Materiality Report 2024 Ferro Duo GmbH

→ Our company is certified according to international standards for environmental management (DIN EN ISO 14001), quality management (DIN EN ISO 9001), and occupational health and safety (DIN ISO 45001).

Contents

Materiality Report 2024

Introduction to the Materiality Report 2024

The world keeps turning, and we welcome you to our 2nd Materiality Report 2024 by Ferro Duo GmbH.
We are convinced: These standards play a crucial role in achieving balanced, transparent, and comparable ESG disclosure, while also enhancing strategic management and the integration of sustainability in companies.

Integration into Financial Organization

We have continued the responsibility for ESG accounting and reporting within our financial organization. This creates a close connection between ESG controlling, reporting, and our existing financial processes.

This structure facilitates alignment regarding deadlines, tools, templates, and reporting products, enabling coherent, verifiable, and adaptable reporting. At the same time, our finance and ESG teams continue to work closely with internal sustainability experts and external service providers. This ensures we meet today's requirements and proactively shape future developments.

Voluntary Implementation of ESRS – with Vision

Even though FERRODUO is not directly subject to CSRD reporting requirements, we have consciously chosen to voluntarily publish a comprehensive Materiality Report based on the ESRS structure. Our goal: to apply the principles of double
materiality early and prepare professionally for future regulatory requirements.

This report reflects our identity as a responsible company. It documents our environmental, social, and ethical initiatives and aligns with established industry standards. Our stakeholders gain transparent insight into our sustainable business strategy, concrete actions, and achieved progress.

Double Materiality as a Guiding Principle

The current double materiality analysis (DWA) was conducted with reference to the ESRS. Certain conscious delimitations were made to make the initial analysis manageable. At the same time, we are closely monitoring the methodological development and preparing for potential full compliance with ESRS requirements.

Transparency, Clarity, Responsibility

We are very pleased to present our current Materiality Report to you. We hope you find it informative, clear, and comprehensible, and that you quickly and clearly find the information relevant to Ferro Duo GmbH's sustainable direction. Thank you for your interest. Enjoy reading!

Cordula Kehrmann & Carsten Nass ESG Manager HSE Manager &
Head of Sustainability Committee

Strong Partner

Strategic Partnership between Ferro Duo and Lafayette Mittelstand Capital starting in 2025

The Ferro Duo Group, a leading company in industrial waste recycling and circular economy, announces that starting in 2025, it will form a strategic partnership with Lafayette Mittelstand Capital. This collaboration aims to support Ferro Duo's next growth phase and advance the implementation of its extensive project pipeline both nationally and internationally.
The Ferro Duo Group, comprising Ferro Duo GmbH, Ferro Duo Switzerland GmbH, Ferro Duo UK Limited, and Ferro Duo US, Inc., acts as a strategic partner in the circular economy for the cement, steel, and chemical industries. With innovative solutions for industrial waste treatment and the utilization of mineral by-products, the group significantly contributes to sustainable value chains. Alongside its existing business, Ferro Duo is increasingly focusing on future-oriented projects, including recycling facilities in Duisburg, which are already underway. Additional projects are in the planning stages and will be implemented directly at customer locations to address issues like CO reduction, resource and water conservation, as well as waste minimization. Through this partnership, technologies can be introduced on a large scale to customers, meeting the demand for sustainable and CO -low resources and reducing Europe's reliance on global supply chains. Ferro Duo and Lafayette make a joint contribution to sustainability and the circular economy, enhancing Europe's global competitiveness!

Overview of our strategic sustainability priorities

Sustainability in circular economy is a key component of our business activities. In all our actions, we are driven by the goal to create the greatest possible value for both society and our company.

We have three strategic sustainability priorities—Environment, Social, and Corporate Governance (ESG)—each with specific priorities. These areas address our core sustainability impacts, risks, and opportunities. They support our efforts to achieve rapid and broad growth that benefits both the planet and people while laying the foundation for a resilient business.

On the following pages, we explain how we identify and evaluate our significant impacts, risks, and opportunities through a double materiality analysis.

E

ENVIRONMENT

A circular economy that promotes sustainable actions

APPROACH

We are increasing our recycling efforts while developing effective strategies for waste reduction, enabling our customers to actively contribute to environmental protection

PRIORITIES

1. Decarbonizing our operations by 2035
2. Complete transition to circular resource management

S

SOCIAL

A sustainable change that focuses on people

APPROACH

We are committed to promoting a green energy transition that benefits everyone and excludes no one

PRIORITIES

1. Promoting equality, diversity, and inclusion in the workplace
2. Ensuring health, safety, and satisfaction of our employees

G

GOVERNANCE

A governance that enables making the right decisions

APPROACH

We strive to integrate sustainability and ethical principles into the processes and decision-making across our entire organization

PRIORITIES

1. Promoting and ensuring responsible business management
2. Careful selection and review of our suppliers and business partners
3. Implementation of sustainability principles in all business areas
4. Active support and engagement in sustainable practices within the industry

Double Materiality Analysis (DWA)

ESRS 2

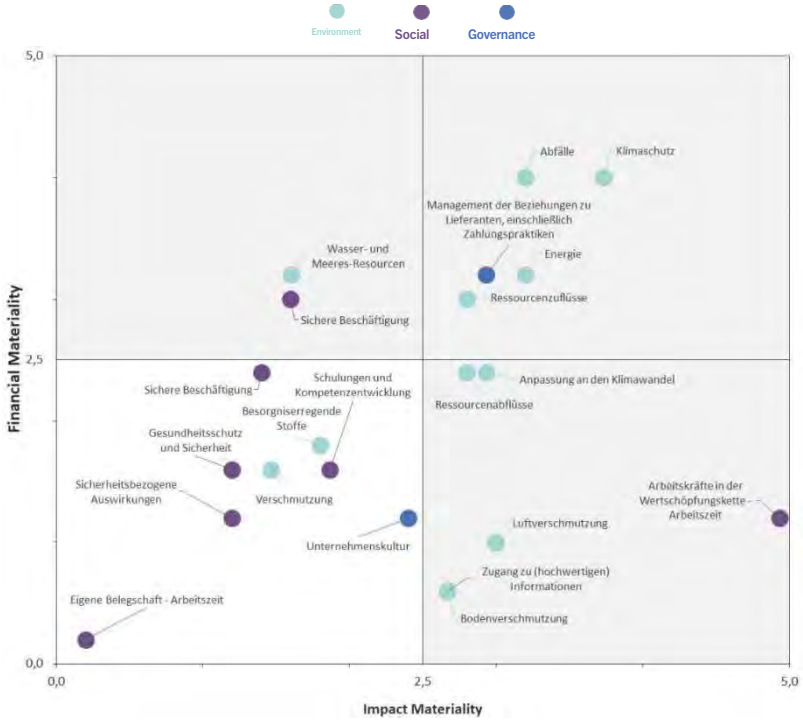
Outcome

We have identified our impact on the environment and society (impact materiality), as well as the sustainability-related risks and opportunities we face (financial materiality). The outcome is aggregated by ESRS themes, highlighting that E1, E2, E3, E5, S1, S2, and G1 are our most significant sustainability topics.

Environmental impacts and risks in E1 and E5 are closely linked to our strategic efforts to rapidly expand renewable energy. Increasing new capacities in renewable energy reduces climate impact but also requires substantial amounts of natural resources like steel, which has indirect negative effects on the climate and environment.

This expansion also affects people and communities, as reflected in the impacts and risks of section S2. We focus our efforts on ensuring the energy transition is fair and inclusive, benefiting those working along the renewable energy supply chains and local communities.

The next page provides a detailed illustration of where our key impacts, risks, and opportunities occur across our entire value chain, highlighted in gray on the matrix to the right.



We have established a structured process for conducting the double materiality analysis, starting with assessing the impact materiality and followed by financial materiality.

Approach

1. Engaging relevant stakeholders, such as banks, ESG experts, and advisors
2. Identifying significant impacts, risks, and opportunities
3. Evaluating the key impacts, risks, and opportunities
   a. In assessing the “Magnitude,” we analyzed how severe or beneficial the impact on the environment and people is
   b. The “Scope” considered the spread of impacts, measured by parameters like the number of locations, employees, or financial expenditures
   c. “Irreversibility” captured whether impacts can be restored to their original state
   d. For potential impacts, “Probability” was also assessed
   e. In cases of negative impacts on human rights, the “Severity” takes precedence over “Probability”
4. Review by stakeholders and management
5. Managing significant impacts, risks, and opportunities

Material sustainability-related impacts, risks, and opportunities

The following tables outline the sustainability-related impacts, risks, and opportunities we have identified as material and assessed within our double materiality analysis.

As shown in the matrix on page 5, seven out of ten ESRS topics are significant for us. Each material ESRS topic is presented in the following tables, where we specify the subtopics to which our material impacts, risks, and opportunities relate, such as adaptation to climate change, climate protection, and energy.

Additionally, the tables indicate whether the impacts, risks, and opportunities occur within our own operations (EB) or in the upstream or downstream value chain (VWK/NWK). We also show whether our impacts are positive or negative.

Brief descriptions of the material impacts, risks, and opportunities are included in the tables. Further information on how we respond to these impacts, risks, and opportunities will be detailed in next year's sustainability report for the year 2024.

By 2026, we will continue to refine our DWA process and methodology based on the new EFRAG guidelines.

(EB) Own Operations (EB)
(VWK) Upstream Value Chain **(NWK)** Downstream Value Chain

ENVIRONMENT

E1
Climate Change > Adapting to Climate Change

	Impact, Risk or Opportunity	Description
Positive Impact (EB)	Recycling and reprocessing under the Circular Economy Act	The circular economy is integral to Ferro Duo's DNA and represents a core strategic approach for us to minimize waste, conserve resources, and establish a sustainable economy. We adhere to the waste hierarchy outlined in the European Waste Framework Directive - prioritizing waste prevention over reuse, reuse over material recovery, material recovery over energy recovery, and recovery over disposal. By applying this strategy, we can make significant progress in drastically reducing environmental impacts, maximizing resource efficiency, and contributing to the reduction of greenhouse gas emissions. This approach is crucial not only in the fight against climate change but also serves as a driver for innovation and economic growth by transforming waste into valuable resources. By committing to the principles of the circular economy, we move closer to a sustainable future that benefits both our planet and society.
Negative Impact (EB)	Processing industrial by-products and waste products, especially in key sectors such as cement, steel, and chemicals	Emissions along our supply chain arise from procurement, manufacturing, and delivery of industrial by-products and waste products, especially in key sectors such as cement, steel, and chemicals, as well as through the use of our sold products throughout the value chain. We address these impacts through our strategic goals and measures to decarbonize our supply and value chain.
Risk (EB)	Physical risks, particularly related to flooding, which disrupts our supply chain and product delivery	Rising transport costs due to flooding pose a significant risk for us. This particularly affects the economics of our exports and imports of goods via seaports and the Rhine. Long-term financial burdens and operational risks can arise if our adaptation measures do not adequately respond to the pace or extent of climate change. This could lead to significant disruptions in our supply chain and increased operating costs, threatening the long-term competitiveness and profitability of our company.
Opportunity (VWK)	Physical risks, especially connected to flooding, disrupting the international supply chain and product delivery outside Europe	Short term: The rising transport costs due to physical risks make regionally and locally produced materials economically more attractive, as they reduce the costs of imports. This promotes local production and decreases dependence on international supply chains. Long-term: In the long term, we aim to limit imports from countries that promote climate change adaptation measures, thus increasing our supply security. This also opens up long-term competitive advantages for us by being pioneers in sustainable and climate-adapted technologies and processes. This not only strengthens our resilience against global market changes but also sustainably improves our innovation capability and market position.

ENVIRONMENT

E1
Climate change > Climate protection

	Impact, risk or opportunity	Description
Positive Effect (EB)	Switching to green energy and Heat recovery during drying processes	Short-term: We are transitioning to green energy and installing heat recovery systems in our drying processes, particularly in dryers 1 and 2 at Plant 3. This directly contributes to reducing CO_2 emissions and boosts our energy efficiency. Medium-term:
	Adjusting our Business operations and strategies towards more sustainable practices	We aim to align our business operations and strategies with more sustainable practices, making us more resilient to market fluctuations and regulatory changes. An example of this is the transition of drying processes from natural gas to green hydrogen in dryers 1 and 2 at Plant 3. Long-term: We aim to secure our long-term existence and profitability. To achieve this, we align with global climate goals and reduce our dependency on fossil fuels. An example of this is converting our internal logistics to electric drives and/or fuel cells.
Risk (EB)	Switching to green energy and heat recovery during drying processes	In fact: We are introducing climate-friendly technologies and processes, including grinding granulated blast furnace slag into a hydraulic binder (slag powder), which replaces cement clinker and by-products from coal combustion. These innovative approaches will require initial financial investments. Additionally, we have already initiated several ongoing projects: A thermal facility for processing residual materials from the steel industry, which includes the use of green energy and hydrogen, with the aim of returning them to the steel plant to promote circular economy. Electrification of dryers in Plant 3, with an optional use of hydrogen. Implementing heat recovery systems for dryers in Plant 3, aiming to increase energy efficiency. Our measures are part of a holistic approach to promoting sustainable practices and reducing our environmental footprint.
	Adjusting our Business operations and strategies towards more sustainable practices	Short-term: There is a risk that other companies may relocate their production to non-EU countries, which could lead to competitive disadvantages for us. Furthermore, products manufactured abroad might have a larger CO_2 footprint due to longer transportation routes. Medium-term: There is a risk that the facility conversion may not pay off. Initial uncertainties and operational disruptions might occur due to the radical restructuring of operational processes. Long-term: Possible long-term risks could arise if we underestimate the pace of market change towards more sustainable practices or fail to adapt quickly enough. This could threaten our competitiveness and long-term stability.

ENVIRONMENT

E1
Climate change > Climate protection

	Impact, risk or opportunity	Description
Opportunity (EB)	Switching to green energy and heat recovery during drying processes	In fact: We implement energy-efficient solutions. This increases operational efficiency and results in significant cost savings.
	Adjusting our Business operations and strategies towards more sustainable practices	Short-term: We proactively take climate protection measures: We are switching to renewable energy sources and implementing heat recovery systems. This enables us to significantly reduce our CO_2 footprint. We are also committed to environmental protection and sustainability by choosing to switch to green energy and efficiently utilizing waste heat. Furthermore, we have adapted our business operations to energy-efficient solutions, such as optimizing production processes and targeted resource use. This has not only led to cost savings but also increased our operational efficiency. These actions demonstrate our environmentally conscious behavior and strengthen our brand image and market presence. Medium-term: We explore new business models and opportunities in a low-carbon economy, such as promoting regional production. This opens up substantial growth opportunities for us. Long-term: Long-term competitive advantages and a leading position in our industry are achieved through the full integration of sustainable and environmentally friendly practices. An example of this is the milling of blast furnace slag or the production of tempered clay to reduce the clinker/cement factor.

ENVIRONMEN
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E1

Climate Change > Energy

Positive impact (EB):

Actually:
We are reducing our emissions through more efficient energy use and increased use of renewable energies.

Short term:
We aim to reduce energy consumption and operating costs by improving our energy efficiency measures, for example through heat recovery in our drying processes (dryers 1 and 2 in Plant 3).

Medium term:
We increase our resilience to volatile energy prices by reducing our dependence on fossil fuels through the purchase of green electricity and the use of green hydrogen.

Long term:
We secure our energy supply and minimize climate-related business risks through our sustainable energy strategy.

Negative impact (NWK):

Actually:
Greenhouse gas emissions arise from the supply chain during the manufacture and installation of renewable energy systems.

Risk (VWK):

Energy consumption, especially through combined heat and power
Combined heat and power plants (CHP plants) form the basis for our production.

Actually:
If our partners' industries produce less due to rising energy costs, this may lead to a reduction in energy supplies to us, leaving us dependent on fossil fuels.

Short term:
We are transitioning to renewable energy technologies and energy efficiency measures, such as the use of green hydrogen instead of natural gas. This requires significant investments and brings with it uncertainties regarding the availability of green hydrogen.

Medium term:
There is a risk of operational disruptions if renewable energy sources and storage technologies are not sufficiently reliable.

Long term:
In the long term, potential regulatory and legal risks could arise, particularly if we fail to comply with new energy regulations and reduction targets, for example due to insufficiently advanced technologies, cost constraints or lack of expertise, or if the demand for green hydrogen exceeds the available quantity.

Chance (EB):

Actually:
We reduce our emissions through more efficient
Energy use and increased use of renewable energies.

Short term:
We utilize heat recovery in our drying processes, thus increasing operational sustainability and energy efficiency within our company. This enables us to reduce our carbon footprint and position ourselves as an environmentally conscious and responsible company. These measures strengthen the trust of our partners, customers, banks, and other relevant stakeholders. However, we recognize that substituting natural gas is not economically and technically feasible in the near future, and its availability remains problematic.

Medium term:
We are working to reduce our CO_2 footprint by substituting natural gas with hydrogen in a chemical process, particularly for reducing iron-containing materials to their metallic form in the furnace. Switching from gray electricity to green electricity is also part of our strategy. Furthermore, we are establishing a process for treating oily sludge with oil recovery for material recycling to achieve additional environmental benefits. We are taking into account that the use of hydrogen as a heating medium is inefficient and only green hydrogen makes sense, as hydrogen from natural gas cannot be used as a substitute for natural gas.

Long term:
We promote our company's growth by playing an early role in shaping the energy transition, for example, through a new technology that allows not only the metals but also the oil to be recycled from oil-containing metal sludge. This makes the process more efficient, reduces the carbon footprint, and conserves resources. By actively participating, we can take advantage of potential subsidies or tax breaks. This strengthens competitiveness and

Future viability of our company.

ENVIRONMENT

E2
Environmental Pollution > Air Pollution

Negative Impact (EB)

Indeed:
We operate all filtration systems (dryer exhaust, hall exhaust, filter exhaust, silo top filter exhaust) in accordance with the Technical Instructions for Maintaining Air Purity (TA Luft) and legal emission protection guidelines. This ensures we provide good working conditions and protect the health of our employees, for example, by reducing indoor air pollution.

Impacts on Human Health:
1. Respiratory Diseases: Air pollution can cause respiratory diseases such as asthma, bronchitis, and COPD. Fine dust and other pollutants impair lung function and increase the risk of respiratory infections.

2. Cardiovascular Diseases: Long-term air pollution increases the risk of cardiovascular diseases as pollutants like nitrogen dioxide (NO_2) and fine dust can trigger inflammation, heart attacks, and strokes.

3. Cancer Risk: Some air pollutants, especially fine dust and certain chemical compounds, are carcinogenic and can increase the risk of lung cancer and other types of cancer with prolonged exposure.

4. Cognitive Function Impairment: Studies have shown that air pollution can negatively affect the brain, including impairing cognitive functions and increasing the risk for neurodegenerative diseases like Alzheimer's.

Environmental Impacts:

1. Damage to Ecosystems: Air pollution affects plants and animals and can contribute to soil and water acidification through pollutants like sulfur dioxide (SO_2) and nitrogen oxides (NOX), worsening living conditions for many organisms.

2. Climate Change: Greenhouse gases like carbon dioxide (CO_2) and methane (CH_4) contribute to climate change, leading to extreme weather events and rising sea levels.

3. Ozone Depletion and Smog: Pollutants like NOX and VOCs contribute to the formation of ground-level ozone and smog, affecting air quality and the health of plants and animals. 4) Visibility Issues and Aesthetic Impairments: Air pollution can reduce visibility in urban and natural environments, altering the aesthetic appearance of landscapes. By operating our filtration systems in compliance with TA Luft and emission protection guidelines, we have taken an important step toward reducing air pollution. This leads to several long-term positive effects:

1. Improving Company Image and Long-term Cost Savings: We invest in modern filtration systems and eco-friendly technologies, such as exhaust filtration systems for storage and production halls, drying facilities, and for pneumatic filling of our storage silos. This helps us save costs by avoiding fines and remediation expenses while making our production more efficient. These measures also secure and strengthen our market position, as environmentally conscious customers and partners prefer to work with us.

2. Securing Market Position: We focus on eco-friendly practices. For instance, we substitute natural raw materials in our formulations with by-products or waste, achieving resource conservation. This secures and strengthens our market position as environmentally conscious customers and partners prefer to work with us.

3. Sustainable Business Development: We are committed to maintaining clean air, promoting sustainable development that is beneficial both ecologically and economically.

Summary:
Air pollution has severe negative impacts on human health and the environment. However, by operating our filtration systems in compliance with TA Luft and emission protection guidelines, we ensure good working conditions and protect our employees' health. In the long run, our company can enhance its image and secure its market position through eco-friendly practices, leading to sustainable economic success. Investments in clean technologies and emission reductions are beneficial both ecologically and financially for us.

ENVIRONMENT

E2
Environmental Pollution > Air Pollution

Risk (EB)

Short-term:
We are required to have regular emission measurements conducted by TÜV, which can result in financial burdens:

1) Measurement and Monitoring Costs: Compliance requires regular inspections by TÜV, which are costly and must be funded from our current budget.

2) Implementation of New Emission Control Technologies: To meet strict emission regulations, we may need to invest in new emission control technologies. These technologies, like advanced filtering and cleaning systems, require high initial investments and ongoing maintenance costs.

Mid-term:
Violations of emission regulations can have significant mid-term financial and reputational consequences:

1) Fines and Penalties: Non-compliance with emission regulations can lead to significant fines that impact our profitability and pose unexpected burdens on our financial planning.

2) Loss of Trust Among Stakeholders: Breaches of emission regulations can lead to a loss of trust among customers, investors, and other important stakeholders, weakening our business relationships and jeopardizing future business opportunities.

Long-term:
The long-term financial risks associated with air pollution and non-compliance with emission reduction goals are significant:

1) Legal Disputes:
Long-term non-compliance with emission regulations can lead to costly and time-consuming legal disputes, distracting management from important business activities.

2) Permanent Reputation Damage:
Failing to meet long-term emission reduction goals can cause lasting damage to our reputation, making it harder to attract new customers and investors and maintain existing business relationships.

3) Competitive Disadvantages:
Companies that adhere to strict emission standards can be perceived as leaders in environmental protection. We could fall behind competitors who invest more in eco-friendly technologies, resulting in a loss of market share.

Summary:
Air pollution and the associated financial risks present a major challenge for us. In the short term, we must cover costs for emission measurements and new technologies. In the mid-term, violations of emission regulations could lead to fines and a loss of trust. In the long term, there is a risk of legal disputes and permanent reputational damage.

To counter these risks, we continuously invest in modern emission control technologies and ensure compliance with all legal requirements through regular emission measurements. Proactive measures, such as regular maintenance by external and internal experts, help us minimize financial burdens and strengthen our image as a responsible and environmentally conscious market leader.

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E2
Environmental pollution > Air pollution

Chance (EB)

Actually:
We are committed to consistently complying with emissions control regulations. This strategy not only offers environmental benefits but also opens up significant financial opportunities.

Improved public awareness:

1) Neighborhood relations:
By strictly adhering to emissions regulations, we demonstrate our responsibility to the local community. Reducing air pollution improves air quality and overall well-being in the areas surrounding our operations. This creates a positive perception in the neighborhood, helping to avoid potential conflicts and gain community support.

2)Local support and cooperation:
A positive relationship with the community offers practical benefits, such as less resistance to business expansion, support with permitting processes, and a generally more favorable business environment. Such relationships are valuable for the long-term stability and growth of our company.

Positive perception among customers and partners:

1)Environmentally conscious customers:

In a market that increasingly values environmental responsibility, we address an important target group by adhering to high environmental standards. Customers who prefer environmentally friendly products and services will be more inclined to

Establish business relationships with us. This can lead to an expanded customer base and increased sales.

2)Stronger partnerships:
Business partners who also value sustainability will view us as a preferred partner. A good environmental record strengthens collaboration with other environmentally conscious companies and leads to long-term, stable business relationships. This can consolidate our market position and open up new business opportunities.

Long-term financial opportunities:

1) Market leadership in environmental protection:
By proactively complying with emissions regulations and investing in environmentally friendly technologies, we can take a leadership role in environmental protection. This not only enhances our image but also attracts the attention of investors and business partners who are interested in investing in sustainable companies.

2) Promoting innovation:
Consistent compliance with legal regulations often requires the use of state-of-the-art technologies and innovative processes, such as thermal processes for phosphate recovery from sewage sludge. This promotes a culture of innovation that leads to more efficient processes, cost savings, and improved competitiveness in the long term.

3) Competitive advantages:
In an increasingly regulated market environment, early adaptation to strict environmental regulations can give us a competitive advantage. Companies with advanced emissions control systems are better equipped to respond to future regulatory changes and can thus minimize risks and uncertainties.

Summary:
Consistent compliance with emissions control regulations offers us not only ecological benefits but also numerous financial opportunities. Improved public and customer awareness, as well as strong partnerships, contribute to the long-term stability and growth of our company. By positioning ourselves as an environmentally conscious market leader and promoting innovation, we can strengthen our competitiveness and successfully assert ourselves in a challenging market environment.

ENVIRONMEN
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E2
Environmental pollution > Soil pollution

Negative impact (EB)

Actually:
The floors at our sites are sealed and comply with the requirements of the German Federal Water Act (WHG) and the German Plant Ordinance for Substances Hazardous to Water (AwSV). A baseline condition report has been prepared for Plant I and is updated regularly.

Effects on human health:

1) Exposure to pollutants:
Soil pollution can lead to the accumulation of toxic chemicals such as heavy metals and industrial pollutants. Humans can be exposed to these pollutants through direct contact or through contaminated food and water, which can lead to health problems such as cancer, neurological disorders, and reproductive problems.

2) Contaminated groundwater:
Soil pollution can affect groundwater, an important source of drinking water. Pollutants can seep into and contaminate groundwater, affecting water quality and posing health risks to the public.

Impact on the environment:

1) Soil quality and fertility:
Soil pollution can alter the physical and chemical properties of soil, impairing its fertility and ability to support plants. This can reduce agricultural productivity and jeopardize food supplies.

2) Ecosystems and biodiversity:
Contaminated soil can directly harm flora and fauna. Pollutants can affect plant roots and inhibit growth, while animals that use or live in the soil can be poisoned. This can lead to a decline in biodiversity and the destruction of ecosystems.

Short term:
Soil contamination can result in immense remediation costs. Removing contamination often requires complex and expensive measures such as soil excavation, decontamination, and backfilling with clean soil. These measures are not only costly but can also cause significant disruption to the affected community and surrounding areas.

Summary:
Although the soils at our sites are properly sealed and monitored, soil contamination remains a serious threat to human health and the environment. Regular monitoring and advanced protective measures are essential to minimize negative impacts and ensure sustainable use of soil resources. The long-term health of people and the environment depends heavily on how effectively these challenges are addressed.

ENVIRONMENT

E2
Environmental pollution > Soil contamination

Risk (EB)

Short-term:
Soil contamination can lead to significant financial burdens. If our sites face soil contamination, immediate and extensive cleanup operations are required, including:

1) Excavation and disposal:
Contaminated soil must be safely removed and disposed of, leading to high transport and landfill costs.

2) Decontamination:
On-site chemical treatments or biological methods might be necessary, which can be expensive and time-consuming.

3) Monitoring and reporting:
Regular testing and reports are essential to document the progress of the cleanup and ensure soil quality is restored. This demands additional personnel and financial resources.

Medium-term:
Another financial aspect of soil contamination affects the company's image:

1) Loss of trust:
Soil contamination can lead to a significant loss of trust among customers, investors, and the public. This means we might lose customers or face challenges in finding new business opportunities.

2) Damage to reputation:
Negative media coverage can harm our reputation over the long-term, potentially leading to boycotts and a decline in market share.

3) Additional PR costs:
To restore the damaged image, we may need to invest significant resources in PR and marketing campaigns. This can cause additional financial burdens and strain our resources further.

Long-term:
The long-term financial risks of soil contamination involve several important factors:

1) Long-term remediation costs:
Fully cleaning up a contaminated site can take years and require ongoing investment, impacting our financial planning and liquidity.

2) Operational shutdowns during renovation periods:
During cleanup and possible renovations, significant operational shutdowns can occur. This leads to production halts and potential loss of market share as customers may turn to competitors.

3) Costs for improvements:
After cleanup, additional steps are often necessary to prevent future contamination. This may require investments in modern technologies and infrastructure, posing further financial burdens.

Summary:
For us, soil contamination carries significant financial risks at short-term, medium-term, and long-term levels. Short-term cleanup costs can be substantial. In the medium-term, our image may suffer, leading to a loss of trust and additional PR expenses. Long-term, ongoing cleanup costs, operational shutdowns during renovations, and necessary improvements present a major financial challenge. Therefore, it's crucial that we take preventive measures and consistently invest in protecting and monitoring our soil areas to minimize these risks and ensure sustainable business growth.

ENVIRONMENT

E2
Environmental pollution > Soil contamination

Opportunity (EB)

Long-term:
Despite the challenges posed by soil contamination, there are significant financial opportunities for us. By taking proactive measures and positioning ourselves as a responsible player in the disposal industry, we can benefit in the long-term.

1) Trustworthiness and reliability:
By adhering to high standards and avoiding soil emissions, we gain the trust of customers and partners. This strengthens our position as a reliable and responsible waste management company.

2) Long-term contracts and financial stability:
A good image and high environmental standards can lead to long-term contracts with industrial clients, municipalities, and other organizations relying on sustainable waste solutions. These contracts secure ongoing revenue and offer us financial stability.

3) Competitive advantages through a strong environmental image:
A robust environmental image gives us a competitive edge. Customers prefer companies that act responsibly towards the environment and use sustainable practices, helping us gain market share and stand out from less eco-friendly competitors.

4) Attractiveness to investors:
Our eco-friendly and responsible practices make us more appealing to investors. This facilitates access to capital and enhances our financing opportunities, strengthening our expansion prospects and innovation capabilities.

5) Cost savings by avoiding soil emissions: Preventing soil contamination saves substantial long-term costs that would otherwise be spent on cleanups and environmental regulations. These savings can be reinvested into other areas of the company to foster growth and innovation.

6) Legal and regulatory benefits:
Meeting strict environmental standards and avoiding soil emissions reduce the risk of legal disputes and fines. This protects us from financial penalties and supports a stable business operation.

Long-term presents numerous financial benefits from a proactive and environmentally conscious business strategy:

1) Strengthening market position:
By positioning as a leading waste management company with high environmental standards, we can strengthen our market position and unlock new business opportunities.

2) Sustainable revenue sources:
Long-term partnerships and contracts ensure continuous revenue and financial stability.

3) Reduced risk and cost savings:
Avoiding soil contamination reduces long-term risks and saves significant costs, which can be reinvested in other business areas.

4) Improved financing opportunities:
A strong environmental image and responsible actions make us more attractive to investors and ease access to capital.

Summary:
By preventing soil contamination and adhering to high environmental standards, we minimize financial risks and take advantage of long-term financial opportunities. Our good image as a reliable and environmentally conscious waste management company strengthens our market position, creates new business opportunities, and ensures sustainable revenue. By investing proactively in environmental protection and positioning ourselves as a responsible partner, we lay the foundation for a successful and sustainable future.

ENVIRONMENT

E5
Circular Economy > Resource Inflows

	Impact, Risk or Opportunity	Description
Positive Impact (EB)	Production based on By-products and waste	Our production method, which relies over 95% on by-products and waste and heavily focuses on the circular economy, has significant effects on both people and the environment. This approach brings many positive effects: 1) Environmental Protection: By using by-products and waste as raw materials, we reduce environmental strain. Instead of tapping into new resources, we reuse existing materials, which lowers our ecological footprint. 2) Waste Reduction: Our focus on the circular economy helps minimize the amount of waste that would otherwise end up in landfills. This supports sustainable waste management and helps prevent pollution. 3) Resource Efficiency: Using by-products and waste increases the efficiency of resource usage. This reduces pressure on natural resources like forests, minerals, and water. Using by-products and waste increases the efficiency of resource usage. This reduces pressure on natural resources like forests, minerals, and water.
Negative Impact (VWK)	Dependence on supply of by-products and waste	Our production method, which relies over 95% on by-products and waste and heavily focuses on the circular economy, has significant effects on both people and the environment. This approach also presents some challenges: 1) Quality Assurance: The use of by-products and waste as raw materials can affect the quality of manufactured goods. It is crucial to ensure that the materials used meet the required standards to guarantee the functionality and safety of products. 2) Logistics and Procurement: The availability of by-products and waste as raw materials can vary. This requires careful planning and organization of procurement and logistics processes to ensure continuous production.

ENVIRONMENT

E5
Circular Economy > Resource Inflows

	Impact, Risk or Opportunity	Description
Risk (VWK)	Production based on By-products and waste	The growing demand for sustainable solutions requires ongoing adaptation. We develop products and processes that replace natural resources with recycled materials. Short-term: Disruptions in supply chains can lead to production issues, especially when critical materials are affected. Mid-term: Price volatility in raw materials can complicate our cost planning. Long-term: Our dependence on suppliers and potential challenges in switching to alternative resources or suppliers pose risks in market changes.
Opportunity (EB)	Production based on by-products and waste	Using by-products and waste offers economic advantages. By reducing material costs and optimizing production processes, we can cut costs and strengthen our competitiveness. We deliberately pursue a strategy with a high rate of recycled raw materials. Short-term: We introduce additional recycling processes. This provides the opportunity to conserve natural resources, such as recycling phosphate from municipal sludge and using packaging materials made from recycled content. This brings both ecological and economic benefits. Mid-term: Access to new and technologically advanced recycling materials, like oil from oily metal sludge, enables the development of innovative products and services. This opens up the possibility to diversify our product lines and enter new markets. Long-term: By establishing sustainable, regional resource strategies, we can boost our resilience to resource fluctuations in the international market. We might expand local production capacities, like producing tempered clays and geopolymers, to replace dwindling material streams from the primary industry. This increases our independence from global supply chains and creates new opportunities for value creation and innovation.

ENVIRONMENT

E5
Circular Economy > Resource Flows

	Impact, Risk or Opportunity	Description
Positive Impact (EB)	Designing products and materials in line with the principles of the circular economy Increasing the extent to which products, materials, and waste processing are reused	Short-term: We optimize material usage, reduce waste, and enhance our operational efficiency. This leads to more effective resource use and lessens environmental impact. Mid-term: We improve our material management, saving costs and reducing disposal expenses. This boosts our economic efficiency and reduces our ecological footprint through more efficient resource use. Long-term: We use recycled packaging materials, ensuring long-term resource availability and decreasing dependence on volatile raw material markets. This sustainable practice supports the environment and stabilizes our supply chain.
Negative Impact (NWK)	The expected durability, reusability, repairability, disassembly, refurbishment, and recycling of the products we market are difficult to control and influence	Limited durability, reusability, repairability, disassembly, refurbishment, and recyclability of our products can negatively affect people and the environment. For the Environment: Products that aren't durable or reusable turn into waste faster, filling landfills. Limited repair and disassembly options result in the loss of valuable materials and increase the demand for new raw materials, leading to environmental degradation. Non-recyclable products contribute to pollution and ecosystem damage. For People: Consumers often have to buy new products, increasing their financial burdens and affecting everyday sustainability. Environmental problems from inefficient waste management, like pollution and resource scarcity, negatively impact long-term quality of life and health. Dependence on new raw materials can cause economic instability, especially in raw material-importing regions.

ENVIRONMENT

E5
Circular Economy > Resource Flows

	Impact, Risk or Opportunity	Description
Risk (EB)	Inefficient use of resources or excessive waste production	Short-term: Potential cost increases and operational disruptions due to inefficient resource use or excessive waste production can raise our operating costs and impact our business performance. Mid-term: Stricter environmental regulations and possible penalties for non-compliance with recycling and disposal rules could lead to additional costs and threaten our financial stability if we fail to respond timely. Long-term: Failure to meet environmental standards can permanently damage the company's image and cost market share. Customers and partners might prefer eco-friendly alternatives. Additionally, rising raw material prices, especially for oil-based materials, could strain production costs and long-term profitability.
Opportunity (EB)	Market differentiation through using more sustainable packaging materials and thereby reducing environmental impacts	Short-term: We use sustainable packaging materials, like 100% recyclable cardboard boxes and bags made from PE recyclate, allowing us to differentiate in the market and reduce environmental impacts. This can enhance perception among eco-conscious customers and boost our sales. Mid-term: A positive image as a sustainable business prioritizing resource conservation and environmental protection can set us apart from competitors. Using recycled packaging materials also offers savings potential, lowers production costs, and increases profitability. Long-term: In the long term, we aim to foster innovation and improve the environmental friendliness of our products and packaging, such as using compostable paper bags instead of PE bags in biogas plants. Introducing reusable packaging instead of single-use packaging is also a sustainable option for us to reduce waste and environmental impact. This fosters long-term customer loyalty and market expansion. A sustainable company image can attract more loyal customers and new customer groups, enhancing long-term stability and growth opportunities.

ENVIRONMENT

E5
Circular Economy > Waste

Positive Impact (EB):
Recycling waste

Besides waste prevention and reuse, material recovery holds special importance in our waste hierarchy. We have seen ourselves as part of the circular economy since our founding, focusing on recycling waste to conserve natural resources and reduce environmental impact.

Actually:
At our Duisburg facilities, we recycle 43 different types of waste. This conserves natural resources and prevents waste disposal, leading to a significant reduction in environmental impact. These measures contribute to a cleaner and healthier environment, improving people's quality of life.

Mid-term:
We develop resource-efficient technologies to promote circular economy and enhance our ecological image, building trust with stakeholders and customers. Examples include recycling oil-containing sludges to recover metal compounds and oil, as well as producing new cement components with a low CO2 footprint. These innovations foster sustainability and reduce pollution.

Long-term:
Sustainable resource use and reducing the CO2 footprint of our products contribute to sustainability throughout our customers' value chain. By using recycled materials and reducing emissions, we make a significant contribution to global climate protection and preserve natural resources for future generations. This creates a more livable environment and promotes the well-being of people worldwide.

Negative Impact (NWK):
Recycling waste

Although material recovery in the waste hierarchy has special importance alongside waste prevention and reuse and we have viewed ourselves as part of the circular economy since our founding, there are also potential negative impacts on people and the environment.

Actually:
At our Duisburg facilities, we recycle 43 different types of waste. While this conserves natural resources and prevents waste disposal, operating such facilities can lead to local environmental impacts. Emissions from recycling processes, such as air pollution from pollutants, could affect the health of residents. Additionally, there's a risk of soil and water contamination from improper handling of waste or operational accidents.

Mid-term:
We develop resource-efficient technologies. Despite ecological benefits, this also brings challenges. The process of recovering metal compounds and oil from oil-containing sludges can potentially create hazardous by-products that need to be disposed of or further treated. The production of new cement components with a low CO2 footprint could also have unforeseen ecological impacts if all environmental effects of these new materials and processes aren't fully understood and controlled.

Long-term:
Long-term, dependencies on specific recycling processes and technologies could arise. If these technologies prove to be less effective or more ecologically problematic than expected, they could harm the environment and cause additional costs for adaptation or replacement. Excessive focus on recycling could also slow efforts to reduce resource consumption and develop alternative, less resource-intensive materials and processes.

ENVIRONMENT

E5
Circular Economy > Waste

Risk (EB):
Increasing disposal costs for waste, as well as rising Raw material costs

The increasing disposal costs for waste and rising raw material costs due to natural resource scarcity pose significant financial risks.

Short-term:
Higher disposal costs and increasing raw material expenses may put pressure on our profit margins and affect competitiveness.

Mid-term:
Supply shortages of critical materials like lithium, rare earths, phosphate, and ores might disrupt production. This leads to higher procurement costs and destabilizes supply chains, potentially affecting timely and cost-efficient manufacturing.

Long-term:
Processes producing a lot of waste may become uneconomical if waste management and raw material costs continue to rise. Long-term inefficiency in such processes could lead to financial strains and threaten the business model. Shifting to more sustainable processes could require significant investments and further impact financial stability.

Opportunity (EB):
Waste recycling

Actually:
We are industry leaders in recycling iron-containing waste as well as hazardous ashes and dusts. This leadership position opens numerous financial opportunities.

Short-term:
By grinding slags and minerals to create low-CO2 building materials, we can expand our portfolio. This opens new markets and generates additional revenue streams while meeting the demand for eco-friendly construction materials.

Mid-term:
The disposal of oil-containing sludges while simultaneously recovering metal and oil content opens a new business field. This innovative approach allows for the conversion of waste into valuable resources, leading to additional sales and strengthening our competitiveness.

Long-term:
Securing our company long-term through compliance and a leading role in environmentally friendly technologies offers substantial financial opportunities. Examples like phosphate recycling or recycling blast furnace gas sludges and acidic pickling solutions position us as pioneers in sustainable technology. This pioneering role enhances our market position and long-term stability by boosting customer and investor confidence and providing access to new business opportunities and partnerships.

SOCIAL

S1
Own Workforce > Secure Employment

Positive Impact (EB):

Indeed:
We offer only permanent employment contracts, which can have positive effects on our employees.

Short-term:
By providing only permanent employment contracts, we strengthen the commitment of our employees. This results in a stable and motivated workforce that feels a long-term connection to the company. This stability helps preserve internal expertise and continuously develop it, boosting our efficiency and innovation.

The security of a permanent employment relationship allows our employees to better plan and focus on their career development, leading to increased satisfaction and well-being.

A low unemployment rate not only indicates good economic development but can also point to a shortage of skilled workers. In this context, we offer valuable stability and security through permanent employment contracts, which is crucial during times of skilled labor shortages.

This not only helps attract and retain qualified employees but also fosters a productive and engaged work environment, benefiting both the employees and the company.

Risk (EB):

Indeed:
We exclusively offer permanent employment contracts, which can bring financial risks.

Short-term:
Despite offering permanent employment contracts, a higher turnover might occur, leading to valuable knowledge and experience leaving the company with departing employees. This loss can incur additional costs as new employees need to be recruited and trained. The associated expenses for recruitment, training, and initially lower productivity of new employees can strain our financial resources.

Medium-term:
Permanent contracts can also cause difficulties in quickly scaling the workforce in response to market changes. Less flexible employment arrangements make it challenging to rapidly respond to growth or decline in demand. During growth phases, we may not be able to hire new employees fast enough, while during downturns, our personnel costs remain high, leading to inefficiencies and increased operational expenses.

Long-term:
Long-term permanent contracts carry the risk of assuming disproportionately high financial burdens during economically uncertain times. Long-term commitments to employees can lead to significant financial strains during revenue declines or economic crises. These lasting commitments can affect our financial stability by limiting the flexibility to reduce costs and adapt to changing market conditions, ultimately jeopardizing our long-term viability and competitiveness.

SOCIAL

S1
Own Workforce > Secure Employment

Opportunity (EB):

Indeed:
We offer solely permanent employment contracts, which can bring positive financial opportunities.

Short-term:
We exclusively offer permanent employment contracts. This leads to increased employee retention in the short term. Since the employment relationships are geared towards the long term, employees feel more connected to the company and are motivated to actively contribute. This reduces turnover and the associated costs for onboarding new employees, positively impacting our financial health.

Medium-term:
The long-term use of permanent contracts strengthens corporate culture through a stable and satisfied workforce. Employees who identify with our company long-term contribute to a positive work atmosphere and are more willing to support our company's goals and values. This promotes collaboration, increases productivity, and contributes to the company's long-term stability.

Long-term:
Encouraging innovation and continuous improvement is facilitated by an experienced and well-trained workforce gained through permanent contracts. Employees who stay long-term develop a deep understanding of workflows, products, and customer needs. This enables us to react quickly to industry changes and develop innovative solutions. An experienced workforce is also better equipped to tackle new challenges and identify efficient working methods, leading to cost savings and improved business outcomes in the long run.

SOCIAL

S2
Workforce in the value chain > Work hours

Negative Impact (EB):

The industry we work in – processing industrial products, by-products, and recycled waste – is characterized by demanding work conditions and long hours in the value chain.

To address these negative impacts, we have implemented the following measures:

1) Introduction of a supply chain control system:
We have established a comprehensive supply chain control system to ensure adherence to work hour standards throughout the value chain. This includes regular audits and assessments to ensure all partners comply with our standards.

2) Compliance with international labor standards: We are committed to adhering to internationally recognized labor standards as set by the International Labor Organization (ILO). This includes reasonable work hours, regular breaks, and the right to leisure. These standards are embedded in our contracts and agreements with suppliers and contractors.

3) Transparency and reporting:
We emphasize transparency by publishing comprehensive information on work hours and conditions across our supply chain. Regular reports document adherence to work hour standards and our ongoing efforts to improve work conditions.

Risk (EB):

We perceive some financial risks related to the working hours of our workforce in the value chain:

1) Labor law violations and legal costs:
Violations of work hour standards and labor rights can lead to lawsuits, sanctions, and fines, causing significant legal costs and affecting our financial stability.

2) Operational disruptions and production losses: Unfair working conditions can lead to dissatisfaction and work stoppages among our workforce in the value chain, causing operational disruptions and missed delivery deadlines, customer dissatisfaction, and revenue losses. This can negatively impact our financial performance.

3) Reputation damage and customer loss:
Negative reporting on work conditions and hours in our value chain can harm our image and lead to customer loss. Businesses and consumers often prefer suppliers who uphold fair labor practices. A negative image can drive them away from us.

To counter these risks and minimize them, we have implemented the following measures:

1) Introduction of a supply chain control system: Our system ensures compliance with work hour standards throughout the value chain, reducing the risk of legal consequences from labor law violations.

2) Compliance with international labor standards: We adhere to labor standards set by the International Labor Organization (ILO) and integrate them into our contracts with suppliers and contractors to minimize legal risks and reputation damage.

3) Transparency and reporting:
By openly disclosing work hours and conditions throughout the supply chain and regularly reporting, we strengthen trust with our customers and stakeholders, preventing reputation damage.

SOCIAL

S2
Workforce in the value chain > Work hours

Opportunity (EB):

We perceive some financial opportunities related to the working hours of our workforce in the value chain:

1) Reputation and customer loyalty:
Through the introduction of a supply chain control system and adherence to international labor standards, we strengthen our image as a responsible company and improve customer loyalty, as many of our customers increasingly value ethical labor practices and social responsibility.

2) Market advantage and competitiveness:
Transparency and reporting on work hours and conditions throughout the supply chain give us a market edge, setting us apart from competitors and attracting customers who value fair labor practices.

3) Long-term sustainability and efficiency:
Integrating work hour policies into contracts and agreements with suppliers and contractors and regular reporting promote our long-term efficiency and sustainability, leading to cost savings through more efficient workflows and optimized resource use.

To harness these opportunities, we have implemented the following measures:

1) Strengthening company image:
By transparently disclosing work hours and conditions and regularly reporting on adherence to work hour standards, we enhance our image as a responsible company and solidify trust with our customers and stakeholders.

2) Improved and long-term customer relationships:
We comply with international labor standards and integrate work hour policies into contracts and agreements with our suppliers and contractors. This fosters customer relationships and positions us as a trustworthy partner committed to fair labor practices, leading to long-term business relationships and repeat contracts.

3) Competitive advantages:
We have a sustainable, ethically responsible, and adaptable business model. By focusing on customer orientation, sustainability, and social responsibility, we can leverage competitive advantages and gain market share for long-term success.

Despite negative impacts on people and the environment due to work conditions in the value chain, we have the opportunity to capitalize on financial benefits through sustainable and ethical business management and differentiate ourselves from competitors.

GOVERNANCE

G1
Company Policy > Managing Supplier Relationships

Positive Impact (EB):

Indeed:
We highly value clear communication and timely payments, transparent supplier evaluations, and effective risk management. We are continuously working on improving supplier management, including optimizing payment practices through regular supplier assessments and risk analysis. The transparent evaluation of suppliers is based on performance indicators such as quality, delivery times, and customer service. We discuss the results of these evaluations with our suppliers to identify improvement opportunities and take steps to enhance collaboration.

Short-term:
We consistently ensure timely payments and clear communication, thus maintaining stability in our supply chain. Our suppliers can rely on regular and prompt payment for their services or products. This stability reduces the risk of supply shortages and enables our suppliers to efficiently plan and manage their business activities.

Medium-term:
Maintaining relationships with key suppliers is crucial for our company. Through clear communication, continuous feedback, and transparent evaluation of supplier performance, we build trust and foster closer

collaboration. This strengthens our bonds with suppliers and contributes to increased efficiency, quality, and innovation throughout the supply chain.

Long-term:
Building sustainable and reliable supply chains is one of our long-term goals. We achieve this through transparent payment practices, clear supplier evaluations, and effective risk management. These measures allow us to establish stable and trustworthy relationships with our suppliers. A sustainable supply chain not only offers economic benefits but also promotes social responsibility and environmental friendliness, ultimately improving the well-being of all parties involved in the supply chain.

Risk (VWK):

Short-term:
Delayed payments can cause supply disruptions as suppliers might need to halt or reduce their deliveries. This leads to shortages in our supply chain, production outages, and additional costs for sourcing alternative suppliers.

Medium-term:
Delayed payments affect supplier loyalty and increase their operating costs. Suppliers might lose trust in us and seek other business partners, which could lead to higher procurement costs for us. We may be forced to find new suppliers at higher prices or conduct more expensive emergency procurements.

Long-term:
Delayed payments can damage our reputation and undermine trust with business partners. Suppliers might consider us unreliable and question their business relations, potentially leading to a loss of business partners and threatening our growth and stability in the long term. A damaged reputation could also affect new business opportunities and negatively impact our long-term competitiveness.

GOVERNANCE

G1
Company Policy > Managing Supplier Relationships

Opportunity (EB):

Indeed:
We recognize the importance of long-term supplier relationships and optimizing payment practices as key opportunities to ensure stable supply chains and gain potential competitive advantages.

Short-term: Through a professional supply chain management system we benefit from various financial advantages. For example, prompt invoice payments allow us to take advantage of discounts and improved terms with our suppliers, leading to direct cost savings. Additionally, timely payments strengthen the relationship with our suppliers and foster trust, which can have long-term positive effects.

Medium-term:
An effective supply chain management system enables us to secure better contract terms and ensure continuous supply through consistent payment practices. Ensuring regular and timely payments reduces the risk of supply disruptions, leading to higher productivity and efficiency in our supply chain. A stable supply situation helps lower operating costs and strengthens our competitiveness.

Long-term: Maintaining good relationships with our suppliers and a professional supply chain management system provides us with the opportunity to build partnerships that foster innovation and increase cost efficiency. By closely collaborating with suppliers, we can leverage their expertise and resources to develop innovative solutions and explore new markets. Long-term partnerships help minimize risks and achieve long-term business goals, ultimately contributing to sustainable and profitable growth for our company.

Environmental Metrics

CO2 Balance and Reduction Goals

Ferro Duo is committed to minimizing its environmental impact and has set ambitious goals to reduce CO2 emissions. Our CO2 balance, based on the Greenhouse Gas Protocol (GHG Protocol), includes emissions from Scope 1, Scope 2, and Scope 3.

In 2024, our emissions were:

Scope 1: 1,837 tCO_2e

Scope 2: 503tCO_2e

Scope 3: 443tCO_2e

Overall, we emitted 2,784 tCO_2e

Reduction Goals

Ferro Duo has set ambitious targets to significantly reduce CO2 emissions in the coming years:

1. 20% reduction by 2030
2. 50% reduction by 2035
3. Climate neutrality by 2050

CO2 Calculation Methodology

Our CO2 balance is prepared according to the guidelines of the Greenhouse Gas Protocol, which considers not only carbon dioxide (CO2) but also methane (CH4), nitrous oxide (N2O), hydrofluorocarbons (HFC), perfluorocarbons (PFC), sulfur hexafluoride (SF6) and nitrogen trifluoride (NF3) as well. To facilitate simplified and focused accounting, we primarily focus on CO2 emissions.

The conversion of emissions into CO 2 equivalents is mainly done using the DEFRA database. For specific emissions, other factors besides those in the DEFRA database may be used.

Renewable Energy: Increasing the share of renewable energy in our energy supply.

Technological Innovations: Utilizing new technologies to reduce CO 2 emissions.

Circular Economy: Encouraging recycling and reuse of materials to minimize waste and emissions.

Sustainable Supply Chains: Collaborating with suppliers and partners to reduce emissions throughout the entire value chain.

Environment – Key Figures

Outlook and Commitment

Ferro Duo is determined to meet the climate goals set and is continuously working to minimize its environmental impact. We will regularly review our progress and adjust our strategies to ensure we are advancing towards climate neutrality.

Our efforts to reduce CO2 emissions are part of a comprehensive commitment to sustainability and environmental responsibility. Ferro Duo remains committed to being a leader in industrial sustainability and contributing positively to global climate protection.

Reporting Obligation E1 – Climate Change

Data Point	Unit	Goal	2024	2023	△
Emissions					
Scope 1	tCO2e	-20%	1,837.34	1,854.00	-
Scope 2	tCO2e	-5%	503.52	436.83	-
Scope 3	tCO2e	-5%	443.39	441.70	-
Energy Mix					
Total consumption of non-renewable energy	(MWh)	0%	10,004,430.0	10,244,327.6	(11%)
Total consumption of renewable energy	(MWh)	100%	0	0	0%
Certificates					
ISO 5001 Energy Management System	Yes/No	Introduced in 2025	No	No	-
ISO 14001	Yes/No	Yes	Yes	Yes	-

Reporting Obligation E2 – Pollution

Pollution					
Caused Air Pollutants (Greenhouse gases up to CO2e)	CO2e	n.a.	2,784.24	2,732.53-	-

Reporting Obligation E3 – Water and Marine Resources

Water Consumption	m3	-10%	1,477	456	-

Reporting Obligation E5 – Circular Economy

Circular Economy					
Non-reused Waste	t	-5%	108.43	38.13	(44%)
Hazardous Waste	t	-2%	0.83	0.65	(23%)
% of Recycled or Reused Waste	%	99	89.70	98.2	0%
Certificate: TÜV Nord	**Yes/No**	Yes	Yes	Yes	

Social – Key Figures

Secure Employment and Social Protection

At Ferro Duo, we place a high priority on secure employment and social protection. Currently, less than 5% of our workforce has temporary contracts. The ratio of non-permanent to permanent staff is 1:10, highlighting the stability and dedication of our core team.

Our employees enjoy extensive social protection, including retirement plans, health insurance, and accident coverage. Additionally, we offer programs for career advancement and personal growth to ensure our employees can work in a safe and supportive environment.

We strive to avoid layoffs to provide stability and security for our employees. Moreover, we limit the renewal of temporary contracts to promote long-term employment and give our employees peace of mind.

If state regulations on social protection are insufficient, we as employers take responsibility. We offer comprehensive social protection, including retirement benefits, health insurance, and accident coverage. We also ensure our employees have access to training and development opportunities to support their professional and personal growth.

These measures ensure that our employees work in a secure and supportive environment. The combination of permanent contracts and extensive social protection reflects our commitment to the well-being and long-term security of our workforce.

Obligation S1 – Own Workforce

Data Point	Unit	Goal	2024	2023	△
Number of Employees					
Total Employees (as of December 31)	FTE #	40	40		490%
Number of Employees during the Year	FTE #	40	40	49	0%
Total Employee Turnover Rate % **18 32 100% Employee Satisfaction High/Low High High High**					
Board Number of Members FTE # 5 **5 8** 33% Percentage of Members: Gender with the Lowest % **15** 10 **12.5** 0% Representation (female)					
Total Reportable Incidents	#	0	5		2 (12.5%)
Number of Fatalities	#	0	0	0	0%

Obligation S2 – Workforce in the Value Chain

Number of Suppliers					
Total Suppliers	#	135	124	135	0%
Total Domestic Suppliers	#	108	101	110	0%
Total International Suppliers	#	27	23	25	0%
Total Suppliers with a Code of Conduct for Suppliers	#	130	113	123	
Human Rights Policy	**Yes/No**	Yes	Yes	Yes	-
Supplier Code of Conduct	**Yes/No**	Yes	Yes	Yes	-
Code of Conduct	**Yes/No**	Yes	Yes	Yes	-

Governance – Metrics

Governance – Business Policy, Corporate Culture, and Strategic Development

At Ferro Duo, we pride ourselves on being a reliable partner for industrial products, by-products, and recycled waste materials. Our daily operations face financial, technical, commercial, and ethical challenges – both at the corporate level and in individual conduct. Through our well-defined business policy, we are committed to fostering a corporate culture based on integrity and transparency. Our guidelines provide all employees with clear standards of conduct – not only internally but also in interactions with business partners and other stakeholders. We address topics such as bribery, facilitation payments, sponsorship, donations, political contributions, business invitations, and conflicts of interest. Compliance with these standards is overseen by our head of the legal department and the CEO-led compliance committee, who hold overall responsibility for this.

Whistleblower Hotline and Protection of Whistleblowers

Our commitment to integrity in business is further emphasized by a whistleblower hotline available to both internal and external stakeholders. We are dedicated to protecting whistleblowers from retaliation – a commitment embedded in our business policy. Those who wish to remain anonymous cannot be traced or identified by Ferro Duo or our web service provider. Additionally, we have implemented a mandatory procedure to thoroughly and objectively review incoming reports and respond appropriately when necessary.

Strategic Development through Partnership with Lafayette Mittelstand Capital A significant step in our governance and business development is the strategic partnership with Lafayette Mittelstand Capital, announced on January 15, 2025, in Duisburg and Münster. With Lafayette, we have gained an experienced, internationally connected private equity partner who supports us in our next growth phase and advances the implementation of our extensive project pipeline – both nationally and internationally – forward.

This partnership not only strengthens our capital base but also offers opportunities to further expand our innovation capacity in industrial waste recycling and the circular economy. With cutting-edge technologies and a forward-thinking product range, we can support our industrial clients in CO_2 reduction, provide sustainable raw materials for the cement, steel, and chemical industries, and promote global waste reduction. By combining a strong financial partner with a proven technology platform, we create excellent scaling opportunities and contribute to sustainably strengthening Europe's competitiveness. With this strategic focus, we ensure that our governance structures and corporate culture are future-proof – always aiming to meet our ethical and commercial standards.

In the double materiality analysis, managing relationships with suppliers, including payment practices, was identified as essential for our business. This is covered under the disclosure requirement G1-6 – Payment Practices in the European Sustainability Reporting Standards (ESRS). The following data points were collected concerning this disclosure requirement.

Disclosure Obligation G1-6 – Payment Practices

Data Point	Unit	2022	2023	2024	2025	2026	2027
Ø Settlement Time: Invoice Payment	**Ø Days**	**5**	**5**	**5**	**5**	**5**	**5**
Standard Payment Terms Standard Payment Terms (Main Categories of Suppliers)	Days	30	30	30	30	30	30
Payments according to Standard Terms	%	100	100	100	100	100	100
Legal Proceedings due to Late Payment	**#**	**0**	**0**	**0**	**0**	**0**	**0**

Summary

Ferro Duo – Your strategic partner for circular economy and CO_2 optimization

In a time when environmental protection is increasingly important, topics like circular economy and CO_2 optimization play a major role. Businesses that don't adapt to new regulations such as the EU Green Deal, Fit for 55, or the Supply Chain Act may face economic disadvantages. We view these changes as opportunities and focus on sustainability.

Our Products and Services Industrial

Products and By-products:

We offer a variety of industrial products, by-products, and recycled waste products.

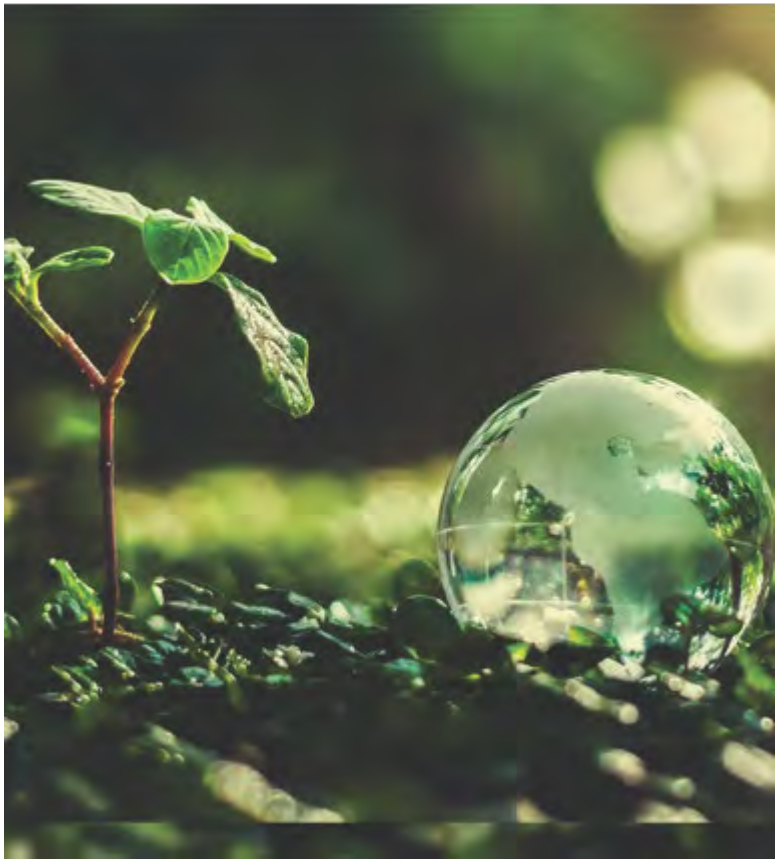
Technical Solutions:
Our modern, patented methods for material processing are efficient and innovative.

Applications:
We are experts in applying our products across various industries such as cement, steel, and chemicals.

Global Presence and Expertise

With locations and partners in Germany, Italy, Switzerland, the USA, Spain, and China, we are connected globally. We have extensive experience in processing materials like iron sulfate, slag, iron oxide, aluminum oxide, fly ash, clay, and gypsum.

Comprehensive Consulting Services
Our consulting services provide businesses with technical expertise and a detailed analysis of their specific challenges. We develop tailored solutions to enhance efficiency and reduce the ecological footprint, relying on innovative approaches and cutting-edge technologies.



Disclaimer

This Materiality Report contains forward-looking statements based on our current assessments and assumptions. These statements include, among others, forecasts, goals, expectations, and plans related to our sustainability efforts. They are naturally subject to risks and uncertainties that may cause actual results to differ significantly from those expected or implied.

Factors that could cause such deviations include, among others:

- Changes in legal and regulatory frameworks
- Technological developments and innovations
- Market and economic conditions - Availability and price of resources and materials
- Climatic and ecological changes

We strive to continuously provide accurate and current information, but we do not undertake any obligation to update or revise the forward-looking statements in this report unless required by law.

The data and information in this report are prepared to the best of our knowledge and belief, but we do not guarantee the accuracy, completeness, or timeliness of the information. This report is for informational purposes only and does not constitute legal, financial, or other advice.

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