

## NCTE AG

AI-Rating: **Very Sustainable**

March 5<sup>th</sup>, 2024

Trade Register No.: **HRB 164384**      ISIN: **DE000A0LEZB2**  
 Sector: **Technology**      Subsector: **Electronic Components**

**ESG-Management: very good**

**Ecological: very good | Social: very good | Governance: very good**

### Company Profile

NCTE AG, founded in 2003 and headquartered in Oberhaching near Munich, is a leading provider of sensor systems based on the physical effect of magnetostriction. These sensors revolutionize various industries through non-contact torque and force measurements. In addition to standardized sensors for test bench and testing applications, NCTE AG, with its about 40 employees, focuses on highly integrated, customized solutions tailored to the customers' requirements. Particularly noteworthy is the company's highest revenue-generating segment in sensor technology for e-bikes, a globally growing market for sustainable mobility. Additionally, the company is shaping future markets such as agricultural technology, automation, robotics, machinery, and vehicle construction, as well as medical technology. Over the years, NCTE AG has continuously evolved from a pure development company into a technological force with serial products and advanced manufacturing capabilities, achieving a turnover of 5.3 € million in 2022.

### Sustainability Summary

NCTE AG has the potential to make a sustainable impact. It supports the Sustainable Development Goals (SDGs) 2, 6, 9, 11, and 13. Furthermore, the company shows strong ambitions to integrate additional SDGs into its processes and has already partially developed precise concepts to implement them. Workflow processes, occupational safety, risk management, environmental management, and quality management are reviewed through external accreditations. The company is ISO 9001 and ISO 14001 certificated and aims for further certifications to access and to improve the company's sustainability. Additionally, 43% of NCTE AG's revenues has been identified as conforming to the EU Taxonomy. We rate the ESG (Environmental, Social, and Governance) performance of NCTE AG, given its relatively small size, as **very good**.

## Transformation Capability: ✓

In terms of transformation capability, we assess how the company is positioned for a sustainable transformation of their products, services, and internal processes.

The management approach (thoroughness, monitoring, optimization) as well as the strategy for resource conservation (efficiency, consistency, harmlessness) were examined within the company on social and economic levels and systematically evaluated for thoroughness, diligence, and ambition.

Environmental impacts are systematically identified, measured, and reviewed throughout the process landscape. The company carefully records external supplier audits, waste management procedures, and consumption metrics, which are measured relative to quantities or a specified timeframe (e.g., kWh/item or m<sup>3</sup>/day). Additionally, consumption levels (electricity, water, and other resources) and waste are continuously compared to previous values with clear objectives to optimize their resource conservation. Employees are directly involved in optimization processes (via weekly team meetings), and a reward system is about to be established in order to promote internal innovation.

Regarding supplier requirements, there are process and procedure instructions (controlled by ISO 9001 and ISO 14001) to help clarifying sustainability issues, creating framework contracts, and understanding self-disclosures. All measures and measurements mentioned by the company have been documented. Clear performance indicators with ambitious target specifications for improving sustainability and ensuring safety within the company exist throughout all core processes. Furthermore, the company aims to produce a detailed sustainability report and to carry out further certifications, e.g. Universal Compliance Standard in accordance with DW PS 980 n.F. 09.2022 for compliance management, and ISO 37301:2021 (CMS), to identify and to potentially integrate additional sustainability activities and monitoring (expected start of certifications 03/2024). The measurement of the carbon footprint, including a "Scope 3" analysis, is also planned.

An analysis of the significant social risks arising from business activities, products, and services was conducted based on the following indicators: labor rights, equality of opportunity, qualification, human rights, community involvement, political influence, as well as compliance with laws and regulations.

Employment contracts, occupational health and safety, safety instructions, and job descriptions are all clearly structured and subject to ISO 9001 quality management, which ensures external control. Supplier requirements have been systematically reviewed and controlled by internal and external auditors. Additionally, supplier requirements are subject to both VDA 6.3 and ISO 14001 certification. The qualifications of individual employees are meaningfully documented in a qualification matrix, allowing for individual development measures. Job advertisements, diversity, and salary structure show no signs of

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discrimination. NCTE AG offers its employees a wide range of benefits, such as German courses for foreign employees, employer subsidies for commuting by public transport, company bike leasing, as well as ergonomic workstations and free beverages.

NCTE AG increasingly emphasizes an effective sustainability strategy and measures. The company's ambition and initiative regarding sustainability are evident in the integration of measures: research and development of new technologies, continuous patenting of technologies (20+ patents), and ongoing external certifications. In our perception, the positive impact of the product is seen as one top priority which is not short to the classical business objectives. There is a clear vision to develop products and services that align with the Paris Climate Goals.

The company's goals are ambitious and sensible in the sense that sustainable and social solutions are pursued equally and innovatively. The company comprehensively applies the management of sustainability potentials and risks to all business activities. Sustainability is thus at the core of the company's strategic orientation, due diligence, and product development.

The next planned steps for NCTE AG are the careful implementation of ambitious goals and the determination of individual sustainability activities and controls. This includes the forthcoming sustainability report and review of the compliance management as well as ISO 37301:2021 certifications.

## Sustainability Impact: ✓

NCTE AG describes its core process as follows: "We help you making your products even more efficient and safe." The company's scope and product development aim to create long-term products. Longevity and efficiency of its products are central to the "Sustainability Impacts" and serve as the foundation. Longevity refers to the contactless measurement systems, which, by design, are protected from environmental influences (such as temperature fluctuations, dirt, or moisture). As a result, the sensors have a very low risk of failure and attrition. They can be recalibrated and/or be replaced at any time without significant resource consumption in case of errors or failures. Each individual sensor is equipped with a serial number to trace any potential error. The processes are carefully documented and improved continuously.

In addition to the longevity of the products, the integration and use of the measurement systems have direct positive effects on the environment and on the resource consumption. Two main topics are central here: the optimization and longevity of e-bikes, and the dosing and reduction of fertilizers in agriculture.

## E-Bikes

Urban transportation planning in Europe is increasingly geared towards sustainability i.e. by promoting walking and cycling as well as public transportation. This trend is driven both by the urgent need to rapidly reduce transport emissions to contribute to superordinate climate goals and citizens' demands for cleaner air, safer and quieter streets, a wider range of travel options, and more livable communities.<sup>1</sup>

The EU-Urban Mobility Framework<sup>2</sup> puts the EU Commission and member states well on the way to achieve all this, aiming, among other things, to provide financial incentives for citizens by national governments, such as mileage reimbursement for every kilometer cycled, tax benefits for bicycle leasing schemes, or direct purchase incentives. In this regard, NCTE AG also offers internal schemes to its own employees to lease or borrow bicycles and e-bikes.

However, it is essential to consider the complete lifecycle of an e-bike. The battery of an e-bike is a critical point since, on one hand, it is expensive, and on the other hand, its production can generate significant greenhouse gas emissions, while it is also the component most likely to fail and to wear. Therefore, it is crucial to extend the battery's product lifecycle and to increase its efficiency. NCTE AG has focused its technological expertise on this challenge in order to enhance the longevity and efficiency of e-bikes'

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<sup>1</sup> <https://ecf.com/users/philip-amaral/trusted-content/cycling-and-eu-urban-mobility-framework-2>

<sup>2</sup> [https://ec.europa.eu/commission/presscorner/detail/en/fs\\_21\\_6781](https://ec.europa.eu/commission/presscorner/detail/en/fs_21_6781)

batteries, thereby contributing to a sustainable future and supporting multiple SDGs<sup>3</sup>. The sensor implemented by NCTE AG regulates the power supply of the e-bike motor, ensuring that neither too much nor too little electricity is consumed, thereby using the battery more efficiently.

The long-term use of an e-bike is particularly important to justify emissions from battery production. The manufacturing and disposal of lithium-ion batteries – currently the most common battery type in e-bike batteries – burdens the environment with approximately 22 kg to 30 kg of carbon equivalents. Compared to the roughly 20 kg of carbon equivalents emitted per 100 km by a car, the greenhouse gas emissions from e-bike battery production are already offset after about 150 kilometers of riding. Sensible recycling of rechargeable batteries and bicycles themselves further contributes to resource conservation.

We see NCTE AG on the right track to make a fundamental contribution to climate protection by improving the longevity of e-bikes batteries.

## **Agriculture**

The German Federal Ministry of Food and Agriculture emphasizes that in organic farming, the management of fertilizers and pesticides plays a significant role in climate protection<sup>4</sup>. Organic regulations prohibit synthetic materials such as mineral and chemical pesticides, which require significant amounts of fossil fuels for their production, thus saving considerable amounts of carbon dioxide emissions. Researchers estimate that in 2010, approximately 0.4 to 0.6 gigatons of CO<sub>2</sub> were generated by the synthesis of nitrogen fertilizers, which corresponds to up to 10% of direct global agricultural emissions and 1% of total greenhouse gas emissions. These emissions can be largely reduced or completely avoided if applying ecological and more efficient farming practices.

A report by the European Environment Agency also emphasizes the need to reduce pressures on aquatic ecosystem<sup>5</sup>. The Environment Agency particularly emphasizes the urgency of a transformation towards sustainable agriculture in order to achieve water conservation goals and other environmental objectives. This requires a shift in both agricultural management practices and consumer behavior.

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<sup>3</sup> <https://unric.org/en/sustainable-development-goals-cycling/>

<sup>4</sup> [https://www.umweltbundesamt.de/sites/default/files/medien/1410/publikationen/2020-03-17\\_texte\\_32-2020\\_oekologische-landwirtschaft.pdf](https://www.umweltbundesamt.de/sites/default/files/medien/1410/publikationen/2020-03-17_texte_32-2020_oekologische-landwirtschaft.pdf)



<sup>5</sup> <https://www.umweltbundesamt.de/themen/nachhaltige-loesungen-zu-wasser-landwirtschaft>

With the innovative technology of NCTE sensors, fertilizer savings of up to 20% can be achieved. The significant reduction in consumption ensures that only the required amount of fertilizer is applied, thereby reducing environmental strain, especially on ground water. Furthermore, the technology allows for precise variation in fertilizer dosage, relieving pressure on parts of agricultural land while optimizing supply to areas crucial for yield. Overall, this approach reduces fertilizer application while simultaneously increasing farmers' yields.

## SDG – Sustainable Development Goals ✓

Each of the 17 UN Sustainable Development Goals (SDGs) is specified by subordinate targets. Activities are considered particularly SDG-effective if they precisely support a target.

The company significantly contributes to the following UN Sustainable Development Goals:

Goal	Target
 <p>The icon for SDG 2, Zero Hunger, features a white bowl with three wavy lines above it, set against a gold background. The number '2' and the text 'ZERO HUNGER' are in the top left corner.</p>	<p><u>SDG 2: Zero Hunger</u></p> <p>With the help of NCTE sensor technology, precise dosing of fertilizers can be achieved, leading to increased crop yields and reduced usage of fertilizers. Furthermore, work is being done on new technologies to optimize plant growth. Here, target 2.4 is supported, which reads "By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality."</p>
 <p>The icon for SDG 6, Clean Water and Sanitation, features a white water tap with a single drop of water falling into a glass, set against a blue background. The number '6' and the text 'CLEAN WATER AND SANITATION' are in the top left corner.</p>	<p><u>SDG 6: Clean Water and Sanitation</u></p> <p>With the help of NCTE sensor technology, precise dosing of fertilizers can be achieved, resulting in a significant reduction in consumption while enabling only the necessary amount of fertilizer to be applied. This reduces the burden on ground water and on rivers. Through this technology, NCTE AG potentially supports the goal of "Clean Water" and specifically target 6.3: "By 2030, improve water quality by reducing pollution, eliminating dumping, and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater, and substantially increasing recycling and safe reuse globally."</p>

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## SDG 9: Industry, Innovation, and Infrastructure

As a result of its development efforts, NCTE AG holds more than 20 patent families worldwide on various innovative sensor technologies. In doing so, NCTE AG supports the transition of industry towards sustainability. The company potentially promotes target 9.5: "Enhance scientific research and upgrade the technological capabilities of industrial sectors in all countries, including by 2030 encouraging innovation and substantially increasing the number of research and development workers per 1 million people and public and private research and development spending." The durability of NCTE sensors, ensured by the highest product quality, the offering of recalibrations in its own service area, as well as certification according to ISO 9001 (Quality Management Systems) and ISO 14001 (Environmental Management Systems), are noteworthy in this regard.



## SDG 11: Sustainable Cities and Communities

As a supplier to the globally expanding e-bike market, NCTE AG contributes both globally and locally to achieving climate goals and making cities more sustainable. In doing so, it particularly supports target 11.6: "By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management." The NCTE segment with the strongest revenues is sensor technology for e-bikes, which can make a significant contribution to reducing carbon emissions in urban areas, where the transportation sector accounts for approximately 12% of global emissions.



## SDG 13: Climate Action: Take urgent action to combat climate change and its impacts

By lowering fertilizer consumption, emissions are directly reduced. Indirectly, but no less significantly, emissions are avoided through the support of e-bikes by the sensor solutions of NCTE AG. Thus, NCTE AG makes a significant contribution to climate protection.



## EU-Taxonomy ✓

Currently, the European Union defines six environmental objectives in its “EU taxonomy for sustainable activities” (according to EU Regulation 2020/852 June 2020) and identifies industries whose activities are considered essential for achieving these targets. Of the six targets, only the two climate-change-related targets have been fully developed to date.

EU Taxonomy Target	Explanation
Substantial contribution to <b>Climate Change Mitigation</b>	<p>The activities of NCTE AG eligible for the EU Taxonomy can be <b>attributed</b> to the following chapter:</p> <p><b>3.3 Manufacturing low-carbon transport technologies.</b> The activity description is as follows:</p> <p>"Manufacture, repair, maintenance, retrofitting, repurposing and upgrade of low carbon transport vehicles, rolling stock and vessels. "</p> <p>Here, <b>criterion e)</b> aligns with the activities of NCTE AG:</p> <ul style="list-style-type: none"> <li>✓ “Personal mobility devices with a propulsion that comes from the physical activity of the user, from a zero-emissions motor, or a mix of zero-emissions motor and physical activity;”</li> </ul> <p>NCTE AG makes a significant contribution to optimizing the power consumption and driving characteristics of e-bikes.</p> <p>The requirements mentioned in the technical annex of the EU Taxonomy under the specified sub-points are fulfilled.</p>

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<b>DNSH</b> (Do no significant harm)	The activities of the company are not in substantial conflict with the remaining five objectives:
<b>Ecology:</b>	✓ (2) Adaptation to climate change
No substantial violation of objectives (2) to (6)	✓ (3) Sustainable use and protection of water and marine resources
	✓ (4) Transition to a circular economy
	✓ (5) Prevention and reduction of environmental pollution
	✓ (6) Protection and restoration of biodiversity and ecosystems

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<b>DNSH</b> (Do no significant harm)	The company does not violate any relevant protective norms.
<b>Social:</b>	

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Using the EU-Taxonomy calculator<sup>6</sup>, based on the total revenues and the revenues from eligible activities, the following share of the NCTE AG's activities weighted by revenues is aligned with the EU-Taxonomy:

**In 2022, a revenues' share of 43% is compliant with the EU Taxonomy.**

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<sup>6</sup> <https://ec.europa.eu/sustainable-finance-taxonomy/wizard>

## Sustainability ESG: Ecological, Social and Governance ✓

NCTE AG exhibits an overall above-average ESG performance. This is primarily attributed to the very high sustainability impact of its core business. The company's significance lies particularly in the environmental aspect as well as in corporate governance. Overall, the company positioning in all three ESG criteria is rated as **“very good”**.

### **E – Ecological**

The company's economic activities imply ambitious goals to address various environmental issues with a sustainable strategy. The company has evaluated risks and impacts and has developed strategies and measures that are systematically embedded in the corporate strategy. The structured nature of these activities is particularly noteworthy for a company of this rather small size. The goals and strategies for improving the ecological impact of products, conserving natural resources in production, and reducing climate-relevant emissions in business operations are rated as **very good**. This assessment is also based on the expectation that the planned determination of the carbon footprint will be carried out promptly.

### **S - Social**

There are many measures in place to involve employees in the company, including training, anti-discrimination, and equal opportunities. There is no indication that employee rights are being violated. The company's economic activities currently do not pose any significant risks to health, training, and human rights. The company offers many additional benefits for leisure, further education, and transportation. Employees are involved in the company's sustainability strategy. Clear criteria, transparency, and control regarding employee rights, salary structures, and anti-discrimination exist and are managed in a structured manner. Overall, the handling of social risks is rated as **very good**.

### **G – Governance**

As far as can be determined, the company does not violate laws and regulations. Sustainability goals (vision and strategy) are integrated into governance and publicly communicated. Quality management, environmental management systems, and data security are clearly defined and externally certified through ISO standards (9001, 14001). ESG risks have already been analyzed, and management strategies are being developed accordingly. Conflicts of interest among key individuals do not appear to exist. The overall governance is rated as **very good**.

## **Sustainability Risks:** ✓

The NCTE AG does not violate any of the key exclusion criteria of sustainable investors.

### **Weapons:**

The company does not manufacture controversial nor conventional weapons nor significant components for them.

### **Nuclear Energy:**

The company does not mine uranium, does not base its electricity generation on nuclear energy, does not operate nuclear power plants, and does not manufacture significant components for nuclear power plants.

### **Fossil Fuels:**

The company does not extract any fossil fuels, especially coal or oil sands, and does not use fracking technologies. It also does not produce electricity using fossil fuels.

### **Human Rights:**

There is no evidence of serious and/or systematic violations of human rights as defined in the UN Universal Declaration of Human Rights and the Charter of Fundamental Rights of the European Union.

### **Labor Rights:**

There is no evidence of serious and/or systematic violations of ILO core labor standards and their four fundamental principles (freedom of association and the right to collective bargaining; elimination of forced labor; abolition of child labor; prohibition of discrimination in employment and occupation).

### **Environmental Protection:**

There is no evidence of serious and/or systematic violations of environmental legislation and/or massive environmental destruction.

### **Corruption:**

There is no evidence of serious and/or systematic corruption or bribery.

## Appendix: ISO 9001

ISO 9001 is an internationally recognized standard for Quality Management Systems (QMS), defining how companies address environmental, social, and governance (ESG) responsibilities, as well as sustainability. Key points in the ESG-relevant strategy include:

1. **Enhanced Process Control:** ISO 9001 emphasizes the efficient and consistent execution of processes. This enables companies to reduce their environmental impacts, utilize resources more efficiently, and integrate social responsibility into their business practices.
2. **Risk Management:** ISO 9001 encourages companies to develop risk management strategies. This is crucial for ESG and sustainability as companies need to identify and minimize risks related to environmental impacts, social responsibility, and governance.
3. **Continuous Improvement:** Companies focusing on sustainability and ESG must continuously improve to achieve their goals related to environmental protection, social responsibility, and ethical corporate governance.
4. **Accountability and Transparency:** The standard promotes clear definition of responsibilities and transparency of processes. This is crucial to ensure that companies pursue sustainable and ethical practices and be accountable to stakeholders.

In summary, ISO 9001 provides a valuable foundation for integrating ESG and sustainability goals within the company. It enables more efficient operations, risk management, while fulfilling obligations related to environment, social responsibility, and sustainability.

## Appendix: ISO 14001

ISO 14001 is an internationally recognized standard for Environmental Management Systems (EMS), which plays a central role in addressing environmental, social, and governance (ESG) aspects, as well as sustainability in businesses. Key points in the ESG-relevant strategy include:

1. **Enhanced Environmental Performance:** ISO 14001 focuses on efficient control and improvement of environmental performance by complying with legal requirements and identifying environmental aspects and impacts. This enables companies to reduce their environmental impacts and utilize resources more efficiently.
2. **Risk Management:** ISO 14001 encourages companies to develop risk management strategies for environmental aspects and minimize environmental impacts. This is crucial for ESG and sustainability as companies need to identify and control environmental risks.
3. **Continuous Improvement:** The standard promotes continuous improvements in environmental management to constantly enhance environmental performance. Companies must continuously improve to achieve their goals in environmental protection.
4. **Accountability and Transparency:** ISO 14001 promotes clear definition of responsibilities and transparency in environmental practices. This is crucial to ensure that companies follow environmentally sound practices and be accountable to stakeholders.

In summary, ISO 14001 provides a valuable foundation for integrating environmental, social, and governance goals into the company. It enables companies to improve their environmental performance, manage risks, and fulfill their obligations regarding environment, social responsibility, and sustainability.

## Rating system

Rating Level	Description
<b>Very Sustainable</b>	<p><b>The company demonstrates an exceptionally outstanding sustainability performance:</b></p> <ul style="list-style-type: none"> <li>✓ The business sectors predominantly support sustainability goals.</li> <li>✓ The capacity for transformation is very high.</li> <li>✓ The business practices achieve well above-average ESG levels.</li> </ul>
<b>Sustainable</b>	<p><b>The company demonstrates a significantly above-average sustainability performance:</b></p> <ul style="list-style-type: none"> <li>✓ The business sectors predominantly support sustainability goals.</li> <li>✓ The capacity for transformation is high.</li> <li>✓ The business practices achieve above-average ESG levels.</li> </ul>
<b>Quite Sustainable</b>	<p><b>The company demonstrates an even above-average sustainability performance:</b></p> <ul style="list-style-type: none"> <li>✓ The business sectors also support sustainability goals.</li> <li>✓ A capacity for transformation is evident.</li> <li>✓ The business practices achieve a solid ESG level.</li> </ul>
<b>Average</b>	<p><b>The company has an average sustainability performance:</b></p> <ul style="list-style-type: none"> <li>✓ The business sectors do not harm sustainability goals.</li> <li>✓ Transformation capacity is addressed.</li> <li>✓ The business practices do not show significant violations of good ESG practices.</li> </ul>
<b>Not Sustainable</b>	<p><b>The company has a below average sustainability performance:</b></p> <ul style="list-style-type: none"> <li>✓ The business sectors partially harm sustainability goals.</li> <li>✓ Transformation capacity is not apparent.</li> <li>✓ The business practices show significant violations of good ESG practices.</li> </ul>

### **For the assessment of ESG subcategories:**

**Rating scale:** *inadequate (0-20%) - sufficient (20-44%) - solid (45-59%) - good (60-75%) - very good (76-89%) - excellent (90-100%)*

**Basis for assessment:** *how ambitious (2) goals, (3) strategies, (4) measures & processes after thorough (1) analysis are carefully and comprehensively integrated into corporate governance (5) and lead to (6) measurable results.*