AAF®
INTERNATIONAL
a member of DAIKIN group

SUSTAINABILITY REPORT 2024

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About this Report

The AAF Sustainability Report 2024 outlines our commitment to sustainable growth and provides an overview of the results from our sustainability activities, along with our future plans. With a legacy of over 100 years in delivering high-quality air filtration solutions, AAF continues to innovate as part of the Daikin Group. We align our initiatives with Daikin's overarching goals and values, leveraging data and insights from Daikin to enhance the impact and depth of our work.

The AAF Sustainability Report 2024 includes information on the global operations of the filtration business under Daikin, collectively known as AAF International (hereafter referred to as AAF), including the Dinair Group and Flanders.

This report primarily focuses on FY24 but also includes relevant data from previous years to provide context and highlight our ongoing progress. The report is organized into three key areas:

- Environmental (Section: Planet and Processes)
- Social (Section: People)
- Governance (Section: Key Foundations)

At the end of the report, we have included a glossary of relevant topics to guide the reader in understanding key concepts and terminology.

Introduction

About AAF

At AAF, our purpose is clear: to improve air quality and protect the planet, people, and processes. For over a century, we've been committed to providing clean air solutions that positively impact communities and industries around the world—creating healthier, more sustainable environments at every turn.

As a proud member of the Daikin Group, the world's largest air conditioning company with over 100 years of history, we are empowered by cutting-edge technology, deep expertise, and a shared vision to transform air quality globally. Headquartered in Osaka, Japan, Daikin is a global leader in air innovation, with over 100 production facilities and a presence in more than 170 countries. AAF has 27 production sites worldwide which allow us to serve the global community, with employees representing over 40 nationalities. This global presence aligns perfectly with Daikin's commitment to driving sustainable progress and enhancing air quality worldwide.

Our customers trust AAF for advanced air filtration solutions designed to meet the rigorous requirements of diverse industries—from educational institutions safeguarding future generations to life science facilities supporting groundbreaking discoveries. By focusing on quality, efficiency, and sustainability, we not only help our customers comply with regulatory standards but also enhance operational performance and reduce their environmental impact.

Together with Daikin, we proudly build on a combined legacy of over 200 years of innovation and progress. We remain committed to advancing sustainable practices that ensure cleaner, healthier environments—for our customers, communities, and the world at large.

AAF Key Figures

NET SALES (Million $)
720+

NUMBER OF EMPLOYEES
5,100+

NUMBER OF MANUFACTURING SITES
27

NUMBER OF COUNTRIES USING AAF PRODUCTS
130+

YEARS OF FILTER EXPERTISE
100+

FACTORY GREENHOUSE GAS EMISSIONS BY 2030
Net 0

EMPLOYEE NATIONALITIES
40+

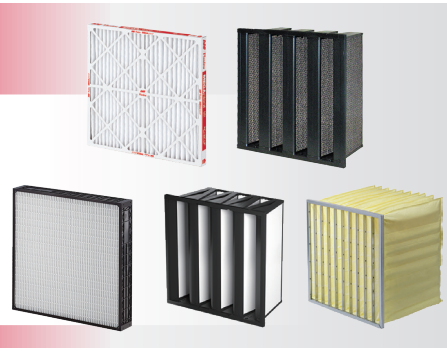
R&D CENTERS
6

AAF offers advanced air filtration products which enhance air quality and safety across industries, providing tailored solutions for hospitals, commercial buildings, manufacturing, and more.

General Ventilation

Ensures clean, healthy air by removing dust, allergens, and pollutants within HVAC systems and indoor environments across various settings.

Industries Commercial & Public Buildings, Healthcare, Education, Government, Transportation, Logistics, Datacenters



High Purity Filtration

Provides ultra-clean air for sensitive environments to ensure product and process integrity, while also protecting people from airborne contaminants.

Industries Life Science, Microelectronics, Electric Vehicle, Food, Agriculture & Beverage, Healthcare

Industrial Filtration

Captures dust, particulate matter, and other pollutants in the energy and industrial sectors, ensuring safety for people and operational efficiency.

Industries Material Processing, Food, Agriculture & Beverage, Waste & Recycling, Offshore Oil & Gas, Power Generation, Automotive

Over 100 Years of AAF: Protecting our Planet, People and Processes

The Rise of Industrial Power

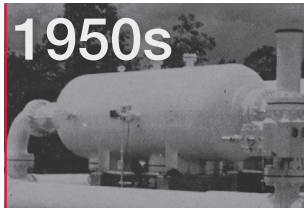
After World War I, factory expansion boosted efficiency but increased pollution. In response, Bill Reed invented a dust filter in 1921, laying the foundation for AAF.

Economic & Environmental Issues

The Great Depression slowed industrial growth, but pollution persisted. As smog worsened, AAF expanded, adding two plants and introducing fiberglass filters.

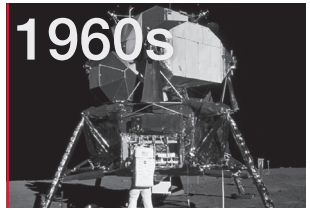
Wartime Manufacturing Boom

World War II boosted industrial production, causing round-the-clock factory operations and worsening air quality, increasing the need for better filtration in precision industries.



The Post-War Expansion

As industrialization and car use rose, urban smog worsened. Air filtration solutions evolved to protect products and improve workplaces, with AAF leading the demand for cleaner air.



Environmental Awareness Takes Root

Smog in cities like Los Angeles led to the Clean Air Act (1963) to regulate emissions. HEPA filters set new standards, while AAF advanced filtration and supported NASA's Apollo 11.

Energy Crises & Industrial Challenges

The oil crises highlighted the need for energy efficiency. Factories adopted advanced filtration to meet regulations, and AAF expanded with energy-efficient air solutions.

Globalization & Urban Growth

As industrial production grew in developing countries, pollution rose. Meanwhile, vehicles with catalytic converters reduced urban pollution in developed nations. AAF expanded globally.

Climate Change Awareness

Scientific consensus linked fossil fuels to global warming, while renewable energy remained niche. Meanwhile, air filtration advanced for cleanrooms in biotech and electronics, with AAF leading.

Green Technologies & Renewables

Renewable energy advanced, and industries and transportation adopted cleaner technologies, supported by improved air filtration. AAF innovated with eco-friendly products, aiding global sustainability.

Sustainability Becomes Mainstream

Global agreements like the Paris Agreement pushed for carbon emission cuts, while electric vehicles reduced pollution. AAF pioneered smart filtration systems for energy efficiency.

Innovations for a Cleaner Future

Air filtration combats industrial and urban pollution. Smart systems using sensors and AI optimize air quality. As sustainability grows, AAF leads in innovations that protect the planet, people and processes.

Technology Drives Sustainability

Technology will drive breakthroughs in how consumers perceive and measure air quality. Real-time data on HVAC systems' sustainability and impact will show consumers the value of their purchases.

The Current Green Glossary

The field of sustainability, particularly within our industry and the sectors we serve, is evolving rapidly, with new specialized terms emerging frequently. To assist both our internal and external stakeholders in understanding and navigating this complex landscape, we have compiled a comprehensive glossary of terms. We hope this glossary will serve as a valuable resource to enhance your understanding of key concepts, including but not limited to, environmental management, economic viability, and social well-being.
Detailed explanations for each term are provided on pages 40 to 46.

Standards

ASHRAE 62.1-2022
ASHRAE 62.2-2022
ASHRAE 241-2023
ISO 9001:2015
ISO 14001:2015-09
ISO 14025:2011-10
ISO 14040:2021-02
ISO 14044:2006
ISO 14067:2019-02
ISO 14072:2014
EN 15804:2022-03
ISO 26000

Terms

A ACT: Accelerate Climate Transition®
B BREEAM: Building Research Establishment Environmental Assessment Method
C CASBEE: Comprehensive Assessment System for Built Environment Efficiency
CBAM: Carbon Border Adjustment Mechanism
cPCR: Complementary Product Category Rules
CSDDD: Corporate Sustainability Due Diligence Directive
CSRD: Corporate Sustainability Reporting Directive
D DGNB: German Sustainable Building Council
DPP: Digital Product Passport
E EcoVadis SAS
EGD: European Green Deal
Enterprise Green Communities Certification
Environmental Impact Categories
EPD: Environmental Product Declaration
EPD International AB
ESG: Environmental, Social, Governance
ESPR: Ecodesign for Sustainable Products Regulation
ESRS: European Sustainability Reporting Standards
EU Taxonomy
F Fitwel Certification Program
G GHG: Green House Gas Emissions
Green Globes Certification
Green Mark Certification
Green Star Certification Program
GRI: Global Reporting Initiative
H HQE: High Environmental Quality Certification Program
HVAC: Heating, Ventilation, and Air Conditioning
I IAQ: Indoor Air Quality
IEQ: Indoor Environmental Quality
L LBC: Living Building Challenge
LCA: Life Cycle Assessment
LEED: Leadership in Energy and Environmental Design
Life Cycle Stages
P Paris Agreement
Passivhaus Certification
PCR: Product Category Rules
Pearl Certification
PPWR: Packaging and Packaging Waste Regulation
R RESET Certification
S SBTi: Science Based Targets Initiative
SDGs: Sustainable Development Goals
T TCO: Total Cost of Ownership
Three-Star Program
U UL Verified Healthy Building Certification Program
UNFCCC: United Nations Framework Convention on Climate Change
W WELL Building Standard

AAF's Sustainability Mindset

AAF's sustainability mindset is built on the 'three Ps'.

AAF's Contribution and Related SDGs

- Improve environmental performance of our products.
- Optimize resources and reduce waste throughout the full product lifecycle.

AAF's Contribution and Related SDGs

- Implement advanced air filtration technologies to optimize energy consumption while maintaining safety and efficiency.
- Focus on consumer feedback to prioritize process protection, while embedding sustainability into every solution.

AAF's Contribution and Related SDGs:

- Reduce harmful contaminants and improve comfort in indoor environments through AAF products and services.
- Educate and collaborate with stakeholders to establish global standards for indoor air quality, ensuring healthy and cost-effective clean environments.
- Foster human development and community strength through inclusive and sustainable initiatives.

Key Foundations

Daikin Group Conduct Guidelines | Anti-Bribery and Anti-Corruption | Respect for Human Rights
Responsible Procurement | Information Security

Planet and Processes

Daikin Group Environmental Vision 2050

Toward Net-Zero Greenhouse Gas Emissions

Guided by the “Daikin Environmental Vision 2050”, established in 2018, the Daikin Group, including AAF, is committed to reaching net-zero greenhouse gas emissions across our entire value chain by 2050.

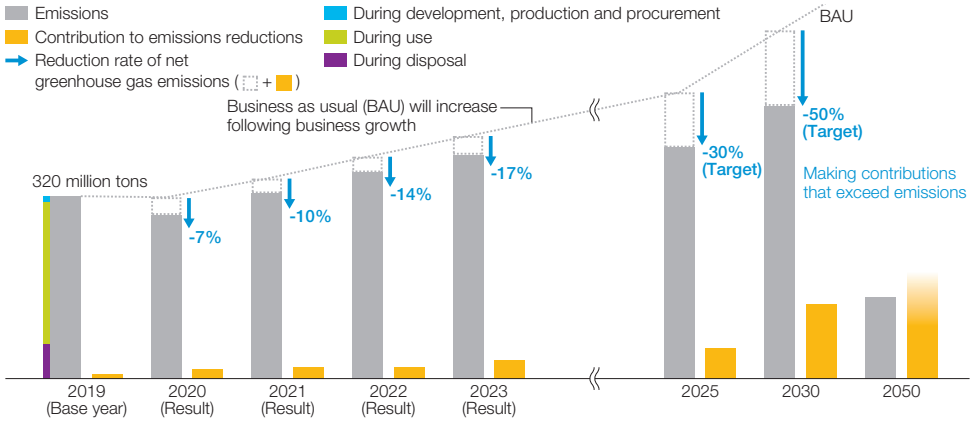
Daikin Environmental Vision 2050

We will reduce the greenhouse gas emissions generated throughout the entire lifecycle of our products. Furthermore, we are committed to creating solutions that link society and customers as we work with stakeholders to reduce greenhouse gas emissions to net zero. Using IoT, AI, and open innovation attempts, we will meet the world's needs for air solutions by providing safe and healthy air environments whilst at the same time contributing to solving global environmental problems.

Medium-Term Targets for Carbon Neutrality

The Daikin Group, including AAF, has set medium-term goals to reduce net greenhouse gas emissions across the value chain by 30% by 2025 and 50% by 2030, compared to the 2019 baseline. We are accelerating our efforts to achieve net-zero emissions in all factories by 2030, advancing our original target of 2050, and also plan to achieve net-zero emissions at our offices. To meet these targets, we are improving the energy efficiency of our products and significantly reducing greenhouse gas emissions at our manufacturing and development sites.

Reduction Targets and Results for Net Greenhouse Gas Emissions throughout the Lifecycle



Science Based Target

The Science Based Targets initiative certifies carbon emissions reduction targets based on scientific data. The Daikin Group, including AAF, received certification in February 2024 for its 2030 goal to reduce greenhouse gas emissions. This goal aims to limit global warming to below 1.5°C compared to pre-industrial levels.

SCIENCE BASED TARGETS
DRIVING AMBITIOUS CORPORATE CLIMATE ACTION

Environmental Management Structure

Basic Principles and Environmental Management Structure

Global Environmental Management

At AAF, we promote environmental management across the organization in line with the Daikin Group’s Environmental Policy. We actively participate in the Daikin Group's Environmental Conference and address environmental issues such as climate change, water conservation, and waste management in every region. Annual regional environmental conferences are held, gathering environmental managers from AAF sites worldwide to work on reducing environmental impact and conserving biodiversity at production sites. The biennial Global Environmental Conference brings together presidents, environmental managers, and environmental department heads from all AAF sites to foster cooperation and strengthen initiatives across the Daikin Group. Key themes are presented to Daikin's CEO through Daikin's Corporate Social Responsibility Committee and are reported to the Board of Directors.

In addition, we have established the Joint Environmental Committee, focusing on the filter business. This committee works on identifying issues and formulating strategies at each AAF site, contributing to AAF's overall environmental management efforts.

The Daikin Group Global Environmental Conference in China

Environmental Management System

At AAF, we ensure the safety and quality of our products and services from the customer's perspective. Additionally, AAF has obtained ISO14001 certification at major sites in each region, establishing a foundation for implementing environmental management at other locations and expanding certification. Furthermore, AAF discloses any significant legal violations in its operations and reported no major violations of environmental laws in fiscal year 2024.

Regional Initiative: The ACT Project

AAF is actively driving sustainability initiatives globally whilst also fostering regional efforts. In this article, we highlight a key example from the European region, showcasing their strategic initiative dedicated to decarbonization.

The ACT (Accelerate Climate Transition®)Step-by-Step Project: AAF Europe's Commitment to a Low-Carbon Future

In line with the Daikin Group's Environmental Vision 2050, AAF Europe has launched the ACT project to accelerate decarbonization across all factories, warehouses, offices, and subsidiaries in Europe.

The ACT Project Focuses on:

– Developing a robust decarbonization strategy.
– Setting scientifically based decarbonization targets.
– Evaluating the effectiveness of this strategy.
– Defining concrete actions to implement the decarbonization strategy.
– Monitoring measurable progress toward climate targets.
– Ensuring transparency in the process.

Progress and Schedule

Our efforts ensure science-based targets and transparency, in line with the Paris Agreement. Key milestones include:

– Greenhouse Gas Emissions Assessment (Scope 1-3) :
Ongoing, to be completed by Q2 2025.
– Climate Strategy Evaluation and Action Definition :
Scheduled for Spring / Summer 2025.
– Implementation of Measures : Starting in Summer 2025.

Conclusion

The ACT initiative by AAF Europe is a powerful tool in the transition to a low-carbon future, driving sustainability and addressing urgent climate challenges. Customers also benefit from products and services with a reduced carbon footprint, supporting a more sustainable tomorrow.

ACT ACCELERATE® CLIMATE TRANSITION

Sustainability and Innovation

Basic Principle

Innovation in environmental technology and energy-saving solutions is essential for a sustainable future. AAF, founded as Reed Air Filters in 1921 by Bill Reed, carries forward his vision through the development of sustainable technologies and products that balance environmental protection with economic growth.

Collaborative Market Response within the Daikin Group

As part of the Daikin Group, AAF addresses market needs with six global development sites. For example, in Indiana, USA, we established the 3,065m^2 Clean Air Innovation and Research (Clean AIR) Center. AAF's commitment to innovation extends internationally through close collaboration with Nippon Muki, which manages the air filter business primarily for the Japanese market within the Daikin Group, and the Daikin Technology and Innovation Center (TIC) in Japan, where 900 engineers drive pioneering research. This collaborative effort spans the fundamental development of filter media, structures, and sensors, significantly advancing our filter technology capabilities.

Introducing Clean AIR Center

Mission of the Clean AIR Center

The Clean Air Innovation and Research (Clean AIR) Center advances filter technology through detailed analysis and modeling of filter media performance. The engineers at the Clean AIR Center continuously innovate new filter media and enhance air quality through cutting-edge research. Additionally, Clean AIR Center's state-of-the-art biosafety lab conducts biological testing and assessments, ensuring filter efficiency for agricultural applications.

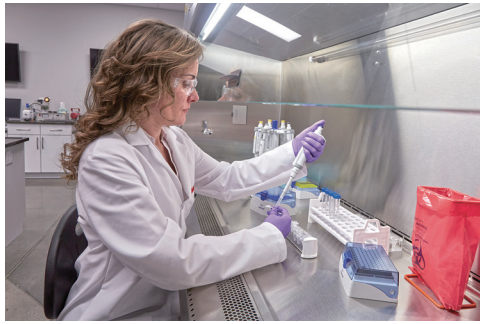
Dedicated Labs and Testing Standards

The Clean AIR Center features specialized laboratories as follows:

Filter Testing Laboratory:
- Examine new and existing AAF filter performance.
- Testing standards: ASHRAE 52.2, ISO 16890, UL 900, etc.
- Equipped with a dedicated UL filter test room.

Media and Materials Laboratory:
- Analyze filter media performance.
- Develop and prototype new media rapidly, followed by evaluations in the ASHRAE test duct.

Biosafety Laboratory:
- Conduct biological testing (PRRS, PED, Influenza A, etc.) for agricultural clients.



Biosafety Laboratory

Clean AIR Center

Roles and Functions of TIC

Established in November 2015, TIC serves as a core hub for technological development, consistently generating unique technologies and products that contribute to the Daikin Group's business while addressing social challenges. With around 900 engineers, it creates new value by integrating diverse expertise. In collaboration with companies and academic institutions from various industries and fields, TIC drives innovative technological advancements. The center also features facilities like Future Labs and Open Labs, designed to promote active discussions among engineers.

For the filtration business, TIC's dedicated teams focus on developing filter media and core technologies, which are essential for sustainable products. AAF's unique strength lies in its ability to develop everything from filter media to air filters.

Daikin Technology and Innovation Center (TIC)

Daikin Technology and Innovation Center (TIC) Work Area

Advancing Filter through Group Collaboration

As a member of the Daikin Group, AAF leverages not only the research and development capabilities of Daikin's TIC but also its extensive experience in air conditioning. Being part of the world's largest air conditioning group, AAF strives to further improve efficiency and reduce environmental impact through the development of technologies that integrate air filters with air conditioning systems, rather than focusing solely on standalone air filters.

Sustainable Filter Design

Introduction

In recent times, the push for sustainable business practices has gathered momentum. Within this effort, the filter industry is embracing innovative designs and manufacturing techniques to lessen environmental impacts. This article delves into various aspects of how filters—from material selection to system efficiency—impact the environment.

System Integrity

The effectiveness of a filter depends not only on the performance of the media itself but also on how well the media is sealed to the frame and how the filter is installed. Bypass, leaks, and poor installation affect the efficiency of the system and increase the risk of system failure. Ensuring that filters are properly mounted with high-quality frames is critical to maintaining system integrity and efficiency.

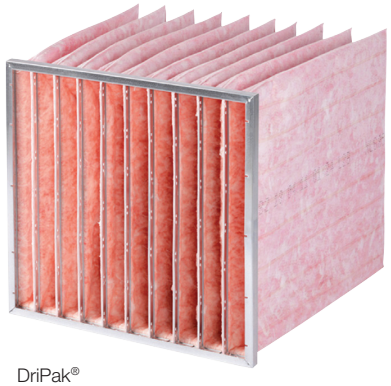
System Economics

The initial pressure drop and lifespan of a filter significantly influence energy consumption. This impact extends beyond the filter media itself to the overall design of the filter. For instance, in bag/pocket filters like DriPak®, factors such as the pocket shape (tapered or straight stitch), frame design, and the choice of optimal media grade can all contribute to energy efficiency throughout the filter's lifespan. The MEGAcel® HEPA and ULPA filters feature a high-efficiency, ultra-low-pressure drop membrane developed by Daikin. Compared to conventional glass fiber filters, it delivers more than 50% lower pressure drop, resulting in substantial energy savings. By carefully selecting these design elements, improvements in long-term energy efficiency and cost reduction are achievable. This reduction in environmental impact also brings economic benefits to our customers.

Material Selection

In the design of filter products, a wide range of materials—including steel, aluminum, plastic, glass, membrane, polyurethane, and adhesives—are utilized, with a strong focus on optimizing material selection from both performance and Life Cycle Assessment (LCA) perspectives. At AAF, we offer environmentally responsible options by integrating sustainable design principles, including recycling, and we are striving towards carbon neutrality.

For instance, AAF/Dinair Sweden has introduced an option for pocket filter frames made from carbon-compensated steel. This steel significantly reduces environmental impact by offsetting the carbon emissions generated during production through activities such as reforestation. The product contains at least 78% recycled steel, and by selecting this option, customers can reduce carbon emissions by 85% compared to plastic alternatives. This results in a reduction of 7.19 kg-CO_2 in greenhouse gas emissions per filter. AAF remains committed to advancing the development of environmentally sustainable products and services in the future.



DriPak®

MEGAcel®

Environmentally Friendly Manufacturing

Basic Principle

At AAF, we are committed to achieving net-zero greenhouse gas emissions at all our factories by 2030, advancing our original target of 2050. This will be accomplished by optimizing energy usage through equipment upgrades and productivity improvements, increasing energy generation through solar and wind, and introducing green electricity. A detailed roadmap is currently being developed to ensure that all objectives are met.

Energy Usage Optimization Examples

Air Compressor Upgrade at the Cramlington Plant, UK

The Cramlington Plant faced inefficiencies and high costs due to outdated air compressors. By upgrading to new, energy-efficient air compressors with the latest technology, the plant achieved better compression efficiency, enhanced equipment reliability, and reduced power consumption, significantly lowering AAF's environmental footprint.

Before and After : Energy Efficiency and Environmental Impact

Before	A 14-year-old system with low efficiency and hard-to-source spare parts.
After	Enhanced energy efficiency, reliability, and durability with modern technology.

Key Benefits

Greenhouse Gas Emissions
Significant reduction of **11 t-CO_2 per year**

Cost Reduction
Annual operating costs **reduced by approximately 11%** along with **lower maintenance costs.**

Enhanced Reliability
New technology features a 5-year parts warranty, **minimizing downtime.**

Reducing Compressor Air Leakage at the Columbia Plant, USA

At the Columbia Plant in the USA, air compressors, accounting for 20-25% of the plant's electricity consumption, were inspected for leaks. Typically, 20% of compressed air is lost to leaks, with an additional 10-30% wasted through unnecessary release. The detailed inspection identified 49 leak points, wasting 241 m^3/h of air—equivalent to 245,572 kWh per year. Prompt corrective actions significantly reduced energy consumption and environmental impact, cutting greenhouse gas emissions by 183,155 kg.

Energy and Emissions Reductions from Repairs

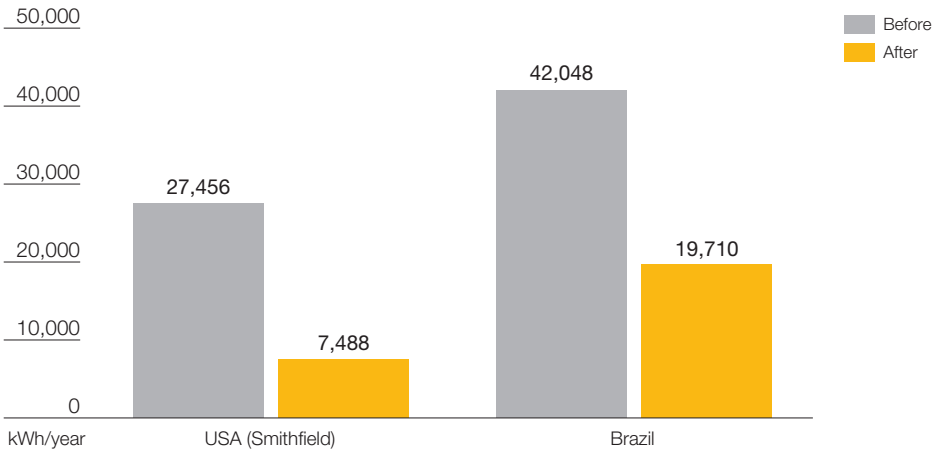
Energy (kWh)	Greenhouse Gas ($t\text{-}CO_2$)	NOx (kg)	SO_2 (kg)
245,572	183	163	466

LEDs and Sensors Installation in Factories

AAF's global bases are systematically introducing LEDs and occupancy sensors to reduce electricity consumption from lighting.

Finland	Achieved a complete conversion to LED lighting.
UK	Almost complete conversion to LED lighting, with steady progress.
Brazil	Successfully implemented LED lighting, achieving the targeted reduction in energy consumption.
USA	At the Smithfield plant, switching to LEDs reduced electricity consumption by 80%, cutting greenhouse gas emissions by 11 t-CO_2/year.
Malaysia	Introduced motion sensors to control lighting, reducing greenhouse gas emissions by 0.7 t-CO_2/year.

Electricity Consumption Before and After LED Introduction



Energy Production Initiative Example

Introduction of Solar Panels in Malaysia

At our Malaysia plant, we launched a solar power project in the parking lot, installing 15 solar-powered lampposts. This initiative now fully powers the parking lot lighting using solar energy.

Results of the Installation

Zero Greenhouse Gas emissions
from solar power generation.

Greenhouse gas emission reduction of **600kg-CO_2/year** due to the installation.

Solar-Powered Lamppost in Malaysia

Introduction of Green Electricity

Since 2022, our Kausala factory in Finland has been operating on 100% renewable energy. This initiative is part of our broader efforts to promote sustainable energy, contributing to improved energy efficiency and a reduced environmental footprint.

Green Logistics

At AAF, we are dedicated to reducing our environmental impact in our logistics process and contributing to a more sustainable future. In line with this commitment, we are taking significant steps through two key initiatives—one in Europe and one in North America—that demonstrate our ongoing efforts to promote sustainability and reduce our carbon footprint across the supply chain.

Europe: DHL's Green Carrier Certification

AAF/Dinair is proud to participate in DHL's Green Carrier Certification program, a key step in enhancing our sustainability efforts.

The Green Carrier Certification, introduced by DHL Freight, promotes transparency in sustainable logistics. DHL Freight invests in fossil fuel-free transport, and AAF/Dinair covers any additional costs, ensuring no impact on our customers. By participating, we aim to measure and improve our sustainability performance, reduce greenhouse gas emissions in the supply chain, and align with industry-leading environmental standards.

Currently, the program is being piloted in Sweden, with plans for expansion to other regions. We are committed to continuous improvement through this initiative by investing in eco-friendly vehicle technologies, optimizing routes to reduce fuel consumption, and adopting energy-efficient practices in our facilities. All these efforts contributing to a greener and more sustainable future for our global operations.

North America: C.H. Robinson's Emissions IQ™

AAF is joining forces with C.H. Robinson to advance sustainability in our North American supply chain. This collaboration leverages Emissions IQ™, a powerful technology developed by C.H. Robinson to measure and analyze carbon emissions across various transportation modes, helping us better understand and reduce our environmental impact.

Emissions IQ™ provides us with critical insights, allowing AAF to map and track Scope 3 emissions from transportation. Using this tool, we can identify opportunities to minimize fuel consumption, optimize supply chain efficiency, and reduce our carbon footprint. The costs associated with these improvements are fully absorbed by AAF, ensuring no added burden for our customers.

As part of this initiative, AAF has achieved significant reductions, cutting over 600 t-CO_2 in greenhouse gas emissions, alongside a 5% year-over-year reduction in emission intensity between the fourth quarter of fiscal year 2023 and the fourth quarter of fiscal year 2024*. Emission intensity, which measures emissions per unit of output, plays a crucial role in minimizing our environmental footprint. By reducing intensity, we substantially lower our overall impact.

Between the fourth quarters of 2023 and 2024, we increased our utilization of the SmartWay program—designed to improve transportation efficiency—from 40% to 44%, reflecting our ongoing progress in enhancing logistics performance. This improvement underscores our ongoing commitment to sustainability. Our efforts, however, are just beginning, and we are dedicated to continuing our progress in emissions reduction in the years ahead.

600+ t-CO_2
Emissions Reduced

5%
Emission Intensity Reduction

44%
SmartWay Volume

*The data tracking system was fully migrated to C.H. Robinson in Q4 FY23.

AAF Technology Tools Driving Enhanced Sustainability

AAF is dedicated to improving air quality and sustainability worldwide. We take pride in delivering environmentally friendly solutions through our innovative technology tools. Here are some examples of our latest technology tools that enhance sustainability by reducing Total Cost of Ownership (TCO) and minimizing environmental impact.

What is TCO?

Total Cost of Ownership (TCO) encompasses a comprehensive assessment of all expenses involved in acquiring, operating, and maintaining a product or system throughout its lifespan. This includes initial purchase costs, ongoing operational expenses, and maintenance fees.

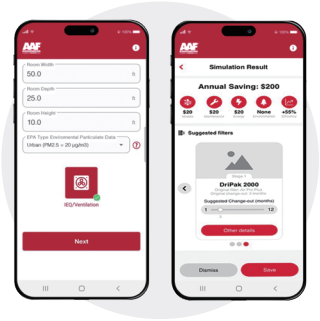
How Reducing TCO Helps the Environment

Reducing TCO not only lowers expenses but also significantly reduces environmental impact. Specifically, lowering energy consumption reduces greenhouse gas emissions, longer product lifespans result in less waste, and decreased maintenance costs provide benefits for both the environment and the company's financial health.

Introduction to AAF Technology Tools

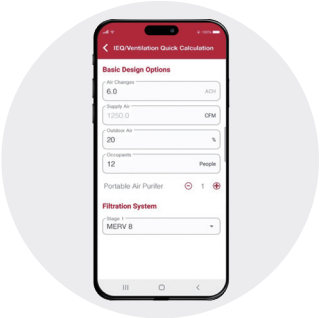
VisionAir® TCO

VisionAir® TCO is a cloud-based software designed for commercial building owners and facility managers. Users can leverage the tool's real-time performance information, Total Cost of Ownership (TCO) analysis, and comparison reports to make data-driven decisions that improve air quality and reduce costs.



VisionAir® Clean

VisionAir® Clean is a specialized software for cleanrooms that helps users to reduce energy consumption through efficient filtration solutions. The program includes features such as air change rate selection, Total Cost of Ownership (TCO) calculations, and built-in design templates. Users can run simulations for multiple rooms, generate detailed reports on recovery time and air change rate optimization, and access a technical library of industry standards.



VisionAir® IEQ

VisionAir® IEQ, part of the VisionAir® Clean app, is a software designed to optimize Air Change per Hour (ACH) rates and identify reductions in particulate matter (PM) levels across various particle sizes in spaces like schools, offices, and commercial buildings. VisionAir® IEQ allows users compare scenarios— with and without air purifiers— to visualize the health benefits of enhanced air filtration and identify the most effective clean air solutions for their environment.

Introduction to AAF Technology Tools

VisionAir®360

The VisionAir® 360 app was specifically designed for AAF to help our team deliver personalized IAQ solutions to customers. Team members use the app to capture images of customers' air handling units and filters, assess the equipment's current condition, and generate detailed audit reports based on the collected data. Finally, Total Cost of Ownership (TCO) simulations are performed to provide customers with cost-effective recommendations, helping them control energy usage and reduce environmental impact.

VisionAir® SAAF

VisionAir® SAAF is software designed to simplify the control of airborne gaseous contaminants. It can be integrated with existing equipment, tailoring solutions that provide precise configuration of clean air products for specific industries. The software includes an extensive contaminant library and 10 different types of chemical media, allowing users to fine-tune key variables and quickly create personalized submittal packages.

Successful TCO and Environmental Impact Reduction with AAF Technology Tools and Products

Healthcare

Cancer Treatment Center in Arizona,USA

50% energy reduction resulting in greenhouse gas saving of 19 t-CO_2, using MEGAcel® filters.

Microelectronic

Cleanrooms at a Global Semiconductor Company

Energy savings of $340K+ anticipated over 5 years, amounting to a 1,250 t-CO_2 greenhouse gas emission reduction, using AstroFan™ FFU and MEGAcel® filters.

Lifescience

Cleanrooms at a US Medical Device Manufacturer's Facility

Filter failure reduced to 0%, achieving significant energy savings, leading the company to replace all existing glass HEPA filters with MEGAcel® filters.

Commercial & Public Buildings

LEED-Gold Certified Convention Center, USA

Filter lifetime doubled, contributing to the customer's green building practices, using PerfectPleat® SC M8 and VariCel® MERV 13 filters.

Transportation

Global Manufacturer of Large Diesel Engines and Parts

50% decrease in AHU energy consumption, resulting in a 72 t-CO_2 greenhouse gas emission reduction, using MEGAcel® filters.

Food & Beverage

World's Leading Producer of Food Products

Filter life extended from two weeks to five weeks — 2.5 times longer than the previous service life, using DriPak® 2000 filters, with a cost benefit of $48,895 per year.

AAF Supporting Energy Decarbonization

With the global energy landscape rapidly shifting, the pressure to reduce greenhouse gas emissions in oil and gas production, as well as gas turbine power generation, has never been more urgent. Achieving a cleaner, more sustainable future requires more than a shift to renewable sources; it demands significant improvements in operational efficiency. For decades, AAF has been at the forefront, providing innovative solutions to support our customers' decarbonization efforts. Filter upgrades can be easily implemented by customers with a relatively low capital investment, which in return, can deliver quick gains and savings toward net-zero strategies. Through products like Optimize™ and N-hance®, AAF has continually enhanced gas turbine efficiency, minimized fuel consumption, and reduced greenhouse gas emissions. Our longstanding commitment to sustainability has made us a trusted partner in the pursuit of cleaner, more efficient energy operations.

Optimize™
GT Operational Excellence

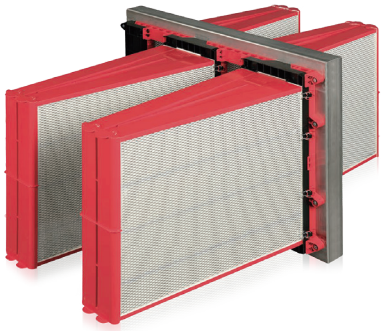
Optimize™ is a service that helps gas turbine users optimize their air inlet systems, improving airflow, temperature control, and contaminant management. This enhances turbine performance, reduces fuel consumption and operational costs, and supports the transition to cleaner operations, ultimately lowering the total cost of ownership.

Over 150 GTs Optimized.

8.2M GJ fuel saving per year.

480,000 t-CO_2 GHG* emissions reductions per year.

*GHG = greenhouse gas



N-hance® Performance Filtration

N-hance® Performance Filtration is a custom-engineered filter designed for offshore environments. It optimizes turbine performance, reduces costs, and minimizes environmental impact, promoting sustainability in the energy sector. With 80% of the addressable market in North Sea offshore operations choosing N-hance®, it sets a benchmark for both performance and sustainability.

Typical example for 1 representative GT installation:

22,000 GJ fuel saving per year.

2,000 t-CO_2 GHG* emissions reductions per year.

*GHG = greenhouse gas

People

Air Filtration for Health

A Healthy Building = Healthier People

The Importance of Indoor Air Quality (IAQ)

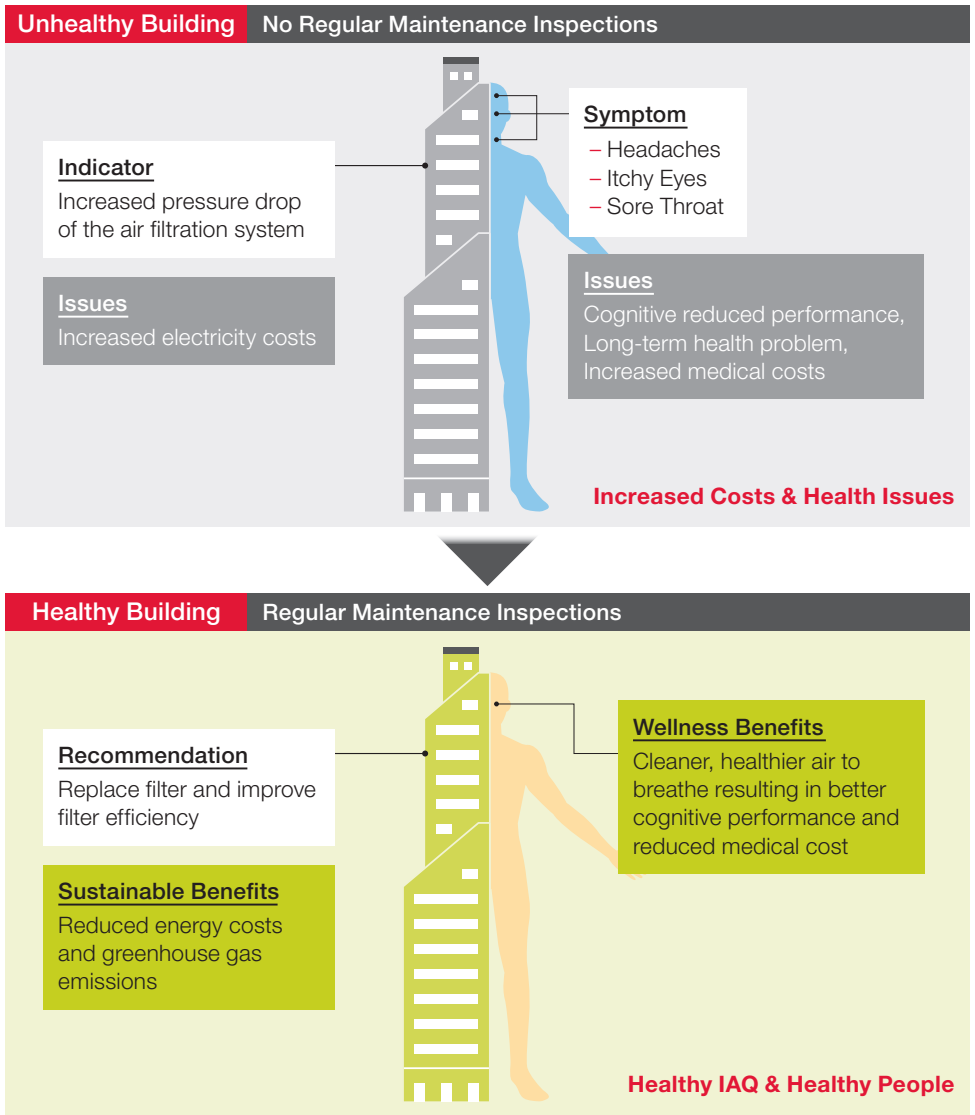
In today's world, where we spend the majority of our time indoors, the quality of our indoor air quality (IAQ) plays a critical role in protecting our health. Studies show that indoor air can be three to five times more polluted than outdoor air, potentially affecting our long-term health. Indoor air can harbor hundreds of species of viruses, bacteria, fungi, and molds, which may enter the human body and cause a wide range of negative health effects.

These microbial contaminants have been linked to symptoms such as rhinitis, coughing, breathing difficulties, as well as allergies and asthma. This is also accompanied by reduced cognitive performance. While there have been improvements over the years and a surge in awareness, particularly during the COVID-19 pandemic, unfortunately, society is gradually returning to its pre-pandemic IAQ habits.

IAQ and Preventive Management

Efficient IAQ management necessitates a proactive strategy. Regular inspections and management of a building, akin to routine health check-ups, can detect early signs of issues, leading to long-term benefits and cost savings. This method not only improves the well-being of both the building and its occupants but also enhances long-term value for owners and residents, while reducing facility operating costs. Ultimately, maintaining healthy buildings contributes to healthier people, fostering public health and sustainable living environments.

Impact of Preventive Measures on IAQ: Focusing on Air Filtration

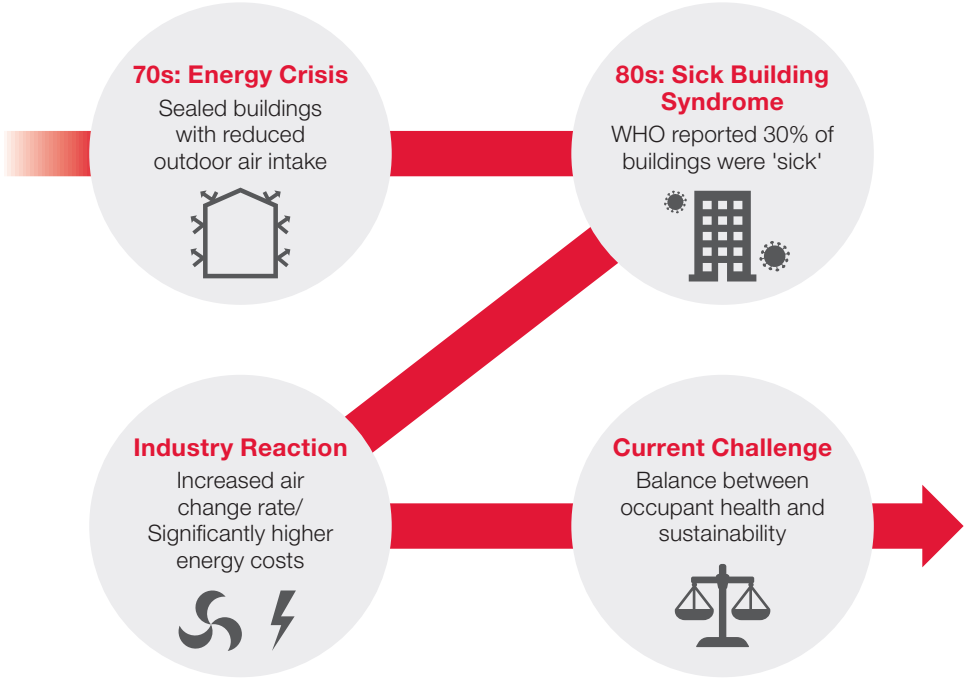


The Evolution of IAQ

During the energy crisis of the 1970s building designers tried to save energy by sealing buildings more tightly and reducing the amount of outdoor air brought indoors. This resulted in fewer air changes inside buildings. In the 1980s, the World Health Organization noted that about 30% of new and existing buildings were considered 'sick', giving rise to the term Sick Building Syndrome (SBS).

To address this, the industry increased outdoor air flow and air changes, but this raised energy costs significantly. Now, almost 50 years later, the challenge remains to strike a balance between protecting occupants' health and implementing sustainable practices.

Timeline of IAQ Evolution



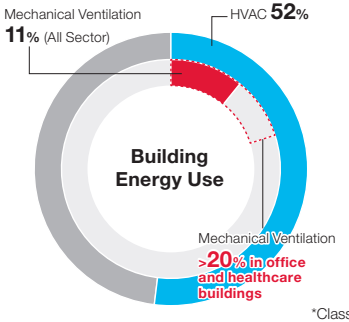
New Standards and Guidelines

Fortunately, to address these ongoing challenges, many standards and guidelines have been developed over time. Notable ones include ASHRAE 62.1 and 62.2, and the newer ASHRAE 241. These frameworks establish minimum ventilation rates and other requirements to ensure acceptable indoor air quality (IAQ) while minimizing adverse health effects. ASHRAE 241 guides us on improving ventilation and filtration during flu seasons or pandemic-like situations. Eurovent Recommendation 4/23 establishes a guideline with which particle filters the desired IAQ level can be achieved under the respective ambient conditions.

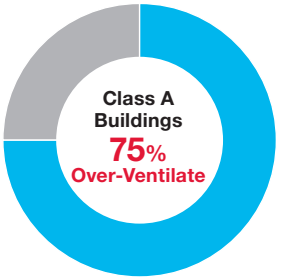
Interestingly, HVAC systems, which include mechanical ventilation, account for a significant portion of a building's energy consumption—around 40-60%. Ventilation alone contributes to about 11% of total energy usage, and in office and healthcare buildings, this figure can exceed 20%. Remarkably, studies show that 75% of buildings are ventilated more than necessary, presenting a clear opportunity for optimization.

Today, AAF's technology allows building owners to optimize their indoor air quality while monitoring the performance of their ventilation systems, allowing them to save energy without compromising the health of the occupants.

Commercial Building Energy Consumption



Class A Building Over-Ventilation Ratio



*Class A buildings are a top-tier property classification in the US, characterized by new or well-maintained structures in prime locations with superior construction and modern infrastructure.

AAF's Utilization of Technology for IAQ Improvement

Learn more about how AAF's technology improves IAQ through our case study described below.

Case Study AAF Air Purifiers Transform IAQ in Slovakian School

Overview Children spend a significant amount of their time indoors during their school years, making IAQ essential for their health and well-being. In Bratislava, Slovakia, an initial assessment was conducted to determine the level of microbial contamination in school and preschool facilities. This evaluation highlighted the presence of bacteria, fungi, and molds, which could potentially trigger respiratory issues and allergies, underscoring the need for effective air purification.

Problem Initial analysis revealed high levels of bacteria and mold, some surpassing acceptable thresholds. Some bacteria species can occasionally become pathogens in the right conditions, such as when immunity is weakened. Mold spores, on the other hand, could penetrate deep into the respiratory system, increasing allergenic potential.

Solution AAF's high-performance air purifiers were deployed in classrooms, dining halls, and gymnasiums, actively filtering and improving air quality. Throughout the six months trial these purifiers reduced microbial presence, achieving noticeable decontamination. Regular sampling verified decreased levels of harmful microorganisms, confirming the purifiers' effectiveness in maintaining healthier school environments.

AstroPure 2000

Bacteria and Mold Samples

AAF's Product Solutions for Enhancing Industrial IAQ

Improving IAQ in industrial settings is critically important today. The initial focus on preventing air pollution has evolved with dust collection advancements that enhance product quality. AAF goes beyond regulations to improve the workplace environment itself. Creating a healthy air environment not only ensures worker health and product integrity but also tackles recruitment challenges by improving employee retention. AAF's innovative solutions are showcased in the following two case studies.

Case Study Air Quality Improvement in a Food Manufacturing Plant

Overview A leading food manufacturing company in Mexico was experiencing poor air quality in their fry coating mixing area due to chili dust. The existing system failed due to inadequate engineering design, resulting in discomfort among workers. The company chose AAF's turnkey solution to solve this issue.

Problem The existing ineffective air filtration system created an uncomfortable and unhealthy work setting, with continuous exposure to chili dust leading to respiratory challenges for employees.

Solution AAF delivered a comprehensive solution by implementing engineering improvements, supplying essential equipment like ducts, dust collectors, and ATEX*-compatible devices, along with a system start-up. The installation of WONDAIR™ successfully improved air quality, making the mixing area safe and a comfortable working place for employees.

*A European standard for explosive environments

> **Customer**
> **Now that the AAF system is installed, several people […] are now requesting to be moved to the mixing area since there is now quality air in the area.**

WONDAIR™ at customer's plant

Case Study Oil Mist Filtration in a Thai Manufacturing Plant

Overview An advanced manufacturing company in Thailand faced challenges with oil mist produced by multiple CNC machines. In response, AAF's oil mist collector was adopted to address these issues.

Problem Traditional centrifugal oil mist collectors were inadequate for capturing fine oil droplets, resulting in higher maintenance needs and production downtime. In addition, the customer was looking for a solution to improve the working environment for employees. Oil droplets, 20 microns or smaller, pose health and safety risks, including skin irritation, respiratory problems, and slippery floors that increase the likelihood of falls.

Solution AAF introduced the Oil Hunter™, featuring multi-stage filtration to target oil mist contaminants effectively. After testing two units, the oil mist levels dropped from 999 µg/m³ to just 1 µg/m³, leading to customer satisfaction and the installation of an additional 107 units.

Oil Hunter™ at customer's plant

Diversity, Equity and Inclusion

Basic Principles

At AAF, we believe our competitive strength lies in our people. We recognize the importance of a diverse team that shares mutual values, enhances organizational strength, and pursues ambitious goals. Guided by the Daikin Group Human Rights Policy, we are dedicated to "Diversity and Inclusion", prohibiting discrimination and harassment. The Daikin Group Conduct Guidelines inspires us to embrace differences, collaborate, combine strengths, and work with passion while sharing our dreams. AAF promotes this spirit, valuing talent regardless of nationality, age, gender, sexual orientation, disability, or career background.

Operating in over 170 countries with 90,000 employees, the Daikin Group's greatest strength lies in its ability to excel globally by effectively managing its growing workforce diversity and leveraging individual strengths. AAF, as part of this network, empowers over 5,100 employees from 40+ nationalities to transform personal strengths into organizational success, driving growth and innovation.

Promotion and Development of Diverse Talent

Diverse Leadership Allocation

At AAF, we drive growth by appointing diverse talent from the Daikin Group to leadership roles, fostering collaboration and development. Daikin managers also join AAF boards, enhancing unity and accelerating global growth.

Talent Development

The Daikin Executive Program (D-EP) is part of the Daikin Group’s leadership strategy, developing senior management around the world. AAF executives join D-EP and advance diversity management suited to their regions.

Commitment in the Recruitment Process

In line with the Daikin Group Conduct Guidelines, AAF upholds individual human rights and prohibits discrimination based on nationality, race, ethnicity, religion, skin color, age, gender, sexual orientation, or disability. Our recruitment process respects diversity and includes measures to prevent discrimination worldwide.

Occupational Health and Safety

Basic Principles

AAF is committed to upholding the Daikin Group Human Rights Policy, aligning with international standards like the UN Guiding Principles on Business and Human Rights and the ILO Declaration on Fundamental Principles and Rights at Work. Furthermore, we aim to create a safe workplace for all. Following the Daikin Group Conduct Guidelines, every AAF officer and employee ensures operational safety through careful and responsible actions. We adhere to local and international labor safety and health regulations, striving for a zero incident workplace to protect our employees, contractors, and community.

Management Structure

AAF holds monthly safety committee meetings and participates in the Daikin Group's regional safety meetings to continuously improve practices. Results are reported at global safety meetings chaired by Daikin's safety officer, where support for each site sites and global safety strategies are discussed.

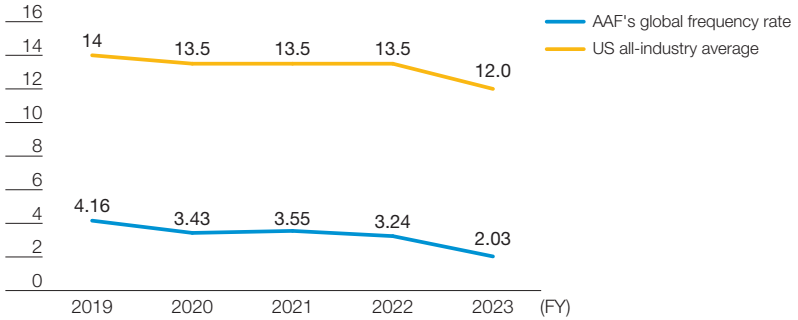
Risk Assessment

To prevent accidents, AAF conducts risk assessments at each site, identifying high-risk equipment and implementing safety measures. Monthly reports on incidents, causes, and countermeasures are submitted to Daikin's safety officer and discussed at global safety meetings. Recent accident trends include entanglement, cuts and material handling. We share these details and countermeasures, conducting risk reduction activities focused on "people," "people and equipment," and "equipment." We also provide protective gear, translate manuals, inspect equipment regularly, and use clear signage to enhance safety.

Goals and Performance

AAF aims for zero incidents as per the Daikin Group's policy, using lost-time incident frequency rates to measure safety. In fiscal year 2023, AAF's frequency rate was 2.03, compared to the US all-industry average of 12.0 in 2023.

Lost Time Incident Frequency Rate[1]



1 This shows the frequency of occupational accidents resulting in lost work time, expressed in number of casualties per 1,000,000 working hours. Frequency rate = Number of fatalities or injuries caused by occupational accidents resulting in lost work time / Total actual working hours x 1,000,000

Occupational Health and Safety Management System

With production sites around the world, AAF has established health and safety management systems at each global production site to ensure safe operations and employee safety. We conduct ongoing risk assessments, develop and execute action plans, track progress, and ensure compliance with relevant laws and regulations. We also perform annual internal and external audits, and conduct safety training and patrols to achieve zero workplace accidents. By the end of fiscal year 2024, over half of AAF's production sites had obtained ISO 45001 certification for occupational health and safety management.

Employee Education and Training

AAF offers various educational programs and training related to occupational health and safety for all individuals working at AAF, including employees, temporary staff, business partners, contractors, and subcontractors. We conduct experiential training to raise safety awareness by simulating hazards like entrapment and pinch points, combining hands-on experience with knowledge-based training. We also develop skills through training sessions in Japan and ongoing safety education and patrols, aiming for zero workplace accidents.

Every July, during Japan's National Safety Week, Daikin's President and COO, sends a message highlighting key safety initiatives to the entire group. Daikin's executive leadership, safety officers, and safety department visit sites to provide safety guidance annually. The safety department compiles and shares monthly accident reports with safety officers at each site to continuously promote safety awareness.

Empowering Action for Sustainability

Our employees are key to our sustainable strategies. We aim to improve the effectiveness of our sustainability initiatives by creating an environment where employees can actively engage in sustainable practices, supported by education and awareness activities. Below, we highlight some of these initiatives.

Promoting Workplace Sustainability

Our Bicycle Scheme for Employees is an active initiative in Finland, Germany, the UK, and the Netherlands. This program allows employees to receive either a standard or electric bicycle on favorable terms. Cycling to work not only offers excellent exercise but also serves as an eco-friendly mode of transportation. Employees can use the bicycles for commuting, work-related tasks, and personal leisure activities.

This initiative makes a significant contribution to our sustainability goals by reducing our carbon footprint, improving employee productivity and well-being, and encouraging sustainable mobility.

Electric Bicycle Scheme

Raising Sustainability Awareness

In India, environmental sustainability awareness sessions were held during the Sales Boot Camp event, with 50 participants, to promote environmental sustainability. Additionally, similar sessions were conducted for all factory employees, engaging 118 participants, to reinforce sustainability practices.

Environment Day was also celebrated in India and Saudi Arabia, where plants were distributed to all employees to encourage home plantation initiatives.

In Malaysia, we collaborated with CEMACS (Centre for Marine and Coastal Studies) to organize beach cleanup campaigns focused on preserving coastal environments and promoting environmental awareness. These initiatives bring employees together to collect litter, reduce marine pollution, and learn about protecting marine ecosystems. Through this collaboration, we demonstrate our commitment to sustainability and environmental stewardship, contributing to a cleaner and healthier coastline.

Environment Day Celebration

Environmental Awareness Session at Sales Boot Camp

Encouraging Sustainable Waste Practices

In Malaysia, we organized a collection of pre-loved clothes from AAF staff to help reduce textile waste and promote sustainability.

Pre-Loved Clothes Donation

Beach Cleanup Campaign

Community Connections

Community Engagement in Education

Supporting education and local students is a key part of our sustainability efforts. Through various initiatives, we have contributed to enhancing educational opportunities for those in need.

We organized two impactful initiatives to support local students. Through our school supply drive, we collected notebooks, pencils, backpacks, and other materials, which were delivered to Airdale Elementary School near the Louisville Cartridge Plant. In addition, the Washington Team participated in the "Stuff the Bus" fundraiser, donating supplies and $600, which enabled us to sponsor 27 children and provide them with essential classroom items. Both efforts helped ensure that students were fully prepared for a successful school year.

School Supplies Collection for Local Students

Health and Wellness Contributions

Our commitment to improving health and wellness is reflected in our active involvement in initiatives that support vital health causes.

Blood Donation Initiative

In India, we organized a blood donation camp with the support of the Rotary Club and Narayana Hospital in Bangalore, where more than 50 employees participated.

Blood Donation Initiative in India

Supporting Children’s Heart Health

In the UK, AAF employees took part in the Great North Run to support the Children's Heart Unit Fund (CHUF). We raised $985 for this important cause, dedicated to improving children's heart health in the North East of England.

Charity Run for Children's Health

AAF Volunteer Efforts at Inclusive Park

At AAF, we are committed to promoting accessibility and inclusivity within our community. We recently partnered with the Parks and Recreation Department of Smithfield, North Carolina, to upkeep the appearance of the Partnership for Children Park. This park is an inclusive space designed for individuals of all abilities, featuring an accessible playground for children with physical and sensory challenges and multi-generational areas for families, including those with limited mobility.

AAF employees volunteered to trim shrubs and spread mulch to maintain the park's appearance. Through these efforts, we reinforced our dedication to creating sustainable spaces that benefit everyone in the community.

Park Maintenance Volunteering

Key Foundations

Daikin Group Conduct Guidelines

Basic Principles and Management Structure

As a global enterprise, the Daikin Group establishes fundamental ethical and compliance principles that every executive and employee must adhere to through the Group Conduct Guidelines (16 key items).

Under these guidelines, as a member of the Daikin Group, AAF develops specific codes of conduct based on local laws, customs, and practices in each country and region where we operate, ensuring full adherence to corporate ethics and compliance.

Each regional headquarters has a compliance officer, directly reporting to the COO, driving initiatives to strengthen internal controls. Regular compliance meetings are held to review progress on risk management, to share information, and to disseminate the Daikin Group Conduct Guidelines. We aim to foster a culture that discourages misconduct and build systems that prevent it from occurring.

Daikin Group Conduct Guidelines

These conduct guidelines set forth the basic premises for all Group companies, as well as each and every one of their executives and employees to observe as a basic framework for compliance in the Daikin Group's global expansion of corporate ethics.
Each company of the global Group shall draft specific criteria based on these guidelines for a code of conduct that corresponds to differences in laws and customs of each country and region and thoroughly maintains legal compliance.

1. Providing Safe, High Quality Products and Services
2. Free Competition and Fair Trading
3. Observing Trade Control Laws
4. Respect and Protection of Intellectual Property Rights
5. Proper Management and Utilization of Information
6. Prohibition of Insider Trading
7. Timely and Appropriate Disclosure of Corporate Information
8. Preservation of the Global Environment
9. Ensuring the Safety of Operations
10. Respect for Human Rights and Diversity and Observance of Labor Laws
11. Protection of Company Assets
12. Proper Handling of Accounting Procedures
13. Practicing Moderation in Entertainment, Gift Exchanges, and Invitations
14. Maintaining a Firm Attitude against Anti-Social Activities
15. Relationship with Society
16. Observing Each Category of Industry Law and Regulation

Note: The above list provides and overview of the headings from our Group Conduct Guidelines. For further information and comprehensive details, please contact your nearest AAF office or refer to Daikin's sustainability report.

Consistency in Compliance

Daikin Group's Self-Assessment System

AAF conducts annual self-assessments using the Daikin Group's system to ensure adherence to the Daikin Group Conduct Guidelines. Identified issues are addressed and reported to Daikin's Corporate Ethics and Risk Management Committee. The results also support audits conducted by Daikin's legal, internal auditing, and finance departments.

Group Collaboration for Enhanced Compliance

AAF participates in regional compliance meetings with the Daikin Group companies to review progress and share information. In fiscal year 2024, AAF attended legal compliance meetings in Asia/Oceania in July 2024, in China in February 2025, and in Europe in March 2025, covering topics such as human rights, personal data protection, and anti-bribery.

Legal and Compliance meeting for the Europe region

Fair Competition and Ethical Business Practices

AAF supports fair business practices in accordance with Item two of the Daikin Group Conduct Guidelines, which emphasizes "Free Competition and Fair Trading".

Education and Awareness Activities

AAF trains all staff in compliance per the Daikin Group Conduct Guidelines, offering case study-based sessions on relevant laws for sales, manufacturing, and procurement. Tiered programs are provided for new hires and new managers. To help employees recognize the importance of compliance through relatable examples, we share quarterly compliance news that highlights relevant compliance topics.

AAF's Legal Compliance Record for 2024

AAF is dedicated to transparency and discloses any major legal violations. In fiscal year 2024, no major violations were reported.

Consultation and Reporting Desk

AAF has established a corporate ethics hotline for consultations and feedback on various ethics-related issues, including bribery, human rights, power harassment, and sexual harassment. The hotline guarantees confidentiality and ensures prompt, appropriate responses. Inquirers and individuals cooperating in investigations are treated fairly and without retaliation.

Each AAF company investigates reported matters, consults with Daikin's legal team, and implements measures to prevent recurrence, ensuring a system for prompt action.

Anti-Bribery and Anti-Corruption

Basic Principles

AAF, as part of the Daikin Group, is committed to preventing bribery and corruption in line with the Daikin Group Conduct Guidelines, focusing on "Free Competition and Fair Trading," "Practicing Moderation in Entertainment, Gift Exchanges, and Invitations," and "Maintaining a Firm Attitude against Anti-Social Activities". We work closely with Daikin's legal department to address and manage these issues effectively.

Anti-Bribery Guidelines for Public Officials

AAF adheres to the Daikin Group's "Public Officials and Anti-Bribery Guidelines," which provide conduct guidelines for interactions with public officials. These guidelines outline specific standards and approval processes for activities involving public officials, such as hospitality and gifts. To prevent indirect benefits through third parties, we enforce strict screening, selection procedures, and include anti-bribery clauses in contracts. Legal inquiries are directed to the Daikin contact point. Compliance is verified through self-assessment, regular reports submitted to Daikin's Corporate Ethics & Risk Management Committee.

Education and Awareness Activities

Training for managers and employees focuses on maintaining healthy relationships with public institutions, and ensuring appropriate entertainment and gift-giving to business partners. These activities aim to raise awareness and enhance knowledge on these critical issues.

Monitoring

Daikin's Internal Auditing Department conducts audits of business units and companies in high-corruption regions to ensure that anti-bribery measures are properly implemented. Any issues identified are promptly addressed by AAF in collaboration with Daikin’s legal department and reported to the Daikin Board of Directors and the Internal Control Committee.

Compliance Status in Fiscal Year 2024

In fiscal year 2024, AAF reported no violations or sanctions related to bribery.

Respect for Human Rights

Human Rights Policy

AAF promotes "Respect for Human Rights" based on the Daikin Group Conduct Guidelines and Human Rights Policy established in 2022. This policy aligns with international frameworks such as the UN Guiding Principles on Business and Human Rights, the Universal Declaration of Human Rights, the ILO Declaration on Fundamental Principles and Rights at Work, and the OECD Guidelines for Multinational Enterprises. It emphasizes compliance with international human rights standards and local laws, human rights due diligence, grievance mechanisms, employee education, and stakeholder dialogue. We also ask our business partners to adhere to these standards.

Human Rights Risk Assessment and Mitigation

AAF utilizes the Daikin Group's risk management system to identify and assess human rights risks throughout the value chain. Human rights-related questions are included in the annual self-assessment. The outcomes, along with identified risks, challenges, and countermeasures from the risk assessment, are reported to the Group's Corporate Ethics and Risk Management Committee and regional Legal and Compliance Meetings. The results are also shared with Daikin's Internal Control Committee and Board of Directors.

Respect for Human Rights in the Supply Chain

We include human rights guidelines in our Supply Chain CSR Promotion Guidelines, addressing discrimination, child labor, and forced labor. We ask our business partners to adhere strictly to these guidelines and improve their CSR practices. Additionally, we regularly share the results of CSR surveys with our suppliers, highlighting any identified issues and the actions taken in response.

Responsible Procurement

Basic Principles

At AAF, we are committed to responsible sourcing across our supply chain to meet our social responsibilities. We emphasize transparent, fair, and equitable business practices, viewing our raw materials and component suppliers as integral partners. AAF focuses on CSR-driven procurement, prioritizing environmental sustainability, quality, occupational safety, and human rights.

Supply Chain CSR Promotion Guidelines
https://www.daikin.com/csr/social/supplychain_gl

Green Procurement Guidelines
https://www.daikin.com/csr/social/green_gl

Guide to Our Global Sourcing Activities
https://www.daikin.com/purchase

Daikin Group Purchasing Philosophy and Policy

Purchasing Philosophy

“Respect Independence” and “Cooperation and Competition”

Purchasing Policy:

– Fair relations based on an open door policy
Provide open, equal, and fair opportunities for all companies, regardless of their locality, size, and sales results.

– Mutual growth through mutual trust
Create open conditions for business dealings and respect free competition.

– Look for good partners
In procuring from overseas, look for companies to share common profit and offer useful products to society.

– Observe laws and maintain confidentiality
Observe laws on business dealings and respect the spirit of these laws.

Provision of Equal Business Opportunities

AAF openly welcomes business partners regardless of their nationality, company size, or past business dealings.

Management Structure

As part of the Daikin Group, AAF identifies supply chain management as a key sustainability theme. The Green Procurement Subcommittee, which includes procurement leaders from each business, leads initiatives related to human rights and hazardous chemical management in our supply chain.

Promotion of CSR-driven Procurement

Evaluation of Suppliers

AAF ensures that suppliers understand the Daikin Group's Purchasing Policy and uses a supplier evaluation criteria sheet that takes regional risks into account. Suppliers are evaluated on management, quality, price, delivery time, and environmental impact. We assess suppliers' ESG-related risk management through surveys on compliance with the Global Supply Chain CSR Promotion Guidelines and conduct annual re-evaluations under the continuous business relationship evaluation system. Global standards are applied to environmental evaluations. Suppliers who fail to meet the standards must submit improvement plans, with our support provided, to help implement necessary improvements.

Deployment of Supply Chain CSR Promotion Guidelines

AAF promotes CSR across our supply chain, aligning with the Daikin Group's sustainability metrics and the 2025 goal of building a resilient, sustainable supply chain. Suppliers are expected to comply with the Daikin Supply Chain CSR Promotion Guidelines, established in April 2017, which cover environmental responsibility, quality control, labor safety, human rights, and the prohibition of transactions with conflict regions. Compliance is monitored through assessments, while feedback and guidance are given to ensure continuous improvement.

Approach to Addressing Conflict Minerals

AAF follows Daikin’s Basic Policy on Conflict Minerals (July 2013) and the Supply Chain CSR Promotion Guidelines. We encourage suppliers to source from conflict-free certified smelters and conduct conflict mineral investigations. To prevent involvement in unethical practices for example by armed groups in the Democratic Republic of the Congo and its surrounding countries, AAF adopts supply chain transparency and ensures responsible mineral sourcing with procurement partners.

Promotion of Green Procurement

AAF requests that suppliers follow Daikin’s Green Procurement Guidelines (2000), prioritizing environmentally-friendly materials. We assess compliance through the Green Procurement Survey, focusing on environmental and chemical substance management. Our goal is global compliance, and we provide guidance for improvements where needed. AAF aligns with standards like the RoHS Directive and REACH Regulation, updating guidelines regularly to meet stringent regulations.

Information Security

Information Security Policy

Effective Management and Protection of Confidential Information

AAF considers information leaks from internal systems, product services, and factory equipment as major risks. We strengthen information security based on the Daikin Group Conduct Guidelines, focusing on "Proper Management and Utilization of Information" and the "Basic Policy on Information Security". Information security leaders at each regional headquarters deploy the Daikin Group's security regulations and guidelines across AAF subsidiaries. Policies for social media use and management of confidential information, including third-party data, are established to raise awareness. The overall information security strategy, countermeasures, and common rules for the entire Daikin Group are reviewed by Daikin's Information Security Committee.

Robust Information Security

AAF continuously assesses compliance with security rules and implements improvements to prevent incidents. A reporting and response system minimizes damage from security threats. Employees report incidents to information security leaders, who then inform Daikin's IT Promotion Department and take the lead in identifying causes and preventing recurrence.

Information Security Education

AAF provides training to raise security awareness among managers, supervisors, and employees. Education on company rules through self-assessments, and information security articles in the company newsletter helps maintain awareness. Additional training on targeted email attacks is also conducted.

Information Security Inspections and Results

AAF includes information security items in self-assessments and conducts annual incident response tests. Deficiencies and issues are identified, and measures are strengthened. Results and countermeasures are reported to Daikin's Information Security Committee. Important matters are also reported to the Daikin's Corporate Ethics and Risk Management Committee, Internal Control Committee, and Board of Directors.

Protection of Customer Information

AAF follows Daikin Group's Personal Information Protection Policy to manage and utilize customer information appropriately. Compliance is ensured through internal rules, self-assessments, legal audits, and operational audits.

Glossary

Standards

Standard	Area	Title	Overview
ASHRAE 62.1-2022	Ventilation	Ventilation for Acceptable Indoor Air Quality	The standard establishes minimum ventilation rates and other requirements to ensure acceptable indoor air quality (IAQ) for human occupants while minimizing adverse health effects.
ASHRAE 62.2-2022	Ventilation	Ventilation and Acceptable Indoor Air Quality in Residential Buildings	The standard establishes minimum ventilation rates and methods to achieve acceptable indoor air quality in residential buildings through whole-building ventilation, local exhaust, and source control.
ASHRAE 241-2023	Ventilation	Control of Infectious Aerosols	The standard establishes minimum requirements for ventilation, filtration, and air cleaning to reduce the risk of airborne disease transmission in buildings during infection risk management mode.
EN 15804:2022-03	Environmental Product Declarations	Sustainability of Construction Works - Environmental Product Declarations - Core Rules for the Product Category of Construction Products	Basic rules for the preparation of environmental product declarations (EPDs) for construction products.
ISO 9001:2015	Quality Management Systems	Quality Management Systems - Requirements	The most frequently certified standard for quality management systems worldwide.
ISO 14001:2015-09	Environmental Management	Environmental Management Systems - Requirements with Instructions for Use	Recognized requirements for an environmental management system.
ISO 14025:2011-10	Product Assessments	Environmental labels and declarations - Type III Environmental Product Declarations - Principles and Procedures	Type III environmental declarations are also known as Environmental Product Declarations (EPDs). EPDs provide quantified, third-party verified information about the environmental impact of products or services throughout their entire life cycle. This distinguishes them from Type I (eco-labels) and Type II (self-declared claims) environmental declarations.
ISO 14040:2021-02	Product Life Cycle Assessments	Environmental Management - Life Cycle Assessment - Principles and Framework	The standard describes the principles and framework conditions of life cycle assessment. It covers life cycle assessment studies and life cycle inventory studies. This document was prepared by Technical Committee ISO/TC 207 "Environmental management" in collaboration with the CEN-CENELEC Management Centre (CCMC).
ISO 14044:2006	Product Life Cycle Assessments	Environmental Management - Life Cycle Assessment - Requirements and Guidelines	Summary of following standards: ISO14041: Definition of the objective and the scope of the investigation as well as the life cycle inventory ISO14042: Impact assessment ISO14043: Evaluation
ISO 14067:2019-02	Carbon Footprint for Products	Greenhouse Gases - Carbon Footprint of Products - Requirements and Guidelines for Quantification	Standard that specifies the principles, requirements, and guidelines for quantifying and reporting the carbon footprint of products throughout their entire life cycle, from raw material extraction to disposal. It ensures transparency and consistency in calculating greenhouse gas emissions associated with a product, enabling companies to assess and communicate their environmental impact.
ISO 14072:2014	Life Cycle Assessments for Companies	Environmental Management - Life Cycle Assessment - Requirements and Guidelines for Organizational Life Cycle Assessment	Rules for organizational life cycle assessments.
ISO 26000	Corporate Social Responsibility	Guide to Social Responsibility	Guidelines that provide orientation and recommendations on how organizations of all kinds should behave so that they can be considered socially responsible.

Terms

A

ACT: Accelerate Climate Transition®

The ACT Initiative provides a standardized framework to evaluate and enhance corporate decarbonization efforts. It is supported by the French Government and the United Nations Framework Convention on Climate Change (UNFCCC). The initiative supports over 1,000 companies globally.

The ACT initiative supports comprehensive decarbonization through the following key programs:

1. ACT Step-by-Step: Provides a process for systematically improving climate strategies, including goal setting, identifying key actions, and measuring progress.
2. ACT Evaluation: Evaluates the effectiveness of current climate strategies, identifying strengths and areas for improvement.
3. ACT Adaptation: Offers strategies to respond to climate change impacts while minimizing environmental footprints and sustaining business operations.

ACT projects begin with a thorough analysis of a company's current situation, including:

- GHG Emissions Assessment (Scope 1-3): Evaluates direct, indirect, and value chain emissions.
- Evaluation of Current Climate Strategies: Identifies strengths and areas for improvement.
- Identification of Key Improvement Areas and Potential Barriers: Develops and implements tailored improvement strategies.

Source https://actinitiative.org/home/

B

BREEAM: Building Research Establishment Environmental Assessment Method

BREEAM (Building Research Establishment Environmental Assessment Method) is a globally recognized sustainability certification program that evaluates buildings across categories like energy, water, materials, and health to promote environmental performance. It offers various certification levels, including Pass, Good, Very Good, Excellent, and Outstanding, and applies to new constructions, existing buildings, and refurbishments.

Source https://breeam.com/

C

CASBEE: Comprehensive Assessment System for Built Environment Efficiency

CASBEE (Comprehensive Assessment System for Built Environment Efficiency) is a Japanese green building certification program that evaluates buildings based on four key areas: energy efficiency, resource efficiency, outdoor environment, and indoor environment, assigning a performance score and certification level (e.g., S, A, B+, B, C, or D). Developed in 2001 by the Japan Sustainable Building Consortium (JSBC) with government support, it is widely used in Japan and offers tools tailored to different project scales, including new construction, existing buildings, and renovations.

Source https://www.ibecs.or.jp/CASBEE/english/

CBAM: Carbon Border Adjustment Mechanism

European policy that imposes a carbon price on imports to prevent carbon leakage and promote global emission reductions.

Source https://taxation-customs.ec.europa.eu/carbon-border-adjustment-mechanism_en

cPCR: complementary Product Category Rules

cPCR adds product-specific details to PCR (Product Category Rules). cPCR for air filters are under development by a working group of CEN (European Standardization Organization).

Source https://www.rethink-environmental-software-and-services.com/insights/product-category-rules-pcr

CSDDD: Corporate Sustainability Due Diligence Directive

European directive requiring companies to identify and report on sustainability risks and opportunities in their supply chains. It aims to ensure that companies fulfil their due diligence obligations with regard to human rights, the environment and social aspects.

Source https://commission.europa.eu/business-economy-euro/doing-business-eu/sustainability-due-diligence-responsible-business/corporate-sustainability-due-diligence_en

CSRD: Corporate Sustainability Reporting Directive

CSRD imposes strict requirements on how companies report their sustainability efforts. They must comply with the EU regulations under ESRS (European Sustainability Reporting Standards) and disclose both how sustainability issues impact their business and how they, in turn, affect the environment and society – this principle is known as double materiality.

Source https://finance.ec.europa.eu/capital-markets-union-and-financial-markets/company-reporting-and-auditing/company-reporting/corporate-sustainability-reporting_en

D

DGNB: German Sustainable Building Council

The DGNB (German Sustainable Building Council/ Deutsche Gesellschaft für Nachhaltiges Bauen) certification program evaluates the sustainability of buildings and districts across six thematic areas, including environmental, economic, and sociocultural qualities, using a lifecycle assessment approach. Projects are awarded certification levels—Platinum, Gold, Silver, or Bronze—based on their performance in meeting specific criteria and achieving a minimum performance index in each category.

Source https://www.dgnb.de/en/certification/important-facts-about-dgnb-certification

DPP: Digital Product Passport
A digital ID for products containing essential information on sustainability, circularity, and environmental impact. It's introduced by Ecodesign for Sustainable Products Regulation (ESPR).
Source https://data.europa.eu/en/news-events/news/eus-digital-product-passport-advancing-transparency-and-sustainability

E

EcoVadis SAS
EcoVadis is a globally recognized platform that evaluates the sustainability performance of companies based on four key areas: environmental impact, labor and human rights, ethics, and sustainable procurement. It provides a score ranging from 0 to 100, enabling companies to benchmark their performance and identify areas for improvement.
Source https://ecovadis.com/

EGD: European Green Deal
The European Green Deal (EGD) is a comprehensive growth strategy launched by the European Union in 2019. Its main goal is to make the EU climate-neutral by 2050 by reducing net greenhouse gas emissions to zero. By 2030, emissions should already be reduced by at least 55% compared to 1990 levels.

Main Objectives of the European Green Deal
- Climate Neutrality: The EU aims to become the first climate-neutral continent.
- Circular Economy: Introduction of an economic model that promotes reuse, repair, and recycling to minimize waste and conserve resources.
- Clean Industry: Supporting sustainable and energy-efficient industries.
- Healthier Environment: Commitment to restoring nature and creating a zero-pollution goal.
- More Sustainable Agriculture: Promoting environmentally friendly agricultural practices.
- Climate Justice and Fairness: Ensuring a just transition that leaves no one behind.

Source https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal_en

Enterprise Green Communities Certification
The Enterprise Green Communities Certification is a national green building program in the USA specifically designed for affordable housing, focusing on sustainability through mandatory and optional criteria in areas like energy efficiency, water conservation, and healthy living environments. Projects undergo a two-step certification process (Prebuild and Postbuild) and can achieve two levels: Enterprise Green Communities Certification or the higher-level Certification Plus, which recognizes advanced energy efficiency and zero-energy goals.
Source https://www.greencommunitiesonline.org

Environmental Impact Categories
Environmental impact categories are standardized measures used in Life Cycle Assessment (LCA) to quantify and classify the various ways human activities affect the environment. These categories originate from scientific models and international standards like ISO 14040/44, the Environmental Footprint Method (EF), and others. These categories help assess and compare the environmental performance of products, processes, or organizations throughout their life cycles. They provide a structured approach to understanding and mitigating various environmental impacts, from climate change to resource scarcity and human health effects.

Some of the main environmental impact categories include:
1) Global Warming Potential (GWP)
2) Ozone Depletion Potential (ODP)
3) Acidification Potential
4) Eutrophication Potential (freshwater, marine, and terrestrial)
5) Photochemical Ozone Creation Potential (POCP)
6) Resource Depletion (abiotic, fossil fuels, minerals, water)
7) Human Toxicity (carcinogenic and non-carcinogenic)
8) Ecotoxicity (freshwater, marine, and terrestrial)
9) Land Use and Transformation
10) Particulate Matter Formation
11) Ionizing Radiation
12) Water Consumption and Scarcity
13) Biodiversity Impact
14) Urban Land Occupation
15) Agricultural Land Occupation
16) Natural Land Transformation
17) Metal Depletion
18) Fossil Depletion
19) Climate Change (fossil sources, biobased sources, and land use changes.)

Source https://green-business.ec.europa.eu/environmental-footprint-methods/life-cycle-assessment-ef-methods_en

EPD: Environmental Product Declaration
A standardized and simplified representation of LCA results. EPDs are registered with the EPD program operator EPD International AB.
Source https://ibu-epd.com/en/what-is-an-epd/

EPD International AB
EPD International AB is the program operator and has the overall responsibility for the administration and operation of the International EPD System. EPD International AB is a subsidiary to IVL Swedish Environmental Research Institute.
Source https://www.environdec.com/about-us/epd-international-ab

ESG: Environmental, Social, and Governance
Environmental, Social, and Governance. It is a framework used to evaluate the sustainability and ethical practices of businesses.

ESG has become increasingly significant for several reasons:
- Risk Management: Helps identify and mitigate environmental, social, and governance-related risks.
- Investor Attraction: Two-thirds of investors consider ESG factors in their investment decisions.
- Stakeholder Expectations: Meets the growing demands of consumers, employees, and investors for responsible business practices.
- Regulatory Compliance: Assists in navigating and complying with evolving sustainability regulations.
- Long-term Sustainability: Enhances a company's long-term viability and resilience.

Source https://www.thecorporategovernanceinstitute.com/insights/guides/what-is-esg-and-why-is-it-important/

ESPR: Ecodesign for Sustainable Products Regulation
European policy that promotes circular economy principles by ensuring products are durable, reusable, repairable, recyclable, and

energy-efficient. It introduces a Digital Product Passport (DPP).
Source https://commission.europa.eu/energy-climate-change-environment/standards-tools-and-labels/products-labelling-rules-and-requirements/ecodesign-sustainable-products-regulation_en

ESRS: European Sustainability Reporting Standards

The European Sustainability Reporting Standards (ESRS) provide a standardized framework for companies in the EU to report on environmental, social, and governance (ESG) topics, ensuring transparency and comparability in sustainability disclosures.
Source https://finance.ec.europa.eu/news/commission-adopts-european-sustainability-reporting-standards-2023-07-31_en

EU Taxonomy

The EU Taxonomy is a classification system introduced as part of the European Green Deal to define and promote environmentally sustainable economic activities. It aims to guide investments toward projects that support the EU's climate neutrality goal by 2050 and its interim target of reducing greenhouse gas emissions by 55% by 2030.
Source https://finance.ec.europa.eu/sustainable-finance/tools-and-standards/eu-taxonomy-sustainable-activities_en

F

Fitwel Certification Program

The Fitwel Certification program is a health-focused building standard developed by the U.S. Centers for Disease Control (CDC) and the General Services Administration (GSA), evaluating projects across 12 categories such as indoor environment, outdoor spaces, and emergency procedures, to promote occupant well-being. It offers three certification levels (1 to 3 stars) based on a scorecard system, with the process typically taking 12 weeks and involving steps like registration, assessment, and documentation submission.
Source https://www.fitwel.org

G

GHG: Green House Gas Emissions (Scope 1-3)

Internationally recognized method to determine greenhouse gas emissions, categorized into three scopes:
Scope 1: Direct emissions from a company's own operations (e.g., fuel combustion).
Scope 2: Indirect emissions from the generation of purchased electricity, steam, heating, and cooling.
Scope 3: All other indirect emissions in a company's value chain, including those from suppliers and customers.
Source https://ghgprotocol.org/sites/default/files/2022-12/FAQ.pdf

Green Globes Certification

The Green Globes Certification is a flexible, science-based building certification program that evaluates sustainability, health, and resilience across various building types, offering four certification levels (1 to 4 Globes) based on performance criteria. It uses a self-assessment questionnaire followed by a third-party audit to verify compliance with standards in areas like energy efficiency, water conservation, and indoor air quality.
Source https://thegbi.org/greenglobes/

Green Mark Certification

The Green Mark Certification is a green building rating system launched in Singapore in 2005 to evaluate a building's environmental performance, covering areas like energy efficiency, water conservation, and indoor environmental quality. It offers certification levels based on a comprehensive assessment framework, promoting sustainable design and best practices in construction and operations.
Source https://www1.bca.gov.sg/buildsg/sustainability/green-mark-certification-scheme

Green Star Certification program

The Green Star Certification program, managed by the Green Building Council of Australia (GBCA), evaluates buildings, fitouts, and precincts across categories like energy, water, and materials, awarding ratings from 4 Stars (Best Practice) to 6 Stars (World Leadership) based on sustainability performance. The certification process involves two rounds of assessment, with independent third-party assessors reviewing documentation to ensure compliance with Green Star's rigorous standards.
Source https://new.gbca.org.au/green-star/certification-process/

GRI: Global Reporting Initiative

GRI is a consultancy for assessment and reporting on environmental, social, and economic impacts.
Source https://www.globalreporting.org/

H

HQE: High Environmental Quality Certification Program

The HQE (High Environmental Quality/ Haute Qualité Environnementale) certification is a French green building standard that evaluates projects across 14 targets grouped into four themes: Eco-construction, Eco-management, Comfort, and Health, focusing on sustainability, energy efficiency, and occupant well-being. It offers multiple certification levels—Good, Very Good, Excellent, and Outstanding—based on a building's performance and lifecycle impact, and is applicable globally with adaptations for different regions.
Source https://www.hqegbc.org

HVAC: Heating, Ventilation, and Air Conditioning

HVAC (Heating, Ventilation, and Air Conditioning) systems regulate indoor temperature, humidity, and air quality by combining heating, cooling, and ventilation components to create comfortable and healthy environments. Key elements include furnaces, air conditioners, ductwork, and air filters, which work together to distribute conditioned air throughout a building.
Source https://daikincomfort.com

I

IAQ: Indoor Air Quality

Indoor Air Quality (IAQ) refers to the quality of air within buildings, impacting the health, comfort, and well-being of occupants by influencing factors like temperature, humidity, and pollutant levels. Poor IAQ, often caused by pollutants such as mold, VOCs, or inadequate ventilation, can lead to health issues like respiratory problems and reduced cognitive function. Maintaining good IAQ involves strategies like proper ventilation, using low-VOC materials, and regular maintenance of HVAC systems.
Source https://www.epa.gov/indoor-air-quality-iaq

IEQ: Indoor Environmental Quality

Indoor Environmental Quality (IEQ) refers to the overall conditions inside a building, including air quality, lighting, thermal comfort, acoustics, and aesthetics, which collectively impact occupant health, comfort, and productivity. It emphasizes factors like adequate

ventilation, natural light, and low levels of pollutants such as VOCs and mold to create a healthier indoor environment.
Source https://sftool.gov/explore/green-building/section/30/ieq/system-overview

L

LBC: Living Building Challenge

The Living Building Challenge (LBC) is a rigorous green building certification program that evaluates projects based on seven performance categories, or Petals, including Place, Water, Energy, and Equity, with a total of 20 imperatives to meet. Certification is performance-based, requiring buildings to demonstrate compliance over 12 consecutive months of operation, and offers pathways such as Living Certification, Petal Certification, and Zero Energy Certification. Developed by the International Living Future Institute, the LBC aims to create regenerative, net-zero energy and water buildings that enhance environmental and social sustainability.
Source https://living-future.org/lbc/

LCA: Life Cycle Assessment

A detailed analysis of the environmental impact of a product. In total there are 16 impact categories. Climate warming potential in CO_2 equivalents is the best known.
The LCA methodology itself consists of four main phases:
- Goal and Scope Definition: This phase establishes the purpose of the study, defines the system boundaries, and determines the functional unit. It sets the direction for the entire LCA process.
- Life Cycle Inventory (LCI) Analysis: The LCI phase involves collecting and quantifying all inputs and outputs of the studied system, including energy, raw materials, emissions, and waste.
- Life Cycle Impact Assessment (LCIA): In this phase, the LCI results are associated with specific environmental impact categories and indicators. This includes steps such as classification, characterization, normalization, and weighting.
- Interpretation: The final phase involves analyzing the results, drawing conclusions, and making recommendations based on the findings of the LCA.

By following these stages and phases, LCA provides a structured approach to evaluating and managing the environmental impacts of products and services throughout their entire life cycle.
Source https://green-business.ec.europa.eu/environmental-footprint-methods/life-cycle-assessment-ef-methods_en

LEED: Leadership in Energy and Environmental Design

LEED (Leadership in Energy and Environmental Design) is a globally recognised certification system for sustainable construction that was developed by the U.S. Green Building Council (USGBC) in 1998. It evaluates buildings according to environmental, social and economic criteria and serves as a symbol for sustainability performance in the construction industry.
Source https://www.usgbc.org/leed

Life Cycle Stages

In the context of Life Cycle Assessment (LCA), the life cycle stages refer to the different phases a product or service goes through, from its inception to end-of-life. These stages are defined as part of the LCA methodology to systematically evaluate the environmental impacts associated with each phase of a product's life.

The main life cycle stages in LCA are:
- Raw Material Extraction
- Material Processing
- Manufacturing
- Distribution and Transportation
- Use Phase
- End-of-Life (including disposal, recycling, or reuse)

These stages originate from the ISO 14040 and 14044 standards, which provide the framework for conducting LCAs.
The purpose of defining these stages is to ensure a comprehensive assessment of environmental impacts throughout the entire life cycle of a product or service.
Source https://green-business.ec.europa.eu/environmental-footprint-methods/life-cycle-assessment-ef-methods_en

P

Paris Agreement

The Paris Agreement is a landmark international climate treaty adopted in 2015, aiming to limit global temperature rise to well below 2°C above pre-industrial levels, with a preferred target of 1.5°C. It requires each participating country to submit Nationally Determined Contributions (NDCs) - voluntary climate action plans that are reviewed and updated every five years to progressively reduce greenhouse gas emissions. The agreement represents a global collaborative effort to combat climate change, emphasizing adaptation, financial support for developing nations, and a transition to low-carbon economies. Unlike previous climate protocols, the Paris Agreement uses a flexible, bottom-up approach that allows countries to set their own emissions reduction targets while maintaining a collective commitment to mitigating global warming.
Source https://unfccc.int/process-and-meetings/the-paris-agreement

Passivhaus Certification

The Passivhaus Certification is a globally recognized standard for energy-efficient buildings, ensuring high performance through rigorous criteria such as airtightness, thermal insulation, and controlled ventilation with heat recovery. Buildings must meet specific energy consumption limits, with certification levels including Classic, Plus, and Premium, and the process involves independent verification by accredited certifiers.
Source https://www.passivhaustrust.org.uk/certification.php

PCR: Product Category Rules

PCR standardize environmental impact assessments within a product category to ensure consistency and comparability.
Source https://www.environdec.com/pcr/the-pcr

Pearl Certification

Pearl Certification is a US home performance rating program that evaluates homes based on five key categories, including building shell, heating and cooling, and renewable energy, assigning points to high-performing features like efficient insulation and smart home technologies. It offers four certification levels—Pearl Platinum, Gold, Silver, and Certified Assets—based on the home's total score, with adjustments for regional climate differences.
Source https://pearlcertification.com

PPWR: Packaging and Packaging Waste Regulation

The Packaging and Packaging Waste Regulation (PPWR) is a European Union law aimed at reducing the environmental impact of packaging, fostering a circular economy, and harmonizing packaging rules across EU member states. It replaces the previous Packaging

Directive 94/62/EC and introduces stricter, binding requirements for packaging design, production, recycling, and reuse.
Source https://environment.ec.europa.eu/topics/waste-and-recycling/packaging-waste_en

R

RESET Certification

The RESET (Regenerative, Ecological, Social and Economic Targets) Certification is a global, data-driven green building standard focused on continuous monitoring of indoor air quality (IAQ) and energy efficiency, ensuring healthier and more sustainable built environments. It emphasizes real-time data collection and performance-based criteria, with certifications available for air, energy, water, and waste, tailored to projects like commercial interiors and core & shell buildings.
Source https://www.reset.build

S

SBTi: Science Based Targets initiative

SBTi is a global organization that helps companies set greenhouse gas emission reduction targets aligned with climate science to meet the goals of the Paris Agreement.
Source https://sciencebasedtargets.org/

SDGs: Sustainable Development Goals

The Sustainable Development Goals (SDGs) are 17 global objectives established by the United Nations in 2015 as part of the 2030 Agenda for Sustainable Development.

The 17 Sustainable Development Goals
1. No Poverty
2. Zero Hunger
3. Good Health and Well-being
4. Quality Education
5. Gender Equality
6. Clean Water and Sanitation
7. Affordable and Clean Energy
8. Decent Work and Economic Growth
9. Industry, Innovation and Infrastructure
10. Reduced Inequalities
11. Sustainable Cities and Communities
12. Responsible Consumption and Production
13. Climate Action
14. Life Below Water
15. Life on Land
16. Peace, Justice, and Strong Institutions
17. Partnerships for the Goals

Source https://www.un.org/sustainabledevelopment/sustainable-development-goals/

T

TCO: Total Cost of Ownership

Assessment of the direct and indirect costs associated with purchasing, operating, and maintaining an air filter over its entire lifecycle. Offered to AAF customers as a service to determine the most cost-effective time to change the filter.

Three-Star Program

The Three-Star Program, developed in 1980, is a strategic community development initiative in Tennessee (USA) aimed at enhancing economic and community prosperity through collaboration and local activity planning. It offers incentives like discounts on development projects, focusing on areas such as health, public safety, and education.
Source https://www.tn.gov/ecd/rural-development/three-star-tnecd/threestar-about.html

U

UL Verified Healthy Building Certification program

The UL Verified Healthy Building Certification program, developed by UL Solutions, evaluates buildings for indoor environmental quality, focusing on factors like air and water quality, lighting, acoustics, and hygiene, with three tiers of verification options: Indoor Air, Indoor Air and Water, and Indoor Environment. It aligns with science-centric standards from organizations like ASHRAE, CDC, EPA, and WHO, and involves an inspection, evaluation, remediation, and accreditation process to ensure compliance.
Source https://www.ul.com/services/verified-healthy-buildings

UNFCCC: United Nations Framework Convention on Climate Change

The United Nations Framework Convention on Climate Change (UNFCCC) is an international treaty established in 1992 to stabilize greenhouse gas concentrations and prevent dangerous climate interference. It provides a framework for global cooperation, leading to agreements like the Kyoto Protocol and the Paris Agreement, which aim to reduce emissions and limit global warming. With 198 parties, the UNFCCC facilitates annual Conferences of the Parties (COPs) to negotiate climate actions. It emphasizes collaboration between developed and developing nations through support for financial, technical, and capacity-building initiatives.
Source https://unfccc.int

W

WELL Building Standard

The WELL Building Standard (WELL) is a globally recognized certification system developed by the International WELL Building Institute (IWBI) in 2014. It focuses on promoting human health and well-being in the built environment by addressing key factors such as air, water, nourishment, light, movement, thermal comfort, sound, materials, mind, and community.
Source https://www.wellcertified.com/