovations rather than promoting them (Matthes & Fröndhoff, 2024). Further, governments can incentivize research and development in sustainable technologies, promote knowledge sharing, and facilitate technology transfer, whereas companies can invest in innovation and sustainable technologies, as well as collaborate with research institutions, and governments to accelerate the development and adoption of sustainable solutions.

However, the example of Germany shows that there is potential for cooperation in this area between politics and business. For example, Germany has been a global leader in transitioning to renewable energy sources which contributes to SDG 13 "Climate Action". The country has implemented policies to increase the share of renewable energy in its energy mix, reduce greenhouse gas emissions, promote energy efficiency, and has established climate protection legislation to set binding targets for reducing greenhouse gas emissions. The legislation includes measures to achieve climate neutrality by 2045 and carbon neutrality by 2050, with specific emission reduction targets for different sectors. One measure is "climate protection contracts", which are one of the German government's most important instruments for supporting industries on the path to climate neutrality. The contracts are concluded between the federal government and companies. In principle, the additional costs incurred by companies from energy-intensive industrial sectors in order to set up and operate more climate-friendly plants are to be offset by the German government (Stratmann, 2024). The current climate protection agreements focus on higher operating costs. These can arise, for

example, if operators use climate-neutral hydrogen instead of fossil fuels. The EU Commission approved the climate protection agreements in 2024. The authority announced that it was approving aid amounting to four billion euros for the decarbonization of energy-intensive industries such as chemicals, steel, paper, and glass (ibid.). Companies that want to be supported initially enter into a bidding competition for climate protection contracts. The best and, in particular, the cheapest bidder wins. In total, the German ministry intends to provide more than 20 billion euros for climate protection contracts in the coming years (ibid.). Climate protection contracts are long overdue, as many companies are facing major investment decisions. They want certainty that they can afford to switch to climate-neutral systems and that they will be able to operate the systems in the long term (ibid.).

However, the overall restructuring of the energy system will require investments of more than one trillion euros in the coming years in order to achieve the legally enshrined goal of climate neutrality by 2045 (Krapp, Stratmann, & Witsch, 2024). Most of the money will have to flow into the expansion of renewable energies, electricity storage, and grids (ibid.). Additionally, the German government announced a power plant strategy for the first half of last year at the beginning of 2023. As of March 2025, Germany's power plant strategy has undergone significant developments. In the 2025 elections, the Christian Democratic Union (CDU) party secured victory, leading to a new government under Chancellor Friedrich Merz. Despite this political shift, Germany remains committed to its climate goals, including reducing emissions by 65% by 2030 and achieving climate neutrality by 2045 (Arasu, 2025). Moreover, the German government continues to promote the construction of hydrogen-capable gas-fired power plants. These plants are designed to operate on natural gas initially, with plans to transition to hydrogen between 2035 and 2040. This approach aims to provide flexible backup capacity, ensuring grid stability during periods of low renewable energy generation (Dietz-Polte, Engelkamp, & Ruepp, 2024). On the other hand, in early 2025, Germany experienced a surge in gas-fired power generation, leading to the highest regional gas prices since early 2023. However, rising gas prices have prompted a shift back to coal-fired generation, particularly in coal-reliant countries like Germany. This transition could reduce gas consumption and cap gas prices but may increase emissions, as coal produces

nearly double the carbon dioxide compared to gas (Maguire, 2025). Still, this strategy has faced criticism for its reliance on fossil fuels and potential delays in achieving renewable energy targets. Some experts argue that sustainable and readily available solutions to provide flexibility for renewable energies are being overlooked, and that Germany is prolonging its reliance on fossil fuels (Flow Batteries Europe, 2024). The new administration emphasizes integrating climate policy with economic growth, focusing on industrial innovation and energy transition.

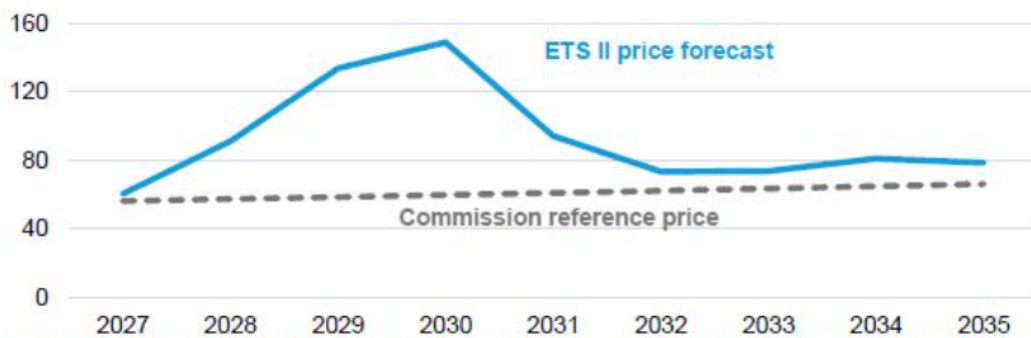
The German industry is also waiting for a government strategy for other important investment projects, such as CO₂ storage. Entrepreneurs are complaining about this uncertainty and are already initiating projects, often in cooperation with foreign companies, as initial regulations are already in place there (ibid.), which would contribute to SDG 9 Industry, Innovation and Infrastructure. To illustrate the example of the energy transition, the Institute of Energy Economics at the University of Cologne (EWI) has written a report on the transformation of the energy system by 2045. The report shows that 440 billion euros will need to be invested in renewable energies in order to achieve the goal of climate neutrality by 2045 (Energiewirtschaftliches Institut an der Universität zu Köln, 2021). This makes this area the largest single item in the total investment required. The largest share (190 billion euros) will be incurred in the 2030s. However, according to the report, investments of 150 billion euros will also be required by 2030 (ibid.). The main driver for this is the demand for electricity, which will grow by 21% between 2019 and 2030. On the one hand, these investments must flow into new wind and solar parks and, on the other hand, into switching to low-emission electricity. This requires controllable power plants and flexible capacities. According to the report, this will cost around 70 billion euros by 2045. In addition, around eleven billion euros will be spent on electrolyzers to produce green hydrogen (ibid.). The construction of numerous new gas power plants, which will eventually run hydrogen instead of natural gas, is also central to future electricity generation. Gas power plants have the advantage over wind power and photovoltaics that they can always produce electricity when it is needed (Krapp, Stratmann, & Witsch, 2024). Without government subsidies, new gas power plants would hardly be economical because they are only intended to be kept as back-up and therefore do not run enough hours per year to be profitable. This is especially true if they run on

expensive hydrogen. However, a large proportion of the investments in new power plants, wind farms, and solar parks will be made by companies. The German listed energy company RWE plans to invest eleven billion euros in Germany by 2030. A large proportion of this is likely to flow into renewable energies and gas-fired power plants. The Uniper Group, also a DAX company, plans to invest eight billion euros by 2030 to make its business areas more sustainable and could be considered as a major gas-fired power plant constructor (*ibid.*). However, the carbon footprint of the German economy improved only slightly in 2022. Overall, the 40 DAX companies were able to reduce their CO₂ emissions by just under 5.5 million tons compared to the previous year, which corresponds to two percent. This was the result of a Handelsblatt analysis of the sustainability reports of the largest German companies (Wermke, 2023). RWE remains at the top of the ranking with 92.4 million tons CO₂e in 2022. Nevertheless, the DAX companies are performing better than in 2021, when emissions of the greenhouse gas had risen by six percent among the 40 companies, as the companies produced more goods and electricity again after the pandemic year 2020 (Wermke, 2023). Emissions would have to fall much faster. In the IPCC's Special Report on Global Warming of 1.5°C (SR15), it is stated that pathways limiting global warming to 1.5°C with no or limited overshoot require a 40–50% reduction in global net anthropogenic CO₂ emissions by 2030, relative to 2010 levels (IPCC, 2018). This translates to an average annual reduction of approximately 4–5% over the 20-year period from 2010 to 2030, in order to achieve the United Nations' 1.5 degree target. The climate initiative Science Based Targets Initiative (SBTi), which already supports thousands of companies in reducing their CO₂ emissions, calls for an average reduction in greenhouse gases of 4.2 percent per year (Science Based Targets initiative, 2024, p. 18). This target applies to absolute emissions reductions across Scope 1 and 2 emissions, and in certain cases, Scope 3 emissions as well (*ibid.*).

RWE is followed by the building materials group Heidelberg Materials with emissions of 70.6 million tons and the chemicals group BASF with 18.4 million tons of CO₂. In fourth place is another energy company, Eon, with 8.7 million tons (Wermke, 2023). After Porsche AG, the pharmaceutical supplier Sartorius (around 34 percent), Deutsche Börse (29 percent) and the sporting goods manufacturer Adidas (18.6 percent) also recorded the largest percentage increases in CO₂ emissions. Emissions are not only relevant for the climate, but also for many

investors. In many countries around the world, especially in the EU member states, companies are required to pay for their carbon dioxide (CO₂) emissions through mechanisms like emissions trading systems and carbon taxes. E.g., The EU ETS is a cornerstone of the EU's climate policy, operating on a “cap-and-trade” principle. It sets a cap on the total amount of certain greenhouse gases that can be emitted by installations covered by the system. Companies receive or purchase emission allowances, which they can trade with one another as needed. If a company emits more CO₂ than its allowances permit, it must purchase additional allowances or face penalties. This system incentivizes companies to reduce emissions cost-effectively (The European Commission, n.d.).

Figure 12: Forecast EU ETS II emissions allowance price (€ per metric ton of CO₂ (nominal)).



[BloombergNEF, n.d.]

The projected increase in carbon prices depicted in the figure above, driven by a potential shortfall of emission permits, is expected to lead to a reduction of an additional 232 million metric tons of CO₂ equivalent (MtCO₂e) in direct emissions between 2027 and 2030. The new carbon market establishes a lower emission reduction target of 43% by 2030 from 2005 levels, compared to 62% under the existing system. The expansion of the market will ensure that 78% of total greenhouse gas emissions from the European Economic Area (EEA) are subject to a carbon price by 2027 (BloombergNEF, 2025).

However, in the ranking of companies that were able to reduce their emissions the most in percentage terms, Mercedes Benz is at the top. The car manufacturer was able to improve its emissions by around 42 percent. The spin-off

of the group, Daimler Truck, also reduced its CO₂ footprint by 20.5 percent (Wermke, 2023). Mercedes Benz justifies the significant reduction with the conversion of its plants. The car manufacturer has publicly stated that since the beginning of 2022, all of its own production plants worldwide have been operating as net carbon-neutral. This achievement is primarily attributed to the company's transition to sourcing 100% of its electricity from renewable sources, including solar, wind, and hydropower. Additionally, Mercedes-Benz has implemented energy efficiency measures and, where necessary, utilizes certified carbon offsetting projects to compensate for any remaining emissions. (Mercedes-Benz, 2025; businesswire, 2023). 45 percent of the total energy consumption in production is currently covered by electricity from renewable sources, with 100 percent green electricity being used for the most part (ibid.).

Overall, DAX companies are not making a sufficient contribution to CO₂ targets. Despite detailed climate strategies, companies have not yet been able to reduce their emissions sufficiently, according to a study by auditing firm BDO and Kirchhoff Consult AG, which examined 200 companies from the Dax 40, MDax and SDax as well as the SMI in Switzerland and ATX in Austria (BDO & Kirchhoff, 2022). Across the DACH region (Germany, Austria, Switzerland), total emissions decreased by only 1% year-on-year in 2021 and 2022. Austrian companies of the ATX index achieved a notable 13% reduction across all scopes, outperforming the Swiss SMI (-3%) and German DAX (0%) and MDAX (+8%) indices (Kirchhoff, 2023). Additionally, companies that committed to short-term, scientifically validated reduction targets in line with the Science Based Targets initiative (SBTi) reduced their Scope 1 and 2 emissions by over 9% in 2022 (BDO, 2023). Over 75% of the companies had their non-financial statements externally audited before the Corporate Sustainability Reporting Directive (CSRD) came into effect. However, smaller companies, particularly those in the SDAX, showed lower audit rates (ibid.). Chapter 4 provides an outlook on what measures must be taken at company level to make climate strategies work and effectively reduce CO₂ emissions.

Another study by McKinsey from 2021 shows that the transition to a climate-neutral economy will cost Germany six trillion euros by 2045 (Engel et al., 2021), which amounts to 240 billion euros per year. Of the six trillion, however, only one trillion euros is actual additional investment. The rest would simply have to be

“reallocated”, for example into subsidies for electric cars instead of vehicles with combustion engines. This would make it possible to increase the number of new registrations tenfold by 2030 compared to 2020. In June 2020, just twelve per cent of new registrations were fully electric and in nine years' time, this figure would have to be at least 60 per cent in order to achieve the European Union's current climate targets (Engel et al., 2021). However, according to an analysis by the European research organization Investigative Europe, the German government still supports fossil fuels alone with at least 37 billion euros annually, making it the EU leader (Investigate Europe, 2020). Furthermore, as already stated, three times as many wind and solar plants will be needed by 2030, industrial processes will have to be electrified, and the infrastructure for transporting electricity and hydrogen will have to be modernized (Witsch et al., 2021). However, the experts agree that the conversion is not only worthwhile for the environment, but also for the economy (Engel et al., 2021; Witsch et al., 2021) which reinforces the topic of this dissertation, namely profitable and sustainable business. The energy sector is not only the key to climate neutrality but also one of the biggest challenges. The energy sector is by far the biggest CO₂ emitter in Germany. According to McKinsey, between 400 and 650 gigawatts of installed renewable energy capacity will be needed by 2045 (Engel et al., 2021). However, data published by the German Environment Agency amounts to 254 gigawatts as of 2022 (Umweltbundesamt, 2023). More recent developments may differ, but the figures are sufficient to illustrate the structural dynamics discussed in this chapter. The reason for the slow expansion is the switch from fixed remuneration to free tenders, in which only the cheapest competitor is awarded the contract. As well as years of approval procedures and increasing complaints from wind power opponents. In many regions, just 0.9 percent of the land area is earmarked for wind turbines (Witsch et al., 2021). This does not even include the consumption of green hydrogen. The experts at McKinsey expect a climate-neutral Germany to require between ten and 15 million tons of green hydrogen across all sectors (Engel et al., 2021). The electricity required for the conversion process will largely come from abroad, but in Germany it will mainly come from offshore wind power. Although expansion is going better here than on land, progress is also too slow off the coasts. In addition to renewables, the electricity grid also needs to be expanded quickly (ibid.). Here, McKinsey focuses primarily on international partnerships and the flexible control

of electricity flows, for example through the intelligent charging of electric cars. Moreover, three core sectors of German industry can be a huge lever on the road to climate neutrality: steel, cement, and chemicals. These basic material manufacturers alone account for 60 percent of direct CO₂ emissions. New and alternative technologies must be introduced quickly and could reduce CO₂ emissions faster (ibid.). In the steel industry, for example, further efficiency improvements in existing blast furnace production alone could save 15 to 20 percent of current emissions. The key to climate protection in steel lies in the use of green hydrogen; together with renewable energy, production could become completely greenhouse gas-free. thyssenkrupp alone, an MDAX company, estimates the investment budget for green hydrogen at ten billion euros by 2050. In addition, McKinsey calculates that reducing CO₂ emissions in the steel industry is associated with higher costs of 20 to 25 percent (ibid.).

The state is negotiating with individual companies for aid for the green transformation, subsidizing new chip plants with billions or electricity prices. The challenge is that government revenue will no longer increase at the same rate as in previous years, while ministers' spending plans will increase all the faster (Matthes, 2024). According to Matthes, Germany is overextending and maneuvering itself into a foreseeable financial burnout. However, only investors on the international capital markets can raise the sums needed to modernize Germany (ibid.). Pension funds alone invest more than 40 trillion dollars worldwide, and this figure could soon rise to 60 trillion. This money flows disproportionately to other parts of the world, for example to Asia or the USA, while the large funds and capital collection centers invest primarily in economically dynamic regions. They also invest where the capital markets are large and therefore liquid (Matthes, 2024). On the other hand, "Europe's individual financial markets are too small, too fragmented and, above all, too complicated for many", states Matthes (ibid.). For this reason alone, a European capital markets union would be the most beneficial economic stimulus program. It would make it more attractive for investors to put their money into European high-tech companies, large infrastructure projects, or renewable energies. However, there are other political steps that the German government could take to bring more private capital into the country. French President Macron regularly organizes major investor conferences at which he promotes France as an investment location to international investors. In November 2022, on the occasion

of the G20 Summit and at the end of a COP27 with mixed results, he also announced the organization of an international conference in Paris in 2023 (Focus 2030, 2023). According to experts at EY, France is the most attractive European country for direct investment (Lhermitte, Alspach, & Bénito, 2023). The public sector could also invest much more consistently together with private investors, which happens much more frequently in the UK and France. Banking circles have also floated the idea of a private transformation fund into which national and international investors would pay to finance the green transformation of the economy (Matthes, 2024).

On the one hand, our economic system developed at a time when CO₂ emissions had no meaning and therefore no price. This is a negative externality: Anyone who emits carbon dioxide is polluting the common good of the Earth and should bear the costs. That would be capitalism in line with the theory. But it is difficult to make improvements in established systems (North, 1990). Secondly, politics is subject to time inconsistency: Future actions that are part of a perfect plan designed today no longer appear optimal from a future perspective - even though nothing has changed in the initial situation. In concrete terms, climate protection could give way to climate adaptation. The third problem stems from these circumstances and the historical lack of credibility of politics. The uncertainties are putting the brakes on investments in green technologies. However, climate protection cannot be financed without private capital. Litterman, a prominent economist and risk management expert, has extensively explored how financial markets can be harnessed to combat climate change. His work emphasizes the importance of integrating climate risk into financial decision-making to drive systemic change. He presented an idea on how these problems could be solved and how climate change could still be stopped through the power of the financial market (Litterman, 2020). Governments could use CO₂-linked bonds to set a target price for CO₂. If this is not met, they pay investors a corresponding coupon. An enormous incentive with a high risk. However, if governments were to use the proceeds from emissions in a targeted manner, it could be a boost for climate protection. Litterman proposes a barometer as a basis for assessment that makes the government's incentives to reduce CO₂ emissions measurable. Misguided incentives such as petrol subsidies would have a negative impact, while climate-friendly incentives such as the promotion of renewable electricity would have a

positive effect. There are extreme scenarios: Depending on how the bonds are constructed, an economy could simply cease all its economic activities and live off the coupons that are boosted as a result. The history of the island state of Nauru shows why this is unlikely to happen. In the 1970s, it became the richest country in the world by mining and selling bird droppings that had turned into phosphate over centuries. But the resource was finite and the state became impoverished. Litterman's concept is promising, especially as it would not be at a competitive disadvantage if it were only introduced nationally (*ibid.*).

When it comes to market demand and consumer behavior, government policies can influence both by incentivizing sustainable choices through taxation, subsidies, or information campaigns. On the other hand, companies can respond to changing consumer preferences by offering sustainable products and services. They can also play a role in educating consumers about the environmental and social impacts of their choices. However, data and reporting seems to be challenging tasks to master for both sectors. Governments can mandate reporting requirements for businesses to track progress toward SDG and provide transparency to the public. As a reaction, companies can collect and report data on their sustainability efforts, contributing to a broader understanding of progress toward the SDG. However, the difficulty for companies lies in having a transparent data structure in the first place. All data is useless if it is kept under lock and key or poorly processed but new technologies and the obligation for companies and authorities to make information more accessible will completely change the way we handle information. Data transparency is not always easy to implement in companies. In addition to understandable reasons such as compliance and data protection, which may necessarily restrict access, there are also cases in which data is deliberately withheld in order to strengthen power relationships or complex data structures (Wilder-James, 2016). The older a company is, the more complex its data structures, applications, and processes are. Older (legacy) systems in particular can sometimes no longer be easily linked to modern (cloud-based) applications. In addition, data has been collected over the years in a wide variety of formats and taxonomies, which makes it considerably more difficult to process (*ibid.*). Changing internal data structures is costly and requires a great deal of internal resources. For many companies, this does not pay off at first glance. A large sum of money for a data project is much more concise than the many costs incurred due to data silos,

unstructured data and a lack of transparency. These costs are often invisible and are rarely recorded in their entirety, such as additional work caused by parallel data maintenance or manual processing (Waack, 2023). This is precisely why clear catalogs of requirements are important. They already indicate where costs, time, and resources can be saved by using a central data platform. They also highlight where revenue can be increased through the use of automation or artificial intelligence, for example. If this is documented company-wide, it is easy to see how much such a project is really worth in order to provide the budget for it (ibid.). Additionally, study results show: Companies can operate in a sustainable and socially fair manner without accepting financial losses. This requires precise data and the right technologies. In a study by ServiceNow and ThoughtLab, 61% of respondents said that digital innovation is key to achieving ESG goals (ServiceNow & ThoughtLab, 2023). Survey participants were assessed on whether they had developed an ESG vision, strategy and budget, communicated their strategy to stakeholders, developed metrics to track success, and deployed technology to support ESG efforts (ibid.). Stakeholders attach great importance to transparency, enabled by data, in order to be able to understand the actions of companies and distinguish genuine efforts from so-called “greenwashing”. If a company succeeds in contributing to a more sustainable, fairer and ethically responsible world through its actions, building stakeholder trust and achieving positive business results, it will benefit in several ways in the long term, especially with regard to highly qualified employees. Setting and meeting SDG goals requires quick access to accurate data. The priority that companies give to data security and advanced data management and analysis tools is correspondingly high. With a holistic, technology-enabled approach, companies can transform their ESG goals into meaningful programs and create long-term value by optimizing processes and delivering sustainable results. This builds trust with different stakeholders, but requires a willingness to invest (ibid.).

To enhance the interplay between politics and business in achieving the SDG by 2030, collaboration, dialogue, and shared commitment are essential. Governments and businesses should work together to set clear targets, create enabling environments for sustainable practices, and mobilize resources to address pressing global challenges, from poverty and inequality to climate change and

environmental degradation. Public-private partnerships that leverage the strengths of both sectors can be particularly effective in driving progress toward the SDG.

2.3.2. The Human Factor

According to the non-profit organization, the Inner Development Goals (IDG), humans lack capabilities to deal with our increasingly complex environment and challenges (Inner Development Goals, n. d.). Looking at recent developments, the question arises as to why the decisions being made by leaders are not aligned with the SDG. On an individual level, achieving the SDG includes adopting, e. g., more sustainable consumption patterns, reducing waste, conserving energy and water, and making environmentally conscious choices in everyday life. On an organizational level, e. g., empowering women and girls, reducing gender-based violence, and promoting equal opportunities are essential components of progress. Gender equality (SDG 5) which is one of the most frequently mentioned in the sustainability reports of DAX companies, is a fundamental human right and a critical factor in achieving all the SDG (Inner Development Goals, n. d.). Building business resilience and adaptation are also two crucial factors, given the challenges posed by climate change and other global threats. This includes disaster preparedness, sustainable urban planning, and climate adaptation measures. Addressing behavior, economic empowerment, gender equality, and other aspects of human development is essential for making progress toward a more sustainable and equitable world (ibid.).

To understand how to address pressing problems in organizations, it is important to know how people make decisions. When considering the human factor in decision-making, various psychological and sociological theories and frameworks can be helpful in understanding and addressing human behavior and motivations but no single theory can fully encompass all the aspects and nuances of SDG achievement. However, several theories and frameworks can be particularly relevant, e.g., theories of behavioral economics. It is concerned with the deviations of human behavior from the behavioral model of homo economicus to a more realistic assessment. People make mistakes and are all too often guided by their gut feelings when making decisions. For economists, this means that concepts and models can be developed on the basis of the findings that take

decision-making processes and decision-making errors into account (Schmidt, n. d.). Therefore, this dissertation takes a closer look at the theory of cognitive biases. This theory tackles the complexity and multidimensionality of this dissertation because SDG chosen by organizations are not immediately tangible and many issues are involved and interconnected. The impacts of unsustainable behavior are often difficult to imagine and achieving the SDG too complex because many parties are involved. An explanation for the slow progress of sustainable development could be that the effects of climate change are difficult to grasp for many people. When it comes to decisions related to the SDG, cognitive biases can happen because we try to simplify complex information. Consequently, cognitive biases are systematic patterns of deviation from the norm or rationality in judgment that often occur as a result of mental shortcuts or heuristics that the brain uses to simplify the processing of complex information (Kovic, 2018). Successfully combating bias is a major challenge. Unconscious biases are rooted in the way our brain works: It is trimmed for efficiency and reduces the complexity of everyday life for us. The brain therefore repeatedly applies learned patterns to new situations: "Bias can inhibit decision making [sic], performance, innovation, and results in the work-place" (Fuller et al., 2020, p. 13). Cognitive biases result from the brain's natural tendency to simplify information processing and make judgments quickly. These biases often lead to errors in judgment and decision-making because they can cause people to deviate from rational, evidence-based reasoning (Agarwal, 2020, p. 16). Stakeholders may prioritize profitability, but increasingly, they also demand sustainable practices, transparency, and ethical behavior. Balancing conflicting stakeholder interests can lead to tension. Cognitive dissonance, a psychological discomfort arising from holding contradictory beliefs or values, arises as this tension between immediate financial returns and long-term sustainability objectives becomes a source of conflict. To alleviate cognitive dissonance, leaders may seek to reduce the inconsistency. This can be done by changing beliefs, attitudes, or behaviors. For instance, leaders might set goals to become carbon neutral by a certain year to align the organizations' behavior with their value of sustainable development. While cognitive dissonance and cognitive biases are distinct concepts, they can interact in decision-making scenarios. Cognitive biases can trigger cognitive dissonance. For example, companies that declare environmental protection as a priority in their sustainability reports, but continue

to source fossil fuels to run their production without outlining mitigation measures or sustainable alternatives, creates tension because they hold conflicting behaviors. To reduce this cognitive dissonance, the organization might engage in additional cognitive biases, such as cherry-picking evidence that supports their belief in their way of protecting the environment (confirmation bias), which also characterizes the concept of greenwashing (European Securities and Markets Authority, 2023; Weghmann, 2023) or downplaying the usage of fossil fuels (minimizing the impact of negative information) (Kunkler & Roy, 2023). The risk of greenwashing exists, which is why organizations find themselves in an environment that is constantly changing and thus constantly generating new challenges, the mastering of which determines whether or not they will survive in the long term. The ability to respond appropriately to challenges, develop new solutions, and learn from developments, will be essential at all levels of the organization and lead to long-term resilience. For example, Weder, Tungarat and Lemke (2020) describe sustainability as a form of “cognitive friction”, highlighting the internal conflicts individuals face when their actions (e.g., prioritizing profits) do not align with their environmental or ethical values. The study suggests that organizations often experience moral dissonance when attempting to reconcile business objectives with sustainability commitments.

Coming back to the decision-making process, “present bias” might play a crucial factor. In the context of present-tense preferences, people's true preferences are assumed to be at the time of decision because preferences at the time of consumption are distorted by temptations or the tendency to seek immediate gratification (e.g., Strotz, 1955; Phelps & Pollak, 1968; Laibson, 1997; O'Donoghue/Rabin, 1999). Similarly, Schwartz (2024) discusses the paradox faced by management teams who acknowledge the importance of Sustainable Development Goals but resist the necessary transformations to implement them. This resistance stems from a clash between corporate culture and sustainability aspirations, leading to cognitive dissonance among decision-makers. From a behavioral economics perspective, e. g., this is caused by the so-called discounting principle. Ramsey's solution to the optimal savings problem, e.g., shows how a rational decision maker should tradeoff between present and future values to maximize utility (Ramsey, 1928). In contrast, behavioral economists and psychologists are concerned with what people actually do. This includes numerous

studies of how people weigh present and future benefits and costs when making decisions (Polasky & Dampha, 2021, p. 699). One of the biggest challenges companies face in the transition to sustainability is understanding idea that a monetary value received or paid in the future is worth more than the same amount received or paid today. The discounting principle involves the practice of assigning lower values to future costs and benefits compared to those in the present. In economic analysis, the discounting procedure is used to compare the effects of projects that are available as economically relevant variables and occur at different times (Gronemann, 2001, p. 234). Discounting means that, for example, when evaluating the impact of a project, future costs and benefits are discounted to the present time (ibid.). Consequently, the more distant an issue is in the future, the less significant its impact will be. Weitzman (1998, p. 207) shows that all other influencing factors in cost-benefit analyses cease to play a role when the time periods become very long. The human suffering that may be brought upon future generations by today's treatment of nature is therefore not to be considered as significant as the welfare of present generations, because it occurs in the future (Siebert, 1978, p. 150). "Essentially, discounting is a trade-off between two possible explanations: if one is stronger, the other is discounted" (Kelley, 1971). Humans do not see themselves as the cause of climate change, so explanations are sought that seem reasonable enough to rule out other explanations. In microeconomic theory, individuals are attributed a utility function is attributed to individuals. The total utility of an individual thus depends on the quantity of goods consumed by the individual. In the discounting procedure, the present value is calculated to compare future costs and benefits with those of today. All values are discounted to zero. Often, however, the present value is maximized not for an individual but for an entire society. This is where the concept of "sustainable development" comes into play. The consequence of the discounting procedure is that the benefit of future generations is minimized, which contradicts a fundamental principle of sustainability, that of intergenerational justice (Gronemann, 2001, p. 234f.). This problem is exacerbated by the fact that the use of a positive discount rate in the intertemporal distribution of natural resources implies a more rapid exploitation of resources. This is particularly worrying from the point of view that the United Nations Environment Programme (UNEP) already sees little chance of escaping the global ecological catastrophe by rethinking and redirecting (ibid., p. 235).

Gronemann's statement is confirmed if you look at the development of the last 20 years. The CO₂ content of the Earth's atmosphere has not been as high as it is today for thousands of years. The discounting principle has persisted, although scientists such as Stern (2006) or Nordhaus (1998) have drawn attention to the ever-increasing problem of climate change in the meantime. Companies are now faced with the challenge of circumventing discounting and ensuring steps for sustainable development.

2.3.3. Profitability vs. Sustainability

The conflict between profitability and sustainability is a fundamental challenge faced by businesses and organizations when trying to balance economic success with environmental and social responsibility. Moreover, businesses must respond to various stakeholders, including shareholders, customers, employees, and regulatory bodies. Some studies have shown that companies prioritizing short-term financial performance over long-term sustainability goals may achieve immediate profitability gains. For example, a study titled "Long-Term Firm Gains From Short-Term Managerial Focus" explores how CEOs with a short-term focus can enhance immediate profitability. The research suggests that such CEOs, by emphasizing short-term stock performance, may adopt more customer-friendly disclosures, thereby increasing customers' willingness to pay and boosting firm profitability. However, this approach may not align with the firm's long-term interests (Arya & Ramanan, 2024). Additionally, research from the NYU Stern Center for Sustainable Business indicates that integrating sustainability into core business strategies can enhance long-term financial performance. The study finds that companies focusing on environmental, social, and governance (ESG) factors often experience improved risk management and financial outcomes over time (Whelan et al., 2021). A majority of studies (around 58%) found a positive correlation between strong ESG performance and improved financial results. Only a small fraction (8%) showed a negative relationship. The longer the time horizon, the stronger the positive impact of ESG on financial performance. This suggests that ESG strategies generate greater returns over time. Companies that focus on ESG issues relevant to their industry perform better financially than those addressing non-material or generic issues, while proactive integration of ESG into

business strategy is more financially beneficial than treating ESG as a compliance or reporting task (ibid). The study concludes that ESG investments are not only aligned with sustainable development goals but also enhance long-term corporate profitability. Integrating sustainability into core strategy can create a competitive advantage and build long-term value for shareholders and long-term consequences of neglecting sustainability factors such as environmental degradation or reputational damage may outweigh short-term gains. A study by Lin et al. (2016) employed secondary data analysis and experiments to examine the impact of environmental irresponsibility on corporate reputation. The findings indicate that such irresponsibility negatively affects corporate reputation, with perceived corporate ethics serving as a mediator. Moreover, while corporate social responsibility (CSR) activities can mitigate some negative effects, the damage to reputation can have lasting financial implications. Moreover, research by Khojastehpour & Johns (2014) in the *European Business Review* investigated the effect of environmental CSR on corporate reputation and profitability. The study concluded that environmental CSR positively influences both brand reputation and financial performance, suggesting that neglecting such responsibilities can hinder long-term profitability. Lastly, An article in the *Financial Times* highlighted Unilever's shift towards "realistic sustainability" under CEO Hein Schumacher. This approach balances environmental commitments with financial performance, acknowledging that overambitious sustainability goals without tangible results can lead to reputational risks and investor skepticism. The case emphasizes the importance of integrating sustainability into core business strategies to maintain stakeholder trust and long-term value (Salinas & Somasundaram, 2024).

Certain industries or sectors may face stronger pressures to prioritize profitability over sustainability due to competitive dynamics or market conditions. For instance, industries with thin profit margins or intense competition might prioritize cost-cutting measures over sustainability investments to maintain profitability. However, this does not imply that sustainability is inherently less profitable but rather reflects sector-specific challenges and priorities. A study published in the *Journal of Business Research* by Patel et al. (2020) found that industries with lower average profitability and higher bankruptcy risks tend to focus more on immediate financial survival. In such sectors, companies may deprioritize sustainability initiatives due to limited financial flexibility and

heightened pressure to maintain cash flow. Another example is the British fashion industry which exemplifies the dynamic between profit pressures vs. Climate Action. Despite growing consumer demand for sustainable products, only 3.4% of British Fashion Council members have set emission reduction targets aligned with the Paris Agreement. High production costs, fragmented supply chains, and minimal government support contribute to the industry's focus on cost-cutting over sustainability. Advocates argue that without systemic changes, such as tax incentives and stricter sustainability requirements, profit will continue to be prioritized over Climate Action (Cope, 2024). Lastly, manufacturing sectors, especially those with energy-intensive processes, face challenges in balancing operational costs with sustainability goals. For instance, British fashion manufacturing has seen a decline due to globalization and offshoring. However, rising international tariffs and supply chain fragility are driving renewed interest in reshoring and sustainability. Despite this, high labor costs, skills shortages, and minimal government support make it difficult for manufacturers to invest in sustainable practices without compromising profitability (McGregor, 2025; Cope, 2024). Profitability often emphasizes short-term financial gains, while sustainability requires a long-term perspective. Investments in sustainability, such as renewable energy, resource efficiency, or ethical sourcing, may not yield immediate profits but can be beneficial in the long run. However, balancing the need for immediate profit with the long-term environmental consequences can be challenging.

Another example is that governments and regulatory bodies are implementing laws and regulations that promote sustainability, reduce environmental harm, and require companies to meet certain social and environmental standards. Examples are the Corporate Sustainability Reporting Directive (CSRD) in Europe or the European Green Deal. Compliance with these regulations can sometimes conflict with profit-maximizing strategies. Sustainable practices can involve higher upfront costs, such as investing in renewable energy infrastructure or adopting eco-friendly supply chain practices. While these investments may lead to long-term savings, they can conflict with immediate profitability goals. Especially in highly competitive markets, companies may feel pressure to prioritize profitability over sustainability to stay competitive. If sustainability practices increase costs, businesses may fear losing market share to

competitors offering cheaper alternatives. Transferring these thoughts to the discounting principle means that the discounting principle can create a conflict when assessing the financial viability of sustainable projects or practices. Investments in sustainability may have higher initial costs but lower long-term operating costs and environmental benefits (Polasky & Dampha, 2021, p. 709). Traditional discounting methods may undervalue these long-term benefits, making it challenging to justify sustainable investments from a profitability standpoint (*ibid.*). Therefore, the literature on dual-rate discounting argues that a different discount rate should be applied to environmental benefits than to financial values (*ibid.*, p. 699). Profitability often prioritizes short-term financial gains and emphasizes the present value of investments, revenues, and costs. In this context, the discounting principle is applied to assess the net present value of projects or investments. Companies may favor projects that offer high returns in the near term, even if they have limited long-term sustainability. Sustainability, on the other hand, typically takes a longer-term perspective. Sustainable practices and investments may have upfront costs but offer long-term benefits, such as reduced resource consumption, lower environmental impact, and enhanced reputation. However, the benefits of sustainability are often discounted in traditional financial assessments, potentially making them less attractive in the short term.

Moreover, sustainability often involves considerations beyond monetary gains, such as environmental preservation, social impact, and ethical considerations. These non-market effects may not be adequately accounted for in traditional financial assessments that rely on the discounting principle, leading to an undervaluation of sustainability initiatives. The value of nature goes beyond the current emphasis on short-term profits and economic growth. A recent study by a panel of global scientists based on a large-scale assessment shows that market-oriented values of nature are often prioritized at the expense of non-market-oriented values associated with nature's many other contributions to society (Pascual et al., 2023, p. 816). Examples include adapting to climate change or nurturing cultural identities. The study argues that the undervaluing of nature is a major cause of today's global environmental crisis, and that the continued dominance of a narrow set of market-oriented values is insufficient to solve biodiversity and climate problems. Moreover, four "values-centered approaches" are presented that could create the necessary conditions for such change. These

include recognizing and embedding the diversity of natural values in decision-making, changing norms and goals at the societal level to support sustainability-oriented values in all sectors, such as businesses, and reforming policies (*ibid.*). As the previous chapter noted, politics and business play integral roles in achieving the Sustainable Development Goals but collaboration between these two sectors is critical. Governments have the power to enact laws, regulations, and policies that can promote sustainability. However, there is currently a lack of more ambitious targets and incentives as well as stringent reporting requirements related to the SDG for German companies that are not subject to the CSRD.

To address this conflict between profitability and sustainability, companies and organizations can take a variety of approaches. First, organizations can consider using lower discount rates for sustainability-related investments to better capture their long-term benefits. This approach reflects the recognition that the traditional discount rate may not fully account for the value of sustainability. Second, organizations can develop and use sustainability metrics that assess the broader impact of sustainable practices, including environmental and social benefits. These metrics can complement traditional financial assessments. Integrating sustainability into the organization's long-term strategic planning and emphasizing the importance of sustainability are two more approaches as a driver of value creation over time. But fundamental change of the corporate culture is one of the key drivers for the rapid transition to sustainability and it all starts with awareness and willingness to change. It's not enough to embed sustainability in a specific department and drive change as a department. It is about a systemic change that brings a different mindset into the daily work of employees and where everyone, from the boardroom to the intern, commits to change (Jordanova, 2023). It goes far beyond fundraising campaigns or drinking bottles for employees and focuses primarily on the issues that are difficult to grasp. For example, creating transparency about the supply chain. This sounds easier than done because once companies examine their supply chain, they will encounter many blind spots. This requires a systematic process to integrate environmentally oriented approaches and ways of thinking into all business relationships (*ibid.*). A company does not act completely autonomously; it is always networked with other stakeholders, which is why it is of great importance to involve them in the development process. Engaging with stakeholders, including investors, customers, and regulatory

bodies, to align sustainability efforts with their expectations and values can help mitigating short-term profitability concerns (ibid.). Last but not least, it is important for companies to communicate their sustainability goals to these partners and look for ways to work together to achieve them. Providing transparent reporting on sustainability initiatives, including their financial and non-financial impacts highlights, contribute to long-term value creation (Tähtinen, 2018; Gelb et al., 2023; Tang & Higgins, 2022). What remains crucial is how companies actually deal with this conflict of profitability and sustainability and how they report on the progress of their sustainability goals that are in line with the SDG. The conflict between profitability and sustainability, when considered in the context of the discounting principle, underscores the need for a balanced approach that values both short-term financial gains and long-term sustainable practices. Adjusting financial assessment methods, considering non-monetary factors, and aligning with stakeholder expectations can help organizations navigate this conflict and make decisions that promote both profitability and sustainability. The next chapter analyzes whether companies are also taking these approaches, using DAX companies as examples.

In summary, sustainable development of organizations requires a shift from profit maximization to value optimization. However, how can a commitment to long-term thinking, a willingness to adapt to changing societal expectations, and a holistic approach to decision making that incorporates financial, environmental, and social considerations be achieved in organizations? Addressing the paradigm shift from profit maximization to value optimization requires a fundamental change in how businesses and organizations approach their goals and operations. First, top leadership must be committed to the shift and communicate its importance throughout the organization. Leaders should set the example and align their actions with the value optimization approach (Olfert, 2016, p. 132). Second, gender equality (SDG 5) is a fundamental human right and a critical factor in achieving all the SDG. Empowering women and girls, reducing gender-based violence, investing in gender equality to bring equitable social benefits to future generations, and promoting equal opportunities are essential components of progress (United Nations, 2023). Incorporating gender diversity into core strategies and emphasizing leadership skills are vital to reaching the SDG.

2.3.4. Organizational Diversity

Studies have shown that diverse teams have a 60% improvement in decision-making ability (Lee, 2019). For example, a study by the American HR consulting firm Korn Ferry on gender-specific differences in social and emotional competencies shows that women are more competent in this respect than men (Spencer & Barnfield, 2021). The authors of the study therefore call for more women in management positions. In the large-scale study, more than 55,000 professionals from 90 countries were surveyed on their emotional and social competencies between 2011 and 2015. It covered 12 basic emotional and social competencies that have an impact on business performance. The biggest difference between men and women is in self-perception. For example, women are 86% more likely than men to perceive themselves correctly. Women are 45% more likely to exhibit consistently emphatic behavior. The smallest difference between the sexes can be seen in the positive basic attitude. Here, women are only 9% more likely to show a consistently positive basic attitude. Other competencies where women score higher are: Coaching & mentoring, influencing others, motivating leadership behavior, conflict management, sensitivity to organizational aspects, adaptability, and teamwork (ibid.). In addition, a recent McKinsey study in 2021 found that employees who work for female managers are often more engaged and productive, and that women score higher on emotional support than their male counterparts (McKinsey & Company, 2021). The “Better Leadership Better World” study identified six leadership competencies that are critical to success in developing business opportunities in line with the 17 Sustainable Development Goals. These are long-term thinking, innovation, collaboration, transparency, environmental management, and social inclusion. Existing research shows that these competencies are strongest in gender-balanced teams where women are represented in leadership positions (Women Rising 2030, 2018). There is evidence that organizations with more women in high-level leadership positions, particularly on supervisory boards, are better able to shift their organization’s focus from maximizing short-term profits to achieving longer-term growth goals (McElhaney & Mobasser, 2012). Boards with female participation are also more likely to think about decisions that lead to long-term rewards and to favor compensation tied to long-term success (Adams & Ferreira, 2009). Having more women on leadership

teams can increase a company's ability to innovate, especially in addressing complex problems (Dezsò & Ross, 2012). Moreover, research shows that women in leadership positions also tend to be more collaborative and balance the interests of different stakeholders to make decisions that benefit all parties (Benko & Pelster, 2013). Unfortunately, women continue to be underrepresented in leadership positions, especially when seniority increases (Duke, 2022). There is a need to promote and prioritize more gender diversity in management positions (Gay, 2022) because the barriers for women start at the management level. Globally, the proportion of women between senior and manager is falling by 9 percentage points (LinkedIn Economic Graph, 2022). An increasing number of studies have found a positive correlation between women's labor market participation and profit growth. A study conducted by consulting firm McKinsey had a closer look at the effect of diversity on business outcomes. They confirmed that companies with more gender diversity on executive teams were more likely to achieve above-average profitability than other companies that had a rather homogenous workforce in terms of gender (Hunt et al., 2015). Especially when it comes to strategic issues and innovative processes, gender-diverse teams with their different perspectives and experiences are important. When gender diverse teams work together, they lead to better and more profitable decisions. Gender distribution plays a crucial role as all-male or all-female teams tend to have homogeneous opinions. Accordingly, if the composition is too one-sided, diversity of perspectives is missing (Hoffmann, 2021). According to another McKinsey study in 2012, US public companies with heterogeneous boards have a 95% higher return on equity than those with homogeneous boards (Barta et al., 2012). Moreover, a study by the Boston Consulting Group in 2018 observed that greater diversity of leadership teams leads to improved financial performance (Lorenzo et al., 2018). This is also confirmed by McKinsey, who conducted a study of 366 public companies in 2015. Results show that those in the top quartile for ethnic and racial diversity in management were 35% more likely to have financial returns above their industry average (Hunt et al., 2015). Additionally, the top quartile of gender diversity was 15% more likely than the industry average to generate returns (ibid.). However, sustainable change will only occur when women find truly inclusive organizations, where statements about the importance of gender equality are backed up by meaningful action, goals are set, and progress is measured. Women who work in organizations that provide

an inclusive workplace culture, where women feel supported by their employers to achieve a healthy work-life balance and sustainable career development, report better psychological well-being, higher motivation and productivity, and are more loyal to their employers (Gay, 2022). The halftime report of the United Nations in 2023 prioritizes to leverage special measures and quotas to promote gender parity across all levels of decision-making in political and economic life” (United Nations, 2023, p. 51).

Balancing profitability and sustainability requires strategic planning, innovation, and a commitment to responsible business practices. Numerous studies and case examples have demonstrated that companies committed to sustainability often outperform their peers financially over the long term. Therefore, while short-term profitability may sometimes seem to outweigh sustainability, the evidence overwhelmingly supports the view that sustainability is essential for long-term business success and resilience. Finding a harmonious balance between profitability and sustainability is critical for the success of businesses in a rapidly changing global landscape. The Sustainable Development Goals can play a crucial role in the transition which is examined alongside the DAX companies in the next chapters. However, the private sector is a crucial factor for productivity, employment, and growth. Business leaders are increasingly recognizing the need and urgency to consider sustainability factors in order to be successful in the long term. Companies are making commitments in their sustainability reports or on social media, but they need to deliver on these commitments and show measurable results. “Corporate governance models, incentive structures and operating practices must be adjusted to align with the objectives of sustainable development” states the United Nations (2023, p. 49). National policies and regulations must facilitate long-term decisions, incorporate pricing of externalities, and consistently reduce harmful subsidies. However, there is also a need to improve the transparency and credibility of sustainability labels and ratings and ensure that every effort is made to eliminate greenwashing and goals-washing (ibid.).

2.4. STAKEHOLDER THEORY AS A THEORETICAL FRAMEWORK

Stakeholder Theory originates from the work of Freeman (1984), who challenged the dominance of shareholder-oriented views of the firm by arguing that corporations are embedded in a network of relationships with multiple stakeholder groups. According to this perspective, stakeholders are defined as “any group or individual who can affect or is affected by the achievement of the organization’s objectives” (Freeman, 1984). This definition broadens the scope of corporate responsibility beyond shareholders and emphasizes that value creation is inherently relational rather than purely financial. At its core, Stakeholder Theory rejects the assumption that the primary purpose of the firm is profit maximization for shareholders alone. Instead, it posits that long-term organizational success depends on the firm’s ability to balance and integrate the interests of diverse stakeholder groups, including employees, customers, suppliers, regulators, communities, and society at large. From this perspective, firms are not isolated economic actors but socio-economic institutions whose actions generate both financial and non-financial effects.

Stakeholder Theory can be differentiated into three interrelated dimensions: normative, descriptive, and instrumental (Donaldson & Preston, 1995).

The normative dimension addresses the ethical foundations of corporate responsibility. It argues that stakeholders possess legitimate claims on the firm that are not solely derived from economic contracts but from moral considerations such as fairness, rights, and social legitimacy. Within this view, firms have an obligation to consider stakeholder interests even when these do not directly maximize short-term profits.

The descriptive dimension explains how firms actually operate in practice. Empirical studies show that corporations routinely engage with stakeholders through governance structures, reporting mechanisms, and risk management processes. In this sense, Stakeholder Theory provides an analytical lens for understanding contemporary corporate behavior, particularly in areas such as sustainability reporting, supply-chain due diligence, and stakeholder engagement.

The instrumental dimension links stakeholder management to economic performance. It suggests that firms that effectively manage stakeholder relationships benefit from enhanced trust, reduced risk exposure, improved

reputation, and greater long-term value creation. This dimension is particularly relevant for publicly listed companies, where sustainability and ESG performance increasingly influence investor decisions and access to capital.

In the context of sustainability, Stakeholder Theory provides a conceptual foundation for explaining why environmental and social considerations have become integral to corporate strategy. Sustainability challenges such as climate change, biodiversity loss, and social inequality primarily manifest as stakeholder-related issues, affecting communities, employees, regulators, and future generations. Rather than treating sustainability as an external constraint, Stakeholder Theory frames it as a condition for sustainable value creation. Firms that ignore stakeholder concerns may generate short-term financial gains, but they also expose themselves to reputational damage, regulatory sanctions, and long-term financial risks. Conversely, incorporating stakeholder interests into strategic decision-making enables firms to align economic performance with environmental and social outcomes. This perspective is particularly relevant for the transition from profit maximization toward value optimization, which emphasizes long-term resilience, societal impact, and intergenerational responsibility.

The increasing relevance of ESG criteria reflects a practical application of Stakeholder Theory. ESG dimensions correspond directly to stakeholder groups: environmental performance affects society and future generations, social performance relates to employees and communities, and governance structures determine how stakeholder interests are integrated into corporate decision-making. Similarly, the United Nations Sustainable Development Goals can be interpreted as a macro-level articulation of global stakeholder needs. While the SDG were originally designed for nation-states, they have increasingly been adopted by corporations as a reference framework for sustainability strategies. From a stakeholder-theoretical perspective, the SDG provide normative guidance on which societal and environmental issues require corporate attention. However, Stakeholder Theory also helps to explain why firms often selectively adopt SDG rather than implementing them holistically. Companies tend to prioritize those goals that align with their core business model, regulatory environment, and material stakeholder expectations, while other goals remain marginal. This

selective integration reflects strategic stakeholder prioritization rather than a universal commitment to all SDG.

A key contribution of Stakeholder Theory to contemporary sustainability governance is its alignment with the concept of double materiality. The Corporate Sustainability Reporting Directive (CSRD) requires companies to assess both:

- **Impact materiality**, which examines how corporate activities affect stakeholders and society, and
- **Financial materiality**, which evaluates how sustainability issues influence the firm's financial performance.

This dual perspective directly mirrors Stakeholder Theory's emphasis on reciprocal relationships between firms and their stakeholders. Impact materiality reflects the normative and descriptive dimensions of Stakeholder Theory, while financial materiality corresponds to its instrumental dimension. In this sense, regulatory frameworks such as the CSRD can be understood as an institutionalized application of Stakeholder Theory, transforming a previously voluntary concept into a binding reporting and governance requirement.

For this dissertation, Stakeholder Theory provides a suitable analytical framework to examine how German DAX companies address the interplay between profitability and sustainability. By focusing on stakeholder integration, the theory explains why sustainability strategies are influenced not only by ethical considerations but also by regulatory pressure, investor expectations, and reputational concerns. The empirical analysis draws on Stakeholder Theory to interpret both the frequency of SDG references in sustainability reports and the qualitative insights gained from expert interviews. In doing so, the dissertation assesses whether stakeholder considerations are embedded in corporate strategy and governance or whether they primarily serve communicative and symbolic purposes. This approach allows for a nuanced analysis of the extent to which Stakeholder Theory is implemented in practice rather than merely acknowledged at the rhetorical level.

2.5. SDG AS A STAKEHOLDER-ORIENTED TRANSLATION FRAMEWORK

While the Sustainable Development Goals were originally formulated as a policy framework for nation-states, their increasing adoption by corporations

necessitates a theoretical classification beyond their normative origins. From a stakeholder-theoretical perspective, the SDG can be understood as an institutionalized aggregation of global stakeholder claims. They translate complex societal expectations regarding environmental protection, social justice, and economic development into a structured goal system that is communicable across political, economic, and organizational contexts.

In this sense, the SDG do not constitute an additional sustainability theory but rather function as a translation and coordination mechanism between macro-level societal demands and micro-level corporate decision-making. Stakeholder Theory provides the conceptual foundation for this interpretation, as it explains why firms face heterogeneous and sometimes conflicting expectations from multiple stakeholder groups. The SDG offer a standardized vocabulary through which these expectations can be articulated and selectively integrated into corporate strategies. However, Stakeholder Theory also implies that firms possess discretion in prioritizing stakeholder interests. Consequently, companies may adopt those SDG that align with their business model, regulatory exposure, or material stakeholder pressures, while disregarding others. This selective integration reflects strategic stakeholder prioritization rather than comprehensive commitment. The absence or limited use of SDG in corporate reporting therefore does not necessarily indicate a lack of sustainability engagement, but rather suggests alternative governance logics, such as reliance on regulatory frameworks or financially material ESG criteria.

While existing research has extensively examined corporate sustainability, ESG reporting frameworks, and stakeholder-oriented governance mechanisms, the role of the Sustainable Development Goals within corporate strategy remains conceptually and empirically underdeveloped. In particular, current studies tend to treat SDGs either as a macro-level policy framework or as a symbolic reporting reference, while neglecting their function as a potential integrative mechanism linking profitability, sustainability, and stakeholder expectations at the firm level. Despite the proliferation of sustainability frameworks, it remains unclear how companies reconcile profitability and sustainability through globally defined goal systems such as the SDG. Against this theoretical background, empirical evidence on how companies operationalize, reinterpret, or disregard the SDGs in practice is

limited. This dissertation therefore adopts a mixed-methods approach, explained in the next section.

III – EMPIRICAL METHODOLOGY

III - EMPIRICAL METHODOLOGY

The Corporate Social Responsibility (CSR) concept used in Germany today is a response to the numerous corporate scandals and the result of many years of national and international media controversy (Carroll, 2008). Against this backdrop, CSR was developed on the initiative of international organizations, such as the Global Reporting Initiative (GRI) or the European Corporate Sustainability Reporting Directive (CSRD), and a number of voluntary corporate reporting frameworks have been developed. With the “Directive 2014/95/EU”, which came into force in December 2014, the obligation for listed European companies to report also on social and ecological aspects became official. The companies affected by the implementation have published a non-financial statement for the first time in the course of the preparation of the annual report as of December 2016, which has to contain information on environmental, social, and employee concerns, human rights as well as the fight against corruption and bribery (Hinze & Freidank, 2018; Mller, Stawinoga, & Velte, 2015; Wulf, 2017). From 2024, certain companies must prepare sustainability reports in accordance with the European Corporate Sustainability Reporting Directive (CSRD). The CSRD, which entered its initial application phase in 2024, represents a significant regulatory shift in corporate sustainability reporting. The empirical material reflects corporate practices during the preparatory and early implementation phase of the CSRD. The CSRD is a proposed EU legislation intended to revise and expand upon the existing Non-Financial Reporting Directive (NFRD). The CSRD aims to enhance corporate transparency and accountability regarding sustainability matters by expanding the scope of reporting requirements and imposing stricter disclosure obligations on companies. It would require a wider range of companies, including more listed companies, to report on sustainability-related information, aligning with the EU's sustainability goals and initiatives such as the European Green Deal. A detailed analysis of the early methods for voluntary reporting and regulatory obligations is beyond the scope at this juncture. However, it can be summarized that publicly listed companies may utilize both international and national frameworks for the preparation of non-financial statements. Voluntary sustainability reporting has

been the subject of numerous empirical studies (Fifka, 2013; Hahn & Kühnen, 2013). With regard to Germany, there are content analyses of sustainability reports of DAX companies (von Ahsen, 2006; Kilian & Hennings, 2011; Pedell, Sautter, & Tappe, 2014), as well as large and medium-sized companies (Gebauer & Glahe, 2011; Schaefer & Schreder, 2012) and industry-specific content analyses, e.g., for credit institutions (Hacker & Schmitz 2015). Furthermore, factors influencing the preparation of voluntary sustainability reports have been the subject of empirical studies. For example, Albers and Günther (2010) found that company size has a significant influence on the preparation of sustainability reports. In addition to the size of the company, other factors for the quantity and quality of voluntary reporting were company risk, the intensity of competition, shareholder structure, and media attention (ibid.). However, there is no content analysis for the underlying research question of how the business manages to consider profitability and sustainability as an interplay to ensure sustainable development with Sustainable Development Goals. This chapter includes the entire process and goal of the mixed methods research, describes, and explains the selection of the research methodology in order to discuss the results in chapter four.

3.1. PURPOSE OF RESEARCH – MIXED-METHODS

The purpose of mixed methods research is to provide a more comprehensive and nuanced understanding of a research problem by drawing on the strengths of both qualitative and quantitative methods. According to Kuckartz (2014), the mixed methods approach refers to the combination and integration of qualitative and quantitative methods within the same research project. It is therefore research in which the researchers collect both qualitative and quantitative data as part of single-phase or multi-phase designs. Depending on the design, the integration of both method strands, i.e., data, results, and conclusions, takes place in the final phase of the research project or already in earlier project phases. By integrating both qualitative and quantitative data, this dissertation aims to gain a more holistic and comprehensive understanding of the research problem. This approach allows for a richer exploration of this dissertation's complex phenomena. The given research question "How does business manage to consider profitability and sustainability as an interplay to ensure sustainable development with Sustainable Development Goals?" is complex and multifaceted, requiring a combination of

qualitative and quantitative approaches to explore different aspects. Mixed methods provide the flexibility to address diverse facets of the research problem and is particularly useful when existing literature on the topic is limited or when different types of evidence are needed to fill gaps in understanding. This approach allows to contribute new insights to the field. Moreover, mixed methods research employs triangulation, a strategy to enhance the credibility and validity of findings. Triangulation involves using multiple sources, methods, or data types to corroborate or validate research results, reducing the impact of potential biases (Kawar et al., 2024, p. 339ff.). However, this dissertation uses the mixed methods research design because non-financial reporting differs in several ways from other forms of ESG communication such as websites, blogposts, or magazines. Non-financial reports are regulated to some degree in most countries, especially in Germany.

Quantitative data can help validate qualitative findings, and vice versa. Mutual validation enhances the study's robustness, boosts confidence in research outcomes, compensates for methodological weaknesses, and reduces validity risks (Kuckartz, 2014). Since this dissertation covers a new area, qualitative methods are often employed for exploring new phenomena and generating theories, while quantitative methods are useful for testing hypotheses and generalizing findings. By combining both, this dissertation explores and explains the intricacies of a research problem more effectively. When it comes to contextualization, qualitative research provides context and depth to quantitative data by exploring the social, cultural, or contextual factors that may influence the phenomenon under investigation. This contextualization is crucial for a behavioral interpretation of results. Mixing methods can enhance the rigor of a study by addressing the limitations inherent in each individual method. The strengths of one method can compensate for the weaknesses of the other, leading to a more robust research design (Kuckartz, 2014). Last but not least, mixed methods research can provide insights that are not only theoretically valuable but also practically relevant (*ibid.*). This is especially beneficial in this field of the dissertation where research findings have direct implications for policy, practice, or interventions. Mixed methods research is well-suited for studies with practical applications or policy implications. The combination of qualitative insights and quantitative generalizability can provide a strong foundation for recommendations and decision-making. The

research design here is a sequential design. Quantitative and qualitative studies are conducted one after the other, not simultaneously. In this dissertation, the explanatory design was selected, i.e., starting with the quantitative study in order to obtain initial results that are further explained by subsequent qualitative research (ibid.). This aims to fill explanatory gaps and connect statistical correlations to their underlying meaning. Ultimately, the decision to use mixed methods in this dissertation is guided by the research question, the nature of the phenomenon under investigation, and the goals of the study.

3.2. QUANTITATIVE RESEARCH: CORPUS ANALYSIS

Quantitative analysis is characterized by the attributes “objective, systematic, quantitative, and manifest” (Lamnek, 2005, p. 494). In the classical sense, quantitative analysis aims to fulfill the corresponding requirements of scientific research. This is only possible if the quantitative analysis focuses exclusively on manifest content. Consequently, the analysis achieves an objective and systematic evaluation where the focus is solely on manifest content (Jenker, 2007). With this approach, the researcher is aware of the omission that is being made. Only characteristics that are relevant for answering the research question are considered, i.e., SDG.

This dissertation uses the corpus analysis which is a methodology that is primarily established in the linguistic research. According to Lemnitzer and Zinsmeister (2010, p. 40), a corpus is “[...] a collection of written or spoken utterances in one or more languages”. It involves the systematic study and analysis of large collections of written, spoken, or electronically transcribed texts, known as “corpora” (ibid.). A corpus is essentially a structured collection of texts or spoken language samples that are selected and compiled for linguistic analysis. For instance, the British National Corpus (BNC) is a well-known resource that contains over 100 million words from various sources, including newspapers, books, and conversations. It has been instrumental in studying British English and understanding language use in different contexts (Baker, 2006).

In corpus linguistics, quantitative methods are based on frequency analyses which are used to calculate certain measures that can be used to characterize and compare corpora (Biber & Jones, 2009). Text corpora are increasingly utilized

beyond traditional linguistic research, notably in market research and marketing. This interdisciplinary application supports the dissertation's guiding assumption by demonstrating the practical relevance of corpus linguistics in analyzing business (Jaworska, 2017). Consequently, a well-known method within the corpus analysis is the frequency analysis, which involves the systematic counting or categorization of occurrences within a dataset. Frequency analyses are an effective way of analyzing large collections of texts, i.e., corpora to identify patterns, themes, and linguistic features (*ibid.*). The occurrence of words or sentences in a corpus is counted in order to determine frequent and rare linguistic elements. It helps in the application to identify common language patterns, lexical elements, or syntactic structures (Biber & Jones, 2009). The goal here is to describe and quantify the distribution of values or occurrences of a particular variable. Corpus analysis provides a systematic and data-driven approach to the study of language, enabling researchers to examine linguistic patterns, variations, and trends in different contexts, and genres (Kennedy, 1998; Baker, 2006; McEnery & Hardie, 2012; Sinclair, 1991). It plays a crucial role in understanding language use and developing linguistic theories (Kennedy, 1998), while in this dissertation it also finds application in economics. The corpus-based model describes an inductive interest in knowledge. In corpus analysis, texts are analyzed exhaustively, i.e., without excluding data from the outset on the basis of theoretical hypotheses (Altmeyer, 2016, p. 3). With a focus on quantitative methods, frequencies are collected or characteristic key figures calculated, for example, which provide an objectified basis for describing the corpus. Computerized methods for the automatic extraction of information from extensive data sets (text mining) can also be classified here (*ibid.*). This methodology has become integral to understanding language use and developing linguistic theories, and it has also found applications in fields such as economics. Therefore, researchers can use corpus analysis techniques to mine large textual datasets, such as economic reports, for relevant information regarding attitudes or behaviors. Topic modeling algorithms, such as Latent Dirichlet Allocation (LDA), can be applied to identify key topics and themes present in the text, providing insights into the factors influencing economic decision-making. For instance, techniques from natural language processing, i.e., LDA, have been applied to analyze international trade data (Blei, Ng, & Jordan, 2003). By treating trade data as a corpus, researchers can uncover latent structures

and patterns, providing new perspectives on economic phenomena (Kozlowski, Semeshenko & Molinari, 2020) However, in this dissertation, the corpus analysis is used as a research method to examine sustainability reports of DAX companies as textual data in the context of economic decisions, i.e., the decision of using SDG in the sustainability reports.

3.2.1. Corpus Assembly

The corpus analysis is particularly well established in linguistic research, however, it has already been used in economic research as well. Herteg (2019), for example, has examined different conceptualizations of "ECONOMY" in the British business press. The approach is based on a corpus of business articles from the British quality press from 2013 to 2016 (Herteg, 2019). Another example is the study of corpus linguistics as a method for analyzing the language of business and financial news (Clancy & Vaughan, 2023). Quantitative and qualitative methods are used to identify patterns of language use and interpret them based on their context of use. In contrast to social empirical research, the "linguistic empirical research" (Altmeyer, 2011, p. 129) do not serve the "collection and interpretation of empirical knowledge" (Ziebertz, 2001, p. 1746) but focuses on "language usage knowledge" (Bubenhofer, 2009, p. 43). In this respect, both forms of knowledge can be related to each other. Experiential knowledge usually exists in the form of language and, conversely, language use refers to experiences in specific speech contexts. It can therefore be assumed that both approaches are mutually referential (Altmeyer, 2016, p. 1). A corpus analysis is therefore always of interest for empirical projects where the aim is to examine more extensive language material, in this case sustainability reports of DAX companies. Its strength lies in using suitable methods to make features and structures visible on the surface of language, on the basis of which, in addition to linguistic theory formation, access to the underlying meaning systems becomes possible. The latter in particular is relevant for this dissertation (Altmeyer, 2016, p. 1). An important distinction is between primary and metadata. While the texts contained in a corpus are referred to as primary data, metadata is information that has been added for the further indexing of these texts and can include either extra-textual contextual data, e.g., author, source, place and time of origin, or comprehensive linguistic information such as part of speech, inflection form, etc. (ibid., p. 4f.).

This dissertation relates to companies listed in the prime standard of the Frankfurt stock exchange in Germany. Companies listed on the stock exchange must comply with stringent international and national disclosure requirements, which often results in higher transparency compared to smaller companies (Knefel & Sassen, 2015; Quick & Knocinski, 2006). Some jurisdictions mandate sustainability reporting for listed companies, requiring disclosure of ESG performance metrics. In many cases, integrating the SDG into reporting helps companies comply with these regulatory requirements and align with international reporting standards, such as the Global Reporting Initiative (GRI) or the Sustainability Accounting Standards Board (SASB). Moreover, investors are increasingly considering ESG factors in their investment decisions, recognizing the importance of sustainable business practices for long-term value creation. Stakeholders, including customers, employees, and suppliers, expect companies to address environmental and social issues. By integrating the SDG into their reporting, listed companies demonstrate alignment with this universal agenda, signaling their commitment to addressing pressing global challenges. The SDG encompass a wide range of economic, social, and environmental issues, including climate change, inequality, and poverty. By incorporating the SDG, listed companies can identify both risks and opportunities associated with these issues, helping them better anticipate and respond to changing market dynamics, and stakeholder expectations (March, Lord, & Ioannou, 2020). SDG allow companies to communicate their efforts in a clear and standardized manner, enhancing transparency, and accountability, however, there is a risk that companies may engage in greenwashing, where they make misleading or exaggerated claims about their sustainability efforts to improve their public image. Integrating the SDG into sustainability reporting without substantive actions to address relevant issues could lead to accusations of greenwashing, damaging the company's reputation and credibility. Research indicates that some companies incorporate SDG references in their reports primarily for image enhancement rather than genuine commitment. This practice, often termed “SDG-washing”, involves highlighting SDG icons or making vague claims without detailing concrete strategies or measurable progress. Such symbolic gestures can mislead stakeholders and erode trust (Heras-Saizarbitoria, Urbietta, & Boiral, 2022).

Reporting on SDG-related activities can be complex, requiring companies to collect and analyze a wide range of data across various sustainability dimensions. Without clear alignment between the SDG and the company's core business activities and material issues, there is a risk of diluting the effectiveness of sustainability efforts. Companies may spread resources thinly across a broad range of SDG without achieving meaningful impact on any specific goals. Moreover, measuring and quantifying progress toward SDG can be challenging, especially when it comes to tracking social and environmental impacts. Companies that make public commitments to SDG-related initiatives may face legal and liability risks if they fail to deliver on those commitments or if their actions result in negative social or environmental impacts. This includes risks related to non-compliance with regulations, breach of contracts, or lawsuits from affected stakeholders. Sustainability initiatives may become fragmented and unfocused, lacking a cohesive strategy. This scattering can lead to inefficient use of resources and diminished impact, e.g., a company focusing on non-material SDG may invest in areas that are not directly related to its business operations or stakeholder concerns, resulting in minimal real-world impact. Companies may be accused of greenwashing if their sustainability efforts are seen as mere public relations exercises rather than genuine commitments to sustainable development. Misalignment can erode stakeholder trust and credibility if initiatives are perceived as insincere or tokenistic. Moreover, resources might be allocated to sustainability projects that do not align with the company's core competencies, leading to suboptimal outcomes and missed opportunities for significant impact. Initiatives not integrated into core business operations may fail to leverage the company's strengths and capabilities, resulting in inefficiency and ineffectiveness. Therefore, aligning sustainability efforts with SDG, core business activities, and material issues is crucial for ensuring the effectiveness and credibility of these initiatives. Analyzing the sustainability reports of DAX companies using the corpus analysis provides valuable insights into their environmental, social, and governance practices as well as their communication strategies and priorities in relation to the SDG.

The frequency analysis shows an initial attitude of companies towards the SDG and a comparison of the relevance of SDG in sustainability reports over 3 years. The first step contains manually gathering the sustainability reports 2021,

2022, and 2023 of a representative sample of the 40 DAX companies across different industries and market capitalization. The calendar years are also the financial years of the companies represented here. This means that the financial and non-financial report may be combined in one integrated report. These reports are available in a pdf file on the companies' websites or via financial databases. The representative sample includes 10 companies, which are listed below.

Table 2: Sample of DAX companies for the corpus analysis

#	Company	Industry	Market capitalization (in bn €)*
1	RWE	Energy	22.81
2	Adidas	Sportswear and Sports Equipment	33.39
3	SAP	Software	202.33
4	Vonovia	Real Estate	21.78
5	Henkel	Chemical and Consumer Goods	27.62
6	QIAGEN	Life Sciences and Diagnostics	8.88
7	Commerzbank	Banking and Financial Services	13.47
8	Airbus	Aerospace	120.19
9	Allianz	Insurance	96.14
10	Mercedes Benz	Automotive	76.51

*As of 31 March 2024 (finanzen.net)

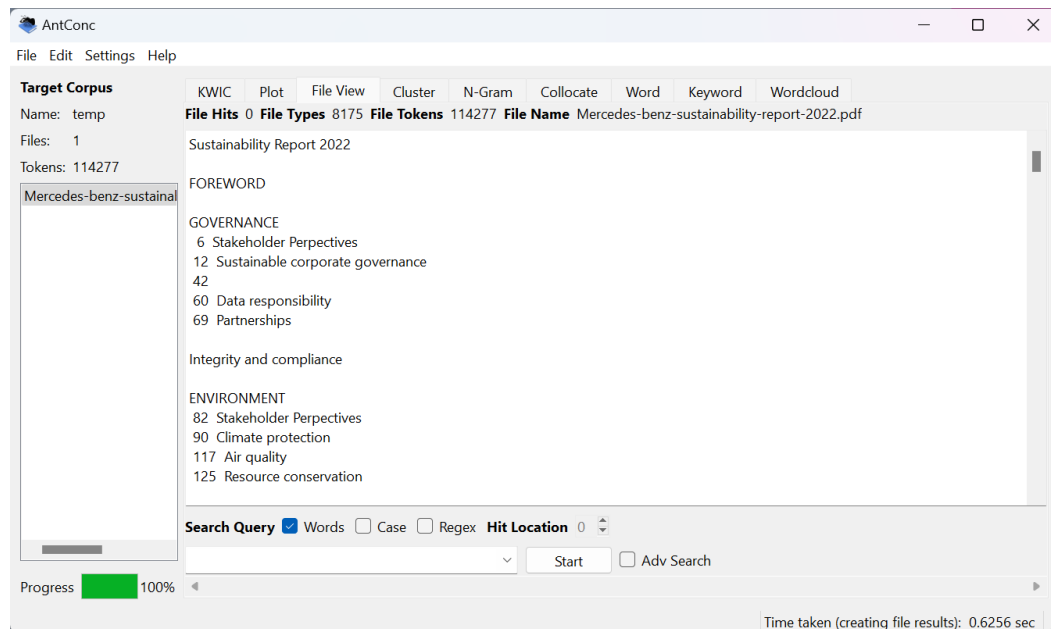
As a first step, the sustainability reports 2021, 2022, and 2023 from the representative sample were downloaded as pdf files and checked for their content. The text data has been cleaned and pre-processed, i.e., all irrelevant sections such as standard texts, disclaimers, headers, and footers have been removed. Adidas, Airbus, RWE, and SAP have an integrated report, which means that the financial

and non-financial information are combined in one report. In this case, the sustainability chapter is either located separately or reflected in the non-financial information chapter. Adidas has a separate sustainability chapter, while Airbus, SAP, and RWE integrate sustainability information in the “non-financial statement” chapters. SAP reports on an integrated basis, but published additional sustainability reports in 2022 and 2023. These sustainability reports and sustainability-related chapters in 2021 from the integrated report 2021, i.e., “strategy” and “energy and emissions”, are included in the corpus. RWE follows a similar approach. Their “sustainability strategy report” is considered alongside their integrated report in the corpus. Allianz, Commerzbank, Henkel, Qiagen, Mercedes Benz, and Vonovia, publish independent sustainability reports. Commerzbank called its 2021 sustainability report a “GRI report”, which means that it was reported in accordance with the GRI standard. GRI provides standards for sustainability reporting, highlighting the significance of addressing material issues and aligning them with business strategies and the SDG (Global Reporting Initiative, 2024). In 2022, the report was still prepared in accordance with the GRI Standard, but was called “Sustainability Report”. After the pre-processing process, the corpus contains all 10 sustainability reports and sustainability-related chapters 2021, 2022, and 2023 of the sample.

3.2.2. Tokenization

Usually, the next step is to break down the text into tokens, i.e., individual units, which makes it possible to count the frequency of each word in the corpus. In the context of frequency analysis, tokens are usually words. Stop words, frequently occurring words such as “the”, “is”, “and”, are removed, and words lemmatized to reduce them to their basic form. Tokenization was omitted as the free corpus analysis program “AntConc” counts tokens automatically, eliminating the need for manual preliminary work.

Figure 13: Example of tokens in AntConc of the sustainability report 2022 of Mercedes-Benz.



(source: AntConc screenshot)

In this example, the sustainability report of Mercedes-Benz has 114,277 tokens, which are displayed at the left or above under “file tokens”. Moreover, the software also creates word lists based on frequency and uncovers vocabulary patterns, which is examined in the further course.

3.2.3. Frequency Analysis of the Corpus

Lemma Frequency analysis is a valuable tool for tracking trends and changes in language use over time. By examining how the frequency of specific terms evolves across different periods, researchers can identify shifts in economic and sustainability-related discourse. For example, research published in the journal “Sustainability” developed a methodology for tracking systemic changes in the environmental, social, and governance (ESG) agenda of Russian regions. By analyzing regional media content, the study aimed to assess positive and negative processes in regional development from a sustainability perspective. The findings indicated a high degree of heterogeneity in the implementation of Sustainable

Development Goals across regions and highlighted the need for a comprehensive approach when assessing sustainability outcomes (Chernyshova et al., 2025).

Frequency analysis enables to track trends and changes in language use over time. By analyzing how the frequency of certain terms evolves across different time periods, shifts in emerging economic or sustainable trends can be identified. Moreover, the frequency distribution of words in the corpus could be compared with a reference corpus or various sub corpora, possibly divided by industry and size. Utilizing large textual databases, researchers can analyze language use across extensive datasets, revealing patterns not visible in smaller texts. Tools like AntConc and Sketch Engine are commonly used for such analyses. For instance, a study of climate change discourse found that terms like “global warming” have become less frequent over time, while “climate crisis” or “climate emergency” have gained prominence, reflecting a shift in media framing (Fariello & Jemielniak, 2025).

The purpose of the quantitative analysis using frequency analysis as a tool for corpus analysis is to examine the individual reports broadly concerning the mentioned Sustainable Development Goals, rather than in-depth. The higher the number of SDG in the given sustainability reports, the higher the probability that they will be used as a communication or marketing tool. The qualitative content analysis afterwards using semi-structured interviews aims to offer detailed insights into the significance and measurement of the SDG in DAX companies. Therefore, the software AntConc (Anthony, 2022) counts the frequency of the relevant words “SDG”, “SDGs”, and “Sustainable Development Goals” in all documents in the corpus, using the frequency analysis to confirm or reject the given guiding assumption that “currently, profit beats sustainability and the SDG remain as a communication tool”. “SDG” and “SDGs” are used equally in the sustainability reports why “SDG” and “SDGs” are summarized in the table below. The frequency analysis is based on the assumption that the frequency of the SDG counted in the sustainability reports should provide an indication of their importance for the DAX companies. Frequent mentions of the SDG in sustainability reports may indicate that implementation measures consider the SDG. Following the analysis of frequency, a table is created to display each individual word alongside its corresponding frequency. Additionally, the frequency of specific sustainability terms or topics is compared across different companies within the DAX index. This

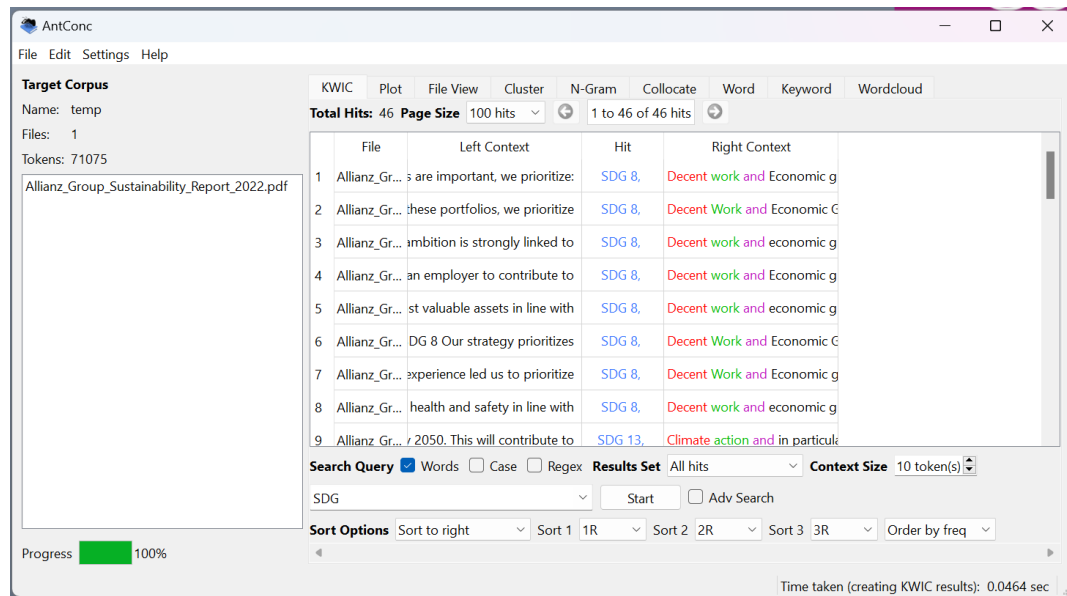
comparison enables the identification of variations in priorities, strategies, or performance related to sustainable practices. By examining the frequency of certain terms between various companies or industries within the DAX index, differences in priorities, focus areas, or communication strategies concerning sustainability can be discerned.

Table 3: Frequency analysis of 10 sustainability reports from DAX companies as of April 2024

<i>DAX company</i>	<i>Frequency of “SDG” in 2021</i>	<i>Frequency of “Sustainable Development Goals” in 2021</i>	<i>Frequency of “SDG” in 2022</i>	<i>Frequency of “Sustainable Development Goals” in 2022</i>	<i>Frequency of “SDG” in 2023</i>	<i>Frequency of “Sustainable Development Goals” in 2023</i>
<i>RWE</i>	11	15	0	2	0	2
<i>Adidas</i>	2	1	0	0	0	0
<i>SAP</i>	0	0	0	0	0	0
<i>Vonovia</i>	13	8	9	5	4	1
<i>Henkel</i>	43	5	31	4	29	4
<i>QIAGEN</i>	9	1	4	3	n/a	n/a
<i>Commerzbank</i>	114	2	5	1	7	6
<i>Airbus</i>	24	4	26	6	23	6
<i>Allianz</i>	27	24	63	7	26	11
<i>Mercedes Benz</i>	22	9	9	6	12	6

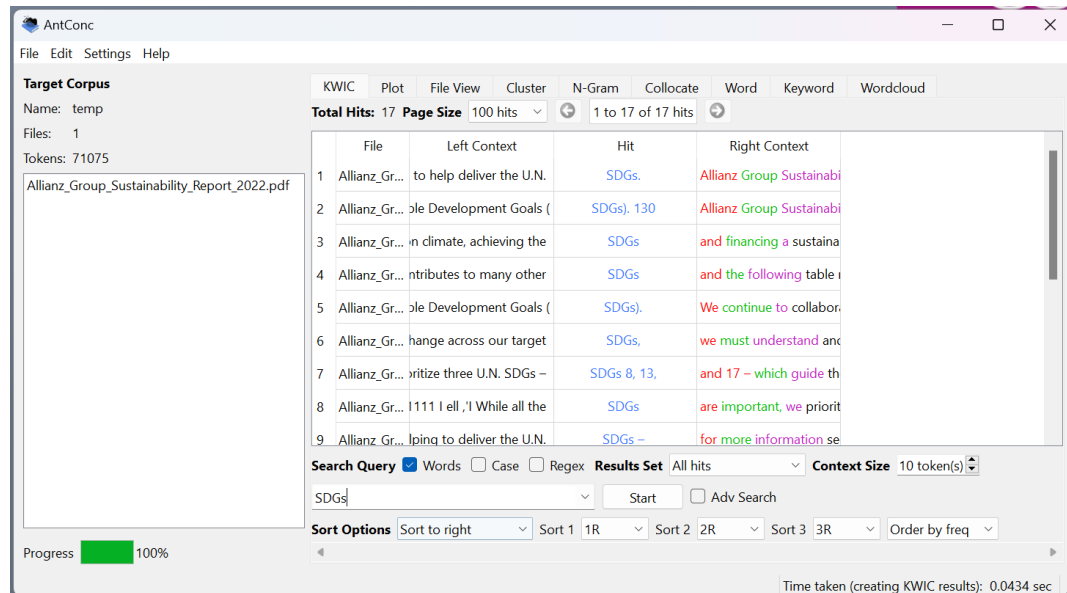
Here is an example of the word frequency in the software AntConc of “SDG” and “SDGs” in the Allianz sustainability report 2022.

Figure 14: Example of tokens in AntConc of the sustainability report 2022 of Mercedes-Benz.



(source: AntConc screenshot)

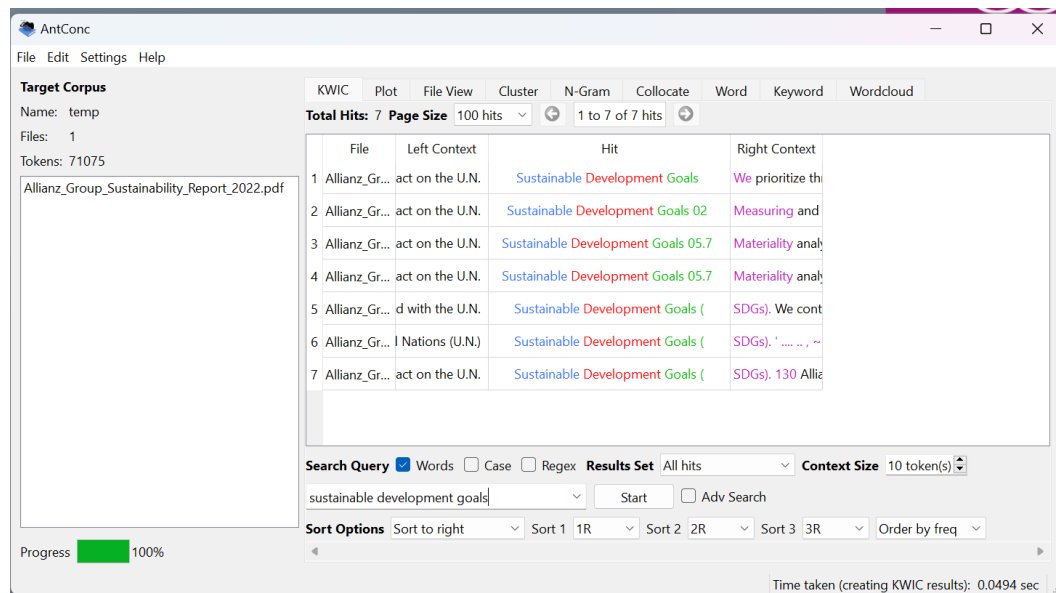
Figure 15: Example of the word frequency of “SDGs” in the Allianz sustainability report 2022.



(source: AntConc screenshot)

The tool calculates SDG (46) and SDGs (17) separately but in the table above displays the total number of SDG which is 63. The frequencies were also counted in the pdf by the automatic word search function confirming the number. The same occurs with the words “sustainable development goals”.

Figure 16: Example of the word frequency of “sustainable development goals” in the Allianz sustainability report 2022.



[source: AntConc screenshot]

Across the companies, there is variability in the frequency of mentioning “SDG” over the years, indicating differences in their emphasis on the Sustainable Development Goals and potentially changes in their sustainability strategies and reporting practices. The count makes it possible to identify frequently occurring keywords and phrases in connection with sustainability topics. This in turn provides information on which topics are addressed most frequently in the reports and in which language they are dealt with.

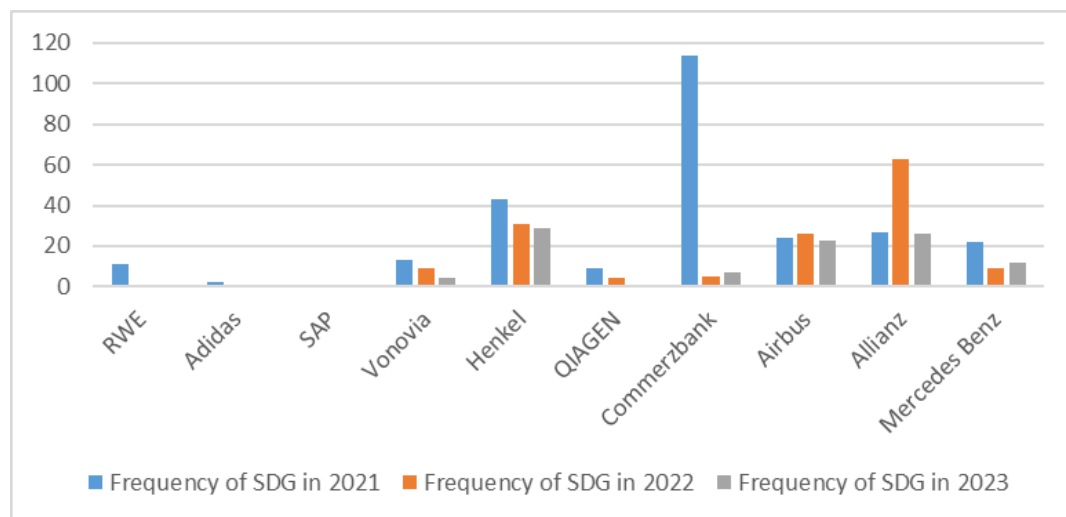
3.2.4. Interpretation and Conclusion

The interpretation of the given data shows that different companies may prioritize certain SDG over others based on their industry, business model, and corporate values. The first highlight of the corpus analysis reveals that SAP did not reference Sustainable Development Goals or related terminology in any of its sustainability reports between 2021 and 2023 (see Table 3; frequency count = 0 for all years). This suggests a lack of explicit alignment with the Sustainable Development Goals in SAP's sustainability reporting, indicating potential opportunities for greater integration of SDG into its sustainability strategy and

communication efforts. Unlike other DAX companies in the sample, SAP therefore represents a case of complete absence of explicit SDG alignment in sustainability reporting, highlighting the selective and voluntary nature of SDG integration at the corporate level. The reporting behavior of Adidas is relatively similar, which mentions “SDG” in its sustainability report for 2021 (2) but did not report any mentions in the subsequent years (2022, 2023). This lack of consistency in addressing sustainable development goals suggests a potential inconsistency or evolving approach to SDG integration in Adidas' sustainability reporting practices. QIAGEN shows relatively consistent but low frequencies of SDG and Sustainable Development Goals mentions across the analyzed years with 10 (9+1) in 2021 and 7 (4+3) in 2022. On the other hand, RWE reported a relatively high frequency of “SDG” and “Sustainable Development Goals” mentions in its sustainability report for 2021 (11+15), which decreased significantly in 2022 and 2023 (2). This fluctuation may indicate a change in the company's emphasis on sustainable development goals over time. The case is similar to Vonovia, which published a combined management report. This means that financial and non-financial data are published in one report, whereby the non-financial part can be downloaded separately and is therefore included in the corpus. Vonovia shows a decrease in the frequency of SDG and Sustainable Development Goals from 21 (13+8) in 2021 to 14 (9+5) in 2022 and 5 (4+1) in 2023. Henkel demonstrated consistent and high mention of SDG and Sustainable Development Goals across the years, with frequencies of 48 (43+5) in 2021, 35 (31+4) in 2022, and 34 (29+4) in 2023. This suggests a sustained focus on sustainable development goals in their reporting, however, a decrease is also noticeable here. Mercedes Benz, Commerzbank, Airbus, and Allianz displayed fluctuations in the frequency over the years, with varying levels of emphasis on sustainable development goals. Mercedes Benz mentioned “SDG” and Sustainable Development Goals with a frequency of 22+9 in 2021, 9+6 in 2022, and 12+6 in 2023. This indicates a consistent level of acknowledgment of the Sustainable Development Goals in their sustainability reporting over the analyzed years. The relatively stable frequency of SDG mentions suggests a consistent focus on sustainable development goals as part of Mercedes Benz's sustainability strategy and reporting practices. Commerzbank reported the highest frequency of “SDG” mentions, with 114 in 2021, and declined sharply to 5 in 2022, and 7 in 2023. The significant decrease in 2022 suggests a notable shift in reporting practices or

priorities and the sharp decline in the frequency of SDG mentions raises questions about the reasons behind this change and whether it reflects a strategic shift in Commerzbank's approach to sustainability reporting or SDG alignment. Airbus showed a moderate frequency of SDG and Sustainable Development Goals mentions, with 24+4 in 2021, 26+6 in 2022, and 23+6 in 2023. The relatively consistent frequency across the analyzed years suggests a sustained focus on sustainable development goals in their reporting and indicates a commitment to addressing global sustainability challenges and aligning corporate strategy with the 2030 Agenda. Lastly, Allianz reported a frequency of SDG and Sustainable Development Goals mentions, with 27+24 in 2021, 63+7 in 2022, and 26+11 in 2023. The significant increase in 2022 suggests a notable ramp-up in reporting efforts or strategic emphasis on sustainable development goals, while the decrease in 2023 compared to 2022 raises questions about potential factors influencing reporting practices, such as changes in corporate strategy, stakeholder engagement, or regulatory requirements.

Figure 17: Frequency analysis of “SDG”.

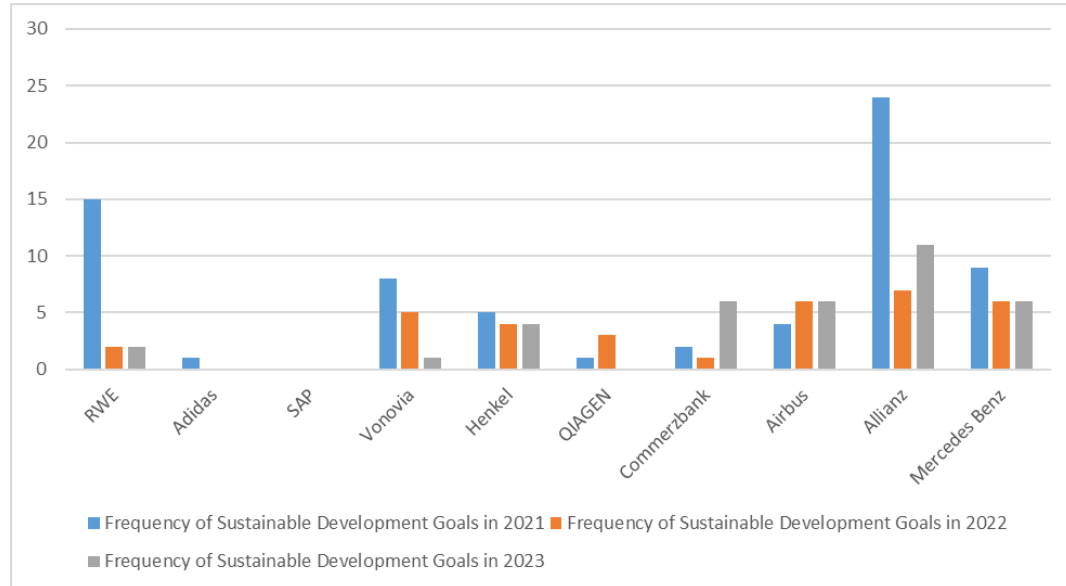


[source: own representation]

The variation in the frequency of SDG mentioned in the sustainability reports of DAX companies underscores differences in their sustainability strategies, priorities, and levels of commitment to addressing global sustainable development challenges. First, it is noticeable that the abbreviation SDG is used more frequently,

where Commerzbank stands out with 114. In second place is Henkel, followed by Allianz. What is striking about Allianz, however, is that the frequency of Sustainable Development Goals is also high, in contrast to the other companies.

Figure 18: Frequency analysis of additional “Sustainable Development Goals”.



[source: own representation]

In 2021, Allianz mentioned “Sustainable Development Goals” the most among the examined companies, followed by RWE, Mercedes Benz, and Vonovia. In 2022, Allianz and RWE significantly reduce the mention of Sustainable Development Goals, with a slight increase by Allianz in 2023. Commerzbank also stands out in 2023 with the number of mentions, while the other companies remain at the same level. The decline in frequency could be due to various factors, such as shifts in corporate priorities, changes in reporting methods or adjustments to sustainability strategies, which is examined in the qualitative analysis. The example of Allianz shows that the company has the most frequent mentions of “SDG” and “Sustainable Development Goals”. The AntConc tool can also extract the left and right content from the sustainability report, whereby the right content is more important as it can be color-coded and clustered.

Figure 19: Content analysis of the Allianz sustainability report 2023.

AntConc				
File Edit Settings Help				
Target Corpus				
Name: temp	Total Hits: 26 Page Size 100 hits 1 to 26 of 26 hits			
Files: 1	KWIC Plot File View Cluster N-Gram Collocate Word Keyword Wordcloud			
Tokens: 71334				
Allianz_Group_Sustainabi				
File	Left Context	Hit	Right Context	
1 Allianz_Gr...	in education and employability,	SDG 13,	Climate Action and SDG 17, Part	
2 Allianz_Gr...	Sustainable Development Goal (	SDG) 13,	Climate action and in particular i	
3 Allianz_Gr...	conomic change. In addition to	SDG 13,	Climate action, we have chosen	
4 Allianz_Gr...	tegy supports the objectives of	SDG 13 –	Climate action. Since 2018, our C	
5 Allianz_Gr...	Sustainable Development Goal (	SDG) 13,	Climate Action. 1. Pricing Pricing	
6 Allianz_Gr...	Partnerships for the Goals and	SDG 13,	Climate Action: • Target 8.5 – Ac	
7 Allianz_Gr...	SDGs), which we have prioritized:	SDG 8,	Decent Work and Economic Gro	
8 Allianz_Gr...	Sustainable Development Goal (	SDG) 8,	Decent Work and Economic gro	
9 Allianz_Gr...	(SDGs), with a priority given to	SDG 8:	Decent Work and Economic Gro	
10 Allianz_Gr...	Climate action, we have chosen	SDG 8,	Decent Work and Economic Gro	
11 Allianz_Gr...	Sustainable Development Goal 8 (	SDG 8) 50 %	reduction of GHG (greenhouse g	
12 Allianz_Gr...	Sustainable Development Goal 8 (	SDG 8) 50 %	reduction of GHG (greenhouse g	
13 Allianz_Gr...	ibute to a number of SDGs like	SDG 7	Affordable and clean energy, the	
14 Allianz_Gr...	a clear alignment with Allianz's	SDG 8	commitment to next generation	
15 Allianz_Gr...	This is reflected in the focus on	SDG 8,	Decent Work and Economic Gro	
16 Allianz_Gr...	nt Work and Economic Growth/	SDG 8,	including education upskilling ar	
17 Allianz_Gr...	content from this report for each	SDG. 01	Introduction and strategy 01.1 M	
18 Allianz_Gr...	– our priority is Climate action/	SDG 13.	Our business, spanning insuranc	
19 Allianz_Gr...	er. This is why we also prioritize	SDG 17,	Partnership for the goals. 06 01	
20 Allianz_Gr...	-targets and closely linked with	SDG 17,	Partnerships for the Goals and S	
21 Allianz_Gr...	il Services for All. It also links to	SDG 17,	Partnerships, as we leverage loc	
22 Allianz_Gr...	partnerships, thereby fostering	SDG 17,	Partnerships. These include: • Fo	
23 Allianz_Gr...	ity, SDG 13, Climate Action and	SDG 17,	Partnerships. Our work in suppo	
24 Allianz_Gr...	v) and contribute to its relevant	SDG	sub- targets 17.16 and 17.17. A	
25 Allianz_Gr...	ed around three sub-targets of	SDG 8: •	Target 8.5 – Achieving full and p	
26 Allianz_Gr...	: Systematic changes to achieve	SDG 8	Value-add to our beneficiaries/ e	

[source: own representation]

At first glance, it can be seen which sustainability topics are important to Allianz and how they are linked to the SDG. In this example of the sustainability

report 2023, it stands out that Climate Action (SDG 13) with the target to reduce Greenhouse Gas Emissions, decent work (SDG 8), and partnerships (SDG 17) are of great importance. Compared to 2021 and 2022, the same SDG remain important which is a sign of the company's consistent strategic direction.

Figure 20: Content analysis of the Allianz sustainability report 2021.

The screenshot shows the AntConc software interface. The main window displays a list of hits from a search query. The search query is "SDG" and the results are sorted by frequency. The hits are listed in a table with columns: File, Left Context, Hit, and Right Context. The hits are numbered 1 to 16. The right context for each hit shows the surrounding text, with the hit itself highlighted in blue. The interface also includes a search bar, a results set dropdown, and a context size dropdown.

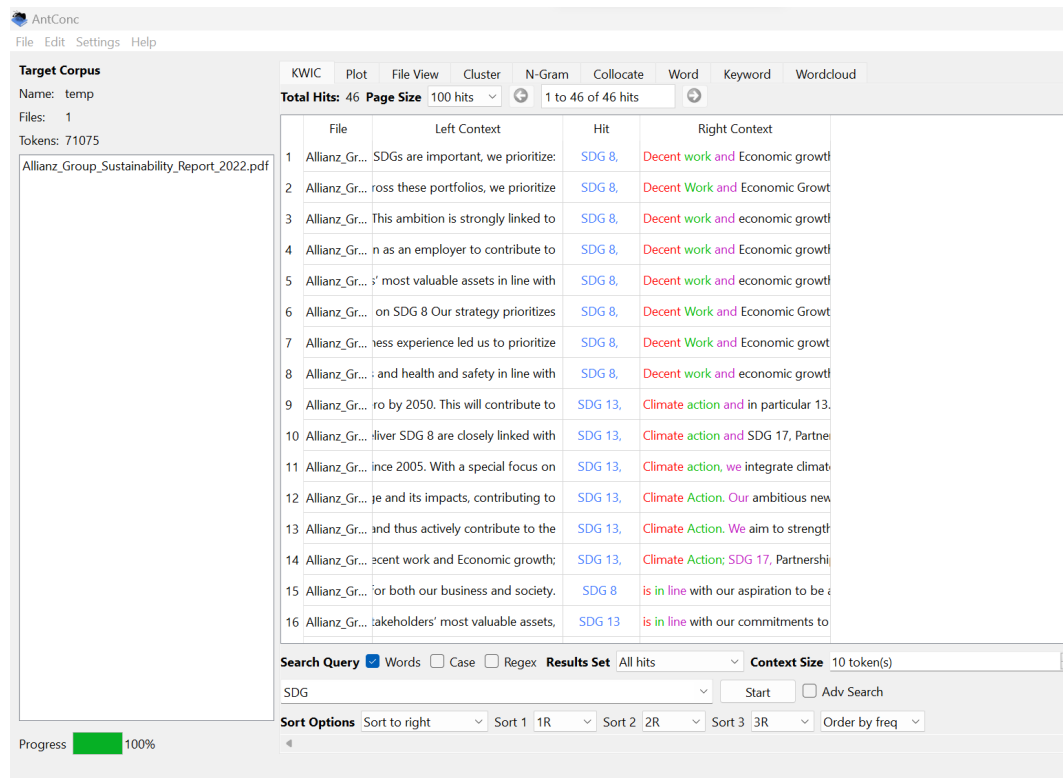
File	Left Context	Hit	Right Context
Allianz_Group_Sustainability_Report_2021.pdf	y purpose 'We Secure Your Future' and our commitment to	SDG 8 –	Decent work and economic growth. For more details, please
	on specific aspects of decent work: The overall goal of	SDG 8 –	Decent Work and Economic Growth is to promote sustained
	A key objective of our strategy is our commitment to	SDG 8 –	Decent work and economic growth. We harness the efforts
	our own initiatives and – in line with our commitment to	SDG 17,	Partnerships for the goals – through active participation in v
	ther lighthouse SDGs we have, SDG 13 Climate Action, and	SDG 17	Partnerships for the Goals. 1 Source: Allianz Research. 2 Sou
	y collaborating with private and public partners, in line with	SDG 17 –	Partnerships for the goals. Examples for such partnerships ir
	be closely linked to the other lighthouse SDGs we have,	SDG 13	Climate Action, and SDG 17 Partnerships for the Goals. 1 So
	nz Group Climate Change Strategy. With a special focus on	SDG 13 –	Climate action, we integrate climate considerations in our or
	, Entrepreneurship, and Trust) Section 02.4 • Climate action (	SDG 13)	is in line with our commitments to net-zero
	nd economic change: • Decent work and economic growth (	SDG 8)	is in Please see our targets and commitments in
	positive environmental and/or societal change. They include	SDG-	aligned listed strategies as well as Private Markets Impact
	takeholders' most valuable assets. With an added focus on	SDG 8 –	Decent work and economic growth – we integrate social cor
	1995– 2010) are immense, especially in four focus areas of	SDG 8:	education, labor, inequality, and health. Particularly striking v
	us on SDG 13 • Social (S) – Our social approach / focus on	SDG 8 •	Governance (G) – Our approach to sustainability integration
	50 and the Net-Zero Alliances; • Partnerships for the goals (	SDG 17)	is in line with our belief that the public/
	ability. • Environment (E) – Our climate approach / focus on	SDG 13 •	Social (S) – Our social approach / focus on SDG 8 • Governa

Search Query: ☒ Words ☐ Case ☐ Regex Results Set: All hits Context Size: 10 token(s)

Sort Options: Sort to right Sort 1: 1R Sort 2: 2R Sort 3: 3R Order by freq

[source: own representation]

Figure 21: Content analysis of the Allianz sustainability report 2022.



[source: own representation]

To understand why Climate Action (SDG 13), Decent Work and Economic Growth (SDG 8), and Partnerships (SDG 17) are among the most important sustainability topics for Allianz, we can consider several factors, including the nature of their business, stakeholder expectations, and global sustainability trends. Allianz, as a major global insurer and financial services provider, is significantly impacted by climate change, why it may mention SDG 13 frequently. The increasing severity of climate-related disasters directly affect their business through increased insurance claims and financial risks. Managing and mitigating these climate risks is crucial for Allianz to protect their assets and ensure long-term business sustainability. Addressing climate change also helps in reducing the systemic risks that could affect the global economy and financial markets. Moreover, Allianz is likely to be under pressure from regulators, investors, and customers to demonstrate leadership in Climate Action. Proactively reducing

greenhouse gas emissions and investing in sustainable practices aligns with their commitment to corporate social responsibility. Taking a strong stance on Climate Action can enhance Allianz's reputation as a responsible and forward-thinking company, which is important for maintaining customer trust and investor confidence. Regarding SDG 8, as a large employer, Allianz is committed to providing decent work conditions, fair wages, and opportunities for professional growth. Ensuring decent work helps in attracting and retaining top talent, which is essential for maintaining a competitive edge. Promoting decent work contributes to social stability and economic growth, which indirectly benefits Allianz by creating a more stable business environment and reducing social risks. Many countries have stringent labor laws and regulations that Allianz must comply with. Adopting high standards for decent work helps ensure compliance and reduces the risk of legal issues. There is growing emphasis from stakeholders, including investors, customers, and employees, on companies to promote fair labor practices and contribute to economic growth. Meeting these expectations helps Allianz maintain strong relationships with its stakeholders. Tackling complex global challenges like climate change and economic inequality requires collaboration. Allianz may recognize that partnerships with governments, NGOs, other businesses, and international organizations are essential for achieving meaningful impact, why they also mention SDG 17 as essential. Partnerships enable Allianz to leverage the expertise, resources, and networks of various stakeholders, enhancing their ability to implement effective sustainability initiatives. Working with diverse partners can drive innovation and open up new business opportunities, helping Allianz to grow sustainably and stay ahead of industry trends. By actively engaging in partnerships, Allianz can influence policy and regulatory frameworks in ways that support sustainable development goals, benefiting both the company and society at large.

A closer examination of the textual context in which SDG are mentioned reveals substantial variation in their functional role. In several cases, SDGs appear primarily in introductory or descriptive sections, emphasizing corporate commitment without reference to concrete targets or governance mechanisms. These contextual characteristics suggest a predominantly symbolic function of SDG references rather than deep strategic integration. In contrast, only a limited number of cases link SDGs explicitly to measurable outcomes or decision-making processes.

However, companies typically conduct materiality assessments to identify the most significant ESG issues for their business and stakeholders. The SDG mentioned in the sustainability reports are often aligned with these material issues. Thus, variations in materiality assessments across companies can lead to differences in the SDG addressed in their reports. Climate Action, Decent Work and Economic Growth, and partnerships are integral to Allianz's sustainability strategy due to their direct impact on business operations, risk management, regulatory compliance, and stakeholder expectations. Emphasizing these SDG helps Allianz mitigate risks, enhance reputation, and drive long-term value creation, aligning their business practices with global sustainability trends and contributing to broader societal goals (source page of Allianz sustainability report). While some companies demonstrate a strong focus on sustainability and comprehensive SDG alignment (e.g., Henkel, Allianz), others may have opportunities to enhance their reporting and engagement with sustainable development goals (e.g., RWE, Adidas, SAP). Another reason might be that companies may strategically select SDG to align with their corporate branding, marketing initiatives, and reputation management efforts. Some companies may emphasize their contributions to specific SDG to enhance their brand image and appeal to socially conscious consumers, investors, and employees. To mitigate these risks, listed companies should establish robust governance structures, implement effective risk management processes, ensure transparency and accountability in sustainability reporting and engage stakeholders in meaningful dialog and consultation. In addition, companies should prioritize actions that align with their core business activities, material issues and long-term sustainability strategy to maximize the positive impact and minimize the risks associated with integrating the SDG.

While frequency analysis provides an overview of how prominently the SDGs are referenced in sustainability reports, frequency alone does not capture the depth or strategic relevance of these references. To address this limitation, the analysis was complemented by a contextual interpretation of SDG mentions, examining whether they were linked to measurable targets, governance structures, or operational decision-making, or whether they appeared primarily in descriptive or declarative sections of the reports. This qualitative contextualization allows the

study to distinguish between symbolic references and more substantive forms of SDG integration.

3.2.5. Quality Criteria

The reliability of the results of a corpus analysis depends on the selection and preparation of the corpus texts. The three most important criteria are usually authenticity, representativeness, and computerization (Mukherjee, 2009, p. 21ff.; Sinclair, 2005). Authenticity means that the language examples are based on linguistically unreflective language use. Representativeness here is not identical with the selection of a representative sample in the sense of empirical social research, since the population of all possible linguistic utterances cannot be determined in principle (Biber, 2007), but the gradual question of the extent to which the corpus under investigation represents a balanced and meaningful selection of language examples in terms of content and form for the research question (Altmeyer, 2016, p. 4). The criterion of computerization states that language data (written and oral) must be converted into a computer-readable form, for which certain standards have been developed (Lemnitzer & Zinsmeister, 2015, pp. 39-56).

In the given corpus, sustainability reports from a representative sample of DAX companies are included, covering various sectors and company sizes. The most recent and complete sustainability reports are available preprocess of the reports to remove extraneous content and standardize text formats done. A robust text analysis methods, the frequency analysis has been used and findings validated through comparison with industry benchmarks. Findings have been contextualized within the framework of sustainability practices and goals specific to the industry. Compliance with ethical standards has been ensured, particularly regarding the use of company data and adherence to copyright laws

3.3. QUALITATIVE RESEARCH: SEMI-STRUCTURED INTERVIEWS

Unlike quantitative research, qualitative research aims to capture the full complexity of its subjects and is closely aligned with the social science belief that human reality is multi-layered and complex (Mayring, 2015, p. 19). It seeks to gather knowledge, experiences, and views from specific participants, typically

through oral conversations in this context. The interviewer prompts with questions, but the interview partner largely controls the conversation's flow. Additionally, it aims to reduce ignorance in a specific subject area and, ideally, to generate knowledge (Lamnek & Krell, 2016, p. 366). By focusing on individuals and their perceptions, qualitative research delves deeply into human motivation and opinions, exploring individual perspectives. Although its primary principle is openness to uncover unexpected and insightful information, it's essential to remember that it is based on preliminary theoretical research before fieldwork. Given its close connection to the reality of the subjects, it views research as a dialogue between the researcher and the researched, acknowledging that qualitative research depends on individual perspectives (*ibid.*, p. 33f.). This implies that the researcher is also part of the research process and influences the results. It requires a reflective attitude and flexibility from the researcher to adapt to the characteristics and peculiarities of the researched object (*ibid.*, p. 35-38). The qualitative content analysis is a well-established method in the sustainability literature (Gamage & Sciulli, 2017; Del Sordo et al., 2016). The basic concept of qualitative content analysis is, “systematically [to] analyze texts by processing the material step by step with category systems developed in a theory-guided manner on the material” (Mayring, 2007, p. 114). This dissertation refers to companies listed in the Prime Standard of the Frankfurt Stock Exchange. Companies listed on the stock exchange are subject to strict international disclosure requirements, which means that they are more willing to be transparent than smaller companies (Knefel & Sassen, 2015; Quick & Knocinski, 2006). Due to their size, such companies also have the financial strength and often the interest to prepare voluntary sustainability reports (Hardeck, 2011; Quick & Knocinski, 2006; Thorne, Mahoney & Manetti, 2014). This dissertation compares the sustainability reports of listed companies and focuses on the most frequent mentioned SDG, which serve as a baseline for the interviews.

The empirical method aims to reduce ignorance in a particular subject area and, in the best case, to generate knowledge (Lamnek & Krell, 2016, p. 366). Qualitative research is primarily inductive exploratory research, which provides insights into a specific situation from different points of view (Corbin & Strauss, 2015, p. 6ff.). It is also used to enable deep dives into thoughts, opinions, and motivations, or perspectives of the individuals. Besides, qualitative research seeks

answers to a question and provides descriptions of how individuals experience a given research issue (*ibid.*). As introduced, the dissertation examines the link between profitability and sustainability, and how to achieve the United Nations' Sustainable Development Goals from an economic perspective by 2030. The research question "how does business manage to consider profitability and sustainability as an interplay to ensure sustainable development with Sustainable Development Goals?" is answered with the help of experts' opinions of DAX companies. To allow an interpretation of the empirical evaluation considering the central research question of this dissertation, the theoretical overview and quantitative analysis in previous chapters serve as a basis for the review. Moreover, this chapter introduces the components of qualitative data collection. As one of the most common methods of qualitative research, the method of the interview will be used in order to give the interviewees the opportunity to speak and to learn more about their worldview and experiences (Friebertshäuser, 1997, p. 371). Particularly, the semi-structured interview presents the advantages and the structure of the guided interview since the research is concerned with very specific subject areas that are to be explored (*ibid.*, p. 375). Moreover, the central characteristic is that it narrows down the interview topic from the outset by means of pre-formulated questions or topics and attempts to create a certain comparability of the results (*ibid.*). The semi-structured interview also presents the selection of the sample, and the execution of the interviews, as well as their preparation and evaluation using the qualitative content analysis of Mayring. In order to meet the technical requirements of qualitative content analysis, a comprehensive category system is used to analyze the outcomes. Further, the category system is presented, and subsequently, the results of empirical research are evaluated and discussed.

The semi-structured interview is conducted in a conversation with one interviewee at a time and uses a mixture of open and closed questions often accompanied by follow-up questions. These follow-up questions contain why or how questions (Adams, 2015, p. 493). The interview guide supports the interviewer and is understood as a survey instrument during an interview (Gläser & Laudel, 2010, p. 142f.). In this method, a catalog of questions is worked out with the help of theory and the research question, which is used in the interview to give the narrative an approximate direction and thus represents a guide for the conversation. The guide is intended to serve more as a type of framework for the

interview. It does not require to be “worked through” in any particular order, to leave room for the individual stories and concerns of the interviewees (Friebertshäuser, 1997, p. 375f.). The guide is also used to avoid missing important aspects of the research question. The characteristic of a guided interview is the formulation of open questions so that the interviewee has the possibility to answer freely (Hopf, 1995, p. 177). The use of a guideline increases the comparability of the empirically collected data. It is not necessary to follow the guideline verbatim permanently. Instead, the interviewer has the chance to react to statements of the interviewee and the freedom to ask follow-up questions, change questions, and even omit them (Mayer, 2013, p. 37). The semi-structured interview may delve into unforeseen issues, which enables new perspectives for the evaluation (Adams, 2015, p. 493). Aiming to generate in depth answers, the questions in the questionnaire were phrased as open as possible, and their order can be adapted over the course of the conversation. Besides, the interviewer has the possibility to provide more information or follow up with spontaneous questions (Brosius et al., 2016, p. 107). However, if an interviewee evades or expands his answer, the interviewer is allowed to interrupt the statement inconspicuously and return to the original guideline (Mayer, 2013, p. 37). Therefore, the semi-structured interview resembles a natural conversation thus allowing a detailed examination of the essential aspects (Schmidt, 2011, p. 1f.). In order to be able to exclude possible unfavorable formulations or ambiguities, a pre-test should be carried out before the actual investigation, in which the guide is tested under circumstances as close as possible to the investigation, whereupon the first version of the questionnaire is revised once again (Friebertshäuser, 1997, p. 375f.). Depending on the interviewee, the interviewer can modify the interview guide, as its purpose is not standardization but ensuring all necessary information is gathered (Gläser & Laudel, 2010, p. 150). The interview guide adheres to the principle of being as open as possible, yet as structured as needed (Helfferich, 2019, p. 670). Openness is a crucial principle in qualitative research but also poses a challenge for non-standardized interviews. The goal of openness is to give participants ample room to provide answers, thus letting them decide the content and amount of information they wish to share. This requirement somewhat conflicts with the aim of semi-structured interviews to gather specific data about the topic under discussion. Therefore, questions are designed to be precise rather than overly

broad, to prevent excessive vagueness which might induce uncertainty in respondents (Gläser & Laudel, 2010, p. 132). The procedure is based on an interview guide encompassing all questions to be asked, aiding the interviewer during the interview (ibid., p. 142f.). Each interview should ultimately yield responses in the desired areas, though with varying levels of detail. It includes “key questions” that are asked in every interview and “contingency questions” that become pertinent depending on the conversation’s direction. This approach enables exploration of interesting and desired aspects while ensuring comparability (Helfferich, 2019, p. 675; Gläser & Laudel, 2010, p. 143).

In order to perform the research, the following methodological steps were conducted:

1. Purpose of research,
2. literature review,
3. composition of a questionnaire for semi-structured interviews,
4. sample selection,
5. pre-test of interview guide,
6. conduction of interviews,
7. transcription of interviews,
8. application of qualitative content analysis according to Mayring,
9. and evaluation and comparison of the results with literature review and theoretical framework.

The qualitative research utilized an inductive-deductive approach. Inductive means the categories are created from the interview content, while deductive implies the categories are predetermined by theoretically grounded evaluation aspects. The structure of the interview is shaped by the selected SDG and organizational requirements, including politics and business, the human factor, the relationship between sustainability and profitability, and organizational diversity, forming the basis for deductive category formation. The findings and the impact of the SDG on the balance of profitability and sustainability inform the inductive category formation. Employing semi-structured interviews provides the advantage of preparing and evaluating them through qualitative content analysis according to Mayring. To assess the generated data, a qualitative content analysis based on Mayring’s approach was employed. Originally, content analysis referred to examining material derived from communication forms. Nowadays, it extends

beyond just communicational material. It originated in Berelson's 1952 work "Content Analysis in Communication Research" and is now widely used in communication studies (Brosius et al., 2016, p. 137f.). Qualitative content analysis is ideal for extracting descriptions and social facts from text-based content, making it suitable for reconstructive studies and expert interview evaluations (Gläser & Laudel, 2010, p. 47). It primarily captures social reality (ibid., p. 143) due to its ability to handle large data sets while retaining a qualitative-interpretative approach, thereby capturing latent meanings (Mayring & Fenzl, 2019, p. 633). With its scientific orientation towards everyday life, qualitative content analysis integrates processes of thinking, feeling, and acting under natural conditions, closely tying it to linguistic understanding and interpretation (Mayring, 2015, p. 38). Following strict rules, it ensures intersubjective verifiability (Mayring, 2015, p. 12; Mayring & Fenzl, 2019, p. 633). Its theory-driven methodology enables the analysis of material using theoretically supported questioning, leveraging others' experiences to draw conclusions about the communication aspects under study (Mayring, 2015, p. 12f.). This evaluative method focuses on finished linguistic material (ibid., p. 54), breaking down the analysis into defined interpretative steps for clarity and verification by others (ibid., p. 61).

According to Mayring (2016), qualitative content analysis involves category-guided, step-by-step text analysis (p. 114). Categories encapsulate analysis aspects as concise formulations, aligning closely with the source material and allowing hierarchical ordering. The category system serves as the primary analytical tool: processing text passages relevant to the categories (Mayring & Fenzl, 2019, p. 634f.). Unlike other qualitative methods, qualitative content analysis predetermines the category system, though it can be refined with subcategories during analysis (Gläser & Laudel, 2010, p. 47). The aim is to extract "supra-individual common features" from individual transcribed interviews (Meuser & Nagel, 1991, p. 452). Resembling everyday text categorization processes, this mixed-methods approach facilitates both inductive and deductive analyses (Mayring & Fenzl, 2019, pp. 639-641). Mayring (2015, p. 67; 2016, p. 115) outlines three basic qualitative content analysis techniques: summarization, explication, and structuring. Summarization condenses material into content-rich paraphrases step by step through inductive category formation. Explication enhances individual text parts with additional material for broader understanding. Structuring employs deductive categorization,

applying a theory-based category system to filter specific material parts (Mayring, 2015, pp. 65-67). In this research, the structuring method was used to identify the extent of Sustainable Development Goals, while the summarizing method assessed the balance of profitability and sustainability.

3.3.1. Sample Selection

The expert interview method involves searching for experts who are familiar with the research subject. Therefore, the choice of experts is of high importance, because the interviewer and the quality of this thesis depend on the knowledge of the experts (Lamnek & Krell, 2010, p. 354). Experts are people who have significant knowledge in a particular field. The term is often associated with a group of high-level education, such as politicians, professors, or scientists. However, experts are also people with specialized knowledge outside this group (Gläser & Laudel, 2010, p. 11). People acquire this significant knowledge in a specific area over a long period of time. Experience, specific characteristics or depth knowledge that are relevant to the research question shape the expert and are crucial. They do not have to be in top management, but on the second or third level. Moreover, a diverse range of participants capture different perspectives, especially in terms of age, gender, socioeconomic status, and other relevant demographic factors, if applicable, can enrich the findings and make them more comprehensive. The decision paths and discussions for possible solutions are developed on these levels and are based on detailed internal knowledge, popularly known as “insider knowledge” (Meuser & Nagel, 2005, p. 73f.). Selecting a sample for semi-structured interviews is a deliberate and thoughtful process that balances the need for depth, diversity, and practical feasibility. Purposeful sampling, guided by the research objectives and ethical considerations, ensures that the sample provides rich, relevant data for in-depth analysis.

The choice fell on experienced employees working in the sustainability strategy, sustainability reporting departments, or sustainability-related work environments, such as project management or controlling. The chosen experts are able to observe the conducted measures, set targets, and actions taken to promote sustainability in the company and fulfil the reporting requirements of listed companies. A total of five interviews were conducted. These two distinct roles,

sustainability strategy and sustainability reporting, were selected to provide a comprehensive perspective on the topic. Consequently, sustainability strategy experts were included to assess whether sustainability reporting extends beyond compliance responsibilities and if a sense for the Sustainable Development Goals exists. Additionally, the aim was to gain insights into the perceived sense of sustainability in the company, with both interview groups sharing their experiences. The experts interviewed comprised a mix of long-term and relatively new employees. To encompass the entire company, members from various teams and offices were included in the research. To find suitable experts, the interviewer contacted several different DAX companies by email or official inquiries via their websites, introducing them to the study's topic and objectives, and inviting them to participate. Upon receiving consent, the interview was scheduled, and a calendar invite was sent. Participants were informed that the interview would last between 30-45 minutes, with all interviews scheduled for 45 minutes to allow flexibility. Each interview was conducted online to ensure consistency, as many interview partners were located abroad. One interview was conducted with two employees on request from two different departments, however, no distinction was made between the employees in the transcription in order to preserve anonymity.

3.3.2. Conducting Interviews

Before starting the interviews, the interviewer informed all experts comprehensively about the purpose, the background, and the further procedure of the interview. This method contains an interview guide, which can be found in appendix 2 and 3. Before conducting the interviews, the interviewer asked all interviewees to sign the declaration of information and consent. The interviews were conducted virtually via the software "Microsoft Teams" in order to achieve a neutral effect and avoid long journeys. Additionally, the interviewer used the recording and transcription function of the software to prevent technical difficulties since the permission was granted verbally. Therefore, the interviewer was able to be more engaged in the interview and to reflect the potential next question instead of concentrating on writing down answers (Adams, 2015, p. 500). The experts could not see the interview guide prior to the interview to avoid the interview questions being rehearsed and the character of the interview as a reactive

method getting lost. The interviews had an average length of 35 minutes. There were no misunderstandings regarding the questions. The interviewees asked questions in between for a better understanding. The interviewer asked all main questions of the interview guide and all experts answered them properly. There were no significant disturbances or interruptions during the interview. Before the interview began, the interviewer sufficiently thanked for participating in the interview. This behavior acted as a brief contact and highlighted the importance of their willingness. During the five introductory questions, the interviewer asked the interviewees to report about their roles and responsibilities within the organization, how sustainability is perceived and whether the organization has a separate sustainability department. The opening questions served as an icebreaker and statements were adapted to the respective experts. This warm-up resolved tensions and created a pleasant atmosphere which promotes productivity and concentration (Büntemeyer, 2021). The further course of the study adopts their experience and thoughts. This resulted in a concretization and deepening of the questions through reactive questioning. The interviewer modified the nine main questions and two industry-specific questions during the conversation. Follow-up questions aimed to deal spontaneously with relevant aspects that may not been included in the interview guide. After answering the first questions, follow-up questions appear indispensable, and explain statements for a better understanding. In the end, the interviewer formulated three final questions. The topic should be elaborated again with the first question, after the interviewee dealt with this topic consciously in the interview. The last question intended to reflect on the interview. The interviewees should think about whether something was missing or if they had any thoughts they had not given yet. Finally, the relevance of the research question can be interpreted from the interviews.

3.3.3. Transcription Process

The transcription process is a critical next step in qualitative research involving semi-structured interviews. It involves converting the audio recordings of interviews into written text. Transcribing the interviews allows a better evaluation of the material as comments and notes can be easily added. The recording function of the software "Microsoft Teams" recorded the interviews. Whereas the transcript function of the same software transcribed them during the

recording, it only served as an aid as they contained too many errors so that no reliable transcription could take place. Therefore, the interviewer used high-quality audio recorders to ensure clear recordings, which facilitate accurate transcription. The interviewer transcribed the interviews in a hybrid approach, combining automatic transcription with manual review to correct errors and ensure accuracy, in order to analyze them using qualitative data analysis. A distraction-free environment helped maintain focus and accuracy during the transcription process. The transcriptions have been numbered for better identification of the experts and later reference in the analysis, however, participant privacy has been maintained by removing or coding identifiable information. A non-literal transcription was chosen to make the statements from the interviews easier to interpret (Mayring, 2016, p. 91). This means that filler words such as “ehm”, “right”, “you know”, “uh-hum” have been corrected, syntax and grammar errors have been mostly smoothed out if a statement was formulated too incomprehensibly. This style of transcription was chosen because the content of the statements is in focus (ibid.). Exceptions exist if otherwise important aspects would have been lost. The following challenges must be taken into account during transcription. The interviewees spoke different accents and dialects, which made it challenging to accurately transcribe non-native accents or regional dialects. However, consultation with native speakers was not necessary to obtain an accurate translation. Furthermore, possible poor audio quality due to background noise or technical issues could hinder accurate transcription, however, audio enhancement tools can be used to improve clarity. None of these difficulties were encountered during the interviews conducted. Two interviewees were not comfortable with the English language, which is why the interview guide was translated into German using the software “DeepL” and the interviews were conducted in German. The interview guides can be found in appendix 2 and 3 in both languages, however, the English interview was used for the evaluation process. This step was necessary to eliminate the language barrier and to fully assimilate the interviewee's knowledge.

3.3.4. Evaluation Process

Once the data has been processed, the evaluation is carried out by the qualitative content analysis according to Mayring. The transcribed interviews can

be found in appendix 4 to 10 and the category system in appendix 11. Mayring's qualitative content analysis goes back to the basic idea that qualitative research does not have to mean that free interpretation should take place without systematic and comprehensible work steps (Mayring, 1995, p. 42). Consequently, the results of the research are largely dependent on the researcher and can hardly be comprehended by other recipients of the results (ibid.). At the center of the method is the development of a category system, which is developed with regard to the theory of the research question, the concrete material, and defined by assignment rules. Moreover, this method simplifies the analysis of the interviews thus the category system is constantly revised, adapted, and reviewed during the analysis (ibid., p. 49). Concerning qualitative content analysis, Mayring mentions summary, explication, and structuring for better differentiation. The summary serves to condense the material under review, resulting in an organized and concise corpus. This process ensures that the essential content is preserved, while still providing a clear representation of the foundational material. The goal of an explication is to expand individual questionable text components with additional material in order to explain and interpret the text passage in more detail. A structuring of the material is to filter out its specific aspects, to lay a cross-section through the material, or to assess it on the basis of certain criteria. In this context, structuring can be further divided into three subcategories: content-based, typifying, and scaling structuring (ibid., p. 54). Content-based structuring was chosen as the appropriate technique for the research question since the goal of this thesis is to clarify a content-related question.

Several steps are necessary for a meaningful category formation. First, deductive categories were established and defined prior to the analysis of the data material. This step was taken due to extensive prior knowledge, an established guiding assumption regarding the research subject, and the use of a partially standardized survey instrument, the interview guide (Mayring, 2010, p. 65). Important aspects from the already known literature on the respective research subject formed the categories (ibid.). After deductive categories were created, the data material was reviewed, and all relevant text passages were assigned to the appropriate categories. This process is called coding. The next step is to record the procedure in a coding guide in order to achieve the most precise formulation of the categories and to avoid unnecessary overlaps. First, the categories were defined

which components should fall under a category. Furthermore, concrete text passages from the protocol or transcript of the interview were given as sample examples for the category. Finally, the coding rules were defined. Where problems of demarcation exist between individual categories, rules were formulated to ensure clear assignments (*ibid.*, p. 106). The coding process was supported by the qualitative data analysis software MAXQDA, which enabled a structured, transparent, and traceable examination. Each coding step was documented and substantiated with appropriate quotations from the interview transcripts. The coded data was then analyzed in terms of thematic similarities, differences, and recurring patterns of reasoning. In the inductive approach, the categories were not created before the material is reviewed but are derived directly from the material without referring to previously used theoretical concepts. In summary, a deductive-inductive category system was developed for the analysis. Main categories were defined in advance based on theoretical considerations (e.g., the role of sustainability in the company, relevant regulatory developments, corporate culture and mindset), while subcategories were derived inductively from the empirical material. This combined approach ensures both theoretical alignment and openness to newly emerging aspects within the interview data.

Mayring refers to this type of category formation as summary content analysis (2010., p. 65). The goal is to narrow down the text elements without distorting the core content and essence of the material. This reduction intends to create a clarity of the data (Mayring, 2015, p. 67). First, individual interview statements from the transcripts were paraphrased (also called summarized) and compressed, whereby important components of the statement were preserved and repetitions omitted (*ibid.*). Aspects that relate to each other or have the same content were combined and represented by a new category. Corresponding passages in the material were now assigned to the newly formed category, i.e., coded (Mayring, 2010, p. 65f.). This results in a first version of the coding guide. Subsequently, the entire material were reviewed and references are assigned to the respective categories (Mayring, 2015, p. 61). The results were then discussed on the basis of the main question, and content analytical quality criteria assess the validity of the entire analysis (*ibid.*). The technique was chosen since the categories should be recorded as closely as possible to the interview. Through the structuring, the analysis aims to assess specific aspects of the transcription using certain criteria

(ibid., p. 67). When evaluating the interviews, it must also be considered that the results apply to the subjective perception and may not be completely related to the generality (Gläser & Laudel, 2010, p. 275). The categories were formed in such a way that the research question of this thesis can be answered by qualitative content analysis (Mayring, 2015, p. 72ff.).

3.3.5. Quality Criteria

Ensuring scientific quality is also a central concern in qualitative research. Unlike quantitative research, which often emphasizes the criteria of objectivity, reliability, and validity, qualitative research applies adapted quality criteria that account for the interpretive and context-specific nature of the methodology. According to Mayring (2022), key quality criteria include process documentation, proximity to the subject, communicative validation, triangulation, reflexivity, and relevance.

In the present dissertation, the following measures were implemented to ensure research quality:

- **Transparent process documentation:** The research process (from the selection of interviewees to the development of the interview guide and the subsequent coding and analysis) was systematically documented and presented in a traceable manner. This also included disclosure of the category development process and the presentation of exemplary coding.
- **Proximity to the subject:** By conducting guideline-based, semi-structured interviews with experts from corporate practice, a high degree of depth and contextual understanding was achieved. The interview format allowed for responsiveness to individual experiences and patterns of interpretation.
- **Communicative validation:** During the interviews, the statements of the respondents were actively mirrored, questioned, and contextualized. This mutual clarification supported shared understanding and minimized potential misinterpretations.
- **Reflexivity:** The researcher's role was critically reflected upon throughout the entire process, particularly in terms of possible biases in the interpretation of data. Through continuous reflection on personal

assumptions and expectations, an open and unbiased approach to the data was pursued.

- **Category triangulation:** The category system was developed both deductively, i.e., based on theoretical assumptions, and inductively, i.e., derived from the empirical material. This ensured that the results were grounded in both theory and practice.
- **Relevance:** The selection of interviewees and the development of the interview guide were closely aligned with the research question. The collected data thus make a focused contribution to answering the research question and generating relevant insights into the field of study.

These measures serve to enhance the credibility and transparency of the qualitative analysis and uphold the academic rigor of the research.

IV – RESULTS

IV -RESULTS

This chapter presents the results of the interviews according to Mayring's category system in order to understand the procedure for answering the research question. Based on the transcription of the interviews, a deductive and inductive category system was created by the qualitative content analysis according to Mayring. After an extensive review of the existing literature on the research subject, four main categories emerged deductively from categorizing the material (Mayring, 2015, p. 85):

C: Corporate Culture and Mindset

CO: Corporate Strategy

R: Regulatory Compliance

S: Sustainable Development Goals

The main categories are further divided in subcategories which are developed inductively as described in the previous chapter (*ibid.*, p. 67).

4.1. CORPORATE CULTURE AND MINDSET

Corporate Culture and Mindset is the first main category with two subcategories. All statements regarding this category are based on the interview questions in the guide.

- C1: Employee's Attitudes
- C2: Organization

C1: First, experts considered employee's attitudes as the driving force for sustainability within a company. #1 explains, "Technology is not necessary or innovation, but it's more people. It's more at the company. It's people's mindset and the culture. I think it's super important that sustainability helps us to decide how we want to hire people, how we want to buy material, how we want to develop our strategy" (l. 155f.). #3 agrees by saying "I don't believe technologies alone will do it" (l. 294f.) because "the drivers for this [sustainability] are the people behind it. You have to want it if you want this attitude" (l. 292f.). #5 adds by stating that "it's [sustainability] something that people want to do where they see a benefit

and that makes fun and they can see an impact and not if it becomes a burden. If you make a very interesting and nice topic very unsexy, and that can make a difference in a firm then also to thrive" (l. 111-114). #2 believes that the attitude might change if the ESG team is located beyond the ESG committee, "for example, to locate the responsibility of the Supervisory Board, where the topic has really received different attention" (l. 88f.). However, #3 also states that the employee's attitude can change because of regulation: "It's actually very strongly driven by regulation, so it's no coincidence that I was hired in 2017. That's when the CSR RUG came in, the first mandatory reporting in the annual report. That's why it was put on a systemic or strategic footing for the first time. In 2020, it became increasingly clear, ... that there was a much stronger focus on these regulatory levels and that we simply had a responsibility ... and that much more needed to be done because more and more regulation was emerging in many places, more and more legislation was coming up and these were actually the main drivers, of course for the company as well" (l. 33-40). Across interviews, CSRD is consistently framed as administratively burdensome. Interviewees describe increased reporting workloads, data uncertainty, and limited perceived strategic value. As #4 notes, "Once CSRD, they really say, ..., that's so much work". (l. 44). Therefore, #3 also raises the attitude of employees to a political level: "So I think that in some respects the political framework and the ideas are working, so I think the National Action Plan for Human Rights, for example, is a very good example of how politicians have said in a very transparent, very good, open and long process that this is what we want, this is our attitude and opinion as a country and if you as a company can't do it, then we'll make a law out of it. It's great, well, it fits back and front, everything has been done right, but it's just missing in relation to the SDG in the big, overarching strategy or in the bigger picture "(l. 188-194). #5 also hopes that "regulation also catches up" (l. 41) but attitudes within one company can change if not only the top management is involved into the Sustainability Strategy as #1 explains: "People were super happy that we talk about sustainability with them. We try to understand how sustainability could impact where they work and that I think it was the right thing to do because to shift sustainability in a silo department and compliance and reporting and ready to spread sustainability with finance, with different departments, with small steps but in fact a big success because people will internally want to have to contribute to because they believe that they want to do

something for the planet. They have no idea how to do that, but if we help them to do something in their day-to-day work, they really appreciate that. It was successful” (l. 177-185).

A final important aspect here is the link between the SDG and the attitude of employees, which #3 outlines by stating that “The SDG provide an attitude and a direction. It is not so important whether a specific goal is achieved or not, but if a society develops within the framework of these 169 sub-goals, it will definitely develop in the right direction, regardless of whether a goal is specifically achieved” (l. 289-292). Looking to the future, #3 does not have high hopes, because “After 2030, I don't have a vision of what will happen and who will do what. I also find that the basic attitude is currently not so much in this direction, in society or societies to look at” (l. 329ff.).

C2: Another aspect of corporate culture and mindset is the organization itself. The first question is whether a centralized or decentralized team makes more sense to promote sustainability in a company, as #1 states the challenges: “We have a very decentralized but at the same time centralized organization and that start to be complex and difficult to spread ESG. We have a corporate organization and the sustainability team is part of the corporate team. But at the same time, we have six different business unit and in each business unit we have a sustainability team. Most of the time, they follow our targets, but sometimes they had different priorities and they work a bit differently and it's not easy to align because we have a very decentralized organization and in each business unit we have a CEO who decides” (l. 35-41). #1 gives an idea on how sustainability could be integrated into the organization's model: “The best way in terms of the organization will probably be to reduce the sustainability team and to be with a couple of people for compliance, for procurement plus sustainability, finance plus sustainability related to add sustainability everywhere, not just to have one department except for compliance, to train people, to explain, to organize webinars, to integrate sustainability in every situation possible and important for the company's success and business. I do believe that in procurement, finance or HR, we could have people with the knowledge of sustainability, I think you could really accelerate and help the company to achieve their goals” (l. 285-292). The proposed structure is reflected in company #2: “We have a matrix organization with representatives from various departments, including Legal, Procurement, and Global Environment,

Health, and Safety. We also have contractors with limited contracts" (l. 57ff.). #1 also introduces a direct link to the corporate strategy and its profitability: "Our company has decided to shift from conventional energy to renewable energy. Just five years ago, it's pretty new for the company because previously the profitability and money revenue come from the nuclear and coal businesses and today we have totally reverse. It's not because the company decides to do something about sustainability or ESG that you can change quickly. The mindset and the culture and the mentality of the people, it's a big challenge" (l. 46-51). The same person is also convinced that sustainability must be distributed throughout the organization because "ESG is not just one department, it is not a silo organization, but it's everywhere. It's really part of the DNA of the company and if we are not able to implement that, it doesn't matter if we have the best technology or whatever" (l. 157-160). Thus, sustainability should not only be spread in the organization but implemented in the company's culture: "People are people and the sustainability need to be really part of our DNA definitely, and our culture if we want really to make an impact" (#1, l. 160f.). However, #4 shows that the larger the organization, the more difficult it is to integrate sustainability into the company. The corporate sustainability structure comprises a dedicated team of around 40 people globally, with an extended network of approximately 100 when including associated roles like EHS (Environment, Health, Safety), HR (Human Resources), supply chain, and regional sustainability business partners. These associated roles are not fully dedicated to sustainability but contribute indirectly. The corporate sustainability team writes the sustainability report and sets key company-level targets, focusing on Scope 2 and 3 emissions (upstream and downstream), women in leadership, fatalities, and safety. Compliance is handled separately and reported quarterly to the board and the Sustainability Council serves as the highest governing body for these targets (cf., #4, l. 175-200). However, company #5 may find it difficult to cascade the understanding within the organization: "what is tricky in terms of SDG is of course mapping, being sure you map the right SDG with the indicator and have that knowledge basically cascaded down in the whole organization so that people in the front office have the same understanding as in the middle or back office" (ll. 66-69). Company #4 revolves around a disparity in perception and engagement with sustainability within the organization: "They seem more as a burden. More the challenges or tensions that you mentioned or I suppose at a

balance they need to establish somehow rather than opportunity. See it very diverse in the workforce. The higher the management, I see a more reluctance, the lower the workforce, they see high motivation to say we need to do something” (l. 52-56).

4.2. CORPORATE STRATEGY

Corporate strategy is the second main category with four subcategories. All statements regarding this category are based on the interview questions in the guide.

- CO1: Strategic Importance
- CO2: Profitability
- CO3: Investment and Innovation

CO1: First, experts considered the strategic importance of sustainability as another driving force for its integration within a company. The strategic importance is noticeable in company #1 by hiring a person to develop a sustainability strategy and integrate ESG aspects into the business model (cf., #1, l. 7f.). The company has established nine ESG initiatives, linking strategy to sustainability goals. However, aside from CO2 targets, there is a lack of clarity on measurement and cascading these goals across business units (cf., #1, l. 24-28). Similarly, since 2017, #3 has integrated sustainability into its operations, starting with an individual role in Corporate Communications and evolving into a dedicated Sustainability Strategy team in 2020. This five-person team acts as facilitators, translating external factors like regulations and societal trends into internal business strategies and gathering the company’s sustainability efforts for external communication through reports and other tools, while also overseeing the strategic integration of sustainability across the organization (cf., #3, l. 6-22). #4 states that “sustainability as part of the strategy organization and for each of them are ... about five to six people” (l. 178f.). Including associated functions like EHS, HR, and supply chain, and sustainability business partners across 7 regions, the total number of people involved in sustainability efforts may reach around 100, though many are not fully dedicated to sustainability, with the core dedicated team around 40 people, underlining the strategic importance of sustainability for the company (cf., #4, l. 178-189). #1 considers sustainability to be essential for the

strategic direction of the company: “ESG is not just one department, it is not a silo organization, but it's everywhere. It's really part of the DNA of the company and if we are not able to implement that, it doesn't matter if we have the best technology or whatever. ... Sustainability needs to be part of our DNA, and our culture if we want really to make an impact” (#1, l. 157-161). This is noticeable in the structure of company #3. Sustainability is integrated into their mission statement, corporate strategy, and external communication, reflecting its importance at a strategic level. The company has made significant progress in their business, with active departments driving change and adapting business models accordingly. However, implementation varies across the organization due to its decentralized structure, with some areas fully engaged and others neglecting sustainability without direct pressure or incentives. This highlights the need for stronger central guidelines to ensure consistent adoption and alignment with sustainability goals across all business units (cf., #3, l. 54-70).

#3 believes that the core of a sustainability strategy for large, publicly listed companies should be based on a thorough materiality analysis to identify key sustainability topics, rather than simply fitting pre-existing frameworks like the SDG (cf., #3, l. 306-319). Last aspect of company #1 is that the company is considering incorporating ESG KPIs into the board's remuneration and broader bonus structure to demonstrate a serious commitment to sustainability. However, this idea is still under discussion, as it is unclear whether the timing is right and whether the KPIs will have a meaningful impact on the company's performance (cf., #1, l. 271-277). Overall, #5 agrees that “it's [sustainability] not just doing good, it's really central to their business model” (l. 37f.).

CO2: Profitability is seen as a challenge that is not always in line with sustainability. #3 states that “Profitability is still the core issue, and there is no change in the achievement thresholds or hurdles in the company. For the individual measures, one must fairly say there are actually no consequences on the topic of economic return” (l. 261-264). However, while profitability remains the core focus, sustainability initiatives are increasingly linked to economic returns, with no major changes to achievement thresholds: “There is more visibility for opportunities in sustainable business processes or sustainable business investments. That means the linkage of normal return expectations with, for example, energy modernization, the expansion of renewable energies, the

promotion of women in leadership positions, but also in STEM subjects with us, all have links with the economic effect and economic return. By now, they go quite well hand in hand” (l. 264-268). #5 argues that targets and goals play a role, too: “I don't think you can manage a firm without targets and goals. There are always those people that are a bit more, that move a bit faster if they have a target, if they can also have an impact. I believe measurement is key” (l. 115ff.). They further state that “also accountability because I think it's very important that every employee understands how he can contribute. If you make that measurable, I think it makes it even better because then you know you can get targets” (l. 118ff.). They add that “you can also make a really high target, which is almost unachievable. That can make frustration, but you can set also a sensible target that with some effort you can actually achieve, and then celebrate that success, which I believe is much better than you force people to transform and making it a bit” (l. 121-124).

Another aspect is given by company #4, which sees the CSRD regulation as an opportunity to connect profitability and sustainability by bringing finance and sustainability teams together: “At least they're in the same room. They might not speak exactly the same language. What I mean by that is sustainability is less mature in almost everything when it comes to the definition. When it comes to data. When it comes to data quality compared to financial data. ... Mostly companies are less vocal and sustainability than they are in finance. So very often you have an CFO in a company has a role that you need to have. Next to the CEO, but you don't have necessarily all of a sudden Chief Sustainability Officer. So that means that indicates ... the difference between finance and sustainability. So it's not in the same maturity level. That's my personal view company view. I guess most of the people see it more as a burden to CSRD rather than an opportunity” (l. 31-40). #5 agrees by stating that “I think it's for us also especially important that there is regulation that companies are also forced to report certain data points because otherwise it's difficult to limit (l. 125ff.). Similarly, #1 agrees by stating that “sustainability and finance and profitability are linked big, but the investors want to see that we are the ones that we prove what we say on the paper and act in the practical way, and that is a big challenge (l. 75-77). As a consequence, the company has successfully shifted from conventional to renewable energy, marking a significant change in its business model (ebd.). #5 agrees by stating that “I think what is also an important stakeholder group is the investors, of course. That should

also force companies to move in that direction and I think clients will as well" (l. 137ff).

However, the shift has been challenging due to the need to change the mindset, culture, and mentality of employees. A key outcome was the positive response from investors during a capital market day, where the company demonstrated its commitment to sustainability, leading to a temporary increase in share price. Despite this, investors emphasized the importance of tangible actions, not just commitments, to ensure long-term value and continued confidence in the company's sustainability efforts (cf., #1, l. 46-51, 68-74). It is still challenging for the company to keep up with their sustainability targets because "it depends on the entire value chain or supply chains. All the time we need to keep some profitability and most of the time some material" (l. 261f.). The challenge is demonstrated by an example: "Green Steel as an example of some recycling blade. More expensive than the traditional material, and that it's another challenge. We would like to, but financially it's challenging" (l. 263ff.). #5 gives another example: "if you take solar as an example, you can see when prices come, it's scalable. It doesn't mean that you need to understand in the early innovation process, if that's something you want to invest in. You have of course a higher risk also, but I mean that's kind of the trend" (ll. 202-207). They further raise a similar aspect: "What cannot happen is that sustainability becomes something like doing good and we do it because of sustainability but it's not profitable because if you scale that, it doesn't make sense. So if sustainability is not something where you can make money and when you have a reliable business case, I think we shouldn't do it" (ll. 200-204).

Lastly, #1 reflects on the challenge of balancing finance and sustainability, noting that while topics like climate change, biodiversity, and diversity are easier to discuss, aligning sustainability with profitability is more complex, particularly when comparing sustainable materials to traditional ones. They also emphasize the need for a shift in mindset among investors and banks to make this balance achievable. Drawing from past experience with circular economy strategies, the speaker concludes that achieving financial sustainability requires collaboration between government, businesses, and innovation, as these sectors are interconnected and must work together (cf., #1, l. 332-348).

CO3: Investment and Innovation are mutually dependent in the context of sustainability. Company #3 explains that, "Sustainability is practiced in some areas

of the company. There are individual departments that are also moving in this direction” (l. 57f.). They further state that “Particularly in the direction of investment in climate-neutral building stock, ... we have set up a large department for renewable energies and all that sort of thing” (l. 60ff.). However, the strategic direction is often unclear. Company #4 exhibits a decentralized structure where sustainability initiatives are unevenly implemented across business areas. Investments in innovation are essential and inevitable, e.g., for the housing and building sector. This highlights the resource-intensive nature of maintaining and upgrading properties, emphasizing that consistent innovation is key to meeting evolving demands, whether for sustainability, efficiency, or compliance with regulations (cf., #3, l. 239f.). While some areas have embraced changes in business models to incorporate sustainability, others remain disengaged unless actively pursued. Decisions on sustainability investments are largely left to on-site teams, with limited central guidance or standardized policies (cf., l. 62-70). They view sustainability investments pragmatically, focusing on integrating social and ecological aspects alongside economic considerations. A notable shift occurred 2-3 years ago with the implementation of a climate investment tool, which ensures that decisions regarding building modernization align with the company's climate goals while balancing tenant affordability and economic returns. However, this holistic approach is not yet uniformly applied across all areas (cf., l. 244-255).

Moreover, over the past decade, the relationship between profitability and sustainability has evolved, though profitability remains the core focus. While sustainability measures often lack direct economic consequences, there is growing recognition of their alignment with economic returns, particularly in areas like energy modernization, renewable energy, diversity in leadership, and STEM promotion. This shift is driven less by intrinsic motivation and more by external factors, such as skilled labor shortages, regulatory risks, and climate-related challenges. Regarding regulatory risks, Company #2 agrees because investment decisions increasingly consider compliance with sustainability-related requirements, including alignment with SDG, though the approach may not always begin with the SDG directly. The CSRD has contributed positively by emphasizing materiality analysis, which aligns with and supports these investment considerations, reflecting a parallel shift in sustainability practices (cf., #2, l. 348-354). Investments in sustainability are increasingly viewed as long-term strategies

for risk mitigation and asset security, aligning naturally with regulatory frameworks and societal expectations (cf., #1, l. 261-276). Investing in innovative solutions is another link to harmonize sustainability and profitability. Company #3 states that: “I do believe that there is a lot possible in construction when it comes to innovations to achieve the SDG, such as affordable and renewable energy or new renewable companies. Also, for SDG 13 on Climate Action, there are many innovation opportunities for our industry. In the rental business itself, it is a bit more difficult. ... But yes, I do believe that there are quite good opportunities for innovation in our industry for individual standards or goals, but more technically than socially or governance innovations, which I don't think are as feasible in this context for the goals” (l. 223-234).

Lastly, company #2 transfers the investment approach to CSRD regulation by stating that “when it comes to investment decisions, you're already looking in that direction, you're already looking at how compliant you are with what when it comes to acquisitions or something like that” (l. 348ff.). From a banking perspective, company #5 relies on regulation as well: “As a bank we see our role of course also to make sure that clients understand how important sustainability is also for them. So it's not just doing good, it's really central to their business model. If they're not adapting it, I think they will go out of business at some point in time and that's why I think that's an important role we play. I think we as banks or the banking industry alone can't currently force people to do so. That's why we are hoping that regulation also catches up a bit more governments, for example” (ll. 36-42).

4.3. REGULATORY COMPLIANCE

Regulatory Compliance is the third main category with three subcategories and forms the transition to the next chapter. All statements regarding this category are based on the interview questions in the guide.

- R1: Corporate Sustainability Reporting Directive (CSRD)
- R2: Data

R1: First, experts considered the Corporate Sustainability Reporting Directive (CSRD) as a major force driving sustainability within a company. Company #2 clearly replied that the biggest driver within a company is the CSRD (cf., l. 245ff.).

#3 agrees by stating that “At the latest with the CSRD for a large number of companies now also mandatory in the direction of double materiality, where it then becomes exciting for the company to see what my possibilities, my levers actually are and where I can also have an impact” (l. 156-159). The materiality analysis that companies have to carry out with the CSRD regulation gives sustainability a new meaning: “I also really mean what I said before, that the core is the company's own materiality analysis, actually for a company, so if a company takes it seriously, to conduct a really serious materiality analysis, to see what our essential sustainability topics are and not go in there pre-formed and say, yes, it somehow fits (l. 311-314). Moreover, the adoption of double materiality in the ESRS is viewed positively, as it encourages companies to integrate considerations of their environmental, societal, and human impacts into their strategies. When thoughtfully developed, such strategies are unlikely to fail (cf., #3, l. 316-319). Company #2 is also focused on implementing the CSRD regulation: “I think that we are all so distracted by the CSRD right now that we will have this as a focus topic from the industry that falls under the CSRD for at least the next two years. Whether even more will develop and even more will have to be done and new laws will be introduced. ... We are currently focused on CSRD compliance, which will occupy us for the next two years” (l. 320-327).

The experts also all agreed that the new European CSRD regulation is an additional burden for sustainability departments. Company #2 argues that “The [SDG] are suitable for this [sustainable development and future thinking], but the CSRD is not suitable at all. Who wants to nibble their way through it?” (l. 236f.). Company #4 agrees “once CSRD, they really say, Oh my God, that's so much work” (l. 44) and states that: “I guess most of the people see it more as a burden to CSRD rather than an opportunity” (l. 39f.). The opportunity presented by the CSRD lies in fostering collaboration between finance and sustainability, enabling both domains to engage in meaningful dialogue and alignment. While sustainability lags behind finance in terms of maturity, data quality, and regulatory structure, the CSRD creates a platform for integrating sustainability considerations into financial decision-making processes. This alignment has the potential to advance the balance between profitability and sustainability, despite the widespread perception of the CSRD as a regulatory burden (cf., #4, l. 26-40). #1 agrees by arguing that: “CSRD. Currently we are working on double materiality assessments, ESRS et cetera. On

the paper the first thing when we have a look, we say, OK it looks achievable and possible to do the double materiality assessment and to communicate the target. But more and more we worked on this topics it was super challenging really to understand finally what we want to achieve, because the framework, there is a lot of contradiction and I think that in my personal view it's really too much. Now we have to prove everything, we have to justify everything, and it's time consuming" (l. 88-94). Company #1 further argues that "I do prefer that we locate more time to work with the team about circular economy and to decide together in the collaborative way how we could really develop targets and how we can work together to achieve the targets in term of recycling, in term of construction, in term of the decommissioning, et cetera" (l. 94-98).

Additionally, experts experience challenges with the new Corporate Sustainability Reporting Directive. Although it is good to have regulation that is intended to lead to more disclosure in sustainability, the experts feel overwhelmed: "To develop strong obligation reporting targets, but without having a holistic view in term of consequences for the companies, for the different industries, for people short term and long term. Everyone wants to do something and the regulation tries to align and to measure but without really consultation about the players, or the people" (l. 119-123). #5 shares a similar opinion: "I think regulation is important so that we, at least in Europe, we have data we force companies to report on. But some of the regulation ... , I feel sometimes a bit uncoordinated and it's not that the business involved in a way that we come to a proposal. I think it also puts a lot of burden on firms and makes a very important topic unattractive" (l. 129-133). Apart from the regulatory burden, the challenges involved in converting a sustainable business model are considerable, as company #1 states "our company has decided to shift from conventional energy to renewable energy. Just five years ago, it's pretty new for the company because previously the profitability and money revenue come from the nuclear and coal businesses and today we have totally reverse. It's not because the company decides to do something about sustainability or ESG that you can change quickly. The mindset and the culture and the mentality of the people, it's a big challenge" (l. 46-51). Company #2 agrees by stating that: "In terms of regulation, for example, none of that fits our business at the moment, but we're currently making a bit of an effort to comply with the regulations, but we can see that it's geared towards other industries" l. 216ff.). Moreover, company #1

considers the people in the change process: “I do believe if we want to change something it's not with regulation or compliance but it is with the people, step by step and practical actions and first to understand what the challenge is for the Engineering people or Procurement, it's to work with them together to integrate sustainability principle in their current business model or processes. It's collaboration. If we want to make an impact and change the mentality and the culture of the company” (l. 198-203).

While four companies discuss the advantages of CSRD and mapping SDG to business models, one company expresses a differing viewpoint: “I don't think that any regulation I know would actually help achieving SDG. ... I think what helps indirectly is, for example, we as a bank, we are of course forced to report against the 1.5 currently net zero scenario. So that means we need to act and shift a bit the business model and that leads, ... to doing business that can be counted against the SDG, but it's not that there's any regulation now that would force us to do certain amount of business and map it against SDG” (ll. 94-100).

R2: Experts consider data availability as a further obstacle to fulfilling the CSRD directive. Company #1 argues that: “we want to be perfect in sustainability but there are too many things, a lot of paper to communicate, a lot of information, a lot of data. We allocate a lot of time about reporting, about to be compliant but it is just too much. We would rather like to use our time to develop more practical action and to decrease the time for reporting and compliance” (l. 98-102). #5 agrees by stating that “I think that's kind of the observations I have and data is not perfect. I think at the same time you can't wait until it is perfect and what we are trying to do is to collect as many data as we can from clients and then where we do not have data, we rely on external data providers, where we get estimates” (ll. 151-155). On the other hand, other companies are already working on automatization processes, as company #3 states: “we are very much involved in the automation of data collection this year. We are shifting a lot to accounting from what we previously did as a sustainability department. ... But the initial effort, the initial investment, is enormous” (l. 378-384). Company #4 is advanced because they are already working on a data tool: “... project where we calculate the downstream data in a tool to be audit proof and have the data at hand easily” (l. 8f.). However, they are also facing challenges with their data quality since sustainability regulations are not mature yet: “When it comes to data quality compared to financial data. Because simply it's

financial data, highly regulated topic. Known in the companies for years. Mostly companies are less vocal in sustainability than they are in finance" (l. 33-36). Company #2 also states that: "CSRD will keep us busy. We can't focus on SDG now, so we'd rather focus on CSRD" (l. 312f.), indicating that data to fulfil the regulation is required.

#5 sums it up by stating that data collection will get difficult in the future: "I think we get more and more data, at least for carbon and I think the trickier part would then be biodiversity or nature which cannot be measured at the headquarters, and I think that's the next challenge. If that's also something you include in sustainability and not just climate. There are still challenges ahead of us in terms of data collection of course and also using historic data to predict the future, something that I think needs to change but it's not unmanageable anymore but it takes time and it is also an investment" (ll. 157-163).

4.4. SUSTAINABLE DEVELOPMENT GOALS

Sustainable Development Goals is the last main category with three subcategories. All statements regarding this category are based on the interview questions in the guide.

- S1: Mapping and Implementation
- S2: Reliability
- S3: Politics

S1: Coming to the strategic importance of the SDG, #1 initially focused on aligning UN principles with its initiatives and strategies, which led to improvements but maintained a siloed approach. While targets and ambition levels were developed, the integration of UN principles was more about matching rather than fully embedding them (cf., #1, l. 242-246). #3 approach was the same. They joined the UN Global Compact and adopted similar frameworks primarily to meet regulatory and rating requirements, rather than as deeply integrated initiatives. While the SDG were mapped onto the existing sustainability strategy during a 2020 materiality analysis update, the approach focused on aligning the SDG with pre-existing goals rather than building the strategy around them. This reflects a broader trend where companies like #3 with established strategies adapt SDG to fit their frameworks, rather than using them as foundational guidelines (cf., #3, l. 130-147).

Company #5 follows a similar approach: “All the transactions we monitor, we map those against the SDG. If we would give a company a credit that will be used to, e.g., for water we map it against clean energy. ... For example, we can take also two or three SDG with one transaction but that's what we transparently measure and also report externally in our report” (ll. 51-55). The company does not differentiate between single transactions when mapping them to SDG. All transactions can be mapped to SDG, and reporting reflects how much of the total business volume aligns with each goal. There are no specific targets or quotas for SDG allocation, the focus is on ensuring impact rather than prioritizing particular SDG. (cf., #1, l. 76-89). Similarly, #2 SDG were mapped to the company's strategy, rather than the SDG shaping their strategy (cf., #2, l. 132), stating that: “We don't take the S and then think strategically about how we can have the greatest impact on certain SDG, but we think about them from our core business, which also makes sense” (l. 333ff.). However, company #2 demonstrates key areas of contribution and clarity on their relevance in the mapping process: “We used a tool to map our activities to the SDG. It was a collaborative effort within our corporate ESG team In principle, we all answered where we think we contribute to which SDG and of course we looked at all the SDG beforehand. It was nice because you could see relatively quickly where we thought we were contributing and which topics we were contributing to, and they then crystallized from that and it made total sense. We then also explained, with the help of the projects that we initiated, why they fit in a certain area, so all of this is also published in our sustainability report” (l. 150-156).

However, they conclude that “I'm not at all concerned with it [SDG] at the moment because we have so many other things to do. We are currently focused on CSRD compliance, which will occupy us for the next two years. We are not strategically aligning with the SDG but rather focusing on our core business and regulatory requirements” (#2, l. 323-327). They further state that “the regulation also requires sustainability, but the SDG are just a mapping exercise to communicate to the outside world, so I'm not sure whether it's the same in other industries, so it should be more national” (l. 335ff.).

#1 offers another interesting aspect that emphasizes the importance of the SDG as a unifying framework to focus on respective sustainability aspects: “I think it's super important to have the right balance because I think everyone would like to contribute to reduce climate change, etc. But when you look sometimes what has

happened in some countries, there is no food, no water. Finally, sustainability is what they would like to have, but it is not their priorities" (ll. 318-321). #5 agrees by stating that "the SDG are a tool to demonstrate that you have impact ... we have focus SDG. We don't think we can equally have all SDG, because of our business model" (l. 48ff.) and "the SDG are a framework or a reference framework to demonstrate that we have an impact with what we do. It's currently not something that we use as a target, so that we have an absolute goal or an amount that we basically would measure to achieve an SDG" (ll. 272-275). However, company #3 does not find it important to map the SDG to the company's goals anyway: "I personally don't find it so necessary, to create this connection to the SDG or to align with them if the goals that you have set yourself since the company, which fit the materiality, are also simply suitable for the company and I actually believe that many of these goals are then automatically congruent or almost congruent" (ll. 159-162). They find the overall sustainability aspects of the company more important: "If I find something much more suitable for the company and better addresses the company's opportunities, I'll take something that perhaps doesn't match the SDG in terms of wording. But if the basic idea is in the same direction, then I don't care whether it can be called an SDG or not" (ll. 168-171). Lastly, sustainable transition finance could be recognized as a distinct category and will likely be mapped to the Sustainable Development Goals (SDG) to reflect its role in supporting companies on their path to net zero (cf., #5, l. 266ff.).

S2: The interviews indicate that the reliability of the SDG for companies is questionable. For example, company #2 sees the SDG as a marketing tool: "Companies use them for marketing, but they also aim to ensure sustainable development. So that was more my personal opinion. Regardless of what we do ... , these are also beautiful, colorful pictures. You can kind of pin them to your shirt. It's very striking, but if you actually look at which country or company has the SDG and what the agenda behind them is, it's a lot of hot air. From a company perspective, it's more marketing. We define our goals based on our business and then map them to the SDG" (ll. 167-172). Company #4 agrees by stating that "at the end of the day, it's marketing" (l. 111).

On the contrary, #2 also argue that "you can say and see how these more marketing-driven instruments can perhaps be used better, because you can probably get more people to contribute in some way (l. 237ff.). They continue that:

“It comes from the top from the SDG and it comes from the bottom, so it doesn't all fit together properly. It's not one piece. Maybe you can't expect that because the industry and the sectors are so different. But you have to find your own way somehow” (l. 222ff.). However, company #1 mentions that at least, “it's good to have something” (#1, l. 83) because “it's super important at the high level to have some direction and to have some agreed ideas. It's the rule of each company to interpret and to try to understand: ‘for me as a company, what does it mean?’. I don't need to take the box for everything, but I can select maybe just five or ten of them. That's it. But I want to use them and to share them across the company and to turn this concept in really practical actions, into measures”, states company #1 (l. 218-223). They further state that the SDG might be easy to translate into practical actions: “It's interpretation and adaption and to transfer or to translate this concept in practical actions for the company. I think with that it will be easier to communicate and to have people in the company that don't need to big concepts. You pair a complex issue and they want to have a practical solution, targets, or actions and they want to believe the vision and idea. I think it's our role to translate the different messages into a practical action” (#1, ll. 225-230). #5 agrees by stating that “our angle is more showing the contribution we can have as a firm in terms of making them understand the transformation is for our clients and where they stand in this process (l. 168ff.). They also argue that the SDG are easy to understand: “We use also the SDG to show that they have an impact and they understand that we map it” (l. 188f.), but they also say that: “I don't see any target or so whereas with net zero, you have a clear target and you can measure it. So for us achieving the net zero goal, the Sustainable Development Goals are more like trying to increase the share of sustainable versus non sustainable business in the firm and that's something which we measure (ll. 251-255).

However, company #1 prioritizes the CSRD over the SDG (cf., #1, l. 104f.). Company #2 follows the same procedure because “it's a difficult thing ... it's already the case that we are driven by the fact that we have to apply the regulations, yes, and have to be compliant and that's also what you present to the outside world and the SDG are also a bit in opposition to that” (ll. 302-305). Moreover, another important aspect they mention is that SDG are hard to audit: “the financial figures are actually reliable, yes, that's how we have it from auditors, for example, that's not yet the case in on financial or sustainability reporting, but the way there is

already paved” (ll. 100-103). Company #3 relates by stating that “I actually don't think the SDG are particularly relevant for day-to-day business in the sense that you absolutely have to orient yourself towards them or pursue them, because I think the overlaps are large enough anyway if I do a clean quality analysis in the company, which is sustainability-related” (ll. 153-156). They see the CSRD regulation as more reliable as well: “At the latest with the CSRD for a large number of companies now also mandatory in the direction of double materiality, where it then becomes exciting for the company to see what my possibilities, my levers actually are and where I can also have an impact” (ll. 156-159).

However, when asked how reliable the SDG are, #3 answers as follows: “Well, nobody cares at all. It's on paper and no one has looked at it except those who wrote it, or who refer to it, in some texts I think they have no effect at all” (ll. 87f.). Company #4 follows a similar approach: “We use the SDG for the sustainability report. We always refer the paragraph to the SDG and I think they are somehow helpful as a framework or a guidance. What I'm missing personally is a little bit how to pick them out into a corporate view” (l. 67ff.). They further argue that SDG are not a suitable instrument for companies: “So I think they are very well nicely defined for more like on a national level on country level or dealing on multinational levels. I think they are not well suited for a company to steer a company because they're so far away. Justice, for example, it's such a broad word and definition. So how to break it down? How to contribute to this SDG? And I think it should be necessary, but actually it's not done in the company to translate the SDG into corporate SDG (ll. 69-74). In contrast, company #5 does not see any problems with mapping SDG and their reliability: “I think what is tricky in terms of SDG is of course mapping, being sure you map the right SDG with the indicator and have that knowledge basically cascaded down in the whole organization so that people in the front office have the same understanding as in the middle or back office. That's definitely a trick, but I think it's doable. So I don't see any problem there and we can use them to demonstrate as I said by doing what we do, we have an impact on them” (ll. 66-71).

S3: The interviews suggest that there is a need for greater political involvement in guiding companies toward achieving the Sustainable Development Goals. Company #2 states that “the SDG have to be exemplified, and that is actually a political task. If you then take this seriously as a country and turn it into political

guidelines, which in turn also inspire the companies or all those involved to be compliant with them and to contribute to them” (l. 140-143). They further argue that “the companies, like us, are of course trying their best and at least trying to get somewhere via a mapping that you can perhaps make yourself comparable with others at this point” (l. 143-147). Additionally, they mention that the SDG were originally designed as a governmental framework, not primarily for private-sector application, highlighting the need for adaptation when aligning corporate strategies with these goals (cf., #2, l. 130-136). They again emphasize the political component: “So if, for example, the German government were to proceed with the goal of implementing SDG X, then you could also pay into this and react as a company. That's what's missing, so it's a weak instrument” (l. 183ff.). They also wish more support from the government: “But if you were to take it seriously, even in the federal government, you would have to have a clear agenda. Then it would be easier to react to it and now everyone is doing their own thing. I also dare to doubt that the SDG are mapped uniformly, because there are no criteria that specify when you can achieve which goal and how. So it's very vague” (l. 198-202). Company #3 share the same opinion: “I don't really know the current status of the sustainability strategy of the Federal Republic of Germany, whether and how all SDG are properly mapped, but the transport to what are, so to speak, demands on companies. That would be a political demand that would then have to be linked to the motto: look, these are our sustainability goals and this is our sustainability strategy for the country. Now, dear companies, let's see what we need from you and it would be great if you could manage that” (ll. 183-188). Company #3 also states a good example where the interlink between corporate and politics worked well: “The National Action Plan for Human Rights, for example, is a very good example of how politicians have said in a very transparent, very good, open and long process that this is what we want, this is our attitude and opinion as a country and if you as a company can't do it, then we'll make a law out of it” (l. 189-192). However, this was not the case with the SDG: “It's great, well, it [The National Action Plan for Human Rights] fits back and front, everything has been done right, but it's just missing in relation to the SDG in the big, overarching strategy or in the bigger picture” (l. 192ff.).

Additionally, #5 believes that “what is also important outside of regulation is the government. What's the government's strategy? How are they enabling

companies to innovate? Trying to keep core technologies within Europe rather than having them go away. I think what really important is that we in Germany but also in other countries have that support" (ll. 133-137).

V – DISCUSSION

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The conducted quantitative and qualitative research emphasizes the importance of using a mixed-methods approach to gain a comprehensive understanding of sustainability practices. The quantitative analysis of sustainability reports complements the qualitative insights from interviews, providing a holistic view of how companies address the SDG. This chapter discusses the strategic transformation required for businesses to align with the 2030 Agenda, with a particular focus on the integration of the Sustainable Development Goals into corporate strategy. Building on the findings of the doctoral project, which examines the SDG as a guiding framework for long-term value creation, the chapter explores how companies can navigate the evolving regulatory landscape, including the Corporate Sustainability Reporting Directive, not merely as a compliance exercise but as a catalyst for systemic change. By synthesizing regulatory, strategic, and societal dimensions, this chapter provides a forward-looking perspective on how companies can effectively position themselves on the road to 2030 and contribute meaningfully to global sustainable development and balance profitability with sustainability.

5.1. THE ROLE OF COMPANIES IN ACHIEVING THE SDG UNTIL 2030

Companies play a crucial role in achieving the Sustainable Development Goals by contributing to economic, social, and environmental sustainability. Their engagement is essential because companies have the resources, innovation capacity, and global reach to make a significant impact. Here are key aspects of the role of companies in achieving the SDG.

This dissertation follows a staged analytical logic regarding the Sustainable Development Goals. An initial mapping identifies the most prominently referenced SDG across corporate sustainability reports. Based on this exploratory step, the analysis subsequently concentrates on three SDG that demonstrate the greatest empirical relevance. In later chapters, the focus deliberately shifts from individual goals to broader organizational and strategic mechanisms of sustainability

integration. This progression reflects the transition from descriptive categorization to analytical abstraction.

Achieving the SDG by 2030 requires a comprehensive approach that integrates profitability with sustainability. From an economic standpoint, it is a multifaceted challenge that demands coordinated efforts from governments, businesses, and society. The SDG serve as a valuable high-level framework for providing direction and shared goals (cf., #3, l. 188-194). However, their real impact lies in each company's ability to interpret and adapt them to its unique context, selecting relevant goals and translating them into practical, actionable measures. The SDG's clarity and universality make them effective tools for guiding companies toward actionable and meaningful sustainability efforts (cf., #1, l. 218-238). Therefore, this approach simplifies internal communication, fosters engagement, and aligns the goals with the company's culture and specific challenges (ibid.). The interviews also emphasize the importance of the SDG as a unifying framework to align the efforts of businesses, governments, society, and other partners toward sustainable development on a global scale (cf., #1, l. 318). However, it also highlights the need for balance and contextual sensitivity, recognizing that while sustainability is a global priority, immediate needs such as food and water security may take precedence in some regions. The SDG should be flexible enough to address these disparities while fostering a shared understanding and collective action (ibid.). It is the responsibility of companies to address sustainability where the SDG can serve as orientation, but they do not help with the implementation of meaningful measures (cf., #1, l. 24-28). Some businesses may not fully understand the SDG or perceive them as relevant to their operations, awareness and understanding of the business case for sustainability may be lacking in certain sectors (#1, l. 179f.). To effectively promote sustainability, organizations should move beyond siloed sustainability teams and integrate ESG principles across all departments, embedding them into the company's culture and operations. A decentralized yet cohesive approach, supported by cross-functional collaboration and alignment with corporate strategy, is essential to overcome the challenges of scalability and ensure sustainability becomes part of the company's DNA (cf., #4, l. 175-200).

Moreover, the interviews suggest that SDG are often used for marketing purposes rather than being deeply integrated into corporate strategies. This is

supported by the quantitative analysis, which shows variability in the frequency of SDG mentions, indicating that some companies may use SDG more for communication than for substantive action. Thus, SDG are not seen as an anchor point because they are unreliable for the interviewed companies (cf., #3, l. 87). The interviews demonstrate that the Sustainable Development Goals are a reference framework to demonstrate the impact of companies rather than as specific targets with absolute goals. There are no mandatory quotas or predefined amounts to achieve an SDG. Instead, the focus is on contributing wherever possible. Any positive contribution is valued, as the primary objective is to ensure impact rather than simply meeting numerical targets (cf., #5, l. 272-281). Transparency is a key part of this approach, with the company openly reporting its core business activities against SDG within its corporate strategy. This integration reflects where the company believes it can make a meaningful difference. However, this is not a regulatory obligation but rather a tool to showcase its efforts and commitment to sustainability. Ultimately, the company prioritizes creating impact over mere compliance, using the SDG as a way to assess and communicate its contributions.

However, profitability and sustainability cannot be achieved with international standards unless there are penalties or prosecutions (cf., #3, l. 156-159). For this reason, both research methods examine the impact of the CSRD on sustainability reporting and address the challenge of data availability. The quantitative analysis highlights the variability in SDG mentions, which may be influenced by regulatory requirements, while the interviews provide detailed accounts of the challenges companies face in complying with the CSRD regulation. The quantitative analysis shows that the CSRD is a significant regulatory development aimed at improving corporate sustainability reporting and transparency. It builds on previous directives and voluntary frameworks, expanding the scope and rigor of sustainability reporting requirements for European companies. From 2024, listed German companies must prepare sustainability reports in accordance with the CSRD. The directive aims to enhance corporate transparency and accountability regarding sustainability matters by expanding the scope of reporting requirements and imposing stricter disclosure obligations. This aligns with the EU's sustainability goals and initiatives such as the European Green Deal but company size, risk, competition intensity, shareholder structure, and media attention influence the quantity and quality of voluntary

reporting. While the regulation imposes additional reporting burdens, it also encourages companies to integrate sustainability into their core strategies and operations, potentially leading to long-term benefits. Even if the CSRD is identified during the interviews as a major force driving sustainability within companies, the additional burden for sustainability departments remain (cf., #3, l. 44). The regulatory requirement adds complexity and reporting obligations, further straining resources and making it difficult to balance sustainability with financial goals (cf., #3, l. 264-268). While profitability remains the core focus, sustainability initiatives are increasingly linked to economic returns, with no major changes to achievement thresholds (ibid.).

However, data availability and quality are significant obstacles in fulfilling the CSRD directive. The lack of standardized and mature sustainability data compared to financial data creates difficulties in integrating sustainability into financial decision-making processes. Companies are working on automating data collection and improving data quality to meet the regulatory requirements (cf., #3, l. 378-384), but data quality and availability remain challenges in sustainability reporting, particularly for CSRD compliance. While larger companies report earlier, data collection is still imperfect. Financial institutions rely on client data and external estimates, such as PCAF (Partnership for Carbon Accounting Financials), which is a global initiative launched by financial institutions to develop and implement a standardized method for measuring and reporting greenhouse gas emissions associated with their loans and investments. However, these are proxies rather than exact figures. While carbon data is improving, biodiversity, and nature-related data pose greater challenges. Using historical data for future predictions is another issue, requiring changes and investment. Despite these hurdles, progress is being made, and the process is becoming more manageable over time (cf., #5, l. 149-163). However, the CSRD fosters collaboration between finance and sustainability teams, enabling meaningful dialogue and alignment (cf., #1, l. 177-180). This integration is seen as an opportunity to advance the balance between profitability and sustainability (cf., #4, l. 31-40).

Moreover, there is also a gap in how sustainability is perceived and pursued within the organization. While many employees show interest and motivation to engage with sustainability initiatives, particularly through training and collaborative efforts, there is a lack of comprehensive understanding of the topic.

Conversely, higher management demonstrates a growing reluctance, perceiving sustainability as a burden rather than an opportunity, especially as priorities shift and urgency declines (cf., #4, l. 44-57). This divergence creates a tension between top-down leadership and bottom-up enthusiasm, complicating efforts to align sustainability goals across all organizational levels (ibid.). However, the most significant enabler for impactful change is not solely new technologies but the mindset and culture within organizations. Embedding sustainability into the company's DNA, spanning hiring practices, procurement, strategy, and overall operations, is essential. Company leaders have the responsibility to consider sustainability and long-term investments rather than focusing solely on short-term outcomes (#4, l. 178-189; cf., #1, l. 46-51, 68-74). ESG should not be isolated as a department but integrated across the organization. Without this cultural integration, even the best technologies will not achieve meaningful impact. Sustainable business processes, such as energy modernization and promoting diversity, are now recognized as having positive economic effects, and there is a growing alignment between sustainability goals and financial performance (cf., #3, l. 264-268). On the contrary, SDG can help create a common understanding of sustainability within a company, but only if they are clearly communicated and consistently applied across all levels of the organization (cf., #1, l. 222-228). When this is done effectively, SDG can align different departments under a shared language and purpose, clarify what sustainability means in the context of the company's activities, and help employees see how their work contributes to broader sustainability goals (ibid.). However, without clear guidance and internal training, the use of SDG might remain siloed or inconsistent. The SDG serve as a reference framework to demonstrate impact, but a key challenge mentioned is ensuring that the knowledge of how to map transactions to the appropriate SDG is cascaded throughout the organization from front office to back office.

By integrating sustainability into corporate strategies, businesses can contribute significantly to the global effort to address pressing social and environmental challenges while ensuring their long-term success. The interviews highlight the significance of employee attitudes and organizational structure in driving sustainability, which aligns with the mixed methods approach's emphasis on understanding the social and cultural context of sustainability practices. Challenges occur in changing the mindset and culture towards sustainability,

especially as the company transitions from conventional to renewable energy (cf., #2, l. 46f.), but significant investments in new technologies and business models are required to achieve sustainability goals, which can impact short-term profitability. The shift from conventional to renewable energy , e.g., requires significant investment in new technologies and business models, which can be costly and impact profitability in the short term (cf., #1, l. 46-51). Besides, the CSRD influences corporate strategy by emphasizing the importance of materiality analysis. Companies are encouraged to conduct serious materiality analyses to identify key sustainability topics and integrate them into their strategies. It mandates the mandatory double materiality assessment, which requires companies to consider both their impact on the environment and society, as well as how sustainability issues affect their business (cf., #3, l. 157f.). Experts express that the regulation is time-consuming and complex, requiring extensive reporting and compliance efforts (cf., #4, l. 44; cf., #2, l. 320f.). A serious, tailored approach, which includes considering the company's impact on the environment, society, and people, is crucial for creating a realistic and effective strategy that offers meaningful societal value, without overcomplicating processes like the CSRD or ESRS (cf., #3, l. 306-319).

This is where the organizational requirements come into play, as already described in 2.3. Integrating the human factor into corporate strategies is essential for organizations aiming to thrive in today's dynamic, complex environment. At the core of every business are people, leaders, employees, customers, and other stakeholders, whose behaviors, values, and decisions profoundly shape strategic outcomes. Recognizing this, successful companies are increasingly shifting from purely transactional models to human-centered strategies that prioritize engagement, purpose, and sustainable value creation (#1, l. 154-161). Leadership plays a pivotal role in this shift. Purpose-driven leaders who act with emotional intelligence and authenticity inspire trust and alignment across the organization (cf., #5, l. 82ff.). They are not only responsible for setting strategic direction but also for modeling the values and behaviors that bring it to life. Their influence shapes organizational culture, which in turn drives performance. A company's culture and its level of employee engagement directly affect the success of any strategy. Furthermore, any strategic transformation, be it digitalization, sustainability, or organizational restructuring, relies heavily on managing change effectively.

Human behavior is naturally resistant to change, often influenced by cognitive biases such as the status quo bias or loss aversion. Corporate strategies must therefore address the emotional and psychological dimensions of change, using clear communication, inclusive participation, and targeted support to guide people through transitions. Equally important is embedding sustainability and ESG principles into strategy. This requires not only compliance, but calls for a mindset shift. Employees and consumers alike are increasingly driven by values and expect organizations to contribute positively to society. Strategies that integrate ESG considerations must therefore be supported by deep engagement with internal and external stakeholders, ensuring alignment and genuine impact. Finally, organizational diversity is a critical component. Diverse teams provide a range of perspectives, improved decision-making processes, and increased creativity, as indicated by the qualitative analysis. But for DEI to contribute strategically, it must go beyond representation to create inclusive environments where every voice is valued.

Many businesses focus on generating profit for their shareholders, which can lead to a short-term profit orientation where immediate financial gains are prioritized over longer-term sustainability goals. The costs of implementing sustainable practices, such as investments in renewable energy, sustainable supply chain measures, and eco-friendly technologies, can pose challenges as these often involve substantial upfront costs without immediate returns. Investor pressure also plays a role while responsible investing is on the rise, not all investors prioritize ESG factors, which may deter companies from making significant sustainability commitments if they fear adverse reactions from certain shareholders. Complex supply chains present additional hurdles, as businesses with global operations may struggle to ensure sustainable practices throughout their entire chain, especially when there is limited control over supplier practices. Regulatory uncertainty can also hinder progress. Inconsistent or unclear regulations related to sustainability may prevent companies from taking decisive steps, as they lack clear guidelines to ensure uniform efforts. The absence of standardized reporting frameworks further complicates sustainability initiatives, making it challenging for companies to communicate their efforts transparently and making it difficult for stakeholders to assess and compare sustainability performance. Resource constraints affect smaller companies particularly hard, as limited financial and human resources can restrict

the ability of small and medium-sized enterprises (SMEs) to adopt comprehensive sustainability initiatives. Additionally, implementing sustainable practices often requires a cultural shift within organizations, where resistance to change, a lack of awareness, and organizational pushback can slow the adoption of sustainability initiatives. Global economic pressures further impact companies, especially those in competitive industries, as economic uncertainties or downturns can intensify the focus on short-term gains over long-term sustainability.

In summary, while the SDG offer a universal framework, their effectiveness depends on each company's ability to contextualize them, translate them into actionable measures, and integrate them into core operations. The doctoral research underscores that companies often use the SDG as communication tools rather than strategic anchors, with awareness and implementation varying widely. Organizational culture, employee engagement, and leadership mindset emerge as key enablers for meaningful impact. Embedding ESG principles across departments and aligning them with corporate strategy is essential to move from siloed initiatives to systemic change. The CSRD significantly influences this transformation by mandating transparency, double materiality, and more rigorous reporting. While it adds complexity, the CSRD also fosters closer collaboration between finance and sustainability functions, encouraging companies to develop credible and data-driven sustainability strategies. However, challenges remain in data availability, regulatory clarity, and resource constraints, particularly for SMEs. Ultimately, companies are not expected to solve all global issues but to contribute where they can make the greatest impact. Their responsibility lies in aligning profit with purpose, embedding sustainability into decision-making, and transparently communicating their contributions.

From an institutional and stakeholder-theoretical perspective, symbolic adoption does not represent a lack of relevance, but rather a specific mode of organizational adaptation. High-frequency SDG references can therefore be interpreted as part of legitimacy-seeking behavior, where firms signal conformity with global sustainability norms without necessarily embedding them operationally. In this sense, the symbolic nature of SDG references constitutes a theoretically meaningful finding rather than a methodological limitation.

5.2. PROFITABILITY AND SUSTAINABILITY: HARMONIZING PROFITABLE SUSTAINABLE GROWTH, SOCIAL INCLUSION AND ENVIRONMENTAL PROTECTION

While many companies are actively working towards sustainability and the achievement of the Sustainable Development Goals, there are several challenges and barriers that may impede more widespread and rapid progress to harmonize three core elements: Profitable sustainable growth, social inclusion, and environmental protection.

Balancing profitability with sustainability goals is a significant challenge for many companies, as highlighted in the interviews. The strategic importance of sustainability and the challenges of balancing profitability and sustainability are discussed in the mixed method approach. The frequency analysis of SDG mentions in sustainability reports provides quantitative evidence of how companies prioritize these goals, while the interviews offer qualitative insights into the strategic considerations behind these priorities. While some departments are proactive in pursuing sustainability initiatives (cf., #1, l. 24-28), others are less engaged, leading to inconsistent implementation across the company (cf., #3, l. 239f.). The investment in renewable energies, e.g., requires significant financial resources, which can be challenging to justify purely from a profitability standpoint. A company's transition from conventional to renewable energy represents a profound strategic and cultural transformation. Historically, profitability was driven primarily by nuclear (RWE AG, 2016) and coal-based operations, which formed the foundation of the business model. The shift toward renewable energy reflects a deliberate move toward sustainability but also introduces considerable complexity in terms of profitability and organizational change (cf., #1, l. 46-51). From a financial perspective, the transition entails significant upfront investments, extended return horizons, and evolving market conditions. These factors pose short-term challenges to profitability, particularly as the company interviewed distances itself from traditionally high-revenue sectors (ibid.). However, this transformation aligns the company with global sustainability goals and positions it for long-term resilience in a rapidly changing regulatory and economic environment. Importantly, the shift to renewable energy is not solely a technological or operational change. It also requires a fundamental transformation of mindset, organizational culture, and internal values. Embedding sustainability

into the company's strategic core involves more than top-down decisions; it demands broad-based cultural alignment and employee engagement. As such, the greatest challenge lies not in the transition itself, but in cultivating the internal readiness to support and sustain it. This case underscores the inherent tension between profitability and sustainability during periods of strategic redirection, and highlights the need for leadership and cultural integration in achieving meaningful and lasting change.

Sustainability is a profitable business opportunity, and many profitable deals align with sustainability goals. However, the market for sustainable finance is still small, leading to high competition among banks and sometimes lower margins (cf., #5, ll. 197-228). Sustainability in banking must be financially viable and not merely an act of corporate social responsibility. Profitable business models are essential for sustainable finance to scale effectively. Banks engage in transactions where sustainability aligns with profitability, avoiding deals that may have a positive impact but lack a strong business case. A key challenge is accurately pricing carbon to reflect true costs, e.g., ensuring informed financial decision-making. Maintaining client relationships is key, as banks aim to support businesses in their transformation. A potential risk is that companies ignoring climate concerns may struggle to secure financing from mainstream banks, making them attractive to outside banks willing to take higher risks for higher returns (ibid.). Additionally, the company faces regulatory pressures and the need to align sustainability targets with financial performance, which can create tension between short-term profitability and long-term sustainability goals (cf., #3, l. 54-70). Moreover, conflict occur between financial aspects and ESG topics. Companies acknowledge that ESG issues are sometimes contradictory to financial targets, creating a challenging environment for decision-making (ibid.). Moreover, there is a notable discrepancy between financial and sustainability data. The company finds it challenging to align sustainability with financial data due to differing maturity levels (cf., #4, l. 32f.). Financial data is highly regulated and well-established, whereas sustainability data is less mature and often lacks the same level of rigor and standardization. This discrepancy creates friction between the two areas, making it difficult to integrate sustainability into financial decision-making processes (ibid., ll. 33-40). Moreover, banks will differentiate between sustainable finance and transition finance. While sustainable finance follows a clear framework aligned

with the EU taxonomy, transition finance lacks a standardized definition, especially in regions without taxonomy regulations. The challenge is that companies moving toward net zero may not currently qualify as sustainable finance. To address this, the bank is developing a definition for transition finance, allowing such companies to be recognized and mapped to SDG accordingly (cf., #5, ll. 256-268).

The CSRD is identified as a major force driving sustainability within companies. The regulation can be seen as an opportunity to connect profitability and sustainability by bringing finance and sustainability teams together, fostering dialogue between them (cf., #3, l. 44). However, sustainability is less mature compared to finance, particularly in terms of data quality and definition, as financial data is highly regulated and well-established. While finance roles like CFOs are essential, many companies do not have equivalent sustainability leadership, which reflects the gap in maturity between the two areas. Despite this potential, many view the CSRD more as a burden than an opportunity (cf., #4, l-31-40). It mandates double materiality, which requires companies to consider both their impact on the environment and society, as well as how sustainability issues affect their business. The double materiality analysis in the context of CSRD regulation is an attempt to reconcile profitable sustainable development with social inclusion and environmental protection. While many see the CSRD as a regulatory burden, there is also recognition of its potential to drive meaningful sustainability practices. The directive creates a platform for integrating sustainability considerations into financial decision-making processes. Moreover, the CSRD influences corporate strategy by emphasizing the importance of materiality analysis. Companies are encouraged to conduct serious materiality analyses to identify key sustainability topics and integrate them into their strategies. Experts highlight the challenges involved in converting to a sustainable business model under the CSRD. This includes changing the mindset, culture, and mentality of employees, as well as aligning sustainability with profitability (cf., #1, l. 155f.).

Corporations often view success in terms of improved ESG communication, altered investor perceptions, and enhanced internal ESG knowledge. Investors, conversely, emphasize stewardship accountability, financial performance, changes in corporate behavior, and disclosure. These differences underscore the need for a

broader, multidimensional definition of engagement success that encompasses communicative, cognitive, and political outcomes. Sustainable business practices can be effectively promoted through this method, as demonstrated in the interviews. Incorporating ESG KPIs into the board's remuneration and broader bonus structure can demonstrate a serious commitment to sustainability (cf., #1, l. 271-277). Some companies' Executive Board's remuneration is linked to ESG targets, which adds pressure to achieve sustainability goals while maintaining profitability. Moreover, a suitable composition of the supervisory board, for example, is a target-oriented approach. At best, the remuneration of the Management Board is designed in such a way that it takes into account the achievement of certain ambitious ESG targets that also contribute to the company's value and success. However, conflicts may arise in areas such as plastic reduction, where customer demands and regulatory requirements drive sustainability initiatives, but financial considerations still play a significant role.

Companies link sustainability initiatives to economic returns through various strategies and practices. Combined from the mixed methods research, here are key ways they achieve this:

- Companies can play a crucial role in advancing the Sustainable Development Goals by integrating sustainability into their business strategies, governance frameworks, and financial models. Through innovation and technology, they can contribute to SDG by developing advancements in renewable energy, sustainable agriculture, clean technologies, and healthcare solutions that improve access to essential services.
- Conducting double materiality analyses helps companies identify and prioritize ESG issues that are most relevant to their business and stakeholders, ensuring their sustainability efforts have the greatest impact.
- Establishing a strong ESG governance framework aligns sustainability initiatives with corporate strategy and stakeholder expectations, addressing global challenges like climate change while driving long-term business success.

- Carbon management plays another key role, as companies can calculate their Corporate Carbon Footprint and set ambitious emission reduction goals, not only ensuring regulatory compliance but also achieving cost savings through energy efficiency and contributing to SDG 13, for example.
- Companies can also play a vital role in Climate Action by reducing not only carbon emissions, but adopting renewable energy and integrating sustainability considerations into long-term planning and goal setting.
- Transparent reporting on sustainability efforts strengthens accountability and enables companies to communicate ESG performance to stakeholders, attract responsible investors, and gain a competitive edge by aligning with frameworks like the CSRD.
- Companies can link ESG to financial performance by measuring the return on investment from sustainability initiatives, analyzing cost savings from energy efficiency, revenue from sustainable innovations, and the financial benefits of enhanced brand differentiation.
- Promoting sustainability across supply chains ensures responsible sourcing, ethical labor practices, and environmentally friendly production methods, leading to stronger supplier relationships, risk reduction, and improved product quality. This approach would align with SDG 12 related to responsible consumption and production.
- Investing in education and training programs for employees, as well as supporting educational initiatives in local communities, advances, e.g., SDG 4 and enhances workforce capabilities. Engaging with communities allows companies to address local needs and contribute to infrastructure development and access to essential services.
- A strong focus on diversity, equity, and inclusion fosters a corporate culture that enhances employee satisfaction, innovation, and overall business performance. Fostering gender equality through diverse and inclusive workplaces, addressing gender pay gaps, and supporting women's empowerment initiatives advances SDG 5.

To sum it up, by embedding ESG principles into corporate strategy and linking sustainability to financial performance, companies drive meaningful

change on both local and global scales. Their commitment to sustainable business practices, long-term vision, and responsible leadership are essential for achieving the SDG and shaping a more resilient and equitable future. By integrating these strategies into business models, companies can effectively link sustainability initiatives to economic returns, creating value for both their stakeholders and the environment.

However, in the year 2024 Donald Trump was re-elected and his policies could significantly impact the progress of the Sustainable Development Goals until 2030, both in the U.S. and globally. His previous administration from 2017 to 2021 demonstrated a clear skepticism toward multilateral agreements and climate policies, which could lead to setbacks in key SDG areas. Donald Trump has expressed minimal support for wind turbines and electric vehicles, while advocating extensively for the expansion of oil and gas drilling initiatives. He also wants to reduce special rights for ethnic or sexual minorities. For years, companies could easily promote their diversity and sustainability goals. Democratic presidents led the USA for twelve of the past 16 years, and Europe's political mainstream has been progressive-liberal. Many US companies, including Meta and McDonalds, have already made significant decisions regarding their diversity and sustainability efforts. Under political pressure from Republicans, these companies are rapidly scaling back their initiatives, suggesting that management may not have fully committed to these goals initially. However, this issue extends beyond diversity alone. The rollback from the USA is extensive, affecting various areas. The goal of climate neutrality has faced challenges during Trump's administration, as has competition law which aims to limit the power of monopolies and oligopolies. Germany is unlikely to succeed in pursuing a unique path in terms of diversity, climate protection, competition law, and trade rules on its own over the long term. Any success in these areas would likely need to be achieved at the European level. Whether the EU can gather the necessary political will for this effort remains uncertain given the current state of the union.

The recent actions of the new president have brought significant changes to the previous administration's climate agenda. Within three hours, President Trump signed orders that effectively nullified key measures aimed at reducing greenhouse gas emissions and protecting wilderness areas from oil drilling. By declaring a "national energy emergency," Trump has prioritized domestic oil and gas

production despite the fact that US crude oil production reached an all-time high in the past year. Additionally, the president rescinded the Environmental Protection Agency's regulation mandating car manufacturers to reduce greenhouse gas emissions from certain new vehicles. Efficiency regulations for household appliances such as dishwashers, shower heads, and gas stoves have also been repealed. The United States' withdrawal from the Paris Climate Agreement marks the second instance of this action under Trump's leadership. The future of Biden's "Inflation Reduction Act" (IRA), which aims to invest trillions into renewable energy promotion, remains uncertain. This move primarily benefits Republican-led states, although some energy companies express internal resistance to increased oil production, citing potential negative impacts on prices. Furthermore, major American banks, including Citi, Bank of America, or Goldman Sachs, preemptively exited the "Net Zero Banking Alliance" climate initiative weeks before the inauguration. The world's largest asset manager, Blackrock, also withdrew shortly before Trump's inauguration, despite CEO Larry Fink's longstanding advocacy for sustainable investments and his support for the largest climate alliance in the financial sector (Blume et al., 2025).

Consequently, the re-election of Donald Trump in 2024 has introduced significant obstacles to achieving the Sustainable Development Goals by 2030. His administration's rollback of climate policies, withdrawal from international agreements, and deregulation of environmental and social protections have created setbacks in global sustainability efforts. The dismantling of emission regulations, increased fossil fuel production, and the abandonment of key climate initiatives have weakened the global push for SDG 13 and SDG 7 (Affordable and Clean Energy). Beyond climate policy, corporate ESG and diversity initiatives have come under pressure, as major U.S. corporations retreat from previous commitments due to political and market forces. The weakening of competition laws and consumer protections further undermines SDG 12 (Responsible Consumption and Production) and SDG 10 (Reduced Inequalities). With the U.S. stepping back from its role in SDG leadership, the burden falls on the European Union and other global actors to uphold sustainability and climate goals. However, the EU's internal challenges and political uncertainties raise doubts about its ability to fully compensate for the U.S. withdrawal. While market forces and private sector innovation may still drive some progress, the overall trajectory suggests a slower

and more fragmented path to achieving the SDG. Without strong political commitment from major economies like the U.S., meeting the 2030 targets will require intensified efforts from global alliances and businesses to counteract these policy reversals. However, the Trump presidency is unlikely to have a major impact on sustainability trends, according to the interviews (cf., #5, ll. 234-244). Despite rhetoric like “drill baby drill”, rapid oil expansion is improbable, as past trends show lower exploration under Trump than Biden. The transition to renewables, such as solar and green data centers, is already well underway and difficult to reverse. Media narratives may exaggerate the impact of political shifts, but the focus should be on ensuring a realistic pathway to decarbonization, with companies receiving necessary support from local governments to achieve climate goals (ibid.).

With the U.S. rolling back sustainability commitments under Trump, German companies must adapt while staying aligned with EU sustainability regulations and Sustainable Development Goals. To achieve this, they should strengthen their ESG commitments, ensuring compliance with the EU CSRD, while maintaining net-zero and decarbonization strategies despite weaker U.S. incentives. Leveraging European green financing and sustainable investments will be key to staying competitive. German companies must also prepare for regulatory uncertainty in the U.S., adapting ESG strategies to different regional policies while avoiding politically charged messaging that could draw Republican scrutiny. Additionally, companies should support European leadership in sustainability, working with EU institutions to maintain strong climate policies and industry-wide benchmarks. By staying committed to sustainability, diversifying global strategies, and strengthening European alliances, German businesses can maintain long-term resilience and competitiveness despite shifting U.S. policies.

Even though this empirical study shows that sustainable business is needed to mitigate climate change, the Global Risk Report 2024 paints a bleak picture of global risks. Surprisingly, climate change is no longer classified as a primary risk. Instead, geopolitical tensions, economic uncertainties, and technological disruptions are coming to the fore. This shift could indicate that climate change is seen as a known risk or that other immediate threats are seen as more pressing (Holzki, 2024). In view of the growing climate crisis, seven innovative and

sometimes radical strategies are being discussed to combat climate change by Jahn and Kersting (2024):

- Geoengineering: Techniques for deliberately influencing the climate, such as releasing aerosols into the atmosphere to reduce solar radiation.
- Carbon capture and storage: Technologies that remove CO₂ directly from the atmosphere and store it safely.
- Artificial photosynthesis: Development of systems that efficiently convert CO₂ into oxygen and other usable products.
- Nuclear fusion: Research into a clean and virtually inexhaustible source of energy by fusing atomic nuclei.
- Vertical farming: Cultivation of plants in multi-stored buildings to reduce land use and transportation emissions.
- Artificial meat: Production of meat in the laboratory to minimize the environmental impact of traditional livestock farming.
- Global CO₂ tax: Introduction of a uniform global tax on CO₂ emissions to create incentives for emission reductions.
- Moreover, a study by McKinsey identifies 18 key industries that are expected to account for more than a third of global economic growth by 2040. These include, among others (Bradley et al., 2024):
- Artificial intelligence and machine learning: applications in various sectors such as healthcare, finance, and mobility.
- Renewable energies: Further expansion of solar, wind and hydropower to meet global energy needs.
- Biotechnology: Advances in gene editing and personalized medicine.
- Autonomous vehicles: Development and integration of self-driving cars and trucks into traffic.
- Space industry: Commercialization of space travel and research.

The study emphasizes that companies and countries that are leaders in these areas will have significant competitive advantages. Investing in research and development and adapting to technological changes are crucial to long-term success, as already analyzed.

The alignment of profitability with sustainability, social inclusion, and environmental protection remains a complex yet essential endeavor for businesses aiming to contribute meaningfully to the Sustainable Development Goals. While many companies have demonstrated commitment to sustainability, persistent structural and strategic challenges continue to hinder the rapid and widespread adoption of integrative business models that balance these three core dimensions. A primary tension identified in this context lies in the balance between short-term profitability and long-term sustainability objectives. Empirical insights from interviews and sustainability reports reveal that, although some organizational units are proactively engaging in sustainability initiatives, others demonstrate lower levels of commitment, resulting in fragmented implementation across the enterprise. Strategic investment in renewable energy, for instance, represents a transformative shift that challenges traditional business models historically reliant on carbon-intensive sources such as coal and nuclear energy. This transition requires significant upfront capital, extended return horizons, and a fundamental reconfiguration of organizational culture and internal values. As such, the challenge is not merely technical or financial but cultural, necessitating broad-based internal engagement and leadership that fosters a shared sustainability-oriented mindset.

From a financial perspective, sustainability is increasingly viewed as a profitable opportunity. However, the current size and maturity of the sustainable finance market remain limited. Banks and financial institutions acknowledge the necessity of aligning sustainability with clear business cases, as transactions must yield competitive returns. The high demand for sustainable investments creates strong competition, sometimes driving down profit margins. Moreover, financial institutions face challenges such as inadequate carbon pricing mechanisms, which complicate risk assessment and investment decisions. Companies that fail to incorporate climate considerations into their strategies may find themselves excluded from mainstream financing channels, posing reputational and operational risks.

The CSRD is perceived as a critical regulatory driver, compelling companies to integrate sustainability into their strategic and financial frameworks. Its requirement for double materiality, assessing both a company's impact on society and the environment, and how sustainability issues affect the company, offers a

platform to bridge financial and sustainability domains. Nonetheless, companies struggle with the immaturity of sustainability data relative to financial data, complicating efforts to integrate ESG considerations into decision-making. While financial information is standardized and heavily regulated, sustainability data often lacks consistency and precision, impeding effective alignment between financial performance and ESG targets. The evolving regulatory environment also influences corporate governance. A targeted composition of supervisory boards and the inclusion of ESG-related key performance indicators in executive remuneration schemes are increasingly adopted as mechanisms to drive sustainable behavior at the top management level. These approaches reinforce accountability and demonstrate a tangible link between corporate performance and sustainability objectives. However, conflicting priorities between profitability and ESG commitments remain pronounced. For example, initiatives such as plastic reduction may be driven by regulatory or customer pressures but can clash with financial objectives, especially when the financial benefits are not immediately quantifiable. Companies that successfully link sustainability to economic performance typically adopt a multifaceted strategy. These include robust materiality assessments, integration of ESG governance into strategic planning, and transparent reporting aligned with regulatory frameworks like the CSRD. Through innovations in clean technology, renewable energy, and responsible supply chain management, businesses contribute directly to multiple SDG while enhancing long-term competitiveness. Furthermore, companies are increasingly engaging in impact investing and inclusive business models that promote social equity and environmental protection. By fostering diversity, supporting education, and partnering with external stakeholders, companies not only enhance their social license to operate but also generate measurable business value.

Notwithstanding these corporate efforts, geopolitical developments significantly influence the global trajectory toward sustainability. The re-election of Donald Trump in 2024 has introduced notable headwinds to international sustainability efforts. His administration's rollback of climate regulations, withdrawal from multilateral agreements such as the Paris Climate Agreement, and promotion of fossil fuel expansion undermine global progress on SDG 13 and SDG 7. Additionally, the political climate has precipitated a retreat by major U.S. corporations from diversity and sustainability initiatives, reflecting the

susceptibility of ESG commitments to political and market pressures. However, industry experts argue during the conducted interviews that the structural shift toward renewable energy and sustainable business is already too advanced to be entirely reversed. The continued development of solar energy, green data centers, and sustainable infrastructure is likely to persist, irrespective of political fluctuations. While the current U.S. administration's policies may slow progress, they are unlikely to derail the global sustainability transition altogether. Media narratives often overstate the impact of such political changes, and a more balanced view emphasizes the resilience of market-driven decarbonization trends and the role of local governance in sustaining momentum. In light of these developments, European companies, particularly in Germany, must navigate a complex geopolitical landscape while remaining committed to the SDG. To maintain strategic alignment, companies must reinforce their ESG frameworks, deepen engagement with EU sustainability policies, and diversify their international partnerships. Furthermore, the evolving global risk landscape, as reflected in the Global Risk Report 2024, underscores a shift in perceived threats. While climate change no longer tops the list of imminent global risks, it remains a persistent and well-documented threat. Emerging risks such as geopolitical instability, economic volatility, and technological disruption are receiving heightened attention. In response, scholars and innovators propose a range of radical interventions to address the climate crisis, including geoengineering, carbon capture, nuclear fusion, and global carbon taxation. These approaches reflect both the urgency and the creativity required to mitigate climate impacts at scale.

Looking ahead, technological innovation is expected to play a central role in sustainable development. According to McKinsey, key sectors, including artificial intelligence, biotechnology, renewable energy, and autonomous transportation, will drive over a third of global economic growth by 2040. Countries and companies that position themselves as leaders in these domains will secure significant competitive advantages. Therefore, ongoing investment in research and development, alongside adaptive and forward-looking governance, will be essential for achieving sustainable and inclusive growth.

VI – CONCLUSION AND OUTLOOK

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The Sustainable Development Goals have the potential to serve as a global framework for organizations. Companies should make a deliberate decision to either integrate the SDG into their strategies or exclude them entirely. It is imperative that the SDG are not utilized solely as a marketing tool or communication channel, as this undermines their effectiveness and causes the fundamental concept of sustainability to not be taken seriously. The harmonization of profitability, social inclusion, and environmental protection is a demanding yet necessary ambition for modern enterprises. Achieving this alignment requires integrated strategies that embed sustainability into core business operations, governance structures, and financial decision-making. Regulatory frameworks like the CSRD offer critical leverage points, but success ultimately hinges on organizational culture, leadership commitment, and the ability to reconcile competing priorities. In an increasingly volatile geopolitical context, companies that remain agile, purpose-driven, and innovation-focused will be best positioned to thrive while contributing to the global sustainable development agenda.

The conducted research emphasizes the importance of using a mixed-methods approach to gain a comprehensive understanding of sustainability practices. In this case, quantitative analysis of sustainability reports complements qualitative insights from interviews, providing a holistic view of how companies address the Sustainable Development Goals. Companies play a crucial role in achieving the SDG by contributing to economic, social, and environmental sustainability. Their engagement is essential due to their resources, innovation capacity, and global reach. Achieving the SDG requires a holistic approach that balances profitability with sustainability. The SDG serve as a high-level framework for direction and shared goals, but their real impact lies in each company's ability to interpret and adapt them to its unique context.

The interviews highlight the need for balance and contextual sensitivity in addressing sustainability and profitability by harmonizing core elements. First, the SDG should be flexible enough to address these disparities while fostering a shared

understanding and collective action. Companies should move beyond siloed sustainability teams and integrate ESG principles across all departments. Second, transparency in reporting core business activities against SDG within corporate strategy is essential for showcasing efforts and commitment to sustainability. However, while targets and measurements are essential for progress, it's important to set achievable goals to avoid frustration. Regulation is necessary to ensure companies report key data, but it should be balanced and practical to avoid overwhelming companies. Beyond regulation and government support, innovation and strategic investments are crucial to enable companies to thrive in sustainability. Balancing profitability with sustainability goals is a significant challenge for many companies. Therefore, the strategic importance of sustainability and the challenges of balancing profitability and sustainability are discussed. Some departments are proactive in pursuing sustainability initiatives, while others are less engaged, leading to inconsistent implementation across the company. For example, the investment in renewable energies requires significant financial resources, which can be challenging to justify purely from a profitability standpoint. Moreover, conflicts arise between financial and ESG Topics. Companies acknowledge that ESG issues are sometimes contradictory to financial targets, creating a challenging environment for decision-making. Financial data is highly regulated and well-established, whereas sustainability data is less mature and often lacks the same level of rigor and standardization. As an example, the CSRD is identified as a major force driving sustainability within companies, fostering dialogue between finance and sustainability teams. Moreover, investors and clients are pivotal in driving change and encouraging companies to move toward sustainability. Their influence is multifaceted, impacting corporate strategies, governance frameworks, and financial models. By prioritizing ESG factors, investors can steer companies toward sustainable practices that align with long-term business success. Customers, on the other hand, can demand transparency and accountability, pushing companies to adopt more sustainable operations and products. This dual pressure from investors and clients ensures that sustainability becomes an integral part of corporate strategy, fostering innovation and responsible business conduct.

The dissertation also implies an impact of political changes on sustainability goals. The re-election of Donald Trump in 2024 has introduced significant obstacles

to achieving the SDG by 2030. His administration's rollback of climate policies, withdrawal from international agreements, and deregulation of environmental and social protections have created setbacks in global sustainability efforts. The dismantling of emission regulations and increased fossil fuel production have weakened the global push for SDG 13 and SDG 7. However, efforts to fight climate change continue unabated. In view of the growing climate crisis, innovative and sometimes radical strategies are being discussed to combat climate change. These include geoengineering, carbon capture and storage, artificial photosynthesis, nuclear fusion, vertical farming, artificial meat, and a global CO₂ tax. Future economic growth and key industries are expected to account for more than a third of global economic growth by 2040. These include artificial intelligence and machine learning, renewable energies, biotechnology, autonomous vehicles, and the space industry. Companies and countries that lead in these areas will have significant competitive advantages.

Frameworks and standards vary in focus, leading to questions about their effectiveness in measuring intended outcomes. There are different frameworks and standards, some of which are voluntary while others are mandatory. Evaluating the metrics employed and their precision in representing sustainability within various industries could be an avenue for future research. However, future studies should also examine the influence of governance structures and corporate missions on the selection of specific Sustainable Development Goals, as empirical evidence indicates that companies do not sufficiently measure their impact on sustainable development. Companies that engage with fewer SDG may well have a greater positive impact on sustainable development than companies that engage with a large number of SDG. In future, company studies should therefore look more closely at the preconditions for integrating the SDG into internal company planning.

This dissertation highlights the main challenges and opportunities presented by climate change and technological developments. While some risks are being reassessed, the need for proactive measures in climate protection and innovation remains high.

VII – LIMITATIONS AND FUTURE WORK

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While this thesis offers valuable insights into the interplay between profitability and sustainability within German DAX-listed companies, several limitations must be acknowledged, each of which opens avenues for future research.

First, the scope of this research is limited to a sample of ten DAX companies, focusing on their sustainability reports from 2021 to 2023 and qualitative interviews with five selected experts. This focus, while allowing for in-depth analysis, restricts the generalizability of the findings to other sectors, smaller enterprises, or companies operating in different regulatory environments. The exclusive emphasis on large, listed firms may overlook unique challenges and opportunities faced by SMEs or organizations outside the German context. Second, the mixed-methods approach relies on the availability and quality of disclosed data. The variability in SDG mentions and the voluntary nature of many sustainability disclosures introduce potential biases and limit the comparability of results across companies and years. Furthermore, the frequency analysis of SDG references, while useful for identifying trends, does not capture the depth or effectiveness of actual SDG integration into business strategy. Third, the rapidly evolving regulatory landscape, particularly regarding the Corporate Sustainability Reporting Directive and emerging international standards, means that some findings may become outdated as new frameworks are implemented. The study also highlights persistent challenges in data maturity, standardization, and auditability, which complicate efforts to benchmark and compare sustainability performance. Finally, the research is situated within a specific political and economic context. Shifts in global or regional policy, such as changes in U.S. or EU leadership, could significantly alter the relevance or applicability of the findings. The qualitative interviews, while rich in insight, are subject to respondent bias and may not fully capture the diversity of perspectives within organizations or across industries.

To address these limitations and advance the field, future research should consider the following directions.

Future studies should include a broader range of companies, encompassing SMEs, non-listed firms, and organizations from different countries and sectors. Comparative studies across industries and geographies would help to identify context-specific drivers and barriers to SDG integration. Moreover, there is a need for longitudinal research that tracks the evolution of SDG integration and sustainability performance over time, especially as new regulations and standards come into force. Future work should move beyond frequency analysis to assess the actual impact of sustainability initiatives on financial performance, stakeholder value, and societal outcomes. As international standards are implemented, future research should critically assess their effectiveness in promoting transparency, comparability, and meaningful progress toward the SDG. Comparative studies of different reporting frameworks and their influence on corporate behavior are especially needed. Research should focus on developing and testing standardized ESG and SDG metrics, improving data quality, and enabling more robust benchmarking across companies and sectors. The role of digitalization, automation, and artificial intelligence in enhancing data collection and reporting processes warrants particular attention. Given the influence of shifting political landscapes on corporate sustainability agendas, future studies should examine how changes in policy, regulation, and global economic conditions affect the pursuit of the SDG. Scenario analysis and policy evaluation could provide valuable insights for both practitioners and policymakers. Finally, research should explore how leadership commitment, organizational culture, and cross-functional collaboration drive or hinder the integration of sustainability into core business strategy. Case studies of successful and unsuccessful transformations can yield practical lessons for other organizations.

This study does not employ financial modeling or quantitative KPI analysis. This reflects a deliberate methodological choice aligned with the exploratory and interpretive nature of the research question, which focuses on the role of the Sustainable Development Goals within corporate sustainability strategies rather than on measuring financial performance outcomes. Given the normative character of the SDGs and the lack of standardized, firm-level, and auditable SDG-linked KPIs, particularly in the pre-CSR reporting environment, quantitative modeling would risk producing pseudo-precision and obscuring strategic and contextual dimensions of SDG integration. Instead, the study adopts a mixed-methods

approach, combining frequency analysis, contextual interpretation, and qualitative interviews to capture both the prominence and the meaning of SDG references in corporate reporting.

By addressing these limitations and pursuing the recommended research directions, future studies can build on the foundation established in this thesis. Such efforts will be essential for advancing both academic understanding and practical progress toward aligning profitability with sustainability and achieving the United Nations' Sustainable Development Goals by 2030.

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VIII - BIBLIOGRAPHICAL REFERENCES

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IX - DOCUMENTATION OF USED AI TOOLS

Table 4: Documentation of used AI tools.

AI-based tool	Form of deployment	Affected parts of the study
DeepL Translator	Translation of interviews	Interviews 3 and 4
ChatGPT	Reformulating of texts to improve readability	Chapter 2.1; 2.2; 2.3; 4.1; 4.2; 4.3; 4.4; 5.1; 5.2

[source: own representation]

VII – APPENDIXES

X - APPENDIXES

APPENDIX 1: Global indicator framework for the Sustainable Development Goals and Targets of the 2030 Agenda for Sustainable Development for SDG 13, 8, and 5

SDG 13 “Climate Action” – 5 targets and 8 indicators

Goals and targets (from the 2030 Agenda for Sustainable Development)	Indicators
13.1 Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries	13.1.1 Number of deaths, missing persons and directly affected persons attributed to disasters per 100,000 population
	13.1.2 Number of countries that adopt and implement national disaster risk reduction strategies in line with the Sendai Framework for Disaster Risk Reduction 2015–2030
	13.1.3 Proportion of local governments that adopt and implement local disaster risk reduction strategies in line with national disaster risk reduction strategies
13.2 Integrate climate change measures into national policies, strategies, and planning	13.2.1 Number of countries with nationally determined contributions, long-term strategies, national adaptation plans and adaptation communications, as reported to the secretariat of the United Nations

	Framework Convention on Climate Change
	13.2.2 Total greenhouse gas emissions per year
13.3 Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning	13.3.1 Extent to which (i) global citizenship education and (ii) education for sustainable development are mainstreamed in (a) national education policies; (b) curricula; (c) teacher education; and (d) student assessment
13.a Implement the commitment undertaken by developed country parties to the United Nations Framework Convention on Climate Change to a goal of mobilizing jointly \$100 billion annually by 2020 from all sources to address the needs of developing countries in the context of meaningful mitigation actions and transparency on implementation and fully operationalize the Green Climate Fund through its capitalization as soon as possible	13.a.1 Amounts provided and mobilized in United States dollars per year in relation to the continued existing collective mobilization goal of the \$100 billion commitment through to 2025
13.b Promote mechanisms for raising capacity for effective climate change-related planning and management in least developed countries and small island developing States, including focusing on women, youth, and local and marginalized communities	13.b.1 Number of least developed countries and small island developing States with nationally determined contributions, long-term strategies, national adaptation plans and adaptation communications, as reported to the secretariat of the United Nations Framework Convention on Climate Change

[source: own representation based on United Nations Statistics Division (2023)]

SDG 8 “Decent work and economic growth” – 12 targets and 16 indicators

Goals and targets (from the 2030 Agenda for Sustainable Development)	Indicators
8.1 Sustain per capita economic growth in accordance with national circumstances and, in particular, at least 7 per cent gross domestic product growth per annum in the least developed countries	8.1.1 Annual growth rate of real GDP per capita
8.2 Achieve higher levels of economic productivity through diversification, technological upgrading and innovation, including through a focus on high value added and labor-intensive sectors	8.2.1 Annual growth rate of real GDP per employed person
8.3 Promote development-oriented policies that support productive activities, decent job creation, entrepreneurship, creativity and innovation, and encourage the formalization and growth of micro-, small- and medium-sized enterprises, including through access to financial services	8.3.1 Proportion of informal employment in total employment, by sector and sex
8.4 Improve progressively, through 2030, global resource efficiency in consumption and production and endeavour to decouple economic growth from environmental degradation, in accordance with the 10-year framework of programmes on	8.4.1 Material footprint, material footprint per capita, and material footprint per GDP
	8.4.2 Domestic material consumption, domestic material consumption per capita, and domestic material consumption per GDP

sustainable consumption and production, with developed countries taking the lead	
8.5 By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value	8.5.1 Average hourly earnings of employees, by sex, age, occupation and persons with disabilities
	8.5.2 Unemployment rate, by sex, age and persons with disabilities
8.6 By 2020, substantially reduce the proportion of youth not in employment, education or training	8.6.1 Proportion of youth (aged 15–24 years) not in education, employment or training
8.7 Take immediate and effective measures to eradicate forced labour, end modern slavery and human trafficking and secure the prohibition and elimination of the worst forms of child labour, including recruitment and use of child soldiers, and by 2025 end child labour in all its forms	8.7.1 Proportion and number of children aged 5–17 years engaged in child labour, by sex and age
8.8 Protect labour rights and promote safe and secure working environments for all workers, including migrant workers, in particular women migrants, and those in precarious employment	8.8.1 Fatal and non-fatal occupational injuries per 100,000 workers, by sex and migrant status
	8.8.2 Level of national compliance with labour rights (freedom of association and collective bargaining) based on International Labour Organization (ILO) textual sources and national legislation, by sex and migrant status

8.9 By 2030, devise and implement policies to promote sustainable tourism that creates jobs and promotes local culture and products	8.9.1 Tourism direct GDP as a proportion of total GDP and in growth rate
8.10 Strengthen the capacity of domestic financial institutions to encourage and expand access to banking, insurance and financial services for all	8.10.1 (a) Number of commercial bank branches per 100,000 adults and (b) number of automated teller machines (ATMs) per 100,000 adults
	8.10.2 Proportion of adults (15 years and older) with an account at a bank or other financial institution or with a mobile-money-service provider
8.A Increase Aid for Trade support for developing countries, in particular least developed countries, including through the Enhanced Integrated Framework for Trade-Related Technical Assistance to Least Developed Countries	8.a.1 Aid for Trade commitments and disbursements
8.B By 2020, develop and operationalize a global strategy for youth employment and implement the Global Jobs Pact of the International Labour Organization	8.b.1 Existence of a developed and operationalized national strategy for youth employment, as a distinct strategy or as part of a national employment strategy

[source: own representation based on United Nations Statistics Division (2023)]

SDG 5 “Gender Equality” – 9 targets and 14 indicators

Goals and targets (from the 2030 Agenda for Sustainable Development)	Indicators
5.1 End all forms of discrimination against all women and girls everywhere	5.1.1 Whether or not legal frameworks are in place to promote, enforce and monitor equality and non-discrimination on the basis of sex
5.2 Eliminate all forms of violence against all women and girls in the public and private spheres, including trafficking and sexual and other types of exploitation	5.2.1 Proportion of ever-partnered women and girls aged 15 years and older subjected to physical, sexual or psychological violence by a current or former intimate partner in the previous 12 months, by form of violence and by age
	5.2.2 Proportion of women and girls aged 15 years and older subjected to sexual violence by persons other than an intimate partner in the previous 12 months, by age and place of occurrence
5.3 Eliminate all harmful practices, such as child, early and forced marriage and female genital mutilation	5.3.1 Proportion of women aged 20–24 years who were married or in a union before age 15 and before age 18
	5.3.2 Proportion of girls and women aged 15–49 years who have undergone female genital mutilation, by age
5.4 Recognize and value unpaid care and domestic work through the provision of public services, infrastructure and social protection policies and the promotion of shared	5.4.1 Proportion of time spent on unpaid domestic and care work, by sex, age and location

responsibility within the household and the family as nationally appropriate	
5.5 Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic and public life	5.5.1 Proportion of seats held by women in (a) national parliaments and (b) local governments
	5.5.2 Proportion of women in managerial positions
5.6 Ensure universal access to sexual and reproductive health and reproductive rights as agreed in accordance with the Programme of Action of the International Conference on Population and Development and the Beijing Platform for Action and the outcome documents of their review conferences	5.6.1 Proportion of women aged 15–49 years who make their own informed decisions regarding sexual relations, contraceptive use and reproductive health care
	5.6.2 Number of countries with laws and regulations that guarantee full and equal access to women and men aged 15 years and older to sexual and reproductive health care, information and education
5.A Undertake reforms to give women equal rights to economic resources, as well as access to ownership and control over land and other forms of property, financial services, inheritance and natural resources, in accordance with national laws	5.a.1 (a) Proportion of total agricultural population with ownership or secure rights over agricultural land, by sex; and (b) share of women among owners or rights-bearers of agricultural land, by type of tenure
	5.a.2 Proportion of countries where the legal framework (including customary law) guarantees women's equal rights to land ownership and/or control

5.B Enhance the use of enabling technology, in particular information and communications technology, to promote the empowerment of women	5.b.1 Proportion of individuals who own a mobile telephone, by sex
5.C Adopt and strengthen sound policies and enforceable legislation for the promotion of gender equality and the empowerment of all women and girls at all levels	5.c.1 Proportion of countries with systems to track and make public allocations for gender equality and women's empowerment

[source: own representation based on United Nations Statistics Division (2023)]

APPENDIX 2: English Interview Guide

Introductory questions:

1. Can you briefly describe your role and responsibilities within your organization?
2. How is the term sustainability defined in your company?
3. Is sustainability anchored as a value in the corporate culture?
4. Is there a separate department to promote sustainability in the company? If yes, has the ESG / Sustainability team you work in grown over the last 24 months?
5. In the last 12 months how has your current employer's attitude to ESG changed?

Main questions:

6. In your view, why are the SDG important for your industry and your organization specifically?
7. How reliable are SDG for listed companies?
8. Are you aware of the sub targets of SDG?
9. How did you choose the SDG for your business?
10. Which SDG do you consider most critical to your business operations and why?
11. Does your company has considerations and/or measures in place to implement the committed SDG? If not, why not?
 - a. Can you provide examples of successful initiatives or projects that align with the SDG?
 - b. Can you share examples of successful partnerships that have advanced your organization's SDG-related goals?
12. How do you measure the progress of the SDG mentioned in your sustainability report?
13. What role do you believe government policies and regulations play in achieving the SDG?
14. Are there specific policies or regulatory changes that you think are necessary to support SDG progress?

Industry trends questions:

15. What are the key trends or innovations in your industry that you believe will drive progress toward the SDG?
16. How do you see these trends evolving, and what impact will they have on achieving the SDG?

Closing questions:

17. What do you consider to be the biggest driver for SDG in business?
18. How do you envision the future of achieving the SDG in your industry over the next three years?
 - a. What do you see as the major barriers to achieving the SDG in your industry?
 - b. How can these barriers be addressed effectively?
19. Do you have any final thoughts or messages?

APPENDIX 3: German Interview Guide

Einleitende Fragen:

1. Können Sie kurz Ihre Rolle und Ihre Aufgaben in Ihrer Organisation beschreiben?
2. Wie wird der Begriff Nachhaltigkeit in Ihrem Unternehmen definiert?
3. Ist Nachhaltigkeit als Wert in der Unternehmenskultur verankert?
4. Gibt es eine eigene Abteilung zur Förderung der Nachhaltigkeit in Ihrem Unternehmen? Wenn ja, ist das ESG-/Nachhaltigkeitsteam in den letzten 24 Monaten gewachsen?
5. Wie hat sich die Einstellung Ihres derzeitigen Arbeitgebers zu ESG in den letzten 12 Monaten verändert?

Hauptfragen:

6. Warum sind die SDG Ihrer Meinung nach für Ihre Branche und Ihr Unternehmen wichtig?
7. Wie verlässlich sind die SDG für börsennotierte Unternehmen?
8. Kennen Sie die Unterziele der SDG?
9. Wie haben Sie die SDG für Ihr Unternehmen ausgewählt?
10. Welche SDG halten Sie für besonders wichtig für Ihre Geschäftstätigkeit und warum?
11. Gibt es in Ihrem Unternehmen Überlegungen und/oder Maßnahmen zur Umsetzung der verpflichteten SDG? Wenn nicht, warum nicht?
 - a. Können Sie Beispiele für erfolgreiche Initiativen oder Projekte nennen, die sich an den SDG orientieren?
 - b. Können Sie Beispiele für erfolgreiche Partnerschaften nennen, die die SDG-bezogenen Ziele Ihres Unternehmens vorangebracht haben?
12. Wie messen Sie die Fortschritte bei den in Ihrem Nachhaltigkeitsbericht genannten SDG?
13. Welche Rolle spielen Ihrer Meinung nach staatliche Maßnahmen und Vorschriften bei der Verwirklichung der SDG?
14. Gibt es spezifische politische Maßnahmen oder regulatorische Änderungen, die Ihrer Meinung nach notwendig sind, um den Fortschritt bei den SDG zu unterstützen?

Fragen zu Branchentrends:

15. Welches sind die wichtigsten Trends oder Innovationen in Ihrer Branche, die Ihrer Meinung nach den Fortschritt bei der Verwirklichung der SDG vorantreiben werden?
16. Wie werden sich diese Trends Ihrer Meinung nach entwickeln, und welche Auswirkungen werden sie auf die Erreichung der SDG haben?

Abschließende Fragen:

17. Was ist Ihrer Meinung nach der größte Treiber für die SDG in der Wirtschaft?
18. Wie sehen Sie die Zukunft der Verwirklichung der SDG in Ihrer Branche in den nächsten drei Jahren?
 - a. Was sind Ihrer Meinung nach die größten Hindernisse für die Verwirklichung der SDG in Ihrer Branche?
 - b. Wie können diese Hindernisse wirksam angegangen werden?
19. Haben Sie irgendwelche abschließenden Gedanken?

APPENDIX 4. Transcription of the guided interview with DAX company #1

T: So thank you so much again for your time. I would like to start with an introductory question, which is can you briefly describe your role and responsibilities within your company?

#1: Yep, I joined the company one year ago with the clear definition and mission to develop a Sustainability strategy and to incorporate ESG in our business model.

T: And I am sure you can also tell me how the term sustainability is defined in your company.

#1: It's a very good question. First of all, sustainability could be everything and nothing. Sustainability is really linked with CO2 emission and not really with governance, with social responsibilities. It's probably because it's hard for most of the people really to have a tangible idea about what does it mean for them because it's easier to measure CO2 emission then to do something for affected community or governments or circular economy.

T: So if I understand correctly, your company has or emphasizes the E in ESG. So the environmental impact like CO2 emissions and less S&G [Social & Governance].

#1: No, no, that's not necessarily that. It's a very and generally speaking, for most of the employees, it's easier. They summarize ESG in the CO2 emissions, but we have developed 9 initiatives, 9 priorities across ESG. The link between strategy and sustainability targets is that we have some definition, some goal what we would like to do, but it's unclear, except for CO2, in term of targets how we want to measure that, how we want to cascade that into our different business units. Again, it's easier because we have the EU Taxonomy, we have some regulation and we have applied for the SBTi to encourage the company to develop a strong target for scope 1, 2 and 3.

33

34 T: OK, I understand. Maybe just two organizational questions. Is there a
35 separate department to promote sustainability in your company?

36

37 #1: Yes, we have a very decentralized but at the same time centralized
38 organization and that start to be complex and difficult to spread ESG. We have a
39 corporate organization and the sustainability team is part of the corporate team.
40 But at the same time, we have six different business unit and in each business unit
41 we have a sustainability team. Most of the time, they follow our targets, but
42 sometimes they had different priorities and they work a bit differently and it's not
43 easy to align because we have a very decentralized organization and in each
44 business unit we have a CEO who decides.

45

46 T: I mean, your company is very big, so I can only imagine the challenges that
47 you face in sustainability.

48

49 #1: Yes, definitely. And our company has decided to shift from conventional
50 energy to renewable energy. Just five years ago, it's pretty new for the company
51 because previously the profitability and money revenue come from the nuclear and
52 coal businesses and today we have totally reverse. It's not because the company
53 decides to do something about sustainability or ESG that you can change quickly.
54 The mindset and the culture and the mentality of the people, it's a big challenge.

55

56 T: Thank you very much for the insight. I would like to give you a little bit of
57 background about my doctoral thesis. I am focusing on profitability versus
58 sustainability because as you can imagine, being sustainable means investing in
59 new energy and new technologies, new business models, et cetera. And I found out
60 that we only have 5 1/2 years to reach the sustainable development goals by 2030.
61 And for that I made a frequency analysis to count how many times listed German
62 listed companies mentioned sustainable development goals or SDG in their ESG
63 reports. And I found out that your company mentioned sustainable development
64 goals 15 times in 2021, but only two times in 2022 and 2023.

65

66 #1: OK. Interesting.

67

68 T: Yes. And my question is, from your point of view and from your
69 experience, how reliable are SDG's or companies?

70

71 #1: Yeah, before I reply. Specifically to your answer, I would like to add one
72 thing. Last year, we have organized a capital market day in London in November
73 and one big section was about ESG and sustainability and we had a lot of
74 communication and interaction with some investors and they say that they were
75 very impressed about the way that we run sustainability and put action in place.
76 The financial communication is super important because with that you can increase
77 or decrease your share price and during the market days our share price increase a
78 lot but couple of days later after the price decreased. Definitely sustainability and
79 finance and profitability are linked big, but the investors want to see that we are
80 the ones that we prove what we say on the paper and act in the practical way, and
81 that is a big challenge. Could you repeat your question? Because I switched a little
82 bit.

83

84 T: Of course. Do you think that SDG's are reliable? A good measurement for
85 companies? Or do you think it's not the best framework to use?

86

87 #1: It's good to have something. May I keep the example of CSRD? Is it a good
88 example for you?

89

90 T: Of course.

91

92 #1: CSRD. Currently we are working on double materiality assessments,
93 ESRS et cetera. On the paper the first thing when we have a look, we say, OK it
94 looks achievable and possible to do the double materiality assessment and to
95 communicate the target. But more and more we worked on this topics it was super
96 challenging really to understand finally what we want to achieve, because the
97 framework, there is a lot of contradiction and I think that in my personal view it's

98 really too much. Now we have to prove everything, we have to justify everything,
99 and it's time consuming. I do prefer that we locate more time to work with the team
100 about circular economy and to decide together in the collaborative way how we
101 could really develop targets and how we can work together to achieve the targets
102 in term of recycling, in term of construction, in term of the decommissioning, et
103 cetera. And that for me, we want to be perfect in sustainability but there are too
104 many things, a lot of paper to communicate, a lot of information, a lot of data. We
105 allocate a lot of time about reporting, about to be compliant but it is just too much.
106 We would rather like to use our time to develop more practical action and to
107 decrease the time for reporting and compliance.

108

109 T: My summary is that you focus on CSRD and not on SDG's, if I am correct.

110 #1: Yes.

111

112 T: Do you have other frameworks that you are reporting on?

113

114 #1: Not me, because it's not my role, but yes, we have a lot of reports. It looks
115 like more than 100 questions and it is just too much.

116

117 T: I would like to understand you're feeling about the reporting obligations
118 because you said CSRD is a lot, CDP is a lot, and EU taxonomy is a lot and now
119 companies are starting to get frustrated. And in the past, from your experience,
120 because you said you have over 20 years of experience, if I remember correctly,
121 what do you think, what role did government policies play in the past for
122 promoting sustainability in companies?

123

124 #1: Not totally in the topics, but I do believe that for government and for
125 different countries, they have selected the easy part. What does the easy part
126 means? To develop strong obligation reporting targets, but without having a
127 holistic view in term of consequences for the companies, for the different industries,
128 for people short term and long term. Everyone wants to do something and the

129 regulation tries to align and to measure but without really consultation about the
130 players, about or the people.

131

132 T: OK, maybe let's talk about the energy industry, because we all know that
133 the energy industry can really make a change and the world is focusing on
134 renewables, for example. And what do you think? What are the key trends or
135 innovations that you believe will progress towards sustainable development?

136

137 #1: I don't believe about just one. I think it's a combination of different
138 technology. It's not super responsible just to focus on one solution. We have
139 decided to invest a lot in hydrogen. It's easy to produce and we know how to do
140 that technically, but there is a lot of issues regarding the pricing. They often come
141 with the transport and the storage that is super challenging. They say, in five years,
142 probably the price could decrease, but we need a solution now. It's not too wait too
143 much. Germany has decided to stop the nuclear, but it was a strong decision that
144 not just for a couple of years but for 20-30. I know that some German people regret
145 to have made this decision, but now it could be too expensive to return. Solar same
146 but in Germany be we have not a lot of space to build. Onshore, offshore, it's
147 another story, but they are super expensive, too. It's expensive to build and it really
148 depends on the technology. I think we have everything we know how to do that,
149 but it's more about the costs because if we pick as an example solar. For solar, there
150 are different components and most of the components come from different
151 countries with different regulations and sometimes the material comes from Asia
152 or another countries and we could have some issues about human rights or about
153 delivery or about the material. Finally, solar could be not totally renewable. It's
154 renewable but if you analyze the supply chain, there are a few issues.

155

156 T: We have talked a lot about challenges now and barriers and all the
157 reporting obligations for German listed companies and Europe listed companies.
158 What do you think is the biggest driver for SDG in business? What can really make
159 a change, except for new technologies? Is there anything else on your mind? What
160 could help to make a change in the future?

161

162 #1: Technology is not necessary or innovation, but it's more people. It's more
163 at the company. It's people's mindset and the culture. I think it's super important
164 that sustainability helps us to decide how we want to hire people, how we want to
165 buy material, how we want to develop our strategy. It's really for me, ESG is not
166 just one department, it is not a silo organization, but it's everywhere. It's really part
167 of the DNA of the company and if we are not able to implement that, it doesn't
168 matter if we have the best technology or whatever. People are people and the
169 sustainability need to be really part of our DNA definitely, and our culture if we
170 want really to make an impact.

171

172 T: How long have you been at your company?

173

174 #1: One year.

175

176 T: And in the last one year, how has the current employees attitude to ESG
177 changed or better employers attitude to sustainability?

178

179 #1: I think it really depends on the objective of each people. I know that we
180 have the double materiality assessment. The first decision was to develop or to
181 analyze the long list and to assess the impact. Only with our team, without the
182 interaction with the author, stakeholders and very quickly, we have relied that it
183 was not the right thing to do. But if we want to spread sustainability and educate
184 at the same time, what does it mean for ESG? And we have 30 subsidiaries. How
185 do we interact and engage with different stakeholders and we have interviewed a
186 lot of stakeholders in person or we have sent a survey, but most of the time it was
187 in person and people it was very useful because people were super happy that we
188 talk about sustainability with them. We try to understand how sustainability could
189 impact where they work and that I think it was the right thing to do because to shift
190 sustainability in a silo department and compliance and reporting and ready to
191 spread sustainability with finance, with different departments, with small steps but
192 in fact a big success because people will internally want to have to contribute to
193 because they believe that they want to do something for the planet. They have no

194 idea how to do that, but if we help them to do something in their day-to-day work,
195 they really appreciate that. It was successful.

196

197 T: How do you know that it was successful?

198

199 #1: Because they say thank you and they ask us, really to continue the
200 pathway, the journey and not to stop. They want to learn more about what does it
201 mean.

202

203 T: Okay, sounds good.

204

205 #1: Sustainability for our company in terms of procurement or when the
206 engineer starts to talk about the design of the building, they want to integrate at a
207 very early stage these sustainability principles in terms of material and to think
208 short term but at the same time long term to think about all the supply chain issues
209 or life of the material of the building and that is a very different mindset. I do
210 believe if we want to change something it's not with regulation or compliance but
211 it is with the people, step by step and practical actions and first to understand what
212 the challenge is for the Engineering people or Procurement, it's to work with them
213 together to integrate sustainability principle in their current business model or
214 processes. It's collaboration. If we want to make an impact and change the
215 mentality and the culture of the company.

216

217 T: So you say that people are the biggest driver in the company for
218 sustainability?

219

220 #1: Definitely.

221

222 T: I have one last content question and or it's more a summary.

223

224 #1: So I see that the sustainable development goals from the United Nations,
225 which is my main part of the doctoral thesis, are not really helping to drive
226 sustainability in the company. It's more engaging with internal stakeholders,
227 explaining the why and working together with different stakeholders that could
228 make an impact of sustainability in one company. If that is correct, what I
229 understand and also the measurement of it and the progress and performance.

230

231 #1: Yes, definitely but I support these different principles or targets. I think
232 it's super important at the high level to have some direction and to have some
233 agreed ideas. It's the rule of each company to interpret and to try to understand:
234 "for me as a company, what does it mean?". I don't need to take the box for
235 everything, but I can select maybe just five or ten of them. That's it. But I want to
236 use them and to share them across the company and to turn this concept in really
237 practical actions, into measures, because it's easier internally to explain something
238 when this target or this issue challenges with the sectors, with the company or with
239 the our culture of the company. It's interpretation and adaption and to transfer or
240 to translate this concept in practical actions for the company. I think with that it
241 will be easier to communicate and to have people in the company that don't need
242 to big concepts. You pair a complex issue and they want to have a practical solution,
243 targets, or actions and they want to believe the vision and idea. I think it's our role
244 to translate the different messages into a practical action.

245

246 T: And you think that the SDG's could help do that?

247

248 #1: Yes.

249

250 T: Because they are high level and easy to understand?

251

252 #1: Yes.

253

254 T: But I saw that your company, as I said in the beginning, has not used them
255 anymore.

256

257 #1: We have to reverse the process. Normally, the objective was to use the
258 different actions from the United Nations first and to adapt into a specific initiative,
259 strategy or whatever. There was a lot of improvement, but it's still a strong silo we
260 have. Something like five years ago, we have developed some targets or ambition
261 levels and we try some UN principles in our initiatives. It could be in a different
262 way, but it was more to match.

263

264 T: That sounds good. We are coming to an end of our interview and I have
265 two last questions. So the first one would be how do you envision the future of
266 achieving the sustainable development goals over the next five years until 2030?
267 Do you think it will be challenging or do you think it could be it could be
268 manageable?

269

270 #1: It could be achievable but it really depends on the global situation. I think
271 as an example of CO2. For climate change, it really depends not just on Germany,
272 but what could happen with the Ukraine war etc., because that has a big impact on
273 our price. The German Government could say that we do not stop the coal but
274 continue the production for coal and that could affect our CO2 ambitions and
275 emissions. But it's a practical example for biodiversity, we have a target, but
276 biodiversity is so challenging because it's a very local impact. We still try to define
277 what it means for our targets, how we could measure and that it is challenging
278 because we don't know how to measure that for circular economy. We have targets,
279 but it depends on the entire value chain or supply chains. All the time we need to
280 keep some profitability and most of the time some material. Green Steel as an
281 example of some recycling blade. More expensive than the traditional material, and
282 that it's another challenge. We would like to, but financially it's challenging for the
283 part about the S we want to do something about affected communities, but it's
284 again very local and we have ambitions, but it's not clear in term of targets we
285 worked. We have some ambitions about diversity, but by diversity, it's very broad
286 topics. For some people, diversity is only gender. I give you a very specific target.
287 They want now for each application to have one male, one female. It's great, we
288 tick the box. But what does it mean in terms of the impact. Just a tick the box and

289 for governance. We have started to talk internally about the board remuneration, if
290 we want really to communicate and to be serious about sustainability. It was an
291 internal question. Is it the time to review how the bonus from the top to the down
292 is the right moment to review it. Individual KPIs and to add some ESG KPIs if we
293 want to have an impact for everyone and it looks too early, probably it's still in the
294 discussion, but for the both really minor relation is really depends on the KPIs. If it
295 is an easy one or can they impact the company?

296

297 T: Thank you so much. I have one last question. Are there are final thoughts
298 or messages that you would like to share with me?

299

300 #1: I think sustainability is a very complex topics because for most of the
301 people and most of the company, sustainability is just another department that is
302 not really integrated into the business model and it will be viewed as compliance
303 and to tick the box, but it is not really a mindset. For me, the best way in terms of
304 the organization will probably be to reduce the sustainability team and to be with
305 a couple of people for compliance, for procurement plus sustainability, finance plus
306 sustainability related to add sustainability everywhere, not just to have one
307 department except for compliance, to train people, to explain, to organize webinars,
308 to integrate sustainability in every situation possible and important for the
309 company's success and business. I do believe that in procurement, finance or HR,
310 we could have people with the knowledge of sustainability, I think you could really
311 accelerate and help the company to achieve their goals.

312

313 T: Thank you so much for the interview. I have no more questions. If you
314 have questions to me, of course, feel free to ask.

315

316 #1: No, thank you. I think you are doing a good job. I think it's a good topics
317 definitely, but not an easy one.

318

319 T: Thank you.

320

321 #1: I spent ten years in Australia and sustainability in Australia is totally
322 different. It depends where you are in which country, because in Australia, I don't
323 know if you have been there, but it's a big country. We have not the same issues
324 with the natural resources for example. In Australia, we could have a lot of solar, a
325 lot of onshore offshore, but it's not the mindset for now, it's more renewable, it's
326 more natural resources because the money comes from that. When you go to Asia,
327 look at sustainability in Vietnam or Cambodia, it's totally a different approach. If
328 you go to America or same in Africa, it depends on what the country's political
329 situation or priorities are. Europe is very focused on compliance. I don't know what
330 happens in other parts of the world because Europe, it's just Europe.

331

332 T: But this is exactly why we need SDG's. Why we need sustainable
333 development goals at a higher level to incorporate businesses, governances and
334 NGO's, other business partners, to have at least one common understanding of a
335 sustainable development of the whole world.

336

337 #1: Yes, I totally agree. But I think it's super important to have the right
338 balance because I think everyone would like to contribute to reduce climate change,
339 etc. But when you look sometimes what has happened in some countries, there is
340 no food, no water. Finally, sustainability is what they would like to have, but it is
341 not their priorities.

342

343 T: Absolutely and this is the great thing about the SDG's. 17 goals. 17 different
344 priorities Europe can focus on climate change and Africa in focusing on goal
345 number 1 "no poverty".

346

347 #1: Yes, exactly right.

348

349 T: What you just said it's all about the balance. And that's the same with
350 profitability and sustainability. It's all about balancing it.

351

352 #1: When I started, one of my first meetings with the sustainability team was
353 to talk about the balance between finance and sustainability and a lot of people
354 were very excited about the topics about biodiversity, diversity and CO2 emissions.
355 It's easier to talk about climate change, biodiversity, diversity than about finance
356 and profitability with sustainability because when you have a look at your offer for
357 example and it will not be profitable because you compare sustainable materials
358 with traditional materials, it will be different in pricing. I would like to add another
359 thing. I participate in a few conference from different universities and sometimes,
360 we had the topics about finance and sustainability and their comment was if we
361 want to do something about to find this balance, we need first to change the
362 mentality from the investors and from the bank. 15 years ago, I was responsible to
363 develop a strategic paper about circular economy and if I summarize that in one
364 sentences, the object, the conclusion, it was impossible to implement circular
365 economy concepts if we are not able to talk together with government, with
366 innovation and with businesses, because the three spheres are really interconnected
367 and if we are not able to connect the dots, it would be hard to have financially the
368 right balance to try to convince people that they have an impact to play, but
369 together, not in separate ways.

370

371 T: Thank you very much. These were nice last finishing words.

372

373 #1: Thank you.

1 **APPENDIX 5: Original German transcription of the guided interview with DAX**
2 **company #2**

3 T: Ist alles klar? Großartig, zunächst einmal vielen Dank für Ihre Teilnahme.
4 Ich möchte Sie kurz bitten, Ihre Rollen und Verantwortlichkeiten in Ihrem
5 Unternehmen vorzustellen.

6 A: Sicher. Ich leite das ESG-Programm und überwache im Wesentlichen
7 unsere Aktivitäten. Ich bin auch für die doppelte Wesentlichkeitsanalyse und die
8 Zusammenstellung aller Informationen für die Berichterstattung verantwortlich.
9 Ich arbeite eng mit meinen Kollegen B daran. Es hat also eine Projektkomponente.
10

11 B: Ja. Ich bin B bei QIAGEN und verantwortlich für die Erstellung der
12 konsolidierten Finanzberichte. Ich kümmere mich auch um die technische
13 Komponente und arbeite mit Kollegen in den USA zusammen, die das Einreichen
14 und andere Aufgaben verwalten. Zusätzlich bin ich global für den Berichtsprozess
15 verantwortlich, einschließlich der Nachhaltigkeitsberichterstattung. Sie haben also
16 zwei Kernkompetenzen hier, die für die Nachhaltigkeitsberichterstattung von
17 QIAGEN verantwortlich sind.

18

19 T: Perfekt, ich habe beide Seiten direkt.

20

21 B: Ja, genau.

22

23 T: Wie wird der Begriff Nachhaltigkeit allgemein in Ihrem Unternehmen
24 definiert?

25

26 A: Nun, wir richten uns nach der doppelten Wesentlichkeitsanalyse und
27 verwenden gängige grundlegende Definitionen. Wir haben Aktivitäten in allen
28 drei Bereichen, nicht nur auf die Umwelt fokussiert. Fragen Sie ruhig nach weiteren
29 Details, wenn Sie welche benötigen.

30

31 B: QIAGEN ist nicht wie ein großes Industrieunternehmen wie
32 thyssenkrupp, das viele Ressourcen verbraucht und Emissionen ausstößt. Unser
33 Fußabdruck ist relativ klein.

34

35 T: Ja.

36

37 B: Daher ist es für uns eine Herausforderung, die
38 Nachhaltigkeitskomponente hervorzuheben und das Thema anzugehen. Wir
39 folgen den wesentlichen Themen, über die wir berichten, und navigieren
40 entsprechend. Es ist anders als bei Unternehmen wie Ihrem, die einen klaren Fokus
41 auf Wasserstoff haben, zum Beispiel.

42

43 T: Das stimmt, aber ich kann Ihnen sagen, dass wir auch eine doppelte
44 Wesentlichkeitsanalyse durchführen und verschiedene Themen auftauchen, die
45 wir als wesentlich betrachten und unsere ESG-Geschichte darum herum aufbauen.
46 Es geht nicht immer in erster Linie um grünen Wasserstoff; wir beschäftigen uns
47 auch mit Chlor-Alkali, das nicht so nachhaltig ist wie grüner Wasserstoff. Jetzt
48 komme ich zu der Frage, die Sie mir am Anfang gestellt haben: Ist das
49 Nachhaltigkeitsteam in den letzten 24 Monaten gewachsen?

50

51 A: Nein.

52

53 T: Oh, das ist interessant.

54

55 B: Wir arbeiten seit mindestens 2018 daran, also sind wir kontinuierlich
56 gewachsen, aber nicht unbedingt in den letzten 24 Monaten. Anfangs war es nur
57 eine Berichtsübung aufgrund der regulatorischen Anforderungen in den
58 Niederlanden. Wir haben mehr Erfahrung als einige andere DAX-Unternehmen in
59 Deutschland, aber wir sind in den letzten 24 Monaten nicht gewachsen.

60

61 A: Es hängt davon ab, wie man es definiert. Wenn wir Berater einbeziehen,
62 dann ja.

63

64 B: Ja, das stimmt.

65

66 A: Ich habe 2021 angefangen, und wir haben externe Berater.

67

68 B: Ja, wir holen uns externe Unterstützung, um wiederkehrende Themen zu
69 bewältigen.

70

71 A: Ich kann versuchen, es zu beschreiben. Wir haben eine Matrixorganisation
72 mit Vertretern aus verschiedenen Abteilungen, einschließlich Recht, Beschaffung
73 und Global EHS. Wir haben auch Auftragnehmer mit befristeten Verträgen. Aber
74 das ist nicht alles, das ist alles Matrixorganisation, aber ich glaube, dass sie in dieser
75 Zeit etwas mehr Zeit investiert haben und auch mussten, weil wir relativ früh mit
76 der Wesentlichkeitsanalyse begonnen haben, also wenn es um die investierte Zeit
77 geht, die sicherlich zugenommen hat, dann haben wir einen Auftragnehmer, der
78 für mich wie ein Mitarbeiter ist. Aber es ist auch ein Auftragnehmer mit einem
79 befristeten Zweijahresvertrag. Das ist, das ist ein unterstützender
80 Nachhaltigkeitsmanager und dann haben wir ein Jahr später, glaube ich, auch als
81 Auftragnehmer eine weitere Person hinzugezogen, die sich um die Scope-3-
82 Aktivitäten kümmert und kurz nachdem ich 2021 angefangen habe. Ich meine, das
83 war im April 22, haben wir einen Wirtschaftsprüfer eingestellt und das ist ein
84 dreiköpfiges Team, das uns schon sehr hilft, also wenn das so zählt, dann ist es
85 gewachsen, aber nicht, wenn man nur rein auf direkte Berichte und
86 Vollzeitbeschäftigte geht.

87

88 T: OK, alles klar, jetzt bin ich natürlich sehr interessiert, weil Sie sagen, Sie
89 haben mehr Zeit in das ganze Thema Berichterstattung investiert, nehme ich an
90 wegen der Vorschriften.

91

92 A: Ja.

93

94 T: Ich verstehe. Jetzt bin ich neugierig, hat sich die Einstellung des
95 Arbeitgebers gegenüber ESG aufgrund der gestiegenen Berichtsanforderungen
96 geändert?

97

98 B: Ja, das hat sie.

99

100 A: Ja, auch.

101

102 A: Es ist nicht einfach zu beantworten. Es gibt einen Konflikt zwischen
103 finanziellen Aspekten und ESG-Themen. Das ESG-Komitee und der Aufsichtsrat
104 haben ihm mehr Aufmerksamkeit geschenkt, und es wird jetzt im Management
105 anders gesehen. Was man wirklich beobachtet, ist der Interessenkonflikt. Auf der
106 einen Seite gibt es die rein finanziellen Aspekte, die auch integraler Bestandteil des
107 Unternehmensmanagements sind. Daran führt kein Weg vorbei und auf der
108 anderen Seite die ESG-Themen, die manchmal widersprüchlich sind. Das ist
109 manchmal wirklich schwierig, wie mein Kollege sagte, es ist ein sehr wichtiger
110 Punkt, das ESG-Team im Unternehmen über das ESG-Komitee hinaus zu verorten,
111 zum Beispiel die Verantwortung des Aufsichtsrats zu verorten, wo das Thema
112 wirklich unterschiedliche Aufmerksamkeit erhalten hat. Es war vorher sehr
113 schwierig, aber jetzt ist es anders. Es wird auch vom Management anders gesehen.
114 Themen werden jetzt auch berücksichtigt. Das sind natürlich auch finanzielle Ziele.
115 Der Vorstand hat auch eine Vergütungskomponente, die direkt mit ESG-Zielen
116 verknüpft ist, aber der Konflikt ist immer da.

117

118 B: Früher war es nur eine Compliance-Übung, aber jetzt wird es ernster
119 genommen.

120

121 A: Es hat viele Veränderungen gegeben, und wir bewegen uns in Richtung
122 Gleichstellung mit der Finanzberichterstattung. Es gab auch viele
123 Absichtserklärungen, viele Phrasen, das hat sich schon deutlich verändert, ja, also
124 das ist der Stand jetzt, auch weil wir auch bis zur Prüfung gehen, zum Beispiel, ja,
125 und es wird auch irgendwann Gleichstellung geben. In Bezug auf die
126 Finanzberichterstattung, die an diesem Punkt eine ganz andere Geschichte hat, ja,

127 die Finanzaahlen sind tatschlich. Zuverlssig, ja, so haben wir es von
128 Wirtschaftsprfern, zum Beispiel, das ist noch nicht der Fall bei der nicht-
129 finanziellen oder Nachhaltigkeitsberichterstattung, aber der Weg dorthin ist bereits
130 geebnet.

131

132 T: Jetzt haben Sie gerade erwhnt, Sie haben Rentabilitt und Nachhaltigkeit
133 erwhnt, das ist eigentlich der perfekte bergang zu den Hauptfragen und
134 eigentlich auch zum Kernthema meiner Dissertation. Wie knnen wir dies aus
135 wirtschaftlicher Perspektive erreichen, um die nachhaltigen Entwicklungsziele der
136 Vereinten Nationen bis 2030 zu erreichen? Und 2030 steht vor der Tr.

137

138 A: Ja.

139

140 B: Ja.

141

142 T: Aus meiner Forschung machen wir weltweit messbare Rckschritte.

143

144 B: Ja.

145

146 T: Natrlich sind auch andere Komponenten enthalten, wie das
147 Unternehmen andere Unternehmen natrlich nicht nur DAX-Unternehmen, aber
148 ich schaue speziell auf Unternehmen in Deutschland, die an der Brse notiert sind
149 und bestimmte regulatorische Anforderungen erfllen mssen. Sind Ihnen die
150 nachhaltigen Entwicklungsziele bekannt?

151

152 A: Ja, natrlich, aber ganz ehrlich, das ist eine bung in Logik. Vielleicht wird
153 jeder sagen, dass unsere Branche stark reguliert ist und natrlich mit unseren
154 Produkten, zum Beispiel Zugang zu Gesundheitsversorgung, wir sind, ich fange
155 schon an zu stottern, ich denke, das ist irgendwie, Gesundheit, ich denke, wir sind
156 im Gesundheits-SDG. Ich muss noch einmal genau nachsehen, wie es heit, aber
157 wir haben bemerkt, was minimal ist, wie wir dazu im globalen Kontext beitragen

158 können, aber natürlich haben wir es abgebildet und bauen es auch transparent in
159 unserem Nachhaltigkeitsbericht auf.

160

161 T: Haben Sie Ihre Strategie an den SDG ausgerichtet oder umgekehrt?

162

163 A: Wir haben unsere Strategie an den SDG ausgerichtet, nicht umgekehrt.

164

165 B: Ich muss auch sagen, dass die SDG nicht unbedingt in erster Linie für
166 privatwirtschaftliche Unternehmen gedacht sind, sondern die Idee war, sagen wir,
167 dass es einen staatlichen, also politischen Ansatz geben sollte, weshalb die UN die
168 SDG überhaupt erst entworfen hat.

169

170 A: Ja.

171

172 B: Die Regierung sollte mit gutem Beispiel vorangehen, und Unternehmen
173 können folgen. Natürlich müssen die SDG vorgelebt werden, und das ist eigentlich
174 eine politische Aufgabe. Wenn man dies dann als Land ernst nimmt und in
175 politische Leitlinien umsetzt, die wiederum auch die Unternehmen oder alle
176 Beteiligten dazu inspirieren, sich daran zu halten und dazu beizutragen, aber ich
177 meine, die Unternehmen, wie wir, versuchen natürlich ihr Bestes und versuchen
178 zumindest, über eine Abbildung irgendwohin zu gelangen, dass man sich an
179 diesem Punkt vielleicht mit anderen vergleichen kann.

180

181 T: Wie haben Sie die SDG ausgewählt? Es gibt 17 verschiedene großartige
182 Schlagworte, ich sage immer keine Armut, Geschlechtergleichheit und so weiter,
183 wie haben Sie sie ausgewählt?

184

185 A: Wir haben eine Abbildung gemacht. Wir haben ein Tool verwendet, um
186 unsere Aktivitäten an den SDG auszurichten. Es war eine gemeinsame
187 Anstrengung innerhalb unseres Corporate ESG-Teams. Im Prinzip haben wir alle
188 beantwortet, wo wir denken, dass wir zu welchem SDG beitragen und natürlich
189 haben wir uns alle SDG vorher angesehen. Es war schön, weil man relativ schnell

190 sehen konnte, wo wir dachten, dass wir beitragen und welche Themen wir
191 beitragen, und sie kristallisierten sich dann daraus heraus und es machte total Sinn.
192 Wir haben dann auch mit Hilfe der Projekte, die wir initiiert haben, erklärt, warum
193 sie in einen bestimmten Bereich passen, also all dies wird auch in unserem
194 Nachhaltigkeitsbericht veröffentlicht.

195

196 T: Wer war beteiligt?

197

198 A: Unser Corporate ESG-Team, einschließlich leitender Berater und Vertreter
199 aus verschiedenen Abteilungen.

200

201 B: Wir haben unsere strategischen und operativen Ziele an den SDG
202 ausgerichtet, nicht umgekehrt.

203

204 T: Ich verstehe. Denken Sie, dass die SDG zuverlässig sind oder nur ein
205 Marketinginstrument?

206

207 B: Es ist ein bisschen von beidem. Unternehmen nutzen sie für Marketing,
208 aber sie zielen auch darauf ab, eine nachhaltige Entwicklung sicherzustellen. Das
209 war also mehr meine persönliche Meinung. Unabhängig davon, was wir bei
210 QIAGEN tun, sind dies auch schöne, bunte Bilder. Man kann sie sich irgendwie
211 anheften. Es ist sehr auffällig, aber wenn man tatsächlich schaut, welches Land
212 oder Unternehmen die SDG hat und was die Agenda dahinter ist, ist es viel heiße
213 Luft. Aus Unternehmensperspektive ist es mehr Marketing. Wir definieren unsere
214 Ziele basierend auf unserem Geschäft und richten sie dann an den SDG aus.

215

216 T: Es gibt auch 167 Unterziele der SDG. Es gibt die großen Industrieländer,
217 die natürlich freiwillige Berichte einreichen oder nicht einreichen, weil sie freiwillig
218 sind, und unsere deutsche Regierung hat nicht alle SDG und hat keine wirklich
219 definierten internen Ziele oder Maßnahmen, die nachhaltig sind.

220

221 B: Genau, und das ist es, was ich vorhin kritisiert habe, weil genau dort das
222 Unternehmen ansetzen könnte.

223

224 T: Was meinen Sie?

225

226 B: Also, wenn zum Beispiel die deutsche Regierung mit dem Ziel vorangehen
227 würde, SDG X umzusetzen, dann könnte man auch in dieses einzahlen und als
228 Unternehmen reagieren. Das fehlt also, es ist ein schwaches Instrument.

229

230 T: Andere Unternehmen, mit denen ich gesprochen habe, sagen sogar,
231 warum sollten wir die Ziele der deutschen Regierung in Anführungszeichen
232 akzeptieren, wenn wir Nachhaltigkeitsstrategien und -ziele in unserem Geschäft,
233 in unserer Branche definiert haben und einen viel größeren Beitrag leisten können.

234

235 B: Auch völlig fair, aber es ist immer leicht, Ausreden zu finden, weil die
236 Leute immer schnell sagen, ja, schön, aber wir haben etwas ganz anderes. Aber es
237 hat bis zu einem gewissen Grad miteinander zu tun, es ist ganz gut, wenn man eine
238 Agenda, einen Zeitplan hat und alle Beteiligten versuchen können, sich irgendwo
239 einzubringen oder nicht.

240

241 T: Haben Sie das Gefühl, dass Sie mehr Unterstützung von der
242 Bundesregierung wünschen würden?

243

244 B: Ja, es war nur eine Beschreibung dessen, was vor sich geht. Aber wenn
245 man es ernst nehmen würde, auch in der Bundesregierung, müsste man eine klare
246 Agenda haben. Dann wäre es einfacher, darauf zu reagieren und jetzt macht jeder
247 sein eigenes Ding. Ich wage auch zu bezweifeln, dass die SDG einheitlich
248 abgebildet sind, weil es keine Kriterien gibt, die festlegen, wann man welches Ziel
249 erreichen kann und wie. Es ist also sehr vage.

250

251 T: Was bedeutet das für die Ziele und vor allem, welche Maßnahmen habe
252 ich als Unternehmen, die dazu beitragen?

253

254 A: Ich habe jetzt unseren Nachhaltigkeitsbericht offen, aber ich habe ihn nicht
255 im Foliensatz, wo ich sie alle nebeneinander habe, ich kann ihn parallel öffnen,
256 wenn Sie das haben, bitte zeigen Sie es mir, aber ich kann es auch schnell öffnen.
257 Zum Beispiel Zugang zu Gesundheit. Wir haben eine Global Public Health Task
258 Force und wir haben medizinische Geräte zur Diagnose von Tuberkulose. Und
259 dann haben wir diesen Zugang zu Gesundheit Fall für uns wesentliches Thema,
260 wir können Produkte in niedrigen und mittleren und Ländern bereitstellen, aber es
261 ist auch ein schwieriges Thema, wie wir es intern im Vergleich zum normalen
262 Geschäft einrichten, nenne ich es jetzt, und wir haben dann festgestellt, dass, in
263 guter Gesundheit und Wohlbefinden. Aber es ist nicht so, dass wir uns umgedreht
264 und geschaut haben, was in guter Gesundheit und Wohlbefinden enthalten ist, was
265 sind die Ziele und was können wir tun? Aber ich denke, es ist auch in Ordnung, es
266 umgekehrt zu machen, weil wir dann von unserem Geschäft ausgehen, was wir
267 sehen. In Bezug auf die Regulierung passt zum Beispiel nichts davon zu unserem
268 Geschäft im Moment, aber wir bemühen uns derzeit, die Vorschriften einzuhalten,
269 aber wir sehen, dass es auf andere Branchen ausgerichtet ist.

270

271 T: Welche Vorschriften?

272

273 A: CSRD. Aber ich denke, es kommt von oben von den SDG und es kommt
274 von unten, also passt nicht alles richtig zusammen. Es ist kein Stück. Vielleicht kann
275 man das nicht erwarten, weil die Branche und die Sektoren so unterschiedlich sind.
276 Aber man muss irgendwie seinen eigenen Weg finden.

277

278 T: Sie sind das dritte Unternehmen, das genau das sagt, dass es nicht passt
279 und dass es viele Schwierigkeiten gibt, es irgendwie passend zu machen oder
280 danach zu berichten, weil man nicht weiß, was man berichten soll.

281

282 A: Genau.

283

284 T: Ja. Die SDG zielen darauf ab, eine nachhaltige Entwicklung und
285 zukunftsorientiertes Denken sicherzustellen.

286

287 A: Ja.

288

289 B: Die [SDG] sind dafür geeignet, aber die CSRD ist überhaupt nicht geeignet.
290 Wer will sich da durchbeißen? Aber man kann sagen und sehen, wie diese eher
291 marketinggetriebenen Instrumente vielleicht besser genutzt werden können, weil
292 man wahrscheinlich mehr Menschen dazu bringen kann, in irgendeiner Weise
293 beizutragen.

294

295 T: Was denken Sie, ist der größte Treiber für nachhaltige Entwicklung in der
296 Wirtschaft?

297

298 A: Regulierung, wie die CSRD.

299

300 T: Was ist der größte Treiber innerhalb eines Unternehmens?

301

302 A: CSRD.

303

304 T: Regulierung?

305

306 A: Ja.

307

308 B: Es hängt von der Branche ab. Verbrauchergesteuerte Branchen haben
309 möglicherweise andere Treiber. Es hängt wirklich vom Sektor ab. Wo man auf
310 Verbraucher trifft, die vielleicht auch Kaufentscheidungen davon abhängig
311 machen oder so etwas, ist eine andere Geschichte. Aber andere Unternehmen
312 werden stark von der Regulierung getrieben, insbesondere in der EU. Und wenn
313 man sich andere Regionen ansieht, die USA oder andere Wirtschaftsbereiche, sieht

314 es wieder ganz anders aus. Es gab eine Welle, die einmal durch das Land fegte,
315 aber sie ist bereits abgeklungen. Andere Themen kommen wieder ins Spiel.

316

317 T: Und wenn ich mir die Unternehmen anschau, was ist der größte Treiber
318 der aktuellen Entwicklung des Unternehmens?

319

320 A: Ich habe tatsächlich etwas gelernt, dass wir ein Ziel zur Plastikreduktion
321 haben. Es sollte von dem kommen, was die Kunden wollen, und es kommt auch
322 teilweise daher, dass wir ein Unternehmensziel zur Plastikreduktion haben. Das
323 kam tatsächlich aus Beschwerden über Verpackungsmüll. Zumindest ist das meine
324 Information. Und dann nahm das Ganze noch mehr Fahrt auf, wegen der
325 Vorschriften. Ich habe einen Artikel auf unserer Website veröffentlicht, also bin ich
326 mir auch sicher, dass es ohne den Regulator gut ist, dass wir die Vorschriften haben
327 und dass wir sie einhalten müssen.

328

329 T: Ok.

330

331 B: Ja.

332

333 A: Es bleibt abzuwarten, ob die Regulierung uns auf andere Weise zu diesem
334 Punkt bringen könnte, aber ich denke, die Tatsache, dass es reguliert ist, hilft dem
335 Ganzen erheblich.

336

337 B: Nein, das ist ein Thema, das auch ein wichtiges Thema ist,
338 Plastikreduktion, weil man an einigen Stellen das Plastik nicht ersetzen kann, weil
339 Polypropylen einfach hat oder wissen Sie es besser? Aber es ist fast unmöglich, sich
340 Diagnostik ohne vorzustellen, aber man muss es nicht 23 Mal mehr in Plastiktüten
341 verpacken.

342

343 A: Ja, zum Beispiel.

344

345 T: A, Sie haben etwas im Chat erwähnt?

346

347 A: Ja, ich habe unsere wesentlichen Themen und wie wir sie an den SDG
348 ausgerichtet haben, geteilt.

349

350 T: Ist das in Ihrem Nachhaltigkeitsbericht, und das ist ja, ich habe vielleicht
351 eine Frequenzanalyse durchgeführt, also habe ich mir die Nachhaltigkeitsberichte
352 verschiedener DAX-Unternehmen angesehen und gezählt, wie oft die SDG
353 überhaupt erwähnt wurden, und das ist sehr, sehr interessant, weil die Zahl
354 abnimmt.

355

356 B: Ja, wir sind jetzt bei fünf Erwähnungen in unserem Nachhaltigkeitsbericht
357 2023.

358

359 T: Ich konnte den Bericht 2023 nicht einbeziehen, weil er noch nicht
360 veröffentlicht war.

361

362 B: Ja, er wurde später veröffentlicht.

363

364 T: Andere Unternehmen haben auch die Erwähnungen der SDG reduziert
365 und konzentrieren sich mehr auf die CSRD.

366

367 B: Es ist also eine schwierige Sache und weil es einfach so ist, dass wir
368 getrieben sind von der Tatsache, dass wir die Vorschriften anwenden müssen, ja,
369 und konform sein müssen und das ist auch das, was man nach außen präsentiert
370 und die SDG stehen dem auch ein bisschen entgegen, also was macht man hier ist
371 das SDG oder beides?

372

373 T: Ja.

374

375 B: Ja, es wird irgendwo entlang der Linie schwierig und dann nimmt man
376 den Weg des geringsten Widerstands und konzentriert sich vielleicht nur auf die
377 CSRD oder so etwas.

378

379 T: Ja, das war irgendwie die Schlussfolgerung, die gezogen wurde, die CSRD
380 wird uns beschäftigen. Wir können uns jetzt nicht auf die SDG konzentrieren, also
381 konzentrieren wir uns lieber auf die CSRD.

382

383 B: Ja, genau.

384

385 T: Das war ihre Erweiterung. Wie sehen Sie die Zukunft der Umsetzung der
386 SDG in den nächsten 5 Jahren, also bis 2030, wenn morgen 2030 wäre? Was wäre
387 Ihre Schlussfolgerung?

388

389 A: Nun, ich denke, dass wir alle gerade so von der CSRD abgelenkt sind, dass
390 wir dies als Fokusthema aus der Branche haben werden, die unter die CSRD fällt,
391 zumindest für die nächsten zwei Jahre. Ob sich noch mehr entwickeln wird und
392 noch mehr getan werden muss und neue Gesetze eingeführt werden. Es ist
393 interessant, wie sehr Sie sich auf die SDG konzentrieren. Ich denke, ich wollte nur
394 erklären, dass ich mich im Moment überhaupt nicht damit beschäftige, weil wir so
395 viele andere Dinge zu tun haben. Wir konzentrieren uns derzeit auf die Einhaltung
396 der CSRD, die uns in den nächsten zwei Jahren beschäftigen wird. Wir richten uns
397 nicht strategisch an den SDG aus, sondern konzentrieren uns auf unser
398 Kerngeschäft und die regulatorischen Anforderungen.

399

400 T: Das ist mein Fokusthema der Dissertation.

401

402 A: Also es ist vielleicht ein bisschen viel, aber die Tatsache, dass wir einfach
403 unseren Bericht richtig aufstellen und dass wir auch herausfinden, wie wir unsere
404 Wertschöpfungskette dekarbonisieren können und so weiter, das wird natürlich
405 alles irgendwie beitragen, aber das ist jetzt nicht strategisch. Also nehmen wir die
406 SDG nicht und denken dann strategisch darüber nach, wie wir den größten

407 Einfluss auf bestimmte SDG haben können, sondern wir denken darüber aus
408 unserem Kerngeschäft nach, was auch Sinn macht. Und die Regulierung erfordert
409 auch Nachhaltigkeit, aber die SDG sind nur eine Zuordnungsübung, um nach
410 außen zu kommunizieren, also bin ich mir nicht sicher, ob es in anderen Branchen
411 genauso ist, also sollte es eher national sein. Meiner Meinung nach muss es
412 kontrolliert werden, und wenn das die Frage ist, sehe ich nicht, dass wir das, was
413 wir uns vorgenommen haben, bis 2030 erreichen werden.

414

415 B: Ja, dafür sind sie in erster Linie gedacht, oder? Dass dies staatliche Ziele
416 sind? Letztendlich geht es um die Themen, ja, nun, ich weiß nicht, ob die Themen
417 sind, ja, aber die Themen werden immer noch angesprochen. Die Themen werden
418 immer noch umgesetzt, ja, Dekarbonisierung, sagte mein Kollege, oder es gibt
419 verschiedene Themen, die wir auch als Unternehmen umsetzen. Ja, vielleicht nicht
420 unter dem Deckmantel eines SDG, sondern als wesentliches Thema im Rahmen der
421 CSRD und wenn man eine Ebene tiefer geht, ja, und dann stellt man fest, dass es
422 bereits abgedeckt ist, d.h. die Themen selbst werden bereits umgesetzt und auch
423 behandelt und meiner Meinung nach auch berichtet. Ja, und wenn es um
424 Investitionsentscheidungen geht, schaut man bereits in diese Richtung, ja, man
425 schaut bereits darauf, wie konform man mit was ist, wenn es um Akquisitionen
426 oder so etwas geht. Ja, und dann ist man wieder bei den Themen und diese Themen
427 können natürlich auch in den SDG gefunden werden, aber vielleicht kommt man
428 nicht vom SDG und geht dann diesen Weg oder vielleicht geht man eine Ebene
429 tiefer über die CSRD, also was die CSRD wirklich gut gemacht hat, ist die
430 Wesentlichkeitsanalyse, ja, und das ist auch eine parallele Veränderung, also es ist
431 auch eine parallele Veränderung.

432

433 T: Wir sind fast am Ende. Haben Sie noch abschließende Gedanken?

434

435 B: Wir sollten in Kontakt bleiben. Sie müssen zuerst Ihre Dissertation
436 abschließen.

437

438 T: A, noch abschließende Gedanken?

439

440 A: Also was Sie am Anfang erwähnt haben, die Verbindung von Profit und
441 Nachhaltigkeit, die auch vom Vorstand und Aufsichtsrat gewünscht wird,
442 sozusagen, aber wo es wirklich schwierig wird, diese Brücke zu bauen. Wenn Sie
443 irgendwelche Werkzeuge oder so etwas haben, würde ich gerne davon hören. Wir
444 bekommen auch Feedback, dass die Wesentlichkeitsanalyse ein bisschen esoterisch
445 ist und vieles auf Bauchgefühl und Schätzung basiert. Und wir verwenden die
446 Skala nach bestem Wissen und Gewissen, aber das ist sicherlich nicht gut, weil es
447 immer subjektiv ist. Es braucht viele Interviews, um irgendwie so nah wie möglich
448 an die Wahrheit heranzukommen, aber ich denke, es wäre wirklich wichtig zu
449 zeigen, dass - und ich weiß, dass es bereits Ansätze dazu gibt - aber dass es mehr
450 Werkzeuge gibt, um der Nachhaltigkeitsabteilung zu zeigen, dass die Pflege
451 bestimmter Themen für das Unternehmen von Wert ist. Es ist einfach super
452 schwierig, das messbar zu machen.

453

454 T: Vielen Dank für das Interview. Ich werde die Aufnahme jetzt stoppen.

455

1 **APPENDIX 6: Translated English transcription of the guided interview with**
2 **DAX company #2**

3 T: Is everything clear? Great, first of all, thank you very much for
4 participating. I would like to briefly ask you to introduce your roles and
5 responsibilities at your company.

6

7 A: Sure. I lead the ESG program, essentially overseeing our activities. I am
8 also responsible for the double materiality analysis and for compiling all the
9 information for reporting. I work closely with my colleagues B on this. So, it has a
10 project component.

11

12 B: Yes. I am B at QIAGEN, and responsible for preparing the consolidated
13 financial statements. I also handle the technical component, working with
14 colleagues in the USA who manage the filing and other tasks. Additionally, I am
15 responsible for the report process globally, which includes sustainability reporting.
16 So, you have two core competencies here responsible for QIAGEN's sustainability
17 reporting.

18

19 T: Perfect, I have both sides directly.

20

21 B: Yes, exactly.

22

23 T: How is the term sustainability generally defined at your company?

24

25 A: Well, we align it with the double materiality analysis and use common
26 foundational definitions. We have activities in all three areas, not just focused on
27 the environment. Feel free to ask for more details if you need.

28

29 B: QIAGEN is not like a large industrial company such as thyssenkrupp,
30 which consumes a lot of resources and emits emissions. Our footprint is relatively
31 small.

32

33 T: Yes.

34

35 B: Therefore, it is challenging for us to highlight the sustainability component
36 and address the topic. We follow the material topics we report on and navigate
37 accordingly. It's different from companies like yours, which have a clear focus on
38 hydrogen, for example.

39

40 T: That's true, but I can tell you that we are also conducting a double
41 materiality analysis, and different topics emerge that we consider material and
42 build our ESG story around. It's not always primarily about green hydrogen; we
43 also deal with chlor-alkali, which is not as sustainable as green hydrogen. Now, I
44 come to the question you asked me at the beginning: Has the sustainability team
45 grown in the last 24 months?

46

47 A: No.

48

49 T: Oh, that's interesting.

50

51 B: We have been working on this since at least 2018, so we have grown
52 continuously, but not necessarily in the last 24 months. Initially, it was just a
53 reporting exercise due to regulatory requirements in the Netherlands. We have
54 more experience than some other DAX companies in Germany, but we haven't
55 grown in the last 24 months.

56

57 A: It depends on how you define it. If we include consultants, then yes.

58

59 B: Yes, that's true.

60

61 A: I started in 2021, and we have external consultants.

62

63 B: Yes, we source some support externally to handle recurring topics.

64

65 A: I can try to describe it. We have a matrix organization with representatives
66 from various departments, including Legal, Procurement, and Global
67 Environment, Health, and Safety. We also have contractors with limited contracts.
68 But that's not all, that's all matrix organization, but I do believe that they invested
69 a little more time during this period and also had to, because we started relatively
70 early with the materiality analysis, so when it comes to the time invested, which
71 has certainly increased, then we have a contractor, which is like an employee for
72 me. But it's also a contractor with a limited two-year contract. That is, this is an
73 assisted sustainability manager and then we brought in another person a year later,
74 I think, also as a contractor, who takes care of the scope 3 activities and shortly after
75 I started in 2021. I mean, that was in April 22, we hired an economic auditor and
76 that's a three-person team, which is already helping us a lot, so if that's how it
77 counts, then it's grown, but not if you just go purely on direct reports and full-time
78 employees.

79

80 T: OK, all right, now of course I'm very interested, because you say you've
81 invested more time in the whole topic of reporting, I assume because of the
82 regulations.

83

84 A: Yes.

85

86 T: I understand. Now, I'm curious, has the employer's attitude towards ESG
87 changed due to increased reporting requirements?

88

89 B: Yes, it has.

90

91 A: Yes, too.

92

93 A: It's not easy to answer. There is a conflict between financial aspects and
94 ESG topics. The ESG committee and the supervisory board have given it more

95 attention, and it is now seen differently in management. What you really observe
96 is the conflict of interest. On the one hand, there are the purely financial aspects,
97 which are also integral to corporate management. There's no getting around that
98 and on the other hand the ESG issues, which are sometimes contradictory. This is
99 sometimes really difficult, as my colleague said, it is a very important point to
100 locate the ESG team in the company beyond the ESG Committee, for example, to
101 locate the responsibility of the Supervisory Board, where the topic has really
102 received different attention. It was very difficult before, but now it's different. It is
103 also viewed differently by management. Issues are now also being taken into
104 account. Clearly, these are also financial targets. The Executive Board also has a
105 remuneration component that is directly linked to ESG targets, but the conflict is
106 always there.

107

108 B: Previously, it was just a compliance exercise, but now it is taken more
109 seriously.

110

111 A: There have been many changes, and we are moving towards equal footing
112 with financial reporting. There were also a lot of declarations of intent, a lot of
113 phrases, that has already changed significantly, yes, so that's where we are now,
114 also because we are also going all the way to the audit, for example, yes, and there
115 will also be equality at some point. With regard to financial reporting, which has a
116 completely different history at this point, yes, the financial figures are actually
117 reliable, yes, that's how we have it from auditors, for example, that's not yet the
118 case in on financial or sustainability reporting, but the way there is already paved.

119

120 T: Now you've just mentioned you mentioned profitability and sustainability
121 that is actually the perfect transition to the main questions and actually also to the
122 core topic of my thesis. How can we achieve this from an economic perspective to
123 meet the UN's Sustainable Development Goals by 2030? And 2030 is just around
124 the corner.

125

126 A: Yes.

127

128 B: Yes.

129

130 T: From my research, we are making measurable regressions globally.

131

132 B: Yes.

133

134 T: Of course, other components are also included, such as the company other
135 companies of course not just DAX companies, but I look specifically at companies
136 in Germany that are listed on the stock exchange and have to comply with certain
137 regulatory requirements. Are you familiar with the Sustainable Development
138 Goals?

139

140 A: Yes, of course, but quite honestly, that's an exercise in logic. Perhaps
141 everyone will say that our industry is highly regulated and, of course, with our
142 products, for example Access to Healthcare, we are, I'm already starting to
143 flounder, I think that is somehow, health, I think we are in the health SDG. I have
144 to look again exactly what it is called, but we have noticed what is minimal, how
145 we can contribute to it in a global context, but of course we have mapped it and are
146 also building it up transparently in our sustainability report.

147

148 T: Did you map your strategy to the SDG or vice versa?

149

150 A: We mapped our strategy to the SDG, not the other way around.

151

152 B: I also have to say that the SDG are not necessarily primarily intended for
153 private-sector companies, but the idea was, let's say, that there should be a
154 governmental, i.e., political approach, which is why the UN designed the SDG in
155 the first place.

156

157 A: Yes.

158

159 B: The government should lead by example, and companies can follow. Of
160 course, the SDG have to be exemplified, and that is actually a political task. If you
161 then take this seriously as a country and turn it into political guidelines, which in
162 turn also inspire the companies or all those involved to be compliant with them
163 and to contribute to them, but I mean the companies, like us, are of course trying
164 their best and at least trying to get somewhere via a mapping that you can perhaps
165 make yourself comparable with others at this point.

166

167 T: How did you select the SDG? There are 17 different great buzzwords, I
168 always say no poverty gender equality and so how did you choose them?

169

170 A: We made a mapping. We used a tool to map our activities to the SDG. It
171 was a collaborative effort within our corporate ESG team In principle, we all
172 answered where we think we contribute to which SDG and of course we looked at
173 all the SDG beforehand. It was nice because you could see relatively quickly where
174 we thought we were contributing and which topics we were contributing to, and
175 they then crystallized from that and it made total sense. We then also explained,
176 with the help of the projects that we initiated, why they fit in a certain area, so all
177 of this is also published in our sustainability report.

178

179 T: Who was involved?

180

181 A: Our corporate ESG team, including senior advisors and representatives
182 from various departments.

183

184 B: We mapped our strategic and operational goals to the SDG, not the other
185 way around.

186

187 T: I understand. Do you think the SDG are reliable or just a marketing tool?

188

189 B: It's a bit of both. Companies use them for marketing, but they also aim to
190 ensure sustainable development. So that was more my personal opinion.

191 Regardless of what we do at QIAGEN, these are also beautiful, colorful pictures.
192 You can kind of pin them to your shirt. It's very striking, but if you actually look at
193 which country or company has the SDG and what the agenda behind them is, it's a
194 lot of hot air. From a company perspective, it's more marketing. We define our
195 goals based on our business and then map them to the SDG.

196

197 T: There are also 167 sub-goals of the SDG. There are the major industrialized
198 countries, which of course submit voluntary reports or do not submit them because
199 they are voluntary, and our German government does not have all the SDG and
200 has not really defined any internal targets or measures that are sustainable.

201

202 B: Exactly, and that is what I denounced earlier, because that is exactly where
203 the company could start.

204

205 T: What do you mean?

206 B: So if, for example, the German government were to proceed with the goal
207 of implementing SDG X, then you could also pay into this and react as a company.
208 That's what's missing, so it's a weak instrument.

209

210 T: Other companies I have spoken to even say why we should accept the
211 German government's targets in quotation marks when we have defined
212 sustainability strategies and targets in our business, in our industry, and can make
213 a much greater contribution.

214

215 B: Also totally fair, but it's always easy to make excuses, because people are
216 always quick to say, yes, nice, but we have something completely different. But it
217 has to do with each other to a certain extent, it's quite good if you have an agenda,
218 a timetable and everyone involved can try to get involved somewhere or not.

219

220 T: Do you have the feeling that you would like more support from the federal
221 government?

222

223 B: Yes, it was just a description of what's going on. But if you were to take it
224 seriously, even in the federal government, you would have to have a clear agenda.
225 Then it would be easier to react to it and now everyone is doing their own thing. I
226 also dare to doubt that the SDG are mapped uniformly, because there are no criteria
227 that specify when you can achieve which goal and how. So it's very vague.

228

229 T: What does it mean for the goals and, above all, what measures do I have
230 as a company that contribute to this?

231

232 A: I have our sustainability report open now, but I don't have it in the slide
233 deck, where I have them all next to each other, I can open it in parallel, if you have
234 that, please show it to me, but I can also open it quickly. For example, Access to
235 Health. We have a Global Public Health Task Force and we have medical devices
236 for the diagnosis of tuberculosis. And then we have this Access to Health Case for
237 us material topic we can provide products in low and middle and countries, but it
238 is also a difficult topic, how we set it up internally compared to the normal business
239 I call it now and we then realized that, in good health and wellbeing. But it's not as
240 if we've turned around and looked at what's involved in good health and
241 wellbeing, what are the goals and what can we do? But I think it's also OK the other
242 way around, because we then come from our business, which is what we see. In
243 terms of regulation, for example, none of that fits our business at the moment, but
244 we're currently making a bit of an effort to comply with the regulations, but we can
245 see that it's geared towards other industries.

246

247 T: Which regulations?

248

249 A: CSRD. But I think it comes from the top from the SDG and it comes from
250 the bottom, so it doesn't all fit together properly. It's not one piece. Maybe you can't
251 expect that because the industry and the sectors are so different. But you have to
252 find your own way somehow.

253

254 T: You are the third company to say exactly that, that it doesn't fit and that
255 there are a lot of difficulties in somehow making it fit or reporting afterwards
256 because you don't know what to report.

257

258 A: Exactly.

259

260 T: Yes. The SDG aim to ensure sustainable development and future thinking.

261

262 A: Yes.

263

264 B: The [SDG] are suitable for this, but the CSRD is not suitable at all. Who
265 wants to nibble their way through it? But you can say and see how these more
266 marketing-driven instruments can perhaps be used better, because you can
267 probably get more people to contribute in some way.

268

269 T: What do you think is the biggest driver for sustainable development in the
270 economy?

271

272 A: Regulation, like the CSRD.

273

274 T: What is the biggest driver within a company?

275

276 A: CSRD.

277

278 T: Regulation?

279

280 A: Yes.

281

282 B: It depends on the industry. Consumer-driven industries may have
283 different drivers. It really depends on the sector. Where you come across

284 consumers who perhaps also make purchasing decisions dependent on it or
285 something like that is a different story. But other companies are strongly driven by
286 regulation, especially in the EU. And if you look at other regions, the USA or other
287 economic areas, it looks completely different again. There was a wave that once
288 swept through the country, but it has already subsided. Other issues come into play
289 again.

290

291 T: And if I take a look at the companies, what is the biggest driver of the
292 company's current development?

293

294 A: I've actually learned something, that we have a plastic reduction target. It
295 should come from what the customers want and it also partly comes from the fact
296 that we have a corporate plastic target. That actually came from complaints about
297 packaging waste. At least that's my information. And then the whole thing took on
298 even more of a path, because of the regulations. I published an article on our
299 website, so I'm also sure that without the regulator, it's a good thing that we have
300 the regulations and that we have to comply with them.

301

302 T: Ok.

303

304 B: Yes.

305

306 A: It remains to be seen whether regulation could bring us to this point in a
307 different way, but I think the fact that it is regulated helps the whole thing
308 significantly.

309

310 B: No, that's an issue that's also an important issue, plastic reduction, because
311 in some places you can't replace the plastic, because polypropylene is just has or do
312 you know better? But it's almost impossible to imagine diagnostics without it but
313 you don't have to pack it 23 more times in plastic bags.

314

315 A: Yes, for example.

316

317 T: Angelika, you mentioned something in the chat?

318

319 A: Yes, I shared our material topics and how we mapped them to the SDG.

320

321 T: Is that in your sustainability report, and that is yes, I have perhaps carried
322 out a frequency analysis against the background, so I looked at the sustainability
323 reports of various DAX companies and counted how often the SDG were
324 mentioned at all and that is very, very interesting, because the number is
325 decreasing.

326

327 B: Yes, we are now at five mentions in our 2023 sustainability report.

328

329 T: I couldn't include the 2023 report because it wasn't published yet.

330

331 B: Yes it was published later.

332

333 T: Other companies have also reduced SDG mentions, focusing more on
334 CSRD.

335

336 B: So it's a difficult thing and because it's just with the so somehow it's already
337 the case that we are driven by the fact that we have to apply the regulations, yes,
338 and have to be compliant and that's also what you present to the outside world and
339 the SDG are also a bit in opposition to that, so what do you do here is the SDG or
340 both?

341

342 T: Yes.

343

344 B: Yes, it becomes difficult somewhere along the line and then you take the
345 path of least resistance and perhaps only focus on the CSRD or something.

346

347 T: Yes, that was kind of the conclusion that was reached, CSRD will keep us
348 busy. We can't focus on SDG now, so we'd rather focus on CSRD.

349

350 B: Yes, exactly.

351

352 T: That was their extension. How do you see the future of the realization of
353 the SDG in the next 5 years, i.e. until 2030, if tomorrow were 2030? What would be
354 your conclusion?

355

356 A: Well, I think that we are all so distracted by the CSRD right now that we
357 will have this as a focus topic from the industry that falls under the CSRD for at
358 least the next two years. Whether even more will develop and even more will have
359 to be done and new laws will be introduced. It's interesting how focused you are
360 on the SDG. I think I just wanted to explain that I'm not at all concerned with it at
361 the moment because we have so many other things to do. We are currently focused
362 on CSRD compliance, which will occupy us for the next two years. We are not
363 strategically aligning with the SDG but rather focusing on our core business and
364 regulatory requirements.

365

366 T: Its my focus topic of the dissertation.

367

368 A: So it's perhaps a bit much, but the fact that we simply get our report set up
369 properly and that we also find out how we can decarbonize our value chain and so
370 on, that will of course all contribute in some way, but that's not strategic now. So
371 we don't take the S and then think strategically about how we can have the greatest
372 impact on certain SDG, but we think about them from our core business, which also
373 makes sense. And the regulation also requires sustainability, but the SDG are just
374 a mapping exercise to communicate to the outside world, so I'm not sure whether
375 it's the same in other industries, so it should be more national. In my opinion, it
376 needs to be controlled and, if that is the question, I don't see that we will achieve
377 what we have set out to do by 2030.

378

379 B: Yes, that's what they're primarily intended for, right, that these are state
380 objectives? Ultimately, it's about the issues, yes, well, I don't know whether the
381 issues are, yes, but the issues are still being addressed. The topics are still being
382 implemented, yes, decarbonization, my colleague said, or there are various topics
383 that we are also implementing as a company. Yes, just perhaps not under the guise
384 of an SDG, but as a material topic within the framework of CSRD and if you go
385 down a level, yes, and then you find that it is already covered, i.e. the topics
386 themselves are already being implemented and also dealt with and, in my opinion,
387 also reported. Yes, and when it comes to investment decisions, you're already
388 looking in that direction, you're already looking at how compliant you are with
389 what when it comes to acquisitions or something like that. Yes, and then you're
390 back in the topics and these topics can of course also be found in the SDG, but
391 maybe you don't come from the SDG and then go down that path or maybe you go
392 one level deeper via CSRD, so what the CSRD has done really well is the materiality
393 analysis, yes, and that's also a parallel change, so it's also a parallel change.

394

395 T: We are almost at the end. Do you have any final thoughts?

396

397 B: We should stay in touch. You need to complete your thesis first.

398

399 T: A, any final thoughts?

400

401 A: So what you mentioned at the beginning, the marriage of profit and
402 sustainability, which is also desired by the Management Board and the Supervisory
403 Board, so to speak, but where it becomes really difficult to build this bridge. If you
404 have any tools or anything like that, I would be interested to hear about them. We
405 also get feedback that materiality analysis is a bit esoteric, and a lot of it is based on
406 gut feeling and estimation. And we use the scale to the best of our knowledge and
407 belief, but that's certainly not good because it's always subjective. It takes a lot of
408 interviews to somehow get as close to the truth as possible, but I think it would be
409 really important to show that - and I know there are already approaches to this -
410 but that there are more tools to show the sustainability department that taking care

411 of certain issues is of value to the company. It's just super difficult to make that
412 measurable.

413

414 T: Thank you for the interview. I will stop the recording now.

1 **APPENDIX 7: Original German transcription of the guided interview with DAX**
2 **company #3**

3

4 T: Jetzt haben wir es auf Deutsch. Dann lass uns anfangen, vielen Dank
5 nochmal für deine Zeit. Ich möchte dir ein paar einleitende Fragen stellen, um dich
6 besser kennenzulernen und auch deine Rolle. Könntest du kurz deine Rolle und
7 Verantwortlichkeiten beschreiben?

8

9 A: Los geht es. Sicher, A ist seit 2017 für Nachhaltigkeit oder das Thema
10 Nachhaltigkeit verantwortlich. In den ersten 3 Jahren war ich unabhängig oder als
11 Einzelperson in der Abteilung Unternehmenskommunikation als Stabsstelle tätig.
12 Im Jahr 2020 gibt es einen eigenen Bereich, die Nachhaltigkeitsstrategie, in dem ich
13 Teammitglied bin. In diesem Team sind jetzt 5 Personen, die sich mit dem Thema
14 Nachhaltigkeit beschäftigen. Wir sehen uns tatsächlich als Vermittler für das
15 Thema. Mit anderen Worten, wir übernehmen die Themen, die von außen
16 kommen, wie z.B. Regulierung. Aber auch gesellschaftliche Trends und Ähnliches
17 und vermitteln sie ins Unternehmen, in die verschiedenen Fachbereiche,
18 transportieren sie oder übertragen sie in Geschäftsstrategien in der
19 Nachhaltigkeitsstrategie, das ist ein Teil und der zweite Teil ist, alles zu sammeln,
20 was wir im Unternehmen zum Thema Nachhaltigkeit tun und dann nach außen zu
21 transportieren. Durch Kommunikation, Instrumente, den Jahresbericht, den
22 Nachhaltigkeitsbericht und so weiter, also die klassische Kommunikationsrolle
23 dafür und ansonsten haben wir die strategische Überbau, also unsere Abteilung
24 heißt auch Nachhaltigkeitsstrategie. Wir sind nicht nur für die
25 Nachhaltigkeitsstrategie verantwortlich, sondern auch für den strategischen
26 Prozess, also etwas wie vielleicht Unternehmensführung oder so etwas, oder
27 Unternehmensstrategie in anderen Bereichen oder Unternehmen, und so
28 kombinieren wir beide Themen und wir sind die Schnittstelle für diesen Überbau,
29 um all dies in strategische Komponenten zu gießen.

30 T: Du hast bereits eine weitere einleitende Frage vorweggenommen, denn ich
31 wollte dich fragen, ob es eine eigene Abteilung gibt und wie sie gewachsen ist, aber
32 was du mir bereits erzählt hast, interessiert mich jetzt, wenn du sagst, du warst

33 zuerst eine One-Man-Show und jetzt bist du ein Team von fünf, wie hat sich die
34 Einstellung zu ESG bei deinem jetzigen Arbeitgeber verändert?

35

36 A: Ja.

37

38 T: Im letzten Jahr oder in den letzten 3 Jahren? Wie kannst du das
39 einschätzen?

40

41 A: Nun, es ist eigentlich sehr stark von der Regulierung getrieben, also ist es
42 kein Zufall, dass ich 2017 eingestellt wurde. Damals kam das CSR RUG, die erste
43 verpflichtende Berichterstattung im Jahresbericht. Deshalb wurde es zum ersten
44 Mal auf eine systemische oder strategische Grundlage gestellt. Im Jahr 2020 wurde
45 immer deutlicher, oder eher um 2020 herum wurde immer deutlicher, dass es einen
46 viel stärkeren Fokus auf diese regulatorischen Ebenen gab und dass wir einfach
47 eine Verantwortung für das Thema klimaneutraler Gebäudebestand hatten und
48 dass viel mehr getan werden musste, weil an vielen Stellen immer mehr
49 Regulierung aufkam, immer mehr Gesetze kamen und dies waren tatsächlich die
50 Haupttreiber, natürlich auch für das Unternehmen. Wie man es vielleicht ein
51 bisschen größer aufbauen kann, auf eine andere Grundlage stellen kann, das fehlt
52 an vielen Stellen noch in Bezug auf Richtlinien und Ähnliches, die dann noch
53 aufgebaut werden mussten. Also haben wir 2020 die Gelegenheit genutzt, dies als
54 eigene Abteilung einzurichten. Wir haben mit viel Regulierung begonnen, viele
55 Richtlinien zu verschiedenen Governance-Themen insbesondere, und dann
56 versucht, es ein bisschen mehr auf die strategische systemische Ebene zu schieben.
57 Es gab bereits vorher alle möglichen Vernetzungs- und Verankerungspunkte, also
58 hatten wir bereits Umweltindikatoren im Umweltcontrolling, wir hatten bereits
59 HR-Indikatoren im HR-Controlling, also war es nicht so, dass es vorher völlig neu
60 war, aber natürlich gab es ihm einen anderen Antrieb.

61

62 T: Und du sagst, du konzentrierst dich seit 2017 wirklich auf Nachhaltigkeit?
63 Das interessiert mich natürlich jetzt. Ist Nachhaltigkeit als Wert in der
64 Unternehmenskultur verankert? Und wie definierst du eigentlich Nachhaltigkeit,
65 weil du gesagt hast, dass es sehr regulatorisch geprägt ist.

66

67 A: Ja, man kann es tatsächlich schichten. Es ist im Leitbild verankert, es ist in
68 der Unternehmensstrategie verankert, es ist tatsächlich sehr, sehr stark in der
69 externen Kommunikation verankert, ja, also im Grunde genommen hat alles, was
70 in Bezug auf externe Kommunikation passiert, irgendeinen Bezug zur
71 Nachhaltigkeit. Nachhaltigkeit wird in einigen Bereichen des Unternehmens
72 praktiziert. Es gibt einzelne Abteilungen, die sich auch in diese Richtung bewegen.
73 Ob es zum Beispiel klimaneutrale Gebäude sind oder Ähnliches, wir haben auch in
74 diesem Bereich viel getan. Insbesondere in Richtung Investitionen in
75 klimaneutralen Gebäudebestand, also die Kollegen, die in diesen Abteilungen sind
76 und sich darum kümmern. Sie sind in diesen Bereichen sehr aktiv, wir haben eine
77 große Abteilung für erneuerbare Energien und all diese Dinge eingerichtet. Es gibt
78 also tatsächlich Geschäftsmodelle, es gibt Veränderungen in Geschäftsmodellen,
79 die sich in diese Richtung bewegen, und es gibt andere Bereiche, die völlig ignoriert
80 werden. Ja, sie interessieren sich einfach nicht dafür, es ist ihnen egal, wenn sie
81 nicht müssen und wenn man sie nicht jagt, dann passiert nichts. Und praktisch
82 gesehen sind wir ein dezentrales Unternehmen. Was das praktische Tun betrifft, ja,
83 es gibt eine zentrale Funktion, aber im Prinzip passiert das Mietgeschäft vor Ort
84 und es wird auch von den Leuten geregelt, die zufällig vor Ort aktiv sind und sie
85 müssen selbst entscheiden, ob sie in diese Richtung investieren oder etwas
86 Nachhaltiges tun wollen oder nicht. Es gibt noch nicht so viele Richtlinien von
87 zentraler Seite.

88

89 T: Ok, lass uns zum ganzen Thema der Sustainable Development Goals
90 übergehen, die 2015 von den Vereinten Nationen nach den Millennial
91 Development Goals entwickelt wurden, von 10 Zielen auf 17 Ziele, und die erste
92 Frage wäre, kennst du diese Ziele überhaupt?

93

94 A: Ich kenne sie, ich habe sie alle gelesen, ich habe sogar alle 169 Unterziele
95 gelesen.

96

97 T: Also beantwortest du sogar meine zweite Frage, ob du die Unterziele
98 kennst, brilliant.

99

100 A: Ja, ich kenne die Unterziele, ich kenne auch die Differenzierung zwischen
101 den Zielen zwischen Zielgruppen in Richtung Unternehmen und Städte oder sogar
102 Länder, ja, also gibt es verschiedene Zielgruppen, die man herunterziehen kann
103 und nicht alle Ziele sind für alle Zielgruppen geeignet.

104

105 T: Genau und jetzt möchte ich nach deiner persönlichen Meinung fragen, was
106 denkst du? Wie zuverlässig sind die SDG für börsennotierte Unternehmen in
107 Deutschland?

108

109 A: Nun, niemand kümmert sich überhaupt darum. Es steht auf dem Papier
110 und niemand hat es sich angesehen, außer denen, die es geschrieben haben, oder
111 die darauf verweisen, in einigen Texten denke ich, dass sie überhaupt keine
112 Wirkung haben.

113

114 T: Dies spiegelt sich auch im Verhalten gegenüber den SDG in den letzten 3
115 Jahren wider, denn ich habe mir die letzten 3 Nachhaltigkeitsberichte angesehen
116 und eine Frequenzanalyse durchgeführt, wie oft die SDG erwähnt wurden. Jetzt
117 sind es nur noch 4 Mal.

118

119 A: Das liegt einfach daran, dass wir sie einfach aktualisiert haben, es ist seit
120 20 Jahren nichts passiert, sie stehen auf einer Seite und seitdem ist nichts passiert.
121 Ich denke, wir haben sie einmal aktualisiert, weil wir nicht mehr bis 2050 einen
122 klimaneutralen Gebäudebestand erreichen wollen, sondern bis 2045. Das mussten
123 wir irgendwann anpassen, sonst wäre es aufgefallen, aber ansonsten ist nichts
124 passiert.

125

126 T: Und keine Überlegungen oder Maßnahmen monetärer Art zur Umsetzung
127 der SDG?

128

129 A: Also kein Bezug zu den SDG. Wenn wir jetzt das Beispiel der 5
130 "Geschlechtergleichheit" nehmen, dann haben wir eine Leistungskennzahl oder

131 eine managementrelevante Kennzahl in unserem Vergütungssystem für den
132 Vorstand und das Top-Management, die sich auf Frauen in Führungspositionen
133 bezieht. Dies hat jedoch nichts mit den SDG zu tun, sondern ist aus einer anderen
134 Motivation entstanden.

135

136 T: Das Gesetz.

137

138 A: Ja, nicht unbedingt wegen des Gesetzes, weil wir gesagt hatten, dass die
139 Einführung eines Vergütungssystems mit Bezug zu Nachhaltigkeitszielen eine
140 andere Motivation war und es dann mehr darum ging, zu schauen, was wir
141 eigentlich brauchen, um die 3 Bereiche E, S und G sinnvoll abzudecken? Und was
142 sind eigentlich auch managementrelevante Unternehmensparameter, die wirklich
143 wichtig für das Unternehmen sind? Und dann kommt man schnell zu dem Schluss,
144 dass es in erster Linie klimaneutrale Bestandsgebäude sind, dass es Neubauten
145 sind, dass es barrierefreie Teilmodernisierungen oder Umbauten für ältere
146 Menschen sind. Dann gibt es zwei personalbezogene Themen, eines ist die
147 Mitarbeiterzufriedenheit und das andere ist die Geschlechtergleichheit, und dann
148 sind wir schnell bei diesen Indikatoren angekommen. Aber das hat keine
149 Rückkopplung zu einer Idee der SDG, obwohl ich denke, dass wir jetzt zu einem
150 sehr spannenden Punkt kommen. Ich meine, die SDG sind auch sehr global und
151 allgemein und viele von ihnen spiegeln sich auch in normalen oder üblichen
152 Zielsystemen oder Nachhaltigkeitsverständnissen wider und es ist eine Frage, ob
153 man die Übung machen möchte, es darauf zu beziehen oder ob man es einfach
154 weglässt. Man kann es verfolgen, ohne es explizit zu benennen, meine ich.

155

156 T: Verstehe, warst du am Prozess der Auswahl der SDG beteiligt?

157

158 A: Ja, ich habe es gesteuert, um genau zu sein.

159

160 T: Kannst du mir mehr darüber erzählen, wie du das gemacht hast?

161

162 A: Eigentlich war das die Motivation damals. Wir sind damals auch Mitglied
163 des UN Global Compact geworden, das war genau in diesem Jahr, als es sehr
164 darum ging, viel Regulierung einzubringen und auch formale Prozesse
165 abzubilden. Wir haben erkannt, dass dies die grundlegende Motivation hinter den
166 Bewertungsergebnissen war. Der UN Global Compact hat nirgendwo im
167 Unternehmen Widerhall gefunden, ebenso wenig wie die Charta der Vielfalt oder
168 Ähnliches, keine Themen, die für das Unternehmen irgendeine Relevanz gehabt
169 hätten, sondern nur aus dem Grund Tick The Box. Man kann sie abhaken, sie
170 wurden in Bewertungen gefragt, wir nehmen sie mit und wir haben gerade eine
171 Wesentlichkeitsanalyse aktualisiert. Der grundlegende Trend war bereits klar, dass
172 wir gesagt haben, wir werden unsere Nachhaltigkeitsstrategie nicht umwerfen, nur
173 weil SDG hinzugekommen sind. Wir versuchen jedoch, die SDG darauf
174 abzubilden, wie wahrscheinlich eine unglaubliche Anzahl von Unternehmen
175 damals, die bereits eine Strategie und Ziele hatten. Die Grundidee ist eigentlich
176 eine andere. Man richtet seine Strategie an diesen Zielen aus und baut die Strategie
177 auf. Aber diejenigen, die bereits eine Strategie hatten, taten dies. Also kenne ich
178 kaum jemanden, der dies wirklich als Leitfaden verwendet hätte und gesagt hätte,
179 ja, wir nehmen die SDG und bauen unsere Strategie darum herum, weil das
180 sozusagen das übergeordnete Ziel ist, aber wir nehmen unsere Strategie und
181 unsere Ziele und sehen, welche SDG dazu passen und so haben wir es gemacht.
182 Dann haben wir im Rahmen der großen Wesentlichkeitsanalyse-Aktualisierung im
183 Jahr 2020 die SDG noch einmal genauer betrachtet und sie im Rahmen dieser
184 Wesentlichkeitsanalyse abgebildet oder anders ausgedrückt, einen groß angelegten
185 Stakeholder-Prozess genutzt.

186

187 T: Du sagst klar, dass Regulierung und Bewertungen tatsächlich der Treiber
188 waren. Hast du das Gefühl, dass es andere politische Maßnahmen geben sollte, um
189 sicherzustellen, dass die SDG unterstützt werden, oder denkst du, es wäre besser,
190 sich zum Beispiel auf die CSRD zu konzentrieren?

191

192 A: Nun, ich denke eigentlich nicht, dass die SDG besonders relevant für das
193 Tagesgeschäft sind, im Sinne von, dass man sich unbedingt an ihnen orientieren
194 oder sie verfolgen muss, weil ich denke, dass die Überschneidungen ohnehin groß
195 genug sind, wenn ich eine saubere Qualitätsanalyse im Unternehmen mache, die

196 sich auf Nachhaltigkeit bezieht. Spätestens mit der CSRD für eine große Anzahl
197 von Unternehmen jetzt auch verpflichtend in Richtung doppelter Wesentlichkeit,
198 wo es dann für das Unternehmen spannend wird zu sehen, was meine
199 Möglichkeiten, meine Hebel eigentlich sind und wo ich auch Einfluss nehmen
200 kann. Dann finde ich es nicht so notwendig, tatsächlich finde ich es persönlich nicht
201 so notwendig, diese Verbindung zu den SDG herzustellen oder sich an ihnen zu
202 orientieren, wenn die Ziele, die man sich seit dem Unternehmen gesetzt hat, die
203 zur Wesentlichkeit passen, auch einfach für das Unternehmen geeignet sind und
204 ich glaube tatsächlich, dass viele dieser Ziele dann automatisch kongruent oder fast
205 kongruent sind. Ich denke, die Schwierigkeit bei den SDG an vielen Stellen ist auch,
206 wenn man sich die Unterziele ansieht. Schlagworte klingen gut,
207 Geschlechtergleichheit oder bezahlbare saubere Energie. Man kann das einfach
208 irgendwie oben drauf schreiben, aber wenn man sich ansieht, was die Unterziele
209 tatsächlich bedeuten, ist es oft nicht so einfach für Unternehmen, sich spezifisch an
210 diesen Zielen zu orientieren. Ich denke jedoch nicht, dass es für den sozialen
211 Wandel überhaupt wichtig ist, ob man sich auf ein bestimmtes Ziel konzentriert
212 oder nicht. Wenn ich etwas finde, das viel besser für das Unternehmen geeignet ist
213 und die Chancen des Unternehmens besser anspricht, nehme ich etwas, das
214 vielleicht nicht mit dem SDG in Bezug auf die Formulierung übereinstimmt. Aber
215 wenn die Grundidee in die gleiche Richtung geht, ist es mir egal, ob es als SDG
216 bezeichnet werden kann oder nicht - ja, dann geht es definitiv in die richtige
217 Richtung für die Gesellschaft.

218

219 T: Und es wird deutlich, dass die SDG sehr geeignet für die Gesellschaft und
220 die Länderebene sind, aber weniger für Unternehmen.

221

222 A: Genau.

223

224 T: Und hast du den Eindruck, dass es auch zu wenig Anleitung vom Staat
225 gibt? Wie Unternehmen sich an den SDG beteiligen können?

226

227 A: Nun, ich kenne tatsächlich keine, also ja, es gibt zu wenig Anleitung. Im
228 Prinzip sollte es in alle CSR-Strategien oder Nachhaltigkeitsstrategien des Landes

229 einfließen, ja, wenn ich dies als Land ernst nehme. Ich muss zugeben, dass ich den
230 aktuellen Stand der Nachhaltigkeitsstrategie der Bundesrepublik Deutschland
231 nicht wirklich kenne, ob und wie alle SDG richtig abgebildet sind, aber der
232 Transport zu dem, was sozusagen Anforderungen an Unternehmen sind. Das wäre
233 eine politische Forderung, die dann mit dem Motto verknüpft werden müsste:
234 Schaut, das sind unsere Nachhaltigkeitsziele und das ist unsere
235 Nachhaltigkeitsstrategie für das Land. Jetzt, liebe Unternehmen, lasst uns sehen,
236 was wir von euch brauchen und es wäre großartig, wenn ihr das schaffen könntet.
237 Also denke ich, dass in gewisser Hinsicht der politische Rahmen und die Ideen
238 funktionieren, also denke ich, dass der Nationale Aktionsplan für Menschenrechte
239 zum Beispiel ein sehr gutes Beispiel dafür ist, wie Politiker in einem sehr
240 transparenten, sehr guten, offenen und langen Prozess gesagt haben, dass dies das
241 ist, was wir wollen, dies ist unsere Haltung und Meinung als Land und wenn ihr
242 als Unternehmen das nicht schafft, dann machen wir ein Gesetz daraus. Es ist
243 großartig, nun, es passt vorne und hinten, alles wurde richtig gemacht, aber es fehlt
244 einfach in Bezug auf die SDG in der großen, übergeordneten Strategie oder im
245 größeren Bild.

246

247 T: Ja, ich verstehe. Ich hatte gerade einen Gedanken, es gibt einen
248 Fortschrittsbericht, den die Länder jedes Jahr einreichen müssen, aber er ist
249 freiwillig. Wenige Länder, hauptsächlich Industrieländer, tun es. Deutschland ist
250 eines davon, aber viele Länder tun es nicht. Dies ist der Unterschied zwischen
251 freiwillig und verpflichtend, genau wie du gesagt hast. Es gab einen Aktionsplan,
252 und wenige Unternehmen hielten sich daran. Dann wurde es zu einem Gesetz, das
253 jetzt viele verpflichtet. Denkst du, es wäre anders gewesen, wenn die SDG
254 verpflichtend gewesen wären?

255

256 A: Natürlich, definitiv. Wenn es einen übergreifenden regulatorischen
257 Rahmen gegeben hätte, der ineinandergreift, zum Beispiel, wenn die SDG und die
258 CSRD darauf Bezug genommen hätten, dann ja, hätte es anders funktioniert. Aber
259 ich denke, es ist ein gutes Beispiel, wenn man sich die ESRS-Standards ansieht, die
260 daraus entwickelt wurden. Ich finde keinen Bezug zu den SDG, wenn man sich die
261 lange Liste ansieht, die Unternehmen betrachten sollen. Als Mindestthemen für
262 Nachhaltigkeit in den jeweiligen Unterstandards im thematischen Standard findet

263 man nicht die Formulierung, die in den SDG steht. Das wäre eine gute Gelegenheit
264 gewesen, die Dinge zu verknüpfen, aber sie haben es nicht getan.

265

266 T: Wie GRI mit ESRS verknüpft wurde.

267

268 A: Ja.

269

270 T: Danke. Ich habe noch ein paar Fragen zur Branche. Kannst du mir bitte
271 sagen, in welcher Branche dein Unternehmen tätig ist?

272

273 A: Wohnungsbau.

274

275 T: Was denkst du, sind die wichtigsten Trends oder Innovationen im
276 Wohnungsbau oder Bauwesen, die den Fortschritt bei der Erreichung der SDG
277 vorantreiben könnten? Siehst du da eine Verbindung?

278

279 A: Oh, sehr komplizierter Ansatz. Ich glaube schon, dass im Bauwesen viel
280 möglich ist, wenn es um Innovationen zur Erreichung der SDG geht, wie
281 bezahlbare und erneuerbare Energie oder neue erneuerbare Unternehmen. Auch
282 für SDG 13 zum Klimaschutz gibt es viele Innovationsmöglichkeiten für unsere
283 Branche. Im Mietgeschäft selbst ist es etwas schwieriger. Wir haben explizit SDG 1,
284 keine Armut, nicht aufgenommen, was interessant ist, weil man viel darüber
285 diskutieren kann, Wohnen als Menschenrecht zu sehen. Man kann es tatsächlich
286 mit keine Armut verknüpfen und sehen, wie man es kombinieren kann. Wir haben
287 dies explizit lange diskutiert, ich erinnere mich im Jahr 2020, dass wir es nicht
288 aufgenommen haben. Mittlerweile könnte sich dies ändern oder zu einem anderen
289 Ergebnis führen, weil wir viel gegen Obdachlosigkeit tun. Also könnte es jetzt eine
290 andere Meinung und Haltung dazu geben. Aber ja, ich glaube schon, dass es
291 ziemlich gute Innovationsmöglichkeiten in unserer Branche für einzelne Standards
292 oder Ziele gibt, aber mehr technisch als sozial oder Governance-Innovationen, die
293 ich in diesem Zusammenhang für die Ziele nicht so machbar halte.

294

295 T: Und bei der technischen Umsetzung gehe ich stark davon aus, dass
296 Innovationsinvestitionen notwendig sind, richtig?

297

298 A: Für Wohnungsbau oder Gebäude sind immer viele Investitionen
299 notwendig. Das ist genau der Punkt, ja.

300

301 T: Wie sieht dein Unternehmen Investitionen in Nachhaltigkeit?

302

303 A: Nicht aus Altruismus oder einer Idee, was für ein kapitalmarktorientiertes
304 Unternehmen ziemlich schwierig und kompliziert zu vermitteln ist, sondern in
305 Kombination mit Investitionen in das Produkt, also das Gebäude. Vor etwa 2 oder
306 3 Jahren haben wir unser eigenes Klimainvestitionstool implementiert. Zuvor war
307 die Investitionsentscheidung für die Gebäudemodernisierung, also wo wir das
308 Haus energetisch angehen, rein wirtschaftlich getrieben. Wo können wir die meiste
309 neue Miete bekommen? Und tatsächlich war dies vor 2 oder 3 Jahren ein
310 Umdenken, weil wir jetzt die sozialen und ökologischen Aspekte neben dem
311 wirtschaftlichen Aspekt in einem Dreieck betrachten. Dieses Tool, das wir
312 technisch implementiert haben, trifft jetzt Investitionsentscheidungen zumindest
313 auch unter der Prämisse, auf unserem Klimapfad zu bleiben, wenn wir es auf diese
314 oder jene Weise angehen. Welche Energiemaßnahme ist hier sinnvoll? Und
315 überfordert es die Mieter nicht mit zu viel Umlage oder Ähnlichem? Es ist also
316 etwas delikater geworden, und es wurden mehr Dinge eingebaut, sodass sie Hand
317 in Hand gehen, aber in vielen Dingen ist es immer noch nicht der Fall.

318

319 T: Und eine letzte Frage dazu, Sie haben jetzt einige Berufserfahrung, wie
320 sehen Sie die Beziehung zwischen Rentabilität und Nachhaltigkeit? Hat sich das in
321 den letzten Jahren geändert? Sagen wir in den letzten 10 Jahren?

322

323 A: Ja, es hat sich sicherlich geändert, nun, anders. Rentabilität ist immer noch
324 das Kernthema, und es gibt keine Änderung der Erreichungsschwellen oder
325 Hürden im Unternehmen. Für die einzelnen Maßnahmen muss man fairerweise
326 sagen, dass es tatsächlich keine Konsequenzen zum Thema wirtschaftliche Rendite
327 gibt. Es gibt jedoch mehr Sichtbarkeit für Chancen in nachhaltigen

328 Geschäftsprozessen oder nachhaltigen Geschäftsinvestitionen. Das bedeutet, dass
329 die Verknüpfung normaler Renditeerwartungen mit beispielsweise
330 Energiemodernisierung, dem Ausbau erneuerbarer Energien, der Förderung von
331 Frauen in Führungspositionen, aber auch in MINT-Fächern bei uns, alle
332 Verbindungen mit der wirtschaftlichen Wirkung und wirtschaftlichen Rendite
333 haben. Mittlerweile gehen sie ziemlich gut Hand in Hand. Ich denke, es ist nicht
334 der intrinsische Antrieb des Unternehmens, nachhaltiger zu sein, aber ich glaube,
335 die Welt hat sich so verändert, dass es ziemlich gut automatisch funktioniert. Ein
336 signifikanter Fachkräftemangel in unserer Branche wäre fatal, wenn wir nicht
337 irgendwie in die MINT-Förderung gehen würden. Wir brauchen Handwerker und
338 Handwerkerinnen, und das Gleiche gilt für Investitionen in Energie. Auch die
339 damit verbundenen regulatorischen Risiken, insbesondere die physischen
340 Klimarisiken, die entstehen, brauchen Antworten, und das sind Investitionen, aber
341 sie sind langfristige Investitionen in die Anlagensicherheit bei uns. Es ist nicht so
342 sehr, dass es gut ist, dass wir das jetzt tun, aber es passt sehr gut zur Regulierung.
343 Sehr risikogetrieben, d.h. Risikovermeidungsstrategien.

344

345 T: Wir kommen jetzt zu den letzten Fragen dieses Interviews, da wir bereits
346 über Risiken und die Zukunft sprechen. Was denken Sie, ist der größte Treiber
347 speziell für die SDG in unserer Wirtschaft?

348

349 A: Was meinen Sie mit Treibern für die SDG, wie sie sich ändern oder wie sie
350 gesehen werden, oder was meinen Sie?

351

352 T: Wer kann sie am besten umsetzen, ob es ein Unternehmen ist, die
353 Menschen im Unternehmen oder vielleicht eine neue Technologie.

354

355 A: Ich glaube nicht, dass es wirklich in einem Zielkonstrukt oder
356 Zielverständnis bleibt, sondern eher ein konzeptioneller Rahmen ist. Die SDG
357 geben eine Haltung und eine Richtung vor. Es ist nicht so wichtig, ob ein
358 spezifisches Ziel erreicht wird oder nicht, aber wenn sich eine Gesellschaft im
359 Rahmen dieser 169 Unterziele entwickelt, wird sie sich definitiv in die richtige
360 Richtung entwickeln, unabhängig davon, ob ein Ziel spezifisch erreicht wird. Und

361 die Treiber dafür sind die Menschen dahinter. Ja. Man muss es wollen, wenn man
362 diese Haltung will. Wie gesagt, der Grad der Zielerreichung ist zunächst sekundär,
363 denke ich, aber es geht definitiv in die richtige Richtung, und ich glaube nicht, dass
364 Technologien allein es schaffen werden, das passt ehrlich gesagt nicht zum
365 Haltungsthema. Ich glaube, Technologien können in einzelnen Sektoren und
366 Themen viel erreichen, insbesondere hier SDG 7 erneuerbare Energien oder auch
367 Investitionen hier Nummer 8 Investitionen in Infrastruktur, nein 9 ich glaube es ist
368 9 können viel erreichen, aber das wird uns nicht davon abhalten, inhaltlich steil in
369 diese Richtung zu gehen.

370

371 T: Aber ich nehme mit, dass es eigentlich nicht so relevant ist.

372

373 A: Dann habe ich mich falsch ausgedrückt, Entschuldigung, es ist relevant,
374 dass sie existieren, weil sie einen Handlungsrahmen oder eine Vision der Richtung
375 bieten, in die sich die Gesellschaft entwickeln kann oder sollte, und das ist wichtig,
376 weil es nicht so viele übergeordnete Visionen gibt.

377

378 T: Mein Punkt war ein anderer, nämlich dass es wichtig ist, dass
379 börsennotierte große Unternehmen überhaupt eine Nachhaltigkeitsstrategie haben
380 und, wie Sie zu Beginn schön gesagt haben, die SDG darauf abzubilden, weil eine
381 Strategie idealerweise Maßnahmen und Ziele hat, die erreicht werden können,
382 realistisch sind und der Gesellschaft großen Mehrwert bieten können, sei es
383 Technologien, Geschlechtergleichheit oder andere Dinge.

384

385 A: Absolut. Ich meine auch wirklich, was ich vorher gesagt habe, dass der
386 Kern die eigene Wesentlichkeitsanalyse des Unternehmens ist, tatsächlich für ein
387 Unternehmen, also wenn ein Unternehmen es ernst nimmt, eine wirklich ernsthafte
388 Wesentlichkeitsanalyse durchzuführen, um zu sehen, was unsere wesentlichen
389 Nachhaltigkeitsthemen sind und nicht vorgeformt hineingehen und sagen, ja, es
390 passt irgendwie. Man muss es nicht übertreiben wie die CSRD oder die ESRS. Das
391 ist auch ein bisschen übertrieben, denke ich, aber grundsätzlich, diesen
392 Denkprozess zu machen, auch warum ich es sehr gut finde, dass die doppelte
393 Wesentlichkeit in den ESRS durchgesetzt wurde, einfach um diesen Denkprozess

394 ins Unternehmen zu bringen, unsere Auswirkungen auf die Umwelt, die
395 Gesellschaft und die Menschen ist einfach ein sehr wichtiger Aspekt. Wenn ich eine
396 solche Strategie aufbaue und zusammen denke, dann kann nicht viel schiefgehen.
397

398 T: Gibt es abschließende Gedanken oder etwas, das Sie teilen möchten? Oder
399 vielleicht irgendwelche Hindernisse, denen Sie in Ihrer täglichen Arbeit begegnen?
400

401 A: Ich bin gespannt, wie der Folgeprozess aussehen wird, weil 2030 sehr nah
402 ist. Wir sind jetzt im Jahr 2024, ich weiß nicht einmal, wann die SDG-Diskussion
403 virulent wurde. Beim Ersetzen der Millennium-Ziele, wie weit die Millennium-
404 Ziele damals entfernt waren. Jetzt musste ich selbst nachschauen, ich kann es nicht
405 aus dem Stegreif sagen. Ich könnte mir vorstellen, dass relativ bald ein Bedarf an
406 einem Prozess oder zumindest einem Kick-off für einen solchen Prozess bestehen
407 wird, um zu sehen, was wir tatsächlich damit machen. Nach 2030 habe ich keine
408 Vision, was passieren wird und wer was tun wird. Ich finde auch, dass die
409 Grundhaltung derzeit nicht so sehr in diese Richtung geht, in der Gesellschaft oder
410 den Gesellschaften zu schauen.

411

412 T: Ich habe dies im theoretischen Teil meiner Doktorarbeit recherchiert, dass
413 wir Rückschritte machen. Besonders seit der Corona-Krise, weil völlig andere
414 globale Risiken auf uns zugekommen sind, und der Schutz der Umwelt und der
415 Gesellschaft tatsächlich in den Hintergrund getreten ist.

416

417 A: Ja, das neue EU-Programm der neuen EU-Regierung für die nächsten 5
418 Jahre, ein Papier wurde bereits mit der groben Agenda dessen, was darin steht,
419 veröffentlicht. Es nimmt den Green Deal nicht zurück, sondern stellt ihn noch
420 stärker in ein anderes Feld, das wirtschaftliche Feld. Es ist bereits relativ klar,
421 wohin die Richtung für Europa in den nächsten 5 Jahren geht, und dann ist es 29.
422 Dann sind wir kurz vor dem Ende der Erreichbarkeit der SDG, also wenn wir jetzt
423 sehr stark auf den wirtschaftlichen Aspekt bei der Erreichung grüner Ziele in den
424 nächsten 5 Jahren schauen. Ja, Friedrich Merz hat bereits angekündigt, dass er zur
425 Kernenergie zurückkehren möchte, also ist der Verbrennungsmotor auch nicht tot.
426 Und wer weiß, was in den nächsten Jahren auf uns zukommt, mit globalen Krisen.

427 Ob es Pandemien sind, Kriege, die näher kommen, wer weiß, welche Themen im
428 Vordergrund stehen werden, und daher bin ich nicht so optimistisch, dass wir ein
429 schnelles Tempo erreichen und dass diese SDG, wenn man sie ernsthaft in 29 oder
430 28 betrachtet, sagen OK, es gibt noch einiges zu tun. Ja, mal sehen, wie der
431 Folgeprozess aussehen wird, ich habe keine Ahnung.

432

433 T: Definitiv, und das war's, man kann nicht mehr langfristig planen.

434

435 T: Daher bin ich auch sehr gespannt, was passieren wird, wenn 2030 vorbei
436 ist, was sich die Vereinten Nationen einfallen lassen werden, und vor allem ist
437 Nachhaltigkeit bereits zur Norm geworden, ebenso wie Umweltrisiken, genauso
438 wie Krieg zur Norm wird, was auch ein sehr großes und gefährliches Problem ist.

439

440 A: Allerdings und wenn man es jetzt aus der regulatorischen Perspektive
441 betrachtet und tatsächlich einen Wunsch äußern könnte, dann würde ich mir sehr
442 wünschen, dass die Regulierung besser aufeinander abgestimmt wird. Was ich
443 vorhin meinte, dass die SDG bei der Gestaltung der ESRS praktisch keine Rolle
444 gespielt haben, ist eigentlich schade, weil der Rahmen existiert und die
445 Möglichkeit, sich daran zu orientieren, gegeben war. Die ESRS enthalten genug
446 interne Widersprüche und dann die fehlende Abstimmung mit CSDDD oder der
447 Taxonomie. Es ist einfach sehr bedauerlich, dass all diese gut gemeinten
448 regulatorischen Rahmenwerke, die uns im Unternehmen, d.h. unseren
449 Abteilungen, sehr helfen, Dinge umzusetzen, die vielleicht vor ein paar Jahren
450 nicht möglich waren. Dass sie alles so sehr verkomplizieren und, ich weiß nicht,
451 wie es dir geht, aber für mich und unsere Teams hier, es eine Ressourcenbelastung
452 darstellt, dass wir inhaltlich nichts mehr machen können. Das ist die traurige
453 Quintessenz der letzten zwei Jahre, denke ich, dass wir uns von den Inhalten
454 entfernen und mehr dazu übergehen, regulatorische Anforderungen zu erfüllen,
455 die nicht einmal kohärent sind. Wenn sie kohärent wären und einem großen Ziel
456 folgen würden, vielleicht OK, aber das tun sie nicht einmal.

457

458 T: Also, ich denke, man könnte eine eigene Abteilung für
459 Nachhaltigkeitsberichterstattung einrichten, die sich nur damit im Controlling

460 beschäftigt, und mir geht es ähnlich. Ich habe auch den Eindruck, dass wir jetzt im
461 SDAX sind, wir machen noch nicht viel, würde ich sagen, oder wir haben noch
462 nicht die Investoren, die darauf bestehen, aber wenn wir größer werden und eine
463 höhere Marktkapitalisierung haben und in den DAX aufsteigen, dann werden wir
464 auch mehr Ressourcen benötigen, um alle Vorschriften zu erfüllen, und wir
465 entfernen uns von den Inhalten.

466

467 A: Ja, ich hoffe sehr, dass meine damit verbundene Hoffnung ist, dass wir,
468 wenn wir es einmal geschafft haben, einen Rahmen aufzusetzen und alles
469 halbwegs funktioniert. Zum Beispiel sind wir dieses Jahr sehr stark in der
470 Automatisierung der Datenerhebung involviert. Wir verlagern viel in die
471 Buchhaltung von dem, was wir zuvor als Nachhaltigkeitsabteilung gemacht haben.
472 Wir integrieren die gesamte ESG-Bewertung in das Risikomanagement. Dies sind
473 gute Schritte, interne Prozessschritte, die hoffentlich dazu führen werden, dass wir
474 viel einfacher Folgeberichte erstellen können. Aber der anfängliche Aufwand, die
475 anfängliche Investition, ist enorm.

476

477 T: Es ist notwendig für interne Prozesse. Ich meine, wir arbeiten gerade
478 daran. Nicht jeder ist begeistert davon, sagen wir so.

479

480 A: Nein, sicherlich nicht.

481

482 T: Danke für das Interview!

1 **APPENDIX 8: Translated English transcription of the guided interview with**
2 **DAX company #3**

3 T: Let's get started then, so thank you again for your time I would like to ask
4 you a few introductory questions to get to know you better and also your role so
5 could you briefly describe your role and responsibilities?

6

7 A: Here we go. Sure, A has been responsible for sustainability or the topic of
8 sustainability since 2017. In the first 3 years, I was employed independently or as
9 an individual in the Corporate Communications department as a staff unit. In 2020,
10 there is a separate area, the sustainability strategy

11 , where I am a team member. There are now 5 people in this team who deal
12 with the topic of sustainability. We actually see ourselves as facilitators for the
13 topic. In other words, we take on the topics that come from outside, such as
14 regulation. But also trends in society and the like and convey them into the
15 company, into the various specialist areas, transport them or transpose them into
16 business strategies in sustainability strategy, that's one part and the second part is
17 to gather everything we do on the subject of sustainability within the company and
18 then transport it to the outside world. Through communication, instrumental tools,
19 the annual report, sustainability report and so on, i.e. the classic communication
20 role for this and otherwise we have the strategic superstructure, i.e. our department
21 is also called Sustainability Strategy. We are not only responsible for the
22 sustainability strategy, but also for the strategic process, i.e. something like perhaps
23 corporate management or something like that, or corporate strategy in other areas
24 or companies, and so we combine both topics and we are the interface for this
25 superstructure to cast all this into strategic components.

26

27 T: You've already anticipated another introductory question, because I
28 wanted to ask you if there is a separate department and how it has grown, but what
29 you've already told me that I'm interested in now, when you say you were first a
30 one-man show and now you're a team of five, how has the attitude towards ESG
31 changed at your current employer?

32

33 A: Yes.

34

35 T: In the last year or in the last 3 years? How can you assess that?

36

37 A: Well, it's actually very strongly driven by regulation, so it's no coincidence
38 that I was hired in 2017. That's when the CSR RUG came in, the first mandatory
39 reporting in the annual report. That's why it was put on a systemic or strategic
40 footing for the first time. In 2020, it became increasingly clear, or rather around 2020
41 it became increasingly clear that there was a much stronger focus on these
42 regulatory levels and that we simply had a responsibility for the topic of climate-
43 neutral building stock and that much more needed to be done because more and
44 more regulation was emerging in many places, more and more legislation was
45 coming up and these were actually the main drivers, of course for the company as
46 well. How to perhaps build it a little bigger, to put it on a different footing, that is
47 still missing in many places in terms of guidelines and the like, which then still had
48 to be built. So in 2020, we took the opportunity to set this up as a separate division.
49 We started with a lot of regulation, a lot of guidelines on various governance topics
50 in particular, and then tried to push it a little more into the more strategic systemic
51 level. There were already all sorts of networking and anchoring points beforehand,
52 so we already had environmental indicators in environmental controlling, we
53 already had HR indicators in HR controlling, so it wasn't like it was completely
54 new beforehand, but of course it gave it a different drive.

55

56 T: And you say you've been really focusing on sustainability since 2017? Of
57 course I'm interested in that now. Is sustainability anchored as a value in the
58 corporate culture? And how do you actually define sustainability, because you said
59 that it is very regulatory in nature.

60

61 A: Yes, you can actually layer it up. So it's anchored in the mission statement,
62 it's anchored in the corporate strategy, it's actually very, very strongly anchored in
63 external communication, yes, so basically everything that happens in terms of
64 external communication has some kind of reference to sustainability. Sustainability
65 is practiced in some areas of the company. There are individual departments that
66 are also moving in this direction. Whether it's, for example, climate-neutral

67 buildings or something similar, we've also done a lot in this area. Particularly in
68 the direction of investment in climate-neutral building stock, that is, the colleagues
69 who are in these departments and who take care of this. They are very active in
70 these areas, we have set up a large department for renewable energies and all that
71 sort of thing. So there are actually business models, there are changes in business
72 models that are moving in this direction and there are other areas that are
73 completely ignored. Yes, they're simply not interested in it, they don't care if they
74 don't have to and if you don't chase them, then nothing will happen. And
75 practically speaking, we are a decentralized company. As far as the practical doing
76 is concerned, yes, there is a central function, but in principle the rental business
77 happens on site and it is also regulated by the people who happen to be active on
78 site and they have to decide for themselves whether they want to invest in this
79 direction or do something sustainable or not. There are not yet so many guidelines
80 from the central side.

81

82 T: Ok, let's move on to the whole topic of the Sustainable Development Goals,
83 which were developed by the United Nations in 2015 following the Millennial
84 Development Goals, from 10 goals to 17 goals, and the first question would be do
85 you know these goals at all?

86

87 A: I know them, I've read them all, I've even read through all 169 sub-goals.

88

89 T: So you even answer my second question, whether you know the sub-goals,
90 brilliantly.

91

92 A: Yes, I know the sub-goals, I also know the differentiation between the
93 goals between target groups in the direction of companies and cities or even
94 countries, yes, so there are different target groups that you can pull down and not
95 all goals are suitable for all target groups.

96

97 T: Exactly and now I would like to ask for your personal opinion, what do
98 you think? How reliable are the SDG for listed companies in Germany?

99

100 A: Well, nobody cares at all. It's on paper and no one has looked at it except
101 those who wrote it, or who refer to it, in some texts I think they have no effect at
102 all.

103

104 T: This is also reflected in the behavior towards the SDG in the last 3 years,
105 because I looked at the last 3 sustainability reports and carried out a frequency
106 analysis of how often the SDG were mentioned. Now it's only 4 times.

107

108 A: This is simply because we have simply updated them, nothing has
109 happened for 20 years, they are on one page and nothing has happened since then.
110 I think we updated them once because we no longer want to achieve a climate-
111 neutral building stock by 2050, but by 2045. We had to adjust that at some point,
112 otherwise it would have been noticed, but otherwise nothing has happened.

113

114 T: And no considerations or measures of a monetary nature to implement the
115 SDG?

116

117 A: So no reference to the SDG. If we now take the example of the 5 "gender
118 equality", then we have a performance indicator or a management-relevant key
119 figure in our remuneration system for the Executive Board and top management,
120 which is about women in management positions.

121 However, this has nothing to do with the SDG, but has arisen from a different
122 motivation.

123

124 T: The law.

125

126 A: Yes, not necessarily because of the law, because we had said that the
127 introduction of a remuneration system with reference to sustainability targets was
128 a different motivation and then it was more about looking at what we actually need
129 to cover the 3 areas E, S and G sensibly? And what are actually also management-
130 relevant company parameters that are really important for the company? And then

131 you quickly come to the conclusion that it is primarily climate-neutral existing
132 buildings, that it is new buildings, that it is barrier-free partial modernization or
133 conversion for the elderly. Then there are two personnel-related topics, one is
134 employee satisfaction and the other is gender equality, and then we quickly arrived
135 at these indicators. But that has no feedback to an idea of the SDG, although I think
136 we are now coming to a very exciting point. I mean, the SDG are also very global
137 and general and a lot of them are also reflected in normal or usual target systems
138 or understandings of sustainability anyway and it's a question of whether you want
139 to do the exercise of relating it to that or whether you just leave it out. So you can
140 pursue it without explicitly naming it, I mean.

141

142 T: I see, were you involved in the process of selecting the SDG?

143

144 A: Yes, I steered it, to be precise.

145

146 T: Can you tell me more about how you did that?

147

148 A: Actually, that was the motivation at the time. We also became a member
149 back then UN Global Compact, that was just this year, when it was very much
150 about bringing in a lot of regulation and also mapping formal processes. We
151 realized that this was the fundamental motivation behind the rating results. The
152 UN Global Compact does not have any echoes anywhere in the company, nor does
153 the Diversity Charter or similar, no topics that would have played any relevance to
154 the company, but only for the reason Tick The Box. You can tick them off, they were
155 asked in ratings, we take them with us and we have just updated a materiality
156 analysis. The basic trend was already clear that we said we weren't going to
157 overturn our sustainability strategy just because SDG were added. However, we
158 are trying to map the SDG onto it, as probably an incredible number of companies
159 did back then that already had a strategy and goals. The basic idea is actually a
160 different one. You align your strategy with these goals and build up the strategy.
161 But those who already had a strategy did. So I hardly know anyone who would
162 have really used this as a guide and said yes, we'll take the SDG and build our
163 strategy around it, because that's the overarching goal, so to speak, but we'll take

164 our strategy and our goals and see which SDG fit in with them and that's how we
165 did it. Then, as part of the major materiality analysis update in 2020, we took
166 another look at the SDG and mapped them as part of this materiality analysis or,
167 to put it another way, used a large-scale stakeholder process.

168

169 T: You clearly state that regulations and ratings were actually the driver. Do
170 you have the feeling that there should be other political measures to ensure that
171 SDG are supported or do you think it would be better to focus on CSRD, for
172 example?

173

174 A: Well, I actually don't think the SDG are particularly relevant for day-to-
175 day business in the sense that you absolutely have to orient yourself towards them
176 or pursue them, because I think the overlaps are large enough anyway if I do a
177 clean quality analysis in the company, which is sustainability-related. At the latest
178 with the CSRD for a large number of companies now also mandatory in the
179 direction of double materiality, where it then becomes exciting for the company to
180 see what my possibilities, my levers actually are and where I can also have an
181 impact. Then I don't find it so necessary, in fact I personally don't find it so
182 necessary, to create this connection to the SDG or to align with them if the goals
183 that you have set yourself since the company, which fit the materiality, are also
184 simply suitable for the company and I actually believe that many of these goals are
185 then automatically congruent or almost congruent. I think the difficulty with the
186 SDG in many places is also when you look at the sub-goals. Keywords sound good,
187 gender equality or affordable clean energy. You can just kind of write that on top,
188 but if you look underneath at what the sub-goals actually mean, it's often not so
189 easy for companies to align themselves specifically with these goals. However, I
190 don't think it's at all important for social change whether or not you focus on a
191 specific goal.

192 If I find something much more suitable for the company and better addresses
193 the company's opportunities, I'll take something that perhaps doesn't match the
194 SDG in terms of wording. But if the basic idea is in the same direction, then I don't
195 care whether it can be called an SDG or not - yes, then it is definitely going in the
196 right direction for society.

197

198 T: And it's becoming clear that the SDG are very suitable for society and the
199 country level, but less so for companies.

200

201 A: Exactly.

202

203 T: And do you have the impression that there is also too little guidance from
204 the state? How companies can get involved in the SDG?

205

206 A: Well, I don't actually know of any, so yes, there is too little guidance. In
207 principle, it should flow into all CSR strategies or sustainability strategies of the
208 country, yes, if I take this seriously as a country. I have to admit that I don't really
209 know the current status of the sustainability strategy of the Federal Republic of
210 Germany, whether and how all SDG are properly mapped, but the transport to
211 what are, so to speak, demands on companies. That would be a political demand
212 that would then have to be linked to the motto: look, these are our sustainability
213 goals and this is our sustainability strategy for the country. Now, dear companies,
214 let's see what we need from you and it would be great if you could manage that. So
215 I think that in some respects the political framework and the ideas are working, so
216 I think the National Action Plan for Human Rights, for example, is a very good
217 example of how politicians have said in a very transparent, very good, open and
218 long process that this is what we want, this is our attitude and opinion as a country
219 and if you as a company can't do it, then we'll make a law out of it. It's great, well,
220 it fits back and front, everything has been done right, but it's just missing in relation
221 to the SDG in the big, overarching strategy or in the bigger picture.

222

223 T: Yes, I understand. I just had a thought, there is a progress report that
224 countries have to submit every year, but it is voluntary. Few countries, mainly
225 industrialized ones, do it. Germany is one of them, but many countries do not. This
226 is the difference between voluntary and mandatory, just as you said. There was an
227 action plan, and few companies adhered to it. Then it became a law, which now
228 obliges many. Do you think it would have been different if the SDG had been
229 mandatory?

230

231 A: Of course, definitely. If there had been an overarching regulatory
232 framework that interlocks, for example, if the SDG and the CSRD referred to it,
233 then yes, it would have worked differently. But I think it's a good example when
234 you look at the ESRS standards that were developed from it. I don't find any
235 reference to the SDG when you look at the long list that companies are supposed
236 to look at. As minimum topics for sustainability in the respective sub-standards in
237 the thematic standard, you don't find the wording that is in the SDG. That would
238 have been a good opportunity to link things together, but they didn't.

239

240 T: Like how GRI was linked with ESRS.

241

242 A: Yes.

243

244 T: Thank you. I have a few more questions about the industry. Can you please
245 tell me which industry your company operates in?

246

247 A: Housing.

248

249 T: What do you think are the most important trends or innovations in housing
250 or construction that could advance the progress of achieving the SDG? Do you see
251 a connection there?

252

253 A: Oh, very complicated approach. I do believe that there is a lot possible in
254 construction when it comes to innovations to achieve the SDG, such as affordable
255 and renewable energy or new renewable companies. Also, for SDG 13 on Climate
256 Action, there are many innovation opportunities for our industry. In the rental
257 business itself, it is a bit more difficult. We explicitly did not include SDG 1, no
258 poverty, which is interesting because you can discuss a lot about seeing housing as
259 a human right. You can actually link it with no poverty and see how to combine it.
260 We explicitly discussed this for a long time, I remember in 2020, that we did not
261 include it. By now, this might change or lead to a different result because we are

262 doing a lot on homelessness. So, there might be a different opinion and attitude
263 towards it now. But yes, I do believe that there are quite good opportunities for
264 innovation in our industry for individual standards or goals, but more technically
265 than socially or governance innovations, which I don't think are as feasible in this
266 context for the goals.

267

268 T: And in the technical implementation, I strongly assume that innovation
269 investments are necessary, correct?

270

271 A: For housing or buildings, a lot of investments are always necessary. That's
272 exactly the point, yes.

273

274 T: How does your company view investments in sustainability?

275

276 A: Not out of altruism or an idea, which is quite difficult and complicated to
277 convey for a capital market-oriented company, but in combination with
278 investments in the product, i.e., the building. About 2 or 3 years ago, we
279 implemented our own climate investment tool. Previously, the investment decision
280 for building modernization, i.e., where we address the house energetically, was
281 purely economically driven. Where can we get the most new rent? And indeed, this
282 was a mindset shift 2 or 3 years ago because we now consider the social and
283 ecological aspects alongside the economic aspect, in a triangle. This tool we
284 implemented technically now makes investment decisions at least also under the
285 premise of staying on our climate path when we address it in such and such a way.
286 Which energy measure is sensible here? And does it not overwhelm the tenants
287 with too much allocation or similar? So, it has become a bit more delicate, and
288 things have been built in a bit more, so they go hand in hand, but in many things,
289 it is still not the case.

290

291 T: And a final question on this, you now have some professional experience,
292 how do you see the relationship between profitability and sustainability? Has it
293 changed in recent years? Let's say in the last 10 years?

294

295 A: Yes, it has certainly changed, well, differently. Profitability is still the core
296 issue, and there is no change in the achievement thresholds or hurdles in the
297 company. For the individual measures, one must fairly say there are actually no
298 consequences on the topic of economic return. However, there is more visibility for
299 opportunities in sustainable business processes or sustainable business
300 investments. That means the linkage of normal return expectations with, for
301 example, energy modernization, the expansion of renewable energies, the
302 promotion of women in leadership positions, but also in STEM subjects with us, all
303 have links with the economic effect and economic return. By now, they go quite
304 well hand in hand. I think it is not the intrinsic driver of the company to be more
305 sustainable, but I believe the world has changed so that it works quite well
306 automatically. A significant shortage of skilled workers in our industry would be
307 fatal if we did not somehow go into STEM promotion. We need craftsmen and
308 craftswomen, and the same applies to investments in energy. Also, the regulatory
309 risks associated with it, especially the physical climate risks that arise, need
310 answers, and these are investments, but they are long-term investments in asset
311 security with us. It is not so much that it is good that we are doing this now, but it
312 is very much and fits well with the regulation. Very much risk-driven, i.e., risk
313 avoidance strategies.

314

315 T: We are now coming to the final questions of this interview, as we are
316 already talking about risks and the future. What do you think is the biggest driver
317 specifically for the SDG in our economy?

318

319 A: What do you mean by drivers for the SDG, how they change or how they
320 are seen, or what do you mean?

321

322 T: Who can best implement them, whether it is a company, the people in the
323 company, or perhaps a new technology.

324

325 A: I don't think it really remains in a goal construct or goal understanding,
326 but it is rather a conceptual framework. The SDG provide an attitude and a

327 direction. It is not so important whether a specific goal is achieved or not, but if a
328 society develops within the framework of these 169 sub-goals, it will definitely
329 develop in the right direction, regardless of whether a goal is specifically achieved.
330 And the drivers for this are the people behind it. You have to want it if you want
331 this attitude. As I said, the degree of goal achievement is initially secondary, I think,
332 but it definitely goes in the right direction, and I don't believe technologies alone
333 will do it, that doesn't fit with the attitude topic, honestly. I believe technologies
334 can achieve a lot in individual sectors and topics, especially here SDG 7 renewable
335 energies or also investments here number 8 investments in infrastructure, no 9 I
336 think it is 9 can achieve a lot, but that will not prevent us from moving steeply in
337 this direction content-wise.

338

339 T: But I take away that it is actually not so relevant.

340

341 A: Then I expressed myself incorrectly, sorry, it is relevant that they exist
342 because they provide a framework for action or a vision of the direction in which
343 society can or should develop, and that is important because there are not so many
344 overarching visions.

345

346 T: My point was different, namely that it is important for publicly listed large
347 companies to have a sustainability strategy at all and, as you nicely said at the
348 beginning, to map the SDG to it because a strategy ideally has measures and goals
349 that can be achieved, are realistic, and can offer great added value to society, be it
350 technologies, gender equality, or other things.

351

352 A: Absolutely. I also really mean what I said before, that the core is the
353 company's own materiality analysis, actually for a company, so if a company takes
354 it seriously, to conduct a really serious materiality analysis, to see what our
355 essential sustainability topics are and not go in there pre-formed and say, yes, it
356 somehow fits. You don't have to overdo it like the CSRD or the ESRS. That is also
357 a bit over the top, I think, but fundamentally, to make this thought process, also
358 why I think it is very good that double materiality has prevailed in the ESRS, simply
359 to bring this thought process into the company, our impact on the environment,

360 society, and people is simply a very important aspect. If I build such a strategy and
361 think it together, then not much can go wrong.

362

363 T: Are there any final thoughts or something you would like to share? Or
364 perhaps any obstacles you encounter in your daily work?

365

366 A: I am curious about what the follow-up process will be because 2030 is very
367 close. We are now in 2024, I don't even know when the SDG discussion became
368 virulent. In replacing the Millennium Goals, how far away the Millennium Goals
369 were back then. Now I had to look it up myself, I can't say it off the top of my head.
370 I could imagine that relatively soon there will be a need for a process or at least a
371 kick-off for such a process to see what we are actually doing with it. After 2030, I
372 don't have a vision of what will happen and who will do what. I also find that the
373 basic attitude is currently not so much in this direction, in society or societies to
374 look at.

375

376 T: I researched this in the theoretical part of my doctoral thesis, that we are
377 making setbacks. Especially since the Corona crisis, because completely different
378 global risks have come upon us, and protecting the environment and society has
379 actually taken a back seat.

380

381 A: Yes, the new EU program from the new EU government for the next 5
382 years, a paper has already been released with the rough agenda of what is in it. It
383 does not take back the Green Deal, but places it in a different field, the economic
384 field, even more strongly. It is already relatively clear where the direction is going
385 for Europe in the next 5 years, and then it is 29. Then we are just before the end of
386 the SDG' achievability, so if we now look very strongly at the economic aspect in
387 achieving green goals in the next 5 years. Yes, Friedrich Merz has already
388 announced that he would like to return to nuclear power, so the combustion engine
389 is not dead either. And who knows what will come upon us in the next few years,
390 with global crises. Whether they are pandemics, wars that come closer, who knows
391 what the topics will be that are in the foreground, and therefore I am not so
392 optimistic that we will achieve a fast pace and that these SDG, if you seriously look

393 at them in 29 or 28, say OK, there is still a bit to do. Yes, let's see what the follow-
394 up process will be, I have no idea.

395

396 T: Definitely, and that's it, you can't plan long-term anymore.

397

398 T: Therefore, I am also very curious to see what will happen when 2030 is
399 over, what the United Nations will come up with, and above all, sustainability has
400 already become a norm, as have environmental risks, just as war is becoming a
401 norm, which is also a very big and dangerous problem.

402

403 A: Indeed, and if you look at it from a regulatory perspective and could
404 actually express a wish, then I would very much like to see better coordination of
405 regulations. What I meant earlier, that the SDG played virtually no role in the
406 design of the ESRS, is actually a shame because the framework exists and the
407 possibility to align with it was there. The ESRS contains enough internal
408 contradictions and then the lack of alignment with CSDDD or the taxonomy. It is
409 simply very unfortunate that all these well-intentioned regulatory frameworks,
410 which also help us in the company, i.e., our departments, very much help to
411 implement things that perhaps were not possible a few years ago. That they
412 complicate everything so much and, I don't know about you, but for me and our
413 teams here, it imposes a resource burden that we can no longer do anything
414 substantive. That is the sad quintessence of the last two years, I think, that we are
415 moving away from content and more towards filling out regulatory requirements
416 that are not even coherent. If they were coherent and followed a big goal, maybe
417 OK, but they don't even do that.

418

419 T: So, I think you could set up a separate department for sustainability
420 reporting that only deals with it in controlling, and I feel the same way. I also have
421 the impression that we are now in the SDAX, we are not doing much yet, I would
422 say, or we do not yet have the investors who insist on it, but if we grow larger and
423 have higher market capitalization and move up to the DAX, then we will also need
424 more resources to satisfy all the regulations, and we are moving away from content.

425

426 A: Yes, I very much hope that my associated hope is that once we have
427 managed to set up a framework and everything works reasonably well. For
428 example, we are very much involved in the automation of data collection this year.
429 We are shifting a lot to accounting from what we previously did as a sustainability
430 department. We are integrating the entire ESG assessment into risk management.
431 These are good steps, internal process steps, which will hopefully make it much
432 easier for us to produce follow-up reports. But the initial effort, the initial
433 investment, is enormous.

434

435 T: It is necessary for internal processes. I mean, we are currently working on
436 it. Not everyone is enthusiastic about it, let's say.

437

438 A: No, certainly not.

439

440 T: Thank you for the interview!

1 **APPENDIX 9: Transcription of the guided interview with DAX company #4**

2 T: Hello and welcome to my interview. Thank you so much for your time. I
3 would like to ask you if you could briefly describe your role and responsibilities
4 within your organization.

5

6 A: Nice to meet you. So I am working for #4 for more than 20 years, currently
7 in the field of corporate strategy and sustainability and they're within
8 sustainability, responsible for, let's say, the sustainability report that we publish
9 once a year and as well, I'm responsible for the data management and project where
10 we calculate the downstream data in a tool to be audit proof and have the data at
11 hand easily. Before that I also took a look at the ESG ratings.

12

13 T: Perfect. So can you tell me how the term sustainability is defined in your
14 company?

15

16 A: That's an interesting question because you're also doing academic work.
17 In academia, I find the term, actually I don't find the term easy. I find the term
18 sustainability, which is mainly focused on economics, ecological topics and social
19 bonds and governance. What I also experience in other companies is very often the
20 term, ESG – environment social governance, which has a kind of downside from
21 my perspective that the finance people are not at the table. So it's the elephant not
22 being in the room, and I personally see a lot of, let's say, friction between E and
23 finance, S and finance. Not too much governance and finance. And once they are
24 not in the room, so we discuss it without to finance people at the table. This might
25 change with the upcoming CSRD, which is highly regulated, which is then mostly
26 in the finance organization. But when it really comes to financial topics and
27 sustainability topics, I see a kind of discrepancy between the two simply because
28 the definition or how we set up sustainability as a company is not as it is defined
29 in academia.

30

31 T: You are referring to my topic of the dissertation, which is the balance
32 between profitability and sustainability, and one thing that would interest me is do

33 you see the CSRD as a chance to interconnect both concepts? Profitability and
34 sustainability?

35

36 A: Personal view. Yes, because it helps to bring the finance people at the table
37 of sustainability and vice versa. So at least they're in the same room. They might
38 not speak exactly the same language. What I mean by that is sustainability is less
39 mature in almost everything when it comes to the definition. When it comes to
40 data. When it comes to data quality compared to financial data. Because simply it's
41 financial data, highly regulated topic. Known in the companies for years. Mostly
42 companies are less vocal in sustainability than they are in finance. So very often
43 you have an CFO in a company has a role that you need to have. Next to the CEO,
44 but you don't have necessarily all of a sudden Chief Sustainability Officer. So that
45 means that indicates somehow, let's say the difference between finance and
46 sustainability. So it's not in the same maturity level. That's my personal view
47 company view. I guess most of the people see it more as a burden to CSRD rather
48 than an opportunity.

49

50 T: What do you think in the last 12 months? How has your current employer's
51 attitude changed?

52

53 A: Once CSRD, they really say, Oh my God, that's so much work. Did they
54 see it only from a kind of peer reporting stuff and work related or effort related
55 topic? Honestly, talking about sustainability or CSRD, I think a lot of people are
56 really interested in the topic. We see it because we also have these kind of
57 sustainability network calls. A lot of people participate there. We had trainings. A
58 lot of people are interested but I'm not sure if they have the correct understanding
59 of sustainability. That's on the, let's say, on the employee level, the higher you come
60 in the hierarchy, the more sustainability is more topic that was very high on the
61 agenda, let's say in 2020/21, maybe before that, which is now going a little bit down,
62 saying, oh, come on guys, we are anyhow reaching 1.5°. Why should we do a lot
63 here? So it's there. They seem more as a burden. More the challenges or tensions
64 that you mentioned or I suppose at a balance they need to establish somehow rather
65 than opportunity. See it very diverse in the workforce. The higher the management,

66 I see a more reluctance, the lower the workforce, they see high motivation to say
67 we need to do something. A lot of activities how to make our factory screen for
68 example.

69

70 T: Thank you very much for your view. We have talked a lot about CSRD
71 because it's the current actual brand new topic for listed companies. However, my
72 framework I am going to observe in my dissertation are the SDG. Sustainable
73 Development Goals by the United Nations, which should be reached in 2030, so to
74 say in five years. So it's just around the corner. And I will now come to the main
75 questions of this interview, which is really focused on SDG. And since Siemens
76 Energy is a listed company, what do you think? How reliable are the SDG for listed
77 companies overall? What's your view on that?

78

79 A: We use the SDG for the sustainability report. We always refer the
80 paragraph to the SDG and I think they are somehow helpful as a framework or a
81 guidance. What I'm missing personally is a little bit how to pick them out into a
82 corporate view. So I think they are very well nicely defined for more like on a
83 national level on country level or dealing on multinational levels. I think they are
84 not well suited for a company to steer a company because they're so far away.
85 Justice, for example, it's such a broad word and definition. So how to break it down?
86 How to contribute to this SDG? And I think it should be necessary, but actually it's
87 not done in the company to translate the SDG into corporate SDG.

88

89 T: You have not or you did not consider any measures to implement the
90 committed SDG that you mentioned in the sustainability report? Am I right?

91

92 A: Oh yes, you're right. We did not translate them, let's say, into corporate
93 SDG. What we did is we defined targets for certain topics. So very often we define
94 sustainability as ESG in the company, not SDG in the company. And then we use
95 the wording environment, social governance and defined targets accordingly to the
96 to the dimensions. But not the SDG.

97

98 T: So you have to find your strategy, your targets, mid-term targets, maybe
99 long-term targets. And then I guess you match them to the SDG and not vice versa.
100

101 A: Exactly. It was more as you describe here.
102

103 T: OK. And you just said that you see the SDG more on a national level and I
104 guess you need more support from the government to help translate them into
105 corporate actions. Or did I get that wrong?
106

107 A: Not necessarily. I think it could be done by each company. It needs some,
108 let's say brain work to translate them to the respective company or the company
109 needs resources for that or what is needed to translate the SDG into corporate
110 targets. I need to see a need to translate them into the corporate targets. So actually
111 I see it as a nice framework which is not connected to the company level. Yeah. The
112 new question is, does the company define within the company a certain kind of
113 framework which then is somehow mapped because of, let's say GRI reasons or
114 other legislation reasons to the SDG, which is then not as perfect. Then it's more a
115 kind of you squeeze it in how it might fit. If you really believe in the SDG, it should
116 then be broken down in in a company level. I'm not sure if there's a regulation
117 needed. I would more recommend the companies doing it. I did so, but actually to
118 see I was not successful.
119

120 T: Got it. I mean, I could ask you if the SDG are not that important for the
121 company. Why is #4 mentioning them in the first place in the sustainability
122 reporting?
123

124 A: To give you a very honest answer.
125

126 T: Please be very honest.
127

128 A: It always refers to something greater. At the end of the day, it's marketing.
129

130 T: And how did you choose the SDG you mention? You know that process?

131

132 A: No, actually, it was before.

133

134 T: Have you been involved in it?

135

136 A: I joined the sustainability organization and interestingly, since then no one
137 touched it. So it was defined once, and that's also indicating the importance of the
138 SDG for the company. It was done once. OK, business haven't changed so much,
139 but still there was no process to revisit them to cluster them again.

140

141 T: Let me come back to the sustainability spirit of the company itself. What
142 do you think is necessary to really achieve the goals or the targets that #4 has set
143 themselves? What are the key aspects there? Can you tell me a little bit more about
144 it?

145

146 A: Guess one key aspect is firstly set a target that is reachable but challenging
147 at the same time, which is not so easy. Yours should have a target that you that
148 really makes a difference. For example, reducing greenhouse gas emissions by -5%
149 might be not a challenging enough target. It should be somehow aligned to call it a
150 standard. It could be SBTI even though SBTI has a lot of critique but it should be a
151 kind of standard whatever it is. Align your target to a, let's say, when it comes to
152 emissions to a certain global warming potential. So you need to align it to let's say
153 1.5° or whatever it is. So that is in line with something scientific that it has been
154 worked out. 3rd the target should be done also internally, let's say. Be really a
155 target. A KPI that is supported regularly so might not be enough, but should be
156 also measures behind it. It should be target measures to achieve the target and also
157 resources dedicated to them and also should be reported accordingly. Yeah,
158 because otherwise if you only set the target, maybe put some resources there, but
159 you never report about the status, most likely will not happen. And 4th, I think the
160 target should be also disclosed externally because then the external audience holds
161 the company accountable for the targets that you establish in the company and.

162 Five, it would sometimes beneficial to also link the bono system to the target,
163 especially for traditional companies.

164

165 T: The last thing you said, is an idea. Maybe this could be the essential link
166 between being sustainable as a company, but also profitable when it's linked to the
167 remuneration of the board members.

168

169 A: Maybe.

170

171 T: Because then they have an incentive to act sustainably in their decisions.

172

173 A: Exactly. And to have this link what you need to break the target down. For
174 example, if you target 2030/2040, assuming that 2050, a lot of companies have not
175 2050. That's so far in the future, even today's CEO, or even today's workforce, don't
176 care too much because they are not in a company in the longer in 2050. So that
177 means you need to break it down into, let's say, smaller pieces.

178

179 T: Absolutely.

180

181 A: What happens in 2070? 2027, 2028, 2030. At least to have a pathway. Yeah,
182 that also the pathway defines the actions, but that also helps them to measure if
183 you're on track or not. And what E in the company at least SG and SBTI target for
184 2030. But I see that we linearly the target from 2019 to 2030 which is from my
185 perspective, not a good friend, because usually it's easier in the first phase to come
186 up with some measures like solar effect for example. It's one time effect and it's
187 getting harder at the end. So if you have a linear pathway, it's a kind of false friend
188 because you feel pretty good on track the first years and then you have a very high
189 burden in the last year. So therefore I would not vote for linear breakdown of the
190 targets.

191

192 T: How is your current sustainability department is set up? How many
193 people are you? Who is dealing with what? What topics? How is this interlink?

194 Because #4 is also a global company. So how do you ensure that the targets that
195 you set or the SDG are dealt with in a global company?

196

197 A: So yeah, on corporate level, a team of eight, which is not so much
198 compared to 95,000 people worldwide. We have organizations, we have 4 business
199 areas kind of business units, simply not a way for that for business areas and within
200 them it's also strange sustainability organization. That means sustainability as part
201 of the strategy organization and for each of them are I think about five to six people,
202 so let's assume 6. So it sums up roughly 25, our eight people, being optimistic 35.
203 Within the organizations and then now it really depends how you count, because
204 we also have a lot of topics in EHS when it comes to fatalities or injury rates or
205 something like that. In a broader meaning, there are also doing sustainable stuff,
206 but they are not part of the sustainability organization because they are doing what
207 they did for years here and if you only associate them or the associated function
208 sales in HR and supply chain, we may come up with another 40 people worldwide.
209 And then we have some sustainability business partners in the regions. Assuming
210 we have 7 regions, maybe one head count per region roughly. So all in all, you
211 might come up to 100 people here if you have all the associated functions included
212 here but these are what we call them split hats, so they are not 100% dedicated to
213 sustainability. The dedicated team is roughly in the field of 40.

214

215 T: And who's writing the sustainability reporting in your company?

216

217 A: Our organization in corporate sustainability and we also set targets. So
218 basically we have 6 focus targets on a company level which are then reported in
219 Sustainability Council, which is the highest governing body in for sustainability in
220 the company. The six targets are Scope 2 and 3 downstream and upstream. So the
221 environmental topics, the other one is women in leadership as a kind of social topic,
222 fatalities and safety topics also related to S. We don't have a specific governance
223 target because there's we have one being 100% compliance, but we don't measure
224 it since compliance is any how quarterly reported to the board in a separate
225 meeting.

226

227 T: Well, that maybe I can also tell you a little bit about the theoretical part of
228 my dissertation. Because what you just said reminded me of something that I found
229 out when you said we have it's a social KPI. The women in leadership positions.
230 We do have it too. And five other companies have a 2 or 10 or 15 because we all
231 have to do it and they have a target of either. We have a target of 25%, for example,
232 of women in leadership positions by 2028 and it's so easy to link this target to the
233 SDG five of gender equality. You see my point here.

234

235 A: Absolutely. Yep.

236

237 T: Do you have an opinion regarding that so that companies use this target
238 and link it to SDG 5 because it's somehow fair? We are ensuring gender equality
239 because we have one KPI or one target. You see the irony here.

240

241 A: Absolutely. And it's a very European target. In U.S. companies you see
242 diversity, it's ethnicity for example or veteran quota or something like that. So even
243 diversity is not defined worldwide exactly accordingly to the same, it's very often
244 gender related.

245

246 T: Diversity is so much more than gender. But then the internal discussions
247 derive to "but we don't have data because everything is anonymous and we cannot
248 measure it".

249

250 A: The interesting part about leadership is what I criticize a little bit is firstly,
251 our target is 25 by 2025 and 30 by 2030. My criticism is that why don't we go for
252 50/50 and why we define a women leadership target but ignore the diverse people
253 in the company. So assuming roughly 100,000 people would assume there are some
254 people who are not men and some diverse or whatever. We have more than two
255 genders in the world. So I would then go for more a target defining as non-man in
256 leadership positions.

257

258 T: I agree from a corporate level because I see those discussions as well and
259 at the same time they're like, yeah, but we are such a diverse company. But how
260 diverse are we exactly? Are you measuring it?

261

262 A: The point is, we don't even have the discussion in the company. Because
263 gender.

264

265 T: I would like to talk about this for hours, but I have to keep my focus on the
266 SDG. So I'm coming to the ending closing questions. What do you think? If you
267 think about the SDG once again, I know [now] that they're used as a marketing
268 tool. But what could be the biggest driver for the SDG? Because it's just around the
269 corner and then the United Nations will do an evaluation. We don't know, but what
270 do you think from a corporate perspective? What can be a driver to achieve them
271 somehow in business?

272

273 A: I look back, what I see as a driver for sustainable topics is the safety topic
274 or also emissions. And once the financial world links some green bonds to emissions
275 or some other sustainable bonds to the injury rate, for example, then companies see
276 a positive effect of being compliant with these kind of targets once they are linked
277 to the bonds, for example, to financing instruments. You get the marlows if you
278 don't achieve them, you get a bonus. If you achieve your target so that means
279 basically what I see is how to include or put the the SDG more prominent in the
280 companies. Not the best always here because of the definition of ESG, but once you
281 put pressure on, let's say the financial institutions to link their, let's say financing
282 equity or debt financing to the SDG then they forced the companies to do the same.
283 So I see since we are running everything with financial institutions, they are the
284 key for everything. I think that would be a nice link. I guess it helps for climate
285 topics a little bit. It might help for the SDG as well.

286

287 T: And do you have any final thoughts or messages that you would like to
288 share with me?

289

290 A: I guess because you also asked for the CSRD.

291 What helps the company if you put SDG to CSRD more on the opportunity
292 side rather than on the reporting or risk mitigation side. So at least now the
293 company is aware of thinking about risk mitigation. Non-compliance, but we don't
294 take the others. The flip side of the coin on what is the positive aspect of sustainable
295 company. So if you really put sustainability, if you really put it on the core of our
296 strategy and link it, I think then we find also new business models and new ideas
297 how to deal with sustainability in the company. That would be my wish. Then look
298 from the positive side, the opportunity side well from the negative.

299

300 T: Thank you very much.

301

APPENDIX 10: Transcription of the guided interview with DAX company #5

T: So thank you again very much for your time and your support. Let us start with some introductory questions. So how is the term sustainability defined in your company?

#1: That's a very good question because I think we do not have like an official definition. Depending on where you are in the company we mix or substitute sustainability in ESG. So I would say from a practical standpoint, sustainability for us is more or less similar to ESG. So basically what we try to do or I mean CSRD kind of also forces you to push you into the G format is that we define strategy along the ESG pillar. Whereas when we've initially started with CSRD with sustainability, I would say it's more the E and S for us, where we try to have an impact on environment and society, and I think that's where sustainability started but due to the serious idea, I think it's more or less interchangeably used with ESG.

T: Thank you very much. How long are you working in the Sustainability department and how many are involved in your team?

#1: I myself work in the Sustainability Department since 2020. The department itself is around for roughly 13 years and We are in the whole sustainability team within the group, around 50 employees. My team in strategy, we are around 5-6 people.

T: In the last 12 months, how has your current employer's attitude to ESG changed?

#1: I think for us 2024 has been a very successful year. Actually, if you measure it in terms of our business like core business been the second best year since 2020 when we've measure our sustainability performance in terms of our core business. So I think it was in the last 12 months quite a good year for us although you can still see that there are messages around climate. I think the difficulty from

33 real economy to actually deliver on the pathways that scientists have calculated to
34 reach net zero lead, of course a bit to worries within the company because we as a
35 bank, we need to be careful that we do not manage ourselves out of the market. If
36 we are very ambitious and the real economy is not as ambitious as we are, that
37 means more and more clients we would need to have let go and at some point in
38 time that would mean we are also bankrupt, right? So that's why I think we are
39 strongly dependent, I think as a bank we see our role of course also to make sure
40 that clients understand how important sustainability is also for them. So it's not just
41 doing good, it's really central to their business model. If they're not adapting it, I
42 think they will go out of business at some point in time and that's why I think that's
43 an important role we play. I think we as banks or the banking industry alone can't
44 currently force people to do so. That's why we are hoping that regulation also
45 catches up a bit more governments, for example.

46

47 T: We will talk about regulations later, but first of all, I would like to ask you
48 what role sustainable development goals by the United Nations play at your
49 company.

50

51 #1: The SDG are there and to my knowledge, there's no formal commitment.
52 We are forced to report SDG and to manage those. For us, I would say the SDG are
53 a tool to demonstrate that you have impact but as a bank, we have focus SDG. We
54 don't think we can equally have all SDG, because of our business model. But we
55 don't measure them, also our performance. All the transactions we monitor, we
56 map those against the SDG. If we would give a company a credit that will be used
57 to, e.g., for water we map it against clean energy. Depending on what it will be
58 used if they're multiple use of proceeds. For example, we can take also two or three
59 SDG with one transaction but that's what we transparently measure and also report
60 externally in our report.

61

62 T: Thank you for that, because this would have been my next question. So
63 just for me to clarify, you look at your transactions and you map them to the SDG
64 and not vice versa, right?

65

66 #1: Yes.

67

68 T: OK. And what do you think from your banking point of view? How
69 reliable are SDG for listed companies especially?

70

71 #1: I think what is tricky in terms of SDG is of course mapping, being sure
72 you map the right SDG with the indicator and have that knowledge basically
73 cascaded down in the whole organization so that people in the front office have the
74 same understanding as in the middle or back office. That's definitely a trick, but I
75 think it's doable. So I don't see any problem there and we can use them to
76 demonstrate as I said by doing what we do, we have an impact on them.

77

78 T: OK. And how did you choose the SDG for your business? Can you provide
79 me more information on that?

80

81 #1: So for the single transactions, we do not differentiate. Basically, you can
82 map a transaction against all SDG and then in the reporting year, you can see how
83 many of the total business volume is mapped against what kind of SDG. You can
84 see, it depends also bit on the year as we don't have any targets or goals on SDG.
85 We are not saying, you need 5% of transaction in clean water, we are happy either
86 way. For us, it's more having an impact rather than not having an impact because
87 you do something that does not have an impact. But we are not prioritizing any
88 SDG with our transactions. So the core business, but of course depending on what
89 we do outside of the core business. Let's say, thought leadership as an example,
90 where we focus on biodiversity at the moment, that's also something which we try
91 to map right. And then there are certain SDG where we believe it's very difficult as
92 a bank to have an impact that is why we say those are not in focus for us. But they
93 are not excluded. If let's say we have a business transaction that would map against
94 that SDG, you can map it, but then depending on the number of transaction, maybe
95 it's just 0.1%. That's then mapped against that SDG.

96

97 T: Thank you very much. What do you think? What role do you believe
98 government policies and regulations play in achieving the SDG by 2030, which is
99 in five years?

100
101 #1: So at the moment, I don't think that any regulation I know would actually
102 help achieving SDG. As I said, there's no formal commitment. I think what helps
103 indirectly is, for example, we as a bank, we are of course forced to report against
104 the 1.5 currently net zero scenario. So that means we need to act and shift a bit the
105 business model and that leads, I would say, also to doing business that can be
106 counted against the SDG, but it's not that of there's any regulation now that would
107 force us to do certain amount of business and map it against SDG.

108
109 T: We have talked about sustainability itself, apart from regulations in the
110 beginning. What do you think is the best driver to sustainability in a company? Do
111 you think it's the people? Is it the mindset? Or do you think that regulations such
112 as CSRD help a lot to achieve sustainability, achieving sustainable growth in one
113 company? Or what do you think are the most important drivers?

114
115 #1: I mean they're multiple domains and I think the most important probably
116 is that sustainability is seen as something fun and something that's has a positive
117 connotation and not that kind of, I need to report, I need to this. So I think you need
118 to be careful, especially as the manager in the firm, that it's something that people
119 want to do where they see a benefit and that makes fun and they can see an impact
120 and not if it becomes a burden. If you make a very interesting and nice topic very
121 unsexy, and that can make a difference in a firm then also to thrive. So I think it's
122 kind of the culture and how you spin it, but at the same time, I don't think you can
123 manage a firm without targets and goals. There are always those people that are
124 maybe a bit more that move a bit faster if they have a target, if they can also have
125 an impact. I believe measurement is key, also,

126 in terms of success. Also accountability because I think it's very important
127 that every employee understands how he can contribute. If you make that
128 measurable, I think it makes it even better because then you know you can get
129 targets and I mean the target sounds always very negative. You can also make a

130 really high target, which is almost unachievable. That can make frustration, but you
131 can set also a sensible target that with some effort you can actually achieve, and
132 then celebrate that success, which I believe is much better than you force people to
133 transform and making it a bit. So that's one, then coming to regulation. I think it's
134 for us also especially important that there is regulation that companies are also
135 forced to report certain data points because otherwise it's difficult to limit. How
136 currently the regulation is basically the proposal, especially from June [2024]. I
137 think it's not very practical in some point to implement. I think we need to be
138 careful not to overregulate, but I think regulation is important so that we, at least
139 in Europe, we have data we force companies to report on. But how some of the
140 regulation proposals I implemented, I feel sometimes a bit uncoordinated and I
141 think it's not that the business involved in a way that we come to a proposal. I think
142 it then also puts a lot of burden on firms and makes a very important topic not so
143 attractive. What I think is also important outside of regulation is the government.
144 What's the government's strategy? How are they enabling companies to innovate?
145 Trying to keep core technologies within Europe rather than having them go away.
146 I think what really important is that we in Germany but also in other countries have
147 that support. I think what is also an important stakeholder group is the investors,
148 of course. That should also force companies to move in that direction and I think
149 clients will as well.

150

151 T: Throughout the interviews that I conducted, gave me a feeling that
152 balancing profitability on the one hand and sustainability on the other hand, is very
153 tricky and that regulations such as the upcoming CSRD or CSDDD might help. To
154 fasten things in one company, on the other hand, they say, they overwhelm the
155 workforce a lot and that systems are not in place for data collection and data
156 transparency. What is your view on that from a banking perspective? Because you
157 have, as far as I understood, insights into different industries and different
158 companies.

159

160 #1: So the difference is within the companies, I think it's more regionally then
161 I would say within the different sectors. So it would say where we see differences
162 in the size, because depending on how big the company is to report CSRD earlier
163 and so forth. I think that's kind of the observations I have and data is not perfect. I

164 think at the same time you can't wait until it is perfect and what we are trying to
165 do is to collect as many data as we can from clients and then where we do not have
166 data, we rely on external data providers, where we get estimates. What we use in
167 the banking industry is this PCAF as an example where we get an average, I would
168 say emission score per euro you lend. But that's of course like a proxy variable and
169 not like an actual emission data point. I think we get more and more data, at least
170 for carbon and I think the trickier part would then be biodiversity or nature which
171 cannot be measured at the headquarters, and I think that's the next challenge. If
172 that's also something you include in sustainability and not just climate. There are
173 still challenges ahead of us in terms of data collection of course and also using
174 historic data to predict the future, something that I think needs to change but it's
175 not unmanageable anymore but it takes time and it is also an investment.

176

177 T: Having this in mind, do you think that the SDG are light and easy to
178 understand, a tool to educate people on sustainability in companies?

179

180 #1: I don't think that we use them for education. Our angle is more showing
181 the contribution we can have as a firm in terms of making them understand the
182 transformation is for our clients and where they stand in this process. I think it's
183 basically because we are as a bank more an intermediary rather than the end
184 customer. It's maybe a bit different, but I think for us in terms of what we want to
185 make sure is understand them, what is your clients' challenge in terms of
186 sustainability at now, where are they in this innovation cycle, what do they need to
187 do? So basically our people understand a bit what the industry challenges are, so
188 they can use that inclined conversations and that they also understand what are the
189 clients I need to go after? What are the clients that are investing and at the same
190 time they understand also because I think it's also key that in certain sectors which
191 we call high emission sectors, that's also key that they transport the message that
192 this company is performing versus peers and what it means if you do not transform
193 your business model because basically what it also means for us is that we are
194 assessing clients, and let's say, you are ignoring sustainability. That means you
195 getting money will be more and more difficult for you as a company because you
196 would need to pay higher interest rates and at some point in time, I'm not sure you
197 will go out of the market because I'm not sure if customers are still requesting your

198 product. Plus as a bank, we are worried because you have a higher risk of default.
199 And that's why I think it's really important for us in terms of education that
200 basically, we have this industry knowledge on the different sectors and that's what
201 we basically teach people and so forth. And of course in the front office, we use also
202 the SDG to show that they have an impact and they understand that we map it, but
203 I think it's not the key lever for us to understand that for example clean water or
204 energy is something we need to be invested in.

205

206 T: That's a very interesting point. You're coming to because my next question
207 which would have been how you think, how companies can balance this profit
208 being profitable and sustainable at the same time. Because you said that investors
209 might not be very happy to invest in this company when they're not sustainable.
210 So how can you ensure or balance this? The two points, profitability and
211 sustainability?

212

213 #1: I don't think we need to balance these things right no. As a banker, it's
214 pretty easy. We have transactions where we make money. I think that should stay
215 this way. What cannot happen is that sustainability becomes something like doing
216 good and we do it because of sustainability but it's not profitable because if you
217 scale that, it doesn't make sense. So if sustainability is not something where you
218 can make money and when you have a reliable business case, I think we shouldn't
219 do it. Of course, I mean if you take solar as an example, you can see when prices
220 come, it's scalable. It doesn't mean that you need to understand in the early
221 innovation process, if that's something you want to invest in. You have of course a
222 higher risk also, but I mean that's kind of the trend. I would argue sustainability
223 needs to be profitable but do we measure already? I think what's important is that
224 we need to internalize or have a price on carbon and need to internalize that so that
225 the true costs are reflected. I think that's important, but I don't see that we have
226 these trade off discussions. I think for us it's more that in certain areas sustainability
227 is more advanced and you can do more business. Of course we are thinking of edge
228 cases where you could do a transaction or not, where we are having discussions,
229 where sustainability might be a trigger point that we still do it right because we
230 believe it's doing good, but we are not doing any I would say business because we
231 believe it has a strong impact, but it does not make money. So that's why it's more,

232 I would say, corporate social responsibility or so but it's not sustainability. So
233 sustainability is far as business and we see a lot of profitable business opportunities
234 that are great for our planet as well. So it's not that a lot of profitability deals are
235 necessarily not sustainability. I mean the market for sustainability is still very small,
236 of course there's a high competition among banks because everybody wants to be
237 in these green deals that the margins are sometimes a bit lower and that's a bit, I
238 would say the risk in this global phenomenon. For us, it's important to keep this
239 client relationships because what we and really want them to transform because in
240 some point in time, if you don't give so much about climate, we see the risk that
241 banks may be outside of euro finance. Because it gets in the shorter period very
242 attractive because nobody wants to finance this company anymore, but an outside
243 bank would do so because you get a very high return and that's a bit the risk.

244

245 T: That's interesting to say that. Green deals are still very interesting and
246 attractive for investors and banks. Given the current situation around the globe, it's
247 a good thing to hear.

248

249 #1: I mean, with Trump, we don't see a huge impact to be honest. I think "drill
250 baby drill" is a marketing campaign, but that's not going to happen because I don't
251 think that they want the oil price to go down so fast. For example, and I think in
252 last Trump administration, I think we had lower actually oil and gas exploration
253 than under Biden. I don't think you can reverse the things that are happening in
254 solar and so forth. If you look in what the US is investing in data centers, green data
255 centers, I think the impact will probably be a bit less than you get from the media.
256 I think what is interesting is that what is the right pathway because I think we are
257 now near 1.5°C. I think you need to be sure.

258 That it's also a realistic goal and that lots of firms basically can decarbonize
259 and get the support also from local governments and enable them that they can
260 achieve those goals as well.

261

262 T: Thank you very much, we are almost at the end of our interview. How do
263 you envision the future of achieving the sustainable development goals in your

264 business or in your company over the next five years? Do you think it's achievable
265 or do you think that there are too many barriers?

266

267 #1: How you can achieve the SDG as a firm, to be honest, I don't see any target
268 or so whereas with net zero, you have a clear target and you can measure it. So for
269 us achieving the net zero goal, the Sustainable Development Goals are more like
270 trying to increase the share of sustainable versus non sustainable business in the
271 firm and that's something which we measure. What is the right choice of
272 sustainable business for us? There are also transactions that are not considered
273 sustainable. Maybe another point what we will do, is that we will differentiate
274 between sustainability and finance, which I would say is the kind of the
275 sustainability but in transition finance. Currently, sustainability in a bank is clearly
276 defined, you can look it up. We have a framework for sustainable finance means
277 we are largely on the east side trying to meet the European taxonomy. On the south
278 side, there's no taxonomy, but we've at least tried to measure to market standards
279 that are available. We have a clear definition, but it is the problem with the
280 definitions, because it's very narrow, is that companies that are transitioning
281 towards net zero might not be considered as a sustainable finance company or
282 transaction and that's why we will be working on a definition that we can also
283 count transition companies against I'd say the activities which we would, I would
284 say call sustainable transition finance but that would also be something I think we
285 will then probably map against the SDG.

286

287 T: Thank you. Do you have any final thoughts or messages?

288

289 #1: No, maybe just to sum up, so for us the SDG are a framework or a
290 reference framework to demonstrate that we have an impact with what we do. It's
291 currently not something that we use as a target, so that we have an absolute goal
292 or an amount that we basically would measure to achieve an SDG. We are really
293 happy if you as a company can contribute to an SDG versus having not a
294 contribution to SDG. It's a tool to demonstrate that we have an impact versus no
295 impact. We transparently report our core business activities against the SDG and
296 within our corporate strategy which is also something where we believe what we

297 are doing and where we can have an impact on them but it's not something that we
298 are forced to do, but it's something that we use as a tool just to demonstrate an
299 impact.

300

301 #1: Thank you for the interview.

302

APPENDIX 11: Category system according to Mayring

Main category	Subcategory	Definition ¹	Example
Sustainable Development Goals	Mapping and Implementation	Mapping: the activity or process of creating a picture or diagram that represents something Implementation: the act of starting to use a plan or system	#1, l. 242-246: “We have to reverse the process. Normally, the objective was to use the different actions from the United Nations first and to adapt into a specific initiative, strategy or whatever. There was a lot of improvement, but it's still a strong silo we have. Something like five years ago, we have developed some targets or ambition levels and we try some UN principles in our initiatives. It could be in a different way, but it was more to match.”
	Reliability	The quality of being able to be trusted or believed because of working or behaving well	#2, l. 167-172: Companies use them for marketing, but they also aim to ensure sustainable development. ... , these are also beautiful, colorful pictures. You can kind of pin them to your

¹ All definitions are taken from the Cambridge Dictionary (except for CSRD, which is taken from the European Commission (n.d.))

			shirt. It's very striking, but if you actually look at which country or company has the SDG and what the agenda behind them is, it's a lot of hot air..."
	Politics	The activities of the government, members of law-making organizations, or people who try to influence the way a country is governed	#3, l. 189-192: "The National Action Plan for Human Rights, for example, is a very good example of how politicians have said in a very transparent, very good, open and long process that this is what we want, this is our attitude and opinion as a country and if you as a company can't do it, then we'll make a law out of it".
Regulatory Compliance	Corporate Sustainability Reporting Directive (CSRD)	Regulation to make sustainability performance transparent in accordance with a uniform EU reporting standard ²	#5, l. 129-133: "I think regulation is important so that we, at least in Europe, we have data we force companies to report on. But some of the regulation ... , I feel sometimes a bit uncoordinated and it's not that the business involved in a way that we come to a proposal. I

			think it also puts a lot of burden on firms and makes a very important topic unattractive”.
	Data	Information, especially facts or numbers, collected to be examined and considered and used to help decision-making, or information in an electronic form that can be stored and used by a computer	#1, l. 98-102: “We want to be perfect in sustainability but there are too many things, a lot of paper to communicate, a lot of information, a lot of data. We allocate a lot of time about reporting, about to be compliant but it is just too much. We would rather like to use our time to develop more practical action and to decrease the time for reporting and compliance”.
Corporate Strategy	Strategic Importance	Strategic: helping to achieve a plan, for example in business or politics Importance: the quality of being important	#1, l. 157-161: “ESG is not just one department, it is not a silo organization, but it's everywhere. It's really part of the DNA of the company and if we are not able to implement that, it doesn't matter if we have the best technology or whatever. ... Sustainability needs to be part of our DNA, and our culture if we want

			really to make an impact”.
	Profitability	the fact that something produces or is likely to produce a profit	#3, l. 261-264: “Profitability is still the core issue, and there is no change in the achievement thresholds or hurdles in the company. For the individual measures, one must fairly say there are actually no consequences on the topic of economic return”.
	Investment and Innovation	Investment: the act of putting money, effort, time, etc. into something to make a profit or get an advantage, or the money, effort, time, etc. used to do this Innovation: the creating and use of new ideas or methods	#5, l. 36-42: “As a bank we see our role of course also to make sure that clients understand how important sustainability is also for them. So it's not just doing good, it's really central to their business model. If they're not adapting it, I think they will go out of business at some point in time and that's why I think that's an important role we play...”.
Corporate Culture and Mindset	Employee Attitudes	Employee: someone who is paid to work for someone else	#1, l. 155f.: “Technology is not necessary or innovation, but it's more people. It's more at the company. It's people's

		Attitude: a feeling or opinion about something or someone, or a way of behaving that is caused by this	mindset and the culture. I think it's super important that sustainability helps us to decide how we want to hire people, how we want to buy material, how we want to develop our strategy”.
	Organization	a group of people who work together in an organized way for a shared purpose	#2, l. 57ff.: “We have a matrix organization with representatives from various departments, including Legal, Procurement, and Global Environment, Health, and Safety. We also have contractors with limited contracts”.

[source: own representation]

This blank sheet is the **back cover**, so there is no heading (there is a change of section).