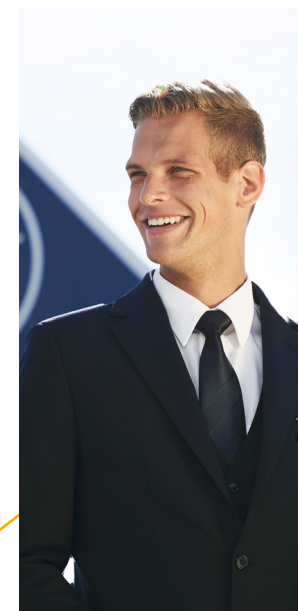
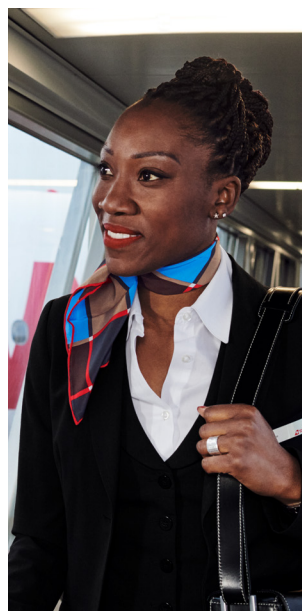




## Sustainability 2023

# FACT SHEET





## Dear Reader,

At the Lufthansa Group, we can look back on the third-best financial year in our corporate history. Demand for air travel remains high, and we were able to fly more than 123 million guests safely to their destinations in 2023.

In accordance with our mission statement to connect people, cultures, and economies in a sustainable way, we make every effort to minimize the environmental impact of flying, and to use resources and every drop of kerosene as efficiently as possible. It is our declared goal to lead the way in transforming our industry, and we have set ourselves ambitious targets to do so: We aim to be carbon-neutral by 2050, and we want to halve the net CO<sub>2</sub> emissions of our flight operations from their 2019 levels by 2030. Our commitment to sustainability at the Lufthansa Group is also rated positively by several independent rating organizations.

As part of our largest-ever fleet modernization program, our order book presently extends to more than 250 latest-generation aircraft that consume up to 30 percent less fuel and emit correspondingly less CO<sub>2</sub>. And, with sustainable aviation fuels being

key to more sustainable air travel, we are not only one of the world's biggest SAF customers; we also work with research institutions and industry partners to drive the development of such fuels and help ramp up their production.

We are modernizing our existing fleets, too, with innovative technologies like our fuel-saving AeroSHARK fuselage film. This pioneering aerodynamic film has already made the aircraft we have applied it to approximately one percent more fuel-efficient; and future developments could boost these savings to up to three percent. We are also continuously expanding our range of products and services for more sustainable travel. In 2023, we recorded more than 850,000 bookings of our Green Fares; and around three per cent of our passengers already used one of the various options we offer for more sustainable flying.

Responsible practices are the foundation of the Lufthansa Group's business activities and are diligently pursued by our diverse workforce of some 100,000 colleagues worldwide. For more than 20 years now, all our actions have been closely guided by the Ten principles of the UN Global Compact.

We take our corporate responsibility seriously. Our 'help alliance' staff volunteer aid organization, for instance, reaches more than 60,000 people worldwide, and supported over 50 projects in 2023 with total funding of around EUR 4 million.

These are just a few examples of our tireless efforts at the Lufthansa Group in caring for our planet and its people. You will find many more of these in this publication, along with our most important topics and our key sustainability figures for 2023.

**Carsten Spohr**  
Chief Executive Officer

# At a glance

PERSONNEL DATA		2023	2022	Change
Average number of employees during the year		110,264	106,886	+3.2%
Employees (as of Dec 31, 2023)		96,677	109,509	-11.7%
of which in Germany		63,176	59,295	+6.5%
of which abroad		33,501	50,214	-33.3%
Staff costs <sup>9</sup>	in € million	8,310	7,223	+15.0%
Revenue/employees <sup>9</sup>	€	321,429	289,038	+11.2%
Staff costs/revenue <sup>9</sup>	percent	23.5	23.6	-0.1 PP
Average age	years	42.6	42.9	-0.3
Absolute part-time ratio <sup>1</sup>	percent	34.5	30.2	+4.3 PP
Part-time ratio men	percent	20.6	17.1	+3.5 PP
Part-time ratio women	percent	51.2	46.1	+5.1 PP
Proportion of women in management	percent	22.3	20.4	+1.9 PP

TRAFFIC DATA 2023		Fact Sheet <sup>2,3</sup>			Annual Report <sup>6,8</sup>		
		2023	2022	Diff. PY	2023	2022	Diff. PY
Flights <sup>4</sup>		874,431	780,047	+12.1%	946,132	826,603	+14.5%
Passengers <sup>5</sup>	thousand	114,405	95,946	+19.2%	122,535	101,775	+20.4%
Seat kilometers offered, SKO	million	291,138	250,552	+16.2%	300,582	259,428	+15.9%
Freight tonne-kilometers offered, FTKO	million	14,072	12,587	+11.8%	15,497	14,194	+9.2%
Passenger kilometers transported, PKT <sup>5</sup>	million	244,912	201,665	+21.4%	249,269	207,030	+20.4%
Freight tonne-kilometers transported, FTKT	million	7,281	7,138	+2.0%	8,735	8,562	+2.0%
Passenger tonne-kilometers <sup>5</sup>	million	24,644	20,289	+21.5%	-	-	-
Tonne-kilometers transported, TKT	million	31,925	27,427	+16.4%	-	-	-

<sup>1)</sup> Scope = Group of consolidated companies without restriction. <sup>2)</sup> The following companies are included for the 2023 reporting year: Lufthansa (including Lufthansa CityLine, Discover Airlines and Air Dolomiti), SWISS (including Edelweiss Air), Austrian Airlines, Eurowings, Brussels Airlines, and Lufthansa Cargo. Other flights (see footnote 4, p. 10) and services performed by third parties are not included, as their performance is beyond Lufthansa

Group's control (see table "Third-party share", p. 10) <sup>3)</sup> Types of flight service considered: all scheduled and charter flights (excluding ground vehicles). <sup>4)</sup> Legs (operational perspective); Annual Report: routes (customer perspective). A route may comprise several legs, e.g. stopovers. <sup>5)</sup> Based on all passengers on board. <sup>6)</sup> Companies included as in footnote 2, but including third-party services, as these contribute to the Group's result. <sup>7)</sup> Actual fuel consumption/

carbon dioxide emissions in tonnes from flight operations based on all flight events under the respective operating flight number. Consumption/carbon dioxide emissions are recorded from gate to gate, i.e. including taxiing on the ground and holding patterns as well as flight detours. <sup>8)</sup> Previous year's figures adjusted <sup>9)</sup> The figures for the 2022 financial year were adjusted for comparability reasons due to the sale of the LSG Group.

ENVIRONMENTAL DATA <sup>2,3</sup>		2023	2022	Change
<b>Resource consumption</b>				
Fuel consumption <sup>7</sup>	tonnes	8,451,407	7,284,584	+16.0%
Fuel consumption, specific, all types of transport	g/tkm	265	266	-0.3%
Fuel consumption, specific, passenger transportation	l/100 pkm	3.52	3.59	-1.7%
Fuel consumption, specific, freight transportation	g/tkm	218	214	+1.8%
<b>Emissions</b>				
Carbon dioxide emissions <sup>7</sup>	tonnes	26,621,932	22,946,441	+16.0%
Carbon dioxide emissions, specific, all types of transport	g/tkm	834	837	-0.3%
Carbon dioxide emissions, specific, passenger transportation	kg/100 pkm	8.84	9.00	-1.8%
Nitrogen oxide emissions	tonnes	125,130	106,896	+17.1%
Nitrogen oxide emissions, specific, passenger transportation	g/100 pkm	40.4	40.7	-0.7%
Carbon monoxide emissions	tonnes	21,411	19,346	+10.7%
Carbon monoxide emissions, specific, passenger transportation	g/100 pkm	7.4	8.0	-6.9%
Unburned hydrocarbons	tonnes	2,434	2,234	+9.0%
Unburned hydrocarbons, specific, passenger transportation	g/100 pkm	0.88	0.97	-9.0%

# The Lufthansa Group is committed to providing transparent and comprehensive sustainability reporting

## MATERIAL SUSTAINABILITY ASPECTS IN THE LUFTHANSA GROUP

- Customer satisfaction
- Financial stability and resilience
- Business ethics and compliance
- Sustainable supply chains
  
- Emissions with an impact on the climate
- Energy and fuel efficiency
- Local pollution (including noise)
- Waste management
  
- Attractiveness as an employer
- Transformation capability
- Health and safety at work
- Diversity and equal opportunity
- Corporate citizenship<sup>1</sup>

**Sustainable and responsible corporate conduct is an integral part of the Lufthansa Group's corporate strategy. The Lufthansa Group firmly believes that it has an obligation to create added value for customers, employees and investors, and to fulfil its responsibilities towards the environment, people and society as a whole.**

This is why the Lufthansa Group considers it important to provide transparent and comprehensive reporting on its sustainability activities. To do so, the Lufthansa Group regularly identifies key sustainability aspects by conducting a **materiality analysis**. This analysis incorporates the expectations and interests of the Group's stakeholders. In 2023 the Lufthansa Group invited representatives from all its external stakeholder groups as well as all employees and managers to take part in an anonymous, wide-ranging survey about their view of the relevance of sustainability topics for the Lufthansa Group. The survey also asked about potential effects of business activities on the human and natural environment as well as risks and

opportunities for the company. In addition to publishing the **Sustainability Fact Sheet**, the Lufthansa Group reports in detail on its commitment to sustainability in its **non-financial declaration** in the Annual Report, with reference to GRI standards. This also includes a statement on the applicability of the EU Taxonomy. The Lufthansa Group has been a signatory of the Taskforce on Climate-related Financial Disclosures (**TCFD**) since 2020 and reports accordingly. The Lufthansa Group also reports according to the Sustainable Accounting Standards Board (**SASB Report**).

**All reports are published under**

➔ [lufthansagroup.com/en/responsibility/reports](https://lufthansagroup.com/en/responsibility/reports)

There, the company also provides a detailed description of its carbon footprint in the context of its **CDP rating**, and, in its annual **Communication on Progress**, reports on its sustainable corporate governance in accordance with the ten principles of the **UN Global Compact**.

## STAKEHOLDERS OF THE LUFTHANSA GROUP

	<p><b>Customers and end-users</b> Consumers including business customers</p>		<p><b>Capital market stakeholders</b> Investors, shareholders, lenders and other creditors</p>		<p><b>Politics, authorities, governments and legislation</b></p>		<p><b>Science, research and education</b></p>		<p><b>Society</b> General public, residents, vulnerable groups, social networks, NGOs/associations</p>
	<p><b>Nature</b></p>		<p><b>Analysts and rating agencies</b></p>		<p><b>Employees and representatives</b></p>		<p><b>Suppliers and contracting partners</b></p>		


<sup>1</sup> Voluntary materiality of the Lufthansa Group.

# Values and guidelines

The Lufthansa Group is committed to the **ten principles of the UN Global Compact** for sustainable and responsible corporate governance. In addition, it supports the 17 global Sustainable Development Goals (SDGs) of **Agenda 2030**, as adopted by the UN member states in 2015. In order to contribute

towards achieving these goals, the Lufthansa Group concentrates on the SDGs where it can reduce its negative impact and increase its positive effect based on its business model. An overview of its contributions is published in the Annual Report.

## SUSTAINABLE DEVELOPMENT GOALS (SDG) SUPPORTED BY THE LUFTHANSA GROUP

	SDG 03: Good Health and Well-Being		SDG 09: Industry, Innovation and Infrastructure		SDG 16: Peace, Justice and Strong Institutions
	SDG 04: Quality Education		SDG 10: Reduced Inequalities		SDG 17: Partnerships for the Goals
	SDG 07: Affordable and Clean Energy		SDG 12: Responsible Consumption and Production		
	SDG 08: Decent Work and Economic Growth		SDG 13: Climate Action		

### Code of Conduct

In its **Code of Conduct**, which is binding for all bodies, senior executives and employees, the Lufthansa Group documents its values, principles and standards of business conduct. By providing a framework for responsible and legal business conduct, the Code of Conduct serves as a basis for fair competition and helps to identify and avoid legal and reputational risks. The key principles of the Code of Conduct include, among others, taking responsibility for society and the environment, acting with business integrity, and protecting company values. Building on this document, the Lufthansa Group also has a **Supplier Code of Conduct**, which specifically lays out the Group's position: it expects suppliers to abide by the principles outlined in the code as a key aspect of their business relationship. It focuses on the three areas of environmental, social and governance, and is intended to ensure that the Lufthansa Group's suppliers comply with the standards it sets out in the

Supplier Code of Conduct and to encourage them to support the establishment of responsible and sustainable behaviors in the supply chain. The principles laid down in the Supplier Code of Conduct not only act as the basis for responsible conduct and fair competition, but also help identify and avoid legal and reputational risks at an early stage.

Additionally, the Lufthansa Group's Executive Board has approved a **Policy Statement on respect for human and environmental rights** for its own business division and along the supply chain. It details the Human Rights Strategy to comply with its Due Diligence Obligations, and Risk Management System. The Policy Statement also covers risk analysis, prioritized risks, and appropriate measures to prevent risks and address violations. It includes complaint options, documentation, and reporting obligations as part of its Risk Management System.

## Ten principles of the UN Global Compact

1. Businesses should support and respect the protection of internationally proclaimed human rights.
2. Businesses should make sure that they are not complicit in human rights abuses.
3. Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining.
4. Businesses should uphold the elimination of all forms of forced and compulsory labor.
5. Businesses should uphold the effective abolition of child labor.
6. Businesses should uphold the elimination of discrimination in respect of employment and occupation.
7. Businesses should support a precautionary approach to environmental challenges.
8. Businesses should undertake initiatives to promote greater environmental responsibility.
9. Businesses should encourage the development and diffusion of environmentally friendly technologies.
10. Businesses should work against corruption in all its forms, including extortion and bribery.

Source: UN Global Compact

# Strategy

## Positioning as leading European airline group

The Lufthansa Group is one of the largest airline groups worldwide and leading amongst European airline groups. In this role, the Lufthansa Group aims to play a part in actively shaping the global airline market. It strives to follow the guiding principle: The Lufthansa Group connects people, cultures and economies in a sustainable way. In doing so, it aspires to set standards in terms of customer-friendliness and sustainability. The Lufthansa Group uses the potential of innovation and digitalization to

develop customer-focused products and increase efficiency. Corporate responsibility and identity are put into practice locally and supported by overarching functional processes that enable synergies and economies of scale. Operational stability and reliability in all areas as well as a strict focus on cost are essential for the Lufthansa Group. The safety of flight operations is and always will be the top priority.

## GUIDING PRINCIPLES OF THE LUFTHANSA GROUP



## The Lufthansa Group to focus more on sustainability and social responsibility

Responsibility is the foundation of business activities in the Lufthansa Group. The Lufthansa Group aspires to lead the airline industry with high standards in this area as well. It therefore builds continuously on its environmental commitment, is dedicated to many social issues, and treats its employees and partners in the value chain responsibly and fairly.



946,132 flights<sup>1</sup>



> 300 destinations<sup>1</sup>



123 million passengers<sup>1</sup>



721 aircraft<sup>1</sup>  
(as of Dec 31, 2023)



5 hubs



96,677 employees<sup>1</sup>  
(as of Dec 31, 2023)



241 companies<sup>1</sup>  
(fully consolidated)

<sup>1</sup> Data basis annual report 2023.



## Above-average ratings in sustainability (ESG) assessments

For the Lufthansa Group, key ESG rating agencies continue to assess the company's sustainability efforts as above average in the reporting year 2023.

Institutional investors are increasingly integrating ESG aspects into their investment decisions. The ESG performance of a company is therefore externally rated on the basis of numerous criteria, which provide information on factors such as a company's values, risk management, non-financial targets, and the measures it adopts. The rating mainly draws on publicly available data and information.

### Prerequisites for a good rating




**Materiality:** Consideration of the material ESG factors for the Company's business and sector that may affect the Company's financial performance and sustainability in the long term.

**Data quality:** Accurate and reliable ESG data that is collected and managed via robust procedures and forms the basis for reporting.

**Transparency:** Disclosure of relevant information on ESG performance.

**Benchmarking:** Comparison of Company performance with competitors and standards in the sector.

### Performance in ESG ratings (as of Dec 31, 2023)

Agency	Score Type	Latest Score	Year	Change from previous scoring	Explanatory notes
 MSCI	ESG Score	AA	2023	→	Confirmation of AA Level and <b>sector leadership</b> . Best Scoring in "Carbon Emissions", "Corporate Governance" and "Corporate Behavior".
 SUSTAINALYTICS	Risk Score	28.3 (medium)	2023	→	<b>Medium ESG risk</b> rating due to high CO <sub>2</sub> relevance. Strong management on essential ESG aspects.
 ISS ESG	ESG Score	C+ (Prime Status)	2023	→	Remaining a top-three <b>"Industry Leader"</b> in aviation, excelling in "Climate Protection", "Labor Standards", and "Transport Safety" and "Stakeholder Responsibility".
 MOODY'S ESG Solutions	ESG Score	47/100	2023	↗	<b>Above Sector Average</b> performance (41). Best scores in "Environmental strategy", "Non-Discrimination and Diversity Audit" and "Internal Controls and Executive Remuneration".
 FTSE Russell FTSE4Good	ESG Score	3.4/5	2023	→	<b>Above Industry Average</b> (2.4). Lufthansa has been part of FTSE4Good Index Series since 2001. Top ratings in "Climate Change" and "Corporate Governance" categories.
 S&P Global	ESG Score	47/100	2023	↗	<b>Above Average</b> (35) among peer airlines. Maximum scores in "CSR Reporting Assurance", "CEO remuneration", "Climate Risk Management", "Codes of Conduct", and "Workplace Health/Safety Program".
 CDP DISCLOSURE INSIGHT ACTION	Climate Change	A- (Leadership Level)	2023	→	<b>Above Sector Average</b> (B). Top scores in "Transparent and Credible Disclosure of Climate-Related Emissions", "Reduction Measures", and "Climate Risks and Opportunities".
 ecovadis	Supply Chain Sustainability Assessment	65/100 (Silver Status)	2022/2023	→	<b>Top 9%</b> of all evaluated companies in the passenger air transport industry. Strong performance in categories "Environment" and "Labor and Human Rights".

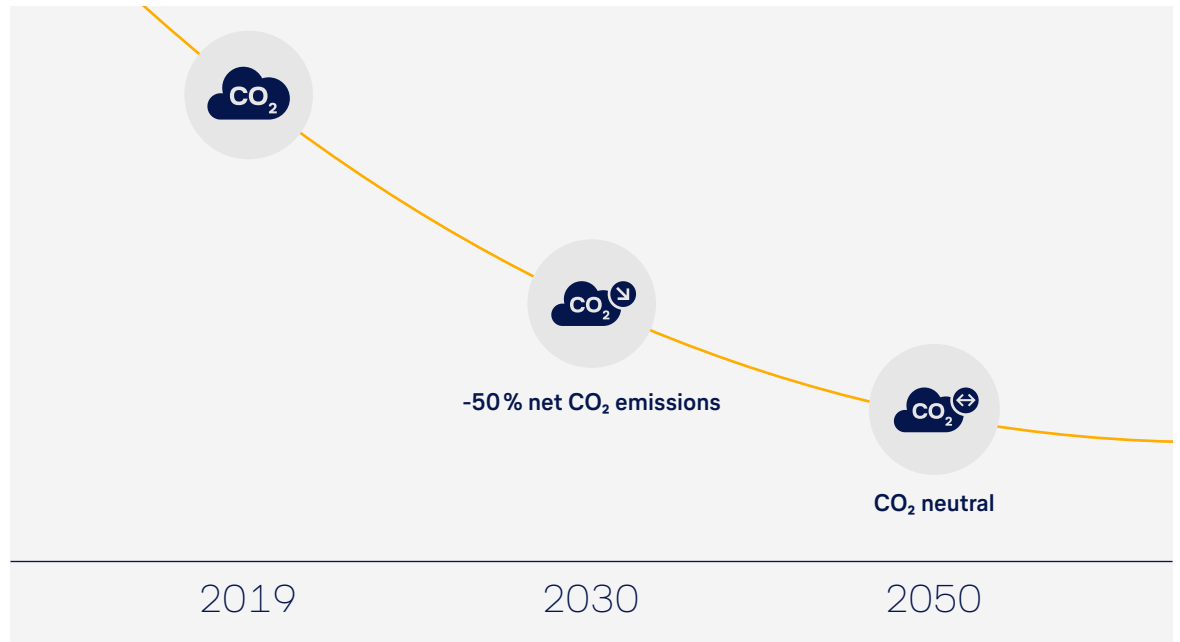
# Climate action goals

## Ambitious Lufthansa Group climate action goals

The Lufthansa Group has set ambitious climate protection goals. It aims to halve its net carbon emissions from flight operations by 2030 compared to 2019, and to achieve carbon neutrality by 2050.

As an additional goal, the Lufthansa Group aims to become carbon-neutral within their mobility on the ground in its home markets by 2030.

The Lufthansa Group has joined the Science Based Targets initiative (SBTi) and is following a clearly defined CO<sub>2</sub> reduction path. Lufthansa Group's target to achieve a 30.6% reduction in CO<sub>2</sub> intensity in 2030 compared to 2019 was successfully validated in 2022 by SBTi as the first European airline group and the second worldwide.



**The Lufthansa Group improved its performance by 2.7% compared with 2019 in terms of the core KPI of the Science Based Targets Initiative (measured in grams of CO<sub>2</sub> per revenue tonne-kilometer).**

### THE LUFTHANSA GROUP'S TOOLS FOR ACHIEVING ITS CLIMATE GOALS



#### Fleet modernization

More modern and fuel-efficient aircraft provide the greatest leverage for reducing CO<sub>2</sub> emissions in this decade.



#### Efficiency in flight operations

Tools used every day to reduce carbon emissions include intelligent route planning, modern approach procedures, and the latest technologies.



#### Offsetting

High-quality, certified offset projects that promote climate change mitigation worldwide are complemented by CORSIA, the international offset instrument for carbon-neutral growth in air transport.



#### Sustainable aviation fuels

The key to making flying more climate-friendly is to increase the use of sustainable fuels.



#### Alternative transport to hubs

The expansion and interconnection of air, rail and bus services makes it possible to reduce the number of short-haul flights and offer alternative modes of travel.



# Update on levers for achieving climate goals – 2023 highlights



## Fleet modernization

- **29 new entry aircraft** including modern and more efficient aircraft models Airbus A320neo, A321neo, A350-900, Boeing 787-9 and Boeing 777F
- **18 retirements** of older, relatively less efficient aircraft

The new aircraft have up to 30 % lower fuel consumption and carbon emissions compared with their direct predecessor models.

### LUFTHANSA GROUP FLEET ORDERS (as of Dec 31, 2023)

	Firm orders <sup>1</sup>	Deliveries	Options
<b>Long-haul fleet</b>			
Airbus A350	42	2024 to 2031	
Boeing 787	34	2024 to 2028	13
Boeing 777	20	2024 to 2028	24
Boeing 777F	8	2024 to 2030	
<b>Short-haul fleet</b>			
Airbus A220	40	2026 to 2031	24
Airbus A320neo	46	2024 to 2028	40
Airbus A321neo	23	2024 to 2028	
Boeing 737	40	2027 to 2032	60
<b>Total aircraft</b>	<b>253</b>	<b>2024 to 2032</b>	<b>161</b>

## Sustainable aviation fuels

**43,628t** fossil CO<sub>2</sub> saved by using sustainable aviation fuel (2023)

- The Lufthansa Group has joined the First Movers Coalition of the World Economic Forum. This initiative aims to use at least 5% SAF in 2030, with an emissions advantage of at least 85% compared to fossil fuel. These two aspects already represent a level of ambition which transcends the statutory obligations, since this 5% refers to the total fuel requirements of the Lufthansa Group (not just fuel taken on board in Europe) and the emissions advantage of SAF required in the EU is 65%.
- “Green Fares”: In February 2023 the Lufthansa Group was the first airline group in the world to offer a separate fare which includes compensation of flight-related carbon emissions: 20% of carbon emissions are reduced by using SAF and the remaining flight-related carbon emissions are compensated via a contribution to high-quality climate protection projects.

## Offsetting

Offsetting CO<sub>2</sub> emissions through high-quality climate protection projects

**420 thousand tonnes** by customers  
**75 thousand tonnes** by the Lufthansa Group for own business trips<sup>1</sup>

## Efficiency in flight operations

**25 thousand tonnes** of CO<sub>2</sub> reduction and **around 8 thousand tonnes** of kerosene reduction through **67 fuel-saving projects underway** across the Group, such as AeroSHARK.

This is equivalent to approximately 97 return flights between Munich and New York with an Airbus A350-900 aircraft.

## Intermodal transport

**Around 520 alternative connections** were offered daily to and from Lufthansa Group hubs to open up additional potential for reducing the number of particularly very short flights.

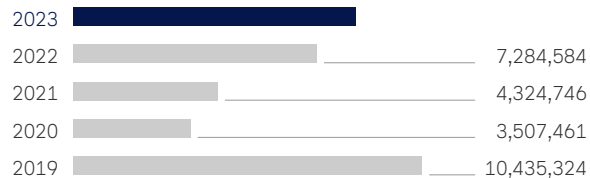
<sup>1</sup> Excluding contracted leases.

# Absolute fuel consumption

## FUEL CONSUMPTION<sup>1,2</sup>

in tonnes

**8,451,407**



Whereas the year 2022 was still occasionally marked by significant travel restrictions and uncertainties in the travel market, demand rose again significantly in the year 2023. This was reflected by an increase in capacity.

The strongly positive development of demand compared to the previous year of 2022 combined with an increase in capacity in the 2023 reporting year resulted in correspondingly higher fuel consumption. The number of flights increased by 12.1%, transportation volume increased by 16.4%, and kerosene consumption by 16.0%.

## FUEL CONSUMPTION<sup>1</sup> 2023

in tonnes

	Passengers	Cargo	Total	Stake
<b>Regular flights<sup>2</sup></b>				
Lufthansa Airlines	4,079,452	1,169,344	5,248,796	59.0%
SWISS	1,152,050	308,278	1,460,328	16.4%
Austrian Airlines	611,915	52,535	664,450	7.5%
Eurowings	608,286	1,319	609,605	6.9%
Brussels Airlines	421,251	46,976	468,228	5.3%
			<b>8,451,407</b>	<b>95.0%</b>
Other flights <sup>4</sup>			27,836	0.3%
<b>Sum<sup>5</sup></b>			<b>8,479,244</b>	<b>95.3%</b>
Third parties <sup>6,7</sup>	214,086	199,946	414,032	4.7%
<b>All flights</b>			<b>8,893,276</b>	<b>100.0%</b>

## FUEL DUMPS<sup>2</sup> 2023

	2023	Change compared to 2022
<b>Total events</b>	30	-7
of which medical reasons	13	-5
technical reasons	12	-5
other reasons	5	+3
<b>Tonnage<sup>3</sup></b>	1,124.6 t	+2.1%

## THIRD PARTY SHARE <sup>6,7</sup> 2023

Number of flights	7.1%
Passengers	5.6%
Tonne-kilometers transported, TKT (tkm)	5.9%
Fuel consumption (tonnes)	4.7%
Carbon dioxide emissions (tonnes)	4.7%



<sup>1)</sup> Actual fuel consumption in tonnes from flight operations based on all flight events under the respective operating flight number. Consumption/carbon dioxide emissions are recorded from gate to gate, i.e. including taxiing on the ground and holding patterns as well as flight detours. <sup>2)</sup> The following companies are included for the 2023 reporting year: Lufthansa (including Lufthansa CityLine, Discover Airlines and Air Dolomiti), SWISS (including Edelweiss Air), Austrian Airlines, Eurowings, Brussels Airlines, and Lufthansa

Cargo. Other flights (see footnote 4) and services performed by third parties are not included, as their performance is beyond Lufthansa Group's control (see table "Third-party share"). <sup>3)</sup> Partly projections. <sup>4)</sup> Ferry flights, special flights, test flights, training flights, aborted flights. <sup>5)</sup> The carbon emissions resulting from this fuel consumption (times 3.15) differ slightly from the value of 26.8 million tonnes reported in the 2023 non-financial declaration. This is due to the inclusion of further data systems for calculating specific

data in the Fact Sheet, and related differences. <sup>6)</sup> Airlines that fall outside the scope of this Fact Sheet but that provide services for Lufthansa, e.g. in the event of capacity bottlenecks. <sup>7)</sup> Excluding road feeder service and partial capacity chartered by Lufthansa Cargo, as no fuel consumption and emissions values are available for these services.

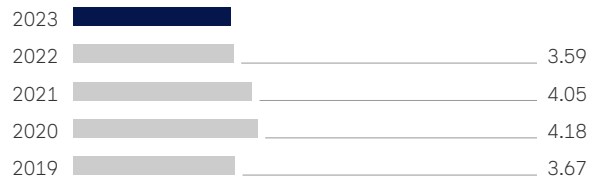
# Specific fuel consumption



## SPECIFIC FUEL CONSUMPTION PASSENGER TRANSPORT<sup>1,2</sup> LUFTHANSA GROUP

in liters/100 passenger-kilometers (l/100 pkm)

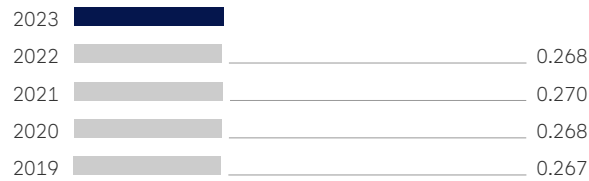
**3.52**



## SPECIFIC FUEL CONSUMPTION CARGO TRANSPORT<sup>1,2,3</sup>

in liters/freight tonne-kilometer (l/tkm)

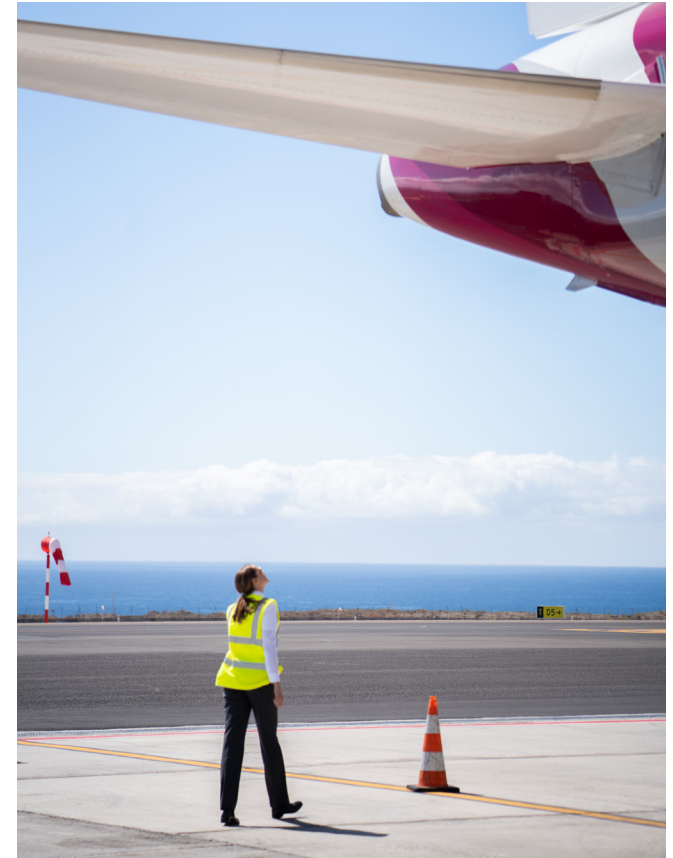
**0.272**



## SPECIFIC FUEL CONSUMPTION PASSENGER TRANSPORT IN COMPARISON<sup>1,2</sup>

in liters/100 pkm

	2023	2022	Change in %
<b>Group fleet</b>	3.52	3.59	-1.7%
Lufthansa Airlines	3.59	3.63	-1.0%
SWISS	3.27	3.27	-0.2%
Austrian Airlines	3.66	3.79	-3.4%
Eurowings	3.48	3.71	-6.3%
Brussels Airlines	3.54	3.61	-2.1%



<sup>1)</sup> Actual fuel consumption in liters from flight operations based on all flight events under the respective operating flight number. Consumption is recorded from gate to gate, i.e. including taxiing on the ground and holding patterns as well as flight detours.

<sup>2)</sup> The following companies are included for the 2023 reporting year: Lufthansa (including Lufthansa CityLine, Discover Airlines and Air Dolomiti), SWISS (including Edelweiss Air), Austrian Airlines, Eurowings, Brussels Airlines, and Lufthansa Cargo. Other flights and

services performed by third parties are not included, as their performance is beyond Lufthansa Group's control (see tables "Fuel consumption" and "Third-party share", p. 10).  
<sup>3)</sup> Based on freight tonne-kilometers transported in both cargo and passenger aircraft.

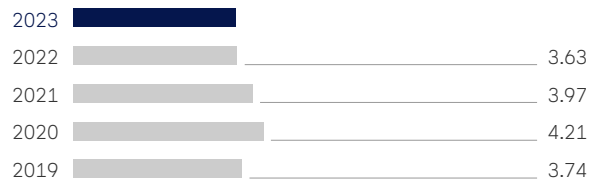
# Specific fuel consumption of the passenger airlines



## SPECIFIC FUEL CONSUMPTION PASSENGER TRANSPORTATION<sup>1,2</sup> LUFTHANSA AIRLINES

in liters/100 passenger-kilometers (l/100 pkm)

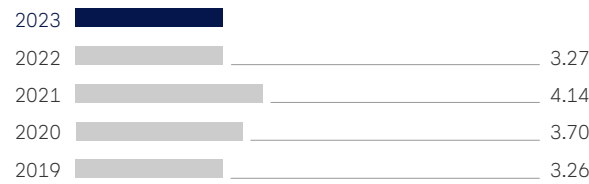
**3.59**



## SPECIFIC FUEL CONSUMPTION PASSENGER TRANSPORTATION<sup>1,2</sup> SWISS

in liters/100 passenger-kilometers (l/100 pkm)

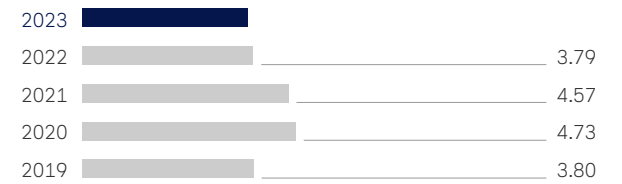
**3.27**



## SPECIFIC FUEL CONSUMPTION PASSENGER TRANSPORTATION<sup>1,2</sup> AUSTRIAN AIRLINES

in liters/100 passenger-kilometers (l/100 pkm)

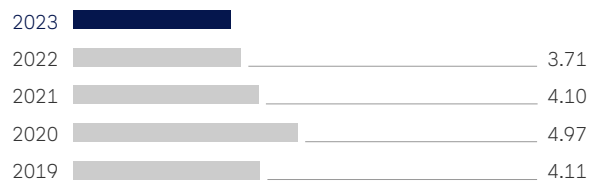
**3.66**



## SPECIFIC FUEL CONSUMPTION PASSENGER TRANSPORTATION<sup>1,2</sup> EUROWINGS

in liters/100 passenger-kilometers (l/100 pkm)

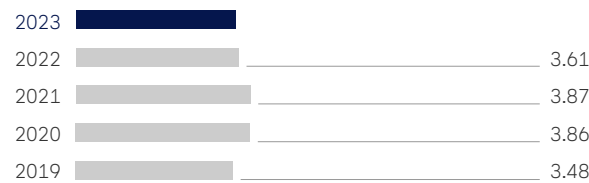
**3.48**



## SPECIFIC FUEL CONSUMPTION PASSENGER TRANSPORTATION<sup>1,2</sup> BRUSSELS AIRLINES

in liters/100 passenger-kilometers (l/100 pkm)

**3.54**



<sup>1)</sup> Actual fuel consumption in liters from flight operations based on all flight events under the respective operating flight number. Consumption is recorded from gate to gate, i.e. including taxiing on the ground and holding patterns as well as flight detours.

<sup>2)</sup> The following companies are included for the 2023 reporting year: Lufthansa (including Lufthansa CityLine, Discover Airlines and Air Dolomiti), SWISS (including Edelweiss Air), Austrian Airlines, Eurowings, Brussels Airlines, and Lufthansa Cargo. Other flights and

services performed by third parties are not included, as their performance is beyond Lufthansa Group's control (see tables "Fuel consumption" and "Third-party share", p. 10).

# Decoupling of fuel and transport

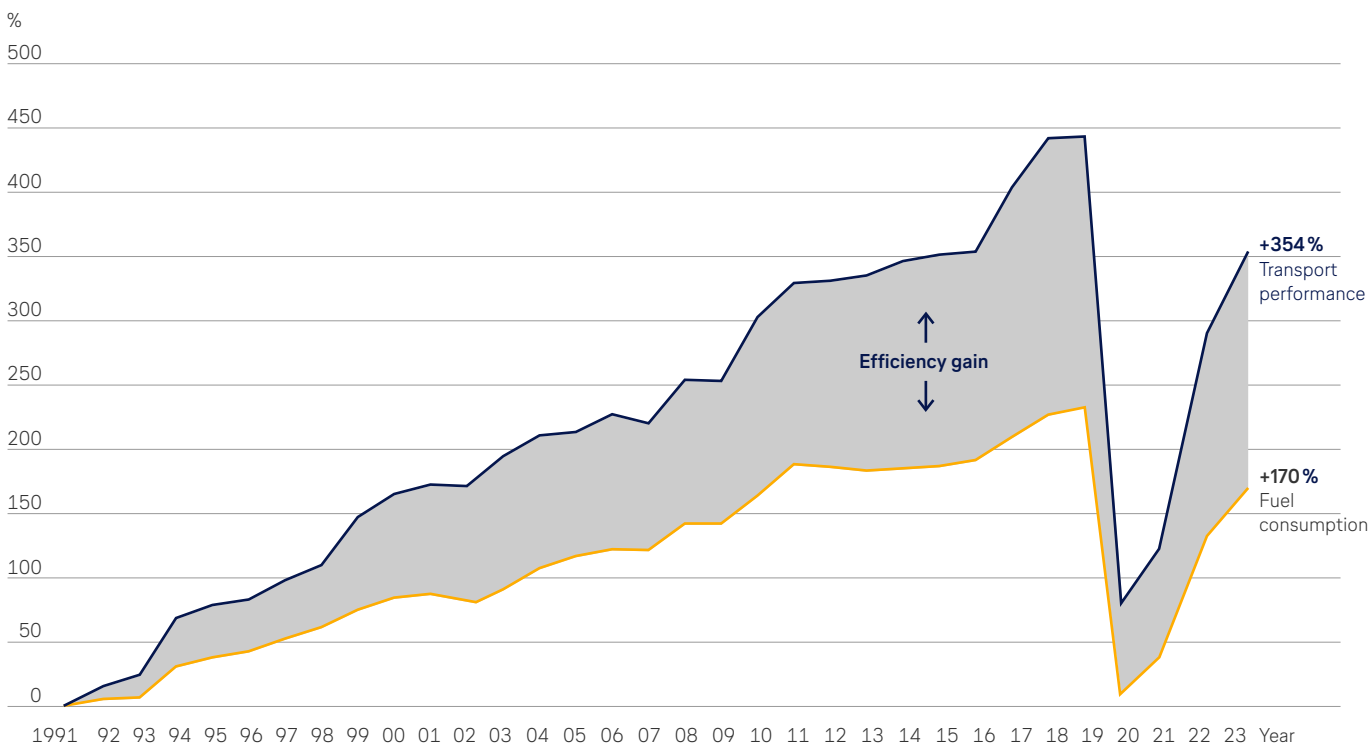
## Improving efficiency by decoupling transport performance and fuel consumption

Despite increasing its transport performance, the Lufthansa Group has implemented numerous measures over many decades to significantly reduce its fuel consumption on a relative basis.

The result of these efforts is reflected in the decoupling chart. While transport performance increased by 354% between 1991 and 2023, fuel consumption increased by only 170%. Specific fuel consumption in 1991 was still 446 g/tkm (grams of fuel per tonne-kilometer transported); in the pre-crisis year 2019 this figure was already only 276 g/tkm, and in the 2023 reporting year it was just 265 g/tkm. This corresponds to an efficiency increase of 41% compared to base year 1991.

Fleet renewal remains the key driver for the decoupling of transport performance and fuel consumption. In 2023, 29 new aircraft were added to the Lufthansa Group fleet, including Airbus A320neos, A321neos, A350-900s and Boeing 787-9s, which are powered by modern engines. The A320neo is one of the world's newest and most environmentally friendly aircraft and is much quieter than comparable aircraft types. Since 2019, the Lufthansa Group has more than doubled the amount of latest technology in its fleet to 20% (141 aircraft). A total of 18 older aircraft have been removed from the Group fleet in exchange. In December 2023, a total of 80 additional Boeing 737 MAX and Airbus A220-300 short- and medium-haul aircraft were ordered and 120 purchase options were signed. Together with previous orders, the order book now comprises around 260 latest-generation aircraft.

DECOUPLING OF TRANSPORT PERFORMANCE AND FUEL CONSUMPTION<sup>1,2,3,4</sup> SINCE 1991



<sup>1)</sup> The following are included for the 2023 reporting year: all scheduled and charter flights operated by Lufthansa (including Lufthansa CityLine, Discover Airlines and Air Dolomiti), SWISS (including Edelweiss Air), Austrian Airlines, Eurowings, Brussels

Airlines, and Lufthansa Cargo. Other flights and services performed by third parties are not included, as their performance is beyond Lufthansa Group's control (see table "Third-party share", p. 10). <sup>2)</sup> Transport performance in KTK. <sup>3)</sup> Transport performance

corrected in 2020 because of adjustments to the system. <sup>4)</sup> Depiction of the development of transport performance and fuel consumption in % in two graphs, based on the 1991 starting value. The gray area between them represents the efficiency gain.



# Sustainable Aviation Fuel (SAF)

Many partnerships worldwide ...

**Biogenic SAF**

**Non-Biogenic SAF**

**Key facts about SAF**

- Sustainable Aviation Fuel (SAF) is the umbrella term for all aviation fuels produced using renewable energy
- SAF is essential to the energy transition in aviation
- The SAF currently available is produced from biogenic residues, next-generation SAF like Sun-to-Liquid or Power-to-Liquid (which are electricity-based “E-Fuels”) are still in development toward industrial production
- Compared to conventional kerosene, SAF now reduces the carbon footprint by up to 80%

... are necessary to achieve Lufthansa Group’s ambitious emission reduction goals including the fulfillment of the upcoming SAF obligations.

**EU BLENDING MANDATE<sup>1</sup>**

in percent

SAF share	E-Fuels (incl. in SAF)
2025	2
2030	6
2035	20
2040	34
2045	42
2050	70



<sup>1</sup>EU Blending Mandate: The regulation requires fuel suppliers to blend increasingly higher levels of sustainable aviation fuels and, from 2030, synthetic fuels with existing jet fuel supplied at EU airports. They must incorporate 2% of SAF in 2025, 6% in 2030 and 70%

in 2050. The blending mandate for synthetic fuels will rise from 1.2% in 2030 to 35% in 2050. To achieve this mandate, 2.3 million tonnes of SAF would be required by 2030.

# Emissions

## Absolute emissions<sup>1</sup>

### EMISSIONS<sup>2</sup> 2023

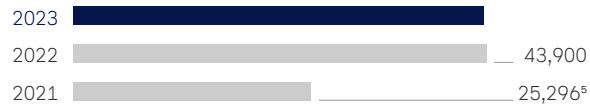
in tonnes

	Passengers	±PY	Cargo <sup>3</sup>	±PY	Total	±PY
CO <sub>2</sub>	21,646,482	+19.2%	4,975,451	+3.8%	26,621,932	+16.0%
NO <sub>x</sub>	98,903	+20.6%	26,227	+5.3%	125,130	+17.1%
CO	18,230	+13.1%	3,182	-1.5%	21,411	+10.7%
UHC	2,166	+10.5%	268	-1.6%	2,434	+9.0%

## REDUCED FOSSIL CO<sub>2</sub> VOLUME THROUGH THE USE OF SUSTAINABLE AVIATION FUEL

Lufthansa Group, in tonnes

**43,628**



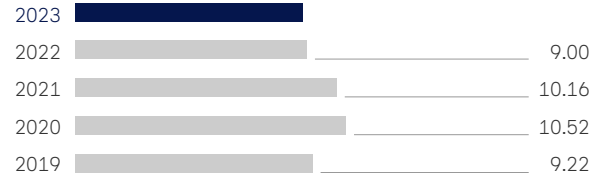
## Specific CO<sub>2</sub> emissions<sup>1</sup>

### PASSENGER TRANSPORTATION 2023

CO<sub>2</sub> emissions

in kilograms/100 passenger-kilometers (kg/100 pkm)

**8.84**



The use of Sustainable Aviation Fuel (SAF) reduced the Lufthansa Group's emissions with an impact on the climate by a total of 43,628 tonnes in 2023. 39,195 tonnes of these were accounted for by direct savings in the combustion of SAF (Scope 1) and 4,433 tonnes by savings in the upstream supply chain (production and transport, Scope 3). Both figures refer to the comparison with fossil kerosene use. Consequently, the total emission reduction from the use of SAF remains almost identical to the previous year.

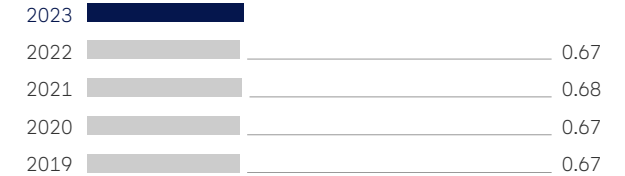
<sup>1</sup>Lufthansa Group's control (see tables "Fuel consumption" and "Third-party share", p. 10).  
<sup>2</sup>Absolute emissions in tonnes from flight operations (all scheduled and charter flights). Emissions are recorded from gate to gate, i.e. including taxiing on the ground and holding patterns as well as flight detours.  
<sup>3</sup>Based on freight tonne-kilometers transported in both

### CARGO TRANSPORT<sup>3</sup> 2023

CO<sub>2</sub> emissions

in kilograms/freight tonne-kilometer (kg/tkm)

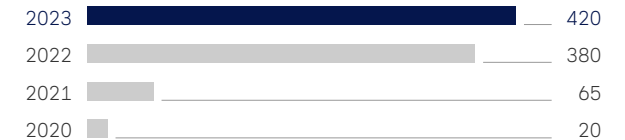
**0.69**



## CO<sub>2</sub> VOLUME OFFSET THROUGH HIGH-VALUE OFFSET PROJECTS

in thousand tonnes

By customers



by the Lufthansa Group for own business trips



<sup>1</sup>The following companies are included for the 2023 reporting year: Lufthansa (including Lufthansa CityLine, Discover Airlines and Air Dolomiti), SWISS (including Edelweiss Air), Austrian Airlines, Eurowings, Brussels Airlines, and Lufthansa Cargo. Other flights and services performed by third parties are not included, as their performance is beyond

cargo and passenger aircraft. <sup>4</sup>Excluding SWISS due to downstream capture in 2022, including SWISS in 2023. <sup>5</sup>Deviations from the figures in the 2021 Fact Sheet due to a subsequent correction in the calculation base.



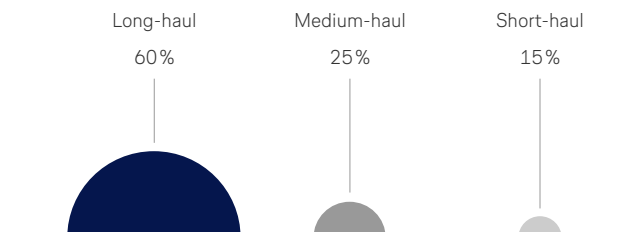
# Specific fuel consumption and CO<sub>2</sub> emissions

## SPECIFIC FUEL CONSUMPTION AND SPECIFIC CO<sub>2</sub> EMISSIONS IN THE LUFTHANSA GROUP<sup>1</sup> 2023

- ◆ Specific fuel consumption in liters/100 passenger-kilometers (l/100 pkm)
- ☁ Specific CO<sub>2</sub> emissions in kilograms/100 passenger-kilometers (kg/100 pkm)

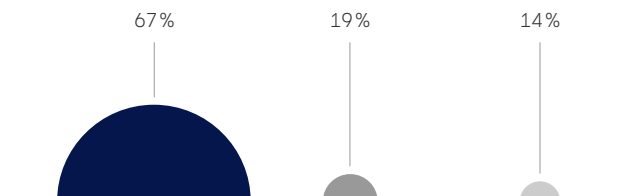
	Total	Long-haul	Medium-haul	Short-haul
◆	<b>3.52</b>	3.30	3.34	5.61
☁	<b>8.84</b>	8.27	8.39	14.10

## SHARE OF FUEL CONSUMPTION BY TRAFFIC AREAS<sup>1</sup> 2023



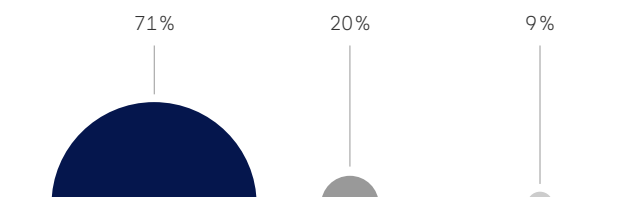
### LUFTHANSA AIRLINES

	Total	Long-haul	Medium-haul	Short-haul
◆	<b>3.59</b>	3.42	3.26	5.89
☁	<b>9.00</b>	8.57	8.19	14.83



### SWISS

	Total	Long-haul	Medium-haul	Short-haul
◆	<b>3.27</b>	3.14	3.31	4.69
☁	<b>8.19</b>	7.87	8.30	11.78



<sup>1</sup> Definition of haul length: long-haul routes: over 3,000 km; medium-haul routes: 800 to 3,000 km; short-haul routes: under 800 km.

# Specific fuel consumption and CO<sub>2</sub> emissions



## SPECIFIC FUEL CONSUMPTION AND SPECIFIC CO<sub>2</sub> EMISSIONS<sup>1</sup> 2023

- ◆ Specific fuel consumption in liters/100 passenger-kilometers (l/100 pkm)
- ☁ Specific CO<sub>2</sub> emissions in kilograms/100 passenger-kilometers (kg/100 pkm)

### AUSTRIAN AIRLINES

	Total	Long-haul	Medium-haul	Short-haul
◆	<b>3.66</b>	3.14	3.51	5.28
☁	<b>9.12</b>	7.80	8.75	13.19

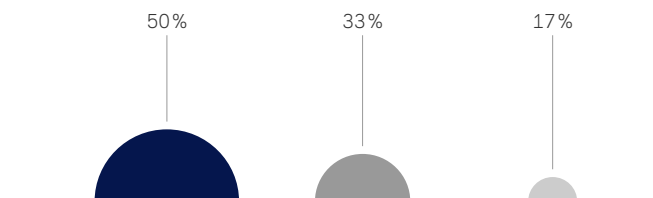
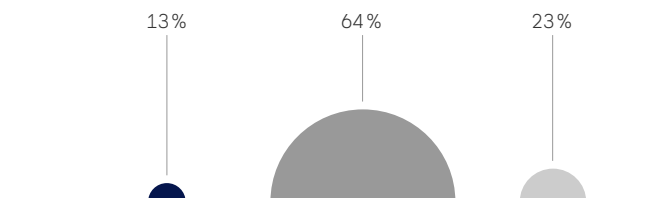
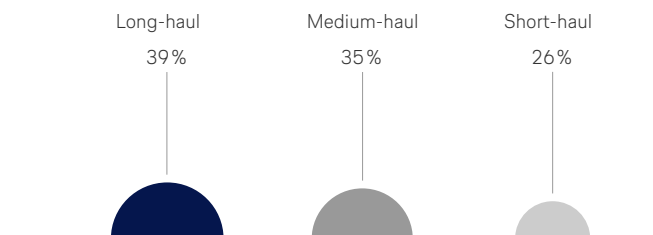
### EUROWINGS

	Total	Long-haul	Medium-haul	Short-haul
◆	<b>3.48</b>	2.61	3.25	5.61
☁	<b>8.78</b>	6.59	8.18	14.15

### BRUSSELS AIRLINES

	Total	Long-haul	Medium-haul	Short-haul
◆	<b>3.54</b>	3.10	3.63	5.58
☁	<b>8.89</b>	7.79	9.14	14.05

## SHARE OF FUEL CONSUMPTION BY TRAFFIC AREAS 2023

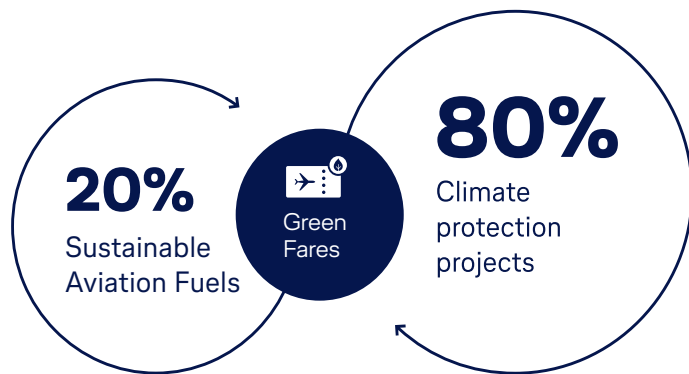


<sup>1</sup> Definition of haul length: long-haul routes: over 3,000 km; medium-haul routes: 800 to 3,000 km; short-haul routes: under 800 km.

# Green Fares

Since February 2023, customers can select one of the Economy Green and Business Green fares which will reduce 20% of individual (additional) flight-related CO<sub>2</sub> emissions by using sustainable aviation fuels (SAFs) and offset the remaining 80% of CO<sub>2</sub> emissions to an equivalent extent

by contributing to high-quality climate protection projects within Europe<sup>1</sup>. These Green Fares made the Lufthansa Group the first airline group in the world to offer a separate fare which includes compensation of flight-related carbon emissions.



 >65,000 t CO<sub>2</sub>  
reduced/compensated via SAF  
or offsetting

 Fare benefits  
Flexible rebooking, +20% miles and  
20% points and qualifying points

 >850,000 guests  
with a Green Fare  
welcomed on board

 3% of customers  
on LH Group websites have  
chosen a Green Fare

<sup>1</sup> Including some routes to North Africa.

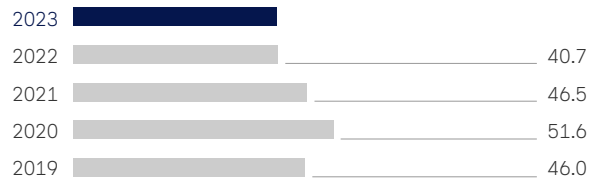


# Specific further emissions broken down by passenger and cargo traffic

## NO<sub>x</sub> EMISSIONS

in grams/100 passenger-kilometers (g/100 pkm)

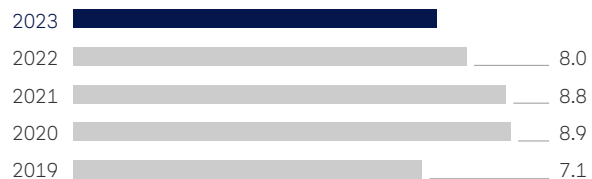
**40.4**



## CO EMISSIONS

in grams/100 passenger-kilometers (g/100 pkm)

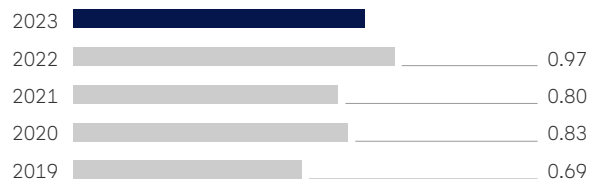
**7.4**



## UHC EMISSIONS

in grams/100 passenger-kilometers (g/100 pkm)

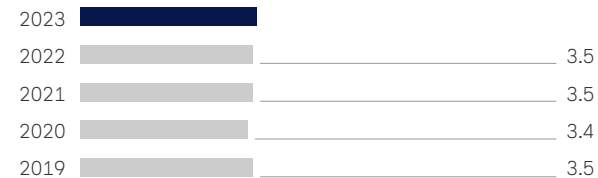
**0.88**



## NO<sub>x</sub> EMISSIONS

in grams/freight tonne-kilometers (g/tkm)

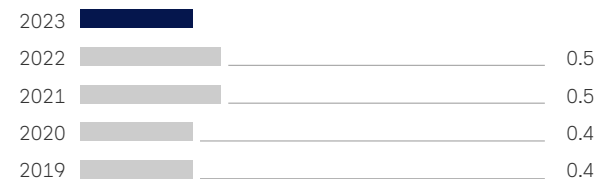
**3.6**



## CO EMISSIONS

in grams/freight tonne-kilometers (g/tkm)

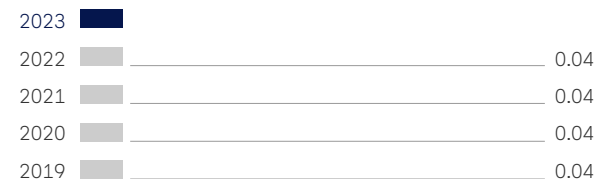
**0.4**



## UHC EMISSIONS

in grams/freight tonne-kilometers (g/tkm)

**0.04**





# Carbon footprint

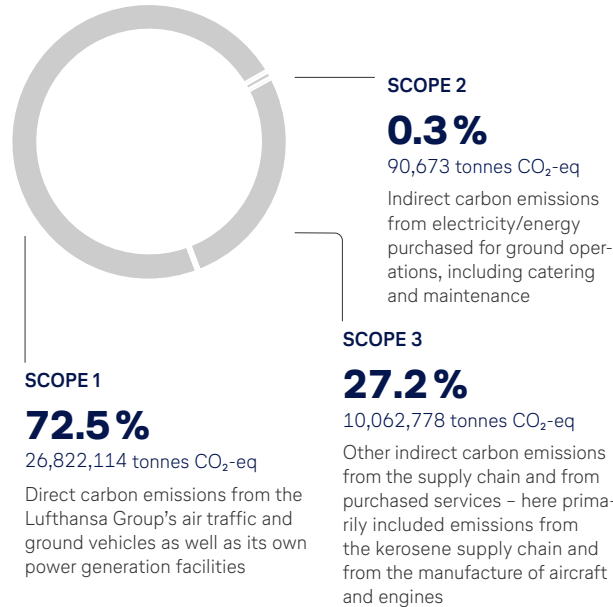
## DIRECT AND INDIRECT CO<sub>2</sub> EMISSIONS OF THE LUFTHANSA GROUP IN COMPARISON<sup>1)</sup>

in tonnes CO<sub>2</sub>-eq

	2023	2022	2021
Scope 1	26,822,114 <b>72.5%</b>	23,170,076 <b>71.8%<sup>3)</sup></b>	13,823,320 <b>74.2%</b>
Scope 2	90,673 <b>0.3%</b>	125,245 <b>0.4%</b>	139,496 <b>0.7%</b>
Scope 3	10,062,778 <b>27.2%</b>	8,955,103 <b>27.8%<sup>3)</sup></b>	4,667,549 <b>25.1%</b>



## DIRECT AND INDIRECT CO<sub>2</sub> EMISSIONS OF THE LUFTHANSA GROUP 2023



The greenhouse gas footprint indicates the total greenhouse gas emissions (Scope 1–3) of the Lufthansa Group (see certificate on p. 21). The use of Sustainable Aviation Fuel (SAF) reduced the Lufthansa Group's emissions with an impact on the climate by a total of 43,628<sup>2)</sup> tonnes in 2023 (well-to-wake balancing).

## Carbon footprint – Scope 3 emissions

The term “Scope 3” originates from the Greenhouse Gas Protocol, a widely used tool for measuring greenhouse gas emissions. Scope 3 includes emissions that are produced indirectly through activities in the upstream and downstream supply chain of a company rather than directly by the company itself. These emissions typically represent a significant portion of a company's total emissions – up to 80% in some sectors. This makes it increasingly important for companies that want to reduce their environmental impact to address these emissions. Scope 3 emissions represent about 25–30% of the Lufthansa Group's total carbon footprint. The vast majority (around 60%) is caused by emissions from the kerosene supply chain – emissions caused by the production and transport of kerosene to the aircraft. Therefore each tonne less of kerosene consumed reduces the corresponding Scope 3 footprint in the kerosene supply chain. The measures taken by the Lufthansa Group, such as modernization of the fleet towards fuel-efficient aircraft, are also consistently reducing its Scope 3 emissions. Greenhouse gas emissions in the supply chain can also be reduced by using sustainable alternative fuel (SAF) since its production and delivery generally produces fewer emissions.

<sup>1)</sup> Scope 1 for 2023 reporting year audited with high assurance. Scope 2 and 3 audited with limited assurance (see p. 21). <sup>2)</sup> Of this amount, 39,195 tonnes were accounted for by direct

savings in the combustion of SAF (Scope 1) and 4,433 tonnes by savings in the upstream supply chain (production and transport, Scope 3). Both figures refer to the comparison with

the use of fossil kerosene. <sup>3)</sup> Correction of previous year value.

# Methodology for calculating absolute and specific consumption and emissions

## Kerosene in absolute terms

Kerosene consumption is calculated on the basis of actual flight operations (i.e. using actual load factors and flight routings) according to the gate-to-gate principle. This covers all phases of a flight, from taxiing on the ground to flight detours and holding patterns in the air.

## Emissions in absolute terms

The emissions from flight operations are calculated on the basis of actual transport performance and thus on actual load factors and the actual absolute quantity of kerosene consumed in the reporting year. Transport performance is measured in tonne-kilometers. For passengers and their luggage, an average of 100 kilograms is the standard estimate; for freight, its scale weight.

Carbon dioxide (CO<sub>2</sub>) emissions do not require special calculation methods, as they are generated in a fixed ratio to the quantity of kerosene burned. The combustion of one tonne of kerosene generates 3.15 tonnes of CO<sub>2</sub>.

## Specific consumption and emission values

Calculating specific consumption and emissions entails expressing absolute values in relation to transport performance. For example, the ratio liters per 100 passenger-kilometers (l/100 pkm) is calculated on the basis of actual load factors along with the quantity of kerosene actually consumed. The distances used in the calculations are great-circle distances. In combination flights (freight and passenger transport in one aircraft), fuel consumption is attributed on the basis of its share of the total payload to calculate the passenger- and freight-specific figures. Since 2013, the DIN EN 16258 standard has provided a framework for standardized calculation of greenhouse gas emissions for transport processes. The Lufthansa Group adheres to this guideline with respect to payload allocation. As of the reporting year 2024, the Lufthansa Group will base those calculations on the new, international ISO 14083:2023 standard.

# Verification statement Scope 1–3

verified by

**MÜLLER-BBM**  
CERT GMBH



VERIFICATION STATEMENT

Müller-BBM Cert Umweltgutachter GmbH, accredited verification body DAKKS D-VS-18709-01-01, confirms that greenhouse gas balance according to the GHG Protocol of the

**LUFTHANSA GROUP**

**Deutschen Lufthansa AG and affiliates\***

audited according to the requirements of ISO 14064-3 and the information in the figure "Direct and indirect CO<sub>2</sub> emissions of the Lufthansa Group 2023" on page 20 of the Factsheet Sustainability 2023 was verified with the following uncertainties:

Scope 1 fossil (reasonable assurance, 2% materiality)	26,822,114 t CO <sub>2</sub> eq
Scope 1 biogenic*** (reasonable assurance, 2% materiality)	39,195 t CO <sub>2</sub> eq
Scope 2** (limited assurance, 5% materiality)	90,673 t CO <sub>2</sub> eq
Scope 3**** (limited assurance, 10% materiality)	10,062,778 t CO <sub>2</sub> eq

Kerpen, April 05<sup>th</sup>, 2024



Müller-BBM Cert Umweltgutachter GmbH

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\* Companies in the scope:  
Deutsche Lufthansa AG, Lufthansa Cargo AG, Lufthansa Technik AG, Lufthansa CityLine GmbH, Swiss International Air Lines AG, Edelweiss Air AG, Brussels Airlines SA/NV, Austrian Airlines AG, Air Dolomiti S.p.A, Lufthansa Regional Europe, Germanwings GmbH, Eurowings Aviation GmbH, Eurowings Europe Limited, EW Discover GmbH, Eurowings Europe GmbH, Lufthansa AirPlus Servicekartens GmbH, Lufthansa Group Business Services GmbH, Lufthansa Seehelm GmbH, Miles & More GmbH, Lufthansa Process Management GmbH, Lufthansa Systems GmbH & Co.KG, Lufthansa Industry Solutions GmbH & Co.KG, Lufthansa Aviation Training GmbH, LZ-Catering GmbH, Lufthansa Global Tele Sales GmbH, EFM Gesellschaft für Entseisen und Flugzeugschleppen am Flughafen München GmbH, plus proportionate share of joint ventures AeroLogic GmbH, SunExpress (Günes Ekspres Havacilik A.S.), N3 Engine Overhaul Services GmbH & Co. KG and EME Aero.

\*\* market based

\*\*\* Note: These biogenic CO<sub>2</sub>eq emissions reflect reduced fossil CO<sub>2</sub>eq emissions in Scope 1 from use of certified biogenic sustainable aviation fuel. These reductions were realized for defined customers of LHG (incl. customers on codeshare flights of associated LHG partners) and exclusively allocated to them. They shall therefore not be claimed regularly and in principle by all LHG customers.

\*\*\*\* Includes changes of emissions from purchased fuels due to switch from fossil fuel to sustainable aviation fuel.

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info@mbbm-cert.com

[mullerbbm-cert.de](http://mullerbbm-cert.de)

A MEMBER OF

**MBBM**

MÜLLER-BBM GROUP

# Lufthansa Group Cultural Journey – Powered by Vielfalt

## Human resources management prepares the company for the future and creates prospects for the employees

With their expertise and wide-ranging talents, the employees are and will always be one of the key success factors for the Lufthansa Group. They ensure reliable flight operations and efficient administrative processes in an aviation system characterized by operational challenges and volatility. In addition, they largely determine the passenger experience and embody the claim of Lufthansa Group Airlines being a premium, value and leisure brand.

Corporate culture plays a key role in both the company's commercial success and the commitment and well-being of its employees. The Lufthansa Group continues to place great importance on offering attractive prospects to future employees and on retaining existing employees in the long term. With these goals in mind, the Lufthansa Group has initiated the Cultural Journey program.



## Lufthansa Group Cultural Journey

In order to strengthen the cultural coherence of Lufthansa Group's individual airlines, businesses and segments while also fostering diversity within the Group companies, brands, markets and employees, the Lufthansa Group has embarked on a Cultural Journey, powered by Vielfalt. The German term "Vielfalt" celebrates and explicitly acknowledges the differences within the group as a unique potential, suggesting that the outcome is greater than the sum of its parts.



The Cultural Journey provides a coherent framework for culture at a corporate level, while allowing for the cultivation of unique cultures within Lufthansa Group's business units. The aim is to provide a unified strategic direction across the Lufthansa Group, to foster collaboration, to inspire employees, and to maximize collective potential by embracing diversity within the Lufthansa Group.

## Initiatives and measures of the Cultural Journey

- A **"Culture Community"** consisting of volunteers from the workforce who work together to address challenges and opportunities for development within the Lufthansa Group has established. This includes a focus on cross-functional collaboration and feedback.
- **Collaboration award:** Recognition and celebration of the "Vielfalt" of collaboration within the company
- The annual company-wide "involve me!" employee survey enables the Lufthansa Group to identify the best opportunities for **personal and professional development**



>1070  
members

55  
business units



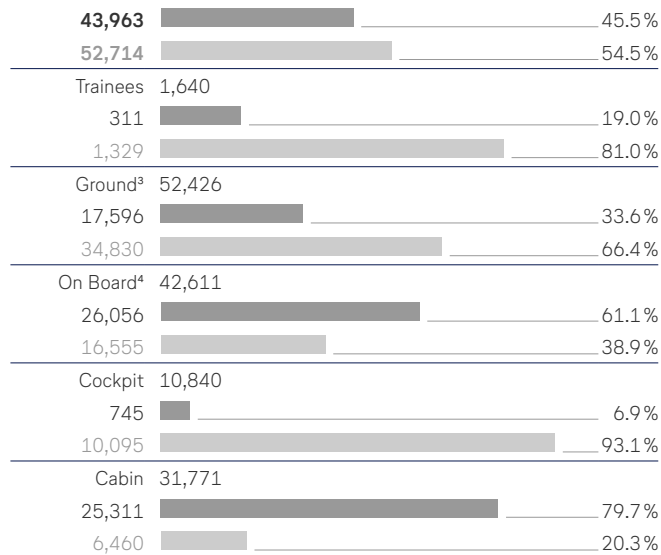
# Employee numbers

With their expertise and wide-ranging talents, the employees of the Lufthansa Group are a key factor in its commercial success. They embody the aspiration of Lufthansa Group Airlines to be a premium brand for passengers, shaping passenger experience. Moreover, they ensure reliable and productive flight operations and efficient administrative processes. For this reason, the Lufthansa Group attaches great importance to the development and well-being of its employees.

## HEADCOUNT BY PROFESSIONAL GROUP AND GENDER<sup>1</sup>

Lufthansa Group, employees as of Dec 31, 2023

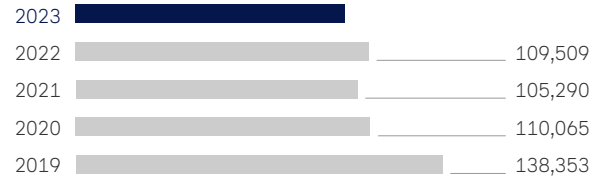
■ Female employees ■ Male employees



## TOTAL HEADCOUNT<sup>1</sup>

Lufthansa Group, employees as of Dec 31, 2023

**96,677**



## DISTRIBUTION OF EMPLOYEES<sup>1</sup>

Lufthansa Group, employees as of Dec 31, 2023

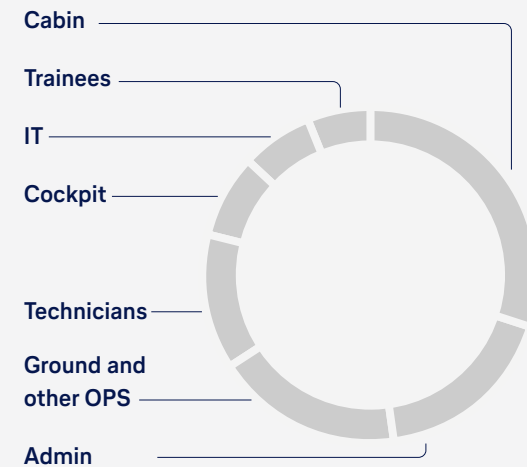
	2023	2022
<b>Group employees<sup>2</sup></b>	<b>96,677</b>	<b>109,509</b>
of which Passenger Airlines	60,924	56,762
of which Logistics	4,152	4,085
of which MRO <sup>5</sup>	22,870	20,411
of which Additional Businesses and Group Functions	8,681	8,033

# Recruiting campaign

## Good prospects for new employees

The pool of skilled labor will decline by up to 30% in the coming decades. In addition, the Lufthansa Group had to downsize during the pandemic, which impacted its image as an employer. With a large-scale recruiting campaign, the Lufthansa Group is now highlighting its aspiration to establish itself as an industry leader in the long term. The Lufthansa Group has already recruited several thousand people through this campaign, and Group companies plan to hire about another 13,000 employees in 2024. The focus is on operational areas such as check-in, MRO, cockpit and cabin crew, though there will also be many new hires in administrative functions such as IT. A recruiting task force from different Group companies is coordinating this recruiting push across the entire Lufthansa Group.

**>13,000** planned new hires by the end of 2024



<sup>1</sup> Group of consolidated companies. <sup>2</sup> Incl. LSG group. <sup>3</sup> Excluding trainees. <sup>4</sup> Consists of cockpit and cabin crew. <sup>5</sup> Maintenance, Repair, Overhaul

# Employer attractiveness

A satisfying work-life balance, a holistic approach regarding equal opportunity and all dimensions of diversity, and intensive talent management are key action areas for realizing the Lufthansa Group’s aim of a fair partnership with its employees so that it remains an attractive employer.

### “involve me!”

The Lufthansa Group uses the annual voluntary employee survey “involve me!” to determine the **Engagement Index**. Among other things, this provides information about the Company’s attractiveness as an employer. It measures the extent to which employees identify with the Company<sup>1</sup>, as well as their commitment and

willingness to recommend the Company to others. The results are measured on a scale from 1 (best) to 5 (worst). In 2023, the Engagement Index value was 2.2 and improved by 0.2 compared with the previous year’s level. Reasons for this positive trend was the improved assessment of the feedback and dialogue culture in the Company. Another factor is employees’ improved assessment of the leeway they have for successfully accomplishing tasks assigned to them and of their greater enjoyment of work. Economic stabilization and trust in the management’s decision-making in order to safeguard financial success also played a key role in the more positive engagement results.



## Staff covered by collective agreements

76% in Germany<sup>2</sup>

87% in Switzerland<sup>4</sup>

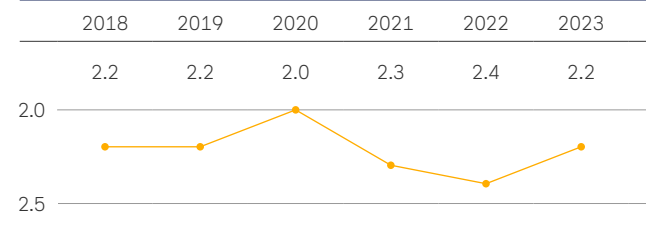
98% in Austria<sup>3</sup>

### New collective agreements

In 2023, the Lufthansa Group, represented by the relevant industry associations or its subsidiaries, concluded a large number of new wage agreements with its collective bargaining partners. This meant that, at the end of 2023, collective bargaining agreements had been concluded and were in force for all employees of Deutsche Lufthansa AG covered by these agreements and for the vast majority of employees involved in the Lufthansa Group’s main companies.

### ENGAGEMENT INDEX<sup>1</sup>

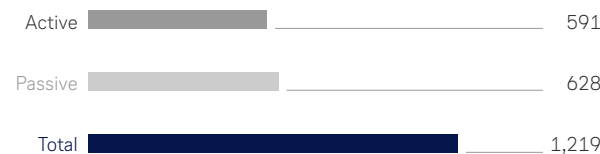
Lufthansa Group, in percent 2023



### PARTIAL RETIREMENT ACTIVE/PASSIVE

Deutsche Lufthansa AG, employees as of Dec 31, 2023

Employees Deutsche Lufthansa AG ground, total: 12,584



### TRANSITIONAL PENSION FLIGHT STAFF<sup>3</sup>

Deutsche Lufthansa AG and Lufthansa Cargo AG, employees as of Dec 31, 2023



<sup>1</sup> With the exception of the LSG group, which was sold over the course of the reporting year, all major Group companies were included. <sup>2</sup> The remaining percentage is largely

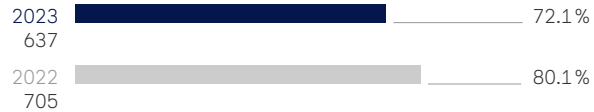
made up of senior executives and management employees in senior positions. <sup>3</sup> Austrian Airlines in Europe. <sup>4</sup> Swiss International Airlines.

# Employer attractiveness

## EMPLOYEES ON PARENTAL LEAVE (OUTSIDE GERMANY)<sup>1</sup>

Lufthansa Group, employees as of Dec 31, 2023

Female employees



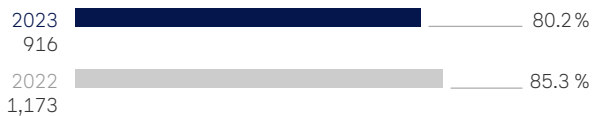
Male employees



## EMPLOYEES ON PARENTAL LEAVE (GERMANY)<sup>1</sup>

Lufthansa Group, employees as of Dec 31, 2023

Female employees



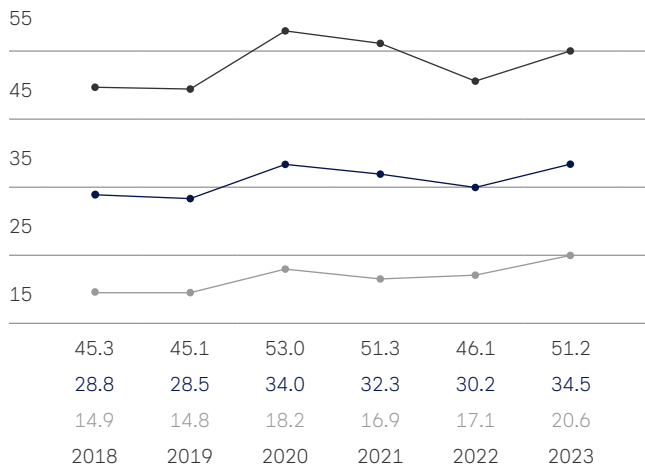
Male employees



## PART-TIME EMPLOYMENT<sup>1,2</sup>

Lufthansa Group, in percent as of Dec 31, 2023

■ Female employees ■ Total ■ Male employees



## Making work more flexible – “cross-border work”

Increased flexibility for employees improves their work-life balance. Flexibility is particularly important for parents or employees who have family members in need of long-term care. Flexibility takes on a wide variety of forms in the Lufthansa Group. Alongside various part-time models, the Lufthansa Group offers mobile work for certain employees a large part of the Group. Since 2022, certain employees and senior managers have the very attractive option of temporarily working from other EU countries. Employees can use up to 30 working days per year for so-called cross-border work. This form of work, which has also become known as “Workation” in the last years, is very popular. Employees can combine mobile work abroad with private trips, either immediately before or after a holiday or free time. This offers employees the flexibility to spend longer periods of time abroad and to optimally combine work and leisure.

<sup>1</sup> Group of consolidated companies. <sup>2</sup> Part-time including partial retirement (also leisure phase).

# Diversity and equal opportunities

## Share of women in leadership to be increased

The success of the Lufthansa Group greatly depends on the varying skills, perspectives and experiences of its employees. The most efficient and innovative workforce is one that is diverse and knows how to use this diversity competently and constructively. The company implements specific measures to promote this culture. The initial focus is on increasing the share of female senior executives. The Lufthansa Group is aiming for a share of at least 25% women across all management levels

by 2025 and has established corresponding target quotas in the Lufthansa Group companies. In November 2023, the eight-month program NextUp Women was introduced to help women take their next career step towards a management position and provide assistance via a series of modules building upon one another, in which they explore topics such as leadership and carry out a strengths and weaknesses analysis.



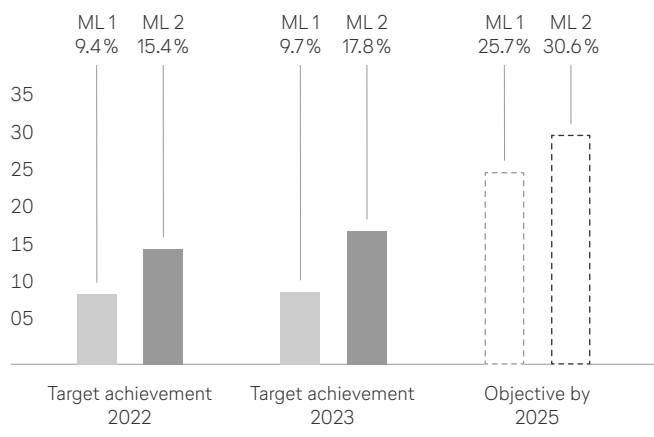
women on Supervisory Board<sup>2</sup>



women on Executive Board<sup>2</sup>

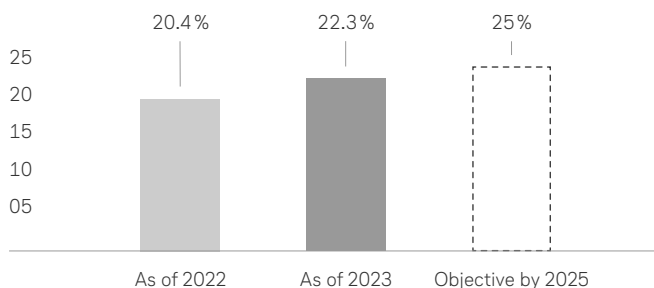
### SHARE OF WOMEN AT MANAGEMENT LEVEL<sup>3</sup> 1 AND 2

(statutory requirements) Deutsche Lufthansa AG, in percent



### SHARE OF WOMEN IN MANAGEMENT<sup>4</sup>

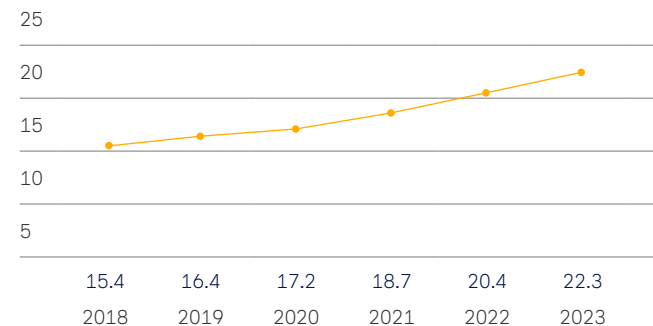
(voluntary) Lufthansa Group, in percent



In addition to Deutsche Lufthansa AG's statutory targets for management levels 1 and 2, the Lufthansa Group has voluntarily set another target. Based on this, the Lufthansa Group aims to increase the share of women among its senior executives at the management level.

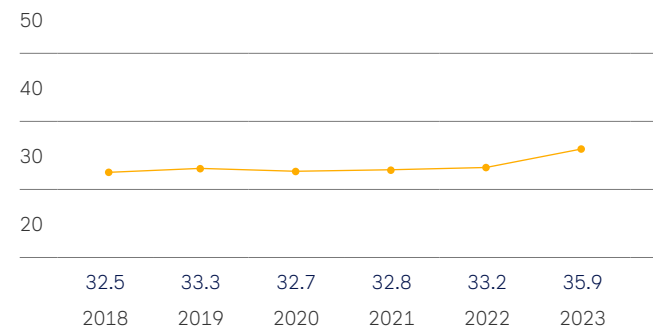
### SHARE OF WOMEN IN MANAGEMENT<sup>4</sup>

Lufthansa Group, in percent as of Dec 31, 2023



### SHARE OF WOMEN WITH STAFF RESPONSIBILITY<sup>1</sup>

Lufthansa Group, in percent as of Dec 31, 2023



<sup>1</sup> Scope: Group consolidated companies. <sup>2</sup> Deutsche Lufthansa AG. <sup>3</sup> Management level is the reporting level below the Executive Board. <sup>4</sup> Management includes all senior managers.

# Diversity and equal opportunities



 177

**nationalities are employed at the Lufthansa Group<sup>1</sup>**

## Development programs encourage and inspire talent

Development opportunities and career options are key factors that talented people use to assess an employer’s attractiveness. The Lufthansa Group offers all employees a variety of continuing education and development opportunities. The company also uses a talent management system to identify top performers and high-potential employees from all over the world and offers them a range of attractive development opportunities. In addition to promoting employee retention and internationalization, this allows the Company to pursue the goal of identifying the emerging needs of the Group companies early on so that it can provide them with qualified support at the right time. Special emphasis is on areas where demand is particularly high, such as engineering, finance and IT.

The classification of employees as talents and the access to the Lufthansa Group’s programs is data and evidence-based to en-

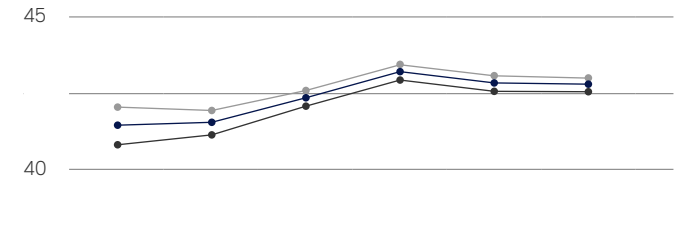
sure fairness and equal opportunity. All talent programs are based on the principles of “learn, connect and contribute”. These elements strengthen the participants’ self-initiative, and at the same time provide opportunities for them to develop personally and build new skills.

With the “Leadership Next Level” program, the Lufthansa Group has reformulated its standards for leadership and cooperation in the areas of “Ambition,” “Responsibility” and “Empathy”. Like all of the Group’s human resources instruments from the selection process to the exit interview, talent programs are aligned with this standard.

## AVERAGE AGE<sup>1</sup>

Lufthansa Group, in years **as of Dec 31, 2023**

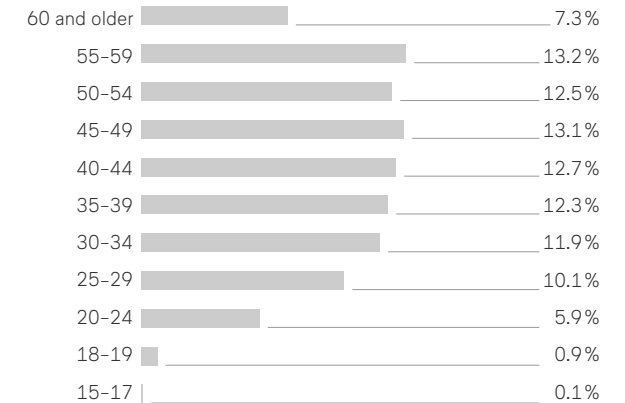
■ Male employees ■ Total ■ Female employees



42.1	42.0	42.6	43.4	43.1	42.9
41.5	41.6	42.4	43.2	42.9	42.6
40.8	41.2	42.1	43.0	42.6	42.3
2018	2019	2020	2021	2022	2023

## AGE STRUCTURE<sup>1</sup>

Lufthansa Group, in percent **as of Dec 31, 2023**



<sup>1</sup> Group of consolidated companies.

# Health and safety at work

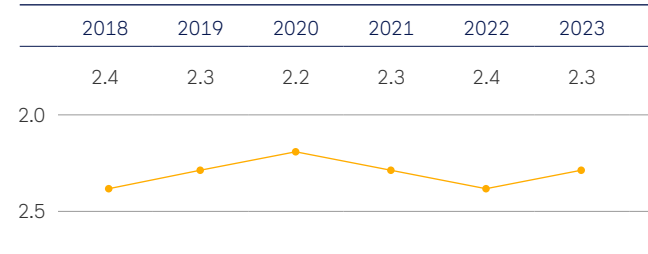
## Other 2023 highlights

- **Influenza vaccination campaign:** More than 4000 employees took the opportunity to get vaccinated against the flu in autumn with a modern cell culture-derived flu shot.
- **Sonne genießen – “Hau(p)tsache gesund”:** Lufthansa Group’s health management carried out a highly-regarded campaign on the topic of skin health and UV protection.
- **Eyes up:** The company’s occupational safety poster campaign addresses the problem of distraction caused by using mobile phones, leading to an increase in falls and collisions. Several motifs, all related to aviation, are intended to encourage employees to reflect on and discuss risky behavior when using their mobile phones.
- **Safety-Inspection Flights** were conducted successfully to support the launch of the new cabin product “Allegris”.
- Comprehensive group-wide **Key Performance Indicators** were implemented to enable steering of Occupational Safety Performance throughout the Lufthansa Group.
- A mandatory and standardized **web-based training course for occupational safety** was developed to improve occupational safety awareness throughout all office areas in Germany.
- **Group Policy “Occupational Safety”** implemented: Its aim is to ensure that board members, managers and employees worldwide fully comply with the applicable rules on occupational safety and health.



### HEALTH INDEX<sup>1</sup>

Lufthansa Group, in percent **2023**



As part of the “involve me!” employee survey, the Health Index is measured annually as a key performance indicator for employee health. The results are measured on a scale from 1 (best) to 5 (worst). This value improved to 2.3 in 2023.

 7.8

**work-related injuries per million hours worked<sup>2</sup>**

<sup>1</sup> With the exception of the LSG group, which was sold over the course of the reporting year, all major Group companies were included. <sup>2</sup> Provisional for 2023/Data will be reconciled with the employers’ liability insurance association after publication of this report.



# Project work – help alliance



Social Engagement of the Lufthansa Group

help alliance GmbH is the aid organization of the Lufthansa Group, created and maintained by the commitment of Lufthansa Group employees. Its primary aim is to support social aid projects with a particular emphasis on the UN Sustainable Development Goals 4 (quality education) and 8 (decent work and economic growth). In 2023, the Lufthansa Group covered all costs for administration, fundraising and communication. This ensures that 100% of all other donations are used to fund project work.

### Which projects are supported?

Lufthansa Group employees submit their own projects to help alliance and volunteer as project leads to be main contacts during the course of the project. Submissions undergo a selection process and are reviewed against set key criteria.

If the project is approved, the funding period is determined and the funding amount is paid out. help alliance is responsible for communication and impact measurement. Further information is available at [help alliance](#)

- Key criteria in the selection process**
- Participants are children and young people
  - Implementation of the projects with the help of officially registered partner organizations
  - Project continuity after funding has ended

### Example Project 1

#### Training Center – Lomé, Togo

help alliance has set up an international training center, where young people from the region are trained to become qualified specialists with practical training in manual and agricultural professions such as mechanics, organic farming and food processing. There's a special emphasis on the training of young women, who often face major challenges in learning a trade that will enable them to become financially independent.

The sustainability of the project is ensured through close cooperation with a local partner organization, guaranteeing both the quality of the training courses and training center's long-term operation.



### Example Project 2

#### Digital Reading Assistance – Offenbach, Germany

help alliance supports a digital reading assistance project in Germany that uses innovative approaches to promote the reading and language skills of children with reading and spelling difficulties by providing a high-quality combination of weekly one-on-one mentoring sessions, a tablet, reading material and a special reading app.

Highlights 2023

> 6,000	~ 4,000
<b>volunteering hours by employees of the Lufthansa Group</b>	<b>young people were given access to education and training</b>
> 970	> 31,000
<b>young people were successfully integrated into the labor market</b>	<b>children were given access to (pre-) school education</b>
54	~ 60,000
<b>supported projects</b>	<b>beneficiaries</b>



# Glossary

## AeroSHARK

The “AeroSHARK” functional surface coating developed by Lufthansa Technik and BASF is one example of the successful implementation of such measures. Their “Riblet films”, named after the microscopically small ribs found on shark skin, are capable of reducing the drag of large commercial aircraft, and thus the kerosene consumption, by around 1%.

## CO<sub>2</sub> equivalent (CO<sub>2</sub> eq)

Unit of measurement used to assess the impact of greenhouse gas emissions on climate change. There are several types of greenhouse gases, including carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O) and hydrofluorocarbons (HFCs). Every gas has a different impact on the climate. While CO<sub>2</sub> is the best known and most commonly emitted greenhouse gas, other gases can have even stronger impacts. The “CO<sub>2</sub> equivalent concept” is an attempt to standardize the different effects of these gases in order to compare them better. The unit of measurement is defined in grams or tonnes of CO<sub>2</sub> equivalent and indicates how much CO<sub>2</sub> would have to be emitted to have the same climate impact as the greenhouse gas in question.

## Freight tonne-kilometers (FTKO/FTKT)

Airlines distinguish between freight performance offered (FTKO, freight tonne-kilometers offered) and its sold freight performance (FTKT, freight tonne-kilometers transported). See also → **Tonne-kilometers**

## Fuel dump

Dumping of fuel in-flight due to emergency situations to reduce a long-haul aircraft’s weight to the maximum allowed landing weight before unscheduled landings (e.g. in the event of technical problems or serious passenger illness). Special air space is

assigned to the aircraft, if possible above uninhabited or thinly populated areas. Fuel is usually dumped at altitudes of four to eight kilometers. A minimum altitude of 1,800 meters and a minimum speed of 500 km/h are required. The aircraft may not fly a fully closed circle. The dumped kerosene is released from outlet valves behind the aircraft and forms a fine mist. So far, no contamination has been detected in plant or soil samples after fuel dumps.

## Great-circle distance

The shortest distance between two points on the Earth’s surface, measured in kilometers (great-circle kilometers) or nautical miles. The center of a great circle is the center of the Earth.

## Carbon dioxide (CO<sub>2</sub>)

Gas resulting in nature from the burning or decomposition of organic substances (e.g. plant material). The greenhouse gas CO<sub>2</sub> remains in the atmosphere for about 100 years. Scientists attribute the increase in atmospheric CO<sub>2</sub> over the last 100 years to the burning of fossil fuels (e.g. coal, oil, natural gas) by humans. Per tonne of fuel, 3.15 tonnes of CO<sub>2</sub> result from the combustion process. Currently, 2.8% of the CO<sub>2</sub> emissions due to human activities are caused by global air traffic. (Source: International Energy Agency [IEA] 2019 values).

## Carbon monoxide (CO)

Chemical compound consisting of one carbon and one oxygen atom, formed in the incomplete combustion process of substances containing carbon. For aircraft engines, the level of CO emissions greatly depends on the thrust level: the emissions per kilogram of fuel burned are higher while the aircraft is idle, taxiing or on approach than during the climbing and cruising phases.

## Passenger related measures (PKT, SKO)

Measure for transport performance in passenger carriage (number of passengers multiplied by distance flown). A distinction is made between available transport performance (PKO, passenger-kilometers offered, or, synonymously, SKO, seat-kilometers offered) and actual transport performance (PKT, passenger-kilometers transported).

## Passenger tonne-kilometers (PTKT)

Measure for transport performance in passenger traffic (number of passengers multiplied by passenger weight and distance flown). A distinction is made between passenger tonne-kilometers offered (PTKO) and passenger tonne-kilometers transported (PTKT). The calculation takes passengers into account by means of a statistical average weight. The payload weight per passenger is 100 kg for continental routes and 101 kg for intercontinental routes.

## Nitrogen oxides (NO<sub>x</sub>)

Chemical compounds consisting of one nitrogen and several oxygen atoms. NO<sub>x</sub> is defined as the sum of NO and NO<sub>2</sub> compounds. Natural sources include lightning and microbes in the soil. Nitrogen oxides are also generated in combustion processes under high pressures and temperatures. However, future combustion chambers of an advanced design could help reduce NO<sub>x</sub> emissions by 85%. Air traffic contributes 2–3% of human-made NO<sub>x</sub> emissions. Climate models show that nitrogen oxides have increased the ozone concentration at cruising altitudes by a few percentage points.

# Glossary

## **Tonne-kilometers (TKT)**

Measure of transport performance (payload multiplied by distance). In calculating payloads, passengers are taken into account by means of a statistical average weight. The payload weight per passenger is 100 kg for continental routes and 101 kg for intercontinental routes.

## **Unburned hydrocarbons (UHC)**

Organic mixture of carbon and hydrogen that results from the incomplete combustion of fuel containing hydrocarbons or from the evaporation of fuel.

## **Well-to-wake**

Well-to-wake emissions analysis is similar to the well-to-wheel emissions analysis for road vehicles and is also known as “Life Cycle Analysis”. It covers the emissions generated at each stage of a fuel’s life cycle – from production through delivery to use as aircraft fuel.



# Credits

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Additional information on “Sustainability in the Lufthansa Group” can be found at:

➤ [lufthansagroup.com/en/responsibility](https://lufthansagroup.com/en/responsibility)

The 2023 Annual Report, including the combined non-financial declaration, can be found at:

➤ [investor-relations.lufthansagroup.com](https://investor-relations.lufthansagroup.com)