



ARRK Engineering GmbH

Sustainability Report 2024/25

in accordance with the Voluntary Sustainability Reporting Standard for non-listed SMEs (VSME)

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General

Basis for Preparation (B1)

Key Company and Reporting Metrics (VSME Section 24)

The VSME Sustainability Report comprises the Basic Module and the Supplementary Module.

The VSME Sustainability Report was prepared on a consolidated basis.

The content and key figures relate to the 2024/2025 fiscal year, with the exception of the environmental indicators, which reflect the 2023 calendar year.

The following subsidiaries are included in the consolidated VSME Sustainability Report:

List of Subsidiaries	Name of the subsidiary	Registered address of the subsidiary
ARRK Research & Development S.R.L. Romania	ARRK Research & Development S.R.L.	Str. Fabricii de Chibrituri 13-21 400124 Cluj-Napoca Romania
ARRK Engineering China	ARRK Engineering China	268 Heng Tong Road, Jing'an District, Shanghai, China

Legal form: Limited liability company

NACE Sector Classification Code(s):

- N - 71.12 Engineering activities and related technical consulting

Total assets: 63,278,926.3 EUR

Revenue: 151,907,639.43 EUR

Employees: 1,677. The number of employees was determined at the end of the reporting period. This is calculated as the number of employees.

The country of primary business activity, as well as the locations of the significant assets, is Germany.

The geographic locations of our owned, leased, or managed sites are shown in the following table:

List of locations	Address of the (operational) location	Zip code of the location	City of the (business) location	Country of the (operational) location	GPS coordinates of the (operational) location
ARRK Engineering Germany Headquarters	Frankfurter Ring 160	80807	Munich	Germany	48.187695, 11.588788
Stuttgart Office (Germany)	Wankelstraße 3	70563	Stuttgart	Germany	48.737962, 9.110965
Ingolstadt Office (Germany)	Levelingstraße 1	85049	Ingolstadt	Germany	48.771600, 11.386997
Wolfsburg Office (Germany)	22 Alessandro-Volta-Street	38440	Wolfsburg	Germany	52.425312, 10.791579
Heimsheim Office (Germany)	Alemannenstraße 19	71296	Heimsheim	Germany	48.827319, 8.869616
ARRK Research & Development Romania Headquarters	13-21 Fabricii de Chibrituri Street	400124	Cluj-Napoca	Romania	46.787434, 23.588171
ARRK Engineering China Headquarters	268 Heng Tong Road	Jing'an District	Shanghai	China	31.241442, 121.458788
Beijing Office (China)	8 Yongdingmen Xibinhe Street	Dongcheng District	Beijing	China	39.869673, 116.389087
Shenyang Office (China)	268-1 Qingnian Street	Shenhe District	Shenyang	China	41.778502, 123.435498

Sustainability certifications (VSME Section 25)

Sustainability labels or certifications: Certifications and sustainability assessments play an increasingly important role for ARRK Engineering GmbH and are a key factor in demonstrating our commitment to the environment, society, and our employees.

- Environmental management system: ISO 14001
- Quality management system: ISO 9001
- Occupational Health and Safety Management System: ISO 45001
- Information Security Management System: ISO 27001
- TISAX – Standard for Information Security in the Automotive Industry

In addition, ARRK regularly participates in supplier assessments conducted by its customers, such as SUPPLIERASSURANCE (SAQ) or EcoVadis.

Gender diversity on the governing body (C9)

Gender diversity on the management and/or supervisory board (VSME § 65)

The numerical gender ratio in the management body is 0 (women-to-men ratio).

Strategy: Business Model and Sustainability – Related Initiatives (C1)

Strategy: Business Model and Sustainability – Related Initiatives (VSME para. 47)

Key product and/or service groups: ARRK Engineering GmbH provides development services for the automotive and mobility industries. The range of services covers comprehensive vehicle development from concept to series production. The company focuses in particular on e-mobility, autonomous driving, software development, and the digitalization of development processes. In collaboration with other companies in the ARRK Group, ARRK Engineering GmbH also manufactures vehicles, components, and parts in small series.

Key Markets: ARRK Engineering GmbH operates globally and focuses primarily on the B2B market, particularly on companies in the automotive and mobility sectors. Its core customer base is primarily located in Europe, with a particular focus on Germany, as well as in the United States, China, and Japan.

Key business relationships: Among the most important business relationships are well-known customers from the automotive industry with whom ARRK Engineering GmbH maintains long-standing partnerships.

These relationships are characterized by high customer satisfaction and a strong focus on quality. In addition, the company benefits from being part of the international ARRK Group and its parent company, the Mitsui Chemicals Group, which provides access to

a global network, resources, and an expanded supplier base - particularly in the plastics sector. Projects are often managed across multiple locations within this network.

In addition, the strategy includes the following key elements that relate to or impact sustainability issues: As an international engineering firm serving the automotive industry, ARRK Engineering GmbH has a special responsibility to develop innovative and environmentally friendly solutions. Together with our customers, suppliers, and partners, we are shaping the future of mobility to be more efficient, safer, and more sustainable - for example, in the fields of electromobility, passive safety, and autonomous driving. Furthermore, ARRK Sustainability Consulting expands our service portfolio by supporting small and medium-sized enterprises in the development and implementation of sustainability strategies.

Our team of experts offers tailored consulting services - from analysis and strategy development to practical implementation and training - and helps companies successfully transition to more sustainable operations.

Revenue from specific activities and exceptions to EU benchmarks (C8)

Revenue from specific sectors (VSME para. 63)

Revenue from the controversial weapons sector amounts to EUR 0.

Revenue from the tobacco cultivation and production sector amounts to EUR 0.

The company generates total revenue of 0 EUR from the fossil fuel sector. This breaks down as follows: 0 EUR from coal, 0 EUR from oil, and 0 EUR from natural gas.

The production of chemicals generates revenue of EUR 0.

Policies, guidelines, and future initiatives for the transition to a more sustainable economy (B2)

Policies, guidelines, and future initiatives (VSME para. 26)

We have introduced procedures, guidelines, or future initiatives for the transition to a more sustainable economy regarding the following sustainability topics:

- Climate change
- Our own workforce
- Workers in the value chain
- Affected communities
- Corporate Governance

These are publicly available: Yes

We have defined targets to monitor the implementation of the guidelines and progress toward achieving these targets: No

Description of procedures, policies, and future initiatives for the transition to a more sustainable economy (C2)

We describe our practices, concepts, and future initiatives as follows:

Climate change:

ARRK Engineering GmbH (hereinafter “ARRK”) is committed to reducing greenhouse gas emissions through continuous monitoring and targeted measures, with a focus on emissions per employee, to ensure sustainable growth. We take climate impacts into account in long-term investments and achieved ISO 14001 certification in 2023, reflecting our structured approach to environmental management. Key measures include switching to green electricity, conducting regular energy audits, the gradual electrification of our vehicle fleet - including charging infrastructure - and reducing business travel through virtual meetings.

Our Workforce - People & Culture at ARRK

Human Rights & Labor Standards

ARRK is fully committed to upholding human rights and fair labor practices at all global locations.

We implement clear internal policies and processes to ensure fair employment, safe work environments, and respectful collaboration across all areas. See also our *Policy Statement on Respect for Human Rights and the Environment*.

Employee Engagement & Corporate Culture

We foster a culture of trust and transparency. Works councils in Germany and Romania play an active role in representing our workforce. Regular town hall meetings, employee surveys, and open lines of communication strengthen engagement and employee involvement throughout the company.

Family-Friendliness & Work-Life Balance

ARRK ranks among the top 10 family-friendly employers in the German automotive industry. We support the balance between work and family life through flexible working hours, remote work policies, and family-friendly measures such as additional sick days for children.

Health & Occupational Safety

Health and safety are firmly embedded in our corporate values. ARRK is ISO 45001 certified, which underscores our structured and measurable approach to occupational health and safety. Preventive measures, such as vaccinations and preventive health screenings, regular safety training, mental health support, and corporate fitness programs are an integral part of our daily work.

Diversity & Equal Opportunity

With over 60 nationalities represented in our teams, ARRK actively promotes diversity and inclusion. Our internal policies and mandatory training ensure equal opportunity, inclusive hiring practices, and a zero-tolerance policy toward discrimination.

Learning & Development

We believe that continuous learning drives progress. Through the ARRK Engineering Academy, we offer tailored development paths—from technical and interdisciplinary training to leadership programs. Clear career models support both technical and leadership tracks.

Employees in the Value Chain

ARRK is committed to protecting human rights throughout the entire value chain and aligns its actions with international standards such as the UN Guiding Principles on Business and Human Rights.

A comprehensive risk management system enables early identification, assessment, and mitigation of human rights risks in the supply chain as well as within our own business operations. Clear corporate policies, training, contractual obligations for suppliers, and a confidential grievance mechanism ensure effective implementation. Prevention, transparency, and continuous improvement are the guiding principles of our actions for fair and sustainable business practices.

For more information, please visit our website at:

- *“Supplier Compliance and Sustainability Commitment”*
- *“Policy Statement on Respect for Human Rights and the Environment”*
- *“Report on the LkSG (Supply Chain Due Diligence Act)”*

Affected Communities

As a service provider, our business activities have only minimal direct impacts on surrounding communities and immediate neighbors. Nevertheless, our human rights policy (“Statement of Principles on Respect for Human Rights and the Environment”—available on our website) explicitly takes their interests into account.

Corporate Governance: Compliance at ARRK

At ARRK, we view compliance not merely as an obligation, but as a central component of our corporate culture. Our success is built on integrity, transparency, and the highest ethical standards. In addition to our *Code of Conduct*, we maintain a comprehensive compliance management system that ensures adherence to legal requirements and mitigates potential risks. Our Risk and Compliance Coordination Group (RICKO) regularly analyzes risks, refines measures, and ensures that compliance is firmly embedded in daily operations. The Compliance Officer coordinates all activities, supports employees, and monitors the implementation of internal policies.

Key compliance principles and measures include:

- Full compliance with national and international laws and regulations
- Zero tolerance for corruption, bribery, and unfair business practices
- Protection of confidential data and intellectual property
- Secure supply chains and fair partnerships
- Regular training and audits to minimize risk
- A whistleblower system for anonymous and confidential reports

Responsible management level (VSME Section 49)

Management level: HR Manager (Division Manager)

Environment

Energy and greenhouse gas emissions (B3)

Energy consumption (VSME para. 29)

Total energy consumption amounts to 3,893.65 MWh.

Our energy consumption is broken down into renewable and non-renewable sources as shown in the following table:

Breakdown of Energy Consumption	Energy consumption from electricity	Energy consumption from self-generated electricity	Energy consumption from fuels
Renewable energy	1,844.39 MWh	n/a	n/a
Non-renewable energy	467.23 MWh	n/a	n/a

Greenhouse gas emissions (VSME Section 30)

The estimated gross GHG emissions in tons of CO₂ equivalent (tCO₂e) in accordance with the requirements of the GHG Protocol (2004 version) are presented in the following table:

Estimated greenhouse gas emissions	Gross greenhouse gas emissions (Scope 1)	Site-based Scope 2 gross greenhouse gas emissions	Gross market-based Scope 2 greenhouse gas emissions	Total (gross) site-based greenhouse gas emissions according to Scope 1 and Scope 2	Total (gross) market-based greenhouse gas emissions according to Scope 1 and Scope 2
Currently reported	382.07 tCO ₂ e	160.77 tCO ₂ e	160.77 tCO ₂ e	542.84 tCO ₂ e	542.84 tCO ₂ e

Aspects from the supplementary module regarding the reporting of greenhouse gas emissions (VSME para. 50)

The estimated gross GHG emissions in tons of CO₂ equivalent (tCO₂e) in accordance with the requirements of the GHG Protocol (2004 version) are presented in the following table:

Estimated greenhouse gas emissions	Gross greenhouse gas emissions (Scope 3)	Total (gross) site-related greenhouse gas emissions	Total (gross) market-related greenhouse gas emissions
Currently reported	1,173.96 tCO ₂ e	1,716.8 tCO ₂ e	-

Greenhouse gas intensity (GHG intensity) (VSME para. 31)

Total intensity of site-specific greenhouse gas emissions 0.000003532 tCO₂e/EUR

Climate-related risks (C4)

Climate-related hazards and transition events (VSME para. 57)

ARRK has identified physical climate-related risks, including rising average temperatures and an increase in extreme weather events (e.g., heat waves, heavy rainfall, thunderstorms). These developments pose risks to employee health and productivity and may increase the need for cooling, which in turn leads to higher energy consumption and rising greenhouse gas emissions. Transition risks include growing expectations from stakeholders - particularly customers and the parent company Mitsui Chemicals - regarding emissions reductions across the entire value chain, as well as increasing regulatory requirements within the EU. Furthermore, the global expansion of business operations (e.g., increased travel, larger office spaces) could further increase emissions.

Vulnerability to climate risks: Exposure to physical risks is considered relatively low, as the locations consist primarily of leased office buildings. Nevertheless, extreme weather events such as heat waves or heavy rainfall can impact infrastructure and business continuity. Rising temperatures increase cooling needs while reducing heating needs. Adaptations such as better insulation, energy-efficient cooling systems, and emergency plans are important to ensure resilience and employee well-being. Transition risks are more relevant: increasing regulatory requirements and growing stakeholder expectations necessitate additional measures. The use of green electricity mitigates the impact, but the handling of refrigerants remains a challenge. Overall, the physical risk is assessed as limited; nevertheless, investments in building technology and strengthening adaptability are necessary.

Measures have been taken to adapt to climate change in response to these hazards and transitional events (see also Chapter C2).

Potential negative impacts of climate risks (VSME para. 58)

ARRK faces both risks and opportunities arising from climate change and the associated transition to vehicle electrification. The shift to e-mobility offers significant growth potential, particularly in the areas of high-voltage battery systems and electric drives. At the same time, there are risks associated with a potential decline in demand for conventional technologies, such as exhaust gas measurement. Indirectly, the company is also exposed to the physical and transitional climate risks faced by OEMs: If these OEMs come under pressure due to extreme weather events, stricter regulations, or rising CO₂ costs, this could lead to project delays or reduced demand at ARRK.

Air, Water, and Soil Pollution (B4)

Water (B6)

Water withdrawal (VSME para. 35)

Our company's total water withdrawal amounts to 3,824.89 m³. Of this, 0 m³ is withdrawn at sites in areas with high water stress.

Resource use, circular economy, and waste management (B7)

Circular economy (VSME para. 37)

Our company applies to the principles of the circular economy: Yes.

ARRK is beginning to integrate circular economy principles into its processes to support sustainable mobility solutions. A key example of this is its participation in the research project “CO2OPERATE – Sustainable Lightweight Construction for Climate-Friendly Buses,” which focuses on increasing resource efficiency and reducing environmental impact through advanced additive manufacturing techniques. As part of the project, ARRK is contributing to the development of lightweight metal components for buses manufactured using these techniques, applying circular strategies such as reuse, repair, and remanufacturing. These components are evaluated within the project, considering eco-design and life-cycle aspects, with the aim of minimizing energy and material consumption in both the production and operational phases.

Social Affairs

Workforce - General Characteristics (B8)

Number of Employees (VSME Section 39)

We have 1,614 permanent employees. 63 people are employed by us on a temporary basis.

Male employees: 1,299 Female employees: 378 Non-binary employees: 0
Employees who did not specify their gender: 0

The number of employees is broken down by country in the following table:

Number of employees in the country of the employment contract	Number of employees in the country of the employment contract
Germany	1,203
Romania	430
China	44

Employee turnover (VSME para. 40)

The turnover rate is 12.4% for the reporting period.

Additional (general) characteristics of the workforce (C5)

Gender ratio (VSME para. 59)

The gender ratio at the management level is 12.5% (female) for the reporting period.

Workforce – Occupational Health and Safety (B9)

Company workforce – health and occupational safety (VSME para. 41)

During the reporting period, there were 0 reportable workplace accidents. This corresponds to a rate of 0%, i.e., the number of workplace accidents per 100 full-time employees within a year.

The number of fatalities resulting from work-related injuries and work-related illnesses is 0.

Additional information on the company's workforce – Guidelines for the respect of human rights and related processes (C6)

Human rights-related policies and processes (VSME para. 61)

We have a code of conduct or guidelines on human rights compliance for our workforce: Yes

Our Code of Conduct covers the following aspects

- Child labor
- Forced labor
- Human trafficking
- Discrimination
- Prevention of workplace accidents
- Other topics

In addition, the following topics are covered: freedom of association; unlawful evictions or the unlawful appropriation of land, forests, and water bodies; prohibition of environmental pollution

We have a grievance mechanism in place for our workforce.

Serious incidents related to human rights (C7)

Serious adverse human rights incidents (VSME para. 62)

There were no confirmed incidents related to human rights involving our workforce.

We are not aware of any confirmed incidents involving stakeholders outside our own company.

Workforce – Compensation, Collective Bargaining, and Training (B10)

Our own workforce – compensation, collective bargaining, and training (VSME para. 42)

Our employees receive compensation that is at least equal to the applicable minimum wage under national law.

The unadjusted percentage pay gap between our female and male employees is 27.2%.

28.3% of our employees are covered by collective bargaining agreements.

The average number of annual training hours per employee (excluding gender) is 13.3.

Governance

Convictions and fines for corruption and bribery (B11)

Convictions and fines for corruption and bribery (VSME para. 43)

During the reporting period, there were no convictions for violations of anti-corruption and anti-bribery regulations. The total amount of fines for the violations amounts to EUR 0.