Sustainability Report

2024

CleanAir
Your filtration's support

interactive
Summary

click on the item
and go to the section
that interests you

Letter to
stakeholders

CleanAir Europe s.r.l. recognises the importance of operating in a sustainable and responsible manner towards the environment and society. In a context of increasing focus on environmental and social issues, since 2021 we have been drafting our Sustainability Report to transparently communicate our commitment and the results achieved in the ESG (Environmental, Social, Governance) fields.

For years, **CleanAir** has developed products that contribute to the safety and improvement of industrial filtration processes. It is therefore natural for us to take a virtuous path within our own organisation, documenting daily activities and setting ambitious goals to improve corporate practices and engage all stakeholders.

Through this report, we aim to:
• Increase transparency regarding our sustainability performance by openly and thoroughly sharing our initiatives and the results achieved.
• Establish a more structured dialogue with our stakeholders, listening to their expectations and feedback to continuously improve our practices.
• Set ambitious goals for the future, committing to reduce our environmental impact and increase our positive contribution to society.
• Align with the best sustainability reporting practices, adopting internationally recognized standards.

In 2024, we decided to continue in several key areas:
• Reduce major sources of pollution through improved energy efficiency and the adoption of renewable energy sources.
• Increase the use of recycled materials in our products, replacing others where possible to contribute to a circular economy.
• Allocate an annual budget equal to 0.5% of the previous year's revenue for sustainability and social responsibility projects.
• Maintain and, where possible, increase the presence of women in the company, promoting gender equality and inclusion.

To achieve these objectives, we have initiated a virtuous process through concrete actions:
• Conduct a materiality analysis to identify the environmental, social, and governance topics most relevant to our reality and our stakeholders, defining a coherent sustainability plan.
• Implement a monitoring and reporting system for ESG performance indicators.
• Train and raise awareness among all staff about the importance of sustainability through specific training programs.
• Collaborate with partners and suppliers to align the entire value chain with sustainability objectives.
• Communicate our progress transparently and consistently through this report and other informational channels.

We are aware that the path toward sustainability is a continuous challenge. However, we are determined to do our part to contribute to a greener and more inclusive future. This report is a concrete testimony to our commitment in this direction.

Luigi Montanelli
CEO
CleanAir Europe S.r.l.

CleanAir Europe

s.r.l.

CleanAir Europe s.r.l.

CleanAir is an Italian manufacturer of filter bag cages, operating on the global market since 1955. We are innovators in the field of industrial air filtration, offering a wide range of solutions to ensure product quality and reliable service.
We design and produce steel supports for bag filters and accessories for industrial dust collection entirely within our main facility in Bulciago (LC), which also houses our cataphoresis coating oven.
The company is equipped with presses for the production of coil-based components such as collars and bottom caps, ring benders, and automatic wire welding machines. We also manufacture wooden crates and packaging – both for our shipments and as a service for third parties.

Research
New techniques, new technologies

CleanAir firmly believes that process innovation is the key to producing high-quality filtration supports. We consider innovation to be the only path to creating the best filter cage solutions for any application.
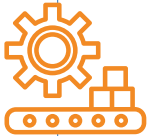
Production
Cages for filter bags

CleanAir is a leading manufacturing company specialized in the production of filter bag cages. We offer a variety of products tailored to meet the needs of different applications and industries. Furthermore, we guarantee consistent product quality for every customer through internal production processes and meticulous control of every phase.

Service
Expertise and experience

With over forty years of experience in air filtration, CleanAir has developed deep knowledge and technical competence. This is why we are able to provide first-class services to our clients and manufacture a wide range of filter bag cages for various applications.

Logistics
Packaging tailored to every need

CleanAir ships cages all over the world. Our custom packaging solutions are designed to meet all transportation requirements, offering strength, durability, and protection.

Mission, Vision and Company Values

In a competitive and constantly evolving market, successful companies are distinguished by a clear identity and a strong sense of direction. Our **Mission**, **Vision**, and **Corporate Values** are the compass that guides our enterprise, defining our purpose, aspirations, and the fundamental principles that drive our actions.

Mission

Our mission is to provide the best support and technologies for controlling industrial air emissions, ensuring the efficiency of industrial processes, and offering a contribution to air pollution reduction with customised solutions built on the real needs of our clients.

Vision

We aspire to be leaders in industrial air filtration solutions, contributing to improving the air we breathe and making industries cleaner and safer through continuous innovation, collaboration, and the promotion of sustainability and social responsibility.

Values

Reliability

Our reliability is reflected in our ability to provide consistent, high-quality solutions and services. CleanAir Europe is committed to fulfilling its commitments to clients, ensuring their air filtration systems operate efficiently and safely. Reliability also extends to the competence of our personnel, who provide technical support promptly and professionally.

Integrity

Integrity is an essential value for CleanAir Europe, which is committed to operating ethically and transparently. The company complies with current laws and regulations, and maintains high standards of conduct in all its activities. Integrity is also shown through fairness and honesty in relationships with clients, suppliers, and employees.

Responsibility

CleanAir Europe is aware of its responsibility toward the environment and people's health. The company is committed to developing and providing air filtration solutions that help improve air quality and reduce environmental impact. Responsibility also extends to the safety of employees and the protection of health and safety in the workplace.

Quality

Quality is a fundamental value for CleanAir Europe, which is committed to delivering excellent products and services. The company uses cutting-edge technologies and rigorous production processes to ensure that its air filtration systems are efficient, reliable, and long-lasting. Quality also means attention to detail and customer care, with the aim of exceeding expectations and ensuring complete satisfaction.

Company History

1898 – The first foundations
At the end of the 19th century, Rinaldo Montanelli began working in the trade and processing of wire and hardware accessories.

1937 – The Ilro company is founded
In the late 1930s, Luigi, Rinaldo's son, founded Ilro, scaling up the family business to an industrial dimension and introducing a wide range of products derived from wire.

1974 – Defim is established
Defim was established, focusing its core business on the processing of metal wire to produce products for various sectors: bottle baskets, screens, cages for farming, industrial mesh, and cages for filter bags.

1981 – The CleanAir brand is launched
In the 1980s, the CleanAir brand was introduced to identify the family of filtration support products, commonly known as cages for filter bags.

1985 – The first electrophoretic coating plant
The first automated internal electrophoretic (anaphoretic) coating plant was built, introducing a new highly corrosion-resistant treatment to the market for the first time.

2003–2014 – CleanAir S.r.l. grows and expands
Starting in 2003, the CleanAir Industria project was launched. The commercial brand was definitively separated from Defim to form a company fully dedicated to the filtration sector. CleanAir Inc. was established in the USA.

2015 – Move to Bulciago headquarters
With the move to Bulciago, the entire production process was internalized to gain full quality control of each stage, from wire straightening to final packaging in wooden crates.

2021 – EcoAtex, the antistatic cage, is introduced
In 2021, the first antistatic cage EcoAtex was launched, the result of experience gained in the EcoHpc cataphoresis process.

2022 – EcoSmart, the digital cage, is launched
In 2022, the digital cage EcoSmart was launched. Through the EcoSmart Cage platform, it became possible to track cages throughout their lifecycle. Together with EcoAtex, these innovations introduced higher performance and safer, more sustainable cage designs.

2023 – EcoTurbo, the energy-saving cage component
In 2023, the EcoTurbo venturi was launched, resulting from a joint study with a university. It established new performance standards in automatic filter cleaning.

Sustainability
at CleanAir

Sustainability at CleanAir

The world is going through a time of epochal change.

Pressures from overpopulation, excessive resource consumption, climate change, and desertification demand a revision of lifestyles and consumption models. Industrial operations must also adapt to these new contexts, which require a deep understanding of problems along with greater awareness and responsibility.

Today, the company views sustainability as the intersection of three different transitions:
- **The ecological transition**, with particular focus on the circular economy and resource saving;
- **The digital transition**, with the gradual introduction of tools, processes, and products that enhance ecological transformation;
- **The safety transition**, aimed at better protection of people, the environment, and assets.

CleanAir's priority is its commitment to guide its growth model toward full customer satisfaction, environmental compatibility, and sustainability, respecting the health of its employees and all stakeholders.

Air quality and environmental protection are issues that concern the entire air filtration sector. **CleanAir** contributes to environmental protection not only by creating support structures used in air filtration systems but also by paying the utmost attention to its own production processes.

Recently, a major result – not only in terms of product performance but also environmental responsibility – was achieved with EcoHpc Plus, a low-impact cataphoresis treatment developed entirely and exclusively by **CleanAir Europe S.r.l.** It is completed in-line and designed to significantly reduce liquid and gaseous effluents from the process.

Additionally, the company invests in research and development to reduce the energy consumption required for filtration operations through eco-design projects.

In 2021, with a significant effort, the company strategically turned this belief into reality with the development of safer, more sustainable products such as EcoAtex, as well as the introduction and subsequent implementation in 2022 of intelligent digital monitoring tools like EcoSmart. These allow tracking of the cage life cycle and extending it through appropriate maintenance policies – fully aligned with life cycle and waste reduction concepts.

With this spirit – which in February 2022 led the company to win the First Prize for the most sustainable product at the most prestigious national environmental competition – we intend to face the challenges for a more sustainable future.

This 2024 Sustainability Report, now in its fourth edition, reaffirms the company's commitment to continue its journey toward excellence and the adoption of clear environmental and social responsibilities.

Value Creation

CleanAir Europe S.r.l., primarily operates within the large-scale primary and secondary industrial sectors. Wherever a combustion or transformation process may result in potential air emissions, the presence of dust collectors and filtration systems ensures the containment of harmful emissions.

From steel to cement, energy production to waste-to-energy, from mining to the chemical industry of oxides and fertilisers, from flour production to pharmaceuticals – our end clients are often large entities already addressing sustainability challenges and looking upstream to suppliers to ensure control of their carbon footprint and environmental impact.

The exchange is therefore mutual, in a relationship where the company chooses the most sustainable sourcing options and, in return, delivers eco-friendly products to those same suppliers.

For this reason, **CleanAir** is focusing its efforts on minimising the resources required to produce cages.

Not only by selecting suppliers who guarantee quality and sustainability, but also through direct investments aimed at reducing waste and managing by-products – as exemplified by the new vacuum evaporation system for the cataphoresis oven (a process with lower environmental impact than epoxy powder coatings), which separates solid pigment residue from water, allowing the water to be distilled and reused in industrial processes.
Another example is the investment in ultrafiltration, which improves product quality and thus the lifespan of the filtration support, through waste selection and separation during production.

CleanAir's goal is to provide, throughout the supply chain of primary industry, a range of low environmental impact products – the ideal complement to new-generation fabric filters. The focus therefore shifts to the product itself, seen as a set of activities that define it in all aspects throughout its lifecycle, within a sustainable inventory.

Sustainable Products and Solutions

CleanAir Europe S.r.l.'s ability to transform strategic sustainability guidelines into tangible products and solutions for the market is one of the company's greatest strengths.

A prime example is the award-winning **EcoAtex**, the first antistatic cage introduced to the market capable of providing a distinctive surface resistivity feature designed to neutralise potentially hazardous electrostatic energy. Launched in 2021, this product established a new class of devices compliant with the European ATEX directive, bringing safer solutions to the industrial filtration market. In environments where combustible dust collectors are used, the risk of explosion and fire requires not only mitigation but a proactive approach to prevention.

ecoATEX
Antistatic high performance cages

EcoAtex delivers on both safety and environmental responsibility: it is produced through a low environmental impact process, minimising resource consumption and carbon footprint. This alignment of sustainability and safety ensures better protection for people, the environment, and industrial assets. Throughout 2022, **EcoAtex** progressively replaced the previous model in market distribution.

ecoSMART
Smart connected cages

At **CleanAir**, our commitment to safety extends beyond product hardware to include communication and smart systems. In 2021, we launched a digitalisation journey for our products. The **EcoSmart** project equips each batch of filter cages with a dedicated digital tag, readable via an app on smartphones or tablets. This system provides access to exclusive product data stored on the company's digital platform. In addition to supporting traceability and access to associated documentation, the platform enables scheduled maintenance through digital content such as instructional videos, checklists, and operational guides.In the future, EcoSmart will evolve into a data-driven platform offering analytics to profile markets, products, and usage trends, supporting a continuous improvement strategy. The first digitally tagged cages were delivered in 2022, marking the operational launch of the project.

Looking ahead, the next phase of this project – **EcoSmart Sense** – is already in development. A proof of concept (POC) is planned by the end of 2025, with full-scale engineering scheduled for 2026. The new product will consist of a cage equipped with a filter bag capable of autonomously detecting and transmitting key physical parameters within the dust collector. Measurements such as temperature, differential pressure, and dust concentration will support predictive maintenance, ensuring optimal energy efficiency and safety performance. The EcoSmart Sense system can operate either as a stand-alone diagnostic unit or be integrated into larger filter systems. The ultimate goal is to create a data ecosystem ready for AI-driven dust collector management.

Sustainable Products and Solutions

ecoTURBO CAGE
Incremental Differential Flow - Venturi

Another innovative product, the result of collaboration with Politecnico di Milano, is the **EcoTurbo IDF** project (Advanced Ecological Filtration Supports with Differentiated Flows). It represents the future of a new generation of cages for bag filters, addressing the primary need to reduce emissions by achieving the lowest possible energy balance.

As an ecodesign tool for redesigning filter supports with an eco-sustainable logic, it requires validation through computer-based fluid dynamics analysis (CFD) as a proven conceptual foundation. The study led in 2022 to a pathway toward new products, including the EcoTurbo venturi, patented in 2024 in Italy and Europe.

The company's attention to the product extends beyond its intrinsic characteristics and also considers the environmental impact of packaging.

CAE PACK

In 2022, **CaePack**, a company division, was consolidated. It aims to research eco-sustainable packaging solutions – mostly based on wood – for the company's products, and also to act as a partner for the production of wooden crates and packaging for third parties, within a short-supply-chain logic (km-zero).

Sales continued with the creation of custom-made packaging certified ISPM15, for the protection of industrial and durable goods during transportation.

2024
Highlights

2024 Highlights

Turnover: €7.1 million

✓ Cages produced: 211,000

✓ Italian suppliers: 92%

✓ Electricity from renewable sources: 100%

✓ Emissions avoided: 207 tCO$_2$eq

✓ Hourly water withdrawal reduction vs. 2021: –66%

✓ Waste reduction vs. 2021: –77%

✓ Non-hazardous waste: 100%

✓ Waste sent for recycling or recovery: 100%

✓ Foreign employees: 40%

✓ Training hours on ESG topics: 68%

✓ Workplace accidents: 0

✓ Charitable organizations supported: 5

Materiality
Analysis

Materiality Analysis

Before starting the current reporting cycle, **CleanAir** implemented a process to update its list of material topics, which will guide current and future sustainability planning and reporting efforts.

As part of our ongoing commitment to improve our sustainability reporting practices and align with new regulatory developments such as the Corporate Sustainability Reporting Directive (CSRD), we decided to undertake a materiality analysis using the 'double materiality' approach.

This approach considers not only the external impacts generated by our activities but also how sustainability issues may affect our operations, performance, and value creation in terms of risks and opportunities.

Although **CleanAir** is not yet formally required to apply this approach, we believe it offers an important opportunity to improve performance and maximize value creation. It also positions us as a reliable partner for companies and stakeholders seeking to manage their own impacts, risks, and opportunities along the value chain.

Context Analysis

The process began with a context analysis: in this phase, the company reviewed its activities, organizational structure, business relationships, and the geographic context in which it operates, as well as understanding the key stakeholders involved. This step also included an analysis of the macro PESTEL factors (Political, Economic, Social, Technological, Environmental, and Legal) that could significantly affect the company.

Stakeholder Mapping

Next, the company focused on understanding its stakeholders. This phase aimed to identify all individuals and entities affected by the company's operations and value chain, both upstream and downstream, including their perspectives and interests.

To support this effort, stakeholders were classified into categories and assigned levels of priority based on their level of influence and dependence on the company. This resulted in a list of stakeholder groups, each ranked by priority and represented graphically in a Stakeholder Map.
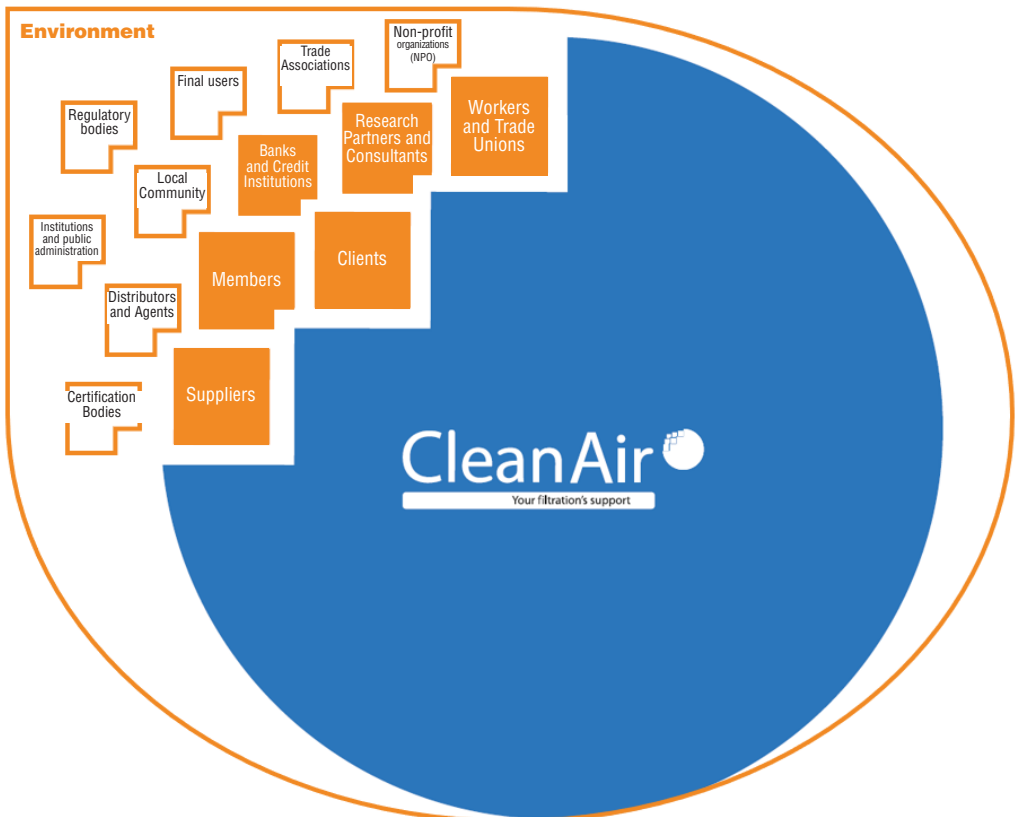
IRO Analysis (Impacts, Risks, and Opportunities)

Materiality Process: IRO and Topic Selection

These stages of the process enabled **CleanAir** to gather key inputs for identifying the Impacts, Risks, and Opportunities (IRO) connected to the company's sustainability performance.

Selection of Relevant Topics

To select the topics for materiality analysis, **CleanAir** used the list of themes provided in Appendix B of the VSME Standard, selecting those relevant to the operations of **CleanAir Europe S.r.l.**

Where necessary, similar topics were grouped into broader, homogeneous categories.

The resulting list of topics submitted for materiality assessment is as follows:
- Climate Change
- Energy
- Air Pollution
- Water
- Circular Economy
- Ecosystems
- Working Conditions
- Equal Opportunities
- Workers in the Value Chain
- Local Communities
- Product Safety
- Business Ethics and Culture
- Supplier Relationship Management
- Anti-Corruption

Assessment of Impacts, Risks and Opportunities

For each of the selected topics, CleanAir identified and analyzed the external impacts caused by the company's activities and business relationships.
Each impact was evaluated across three dimensions of severity – magnitude, scope, and irremediability – along with the likelihood of occurrence.

At the same time, the company considered the actual or potential economic and financial effects of each topic on CleanAir's performance, in terms of both risks and opportunities.

The four dimensions (magnitude, scope, irremediability, financial effect) were assessed using the following 0–3 scale:
• **0** = none
• **1** = low relevance
• **2** = relevant
• **3** = highly relevant

Probability was assessed on the following scale:
• **0** = very unlikely
• **0,25** = unlikely
• **0,5** = moderately likely
• **0,75** = very likely
• **1** = certain / actual

The values were then combined in a two-dimensional matrix to derive an overall assessment of each topic's relevance.

Stakeholder Engagement

At this stage of the process, it was considered essential to include the perspective of affected stakeholders in order to incorporate their viewpoints into the internal assessments and obtain a comprehensive understanding of external impacts.

To achieve this, CleanAir developed a questionnaire on an online platform, made available in both Italian and English.
Selected stakeholders were invited to assess the impact generated by CleanAir on each of the proposed topics, based on their experience and perspective.

The questionnaire remained open for ten days, and the results were used to adjust and validate the relevance scores assigned to each topic.

List of Material Topics

At the end of this process – which combined the evaluation of outward impacts with the economic and financial consequences associated with each topic – the following material topics were identified:

Topics	Pillar	Impact Assessment			Economic and Financial Assessment		
Air Pollution	🍂	●	●	○	●	●	●
Product Safety	👥	●	●	○	●	●	●
Climate Change	🍂	●	◐	○	●	●	●
Energy	🍂	●	◐	○	●	●	●
Circular Economy	🍂	●	◐	○	●	●	○
Business Ethics and Corporate Culture	👔	●	◐	○	●	●	○
Working Conditions	👥	●	●	◐	●	○	○
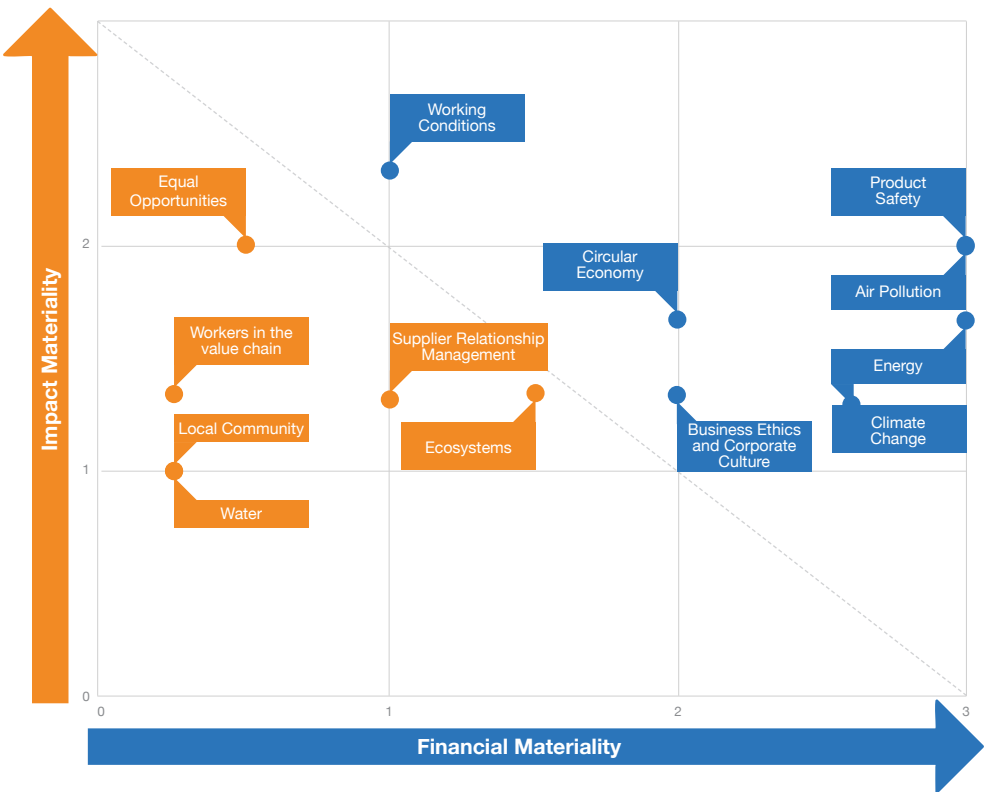
Sustainability
Strategy

Sustainability Strategy

An important step taken by **CleanAir Europe s.r.l.** in 2024 was the development of a **sustainability strategy**, based on the material topics identified through the materiality analysis (see dedicated chapter).

The double materiality assessment provided us with strategic insights to seize opportunities for a just and green transition, and to ensure the long-term sustainability of our business model in alignment with the expectations of our stakeholders. It also allows us to identify and manage risks – helping prevent future issues and safeguard business continuity – while identifying our most significant external impacts, maximizing the positive and minimizing the negative ones.
Sustainability planning will thus enable **CleanAir** to focus its upcoming initiatives and development strategies around the most relevant Environmental, Social, and Governance (ESG) topics for both the company and the context in which it operates.

> This journey reflects CleanAir's tangible and forward-looking commitment to sustainability, clearly and transparently communicated to all stakeholders.

2025–2027 Sustainability Plan

CleanAir Europe s.r.l. has developed a three-year sustainability plan for 2025–2027, setting specific goals for each material topic. These objectives are structured around three core pillars:

Cross-cutting: Sustainability Management and Communication		
Digital Transition	Ecological Transition	Safety Transition

Some goals are cross-cutting and fall under a unifying theme of:
· Sustainability Management and Communication

**For the achievement of each objective,
an action plan has been established,
with a defined timeline.**
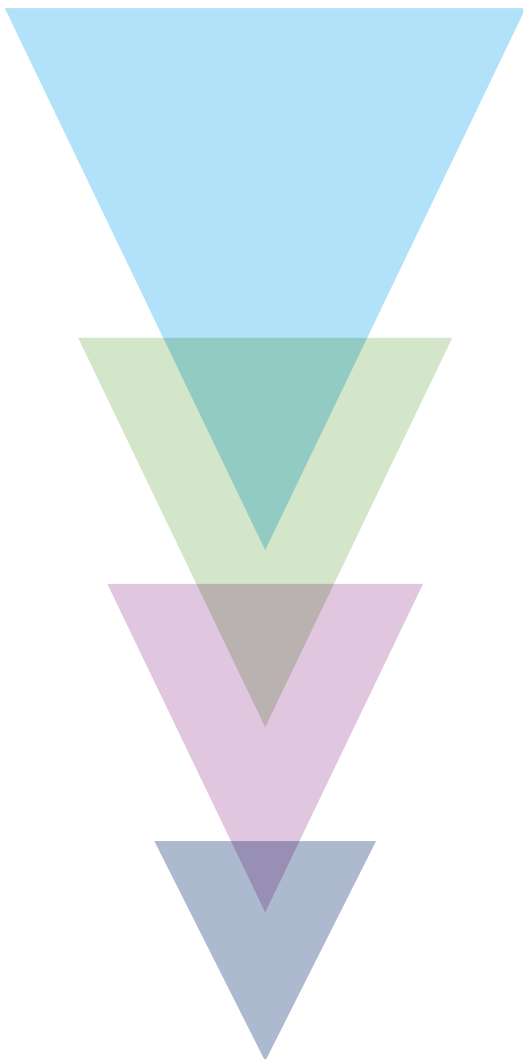
Digital Transition
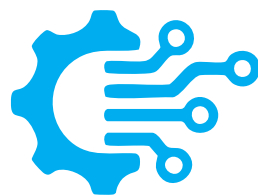
Topic

- Product Innovation

Relevant material topics

Air pollution

Climate change

Energy

Circular economy

Product safety

Objectives

Implement product digitalisation

Improve energy efficiency, filtration, and product durability

Actions

	2025	2026	2027
EcoSmart SENSE – Prototype creation	●	○	○
EcoSmart SENSE – Definition of the commercial model	○	●	○
EcoSmart SENSE – Pre-series/first marketing	○	○	●
Ecodesign of the cage-venturi tube – Completion of the product line	●	●	●
Implementation of digital monitoring systems for filtration capacity	●	●	●
Monitoring of technological evolution of products and processes	●	●	●

Ecological Transition

Topic
- Energy and emissions
- Circular economy

Relevant material topics

Air pollution

Climate change

Energy

Circular economy

Business ethics and culture

Objectives

Reduce energy consumption and greenhouse gas emissions

Reduce the production of waste and scraps

Encourage recovery and recycling mechanisms

Actions

	2025	2026	2027
Purchase 100% renewable electricity	●	●	●
Conduct an energy diagnosis	●	○	○
Calculate the Organisation Carbon Footprint (OCF)	○	●	○
Implement energy efficiency interventions (to be defined following the diagnosis)	○	●	●
Update the Product Carbon Footprint (PCF) for cages every three years	○	○	●
Implement a monitoring system for scraps (MP quality and cages)	●	○	○
Draft procedures and operating instructions to reduce scrap generation	○	●	◐
Set scrap reduction targets	○	○	●
Identify a destination for wood, metal, and other production scraps	●	●	○
Identify and communicate recovery methods for end-of-life cages	○	○	●

Transition for Safety

Topic

- Customer safety
- Employee health, safety, and well-being

Relevant material topics

Product safety

Working conditions

Objectives

Transition from product safety to plant safety

Ensure job stability for employees

Promote skill development and professional growth

Introduce corporate welfare initiatives

Introduce health and safety initiatives beyond legal obligations

Azioni

	2025	2026	2027
EcoSmart SENSE (see Digital Transition)	●	●	●
Evolution of the cage to improve the safet of the final use plants	●	●	●
Prioritise permanent contracts (>90% of the total)	●	●	●
Establish a training register	●	○	○
Define a personal/department training plan	○	●	○
Include an annual personal evaluation session	○	○	●
Prepare a welfare questionnaire for employees	●	○	○
Welfare interventions (to be defined based on questionnaire results)	○	●	●
Health and safety initiatives (to be defined based on the main critical issues that may arise)	●	●	●

Cross-cutting

Topic

- Sustainability Management and Communication

Relevant material topics

Air pollution

Climate change

Energy

Circular economy

Product safety

Working conditions

Business ethics and culture

Objectives

Review and strengthen mission/vision/values

Report ESG performance

Define an ESG rating

Raise awareness, train, and collaborate with stakeholders

Actions

	2025	2026	2027
Define mission/vision/values	●	○	○
Draft an annual sustainability report referring to the VSME standard	●	●	●
Undergo a first Open-ES assessment	●	○	○
Strive to improve ESG rating	○	●	●
Digital communication plan on sustainability and safety	●	○	○
Join the Lariana network for Sustainability	●	○	○
Update the materiality analysis with stakeholder engagement	○	●	○
Provide operational instructions for the disposal of product and packaging for the customer	○	○	●

AIR QUALITY

Good

PM2.5:10   PM10:19

Corporate
Governance

Corporate Sustainability Policies

Corporate sustainability policies are placed at the core of **CleanAir**'s governance and board-level decision-making.
CleanAir has initiated a process to strengthen its sustainability governance and develop a dedicated ESG plan (Environmental – Social – Governance) in line with the latest European Union guidelines, which call for increased use of these tools for both management and reporting purposes.

Furthermore, the company is actively working to identify and quantify the most appropriate impact indicators, some of which were already introduced in the previous Sustainability Report. These indicators have since been expanded, refined, and deepened in the current edition.

Code of Ethics

CleanAir Europe S.r.l.'s Code of Ethics is published on the company's website.
The code is based on the company's core values, which include: impartiality, competence, credibility, excellence, safety, social and environmental responsibility. It governs the company's operations by setting rules on issues such as conflicts of interest, gifts and gratuities, antitrust compliance, transparency in financial reporting, protection of company assets, and confidentiality of information. Special emphasis is placed on compliance with labor laws and regulations, as well as on employee development, training, and protection of physical and moral integrity. GDPR principles are embedded to ensure privacy and data protection. The Code of Ethics also regulates institutional relations, particularly communications and interactions with clients and suppliers, as well as users and local communities. A dedicated section addresses relations with trade unions, chambers of commerce, and industry associations. In the event of violations, the code outlines the applicable sanctions and disciplinary measures.

Management Systems and Certifications

CleanAir Europe S.r.l.'s quality system is certified by TÜV SÜD in accordance with the **UNI EN ISO 9001:2015** standard. Although the company does not currently hold a formal environmental management system certification, it operates an internal system aligned with certain ISO directives, even if not officially documented. **CleanAir** also adopts voluntary product certifications in compliance with **UNI EN ISO 14021** for its solutions: EcoHpc, EcoAtex, EcoSmart, and EcoTurbo. Additional product certifications, particularly regarding compliance with the European ATEX Directive (explosion protection), are currently under evaluation for future implementation.

2030 Agenda

With reference to the United Nations 2030 Agenda and its 17 Sustainable Development Goals (SDGs), CleanAir has identified the most relevant areas where it can contribute to sustainable development through its industrial and commercial activities:

Goal 7 – Affordable and Clean Energy, especially target 7.3, focused on energy efficiency

Goal 8 – Decent Work and Economic Growth, especially targets 8.4 and 8.8, concerning resource efficiency and workplace safety

Goal 9 – Industry, Innovation and Infrastructure, especially target 9.4, promoting clean and environmentally friendly technologies

Goal 11 – Sustainable Cities and Communities, particularly targets 11.5, 11.6, and 11.7, related to air quality, public health, and community environmental policies

Goal 12 – Responsible Consumption and Production, particularly targets 12.4 and 12.5, concerning waste management and recovery

Goal 13 – Climate Action, especially targets 13.2 and 13.3, related to environmental strategy planning and promotion of environmental awareness

Goal 17 – Partnerships for the Goals, especially target 17.7, supporting the global diffusion of advanced environmental technologies

SUSTAINABLE DEVELOPMENT GOALS

Environmental Enterprise Award

It is worth highlighting the Environmental Enterprise Award (Premio Impresa Ambiente) received in February 2022, organised by the Chamber of Commerce of Venice-Rovigo and sponsored by Unioncamere and the Italian Ministry for Ecological Transition.

The award was granted for the EcoAtex IDF cage in the category "Most Sustainable Product/Service." The same product was also submitted in 2022 to the Circular Economy Supply Chain Call for Proposals promoted by the Lombardy Region. The project was positively evaluated and ranked, and it was officially awarded funding in December 2022.

Regarding the Environmental Enterprise Award, we quote the jury's official motivation:

CleanAir Europe S.r.l., a company active for decades in the field of industrial gas filtration and abatement, has introduced a significant innovation in the production of filter bag cages, which are used in flue gas treatment systems across most industrial sectors.
Through an innovative design and treatment process, the cages offer enhanced safety features (such as antistatic properties), longer service life, reduced resource consumption during production, and consequently, lower waste generation.

Membership in the Lariana Network for Sustainable Transition

In 2023, the Chamber of Commerce of Como-Lecco launched an initiative to engage local stakeholders, which led to the creation of LARete – Lariana Network for Sustainable Transition, becoming fully operational in 2024.

The ultimate goal of LARete is to strengthen knowledge-sharing and collaboration among all stakeholders operating in the provinces of Como and Lecco, promoting sustainability projects across the Lake Como area and cross-border regions, through action plans and concrete interventions.

CleanAir Europe S.r.l. is a proud and active member of the network.

We have contributed proactively since its inception and actively participate in the "ESG Working Groups", co-designed with other stakeholders and coordinated by the Chamber of Commerce.

Through these groups, we share experiences, knowledge, and resources to develop pilot projects that advance both environmental and social sustainability for the local area and the companies operating within it.
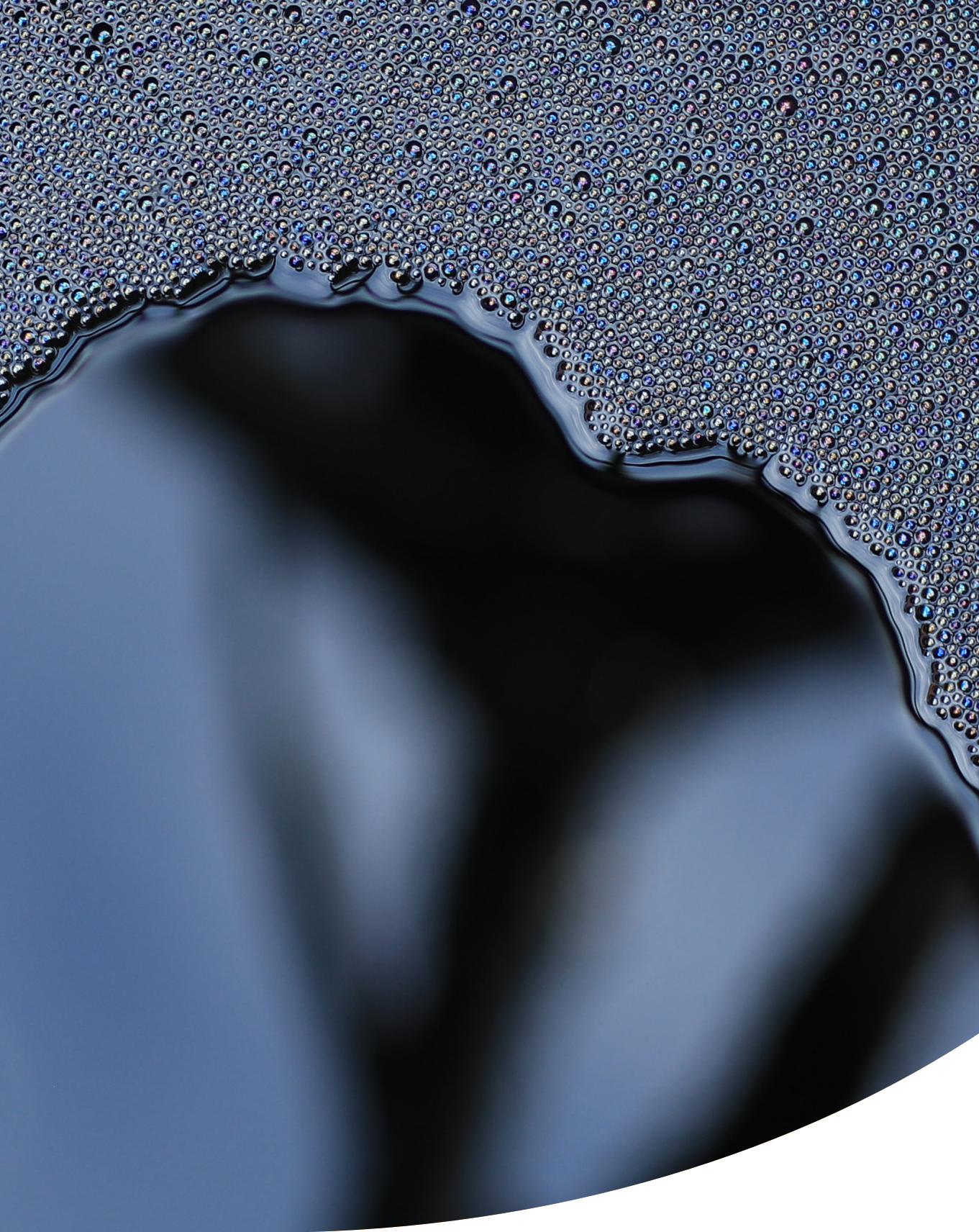
Economic
Dimension

Key Economic Data

Economic performance is the primary measure of business success for CleanAir Europe S.r.l.

The company's policy is clearly oriented toward maintaining corporate integrity through the efficient and effective use of financial resources, ensuring long-term sustainable development. Performance results are regularly analyzed at the management level to verify alignment with strategic objectives and to identify any corrective actions in case of deviations.

In recent years, **CleanAir Europe S.r.l.** has experienced a steady growth trend. In 2024, the company consolidated the positive results of the previous years, despite a slight decline (-4%) due to reduced market demand. The target for 2025 is to increase revenue by 5% compared to 2024. (*Chart 1*).

Turnover

2020	2021	2022	2023	2024
€3.732.578	€4.673.502	€6.381.635	€7.404.255	€7.119.234
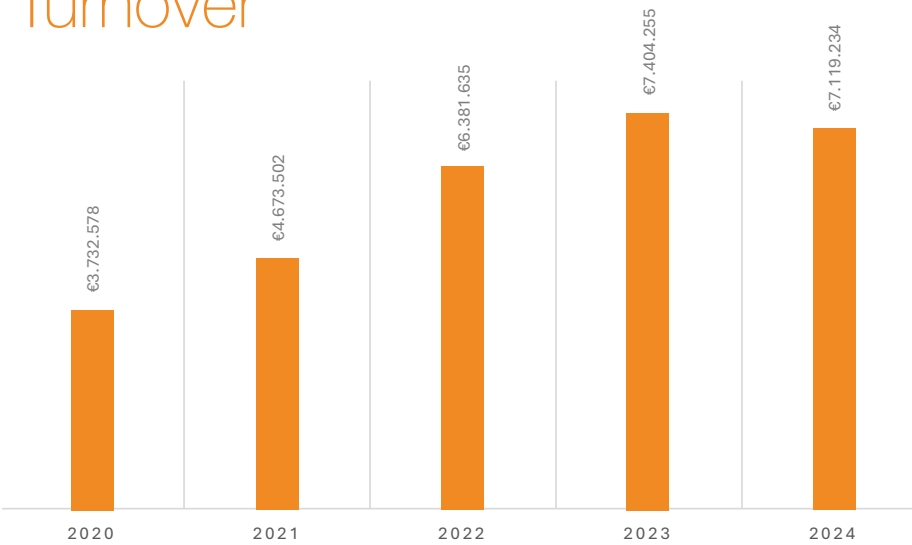
Chart 1 – CAE revenue over the past five years (in euros)

Another key indicator to consider is the production capacity of the manufacturing facility.

2020 was a year of low output due to the COVID-19 pandemic and related restrictions, which led to months-long shutdowns of manufacturing operations globally.

In the following years, **CleanAir** successfully recovered, reaching an annual production of 200,000 to 250,000 filter cages, in various finishes (*see Chart 2*).
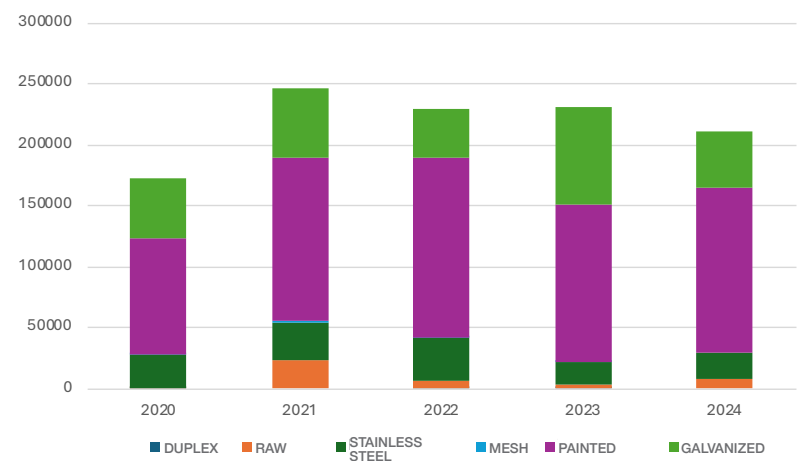
Chart 2 – Number of units produced from 2020 to 2024, by finish

An additional and highly significant indicator is the expansion of our customer and supplier base. In the calendar year 2024, CleanAir sold products to 105 customers, split fairly evenly between 58 Italian clients (55%) and 47 foreign clients (45%). Notably, 39 of these were new customers, reflecting the continuous growth and diversification of **CleanAir**'s client portfolio (*see Chart 3*).

In the same period, CleanAir worked with 264 suppliers, of which over 92% were Italian. 73 new suppliers were added during 2024 alone (*see Chart 4*

Customers
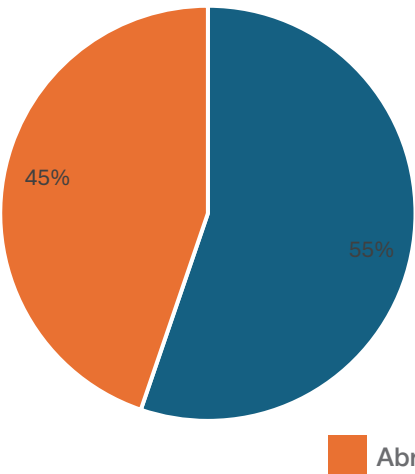
Suppliers
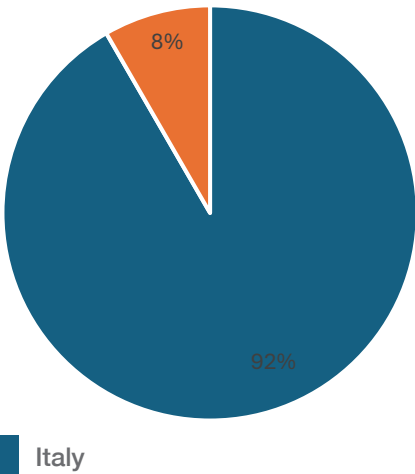
Chart 3 – Distribution of customers by geographical origin

Chart 4 – Distribution of suppliers by geographical origin

Innovation, Research and Development

Next-generation filtration supports are increasingly incorporating the principles of ecodesign, with attention to sustainability, digitalization, and all the priorities set by the ongoing industrial transitions.

From digital technologies to energy recovery, from carbon footprint reduction to environmental and product safety – these are the dimensions that now characterize CleanAir Europe S.r.l.'s commercial offering.

This extensive design effort is strongly supported by partnerships: scientific collaborations with universities and research institutions, as well as institutional partnerships with chambers of commerce and national agencies.

CleanAir has been collaborating for over three years with **Politecnico di Milano** on a project aimed at developing new geometries for filter supports, with the goal of reducing the energy consumption of dust collectors.

In 2023, a second agreement was signed with Politecnico di Milano to study the fluid dynamics behavior of filter supports through simulation models. The aim is to explore product evolution also from a design perspective over the next five years. This research was consolidated with the presentation of preliminary solutions through a call for papers at Europe's leading industrial filtration trade fair. The call was repeated in 2024, this time with experimental validation data provided by a strategic partner. In 2025, a third agreement will be signed to conduct CFD (Computational Fluid Dynamics) simulations within dust collectors.

At the same time, the company's commitment to offering advanced products on the market has led to participation in various funding calls and competitions, aiming to leverage incentives made available for reliable, concrete, and measurable innovation projects. In this regard, **CleanAir** has collaborated actively with both the **local Chamber of Commerce** and **Unioncamere**.

While 2024 was a year of consolidation for new products and technologies, the coming years will see a strong push toward the development of the new product line **EcoSmart Sense**, focusing on the implementation of digital monitoring systems for filtration performance.

Environmental
Dimension

Environmental Dimension

Environmental protection is an inherent part of **CleanAir Europe S.r.l.**'s identity. The company manufactures devices that help reduce the polluting impact of fine particulates, sulfur oxides, and nitrogen oxides – the main contributors to acid rain – by enabling effective filtration in dust collectors and gas filters.

The reduction of these pollutants is primarily achieved through the use of Pulse Jet technology, which pairs CleanAir-manufactured filter cages with fabric filter bags.

This technology is currently recognised as a **BAT** – Best Available Technology for air pollution control. Thanks to its efficiency, emissions can now be reduced to below 10 micrograms/m^3, well below the legal threshold for PM2.5, which stands at 25 micrograms/m^3.

It is therefore fair to state that CleanAir is an active contributor to the fight against air pollution and a committed supporter of planetary protection.

Environmental Policy

CleanAir Europe S.r.l.'s industrial supply chain is particularly sensitive to issues related to atmospheric emissions and greenhouse gas mitigation, with a strong focus on carbon footprint reduction. The company's management actively pursues policies aimed at waste reduction and energy efficiency, particularly throughout the manufacturing process of filter cages. One significant initiative is the investment in an ultrafiltration and evaporation plant for cataphoresis coating, designed to separate wastewater paint residue into distilled water and concentrated paint, significantly reducing waste and environmental impact.

In its strategic plans, **CleanAir** aims to progressively decouple business growth from environmental impact. This includes measuring the carbon footprint of both the organisation and its manufactured products, with a special focus on energy efficiency, waste reduction, and recyclability as key levers for reducing environmental footprint.

Production Process

Environmental responsibility is also reflected in CleanAir Europe S.r.l.'s production process, particularly in the cataphoresis coating stage, which in 2021 benefited from a new investment aimed at transforming waste into by-products.

The company invested in an evaporation system capable of separating the concentrated pigment waste – destined for disposal – from distilled water, which is recovered and reused in the production cycle.

Additionally, **CleanAir** invested in an ultrafiltration system, which improves process efficiency and reduces contamination in the treatment bath. This ensures better pigment adhesion, thereby increasing product durability and making it more sustainable over time.

These steps have initiated a broader company-wide effort to calculate, monitor, and gradually reduce the carbon footprint of CleanAir's products.
As part of the documentation prepared for the Circular Economy Call for Proposals promoted by the Lombardy Region and Chambers of Commerce, CleanAir has already estimated a preliminary carbon footprint value associated with the cataphoresis process.

The company is currently evaluating the possibility of systematically determining and tracking the carbon footprint of both its organization and its main manufactured products at the Bulciago facility.

As a first step in this direction, in 2023 **CleanAir** conducted an LCA (Life Cycle Assessment) focused on greenhouse gas emissions (see box below), to assess potential differences in environmental performance – particularly GHG emissions – over the life cycle of filter cages with different finishes.
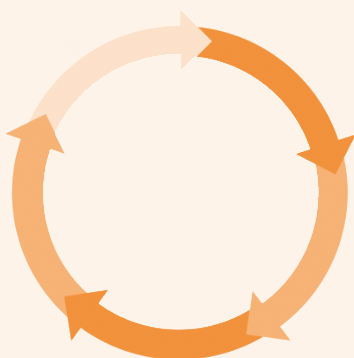
Life Cycle Assessment

Summary of the Simplified Life Cycle Assessment (LCA) Report on Greenhouse Gas Emissions

1. Introduction

This report analyzes the greenhouse gas emissions generated during the production cycle of four types of filter bag cages manufactured by CleanAir.

Following the standards UNI EN ISO 14040:2021 and 14044:2021, the LCA methodology assesses the environmental footprint of the products from raw material reception to finished product packaging (a "gate-to-gate" approach).

The impact category considered is the 100-year Global Warming Potential (GWP-100), with emissions expressed in carbon dioxide equivalent (CO_{2eq}).

2. Organization and Scope of the Study

The study focuses on four types of cages:

- Stainless steel
- Galvanized steel
- Raw steel with cataphoretic coating
- ARaw steel

Emissions from powder-coated epoxy steel cages were also considered, based on bibliographic data.

3. Objective and Scope of the Study

The aim is to comparatively assess the CO_2 emissions of the different cage types using a gate-to-gate approach, applying the software SimaPro v.9.3.

Functional Unit

The functional unit is defined as an average cage with the following specifications provided by the company:

- Average diameter: 150 mm
- Average length: 3,500 mm
- Average weight: 3.6 kg

System Boundaries

The analysis covers the stages from raw material intake to final packaging. The only transportation considered is that of stainless steel cages sent to third parties for additional processing.

Data Quality and Time Frame

The data used are primarily primary data collected directly from the production site, supplemented by secondary data from bibliographic sources and technical databases. The reference year for the study is 2022.
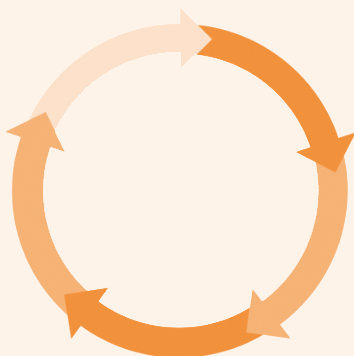
Life Cycle Assessment

Summary of the Simplified Life Cycle Assessment (LCA) Report on Greenhouse Gas Emissions

4. Inventory Analysis

The tables summarize the quantities of materials used and the associated emissions for each type of cage. For example, for stainless steel cages, the total CO_{2eq} emissions amount to 706.32 tons, with an average of 19.66 $kgCO_{2eq}$ per cage.

5. Impact Assessment

The results show the CO_{2eq} emissions for each type of cage.

Considering the production volumes for the reference year, the highest total emissions are associated with cataphoretically coated cages (1,558 tCO_{2eq}), followed by stainless steel cages (706.32 tCO_{2eq}), galvanized steel cages (521.38 tCO_{2eq}), and raw steel cages (43.69 tCO_{2eq}).

When emissions are normalized per individual cage, stainless steel cages show the highest per-unit emissions (19.66 $kgCO_{2eq}$ per cage). Cataphoretic coating performs better in this regard, ranking just behind untreated raw steel, which, however, is expected to have a shorter product lifespan.

Potential Future Developments
An interesting avenue for future analysis would be to evaluate emissions relative to the product's useful life. This approach could reduce the annualized emissions for cages with longer durability. For example, a stainless steel cage might have lower annual emissions than a galvanized steel cage if its lifespan is significantly longer.

Energy and Greenhouse Gas Emissions

The main energy sources used in CleanAir's operations are electricity (48.5% of total energy demand), employed for production processes, heating, lighting, and partially for vehicle charging, and natural gas (51.2%), used as fuel for the coating oven. Diesel fuel is used only marginally (0.3%) for company vehicles. All energy needs are met through purchases from external suppliers (*see Table 1, Table 2, and Chart 5*).

Energy Consumption	2021	2022	2023	2024
Electricity purchased (kWh) – on-site use	720.942	809.372	724.685	804.847
of which used for company electric vehicles (kWh)	——	——	4.268	5.469
Electricity purchased for EV charging (off-site)	——	——	1.348	2.344
Natural gas (Smc)	79.494	101.796	67.919	77.579
Diesel fuel for vehicles (liters)	351,29	561,89	720,14	505,26

Table 1 – Total energy consumption at CleanAir Europe S.r.l. over the last four years, by source

Total Energy Consumption (in MJ)[1] and Breakdown by Source	Source MJ	% Share
From diesel fuel	18.189,36	0,3%
From natural gas	3.062.818,92	51,2%
From purchased electricity	2.905.887,24	48,5%
Total Energy Consumption (MJ)	**5.986.895,52**	**100%**

Table 2 – Total energy consumption (MJ) at headquarters, by source and percentage share

[1] The energy conversion factors used (MJ per liter of fuel) are based on Legislative Decree No. 199 of November 8, 2021, which transposes EU Directive 2018/2001 on the promotion of renewable energy, and the Ministerial Decree of March 16, 2023 No. 107. For natural gas (Smc), the Higher Heating Value (HHV) of 39.48 MJ/Smc provided on the utility bill was used for conversion.

Energy Consumption
% Breakdown

Diesel fuel
0,3%

Natural gas
51.2%

Purchased
electricity
48.5%
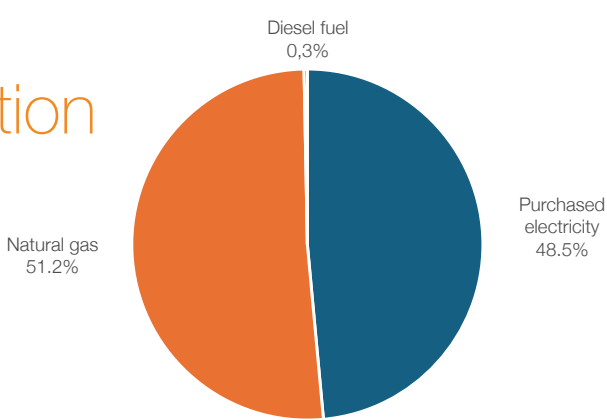
Chart 5 – Percentage breakdown of energy sources used by CleanAir Europe S.r.l. in 2023

Using a location-based approach (i.e., considering the national average energy mix), it is estimated that 22% of the total energy consumed by **CleanAir Europe s.r.l.** originates from renewable sources.

However, when applying a market-based approach (which considers the actual energy mix purchased from the grid), this proportion shifts significantly in favor of renewables: As of January 1, 2024, **CleanAir** has signed a contract with its electricity provider that guarantees 100% of **electricity supplied comes from renewable sources, certified** through Guarantees of Origin (GOs) (*see Chart 6*).[2]

Energy Sources
Market-Based Methodology

Non-renewable
sources
51.5%

Renewable
sources
48.5%
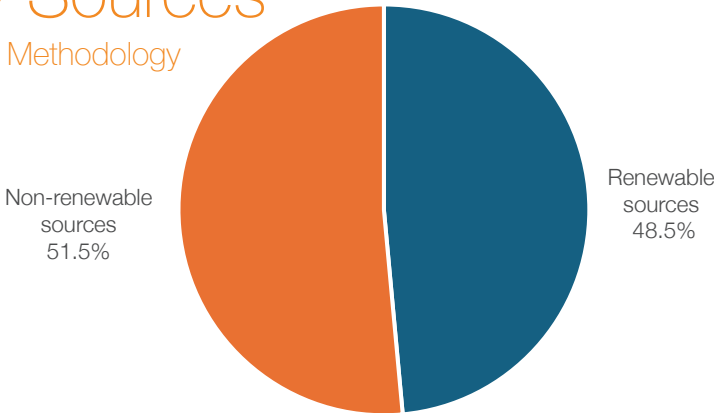
Chart 6 – Percentage breakdown of energy sources, renewable vs. non-renewable, using market-based methodology

[2] To calculate the percentage of electricity generated from renewable vs. non-renewable sources under the location-based methodology, the analysis relied on the initial national mix of electricity production for Italy in 2023 (source: GSE, preliminary data available at the balance sheet closing date):
• Renewables: 46.31%
• Natural gas: 42.99%
• Coal: 5.27%
• Petroleum products: 0.90%
•Other sources: 4.53%
Under the market-based methodology, a 100% renewable electricity supply was applied. These values were then integrated with natural gas and diesel consumption, which are non-renewable sources, to obtain the final energy mix.

The internal greenhouse gas (GHG) emissions resulting from **CleanAir Europe s.r.l.**'s production activities can be classified as direct or indirect.

• Direct emissions (Scope 1, as defined by the GHG Protocol) stem from the combustion of fuels by equipment owned or controlled by the company (e.g., boilers, burners, company vehicles).
• Indirect emissions (Scope 2) refer to emissions from the generation of electricity purchased and consumed by the company.

In accordance with these definitions, Scope 1 emissions were calculated and converted into tons of CO_2 equivalent (tCO_2eq) using GHG Protocol tools, based on natural gas combustion and fuel used for transportation. Scope 2 emissions, related to thermoelectric energy production, were estimated using the latest ISPRA emission factors and the most recent available data on energy mix composition. Depending on the method used, estimates vary:
• With the location-based approach, Scope 2 emissions account for approximately 58% of CleanAir's total internal GHG emissions.
• With the market-based approach, Scope 2 emissions are effectively nullified due to CleanAir's procurement of 100% renewable electricity starting in January 2024. (*see Table 3*).

GHG Emission Source	tCO_{2eq}
Direct GHG emissions (Scope 1)	147,73
Indirect GHG emissions from energy (Scope 2 – location-based)	207,13
Indirect GHG emissions from energy (Scope 2 – market-based)	n/a

Table 3 – Estimated greenhouse gas emissions for 2024 (in tCO_2eq), divided into Scope 1 and Scope 2 emissions using both location-based and market-based methods

CleanAir has demonstrated awareness of its energy choices for several years – starting with the implementation of a new LED-based lighting system in its production facilities.

This modern LED lighting setup:
• Guarantees high energy efficiency, reducing consumption by up to 90% compared to traditional incandescent bulbs;
• Is made of non-toxic materials, unlike traditional or fluorescent lighting, which may contain mercury, sodium vapors, or metal halides – all potentially harmful to the environment;
• Is 95% recyclable.
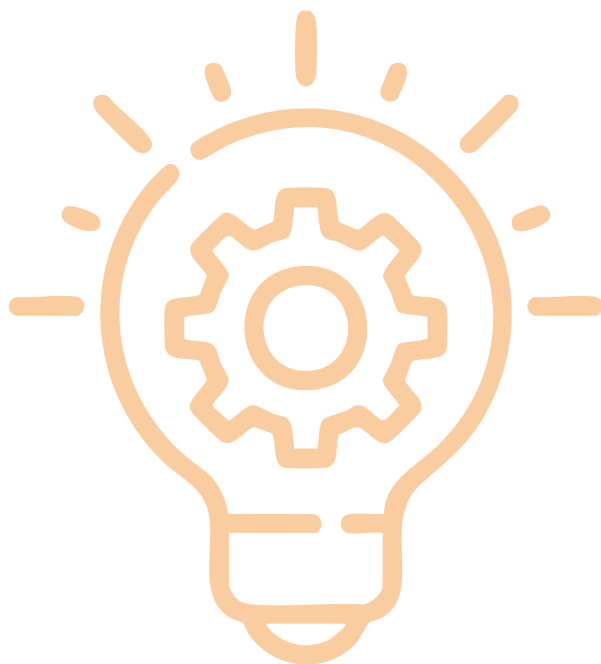
CleanAir is also committed to improving the energy efficiency of dust collection systems used by end users of its cages, by studying and implementing innovative solutions to enhance filtration efficiency.

For several years, the company has maintained an active collaboration with the **Department of Civil and Environmental Engineering at the Politecnico di Milano,** aimed at analyzing airflow patterns within filtration supports using Computational Fluid Dynamics (CFD) techniques. This research serves as a foundation for the development of a venturi-cage system, capable of delivering energy savings during filter operation. The study was included and funded as part of the 2022 Circular Economy Call promoted by the Lombardy Region and supported by the Chambers of Commerce of Lombardy. Reducing energy consumption in dust collectors will contribute significantly to lowering their carbon footprint and will also have a substantial impact on reducing operational expenditures (OPEX).

Natural Resources

Figure 1 – Ultrafiltration and distillation system operating at CleanAir Europe S.r.l.

Figure 2 – Condoremi Unit (Distillation)

CleanAir Europe s.r.l. considers the efficient use of natural resources—particularly water—to be of paramount importance. Water is a scarce and valuable resource, shared with both the ecosystem and the local community, and it is essential to implement every possible solution to optimize its use and reduce waste, especially in a context where climate change is making drought events more frequent and water stress conditions harder to predict.

Despite the Aqueduct Water Risk Atlas[4] identifying the Bulciago area as low to medium water risk, CleanAir considered it essential to adopt the best available technologies to reduce its water consumption.

The water used in **CleanAir**'s processes is drawn from the municipal aqueduct and used for domestic purposes (restrooms, catering, cleaning, irrigation) and, for industrial purposes, exclusively within the coating process. Greywater from domestic uses is discharged into the sewage system and treated at the Nibionno (LC) purification plant. At the end of the industrial painting process, a by-product is generated–water contaminated with pigment–which was previously disposed of as special waste.

Starting in 2022, following a significant investment, the company equipped its coating plant with an evaporator. This system separates the by-product into a concentrated pigment solution (disposed of as special waste) and distilled water, which is then reused in the production cycle.

This innovation significantly reduced aqueous waste, cutting water withdrawal per hour of filtration system operation by 66% compared to pre-installation levels (*see Table 4*).

At the same time, the volume of aqueous solution waste sent for disposal also dropped sharply–from 184,700 kg in 2021 to 42,480 kg in 2023, and 46,760 kg in 2024, representing a 77% reduction.[5]

Information related to water usage in the coating oven	2021	2022	2023	2024
Water withdrawal (cubic meters)	256	266	210	106
Hours of filtration system operation (hours)	1.240	1.652	1.467	1.505
Hourly water withdrawal of filtration system (cubic meters/hour)	0,21	0,16	0,14	0,07
Aqueous solution waste sent for disposal (kilograms)	184.700	62.860	42.480	46.760

Table 4 - Detail of water resource utilization in the painting plant over the last four years[6]

[4] https://www.wri.org/applications/aqueduct/water-risk-atlas/ Last consulted 20th May 2025.

[5] The data is partially flawed by the fact that some waste from 2020, accumulated on site due to the blockage caused by the Covid pandemic, was withdrawn in January 2021.

[6] Errata corrige: the data relating to the years 2021-2023 were also corrected, due to an erroneous calculation of water withdrawals.

CleanAir also measures and monitors the flow of incoming and outgoing materials, including raw materials, processing-related products, and waste.
This monitoring is crucial from an environmental standpoint as it allows the company to assess resource efficiency, reduce material waste, and minimise the environmental impact of waste.
By accurately tracking these flows, the company can implement more sustainable practices and ensure responsible resource management, in line with the waste hierarchy: preventing waste generation as the top priority, followed by recovery and reuse, and recycling, with disposal as a last resort.

These flows, categorised by material type and waste characteristics, are summarised in the tables below. All waste produced by **CleanAir** in 2024 was classified as non-hazardous and was 100% directed toward recovery or recycling operations.

Main Materials Used	Quantity (kg)
Carbon steel (bright and galvanized)	622.290
Stainless steel	141.473
Spruce wood[7]	412.000
Paints and coatings	18.290

Table 5 – Annual mass flow of relevant materials used in 2024

Waste Produced (kg)	Hazardous	Non-hazardous	Total
Recycled or Recovered	0	90.493	90.493
Sent to Disposal	0	0	0
Total	**0**	**90.493**	**90.493**

Table 6 – Total annual waste production for 2024

Among its next corporate objectives, **CleanAir** aims to implement a waste monitoring system, both for raw materials and semi-finished products. At a later stage, the company will define procedures and operating instructions to minimize waste generation and will establish specific reduction targets.

Finally, over a longer time horizon, **CleanAir** will work to identify second-life uses for wood, metal, and other production scraps, and to define recovery methods for end-of-life filter cages, involving final users in the process.

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[7] A conversion factor of 1 m³ spruce wood = 500 kg was used.
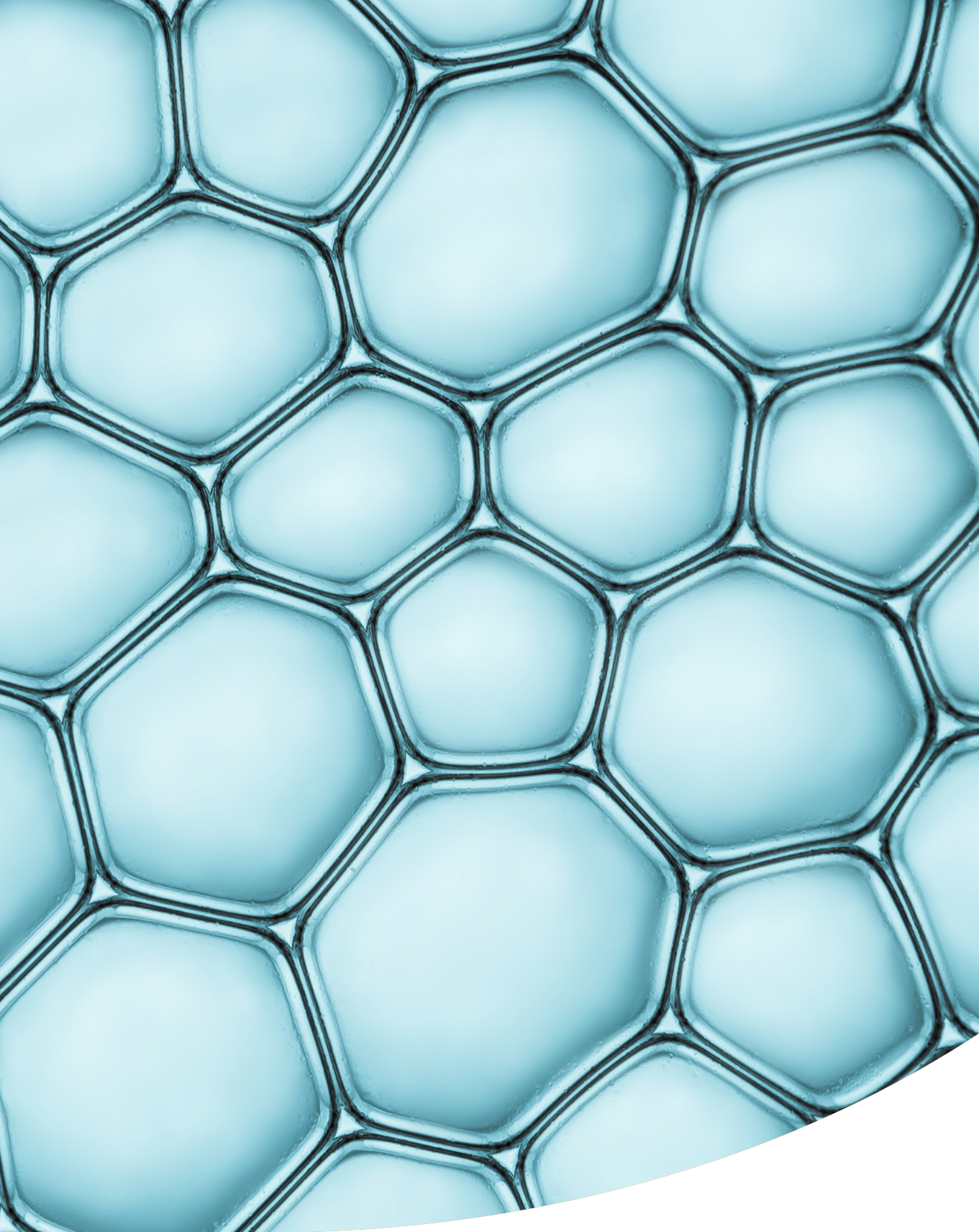
Social
Dimension

Human Resources

Employees

CleanAir Europe S.r.l. employs 25 men and 6 women, all of whom are covered by collective bargaining agreements (CCNL Metalworking Industry). Of these, 29 are employed under permanent contracts, while 2 have fixed-term contracts. All employment contracts are full-time (*see Chart 7*). The company strongly favors full-time employment and permanent contracts: this approach ensures stability and professional security for workers, enabling them to plan their careers and personal lives in the long term.

All women in the company hold positions of responsibility. Three are line supervisors, setting the pace for production machinery. One, a former supervisor with years of experience, has been promoted to quality control assistant. Another is the company's lead sales representative, while the last is responsible for corporate treasury, shipping, and outgoing invoicing.

Employees by Contract Type

Men   Women
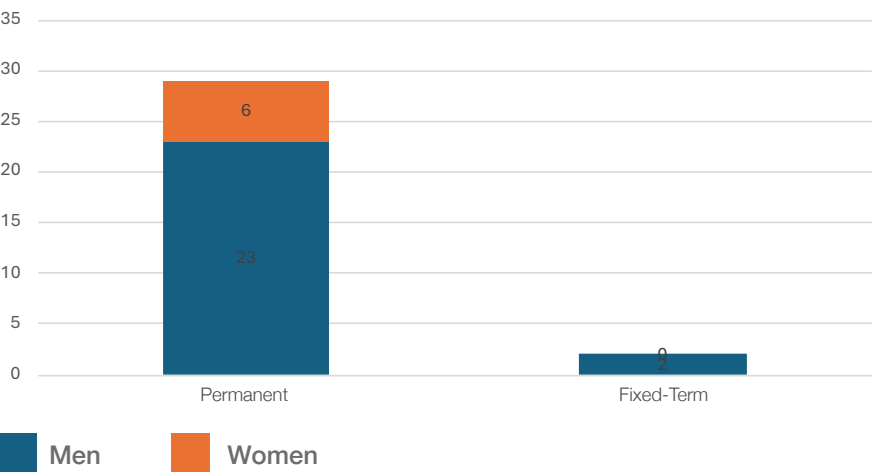
Chart 7 – Total number of employees by contract type as of 31/12/2024

The company does not discriminate in any way based on gender, nationality, age, origin, or religion, and considers diversity a strength and a corporate asset.
CleanAir believes that multiculturalism is a key added value and is proud to have twelve foreign employees (almost 40% of the total workforce), primarily from African countries (*see Chart 8*).

Number of Employees by Country of Origin

Country	Permanent
ITALY	19
TUNISIA	2
TOGO	
BURKINA FASO	
NIGERIA	1
ALBANIA	1
ROMANIA	1
MALI	1
KOSOVO	1
SENEGAL	1
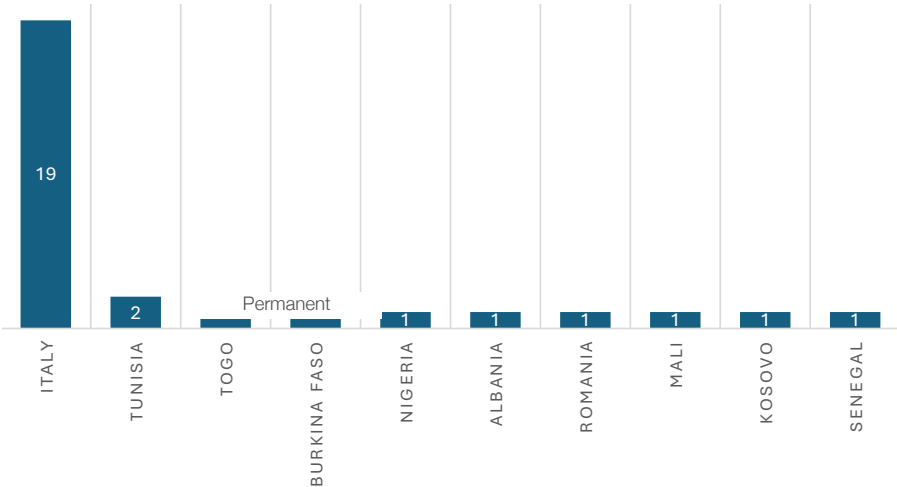
Chart 8 – Number of employees by country of origin

Human Resources

Training

The knowledge and skills of employees are considered a fundamental value at **CleanAir Europe S.r.l.** The company strongly believes in the importance of adequate training and in the personal and professional development of its staff, aiming to enhance individual competencies. Specific professional development plans and training programs are created for each person and are constantly reviewed and updated.

Training courses are offered throughout the year in various formats: seminars and lessons delivered by internal staff, industry experts, or university professors, as well as external programs including trade shows, conferences, fieldwork, and classroom sessions.

In 2024, training activities covered health and safety at the workplace (both mandatory and voluntary), technical skills, IT skills, and refresher courses, for a total of nearly 300 hours. More than two-thirds of the training hours were specifically dedicated to ESG-related topics.

Training Areas

Health and Safety (H&S):
IT Skills
Technical Skills
ESG Topics
Refresher Courses
Other

2% 4% 20% 1% 5% 68%
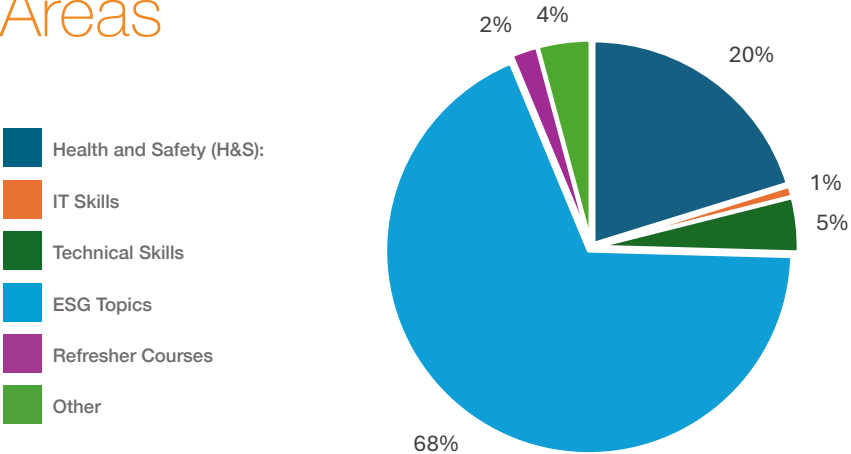
(Chart 9 – Distribution of training hours provided in 2024 by topic)

Human Resources

Employee Wellbeing and Corporate Welfare

At **CleanAir Europe S.r.l.**, care and respect for individuals are at the heart of the company culture. This shared spirit, fostered by the close collaboration between office and factory staff, shapes the positive work environment across the organization.

Within the limits of company goals, **employees** enjoy a certain degree of autonomy in organizing their work. For example, flexible working hours are offered to office staff, tailored to their family needs. When requested, remote work (smart working) is also considered and granted when possible.

Salaries are in line with industry standards. Fringe benefits and performance or quality bonuses are in place and are regularly reviewed based on company merit criteria. Social gatherings and moments of celebration among colleagues and employees are not only welcomed but actively encouraged by management, particularly during holidays and birthdays—sometimes even held outside the company premises. Employees also receive a small holiday gift during the Christmas season.

Shift scheduling in the factory is managed with full employee agreement and planned well in advance. Likewise, vacation time and company closures are communicated early and often discussed collectively. In general, the company promotes coordinated relations with trade associations and unions, including in conflict resolution processes, aiming for mutually satisfactory agreements.

A supplementary **insurance policy** is provided to cover unforeseen medical expenses, and it is included in the company's contractual offering.

CleanAir Europe S.r.l. also enhances **team value and staff recognition** through media and social communication, featuring employee roles, contributions, and individual initiatives on the company website.

To support employee and visitor mobility, free parking spaces are available within designated areas on company premises. During the year, additional work was carried out to clearly mark visitor parking spots. Two electric vehicle charging stations are available for hybrid and electric vehicles.

Health and Safety at Work

The protection of workers' health and safety in the workplace is a fundamental and non-negotiable element in all company activities and decisions.

Every decision regarding health and safety is taken in compliance with the general protection measures established by applicable legislation, in particular Italian Legislative Decree 81/08 (the "Consolidated Act" on health and safety at work), with the primary objective of safeguarding the physical and mental well-being of personnel.

The company's health and safety system is organized hierarchically, with the Employer (Datore di Lavoro - DL) at the top, assisted by Supervisors (Preposti) for the implementation and oversight of safety measures. The DL is supported by the Head of the Prevention and Protection Service (RSPP), who coordinates prevention and protection activities. Specialized external consultants are also engaged to ensure compliance with constantly evolving safety regulations.

Employee consultation is guaranteed through the election of a Workers' Safety Representative (RLS). The Employer also appoints a Company Doctor (Medico Competente) for mandatory health surveillance. Emergency response teams are in place, trained in fire prevention, evacuation, emergency response, and first aid.

Risk monitoring and assessment are carried out by qualified personnel, following legal requirements, to minimize and control hazards. Worker training is also delivered regularly. The Risk Assessment Document (DVR) includes a detailed and systematic analysis of potential workplace hazards and the relevant preventive and protective measures to mitigate them. This assessment considers factors such as workplace activities, the characteristics of the work environment, tools and equipment used, and potential exposure to hazardous substances, based on direct observation, safety data, expert consultations, and reliable sources.

CleanAir strongly believes in accident prevention and promotes behaviors aimed at improving working conditions. Examples of this corporate policy include:
• Provision of dedicated canteen and locker room facilities
• Supply of company clothing, beyond the minimum required Personal Protective Equipment (PPE)
• Use of external professional cleaning staff for hygiene and sanitation.

The management also places strong emphasis on the comfort of factory employees, especially in adapting to seasonal changes. Recent improvements include:
• Electric radiant heaters to protect from cold during winter
• LED lighting to ensure proper illumination with low energy use
• Comfortable, ergonomic workstations, proper heating and cooling, and adequate lighting are also standard features of the company's office environments.

At **CleanAir**, the number of workplace accidents and injuries is continuously monitored and managed in order to minimize incidents as much as possible. Through the tracking of near misses and the investigation of accidents, the most suitable corrective actions are implemented to prevent recurrence.

In 2023, following a temporary increase in incidents, **CleanAir** provided targeted training to the workers involved. The corrective measures undertaken had the desired effect, resulting in a return to zero incidents for the current year.

Injury Incidence	2021	2022	2023	2024
No. of Injuries	0	1	4	0
Days of Absence	0	11	57	0
INAIL Hours Worked	45.302	45.133	48.051	50.546

Table 7 – Key occupational health and safety indicators over the past four years

Product Safety

Safety is a core value at **CleanAir Europe S.r.l.**, both within the company and in the external use of its products once installed and in operation. Strategically, the company has made targeted investments to enhance product safety, notably by improving construction features (for example, by introducing explosion-proof characteristics in potentially hazardous environments, as seen with the EcoAtex product line).

In addition, CleanAir provides effective communication tools to support safe maintenance and installation activities. One example is the **EcoSmart Cage digital project, which guides personnel through maintenance and installation procedures** with particular attention to safety equipment and protocols. This guidance is always accessible on-site via a digital tag on the product, easily reachable through a smartphone interface.

Local Community

CleanAir Europe S.r.l. has been supporting various solidarity initiatives for several years.

Make-A- Wish® Italy – Annual Donation

CleanAir supports the activities of **Make-A-Wish® Italy**, a non-profit organization that grants wishes to children and adolescents between the ages of 3 and 17 affected by serious illnesses, bringing them joy, strength, and hope.

Operating since 2004 and based in Genoa with an office in Milan, **Make-A-Wish® Italy** works across the country through a network of more than 250 volunteers and receives referrals from the most important pediatric hospitals in Italy.

Its membership in the global **Make-A-Wish® Foundation International** ensures maximum efficiency, even for the most complex wishes, in any country in the world.

CleanAir is a regular donor to **Make-A-Wish® Italy**. In 2024, it supported the fulfillment of the dreams of three children, in addition to the two dreams funded in the previous year.

Fondazione comunitaria del Lecchese

For 25 years, the **Fondazione comunitaria del Lecchese** has been committed to enhancing the natural and cultural beauty of the region and supporting socially relevant projects.

Each year, it financially supports dozens of organizations including associations, cooperatives, parishes, and municipalities, aiming to improve the quality of life and strengthen social bonds and responsibility among all those who live and work in the province.

In 2024, **CleanAir** renewed its participation in the **Con-vivium project**, which it had already joined in 2021 and 2023. The initiative involves the creation of personalized planners featuring twelve traditional Lombard recipes, one for each month, reinterpreted by renowned chefs. The project collects donations to support **Caritas Ambrosiana – Casa della Carità** and its meal service, helping fund the purchase of food supplies.

Treedom

At **CleanAir**, we believe a greener world is a better world. That's why we strive to plant as many trees as possible, also thanks to the loyalty of our customers.

Our collaboration with **Treedom** has been ongoing for several years: for every order received, we purchase trees and dedicate them to our clients as a symbolic gesture toward a greener planet.

Through this initiative, **CleanAir** reaffirms its commitment to sustainability. Together with Treedom, we have created the **CleanAir Forest**, which now includes over 200 trees planted in Colombia, Haiti, Madagascar, Ecuador, and Tanzania. This forest is expected to absorb 83 tonnes of CO_2 equivalent (tCO_{2eq}) in its first 10 years of life.

We believe reforestation plays an essential role in protecting our planet. Trees help clean the air by removing carbon and releasing oxygen, cooling the atmosphere through evaporation, preventing erosion, conserving water, and more.

To visit our forest:
https://www.treedom.net/it/forest/foresta-cleanair

Click here

European Institute of Oncology (IEO)

The European Institute of Oncology is a private hospital and scientific research center (IRCCS) in Milan that specializes in cancer care and research, aiming to improve diagnostic and therapeutic methods. It houses several laboratories dedicated to this mission.

In 2024, **CleanAir** financially supported several research projects, demonstrating a concrete and valuable commitment to scientific progress through targeted investments. This support will help accelerate the development of new therapies and technologies, improving the life expectancy and quality of life of people affected by cancer.

Telethon

Fondazione Telethon is a non-profit Italian foundation recognized by the Ministry of Universities and Research. Its mission is to promote fundraising initiatives and manage collected funds to support both internal and external scientific research on rare genetic diseases.

Since 1990, Telethon has funded over 2,700 projects, involving more than 1,600 researchers and addressing 526 rare genetic diseases. One of its main focuses is gene therapy, which aims to treat diseases by addressing their genetic root causes.

In 2024, **CleanAir** demonstrated its commitment to scientific research and the fight against rare genetic diseases by making a charitable donation, underlining the importance of supporting the scientific community and bringing hope to the families who depend on Telethon's discoveries.

Methodological
Note

Methodological Note

CleanAir is publishing its **fourth sustainability report**, with the aim of transparently communicating its environmental, social, and governance (ESG) performance to all its stakeholders by sharing the initiatives undertaken, the results achieved, and the future goals.

The reporting scope of this document includes **CleanAir Europe s.r.l.** and covers the fiscal year **01.01.2024 – 31.12.2024**. Within the document, the company is also referred to as CleanAir or CAE.

This report has been prepared with reference to the **GRI Standards** of the Global Reporting Initiative, the most widely used voluntary sustainability reporting standards worldwide. The list of GRI disclosures included in this report can be found in the GRI Content Index at the end of the document.

The report also includes the quantitative indicators required by the **Voluntary ESRS for non-listed Small and Medium Enterprises (VSME ESRS),** covering both the Basic Module and the Comprehensive Module, based on the December 2024 version available at the time of this report's preparation. These indicators are summarized in the appendix.

The publication frequency of the sustainability report remains annual. The drafting of the 2024 Sustainability Report was personally overseen by the General Management, with the support of external consultants.

Contacts

We are at your disposal, contact us!

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GRI Content Index

Statement of use	CleanAir Europe s.r.l. has reported the information cited in this GRI content index for the period 01.01.2024 - 31.12.2024 with reference to the GRI Standards.
GRI 1 used	GRI 1: Foundation 2021

GRI STANDARD	DISCLOSURE	LOCATION
GRI2: General Disclosures 2021	2-1 Organizational details	"CleanAir - Who We Are Contacts"
	2-2 Entities included in the organization's sustainability reporting	Methodological Note
	2-3 Reporting period, frequency and contact point	Methodological Note Contacts
	2-4 Restatements of information	Natural resources The data relating to water withdrawals for the years 2021-2023 have been corrected, due to a previous erroneous calculation
	2-5 External assurance	The organization has no policy or practice for seeking external assurance.
	2-6 Activities, value chain and other business relationships	Value creation
	2-7 Employees	Human Resources
	2-8 Workers who are not employees	Human Resources
	2-14 Role of the highest governance body in sustainability reporting	Methodological Note
	2-22 Statement on sustainable development strategy	"Letter to Stakeholders Sustainability Strategy"
GRI 3: Material Topics 2021	3-1 Process to determine material topics	Materiality Analysis
	3-2 List of material topics	Materiality Analysis
GRI 201: Economic Performance 2016	3-3 Management of material topics	Key economic data
	201-1 Direct economic value generated and distributed	Key economic data
GRI 204: Procurement Practices 2016	204-1 Proportion of spending on local suppliers	Key economic data

GRI Content Index

GRI STANDARD	DISCLOSURE	LOCATION
GRI 301: Materials 2016	3-3 Management of material topics	Environmental policy Production process Natural resources
	301-1 Materials used by weight or volume	Natural resources
GRI 302: Energy 2016	3-3 Management of material topics	Environmental policy Production process Energy and Greenhouse Gas Emissions
	302-1 Energy consumption within the organization	Energy and Greenhouse Gas Emissions
	302-4 Reduction of energy consumption	Energy and Greenhouse Gas Emissions
	302-5 Reductions in energy requirements of products and services	Energy and Greenhouse Gas Emissions
GRI 303: Water and Effluents 2018	3-3 Management of material topics	"Environmental policy Production process Natural resources"
	303-1 Interactions with water as a shared resource	Natural resources
	303-2 Management of water discharge-related impacts	Natural resources
	303-3 Water withdrawal	Natural resources
	303-4 Water discharge	CleanAir manages its industrial wastewater as waste; the only water discharges concern civil uses
	303-5 Water consumption	Natural resources
GRI 305: Emissions 2016	3-3 Management of material topics	Environmental policy Production process Energy and Greenhouse Gas Emissions Life Cycle Assessment
	305-1 Direct (Scope 1) GHG emissions	Energy and Greenhouse Gas Emissions Life Cycle Assessment
	305-2 Energy indirect (Scope 2) GHG emissions	Energy and Greenhouse Gas Emissions Life Cycle Assessment
	305-4 GHG emissions intensity	Life Cycle Assessment B3 Energy and green-house gas emissions

GRI Content Index

GRI STANDARD	DISCLOSURE	LOCATION
GRI 306: Waste 2020	3-3 Management of material topics	Natural resources
	306-3 Waste generated	Natural resources
	306-4 Waste diverted from disposal	Natural resources
	306-5 Waste directed to disposal	Natural resources
GRI 401: Employment 2016	3-3 Management of material topics	Employees
	401-2 Benefits provided to full-time employees that are not provided to temporary or part-time employees	Employee Wellbeing and Corporate Welfare
GRI 403: Occupational Health and Safety 2018	3-3 Management of material topics	Health and Safety at work
	403-1 Occupational health and safety management system	Health and Safety at work
	403-2 Hazard identification, risk assessment, and incident investigation	Health and Safety at work
	403-3 Occupational health services	Health and Safety at work
	403-4 Worker participation, consultation, and communication on occupational health and safety	Health and Safety at work
	403-5 Worker training on occupational health and safety	Health and Safety at work
	403-6 Promotion of worker health	Health and Safety at work
	403-8 Workers covered by an occupational health and safety management system	Health and Safety at work
	403-9 Work-related injuries	Health and Safety at work
GRI 404: Training and Education 2016	3-3 Management of material topics	Training
	404-1 Average hours of training per year per employee	B10 Workforce – Remuneration, collective bargaining and training
	404-2 Programs for upgrading employee skills and transition assistance programs	Training

GRI Content Index

GRI STANDARD	DISCLOSURE	LOCATION
GRI 405: Diversity and Equal Opportunity 2016	3-3 Management of material topics	Human Resources
	405-1 Diversity of governance bodies and employees	Human Resources C9 Gender diversity ratio in the governance body
GRI 406: Non-discrimi-nation 2016	3-3 Management of material topics	Employees
GRI 413: Local Communities 2016	3-3 Management of material topics	Local community
	413-1 Operations with local community engagement, impact assessments, and development programs	Local community
GRI 416: Customer Health and Safety 2016	3-3 Management of material topics	Product safety
	416-2 Incidents of non-compliance concerning the health and safety impacts of products and services	Product safety

VSME Standard – Reference table

Basic module – General Information

B1 Basis for preparation

24.	(a)	Selected option					
		i. OPTION A: Basic Module only					
		ii. OPTION B: Basic Module and Comprehensive Module					X
	(b)	Omitted disclosures as classified or sensitive informations:					
		N/A					
	(c)	Sustainability report prepared on:					
		Individual basis, or					X
		Consolidated basis					
	(d)	List of subsidiaries and their address:					
		N/A					
	(e)	Undertaking's information					
		i. Legal form					
		CleanAir Europe s.r.l.					
		ii. NACE sector classification code (s)					
		25.93 Manufacture of wire products, chain and springs					
		iii. Size of balance sheet (€)					
		7.245.207,94					
		iv. Turnover (€)					
		7.119.246,06					
		v. Number of employees in headcount of full-time equivalent					
		31					
		vi. Country of primary operations and location or significant assets					
		Italy					
		vii. Geolocation of sites owned, leased or managed					
		N 45.748559, E 9.278808					
25.		Sustainability-related certification or labels, issuers , date and rating score					
		none					

B2 Practices, policies and future initiatives for transitioning towards a more sustainable economy

							y/n
26.		Has the undertaking has put in place specific practices, policies or future initiatives for transitioning towards a more sustainable economy?					
	(a)	Practices					Y
	(b)	Policies					N
	(c)	Future initiatives					Y
	(d)	Targets					Y

Basic module – Environmental Metrics

B3 Energy and greenhouse gas emissions

29.		Total energy consumptions (MWh)					
			Renew.	Non-ren.	Total		
		Electricity	807,19	0,00	807,19		
		Fuels	0,00	855,84	855,84		
		Totals	807,19	855,84	1663,03		
30.		Gross greenhouse gas (GHG) emissions (tCO2eq)					
	(a)	Scope 1 GHG emissions	147,72762	tCO2/eq			
	(b)	Location-based Scope 2 GHG emissions	207,13	tCO2/eq			
	(*)	*Scope 3 GHG Emissions*	*no*	*tCO2/eq*			
31.		GHG intensity = gross GHG emissions/turnover					
			0,00005	tCO2eq/€			

B4 Pollution of air, water and soil

32.		Pollutants emitted to air, water and soil				
		CleanAir Europe has authorization for emissions into the atmosphere in relation to the cleaning activities with detergents in aqueous solution of metal baskets. The pollutants monitored are alkaline aerosols and PO4---, both below the thresholds established by law. The overall quantities emitted in the year are not known.				

B5 Biodiversity

33.		Sites in or near a biodiversity sensitive area				
		number	0			
		area	0	ha		
34.		Metrics related to land-use				
	(a)	Total use of land	0,9	ha		
	(b)	Total sealed area	0,7	ha		
	(c)	Total nature-oriented area on-site	0	ha		
	(d)	Total nature-oriented area off-site	0	ha		

B6 Water

35.		Total water withdrawal				
			106	mc		
		Total water withdrawal in area of high water stress				
			0	mc		
36.		Total water consumption				
			0,47	mc		

Basic module – Environmental Metrics

B7 Resource use, circular economy and waste management

37.		The undertaking applies circular economy principles				y/n
						Y
		If yes, how it applies				
		See paragraphs "Innovazione, ricerca e sviluppo - Innovation, research and development"; "Il processo produttivo - The production process"; "Risorse naturali - Natural resources"				
38.	(a)	Total annual generation of waste				
		hazardous	0	kg		
		non-hazardous	137253	kg		
	(b)	Total annual waste diverted to recycling or reuse	90493	kg		
	(c)	Annual mass-flow of relevant materials used.				
		bright and galvanized carbon steel	622290	kg		
		stainless steel	141472,5	kg		
		fir wood	412000	kg		
		paints and varnishes	18290	kg		

Basic module – Social Metrics

B8 Workforce – General Characteristics

39.		Number of employees in headcount or full-time equivalent		
	(a)	type of employment contract		
		temporary	2	
		permanent	29	
	(b)	gender		
		male	25	
		female	6	
		other	0	
	(c)	country of the employment contract		
		Italy		
40.		Turnover rate		

B9 Workforce – Health and Safety

41.	(a)	Number and rate of recordable work-related accidents		
		number	0	
		rate	0	
	(b)	Number of fatalities as a result of work-related injuries and work-related ill health		
			0	

Basic module – Social Metrics

B10 Workforce – Remuneration, collective bargaining and training

42.								y/n
	(a)	The employees receive pay that is equal or above applicable minimum wage for the country						Y
	(b)	Percentage gap in pay between its female and male employees		%				
	(c)	Percentage of employees covered by collective bargaining agreements	100	%				
	(d)	Average number of annual training hours per employee	9,2580645	hrs				

Basic module – Governance metrics

B11 Convinctions and fines for corruption and bribery

39.		For the violation of anti-corruption and anti-bribery laws:				
		Number of convictions	0			
		Total amount of fines incurred	0			

Comprehensive module – General information

C1 Strategy: Business Model and Sustainability – Related Initiatives

47.		Key elements of its business model and strategy					
	(a)	significant groups of products and/or services offered					
		Filter cages / Filter bags					
		Ecosmart - Eco Atex - Eco Turbo					
		For details, see paragraph "Prodotti e soluzioni sostenibili - Sustainable products and solutions"					
	(b)	significant market(s) the undertaking operates in					
		Europe					
		North Africa					
	(c)	main business relationships					
		See paragraphs "La creazione di valore - Value creation" and "Mappatura degli stakeholder - Stakeholder mapping"					
	(d)	if the strategy has key elements that relate to or affect sustainability issues					
		See paragraphs "La sostenibilità per CleanAir - Sustainability for CleanAir" and "Strategia di sostenibilità - Sustainability strategy"					

C2 Description of practices, policies and future initiatives for transitioning towards a more sustainable economy

48.		Specific practices, policies or future initiatives for transitioning towards a more sustainable economy (description - see B2)		
		All practices, initiatives and targets are well described in our sustainability report as a whole		
49.		The most senior level of the undertaking accountable for implementing them.		
		CEO		

Comprehensive module – Environmental metrics

C3 GHG reduction targets and climate transition

54.		GHG emission reduction target						
		Scope 1						
	(a)	Target year						
		Target year value						
	(b)	Base year						
		Base year value						
	(c)	Units for target						
	(d)	Share						
	(e)	List of main actions						
		Scope 2						
	(a)	Target year	2024					
		Target year value	0					
	(b)	Base year	2023					
		Base year value	186					
	(c)	Units for target	tCO2eq					
	(d)	Share	nd					
	(e)	List of main actions						
		Purchase of electricity coming 100% from renewable sources certified by certificates of origin						
		Scope 3						
	(a)	*Target year*						
		Target year value						
	(b)	*Base year*						
		Base year value						
	(c)	*Units for target*						
	(d)	*Share*						
	(e)	*List of main actions*						
55.		Transition plan for climate change mitigation						
56.		If not, when it adopts it						
		A transition plan will be drafted after the measurement of OCF (likely to be conducted in 2027)						

Comprehensive module – Environmental metrics

C4 Climate risk

57.	(a)	If the undertaking has identified climate-related hazards and climate-related transition events, creating gross climate-related risks for the undertaking, it shall describe such climate-related hazards and climate-related transition events			
		Impacts caused by any extreme weather events may affect business operations directly or on the supply chain. There could be a risk of more stringent regulation, limiting business operations or inducing a change in its operativity. Both risks are assessed low.			
	(b)	disclose how it has assessed the exposure and sensitivity of its assets, activities and value chain			
		It was based on the occurrence of past events and on the evolution of the regulatory framework.			
	(c)	disclose the time horizons of any climate-related hazards and transition events identified			
		Short-medium time horizon			
	(d)	disclose whether it has undertaken climate change adaptation actions			
		Voluntary insurance coverage (before legislative obligation). The operating site is not particularly subject to risks arising from climate change (apart from electricity supply). Diversification of suppliers for continuity of supplies.			
58.		Potential adverse effects of climate risks			
		An operational risk could be the flooding of production facilities, due to extreme weather events			

Comprehensive module – Social metrics

C5 Additional (general) workforce characteristics

59.		Female-to-male ratio at management level				
				F/M		
60.		Self-employed and temporary workers				

C6 Workforce – Health and safety

61.		The undertaking shall disclose an answer			y/n
	(a)	Does the undertaking have a code of conduct or human rights policy for its own workforce			Y
	(b)	Does this cover:			
		i. child labour			Y
		ii. forced labour			Y
		iii. human trafficking			N
		iv. discrimination			Y
		v. accident prevention			Y
		vi. other?			Y
		If yes, specify			
		abuse of power, psychological violence, sexual harassment, bullying, mobbing, protection of privacy			
	(c)	Does the undertaking have a complaints-handling mechanism for its own workforce?			N

Comprehensive module – Social metrics

C7 Severe negative human rights incidents

62.		The undertaking shall disclose an answer to the following questions:				y/n
	(a)	Does the undertaking have confirmed incidents in its own workforce related to:				
		i. child labour				N
		ii. forced labour				N
		iii. human trafficking				N
		iv. discrimination				N
		v. other?				N
		If yes, specify				
	(b)	If yes, the undertaking may describe the actions being taken to address the incidents described above.				
	(c)	Is the undertaking aware of any confirmed incidents involving workers in the value chain, affected communities, consumers and end-users?				N
		If yes, specify				

Comprehensive module – Governance metrics

C8 Revenues from certain sectors and exclusion from EU reference benchmarks

63.		If the undertaking is active in one or more of the following sectors, it shall disclose its related revenues in the sector(s)			
	(a)	Controversial weapons		€	
	(b)	Tobacco			
	(c)	Fossil fuels			
	(d)	Pesticides and agrochemicals			
64.		Exclusion from any EU reference benchmarks that are aligned with the Paris Agreement		y/n	
				N	

C9 Gender diversity ratio in the governance body

65.		Gender diversity ratio in the governance body			
			0	F/M	

Sustainability Report
2024

CleanAir
Your filtration's support

Document drawn up with the support of
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