



Issue 2015

Balance

Key data on sustainability within the Lufthansa Group



**Innovation –
The key to a
successful future**

Contents

- 1 About this report
- 2 At a glance
- 4 The Lufthansa Group

/ 6 Innovation – The key to a successful future

1/ 16 Sustainable Business Practice

- 18 Doing business responsibly and sustainably
- 20 “The environment always flies with us.” – Interview with Carsten Spohr
- 23 Stakeholder dialogue
- 26 Corporate governance and compliance
- 28 Fleet development
- 31 Sustainability in the procurement process

2/ 32 Climate and Environmental Responsibility

- 34 Strategy and management
- 39 Fuel consumption and emissions
- 50 Energy and resource management
- 54 Active noise protection
- 57 Commitment to science

3/ 58 Product Responsibility

- 60 Safety, health, satisfaction
- 62 Customer satisfaction
- 64 Flight safety and health protection
- 67 Data protection and data security
- 68 Offsetting carbon emissions

4/ 70 Social Responsibility

- 72 Seizing the opportunities of change: Thinking the future, meeting new challenges, living out responsibility
- 74 Interview with Åsa Lautenberg
- 75 Diversity and equal opportunity
- 80 Employment policy based on partnership
- 83 Talent management
- 88 Employee health and safety protection

5/ 90 Corporate Citizenship

- 92 Lufthansa Group Social Care – For a culture of shared responsibility
- 93 Humanitarian emergency aid
- 95 Social commitment
- 101 Environmental sponsorship
- 102 Cultural commitment
- 103 Sports sponsorship

6/ 104 Service and Information

- 106 Glossary
- 112 Editorial information
- 113 Notes on the scope of consolidation and methodology for calculating absolute and specific consumption and emissions
- 114 Most stringent noise standards for the Lufthansa Group’s fleet
- 115 The operating fleet of the Lufthansa Group
- 116 Corporate Responsibility: Prizes, awards and indices



Balance, the Lufthansa Group's Sustainability Report, informs stakeholders and the interested public about the Group's goals, activities and advances in the areas of business, social responsibility, environment, product and corporate citizenship. The data presented in this report refer to the financial year 2014.

Across the Lufthansa Group, Corporate Responsibility is understood to comprise the following dimensions:

- Economic sustainability
- Corporate governance and compliance
- Climate and environmental responsibility
- Social responsibility
- Product responsibility
- Corporate citizenship

Scope of consolidation and comparability

You will find explanations concerning the scope of consolidation and calculation methods used to determine the absolute and specific resource consumption at the Lufthansa Group on page 113. Due to changes in the portfolio over the past years, the figures for personnel and environmental performance cited in this report are only to a limited extent comparable with those reported for previous years. There are also certain differences in approach compared to the Annual Report when calculating passenger numbers and their derivative performance indicators (see explanations relating to the overview on page 2, At a glance).

Publication dates of this report

Balance, the Lufthansa Group's Sustainability Report, is published once a year in German and in English. The preceding edition was published at the end of June 2014.

Additional information on the Internet

In addition to this report, the Lufthansa Group also informs readers via the Internet about its activities in the area of sustainability:

📄 www.lufthansagroup.com/responsibility

Disclaimer in respect of forward-looking statements

The data included in this report has been collected and processed with the utmost care. Nevertheless, errors in transmission cannot be ruled out entirely. Information published in this report with regard to the future development of the Lufthansa Group and its subsidiaries consists purely of forecasts and assessments and not of definitive historical facts. Its purpose is exclusively informational, identified by the use of such cautionary terms as *believe, expect, forecast, intend, project, plan, estimate, count on, or endeavor*. These forward-looking statements are based on all the discernible information, facts and expectations available at the time. They can, therefore, only claim validity up to the date of their publication. As forward-looking statements are by nature subject to uncertainties and imponderable risk factors – such as changes in underlying economic conditions – and rest on assumptions that may not or divergently occur, it is possible that the Group's actual results and development may differ materially from those implied by the forecasts.

The Lufthansa Group goes to great lengths to check and update the information it publishes. It cannot, however, assume any obligation to adapt forward-looking statements to accommodate events or developments that may occur some later date. Accordingly, it neither expressly nor conclusively accepts liability, nor does it give any guarantee for the actuality, accuracy and completeness of this data and information.

1 Taken from the Annual Report 2014 of the Lufthansa Group. **2** Previous year's figures have been adjusted due to IFRS 11. **3** For the reporting year 2014, the following companies have been included in *Balance*: Lufthansa (including Lufthansa CityLine, Air Dolomiti and Eurowings), Germanwings, Lufthansa Cargo, Swiss (including Edelweiss Air) and Austrian Airlines. Excluding the services of third parties as Lufthansa can influence neither performance nor the equipment operated (see also table "Share of third parties" on page 44). **4** Types of flights taken into account: all scheduled and charter flights. **5** See also table "Fuel consumption" on page 44. **6** *Balance*: segments (operational perspective); Annual Report: Distance (customer perspective). One distance can include several segments, e.g. in the event of stops en route. **7** *Balance*: on the basis of all passengers aboard; Annual Report: on the basis of all revenue passengers. **8** Companies referred to as in 3, but including the services of third parties, as these contribute to the Group's results. Types of flights as in 4, but including ferry flights, as these represent costs.

At a glance

// 2

Business performance data¹		2014	2013 ²	Change
Revenue	million €	30,011	30,027	-0.1%
of which traffic revenue	million €	24,388	24,568	-0.7%
Operating result	million €	954	699	+36.5%
Profit/loss from operating activities	million €	767	851	-9.9%
Net profit/loss for the period	million €	55	313	-82.4%
Total assets	million €	30,474	29,108	+4.7%
Cash flow from operating activities	million €	1,977	3,290	-39.9%
Capital expenditure (gross)	million €	2,777	2,499	+11.1%
Equity ratio	percent	13.2	21.0	-7.8PP

Personnel data		2014	2013	Change
Number of employees (on December 31, respectively)		118,781	118,285 ²	+0.4%
of these, in Germany		67,155	66,866	+0.4%
of these, outside Germany		51,626	51,419	+0.4%
Staff costs	million €	7,335	7,356 ²	-0.3%
Revenue/employee	thousand €	252	256	-1.4%
Staff costs/revenue	percent	24.4	24.5	-0.1PP
Average age	years	42.3	41.9	+0.4 years
Part-time ratio, absolute	percent	28.0	28.1	-0.1PP
Part-time ratio, men	percent	14.3	14.1	+0.2PP
Part-time ratio, women	percent	45.0	45.6	-0.6PP
Share of women in management (Germany)	percent	16.0	16.7	-0.7PP
Share of women in management (worldwide)	percent	14.2	14.5	-0.3PP

Environmental data^{3,4}		2014	2013	Change
Resource consumption				
Fuel consumption ⁵	tonnes	8,825,774	8,764,774	+0.7%
Fuel consumption, specific, passenger transportation	l/100pkm	3.84	3.91	-1.6%
Fuel consumption, specific, freight transport	g/tkm	221	223	-0.8%
Emissions				
Carbon dioxide emissions	tonnes	27,801,092	27,609,039	+0.7%
Carbon dioxide emissions, specific, passenger transportation	kg/100pkm	9.69	9.84	-1.6%
Nitrogen oxide emissions	tonnes	132,257	131,091	+0.9%
Nitrogen oxide emissions, specific, passenger transportation	g/100pkm	45.8	46.7	-2.0%
Carbon monoxide emissions	tonnes	19,251	18,976	+1.5%
Carbon monoxide emissions, specific, passenger transportation	g/100pkm	7.3	7.4	-1.9%
Unburned hydrocarbons	tonnes	1,952.5	1,990.8	-1.9%
Unburned hydrocarbons, specific, passenger transportation	g/100pkm	0.7	0.7	-3.6%

Transport performance data		Balance ^{3,4}	±2013	Annual Report ⁸	±2013
Flights ⁶		953,669	-1.5%	1,001,975	-2.6%
Passengers carried ⁷		104,018,126	+1.3%	105,988,268	+1.3%
Freight and mail carried	tonnes	1,920,328	-2.2%	1,923,529	-2.1%
Seat kilometers offered, SKO	million pkm	266,397	+2.6%	268,105	+2.1%
Freight tonne kilometers offered, FTKO	million tkm	14,310	-1.7%	14,659	-1.6%
Tonne kilometers offered, TKO	million tkm	40,917	+1.8%	41,548	+0.8%
Passenger kilometers transported, PKT ⁷	million pkm	219,372	+2.8%	214,641	+2.4%
Freight tonne kilometers transported (incl. third-party performance), FTKT	million tkm	9,408	+0.1%	10,249	-0.4%
Tonne kilometers transported, TKT	million tkm	31,408	+1.9%	31,308	+1.4%

Dear Readers,

During the production phase of this Sustainability Report, the tragic accident involving one of our Germanwings aircraft occurred on March 24, 2015. We immediately did everything in our power to assist the family members of the accident victims quickly and unbureaucratically at that terrible time. And we continue to do so today. The suffering caused by this tragedy is immeasurable. For us, March 24 marked a break in the history of our Company. Even though we are now looking ahead again, it will still take a long time for us to work through the shock caused by the worst accident since the foundation of the new Lufthansa.

In the aviation industry, we have always learned from accidents and have taken measures to make flying even safer. This is what we have done in this situation as well. Safety remains our highest priority. We will continue to strengthen our leading position in air safety by further developing our safety structures, even if Group-wide we currently score significantly above the legally required standards.

After safety it is future viability that has the highest priority for us. In the reporting year 2014, we defined seven central action fields by means of our strategic program "7to1 – Our way forward" and thus created the basis for a sustainable improvement of results and a successful evolution of the Lufthansa Group. For us, entrepreneurial responsibility means not only cultural and social commitment, but above all future-oriented action. With this program, we also set the course for an even more climate-compatible form of air transport. And this is paying off. Last year, our passenger airlines needed only 3.84 liters of kerosene on average to carry one passenger over a distance of 100 kilometers – a new efficiency record! We continuously invest in environmentally friendly technologies and currently have 272 quiet and highly efficient aircraft on order (as of December 31, 2014). In early 2015, we received the "Eco-Airline of the Year" award for the second time for our role as a front-runner in the area of climate protection.

Environmental and climate protection are a central part of our entrepreneurial responsibility. With our membership in the UN Global Compact, we pledge ourselves further to the principle of sustainable entrepreneurial leadership that aims at enabling people to achieve a shared performance and to react to changes by means of shared values, goals and structures as well as training and continuing education. In this context, we have also evolved our personnel strategy. Through new instruments and processes, we wish to ensure that we will have the very finest employees on board in future as well. And in the area of corporate citizenship, to address a remaining important area, we will focus much more strongly than before on social issues.

You will find more in-depth information about these and other subjects in this issue of *Balance*. The special section "Innovation Management" leads this year's report. It gives you a well-founded overview of one of our most important action fields, which is closely associated with our commitment to applying sustainable principles.

I wish you a sustainably captivating read.



Carsten Spohr

Chairman of the Executive Board and CEO
Deutsche Lufthansa AG

"After safety it is future viability that has the highest priority for us."



Carsten Spohr

The Lufthansa Group

At a glance

The Lufthansa Group is the world's leading aviation group. The Company's portfolio comprises network airlines, low-cost airlines and aviation service companies. In the financial year 2014, the Company was organized in five business segments: Passenger Airline Group, Logistics, MRO, Catering and, until the end of 2014, IT Services. Each of these business segments occupies a leading position in its respective market. Overall, the Lufthansa Group includes about 540 subsidiaries and equity investments.

 www.lufthansagroup.com

At a glance



Cologne

Corporate headquarters



118,781

employees*



143

nationalities*



105.9 million

passengers in 2014



**Frankfurt,
Munich, Zurich,
Vienna, Brussels**

hubs



615

aircraft in the fleet*



> 1.9 million tonnes

freight/mail in 2014

* as of December 31, 2014



North America

367 weekly frequencies
to 22 destinations
in 2 countries



**Passenger Airline Group
flight destinations**

Frequencies per week by Lufthansa German
Airlines, Swiss and Austrian Airlines



Central and South America

63 weekly frequencies
to 8 destinations
in 7 countries

A day in the life of the Lufthansa Group

2,745
takeoffs/landings
a day

290,379
passengers a day



1,700
aircraft are maintained
by us every day.

1.6 million
meals a day

5,270
tonnes of freight a day



Europe
7,405 weekly frequencies
to 160 destinations
in 42 countries



Asia/Pacific
261 weekly frequencies
to 24 destinations
in 11 countries



Middle East
184 weekly
frequencies
to 15 destinations
in 11 countries



Africa
140 weekly frequencies
to 21 destinations
in 13 countries

The business segments of the Lufthansa Group

Passenger Airline Group

The largest business segment is the Passenger Airline Group. All Lufthansa Group airlines position themselves as quality carriers within their respective industry segments.



Lufthansa
www.LH.com



Germanwings
www.germanwings.com



Eurowings
www.eurowings.com



Swiss
www.swiss.com



Austrian Airlines
www.austrian.com



Brussels Airlines
(equity investment: 45 %)
www.brusselsairlines.com



SunExpress
(equity investment: 50%)
www.sunexpress.com

Logistics

The Lufthansa Cargo AG, headquartered in Frankfurt, is one of the leading providers of services for standard, express and special freight worldwide. The company offers a comprehensive route network with more than 300 destinations in about 100 countries. www.lufthansa-cargo.com



Lufthansa Cargo AG



AeroLogic
(equity investment: 50 %)

MRO

The Lufthansa Technik AG, headquartered in Hamburg, is the world market leader in the areas of MRO of passenger aircraft. Its product offering ranges from the repair of a single component to global maintenance support for an entire fleet of aircraft. www.lufthansa-technik.com

Catering

LSG Sky Chefs is the largest provider worldwide of services in the area of airline catering and in-flight management. The Group's parent company, LSG Lufthansa Service Holding AG, is headquartered in Neu-Isenburg. www.lsgskychefs.com

Innovation – The key to a successful future

The Lufthansa Group is making a concerted effort to make flying even more efficient, sustainable and attractive.

The automobile, the aircraft, the Internet – each of these innovations has changed the world. The word innovation is derived from the Latin verb *innovare* and means renewal and change. Without innovation and research, there can be no progress. Ideas become innovations when they evolve into new products, services, processes or business procedures that permeate the market and perceptibly change it. In the digital era, the ability to innovate is more than ever a basic prerequisite for economic success. For a Company such as the Lufthansa Group, that means thinking and acting strategically in a highly competitive environment. As we do so, new materials, technologies and innovations offer significant opportunities to make the services we provide our customers even more attractive and ecologically efficient. The ability to identify trends and customer needs early on and to develop corresponding new services will become ever more important in future. Therefore, innovations secure the Group's competitiveness and guarantee its future viability.



Think out
of the box!

Be
part
of it!

innovation
@ Lufthansa Group



92
innovation projects
competed in 2014 for the
Lufthansa Group's first-ever internal
Innovator Award.

500
million euros
are to be invested by the Lufthansa
Group by 2020 for internal and external
innovations.

“For us, innovation means thinking and acting strategically in an extremely competitive environment. That is something we’ve done before very successfully, as the foundation of the Star Alliance and the very first formations of joint ventures in the airline industry show.”



Sadiq Gillani
Senior Vice President, Group Strategy
Deutsche Lufthansa AG

Innovation@Lufthansa Group

The Lufthansa Group has a proven track record of turning new ideas into successful products and services. Yet innovation management is to receive even greater importance in future. The goal: To be the industry’s pacesetter.

To secure the Lufthansa Group’s competitiveness, to guarantee its future viability and to expand its position in the growing market of civil aviation, the Company has launched the strategic program “7to1 – Our way forward”. One of the seven key action areas defined by this internal initiative is “Innovation and digitalization”. The campaign aims to make the Lufthansa Group the benchmark again and thus the first choice in aviation for customers, employees, shareholders and partners.

Group-wide, the aviation company will invest 500 million euros by 2020 in innovations aimed at further improving products and services. For example, a newly-established innovation fund, endowed with a double-digit million euro amount, is to help ideas take flight in the future. An expert committee of top managers can allocate up to 500,000 euros per project in an unbureaucratic way to ensure that especially promising ideas are able to progress especially swiftly. For the Lufthansa Group, innovation means both aligning its internal culture appropriately and incorporating impulses from the outside. It is particularly important in this context to correctly structure and steer innovations within the Company.



How we strengthen the innovative force across the Company:

- To coordinate the numerous innovation-related activities within the Company and to develop even more new ideas, the Lufthansa Group has set up a cross-business segment Innovation Unit within its Group Strategy Department. This unit also ensures that existing projects are advanced and supported in a concentrated and consistent manner.
- In 2014, the Lufthansa Group presented its first-ever Innovator Award. The innovation prize not only promotes the spirit of innovation within the Company but is also an important building block for establishing a Group-wide innovation network. Award categories were preset as follows: Sustainability, Efficiency, Customer Orientation, Partner Solutions, and a Special Jury Prize. All employees were able to vote in the preliminary phase; after that an expert jury examined the ideas entered by 14 business segments. In 2015, the Innovator Award will enter its second edition.
- A recognizable symbol for the growing culture of innovation at the Lufthansa Group is the Red Box. In 2014, it made its way around the Company for several months to make the topic of innovation within the Group even more visible. Each time the mysterious box was opened as a part of an event, it revealed a groundbreaking development from within the Lufthansa Group, such as the environmentally friendly TaxiBot system (see page 11). At the same time, an exhibit provided information on 20 successful innovations from various Lufthansa Group companies.
- Further building blocks of innovation management are the Innovation Lunch, Innovation Days and digital platforms.

How we channel external impulses into the Lufthansa Group:

- In September 2014, the Lufthansa Group opened an Innovation Hub in Berlin to move closer to the world of start-ups and the digital technology scene. The new hub's task is to feed additional impulses into the Group and above all to develop digital contents for products, services and processes along the entire air travel chain (see page 14).
- Additionally, the Lufthansa Group is establishing close cooperations and partnerships in Silicon Valley. They are designed to help gain access to future-oriented ideas.

“Strengthening the culture of change is an important building block for promoting innovations within the Lufthansa Group. Good ideas must prevail. We’re laying the foundations for this through the Innovation Fund, the Innovator Award and other platforms.”



Doris Krüger
Director Group Innovation Unit
Deutsche Lufthansa AG

From “sharkskin” to TaxiBot: Innovations at Lufthansa Technik

When it comes to innovation within the Lufthansa Group, Lufthansa Technik plays an important role through its participation in numerous research and development projects. Innovation is part of everyday business for the world’s leading provider of maintenance, repair and overhaul (MRO) services. To implement more innovations between now and 2018, the Executive Board of Lufthansa Technik has approved a budget of 200 million euros, as part of the 500-million-euro Group-wide package. To date the engineering specialist already has about 70 new projects in the pipeline. The focus is on innovation that provides both economic and ecological advantages, as the following examples illustrate.

70
new research projects
are being planned at Lufthansa Technik.



▲ 01

Learning from nature: “Sharkskin” for aircraft

In the framework of the research project FAMOS, Lufthansa Technik – together with its partners Bremer Werk für Montagesysteme (bwm) and Airbus – is working to develop a highly automated system to clean, strip, paint and apply low-drag aircraft surfaces by 2017. According to the latest findings, these surfaces, which are modeled on the surface structure of sharkskin, can lead to fuel savings of around one percent. Hence they lower operating costs and reduce the burden on the environment. If the paint-based riblet-structured surface coating proves marketable, it will be a quantum leap for civil aviation in terms of fuel efficiency and environmental friendliness. In an earlier project, the experts of Lufthansa Technik tested and proved the durability of technically simulated sharkskin under operating conditions on the fuselages and the wing leading edges of two Lufthansa Airbus A340-300s.

▲ 02

Improved aerodynamics:

Vortex generators reduce noise emissions

Besides the sharkskin coating, Lufthansa Technik has set in motion several other aerodynamic improvements aimed at reducing kerosene consumption and noise emissions while flying. Since fall 2014, the Company has fitted Lufthansa’s Airbus A319, A320 and A321 aircraft with noise-reducing vortex generators in front of the circular fuel-tank pressure equalization vents on the underside of the wings. These components are based on research results produced by the Lufthansa Group and the German Aerospace Center (DLR) (see page 54, Active noise protection). In addition, Lufthansa Technik is developing vortex generators for the upper wing surface. These are likewise to be used for refitting Airbus A320 aircraft.

▲ 03

Environmentally sound solutions: Taxiing and towing with electrical power

Lufthansa Technik is ahead of the game in the area of electrically-powered mobility as well. Given the enormous ecological and economic savings potentials, the company has been researching alternative power concepts for aircraft movements on the ground since 2008. The goal is to significantly reduce an aircraft's kerosene consumption and thus its emissions of CO₂ and noise during taxiing and towing at airports. To this end the hybrid aircraft tug TaxiBot, which was developed with extensive support from Lufthansa Technik and its subsidiary Lufthansa LEOS, has been deployed in real flight operations at Frankfurt Airport ever since its certification by the European Aviation Safety Authority (EASA) (see page 50, Energy and resource management).



▲ 05

DishwashAir: The flying dishwasher

DishwashAir is the name of a new minimal-water-consumption dishwasher specially designed for use aboard passenger aircraft. Developed by a consortium headed by Lufthansa Technik, this innovation lets airlines load only as much cutlery and dishware aboard aircraft as is actually needed for in-flight service. The appliance, which is equipped with complex safety mechanisms, allows the crew to wash a load of dirty dishes and cutlery in only six minutes with a mere three liters of water. The first VIP clients of Lufthansa Technik have already decided in favor of installing the DishwashAir aboard their aircraft.

▲ 04

Cyclean®: The revolution in engine washes

Cyclean® Engine Wash, developed by Lufthansa Technik, is a particularly efficient way to clean aircraft engines. In this way, airlines can save about 0.5 percent of their kerosene requirements. The water-based procedure can now be used at temperatures down to minus ten degrees Celsius. In a parallel move, Lufthansa Technik is researching the use of alternative blasting materials, such as CO₂ dry ice pellets, to make engine cleanings possible in permafrost regions as well. Lufthansa Technik also offers a dry washing method for aircraft fuselages using a cleaning paste; this alternative takes more effort than wet washes but consumes significantly fewer natural resources.

“Our capacity for innovation gives us enormous drive. It is getting room to develop, so that we can offer our clients added value through new products. In this way, we have created all the prerequisites for further growth.”



Dr. Helge Sachs
Head of Corporate Innovation
Management and Product Development
Lufthansa Technik AG

Tapping the green potential of flying

All business segments and companies within the Lufthansa Group continuously work to develop innovative technologies and concepts that reduce the environmental effects of their business activities at all levels. In this way, the Group companies have already set numerous pioneering developments in motion. Here is a selection:

▲ 01

Even higher fuel efficiency

One of the Lufthansa Group's most important goals is to use the kerosene it needs as efficiently as possible and to fly into the future in environmentally friendly ways. The Group has bundled all measures serving to improve fuel efficiency together in a special department. Fuel Efficiency's interdisciplinary team of experts works on identifying and utilizing economic and ecological savings potentials. With all its fuel efficiency innovations and projects, the Company is aiming to save about 148 million euros by the end of 2015 (see page 39, Fuel consumption and emissions).



▲ 02

En route to the paperless cockpit

Lufthansa German Airlines, Lufthansa CityLine and Lufthansa Cargo first equipped their pilots with in-house developed Electronic Flight Bags (EFBs) as long ago as 1999. In 2006, further development was begun on an EFB to be used during all flight phases. These “electronic pilot's cases” have since largely replaced route maps and technical manuals weighing several kilos in the cockpit. At the end of October 2014, the rollout of the EFB's third generation, called EFB 2.2, was initiated. This project provides the necessary infrastructure aboard aircraft and on the crews' new tablets to digitalize all processes and with time to introduce the fully paperless cockpit. EFB 2.2 is part of the e-Enabling Program, in which Lufthansa coordinates a number of individual projects and innovations in the area of digitalization.

▲ 03

Pioneering achievements for alternative fuels

Alternative fuels with a significantly lower net carbon footprint are an important building block in reducing emissions sustainably. In 2011, Lufthansa became the first airline worldwide to test the use of biosynthetic fuel in routine operations as part of a long-term study. On September 15, 2014, the Company laid the next milestone: Lufthansa flight LH190 from Frankfurt to Berlin's Tegel airport was the first European scheduled flight to run on a 10 percent blend of the new sugar-based biofuel component “Farnesan”. Alongside this step forward, the Lufthansa Group is committed to many other future-oriented projects that focus on alternative fuels. (see page 39, Fuel consumption and emissions).



▲ 04

Ever-lighter containers and pallets

In 2014, Lufthansa Cargo completed the replacement of its more than 5,500 standard aluminum freight containers with a nearly 14-kilogram lighter version made from composite materials. To conserve even more kerosene, the company and its subsidiary Jettainer, together with partners from business and science, are advancing the development of the next generation of lightweight containers and pallets. Tomorrow's standard lightweight pallets are expected to weigh as much as 25 percent less than their predecessors, which tip the scales at about 100 kilos each. Should the current test series yield positive results, the first standard pallets could be replaced at the end of 2015.



▲ 05

Crunching numbers for the environment

Swiss has developed a new process to optimally calculate the daily arrival times of its long-haul flights in Zurich. Both its passengers and the environment benefit from this procedure: Not only do 10 percent more passengers reach their connecting flights, but the airline also conserves about 500 tonnes of kerosene and avoids about 1,500 tonnes of CO₂ emissions per year. This leading-edge process received a Lufthansa Group Innovator Award in 2014.



▲ 06

Clean as a whistle

With Waliclean, Austrian Airlines has revolutionized the cleaning of low-pressure toilet systems: A solution of citric acid and warm water circulates at low pressure through an aircraft's wastewater system. The flushed water can be conveniently disposed of via the public sewage system. This new method eliminates the purchase, storage and disposal of special cleaning fluids as well as an involved cleaning process. The airline received the Environmental Award of the City of Vienna for this innovation.

Digital innovations for a perfect travel experience

Innovative developments – and above all digitalization – produce ever more new services along the entire air travel chain, further enhancing the travel experience. In the front line of innovation: the Lufthansa Group. Apps, electronic baggage receipts, in-flight entertainment and super-fast WiFi are only a few examples of such improvements. A clear advantage for passengers, who benefit from the wide variety of new digital innovations.

▲ 01

Ideas for the future: The Innovation Hub

To find responses to the digital era's rapid market changes is the task of the new Innovation Hub. Comprising internal and external employees with start-up experience, the Lufthansa Group founded the Hub in 2014 in Berlin. The Hub's team – together with partners – has the specific aim of advancing the development of digital contents for products, services and processes along the service chain from reservation to arrival. Among the other objectives for these creative thinkers is to ensure that the Group identifies future customer needs and trends at an early stage and participates in shaping them. The long-term goal: Each traveler is to come into contact during his or her trip with a product initiated by the Innovation Hub – and this worldwide. The Hub's team also counts on external partners: Start-ups can use the internet page <http://hub.lh.com> to propose their ideas for cooperating with the Lufthansa Group.

▲ 02

Standardized reservations: The airline.com program

In the future, airline.com will give passengers access to the Lufthansa Group's entire offer of flights and additional products via a digital marketplace in a personalized format. In addition to the sales process, digital service processes such as Group-wide check-in and rebooking will be further simplified. Lufthansa German Airlines, Swiss, Austrian Airlines and Brussels Airlines will participate in this Group-wide program.

▲ 03

Personalized offers: The SMILE program

New technologies and social media are increasingly changing passengers' expectations. Lufthansa has launched the SMILE program to view its own processes and products more intensively from a customer perspective and to move the holistic passenger experience more to the fore. The aim is to serve and exceed changed customer needs with personalized products, services and communications and thus create added value for passengers over the long-term. The goal is to make Lufthansa the leading customer-centered airline.



▲ 04

Lightweight and wireless: The in-flight entertainment

Lufthansa is equipping its long-haul fleet with the new in-flight entertainment system RAVE. Depending on the type of aircraft, the airline saves 30 to 40 percent of weight when compared with previous on-board entertainment systems. This reduces kerosene consumption and CO₂ emissions correspondingly. Additionally, a wireless in-flight entertainment system will initially be installed on 20 selected medium-haul aircraft, making entertainment contents available on the passengers' own devices by means of WLAN streaming. This system is based on Lufthansa Systems' BoardConnect entertainment product, which received the Crystal Cabin Award, and for which Lufthansa Technik specifically developed and certified parts.



▲ 05

Faster than everybody else:

The WLAN access from Lufthansa Technik

Lufthansa Technik has developed the fastest WLAN access in civil aviation. It takes full advantage of the performance of latest-generation computers, tablets and smartphones. Additionally, integrated antennas reduce cabling and thus installation work. The first of Lufthansa's Airbus A321s have already been equipped with this access, so that customers on short- and medium-haul routes can use their own mobile devices to watch movies, for example. At the Aircraft Interiors Expo 2014, Lufthansa Technik received the Crystal Cabin Award as well as a Lufthansa Group Innovator Award for this WLAN access.

▲ 06

Saving printing and paper:

The electronic baggage receipt

Since October 2014, Lufthansa has offered its customers electronic baggage receipts, a move that has advantages for both sides. The airline saves printing and paper costs, while passengers benefit from greater convenience when checking in baggage. Thus, electronic baggage receipts give quick access to additional services, such as baggage tracking and information in the event of delayed delivery.

“Quality, efficiency and innovation are the prerequisites for our future success. We want to be pacesetters among the competition rather than follow others. To achieve this, the Lufthansa Group needs to identify trends earlier than the competition.”



Alexander Schlaubitz
Vice President Marketing
Deutsche Lufthansa AG





Sustainable Business Practice

Sustainable business practices are firmly anchored in our Company strategy. We actively seek an open dialogue with our stakeholder groups to jointly shape the future.

7

action fields comprise our new strategic program "7to1 – Our way forward".

500

million euros to be invested in innovations by the Lufthansa Group by 2020.

272

quiet and efficient aircraft to join the Group fleet between 2015 and 2025.

Doing business responsibly and sustainably

The Lufthansa Group assumes its entrepreneurial responsibility in a comprehensive manner. It has set itself the goal of conducting business across all areas according to sustainable and responsible principles and thus securing its future viability. Sustainability – along with corporate value creation, market leadership and customer satisfaction – is an important pillar of the Lufthansa Group's strategy.

Social developments and megatrends influence the business activities and the sustainability agenda of the Lufthansa Group in significant ways.

Among the present and future challenges figure not only global population growth, increasing mobility and demographic changes, but also the trend towards service-based societies, the spread of the Internet and people's rising need for security.

At the same time, environmental protection is also becoming even more important in the face of climate change and the growing scarcity of resources.

The Lufthansa Group meets these challenges with a comprehensive sustainability agenda. It comprises the following action fields of entrepreneurial responsibility:

- Economic sustainability
- Corporate governance and compliance (see page 26),
- Climate and environmental responsibility (see page 32),
- Social responsibility (see page 70)
- Product responsibility (see page 58)
- Corporate citizenship (see page 90).

By maintaining memberships in the UN Global Compact, the International Chamber of Commerce, Transparency International, the German Network for Business Ethics and in various institutions supporting individual aspects of human rights, the Group specifically acknowledges its intent to respect the standards set by each of these organizations and thus human rights as well (see page 27, *Balance* 2014).

Risk and opportunity management

To secure economic success, the Lufthansa Group identifies risks and opportunities relevant for its business at an early stage and at regular intervals – and incorporates them into the process of steering the Company. The management of risks and opportunities is integrated into all business processes. This allows the Company to be prepared for positive and negative influences, so that it can react in a proactive and flexible manner (see from page 100, Annual Report 2014).

Sustainability parameters part and parcel of variable remuneration

At the Lufthansa Group, the remuneration of members of the Executive Board and managers is tied to the Company's sustainable success. Therefore, the variable part of remuneration is also influenced by sustainability parameters such as environmental protection, customer satisfaction and employee commitment (see page 132, Annual Report 2014).

7 to 1

Our way forward

Strategic program

In July 2014, the Lufthansa Group launched its new strategic program “7to1 – Our way forward”. It aligns the Company with the requirements of the future by depicting the most important higher-level fields of action for its successful further development: towards a globally unique integrated aviation group that generates important synergies from its broad setup and thus creates added value for its customers, employees, shareholders and partners. The goal is to make the Lufthansa Group the first choice for its stakeholders and to live up to these ambitious standards for many years to come (see from page 24, Annual Report 2014).

To achieve this goal, the Group has identified seven fields of action covering three thematic areas of focus: continuous quality improvement, efficiency and the ability to innovate. At the same time, these fields of action ensure the Lufthansa Group's future viability while taking into account the key success factors of financial stability, market position and average fleet age:

1. Customer centricity and quality focus
2. New concepts for growth
3. Innovation and digitalization
4. Effective and lean organization
5. Culture and leadership
6. Value-based steering
7. Constantly improving efficiency



The 10 principles of the UN Global Compact

The Lufthansa Group is committed to the principles of the UN Global Compact, the largest initiative worldwide for responsible corporate management. In 2002 Lufthansa was the first aviation company to become a member of the initiative that had been set up two years earlier by the then UN Secretary General Kofi Annan.

The participating companies have agreed to align their business activities and strategies with ten universally accepted principles:

Human rights

- Businesses should support and respect the protection of international human rights within their sphere of influence and
- make sure their own corporations are not indirectly linked to human rights abuses.

Labor

- Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining;
- eliminate all forms of forced and compulsory labor;
- effectively abolish child labor; and
- eliminate any discrimination in respect of employment and occupation.

Environment

- Businesses should support a precautionary approach to environmental challenges;
- undertake initiatives to promote greater environmental responsibility; and
- encourage the development and diffusion of environmentally friendly technologies.

Anti-corruption

- Businesses should work against corruption in all forms, including extortion and bribery.

www.unglobalcompact.org

“The environment always flies with us.”

Interview with Carsten Spohr, Chairman of the Executive Board and CEO Deutsche Lufthansa AG

➤ **Mr. Spohr, a year ago you presented the strategic program “7to1 – Our way forward”. In which of these action fields is the topic of sustainability to be found?**

Sustainability is actually present in all seven action fields. Here's an example: Over the next five years we will invest 500 million euros across the Group in innovations. As a result, we will be making flying even more efficient, more environmentally compatible and more attractive. Innovations also help us break into new markets. I'm thinking here for example of Lufthansa Technik's new procedures for efficient engine washes or the research projects in which the aircraft surfaces with structures modeled on sharkskin were developed.

Or think of the dynamic developments in the area of digitalization. These are opening up entirely new opportunities for communicating with our customers. In future, we would like to enthrone our passengers with a broad spectrum of digital services along the entire service chain and offer them a perfect travel experience. It was from this point of view that we founded our Berlin-based “Innovation Hub” in September 2014. When it comes to developing new ideas, we're counting on close links with the global start-up scene so strongly present there. It is especially important for

me to take advantage of the innovation potential of the entire Group. This is why we created a number of new internal formats last year, including the Innovator Award. Ninety-two pioneering projects from eleven countries were presented to the jury last year. It was quite impressive to see what our employees produced!

➤ **What role do climate and the environment play in the daily business of an airline?**

At Lufthansa, the environment always flies with us. So far, our employees have developed over 1,300 ideas and projects for boosting fuel efficiency. Our specialists in the areas of aerodynamics, flight operations and network planning are all on a highly innovative path here. The figures demonstrate this as well. We established another round of record lows in fuel consumption last year. Our passenger fleets now only need 3.84 liters of kerosene per passenger and 100 kilometers on average. In other words, we were able to reduce the specific kerosene consumption by another 1.6 percent compared with the year before. And we are continuing our investments in fuel efficiency – more intensively than ever.

At the moment, we're carrying out the largest fleet modernization program in the

history of our Group. Every day we test anew what we could do better, such as reducing aircraft weight. In our initiative “Fly Greener” we're investigating how we might avoid even more waste on board. We've developed lightweight freight containers, onboard trolleys and a wireless entertainment system. All of this saves weight, conserves kerosene and reduces CO₂ emissions. We get better every year. Our new long-haul aircraft, the A350-900s and Boeing 777-9Xs to be delivered to us in the years ahead, will consume less than three liters per 100 passenger kilometers. And a lot has changed at Lufthansa Cargo as well: Our freight airline now flies five new Boeing 777Fs. These freighters are especially efficient and quiet. This gives our customers yet another reason to rely on the services of Lufthansa Cargo. And for people living near airports that is a perceptible, or better an audible relief.

➤ **Are there also environmental measures taken on the ground?**

Indeed there are. At our largest hub in Frankfurt we've launched together with partners a number of projects in the electromobile handling of aircraft. We currently have three “TaxiBots” in operation. With these hybrid aircraft tugs, our pilots can tow their aircraft all the way to the runway with



the engines turned off – without emissions and noise. In the case of our office buildings or our training center in Seeheim, we've also paid attention to obtaining the highest-possible levels of energy efficiency.

➤ What do you think? How important will the topic of sustainability be for the aviation industry in the future?

The worldwide need for mobility increases year after year – in 2014 alone, passenger numbers rose by 5.9 percent. Sustainability, climate protection and environmental responsibility are becoming ever more important because of this growth. As the world's largest aviation group, we are an essential part of this development. With innovative products, we want to set new standards and to make our contribution toward an environmentally compatible type of air transport in the future.

The largest lever available to us is the investment in new technologies as aircraft will continue to depend on the use of kerosene for the foreseeable future. The aviation industry has set itself ambitious fuel efficiency goals. We are all doing a lot to reach these. But I also recognize the responsibility of policy makers to create the necessary framework of conditions. For example, by implementing the Single

European Sky, one of Europe's largest climate protection projects. Unfortunately, there hasn't been any progress worth mentioning for 20 years. We've just reiterated – together with other airline CEOs – our demand in Brussels to accelerate and to realign the implementation of a standardized air space over Europe. Shorter and more direct flight routings without unnecessary detours could reduce the CO₂ emissions of European air transport by ten percent a year.

➤ And what significance will sustainability have for the Lufthansa Group in the future?

I'm convinced that only a sustainable way of steering our Company will secure our long-term success. But the basic condition for all of our activities is economic success. I'll repeat it here as well: After safety, it's future viability that has the highest priority for us.

The essence of "7to1 – Our way forward" is to expand the strengths of the service companies while openly identifying and harnessing the improvement potentials in the passenger business. In a parallel move all current initiatives, such as the successfully established steering logic of SCORE, are being transferred into the new strategic program. The future-oriented SCORE program, which was launched in 2012 and is scheduled to run through 2015, has served to utilize synergies within the Group, lower costs, increase revenues and optimize processes.

New concept for value-based management: EACC replaces CVA

Since 1999, the Lufthansa Group's corporate management has been guided by the goal of increasing the Company's value sustainably and thus across industry cycles. This approach has become an integral part of all planning, steering and control processes. Since the introduction of this value-oriented management system, the Lufthansa Group has used Cash Value Added (CVA) as the main performance indicator. In order to anchor this value-based orientation even more firmly in the Company, Earnings After Cost of Capital (EACC) replaced CVA as the main performance indicator at the beginning of the financial year 2015 (see from page 30, Annual Report 2014). The calculation of EACC is less complex and thus more readily comprehensible for all stakeholder groups. EACC therefore reflects shareholder demands for an appropriate return on capital and sustainable increases in the value of the Company now and in the future.

Materiality analysis

In order to strike a balance between key fields of action in the area of sustainability from the stakeholder and Company perspectives respectively, the Lufthansa Group conducted its second survey of interest group representatives at the beginning of 2014. It thus gained important insights with regard to the sense of responsibility within the Company and the further development of its sustainability agenda. For example, against the backdrop of demographic change, the stakeholders advocated that management place even greater emphasis on training, continuing education (see page 83) and work-life integration (see page 79) in future. Moreover, the Group had the impulses from this survey analyzed by

external experts in order to reveal weak points and to explore further potentials for optimization.

Furthermore, LSG Sky Chefs commissioned a team within the Group-wide talent management program “explorers” to evaluate some of its worldwide activities with regard to corporate responsibility and to develop an action plan. The basis for this work were an international stakeholder survey and best-practice examples from inside and outside the Lufthansa Group. A senior management team selected focus topics adapted to the catering business segment from the suggestions made by the explorers team. These topics are now being further developed.

Awards for commitment to sustainability

External experts and rating agencies again honored the Lufthansa Group’s commitment to sustainability in 2014. For example, the Company was again represented in the sustainability indices FTSE4Good and Ethibel Excellence Investment Register. In addition, the Lufthansa Group is listed on the Ethibel Sustainability Index (ESI) Excellence Europe, which comprises European companies that received top grades in the area of corporate responsibility. In 2014, the Group managed again to achieve an improved evaluation from the Carbon Disclosure Project (CDP) compared with the year before. Similarly, oekom research, a globally leading rating agency in the market for sustainable investments, awarded the Lufthansa Group its Prime Status as a particularly sustainable company. Since June 1, 2015, the Group has also been part of the MSCI Global Sustainability Index Series. In addition, the companies of the Lufthansa Group received numerous prizes and awards in the course of the reporting year – including several with regard to corporate responsibility (see cover page, Corporate Responsibility: Prizes, awards and indices).

“The insights we gained from our materiality analysis give us important impulses for future areas of emphasis in our corporate responsibility activities. The dialogue with our stakeholders is an important building block in this process.”



Astrid Messmer Rodriguez
Director Segments, Group Strategy
Deutsche Lufthansa AG

Stakeholder dialogue

The Lufthansa Group actively seeks an ongoing exchange with its numerous stakeholder groups with the goal of incorporating their experiences, expectations and wishes into its business practices and principles. Besides customers, employees, shareholders and suppliers, the aviation company's stakeholder list includes legislators, municipalities, neighbors, NGOs and scientific researchers.

The basis for the dialogue with stakeholder groups on the subject of sustainability is the present report, *Balance*, which provides comprehensive information about activities and advances in the area of corporate responsibility at the Lufthansa Group.

In 2014, the Company also carried out a qualitative stakeholder survey, which provided important impulses for the further development of its sustainability agenda. Below is a selection of activities in 2014/15:

Customers

The continuous dialogue with its customers is a central concern for the Lufthansa Group (see page 62, Customer satisfaction). A key function in customer relations care is carried out by "Discover Lufthansa", the visitors' service in Frankfurt, the Company's largest location. Aimed in part at top German and international customers, its offers also include tailor-made visitor

programs for the Lufthansa partner universities, people living near the airport, citizen's initiatives, associations and research institutions. In 2014 alone, the Lufthansa visitors' service organized 481 events for 4,833 guests. The Group airlines Lufthansa Cargo, Swiss and Austrian Airlines offer their own visitors' services. Furthermore, Swiss conducted a passenger survey in 2014 to assess the potential of "green products" such as carbon emissions offsetting as a meaningful way to expand its current offers.

Also in 2014, the Lufthansa Group took part once again in "Kunst privat!", an initiative in which over 30 companies in the federal state of Hessen make their private art collections public for two days each year. In this context, the Lufthansa Aviation Center in Frankfurt opened its doors on 10 and 11 May to visitors interested in art and architecture.



The Lufthansa Aviation Center at Frankfurt Airport was inaugurated in 2006. It is also a venue for works of art – which many art and architecture enthusiasts came again to admire in 2014 in the context of "Kunst privat!"



“Speaking openly ...” is the Lufthansa Group’s new internal dialogue format.

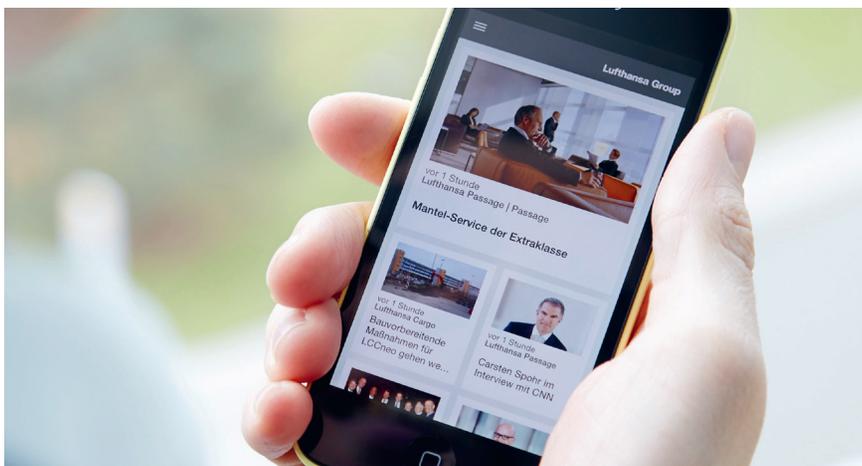
Employees

Since summer 2014, internal communications at the Lufthansa Group have featured a new core element: the news app. By introducing this new application, the aviation company stays abreast of the trend driving more and more people to use mobile devices such as smartphones and tablet PCs to access information. Thanks to this innovation, employees are now able to stay informed anywhere and at any time. Many employees in operative areas draw a special benefit from this change, as previously they were unable to access the intranet and company news at certain times.

In 2014, the Lufthansa Group also launched “Speaking openly ...”, a new internal dialogue series in which the Company’s chief executive responds in person to questions from employees during a live videocast on the intranet. Before the transmission, employees may address their questions directly to CEO Carsten Spohr via eTeaming, the Group-wide platform for communication and cooperation. He then answers the questions with the highest number of “Likes”. Other formats such as “Dialogue Cockpit”, town meetings and live chats with members of the Executive Board complement the aviation company’s internal communications offer.

Investors

Continuous dialogue is a crucial prerequisite for the shareholders’ trust in the Company. Therefore, in 2014 the Lufthansa Group again informed institutional shareholders promptly, extensively and factually by means of quarterly conference calls, 26 road shows, 13 investor conferences and six special forums organized for private investors. Detailed information is also provided by annual and interim reports, the monthly “Investor Info”, the annual “Creditor Info” for creditors and bondholders, as well as the “Shareholder Info” published twice a year especially for private shareholders. The Group makes all publications, financial reports, presentations, background information, speeches, news updates and a financial calendar available at www.lufthansagroup.com/investor-relations (see page 17, Annual Report 2014).



The Lufthansa Group’s “news app” now allows employees to get up to date anywhere and at any time.

The diverse stakeholders of the Lufthansa Group



Lawmakers and public administrations

The Lufthansa Group has maintained an intensive and uninterrupted exchange with representatives from politics and public administrations for many years. In addition, the “Lufthansa Policy Brief” regularly provides information for decision-makers in politics, business and the media about current developments in the aviation industry and the Company’s concerns and positions. Since 2014, Swiss has familiarized these target audiences with aviation-related topics by means of its quarterly publication “Aeropolitics”. Austrian Airlines likewise informs policy-makers in detail about its activities and participates actively in the “Vienna Airport Dialogue Forum”, of which it is a founding member.

Furthermore, the Lufthansa Group places great emphasis on open and permanent exchange with the municipalities and neighbors at all its Company locations. A symbol for this local dialogue at the Frankfurt location is the “Environment and Neighborhood House” in Kelsterbach. In Frankfurt, the Group has also been actively involved in the “Forum Airport and Region” since 2008 (see page 54, Active noise protection).

Cargo Climate Care Environmental Conference

The fourth Cargo Climate Care Environmental Conference organized by Lufthansa Cargo took place on June 10, 2015. More than 150 experts from business and science gathered at Frankfurt’s Städel Museum to discuss environmental strategies in the air freight industry under the title “More logistics with less CO₂”. The event’s focus was on alternative fuels in aviation as well as the role of customers and consumers in environmentally friendly air freight.



“More logistics with less CO₂” was the motto of the fourth Cargo Climate Care Environmental Conference, organized by Lufthansa Cargo in 2015.

Corporate governance and compliance

Corporate Governance at the Lufthansa Group is expressed as responsible corporate management and control which targets sustainable value creation in accordance with the highest international standards. Such corporate governance is of central importance for the Company's transparency vis-à-vis its shareholders and for continuously increasing trust in its management.

The German Stock Corporation Act (AktG) and the German Corporate Governance Code are key elements in this context. The Company's declaration of compliance with the German Corporate Governance

Code was updated in December 2014 and is published on the Internet at www.lufthansagroup.com/declaration-of-compliance.

Compliance program

Compliance describes all measures that ensure the lawful conduct of companies, their executive bodies and employees with regard to adhering to legislation. The Lufthansa Compliance Program, established in 2004, aims at helping its employees adhere to legal norms and keeping them from breaking the law. As an aviation company with global activities, the Lufthansa Group advocates fair competition, integrity and responsible action.

Group Compliance Office

The Compliance Office, which was set up on October 1, 2007 within the central legal department, is responsible for the implementation, development and communication of the Lufthansa Compliance Program. In addition, there is a network of Compliance Commissioners and Compliance Managers across the various Group companies.

The Compliance Office coordinates the investigation of circumstances relevant to compliance and in this context serves as a contact point for cartel and investigative authorities. In such cases, Lufthansa cooperates fully with the authorities. The core components of the Lufthansa Compliance Program are its compliance guide-

Ombudsman system

A further basic component of the Lufthansa Compliance Program is the globally implemented and proven ombudsman system. Introduced on December 1, 2007, it serves as an additional preventive measure against economic crimes. Relevant information can be given by employees or by third parties to an ombudsman outside the Company, by telephone, in writing or in person. The ombudsman function is fulfilled by Frankfurt-based lawyer Dr. Rainer Buchert, who is fully bound by the professional obligation of secrecy and also has the legal right to refuse to give evidence to public investigative authorities. The ombudsman communicates any information he receives to Lufthansa while respecting absolute confidentiality concerning the name and identity of the informant. In this way, the disclosure of an informant's identity to Lufthansa or to third parties without his or her consent is ruled out.

Furthermore, Lufthansa is listed in the joint transparency register of the European Commission and the European Parliament. The goal of this public register is to increase the transparency of decision-making processes within the EU on a voluntary basis and to ensure that the interactions between EU institutions and organizations, associations or companies are in conformity with current law and are carried out on the basis of ethical principles.

lines. These are binding internal regulations that give employees a precise framework for action which guarantees a standardized and law-abiding external conduct for Lufthansa. The Company is not willing to tolerate possible violations of law on the part of its employees. Culpable breaches of law lead to consequences under labor law and may also entail personal liability. The Lufthansa Compliance Program currently comprises four building blocks: Competition, Capital Market, Integrity and Embargo.

Competition Compliance

The module Competition Compliance introduces employees to the relevant regulations of competition and cartel legislation, so as to minimize or exclude risks for Lufthansa in this area. All employees handling issues relevant to competition or cartels are trained in the fundamental regulations of German and European antitrust legislation.

Capital Market Compliance

The module Capital Market Compliance gives employees an overview of current capital market law, such as regulations relating to insider trading or ad hoc publicity. Accompanied by specialized training, this module assures that all employees and

Company bodies concerned receive in-depth insight into the regulations of the German Securities Trading Act (WpHG).

Integrity Compliance

With the module Integrity Compliance, Lufthansa documents its fundamental approach of law-abiding conduct in business relationships. The obligation to adhere to non-corrupt and ethically correct conduct flows naturally from current law, the internal compliance guidelines and Lufthansa's memberships in relevant national and international organizations. Examples of the latter include Lufthansa's commitment to the principles of the UN Global Compact and its membership in Transparency International. The Integrity Compliance Guideline provides support in handling invitations, gifts and other attentions.

Embargo Compliance

The module Embargo Compliance serves to ensure that the Lufthansa Group, as a globally active corporation, adheres to country- and person-specific sanctions regulations in the area of foreign trade. The Embargo Compliance guideline provides the employees concerned with a binding framework of conduct.

Compliance training

Automated IT processes ensure that all employees participate regularly in those Web-based Compliance trainings (e-Learning courses) that are relevant for them. The employees of the subsidiary companies also have access to these e-Learning courses and are either included in automatic mailings of materials or have their own company-specific processes. To complement such online courses, the Compliance Office regularly carries out trainings requiring the participants' physical presence. Compliance trainings are also an integral part of leadership seminars, management courses and other internal continuing education and training events at Lufthansa.

Monitoring and reporting

In keeping with current requirements in the framework of the German Accounting Law Modernization Act, self-audits and external audits take place to evaluate the effective implementation of the Compliance Program. Furthermore, the Supervisory Board's Audit Committee is informed twice a year about current developments relevant to compliance issues and the current state of the program's implementation within the Group.

The Lufthansa Compliance Program



Fleet development

272 new aircraft by 2025

The fleet operated by the Lufthansa Group is by far the Company's largest asset. Modern aircraft that are both economically and ecologically efficient are the basis for business success and secure the Group's competitiveness in an extremely demanding market environment.

Currently, the Lufthansa Group's fleet is undergoing a fundamental modernization. As of December 31, 2014, the aviation company had a total of 272 aircraft with a list-price value of 38 billion euros on its order list, all for delivery by 2025. In 2014 alone, the Group integrated into its fleet 23 new, highly efficient aircraft, including 11 long-haul aircraft. Also in 2014, orders were placed for 15 Airbus A320neo (new engine option) and ten Airbus A320ceo (current engine option) aircraft. The Lufthansa Group will take delivery of 17 new aircraft in 2015.

The Group has ordered a total of 116 aircraft from the A320neo family and has chosen both the LEAP-1A engines manufactured by CFM International and the PW1100Gs by Pratt & Whitney. Both types are highly efficient and set new standards concerning noise reduction by cutting in half the usual noise footprint an aircraft generates during takeoffs and landings. Furthermore, both engines types burn 15 percent less fuel than other types. Delivery of these Airbuses will start at the end of 2015.

On December 31, 2014, the Lufthansa Group's fleet comprised 615 aircraft with an average age of 11.5 years. Thus, the Company operates one of the largest aircraft fleets worldwide. Here is an overview of the fleet development at the Group airlines:

Lufthansa German Airlines

During the reporting year, Lufthansa German Airlines took delivery of two Airbus A380s, six Boeing 747-8s and one Airbus A330. In addition, the last two of 14 Airbus A380 wide-body jets on order were delivered to the airline in early 2015. At the end of April 2015, the last Boeing 747-8 of 19 ordered aircraft was delivered.



The Boeing 747-8 is an entirely newly-developed aircraft that delivers palpable improvements in terms of ecological efficiency. For example, the aerodynamic properties of the wings have been significantly improved and the new wing tip design is now raked. The highly efficient GEnx-2B67 engines cut fuel burn and CO₂ emissions per passenger by 15 percent. To mark its 60th anniversary, Lufthansa took delivery of one Boeing 747-8 painted in a 1970s retro livery.

Austrian Airlines

Austrian Airlines received one Fokker 70 during the reporting year. In mid-2014 the airline also put into service another Boeing 777-200ER, which flies extremely efficiently and quietly while offering the highest levels of customer comfort.

Swiss

Starting in 2019, Swiss International Air Lines will receive 15 Airbus A320neo aircraft, for which the Lufthansa Group placed an order in 2014. They are to replace older aircraft of the same type. Moreover, in March 2015 the Group approved the acquisition of another three Boeing 777-300ERs, which will be delivered to Swiss from 2017 and are to replace older Airbus A340-300s. Overall, Swiss will put nine Boeing 777-300ERs into service from 2016. In the first half of 2016, the airline is also set to receive the first of 30 Bombardier CSeries aircraft on order, which will replace the Avro RJ100 aircraft step by step. Swiss is the launch customer for the CSeries. Above all, this generational change means an audible reduction of noise for people living near airports, as the

new CS100s, which are set to operate on European routes, will be 10 to 15 decibels quieter on average than the currently operated Avro RJ100s.

Eurowings

Under the brand name "Eurowings", the Lufthansa Group airlines Eurowings and Germanwings, along with other flight operators in Europe, are to offer a quality product at advantageous prices from winter 2015 onwards. With this "New Eurowings" concept, which comprises both short- and long-haul flights, the Lufthansa Group is responding in a customer-oriented manner to price-sensitive demand for point-to-point flights. By the end of 2017, Eurowings will take delivery of up to 23 new A320neos, which are set to replace older Bombardier CRJ900s. In 2014, Germanwings received two new Airbus A319s.

Lufthansa Cargo

In 2014, Lufthansa Cargo took delivery of two Boeing 777Fs. The last of five freighters of this type on order was delivered to

Europe's leading freight airline in February 2015. In addition, Lufthansa Cargo has already secured options for a further five "Triple Sevens" with staggered delivery dates until 2020. The Boeing 777F is considered the most efficient and quietest freight aircraft in its class.

More fuel-efficient and quieter – The Airbus A350-900

In 2013 the Lufthansa Group placed orders for 59 highly advanced long-haul aircraft: 34 Boeing 777-9Xs and 25 Airbus A350-900s. The first A350-900 is slated for delivery to Lufthansa as early as the end of 2016 and will be stationed at the Munich hub. Both types of aircraft consume about 25 percent less kerosene than today's aircraft; their CO₂ emissions are also correspondingly lower. The A350-900's noise footprint will be at least 30 percent smaller as well – an important step in the direction of active noise protection. Moreover, the aircraft's structure will feature a more than 70 percent share of state-of-the-art materials. Its robust, latest-technology systems will also help to lower future MRO costs.

Important impulses for the preparation of processes and cabin fittings came from a test flight with the A350 on June 3, 2014. In addition, Lufthansa German Airlines, Lufthansa Technik and Airbus extensively checked the onboard and ground processes related to the twin-engined wide-body aircraft during its first visit to Frankfurt Airport on July 25, 2014. Finally, Lufthansa Technik received the certification on January 14, 2015 from the European Aviation Safety Agency (EASA) to carry out maintenance work on the new long-haul Airbus, which the Company will offer in Frankfurt and Munich initially.

“In civil aviation, investments in new technologies are the best strategy to lessen the burdens on people and the environment.”



Nico Buchholz
Executive Vice President Group Fleet Management
Deutsche Lufthansa AG



With the new Eurowings concept the Lufthansa Group responds in a customer-oriented way to price-sensitive demand for point-to-point flights.



The Lufthansa Group's most advanced long-haul aircraft: the Airbus A380 and the Boeing 747-8.



Swiss will receive the first of 30 CSeries aircraft ordered from Bombardier in the first half of 2016.



"My Austrian" – An Airbus A321 sporting Austrian Airlines' new livery.

The Lufthansa Group fleet

As of December 31, 2014 (changes compared to 2013)

	In possession ¹		Age ¹		In operation ²		Age ²	
Lufthansa	362	(+2)	10.5	(±0)	272	(-1)	11.1	(-0.6)
Lufthansa CityLine	23	(-7)	10.0	(+0.3)	49	(-12)	5.7	(-0.3)
Air Dolomiti	0	(-5)			10	(±0)	3.9	(+1.0)
Eurowings	0	(±0)			23	(±0)	4.7	(+1.0)
Germanwings	38	(+2)	7.8	(+0.6)	60	(+16)	12.9	(+3.4)
Swiss (including Edelweiss Air)	92	(-2)	13.3	(+0.9)	92	(±0)	13.3	(+1.0)
Austrian Airlines	80	(+3)	15.5	(+0.7)	80	(+6)	15.5	(+0.9)
Passenger Airline Group business segment	595	(-7)			586	(+9)		
Lufthansa Cargo	20	(±0)	13.0	(-1.2)	19	(±0)	12.5	(-1.3)
Logistics business segment	20				19			
Lufthansa Group	615	(-7)	11.5	(+0.2)	605	(+9)	11.4	(+0.4)

¹ Aircraft in the Group's possession

² Aircraft operated by the Group

Sustainability in the procurement process

As a globally operating aviation company, the Lufthansa Group stands for fair competition, integrity, and responsible action. The Group is unreservedly committed to compliance with all applicable laws, directives, and regulations. The Lufthansa Group expects this not only from its employees, but from its suppliers and competitors as well.

Lufthansa assumes corporate responsibility by integrating sustainability into the procurement process. At the same time, we minimize risks and thereby avert potential damage to the Company. For us as a globally operating Group with about 540 subsidiaries and affiliated companies, this is a challenging task.

Group purchasing guidelines approved

In May 2013 the Executive Board approved Group purchasing guidelines requiring suppliers to enter into a commitment to social and ecological responsibility. The guidelines are meant as an umbrella directive for all of the Group companies' purchasing guidelines. They also serve as a manual for purchasers and all employees with contacts in the procurement market. They are regularly updated and adjusted. The guidelines prescribe, among other things, that the following duties be included in contracts with suppliers:

➤ Compliance with the 10 principles of the UN Global Compact. The principles range from respect for human rights through commitments to labor standards and environmental protection to working against corruption. In 2002 Deutsche Lufthansa AG became the first aviation company to join this strategic United Nations initiative for companies, thereby agreeing to uphold the 10 principles formulated by it (see overview on page 19).

- Compliance with the International Labour Organization's (ILO) four fundamental principles for labor. These concern freedom of association, the right to collective bargaining, the elimination of forced labor and child labor, and prohibition of discrimination in respect of employment and occupation.
- Consent to announced and unannounced audits of the supplier by companies of the Lufthansa Group.
- Recognition of Lufthansa's right to terminate the contractual relationship in the event of a breach of the aforementioned agreements. Suppliers must also observe the Lufthansa Group's Environmental Protection Guidelines.

By including these commitments in contracts, the Group ensures that sustainability is taken seriously as an issue and that it becomes a way of life all across the supply chain. To familiarize our purchasers with the Group purchasing guidelines, we train them in our Procurement Academy, which provides continuing education opportunities for employees from throughout the Group.



Climate and Environmental Responsibility

Climate and environmental responsibility is a guiding principle of our value-oriented corporate management. Fuel efficiency in flight operations is of major importance for our success according to economic and ecological benchmarks.

3.84

liters of kerosene consumed on average to carry one passenger 100 kilometers in 2014.

1,300

ideas and projects for more fuel efficiency

100

aircraft in the A320 family are already equipped with noise-reducing technology.

Strategy and management

Keeping people, the environment and mobility in balance

Environmental care has been one of the Lufthansa Group's primary corporate goals for many years. The Company has been working resolutely for a long time to further reduce the effects of its business activities on the environment – and thus on the Earth's climate – and to use resources ever more efficiently.

The worldwide connections provided by air transport are a central condition for economic growth, employment and individual mobility. For 2015 alone, the International Air Transport Association (IATA) forecasts an increase in passenger numbers of 7 percent worldwide (2014: 5.9 percent). Despite these significant growth rates, air transport's share in worldwide CO₂ emissions has actually been declining for years. According to the International Energy Agency (IEA), this value reached 2.42 percent in 2011 (2000: 2.81 percent).

The Lufthansa Group aims to make mobility as environmentally friendly as possible for its customers – now and in the future.

The Lufthansa Group's goals and strategy

The Group has a clear strategy to further limit the environmental effects of flying and to make traffic growth as environmentally compatible as possible. As long ago as 2008, the Lufthansa Group adopted a strategic environmental program (see page 36). In addition, it supports the aviation industry's goals of improving fuel efficiency by 1.5 percent on average per year until 2020 and to make all transport growth CO₂-neutral thereafter. By 2050, net CO₂ emissions are to be cut by 50 percent, compared with 2005. The generally acknowledged basis for this approach is the aviation industry's established four-pillar strategy for climate protection (see graphic 43).

Central fields of action in climate and environmental protection

Passenger and freight transport is the Lufthansa Group's core business. Fuel efficiency in particular is of fundamental importance for the Company's economic

and ecological success and therefore a central field of action. The efficient use of kerosene not only reduces costs, but also improves flight operations' ecological balance sheet. The most significant advances can be achieved by operating aircraft with the latest technology. For this reason, the Group is due at current order status to take delivery of 272 new aircraft by 2025 – all characterized by low fuel burn (see page 28, Fleet development).

In May 2013, the Lufthansa Group set up a Company-wide department which has since coordinated all activities concerning fuel efficiency. A significant potential for improving the environmental balance sheet is also opened up by alternative fuels low in CO₂ emissions, to whose development and testing the Group has shown an ongoing commitment (see page 43).

Another important field of action is active noise protection. Here, the Lufthansa Group counts on investments in new aircraft and retrofitting the existing fleet with noise-reducing technologies. Moreover, the Group cooperates with partners in industry, public administrations, universities and research institutions to identify noise sources and develop perceptible noise-reduction measures, such as the quietest approach and takeoff procedures possible (see page 54).

Energy and resource management in its ground operations and catering processes is also of great importance for the Lufthansa Group. The key element in ground operations is the research into and operation of electro-mobility for taxiing and towing of aircraft (see page 50). Building management as well must satisfy clear, resource-efficient requirements when modernizing existing buildings or planning new ones. LSG Sky Chefs, the Group's catering specialist, has set itself ambitious goals for avoiding waste and using the resources needed as efficiently as possible.

Moreover, the Lufthansa Group cooperates with scientific and research institutions to further optimize environmental protection on the basis of sound data and facts. The Company has been actively involved in noise and climate research for many years (see page 57). It thus participates in research projects, such as those concerning the use of alternative fuels and propulsion systems as well as aerodynamics.

60 years of Lufthansa – 60 years of progress

Since the start of flight operations by the new Lufthansa on April 1, 1955, aviation has achieved significant advances in climate and environmental responsibility thanks to technological quantum leaps. For example, highly efficient jet engines have significantly cut kerosene consumption in comparison with earlier years. While aircraft in the 1970s needed about 12 liters of kerosene to carry one passenger over a distance of 100 kilometers, the Lufthansa Group's fleet needed a mere 3.84 liters on average for the same performance in 2014 (see page 39, Fuel consumption and emissions). At the same time, today's aircraft are 80 percent quieter than those of 60 years ago.

Over the past decades, Lufthansa has repeatedly been involved in the development of new aircraft models and has also contributed to new insights and perceptible improvements in active noise protection as a result of its commitment to research (see from page 8, *Balance 2014*, More quietly into the future). Important advances from new materials and technical improvements were also achieved in the area of reducing aircraft weight.

In February 2015, the U.S. trade publication *Air Transport World* awarded Lufthansa the title "Eco-Airline of the Year" for the second time in three years for the Company's commitment to climate and environmental protection. The reasoning: "The Lufthansa Group works not only for the most stringent goals worldwide for environmentally-conscious air transport, but it also invests a lot of time, money and effort in efficiency-improving measures."

Strategic environmental program 2020

The Lufthansa Group adopted guidelines for environmental protection as long ago as 1996 and thus assumed the role of an industry pacesetter. In 2008, the Group set up a strategic environmental program, aimed at achieving further progress in climate and environmental responsibility until 2020. Looking back shows that the Lufthansa Group has made progress in all areas. For example, the CO₂ emissions of the Lufthansa Group's aircraft per passenger and 100 kilometers fell by 12.3 percent between 2006 and 2014. Simultaneously, the Group phased 203 more efficient and quieter aircraft into the fleet between 2006 and 2014, while decommissioning 145 older aircraft over the same period. An overview of the Lufthansa Group's environmental program can be found on the next double page.

“Increasing eco-efficiency has been the Lufthansa Group's focus for many years and will continue to have our undivided attention in the future.”



Dr. Karlheinz Haag
Vice President Group Environmental Issues
Deutsche Lufthansa AG

Strategic environmental program 2020



01 / Reduce CO₂ emissions

The Lufthansa Group has increased the fuel efficiency of its passenger fleet by 12.3 percent since 2006. By 2020 the specific CO₂ emissions of the passenger fleet are to be cut by 25 percent in comparison with 2006. In addition, the Group actively supports the aviation industry's ambitious efficiency goals (see page 34).



02 / Cut emissions of nitrogen oxides

Since 1991, emissions of nitrogen oxides per tonne kilometer transported within the Lufthansa Group have already been cut by 26 percent. The Lufthansa Group specifically supports the goal set by the Advisory Council for Aviation Research and Innovation in Europe (ACARE), which calls for a further 80-percent reduction of nitrogen oxide emissions by 2020, relative to 2000. Furthermore, the Company encourages aircraft and engine manufacturers to implement low-NO_x technologies.



03 / Modernize the fleet

Investments in new aircraft and technologies are the most effective way to reduce the environmental effects of flying further. The Lufthansa Group's fleet is currently undergoing a comprehensive modernization. The Group will take delivery of 272 new aircraft with a list price of 38 billion euros by 2025 (see page 28).



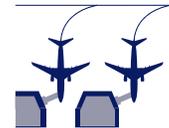
04 / Promote alternative fuels

The Lufthansa Group is committed to numerous future-oriented projects that focus on alternative fuels. On September 15, 2014, Lufthansa flight LH190 from Frankfurt to Berlin's Tegel airport was the first European scheduled flight operated with a 10-percent blend of the new sugar-based biokerosene Farnesan (see page 43).



05 / Increase operational efficiency

The Lufthansa Group consistently counts on operative measures as well to further increase fuel efficiency. This includes optimum flight routings and flight speeds, efficient aircraft capacities, programs for long-term weight reductions on board and optimum aircraft loading procedures (see page 45).



06 / Improve infrastructure

Inefficient or lacking infrastructures in the air and on the ground cause unnecessary fuel consumption. It is chiefly the task of the political process to create an appropriate framework of conditions. This applies to the need-oriented expansion of airports and above all to the introduction of the Single European Sky, an area where Lufthansa supports the implementation of technical components (see page 44).



07 / Implement emissions trading on a global scale

The Lufthansa Group advocates a globally-valid, market-based and competition-neutral system for climate protection charges and actively supports this goal through its participation in international bodies (see page 46).



08 / Continue to offer CO₂ compensation

Lufthansa, Swiss and Austrian Airlines offer their customers the option to compensate the CO₂ emissions unavoidably generated by their flights with a voluntary donation. These funds directly benefit climate protection projects (see page 68).



09 / Develop further incentive systems

The Lufthansa Group supports ecologically oriented incentive systems designed to be revenue-neutral, such as emissions-based airport fees. This scheme eases the financial strain on innovative airlines with low-emission aircraft while placing higher charges on fuel-intensive aircraft. The airports in Frankfurt, Munich, Stuttgart, Dusseldorf, Cologne, Hamburg and Hannover have already introduced such fees in relation to emissions of nitrogen oxides.



10 / Reduce aircraft noise

For many years, the Lufthansa Group has been committed to active noise protection. It invests in ever-quieter aircraft, retrofits its existing fleet and introduces noise-reducing flight procedures. This commitment has produced lower burdens on the communities surrounding the main hubs (see page 54).



11 / Improve aircraft

In order to reduce the noise emitted by current aircraft, sources of noise need to be researched in greater depth. Along with research partners, the Lufthansa Group's experts analyze these noise-generating mechanisms on a continuous basis and use their findings to develop noise-reducing solutions, such as the vortex generators for the A320 family (see page 54).



12 / Optimize flight procedures

The Lufthansa Group advances the development of low-noise flight procedures. In this context, it is important that these new procedures take into account the aspects of safety, capacities and economic viability. Therefore, all system partners – airports, air traffic controllers and airlines – must pull together (see page 45).



13 / Develop comprehensive mobility concepts

The Lufthansa Group supports – wherever ecologically and economically sensible – measures that interconnect optimally different modes of transport. One successful example is AILRail project, the optimum combination of train and plane, which has also existed in Austria since December 2014. In addition, Lufthansa has also expanded its airport bus offers.



14 / Build green

When it comes to planning, modernizing and constructing Company buildings as well, the Lufthansa Group places great emphasis on the careful use of natural resources. For example, Lufthansa Technik is planning to exceed the requirements of Germany's Energy Saving Ordinance by 30 percent when constructing its new wheel and brake workshop in Frankfurt.



15 / Expand environmental management

The department Group Environmental Issues coordinates all Group-wide goals, strategies and measures in the area of environmental care. In the years ahead, the Company is planning to expand its environmental management at all levels and to have it evaluated by external experts (see page 38).



During the reporting year, Lufthansa Cargo included its subsidiary Jettainer in the certification process for the first time.



LSG Sky Chefs operates a highly structured environmental management system.

Organization of climate and environmental management

The department Group Environmental Issues assumes the leading role in coordinating the Company-wide goals, strategies and measures in the area of climate and environmental responsibility. Additionally, all larger subsidiaries have environmental departments and commissioners or coordinators. These experts meet twice a year at the Environmental Forum to discuss current topics and new ideas.

An overview of the Group companies' environmental management systems:

In 1996, **Lufthansa Technik** became the first Group company to be certified according to the international environmental standard ISO 14001. Today, the company also operates an integrated management system, which was recertified in 2014 in accordance with the quality standards EN 9100 and 9110 as well as ISO 14001 and the international standard for job safety and health protection OHSAS 18001. All company locations worldwide will be certified by the end of 2015 (see page 47, *Balance* 2014).

Lufthansa Cargo has operated a certified environmental management system since 2008 in accordance with ISO 14001. All locations in Germany were recertified during the reporting year. For the first time, a subsidiary company – Jettainer, the specialist for stowage equipment management – was successfully included in this certification. This system is set to be expanded to locations in Europe, America and Asia in 2015 to achieve worldwide certification.

Lufthansa German Airlines is expected to begin the introduction of an environmental management system in 2015. The subsidiary's Board of Management made this decision at the end of 2014. Additionally, the Group-wide initiative "Fly Greener" was launched, which aims at reducing the quantities of waste materials on board and avoiding waste whenever possible (see page 50, Energy and resource management).

Lufthansa CityLine was recertified anew in May 2015 for its company-wide environmental management system. The airline received the certificates of the European Environmental Management and Audit Scheme EMAS for the 15th year in a row. Additionally, the company was recertified according to the international environmen-

tal standard ISO 14001. Lufthansa CityLine was the first airline worldwide to be certified according to both environmental standards.

Austrian Airlines has successfully participated in the project ÖkoBusinessPlan Wien since 2006 and thus already fulfills certain aspects of an environmental management system, which is expected to be implemented in 2016.

LSG Sky Chefs operates a highly structured and comprehensive environmental management system, which is guided by the ISO 14001 standard and the leading such system in the catering industry. Among the central elements are a binding environmental policy, goals set by region, environmental managers, a database for best-practice examples and an annual environmental report.

Since July 2014, **LZ-Catering** has offered at least one CO₂-friendly main course every day in a majority of its company restaurants. These are either vegetarian, poultry or fish dishes. By contrast, red meat does not belong in a climate-friendly meal due to its high environmental impact.

Fuel consumption and emissions

Lufthansa Group's airlines achieve new efficiency record

The Lufthansa Group again set a new efficiency record in 2014: On average, the aircraft of the passenger fleets consumed only 3.84 liters of kerosene to carry one passenger over a distance of 100 kilometers (3.91 l/100 pkm in 2013). This is an improvement of 1.6 percent compared with the preceding year. Thus, the Lufthansa Group again met the aviation industry's ambitious goal of increasing efficiency by 1.5 percent per year.



Be it Lufthansa, Swiss, Austrian Airlines or Germanwings – all Group airlines further improved their specific consumption values (see pie charts, page 40). In the same way the freight aircraft of Lufthansa Cargo flew more efficiently than ever before with a fuel consumption value of 0.183 liters/tonne kilometer. This corresponds to a 5.2 percent improvement compared with 2013. Group-wide, the efficiency in freight transport increased by 0.8 percent in 2014.

The Lufthansa Group's absolute fuel consumption increased slightly by 0.7 percent during the reporting year, while transport performance rose by 1.9 percent. Thus, the aviation company successfully continued the trend of decoupling transport performance and fuel consumption. The Group's transport performance has increased by 347 percent since 1991, while fuel consumption only rose by 182 percent (see graphic, page 40).

Specific fuel consumption Passenger transportation

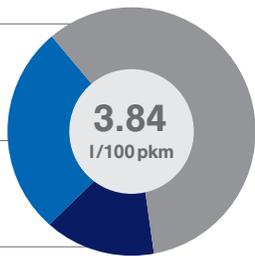
Active fleet in 2014, in liters per 100 passenger kilometers (l/100 pkm)
Definitions of traffic areas ● Long-haul more than 3,000 km ● Medium-haul 800 to 3,000 km ● Short-haul under 800 km

Group fleet

Long-haul
(59%)
3.45 l/100 pkm

Medium-haul
(26%)
3.99 l/100 pkm

Short-haul
(15%)
6.32 l/100 pkm



Average specific fuel consumption in l/100 pkm (center of the circle) and proportion of the entire passenger fuel consumption of the active fleet contributed by each traffic area (segments of circle) in 2014

Lufthansa

Long-haul
(66%)
3.60 l/100 pkm

Medium-haul
(18%)
3.88 l/100 pkm

Short-haul
(16%)
6.11 l/100 pkm



Germanwings

Medium-haul
(100%)
4.18 l/100 pkm



Specific fuel consumption of passenger transportation compared

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

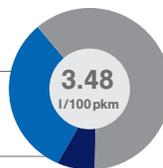
	2014	2013	Changes in %
Group fleet	3.84	3.91	-1.6
Lufthansa	3.91	3.98	-1.8
Swiss	3.48	3.54	-1.5
Austrian Airlines	3.87	3.93	-1.7
Germanwings	4.18	4.22	-0.9

Swiss

Long-haul
(61%)
3.03 l/100 pkm

Medium-haul
(30%)
4.05 l/100 pkm

Short-haul
(9%)
8.56 l/100 pkm

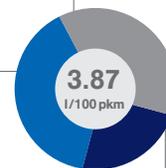


Austrian Airlines

Long-haul
(37%)
2.92 l/100 pkm

Medium-haul
(38%)
4.08 l/100 pkm

Short-haul
(25%)
6.38 l/100 pkm



Specific CO₂ emissions of passenger transportation

Active fleet in 2014,
in kilograms per 100 passenger kilometers (kg/100 pkm)

	Long-haul	Medium-haul	Short-haul	Overall average
Group fleet	8.69	10.07	15.92	9.69
Lufthansa	9.08	9.77	15.41	9.85
Swiss	7.63	10.21	21.57	8.78
Austrian Airlines	7.36	10.28	16.07	9.75
Germanwings		10.55		10.55

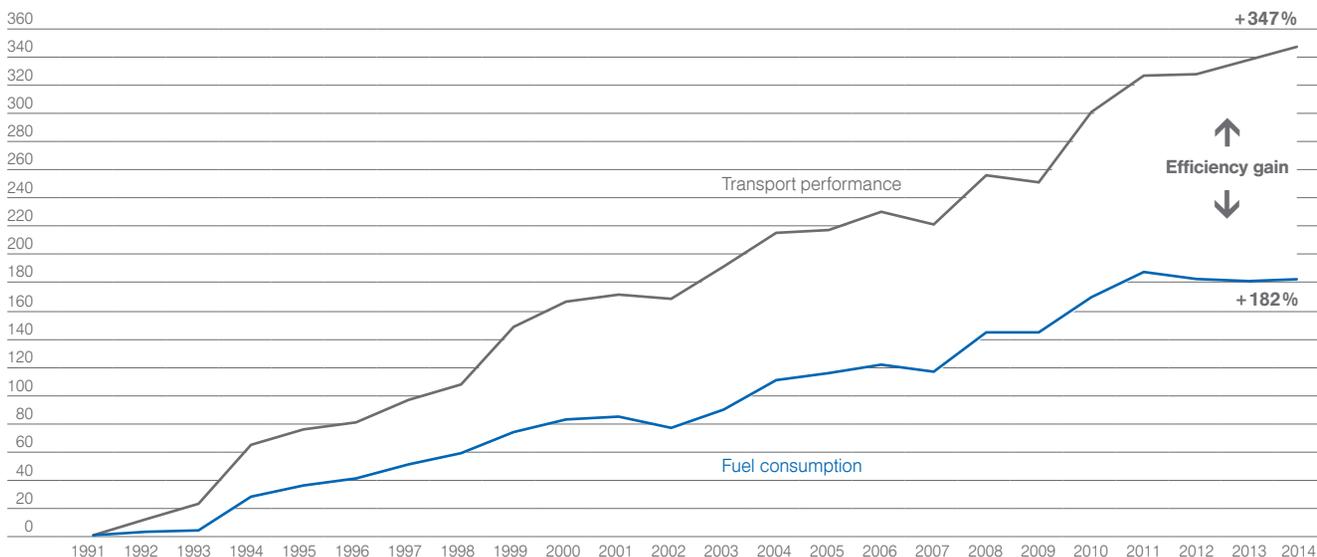
Fuel Dumps

Active fleet in 2014

	2014	Changes compared to 2013
Events, total	16	-15
thereof medical reasons	7	-6
technical reasons	8	-7
other reasons	1	-2
Quantity, total	513t	-45.2%

Decoupling of transport performance and fuel consumption

Change compared to 1991 in percent, values for the fleet of the Lufthansa Group



Fuel consumption¹

2014, in tonnes				
	Passengers	Freight	Total	Share
Scheduled flights^{2,3}				
Lufthansa	4,701,726	1,588,703	6,290,429	70.7%
Germanwings	372,027	0	372,027	4.2%
Swiss	1,094,037	402,411	1,496,448	16.8%
Austrian Airlines	577,847	88,992	666,839	7.5%
			8,825,774	99.2%
Third parties ⁴	49,764	1,754	51,518	0.6%
Other flights⁵			22,668	0.3%
All flights			8,899,929	100.0%

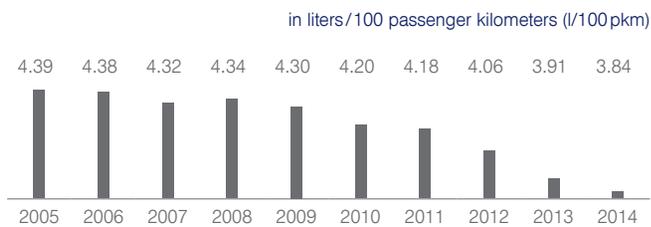
Emissions^{3,6}

2014, in tonnes						
	Passengers	±2013	Freight	±2013	Total	±2013
CO₂	21,248,759	+1.1%	6,552,333	-0.6%	27,801,092	+0.7%
NO_x	100,478	+0.7%	31,779	+1.5%	132,257	+0.9%
CO	15,918	+0.8%	3,333	+4.5%	19,251	+1.5%
UHC	1,569	-0.9%	383	-5.8%	1,952	-1.9%

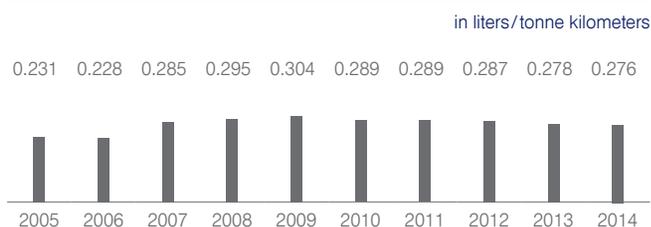
Share of third parties⁴

2014	
Flights	1.7%
Passengers	1.0%
Tonne kilometers transported, TKT ⁷ (tkm)	0.3%
Fuel consumption (tonnes)	0.6%
CO ₂ emissions (tonnes)	0.6%

Specific fuel consumption Passenger transportation



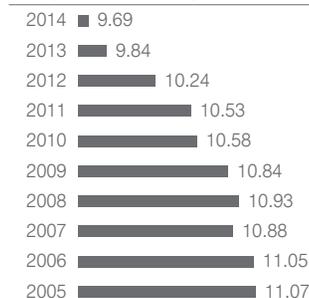
Specific fuel consumption Freight transportation⁸



Passenger transportation

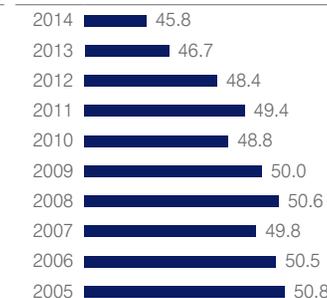
CO₂ emissions

in kilograms/100 passenger kilometers



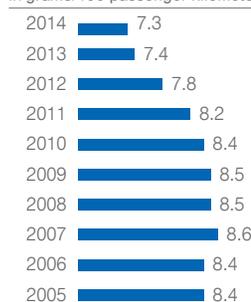
NO_x emissions

in grams/100 passenger kilometers



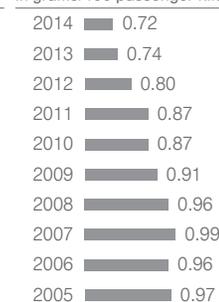
CO emissions

in grams/100 passenger kilometers



UHC emissions

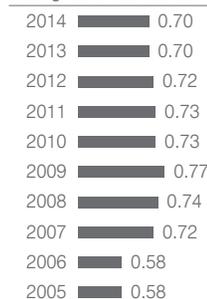
in grams/100 passenger kilometers



Freight transportation⁸

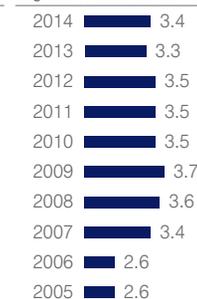
CO₂ emissions

in kilograms/tonne kilometers



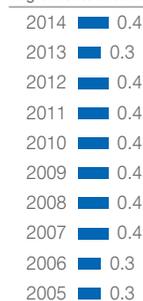
NO_x emissions

in grams/tonne kilometers



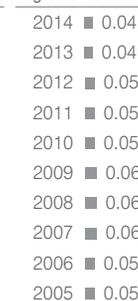
CO emissions

in grams/tonne kilometers



UHC emissions

in grams/tonne kilometers



¹ Actual fuel consumption in tonnes from flight operations, based on all flight events under the respective operative flight number. Recorded are consumption values from gate to gate, i.e. including taxiing on the ground, holding patterns, and detours in the air.

² Scheduled flights, charter flights.

³ For the reporting year 2014, the following companies have been included in *Balance*: Lufthansa (incl. Lufthansa CityLine, Air Dolomiti and Eurowings), Germanwings, Swiss (incl. Edelweiss Air), Austrian Airlines and Lufthansa Cargo. Excluding the services of third parties as the Company can influence neither their performance nor the equipment operated (see table Share of third parties).

⁴ Includes flights operated by airlines that do not belong to the Group, which carry out services on Lufthansa's behalf at short notice, e.g. in the event of capacity bottlenecks.

⁵ Ferry flights, special flights, training flights, test flights, aborted flights.

⁶ Absolute emissions in tonnes resulting from flight operations (all scheduled and charter flights). Recorded are consumption values from gate to gate, i.e. including taxiing on the ground, holding patterns, and detours in the air (see notes on page 113).

⁷ Excludes road feeder service and partial capacity chartered by Lufthansa Cargo, as no fuel consumption and emissions values are available for this performance.

⁸ On the basis of freight tonne kilometers (FTKT), transported on both cargo and passenger aircraft.



A view of the Pier A-Plus at Frankfurt Airport

New department Operations Efficiency & Strategy

Fuel efficiency is and will remain a central action field for the Lufthansa Group, as the cost of kerosene is the Company's largest individual cost item. Therefore, the Group has an economic and ecological interest in using the kerosene required as efficiently as possible.

Since July 1, 2014 fuel efficiency has been the responsibility of the new department Operations Efficiency & Strategy, headed by Flight Captain Jens Ritter. Under this organizational umbrella, the department Fuel Efficiency Lufthansa Group steers all topics related to fuel efficiency Company-wide. Its goal is to bundle the forces of innovation and know-how to achieve an even more efficient use of kerosene at the Group level and to establish an innovation management system at the same time.

One of the department's tasks is to ensure the continuous exchange of ideas between the Group's airlines and other companies

as well as with partners across the Star Alliance. Therefore, the Company's fuel experts meet every two months to exchange knowledge in the context of the Fuel Efficiency Group (FEG) meetings, while FEG members will receive new information about fuel efficiency and are updated about new ideas, measures and goals.

According to current plans, fuel efficiency measures are to contribute 148 million euros to the Lufthansa Group's 2015 result. Lufthansa German Airlines is to have a share of 93 million euros in this effort.

So far, fuel efficiency experts have already developed more than 1,300 ideas and projects in the areas of flight operations, network planning, ground processes, aerodynamics, reduction of flight weight and technical optimization of performance. In the reporting year alone, the Group implemented 145 related projects, which takes the number of projects in implementation to more than 266. Their progress is monitored by means of the ProFuel database.

Four pillars for climate protection

The basis for the Lufthansa Group's fuel efficiency activities and further successes in improving its environmental balance sheet is the established four pillar strategy developed by the aviation industry for climate protection purposes. This strategy interlinks different measures with relevance for the environment (see graphic on page 43). Its scope ranges from technological progress and improved infrastructure to operational measures and economic measures.

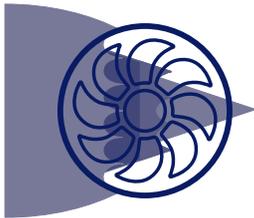
Pillar 1: Technological progress

Efficient aircraft and engine technologies
Investments in modern and efficient aircraft and engine technologies are the most effective way to further reduce fuel consumption. Currently, the Lufthansa Group is in the process of implementing the largest fleet modernization program in its history (see page 28).

Four pillars for climate protection

1

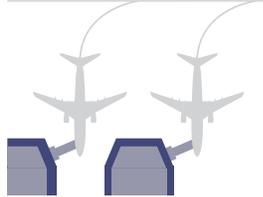
Technological progress



- Innovation in aircraft and engine technologies
- Alternative fuels

2

Improved infrastructure



- Improved use of airspace
- Airport infrastructures adapted to needs

3

Operational measures



- More efficient aircraft sizes
- Optimal flight routes and speeds
- Optimized processes on the ground

4

Economic measures



- A global, sensibly designed, market-based system for reducing emissions to complement the other three pillars

Four pillars for climate protection: The Lufthansa Group is constantly increasing its fuel efficiency by applying the industry's four-pillar strategy for climate protection. In pursuit of technological progress, it is continuously investing in the newest generation of fuel-efficient aircraft as well as testing and using alternative fuels in flight operations. In addition, it strongly supports infrastructure improvements, such as the optimum use of airspace and the needs-based expansion of airport capacity. Moreover, it is taking operational measures such as using more efficient aircraft sizes, introducing improved procedures on the ground, making better use of aircraft capacity and flying optimum routes to increase fuel efficiency in flight operations. To complement the three pillars already mentioned, it advocates the use of global market-based economic measures.

Alternative fuels

The use of alternative fuels is another important lever for reducing air transport's CO₂ emissions over the long-term. The Lufthansa Group continuously works on the further development of these environmentally friendly fuels. It is actively involved in research projects for this purpose and in numerous initiatives such as aireg (Aviation Initiative for Renewable Energy in Germany) and SAFUG (Sustainable Aviation Fuel Users Group). The research work also includes testing newly-certified alternative fuels in regular flight operations.

Thus, on September 15, 2014 Lufthansa flight LH190 from Frankfurt to Berlin Tegel became the first European scheduled flight using fuel containing 10 percent of the sugar-based biokerosene Farnesan. This flight was preceded in fall 2013 by a rig test

at Lufthansa Technik in Hamburg, which was part of the EU project Blending Study. It proved that the emissions characteristics could be improved by adding Farnesan. In April 2014, the production of Farnesan was certified as being sustainable by the Roundtable on Sustainable Biomaterials (RSB). Additionally, in June 2014 the fuel was certified for blending with crude-oil based kerosene.

Likewise, the Lufthansa Group, together with the Bundeswehr Research Institute for Materials, Fuels and Lubricants (WIWeB), conducts research in the project Blending Study concerning the blending properties of conventional fossil kerosene and different new biokerosenes (e.g. alcohol-to-jet, see page 56, *Balance* 2014). This research was concluded in February 2015 with an overview report of the blending properties of all

biokerosenes certified or undergoing certification (published at www.HBBA.eu).

Moreover, an estimated 5 percent of the Lufthansa Group's fuel requirements at Oslo Airport is set to be covered by biokerosene from late 2015. The supplier Air BP will feed the sustainably produced and certified biofuel into the fuel supply system at Oslo Airport. The launch of this project was originally planned for March 2015. A total of about 5,000 Lufthansa, Swiss, Austrian Airlines, Germanwings and Brussels Airlines flights will then be flying on a biokerosene mixture. For the Lufthansa Group, this is the next step from its previous test flights as part of the recently concluded burnFAIR Project (see page 67, *Balance* 2012) toward the use of alternative fuels in regular flight operations.



On September 15, 2014, Lufthansa flight LH190 from Frankfurt to Berlin's Tegel airport was the first European scheduled flight operated with a 10-percent blend of the new sugar-based biokerosene Farnesian.

Pillar 2: Improved infrastructure

Single European Sky

The standardized European airspace, or Single European Sky (SES), is planned to be implemented by 2020 and is the largest climate protection project in European aviation. Currently, supervision of the EU's airspace is the fractured task of 27 different national air traffic control systems and more than 650 sectors monitored by about 60 control centers. The result is that flights in Europe often cannot take a direct route and have to fly a "detour" of 42 kilometers on average. By contrast, the SES is intended to steer traffic flows significantly more efficiently.

This would help Lufthansa alone to cut its annual kerosene consumption by about 270,000 tonnes. Overall, airlines would emit up to 10 percent less CO₂.

To advance the SES, the EU is providing 3 billion euros. These funds go to airlines, airport operators and air traffic control organizations, so that they can jointly modernize Europe's air transport management. On December 5, 2014, the EU Commission signed a partnership agreement to this end with the key participants of air transport management assembled in the consortium SESAR Deployment Alliance.

In 2008, the EU Commission and the European air traffic control agency Eurocontrol

launched the Single European Sky Air Traffic Management Research Program (SESAR) with the aim of realizing the standardized European airspace by 2020. Currently, the companies of the Lufthansa Group provide their expert knowledge from different specialty areas in more than 50 SESAR projects. The spectrum ranges from flight route planning to operations centers and training divisions to information technology and finances.

For example, the specialists at Lufthansa German Airlines and Swiss participate in the EU research project Free Solutions, which helps determine how more direct and more flexible flight routes can be realized in Europe. The airspace analyzed stretches

from France to Germany, Switzerland and Italy to Malta. Another project in which Lufthansa Passenger Airlines and Swiss participate is iStream. It is working on improving the approach management at Charles de Gaulle Airport in Paris and at Zurich Airport in order to avoid late arrivals and unnecessary holding patterns in the air by optimizing planning, thereby reducing the related fuel consumption. New procedures in this context are tested in "live trials" in actual flight operations. Concepts for optimized navigation and approach procedures are applied under everyday conditions in flight operations, aiming at transferring future-oriented technologies from SESAR into operation without delay. Furthermore, the Lufthansa Group airlines are participating in a new consortium within the SESAR framework to develop optimized descent profiles for the route section be-

tween cruising altitude in the upper air-space and the airports' terminal control areas by the end of 2016. The goal is to increase the vertical flight efficiency and environmental compatibility without ignoring capacity aspects. For this purpose, the consortium airlines are conducting test flights in scheduled operations, among other measures. In 2015, Lufthansa, DFS Deutsche Flugsicherung and Eurocontrol received the "IHS Jane's ATC Award" in the environmental category for their project "Free Route Airspace Maastricht and Karlsruhe" (FRAMaK).

Apart from an improved utilization of air-space, it is also important to optimize conditions on the ground. There, it is above all adapting airport infrastructures to actual needs that allows efficient flight operations.

Pillar 3: Operational measures

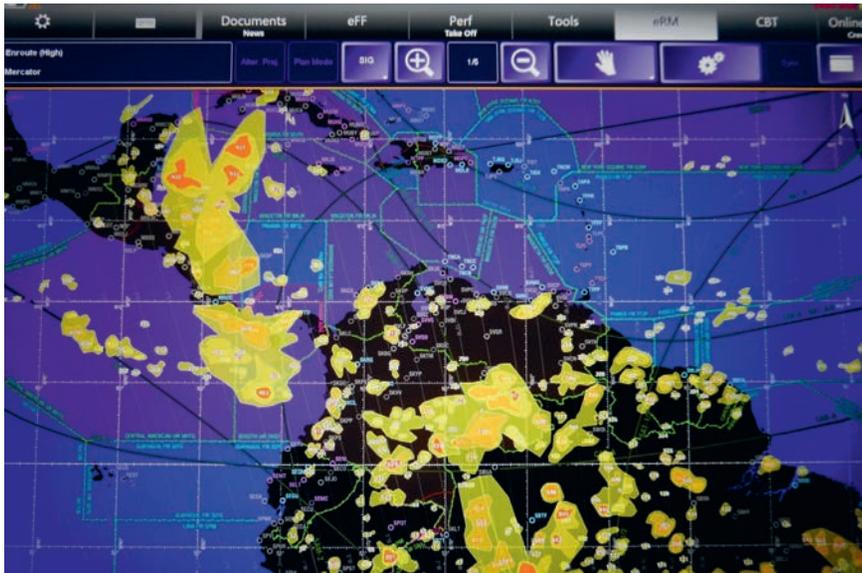
Among the operational measures are the deployment of efficiently-sized aircraft, the determination of optimum flight routes and flight speeds, and improvements of processes on the ground. The experts in the Lufthansa Group's Operations Efficiency & Strategy department are working on numerous projects aimed at helping to use kerosene ever more efficiently, as an overview of the areas emphasized in 2014 illustrates:

Optimum flight routes and flight speeds

The Lufthansa Group airlines are currently introducing software to analyze flight data, called OMEGA (Operations Monitoring and Efficiency Gap Analyzer). In the future, it will



The largest climate protection project in European aviation is the creation of a standardized air space above Europe. The Single European Sky (SES) would help Lufthansa alone to reduce its annual fuel consumption by about 270,000 tonnes.



Prototypical display on the Electronic Flight Bag (EFB)

allow the experts at the Fuel Efficiency department to analyze the current levels of fuel consumption even more precisely and to derive further optimization options for processes and flight routes. The new tool will allow the subsequent comparison of planned, actual and optimum values for different flight phases, so that data from actual flight operations can be used to improve the efficiency of future flights.

E-enabling program

The Lufthansa Group uses the e-enabling program to coordinate different digitalization projects, including the EFB 2.2 project, the rollout of the third generation of the Electronic Flight Bag (EFB). With EFB 2.2 in 2014, the aviation company created the necessary infrastructure aboard the aircraft in its fleet to allow the digitalization of all processes and the introduction of the entirely paperless cockpit later on.

Another new software being deployed is electronic Flight Folder (eFF), which digitalizes and archives all briefing processes and strategic flight processes. Moreover, the Flight Path Optimizer allows long-haul crews calculations to optimize a flight's

trajectory. Tests conducted to date have proven a conservation potential of more than 250 liters of kerosene per long-haul flight.

Pillar 4: Economic measures

Among the economic incentive systems and measures that the Lufthansa Group advocates is a globally valid, market-based and competition-neutral system for climate protection charges. In October 2013 the International Civil Aviation Organization (ICAO), a United Nations agency, developed a globally valid system for climate charges by 2016, which is to become effective by 2020. This makes the aviation industry a front-runner with regard to a globally valid climate protection agreement. By contrast, there is the EU emissions trading system for civil aviation, which creates a significant competitive disadvantage for European network airlines (see page 59, *Balance* 2014).

Further examples from the Group companies

The overview on the following pages presents a selection from the multifaceted activities implemented by the Group companies to reduce fuel consumption even further.

Lufthansa

An optimized approach management at London's Heathrow Airport has ensured since 2014 that Lufthansa aircraft can avoid holding patterns during times of dense traffic. This type of cooperation with neighboring air traffic control centers – and thus across air space boundaries – reduces kerosene consumption and is an initial step in the direction of cross-border arrivals management.

In September 2014, Lufthansa introduced the altered takeoff procedure "1,000-foot acceleration" in Germany. The airline expects to conserve more than 3,000 tonnes of kerosene per year, which would reduce CO₂ emissions by about 10,000 tonnes.

Likewise, Lufthansa optimized the vertical approach profile at Munich Airport. Continuous Descent Operations (CDO) make approaches more economical, which helps the airline conserve about 600 tonnes of kerosene per year. That the Continuous Descent Approach indeed reduces kerosene consumption was confirmed by the results obtained by the Task Group Optimized Flying, which were published at the end of 2014. This management committee joins the Federal Association of German Airlines (BDF) and DFS Deutsche Flugsicherung (German air traffic control) to develop solutions that help reduce costs, fuel burn and CO₂ emissions. Airlines and DFS are planning to continue the success-

ful cooperation, to increasingly use CDO in regular operations and to expand this approach procedure to additional airports.

At the same time, Lufthansa works continuously on further reducing the weight of its aircraft. One of these measures was to adapt the number of magazines offered on board closer to actual demand in the continental fleet's Business Class cabins. From February 2015, the compactors for plastic waste aboard the Lufthansa Airbus A380s started being removed and replaced with two significantly more lightweight waste trolleys. Another measure: By the end of 2015 the Company will replace the carpets fitted in aircraft cabins with a more lightweight and more robust type. Additionally, the Group-wide initiative "Fly Greener" is working for a reduction of waste volumes aboard, not only to conserve resources, but also to further reduce weight (see page 53, Energy and resource management).



Jörg-Stefan Fritz, Team Manager Fuel Efficiency Lufthansa German Airlines, and Jens Ritter (right), Director Operations Efficiency & Strategy, with flight attendants at the "Fly Greener" information stand at Lufthansa in Frankfurt.

Swiss

In fall 2014, Swiss put a new flight planning software into operation. In the "Godwit" project the participating experts develop new planning options and strategies on the basis of current technologies, which is expected to lower fuel consumption by up to 13,000 tonnes per year from 2017. For example, the new software allows the more efficient use of runways and more flexible flight routings, among other features. It also helps pilots to react even better to changing weather conditions in flight.

Moreover, with Strategic and Tactical Flight Steering, Swiss developed a procedure that guides the morning arrivals of long-haul flights at Zurich Airport with down-to-the-minute precision. During a flight's planning phase an arrival time is assigned to the pilots, to which they have to adhere exactly to avoid holding patterns. Operations control monitors the arrival time on the basis of



Information concerning the approach sequence for the cockpit crew.



Swiss has developed a new process to calculate the optimum arrival times of its long-haul flights in Zurich on a daily basis.



Lufthansa Cargo has five Boeing 777Fs in its fleet. The "Triple Seven" is considered the most efficient and quietest aircraft in its class.



Austrian Airlines' Fokker fleet has followed the modified takeoff procedure "1,000-foot acceleration" since June 2013.

the latest data from the aircraft in flight and adapts it if needed. In this way Swiss conserves 500 tonnes of kerosene per year and avoids 1,500 tonnes of CO₂ emissions. The new method optimizes the assignment of time windows practiced so far in the context of the approach procedure "Greener Wave" (see page 72, *Balance 2012*) and received a Lufthansa Group Innovator Award in 2014.

At New York's John F. Kennedy Airport (JFK) Swiss developed ways to reduce the energy consumption and running times of auxiliary power units (APUs) during ground handling in the framework of a Kaizen workshop. The use of ground power units (GPUs) was extended for this purpose; a method that has already been successfully implemented at Zurich Airport. The insights gathered at the workshop are to become the basis for a new standard that can be applied at other airports as well.

Austrian Airlines

In Vienna the airport, air traffic control, Austrian Airlines and other carriers, as well as handling operators have coordinated their activities in the framework of Airport CDM (Collaborative Decision Making) for many years. Standardizing processes is aimed at increasing punctuality and reducing fuel consumption.

The Fokker fleet operated by Austrian Airlines has applied the modified takeoff procedure "1,000-foot acceleration" since June 2013. Optimized thrust reduction and acceleration conserve kerosene and thus reduce CO₂ emissions.

Lufthansa Cargo

Above all by operating the new Boeing 777F freighters, Lufthansa Cargo now flies more efficiently than ever before. Since 2005, the Company has successfully increased its fuel efficiency by 15.8 percent and thus already achieved over half of its long-term goal of 25 percent.

In order to reduce the weight of loaded aircraft perceptibly, Lufthansa Cargo has introduced freight containers made from ultra-light composite materials. Furthermore, the freight specialist has continuously optimized the loading of its Boeing MD-11F aircraft in recent years. Distributing the weight and volume of cargo optimally improves aerodynamics and consequently lowers fuel consumption by 494 tonnes per year.

In addition, since April 2014 Lufthansa Cargo has used empirical values to determine with greater accuracy the quantity of kerosene its aircraft need for taxiing. The ensuing lower takeoff weights have cut fuel consumption by about 270 tonnes per year. The freight airline also saves fuel by using updated taxiing times and an optimized selection of runways at Frankfurt Airport.

Yet the most significant contribution to fuel conservation in the years ahead will come from fan blade recontouring. The leading-edge contours of the thrust-producing engine fan blades are progressively eroded in daily operations. Polishing these contours improves the fan blades' aerodynamics, which in turn increases an engine's efficiency by 0.4 percent. As a result, Lufthansa Cargo will be able to conserve about 1,600 tonnes of kerosene per year.



Cyclean®, the water-based engine wash developed by Lufthansa Technik, saves airlines time, maintenance costs and above all fuel. The company is researching the use of alternative blasting materials, such as CO₂ dry ice pellets, to make engine cleanings possible in permafrost regions as well.

Lufthansa Technik

For many years, Lufthansa Technik has worked on making flying more efficient through its innovations. In this spirit the company developed the Cyclean® engine wash which saves time, maintenance costs and above all fuel. At the beginning of 2015 the 40,000th engine wash was carried out. The water-based procedure can now be used in temperatures down to -10 degrees Celsius thanks to further development (see page 10, From "sharkskin" to TaxiBot: Innovations at Lufthansa Technik).

Another example of an innovative idea from Lufthansa Technik that has found its way into everyday aircraft maintenance is the overhaul of turbine blades in CFM56-5C and CF6 engines. The background is that the turbine blades' edges roughen with time as a result of erosion. Their performance decreases due to wear, while kerosene consumption increases. The overhaul of these parts involves computer-guided abrasive finishing of the edges at Lufthansa Technik, so that they function as efficiently as new ones, which saves the airline the expense of replacement blades.

In the framework of the research project FAMOS, Airbus and Lufthansa Technik, in

cooperation with other partners, are developing a highly automated system for cleaning, stripping, painting and applying aerodynamic aircraft surfaces by 2017. The surfaces, which are modeled on the structure of sharkskin, save about one percent of kerosene, lighten the burden on the environment and lower operating costs.

Lufthansa CityLine

As the first Group airline to do so, Lufthansa CityLine systematically uses actual flight data to improve efficiency in flight operations. Among these in-flight data are location information such as longitude and latitude as well as central parameters such as altitude, speed and fuel consumption. Compiled, this data helps the airline to operate flights more efficiently. To accomplish this goal, intelligent software interlinks three dimensions: the characteristics of the planned flight, the actual flight and the most economical flight. On basis of this broad scope of data, flight routings can be further optimized or the required quantity of reserve fuel can be calculated even more accurately, for example.

Energy and resource management

Numerous initiatives for greater efficiency

Sustainable business practices and the sparing use of natural resources are not contradictions for the Lufthansa Group. Over the past years, the Group has steadily delivered impulses for innovations which benefit not only the environment, but also the entire aviation industry. In 2014, the Lufthansa Group again advanced numerous initiatives to further increase its energy and resource efficiency on the ground and in the air, as the following examples from everyday practice show.

Environmentally compatible air transport starts on the ground. Therefore, an effective lever for more energy and resource efficiency is researching and implementing

electro-mobility for aircraft taxiing and towing on the apron – an area in which the Group is active in numerous ways. All initiatives support the goals of the International

Air Transport Association (IATA) to reduce CO₂ emissions on the basis of the established four pillar strategy (see page 43).



The TaxiBot hybrid aircraft tug allows pilots to tow the aircraft to the runway under their own command by using the Pilot Control Mode.



En route to green handling: E-PORT AN

The Lufthansa Group is a partner of the E-PORT AN initiative, which is committed to a sustainable reduction of emissions at the Frankfurt aviation hub. The goal in the area of aircraft handling is to replace mobility supported by internal combustion engines with electro-mobility whenever it is sensible and possible. For this purpose, E-PORT AN considers all ground traffic, meaning aircraft taxiing to their takeoff and gate positions, as well as the movements of more than 1,000 vehicles related to ground services, taking passengers, freight and catering to aircraft.

In addition to the Lufthansa Group, the airport operator Fraport AG, the state government of Hessen and the Model Region Electro-Mobility Rhine-Main participate in E-PORT AN. The initiative, which was awarded the "Lighthouse project E-mobility" by Germany's federal government in 2013, is supported by the Federal Ministry of Transport and Digital Infrastructure. Technische Universität Darmstadt and others provide the scientific supervision of this joint project. In April 2014, E-PORT AN won the renowned GreenTec Award in the aviation category. The Lufthansa Group participates with the following projects in E-PORT AN:

TaxiBot: Hybrid aircraft tug receives EASA certification

An important contribution to reducing fuel consumption and emissions in airport settings comes from the TaxiBot. This diesel-electric hybrid tug can be controlled from the cockpit and maneuvers aircraft to



The eSchlepper diesel-electric hybrid aircraft tug is particularly suited for environmentally friendly maintenance and positioning tows of large passenger aircraft.

the runway for takeoff without thrust from their engines (see page 62, *Balance* 2014). In 2014, the European Aviation Safety Agency (EASA) certified this innovative vehicle. One year after the start of the test phase, three TaxiBots are in operation in regular handling settings at Frankfurt Airport. TaxiBot is based on technology patented by Israel Aerospace Industries (IAI), in whose development Lufthansa LEOS participated. In early 2015, the subsidiary of Lufthansa Technik and IAI signed a declaration of intent for the certification tests with wide-body aircraft. Initial tests with a Boeing 747-400 are expected to begin in January 2016 in Frankfurt.

eSchlepper: First prototype arrived in Frankfurt

The eSchlepper is also a towbarless aircraft tug equipped with diesel-electric hybrid drive. It is particularly intended for environ-

mentally friendly maintenance and positioning tows of large passenger aircraft such as the Airbus A380 or the Boeing 747-8. It is expected that the eSchlepper will help cut the related CO₂ emissions by 70 percent. Simultaneously, fuel costs are to fall by more than 60 percent and maintenance costs by more than 50 percent. In May 2015, Lufthansa LEOS received the first prototype of the tractor it developed jointly with Kalmar Motor AB.

Furthermore, the Lufthansa Group is driving the projects eTaxi and eLift forward. The latter is a future-oriented catering lift truck that is being developed under the supervision of Lufthansa Sky Chefs on the basis of an electrically powered truck chassis (see from page 61, *Balance* 2014).

www.e-port-an.de

Other projects

In addition to its involvement in E-PORT AN, the Lufthansa Group participated in other initiatives to promote electro-mobility in 2014. For example, LSG Sky Chefs now operates ten gas-driven lift-trucks at Frankfurt Airport that are based on the Mercedes-Benz Econic model with Natural Gas Technology (NGT). Moreover, the Lufthansa subsidiary ensures that newly acquired vehicles meet current emissions standards (see page 83, *Balance* 2013). And Lufthansa Cargo acquired another ten energy-efficient electric forklifts of the latest generation during the reporting year (see page 64, *Balance* 2014).

First e-charging station for employees with electric cars

Since early 2015, Lufthansa Group employees in Frankfurt benefit from a charging station for their electric cars. This has become possible thanks to a pilot project in which Lufthansa cooperates with Süwag, RWE and Goethe University. The new e-filling station offers two charging bays. Accompanying workshops ensure the link between science and practice. The pilot project will run until December 2015.

With the intention of facilitating the transfer of know-how and best-practice examples within the Company, the Lufthansa Group set up an internal energy forum in February 2014. The event is aimed at energy experts from all Company areas and in the future will be held on a regular basis. In addition, the Lufthansa Group's environmental experts regularly exchange information at the Company-wide Environmental Forum. In January 2015, participants discussed the new EU Energy Efficiency Directive, among other items (see insert at right).

Emphasis on waste management

As the worldwide market leader in airline catering and the management of all in-flight services, LSG Sky Chefs takes advantage of all options to recycle as much waste material as possible and to reduce waste quantities. The base for waste management is a comprehensive system of performance indicators (see page 63, *Balance* 2014).

Recycling on the ground

By implementing the "Zero Waste to Land-fill" (ZLF) program the Lufthansa subsidiary aims at recycling 100 percent of its waste materials at all 41 stations in the United

States by 2015 (see page 63, *Balance* 2014). By the end of 2014, 35 LSG locations had recycled a total of 11,469.54 tonnes of waste materials. Since the start of ZLF in spring 2013, this raised the overall total to 20,163.81 tonnes of waste.

Recycling on board

National laws and local regulations determine worldwide how waste materials are handled on board and on the ground. LSG Sky Chefs aims at exceeding legal requirements and reducing waste quantities to the unavoidable minimum. The Company distinguishes three types of waste worldwide: recyclable on-board waste materials, non-recyclable on-board waste materials and other waste materials (see page 84, *Balance* 2013).

Effects of the EU Energy Efficiency Directive

On December 4, 2012, the EU Energy Efficiency Directive (EED) took effect. It is to be ratified by EU member states to become national law. In Germany, this step followed in April 2015. With help from the EED, the European Union aims to lower the consumption of primary energy by 20 percent by 2020. To this end, non-SMEs (small and medium-sized enterprises) in Germany are obligated to carry out energy audits by December 5, 2015, and subsequently at least every four years. This obligation applies to Deutsche Lufthansa AG and – depending on the legal requirements in other EU countries – also to EU subsidiaries in which the Group holds at least a 25-percent stake. Group-wide, this affects about 250 companies. In Germany, exemptions from energy audits apply to those companies that already have a certified energy management system according to ISO 50001 or an environmental management system according to EMAS III or will have started one by December 2015. At Lufthansa, the timely implementation of the Energy Efficiency Directive is managed by the energy experts of the department Group Infrastructure Commercial in cooperation with the department Group Environmental Issues and the business segments.



Initiative “Fly Greener”

Concern for the environment was also the inspiration for the Group-wide initiative “Fly Greener”, which was launched in Munich in 2014 by Munich-based Cabin Crew Manager Rebecca Emmerling. “Fly Greener” aims at avoiding waste in flight operations in particular and considers the entire waste chain – from loading to separating waste materials on board to disposing of waste on the ground. In addition, awareness of how to conserve resources is to be further raised among flight attendants by means of communications and “Fly Greener”

Ambassadors. To generate synergy effects during the implementation phase, the Group airlines regularly exchange information on the subject. The initiative also maintains close contact with the department Operations Efficiency and Strategy. For example, on test flights between March 17 and April 30, 2015 in Munich, “Fly Greener” checked the returns of beverages in Economy Class together with LSG Sky Chefs on two selected routes. The results are to provide input for further optimization measures.

Waste separation saves disposal costs

Remarkable ecological and economic successes are also achieved by Lufthansa Cargo. The logistics specialist managed to cut its waste disposal costs from previously up to 80,000 euros per year to zero. This is due to consistent waste separation, which generates higher revenues from materials recycling. Active recycling has also been a long tradition at Lufthansa Technik. The Company has separated waste materials for more than 20 years and achieves a recycling quota of more than 70 percent.



The “Fly Greener” innovation workshop 2015 was held in green surroundings at the Allianz Arena in Munich.

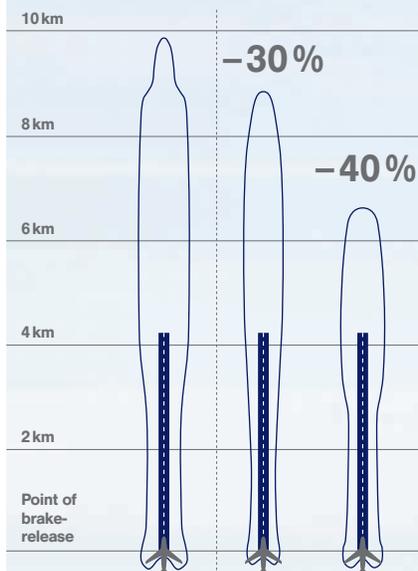
Active noise protection

Comprehensive commitment produces audible successes

The airlines of the Lufthansa Group set milestones worldwide for responsible mobility – also when it comes to active noise protection. They are active in many ways to continuously reduce the inevitable noise emissions in the vicinity of airports.

Noise contours compared (B 747-400 vs. B 747-8 and B 777-9X)

For each of the contours shown, the intensity of sound at takeoff is 85 decibels.



	Boeing 747-400	Boeing 747-8	Boeing 777-9X
MTOW	395 t	442 t	351 t
First flight	1989	2012	~2020

The Lufthansa Group's activities span the entire scope from investments in the most modern aircraft to retrofitting of the existing fleet with noise-reducing technologies to noise research. In addition, there is the development of new flight procedures for approach and departure in cooperation with system partners as well as a constructive dialogue with people living near airports and other interest groups (see page 8, *Balance 2014, More quietly into the future*).

The largest fleet modernization program in the history of the Lufthansa Group (see page 28) contributes significantly to lowering noise emissions and lessening the burden on people living near airports. 602 of 605 aircraft in the Lufthansa Group's active fleet fulfill the stringent requirements of the Chapter 4 noise limits of the International Civil Aviation Organization, which have been in force since 2006 for new aircraft (see page 114).

Vortex generators: Retrofit for the A320 fleet

At the beginning of February 2014, Lufthansa became the first airline worldwide to start operations with a new Airbus A320 equipped with so-called vortex generators. Since then, all newly delivered aircraft have been equipped with this part, which reduces noise by up to 5 decibels during the approach phase between ten and 17 kilometers before touchdown. At greater distances from an airport the effect is even more pronounced, according to Airbus. Aircraft in the Airbus A320 family have two fuel-tank pressure equalization vents on the underside of each wing. In flight, the air flow passing over these cavities generates unpleasant whistling sounds, similar to blowing across the opening of a glass bottle. Vortex generators installed in front of

The noise footprint of a Boeing 747-8 on takeoff is, despite its 10% higher maximum takeoff weight, about 30% smaller than that of the Boeing 747-400. The Boeing 777-9X ordered by Lufthansa will have a noise footprint that is about 40% smaller than that of the Boeing 747-400, according to the manufacturer's specifications. The chart shows the 85 dB maximum level contours for a takeoff according to standard Lufthansa takeoff procedures (modATA) and with the takeoff weights as shown.

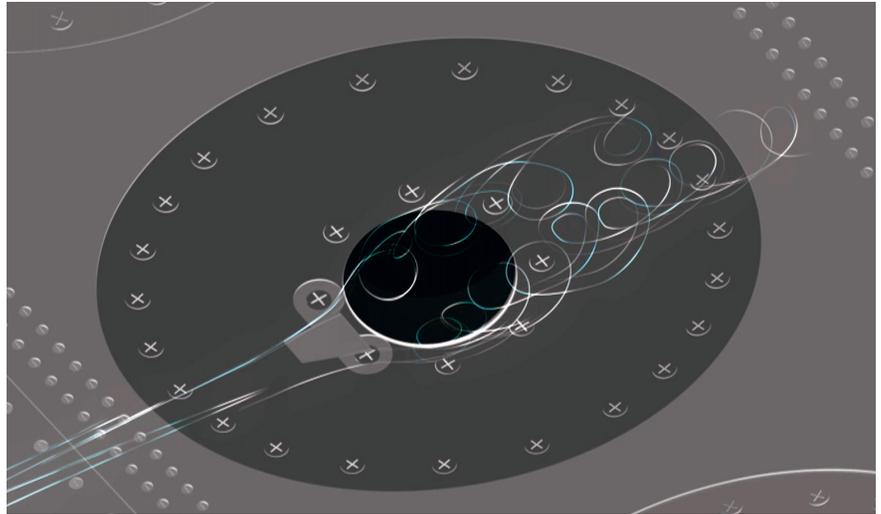
Flying more quietly: The vortex generators produce an air flow in front of the fuel-tank pressure equalization vents that effectively prevents sounds of an unpleasant frequency.

these cavities prevent the generation of these sounds. Together with the German Aerospace Center (DLR) Lufthansa developed such parts for the first time and tested them successfully. When the refit kits became available from Airbus in fall 2014, Lufthansa – again as the first airline – started updating its existing fleet. Of these 150 aircraft, 100 had already undergone the refit by end of June 2015.

Thanks to this innovation, more than 200 Lufthansa aircraft will fly even more quietly in the future. Equipping these aircraft with vortex generators is one of the most comprehensive voluntary measures in the area of active noise protection by the Lufthansa Group, lessening the burden in particular on people and towns near the large hubs in Frankfurt and Munich.

Improved procedures for approach and takeoff phases

New noise-reducing procedures for approach and takeoff as well as changed flight routings have also contributed over the past year to lighten the burden on people near airports. A new precision approach system, the Ground Based Augmentation System (GBAS), promises further improvements in Frankfurt, where Lufthansa, Fraport and Deutsche Flugsicherung (DFS) officially inaugurated it



on September 3, 2014. For the first time, GBAS makes satellite-supported precision approaches possible at an international hub airport in Europe. Over the mid- and long-term, this system opens up opportunities for the development of a myriad of new approach routes that will further reduce noise exposure.

Beyond that, the state government of Hessen and the aviation industry have agreed the voluntary introduction of noise respites in an "Alliance for noise pauses". Accordingly, Lufthansa, Fraport and DFS have implemented a seven-hour noise pause at Frankfurt Airport since April 23, 2015. During west-wind operations, some runways are not used between 5 and 6 a.m. and between 10 and 11 p.m., giving up to 40,000 people living east of the airport a respite from aircraft noise. Frankfurt is the first international hub airport to have introduced a noise pause in addition to the six-hour curfew for night flights. Experts at the Lufthansa Group made a significant contribution to the development of this concept. The trial operation, which will last

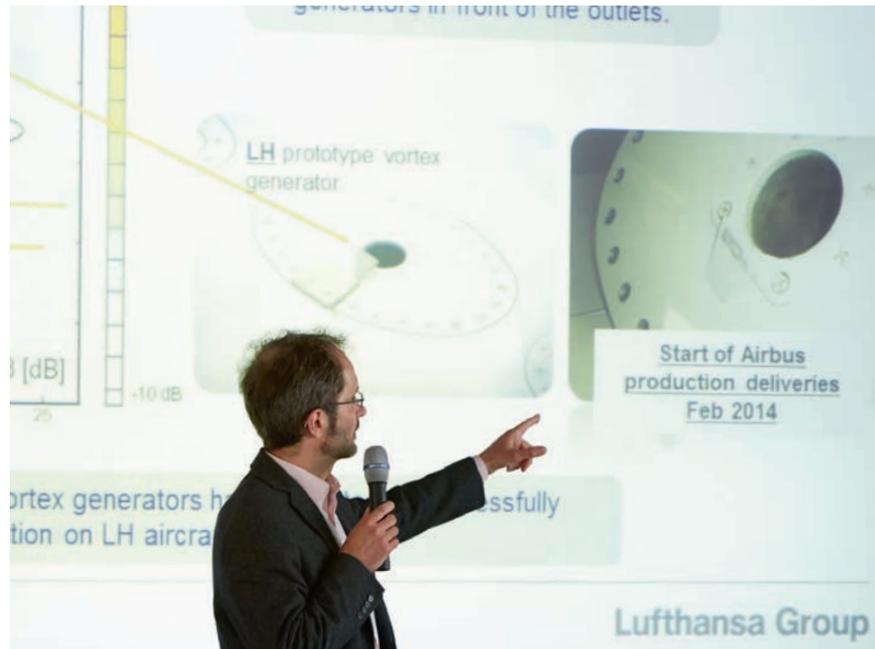
one year, is to see if the noise reductions occur as forecasted and if punctuality in flight operations can be maintained. With this joint voluntary agreement, airport, air traffic control, airlines, aviation associations and the state government of Hessen intend to further reduce the burden of noise emissions from flight operations at the Frankfurt hub on people living close by.

The "Alliance for noise breaks" complements the "Alliance for noise protection" agreed in 2012 (see page 88, *Balance* 2013 and page 87, *Balance* 2012). At that time, the state government of Hessen and representatives of the aviation industry jointly defined a number of innovative measures to protect people living near the airport from aircraft noise. This includes the retrofit of the A320 aircraft with vortex generators and phasing out the Boeing 737 aircraft, planned to be completed by mid-2016. At the beginning of 2015, more than 50 percent of these aircraft had already left the fleet.

Research for quieter flying

The Lufthansa Group has been active in noise research since 1999. The goal is to continuously make air traffic more quiet – also by measures applied to aircraft in the existing fleet (such as vortex generators). To achieve this complex and demanding task, the aviation company closely cooperates with partners in industry, administrations, universities and research institutions. For example, the Lufthansa Group heads up the aviation research program that is part of the MODAL project (Models and Data for the Development of Active Noise Protection Measures in Aviation) of Germany's Federal Ministry for Economics and Technology. This research project primarily serves to better understand the noise emissions of different types of aircraft. Furthermore, the participating experts intend to improve the assessment of active noise protection measures by means of more accurate calculations. In the context of MODAL, further flyover measurements with two Lufthansa Cargo Boeing MD-11Fs took place in late June 2015 at Magdeburg-Cochstedt Airport to test noise-reducing modifications to engines and landing gear.

Moreover, the Lufthansa Group supports the noise effect study NORAH (Noise-Related Annoyance, Cognition and Health). This research, designed with a broad scope and based on scientific methods, examines the effects of noise from air, rail and road traffic on cognitive abilities, health and quality of life for people living in areas affected by such noise. Initial results were presented in November 2014. The full NORAH report will be published in the second half of 2015.



The Lufthansa Group's environmental experts regularly exchange information at the Environmental Forum, for example on active noise protection.

Ever fewer people affected by aircraft noise

For many people, flying has long since become a matter of course. For example, passenger numbers at German airports nearly tripled between 1991 and 2014 to 208 million per year. By contrast, according to new noise maps produced by the Federal Ministry for the Environment, the number of people affected by aircraft noise in Germany declined from 746,500 in 2007 to 738,000 in 2012. And that even though the Ministry added data from two more airports in comparison to the first measurements made in 2007.

Information such as this and further comprehensive explanations of the aviation industry's commitment to noise protection have been available since July 2014 on the new aircraft noise portal of the German Aviation Association (BDL).

www.fluglaerm-portal.de

Commitment to science

The Lufthansa Group expands its support for climate research

For more than 20 years, the Lufthansa Group has been a reliable partner for climate research. Its aircraft are the ideal platforms for scientific measuring instruments. The data they collect at cruising altitude around the world is of particular importance for understanding the Earth's climate. This year, the Company has once again expanded its support for climate research. Through its commitment to science, the Lufthansa Group contributes significantly to establishing a worldwide measuring infrastructure for the observation of the Earth's atmosphere through civil aviation. Currently, the aviation group supports several important climate research projects.



In 1994, the Lufthansa Group began its commitment to climate research with the project MOZAIC (Measurement of ozone, water vapor, carbon monoxide and nitrogen oxides aboard Airbus in-service Aircraft). Since then, the MOZAIC measuring devices have been replaced by IAGOS instruments. In March 2015, a second Lufthansa Airbus was equipped as a "flying IAGOS laboratory".

IAGOS: Lufthansa equipped second Airbus with flying climate research laboratory

To support the climate research project IAGOS (In-service Aircraft for a Global Observing System) managed by Forschungszentrum Jülich (Jülich Research Center), the Lufthansa Group equipped a second aircraft with special scientific measuring instruments. Since March 2015, the Lufthansa Airbus A330-300 with the registration D-AIKO has collected data concerning atmospheric trace elements and cloud components at cruising altitude on each flight. This data is used by numerous research institutions around the world. The first IAGOS aircraft, the Lufthansa Airbus A340-300 "Viersen", has been in operation since July 7, 2011.

www.iagos.org

CARIBIC: Ten years of support from Lufthansa

In addition, the Lufthansa Group supports the research project CARIBIC (Civil Aircraft for the Regular Investigation of the atmosphere Based on an Instrument Container). Since December 2004, the Lufthansa Airbus A340-600 "Leverkusen" has been equipped for several days each month with a measuring container that is unique worldwide. It simultaneously records data concerning over 50 gases and particle compounds. In 2014, the experts at Lufthansa Technik replaced the measuring probe for the first time, after more than 340 measuring flights. Previously stationed in Frankfurt, the "Leverkusen" has been based in Munich since August 2014.

www.caribic-atmospheric.com





Product Responsibility

Continuously increasing customer satisfaction is one of our strategic cornerstones. We constantly optimize our products along the entire service chain.

1,000,000

euros a day on average have been invested to refit the cabins of Lufthansa long-haul aircraft since 2011.

9,000

medical doctors worldwide support the Lufthansa program "Doctor on Board".

16,000

tonnes of CO₂ were offset voluntarily by our passengers in 2014.

Safety, health, satisfaction

Product Responsibility across the Lufthansa Group

Product Responsibility means for the Lufthansa Group that all business segments and companies continuously review and improve their offers and services along the entire service chain. It is of fundamental importance for the Group's business success to increase customer satisfaction continuously and to guarantee the safety and health of passengers, crews and employees in the most effective way. It is equally important to protect personal data with the greatest of care.

Increasing customer satisfaction on a permanent basis is one of the Lufthansa Group's strategic cornerstones. In this area, the Group counts above all on quality and innovation, which are two of the central action fields in the strategic program "7to1 – Our way forward" (see page 19, Doing

business responsibly and sustainably). The aviation company's goal is to become the recognized quality leader in all markets and business segments and to develop Lufthansa German Airlines into the Western world's first five-star airline. To this end, the airline will have completed the most com-

prehensive modernization of cabin interiors in its history by fall 2015. Regular customer surveys and the further development of the feedback management processes also play an important role in increasing passenger satisfaction (see page 62).



The aspect of "Service and Hospitality" in customer orientation will be given even more emphasis in the future.



For the Lufthansa Group, flight safety and health protection have the very highest priority. With the crash of Germanwings flight 4U9525 on March 24, 2015, an emergency situation arose for the Lufthansa Group. In response, the Lufthansa Group airlines introduced a new procedure for cockpit occupancy directly following the accident. Under the new procedure, two authorized persons must now be present in the cockpit at all times for the duration of a flight. As a further precautionary measure, the Lufthansa Group immediately expanded its internal flight safety structures. Beyond this, the aviation company has continuously

extended its health-related offers for passengers for many years and has successively set benchmarks in the area of cabin air quality (see page 66).

Data protection and data security are the basis for a trusting business relationship. Daily, the Lufthansa Group companies process enormous volumes of data and in so doing always handle personal data with the utmost care. In addition, such data are protected and secured in accordance with the most stringent standards and the very latest technical norms (see page 67).

The Lufthansa Group's commitment in the area of voluntary CO₂ compensation is firmly anchored in the Group-wide Strategic Environmental Program 2020; moreover, it is an integral part of the aviation industry's four-pillar strategy for climate protection (see page 42). The options offered by the Group airlines Lufthansa, Swiss and Austrian Airlines and by the Lufthansa subsidiary AirPlus all do their part to keep the environmental impact of flying as low as possible (see page 68).

Customer satisfaction

The Lufthansa Group will place an even greater emphasis on its customer orientation in all business segments. On this path, a key role is given to the topics of innovation and quality, which are central action fields in the strategic program “7to1 – Our way forward”. Carsten Spohr, in his role as Chairman of the Executive Board, has assumed direct responsibility for the Group’s planned innovation and quality offensive.

Important building blocks in this strategy are continuous investments in quality as well as products and services that are even more clearly aligned with individual customer preferences. Therefore, the Lufthansa Group will invest 500 million euros for innovations by 2020 in order to further optimize the quality of its product and services portfolio (see page 6, Innovation – The key to a successful future). Likewise, the aviation company is consistently pursuing its fleet modernization with investments in modern and efficient aircraft with low fuel-burn profiles (see page 28).

The Lufthansa Group’s goal is to achieve quality leadership in all market and business segments. At the same time, the Company is working on personalizing its offers more clearly as part of its quality offensive, for example with the project SMILE (see page 14, Digital innovations for a perfect travel experience).

The initiatives to improve quality are already advancing successfully at all airlines and companies. For example, Lufthansa German Airlines stresses its commitment to becoming the first five-star airline in the western hemisphere and to offering all

passengers an excellent service and a significantly improved travel experience. Skytrax, the industry-leading airline rating system, will be evaluating this aspiration by means of a comprehensive audit until early 2016. In this context, Lufthansa has launched the most far-reaching cabin modernization program in its history and will refit its entire long-haul fleet by fall 2015.

On its more than 100 long-haul aircraft about 39,000 seats are being replaced, modified or in the case of new aircraft installed at delivery – in Economy Class, the new Premium Economy Class, Business Class and First Class.

New travel class Premium Economy

Since November 22, 2014, Lufthansa has offered its customers a new travel class: Premium Economy. Its central feature is a new, wider and more comfortable seat that gives passengers up to 50 percent more space. Additionally, each seat has its own armrests, which ensures a more private sphere. The new product is complemented by more comfort and higher-quality service. Premium Economy class seats will in the future represent about 10 percent of the total seat capacity on long-haul aircraft.



The new travel class Premium Economy aboard Lufthansa’s long-haul aircraft: In comparison with Economy Class, this seat offers up to 50 percent more space.

Lufthansa is installing between 21 (Airbus A330-300) and 52 (Airbus A380-800) new seats per aircraft. Aboard the Boeing 747-8 the Company is dedicating 32 seats to Premium Economy. It is expected that about 1.5 million passengers will travel in this new travel class per year.

Focus on service optimizations

Many topics are being addressed in the framework of the improvements the Company is introducing for its passengers. This includes an optimized premium check-in and enhancements of the transfer services at the Frankfurt and Munich hubs. Moreover, there are higher-quality amenity kits (pouches with comfort items) in First and Business Class as well as increased quality and greater diversity of food and beverages at the Business Class Lounges.

In the context of service optimization it is above all the projects in the "Service and Hospitality" segment that play a significant role as they aim at intensifying the personal customer contact on the ground and in the cabin. A key project on the way to becoming a five-star airline is therefore the "Signature Service" in Business Class. Here, the service sequence is to resemble an excellent restaurant experience with the focus on the guest's wishes. This more personalized in-flight service is characterized above all by accentuating the flight attendants' role as hosts and thus their service responsibility for "their" passengers.

Regular customer surveys

To measure its customers' satisfaction, the Lufthansa Group regularly conducts online surveys that cover the entire passenger experience and service chain. Specific scales show the performances with which customers are especially satisfied and which ones might need improvements.



Lufthansa German Airlines is actively committed to becoming the first five-star airline in the western hemisphere.

At Lufthansa Passenger Airline, for example, such customer ratings are fed into the Customer Profile Index (CPI), which represents a weighted average evaluation of various services from a passenger perspective. In 2014, this value was 7,322 points. Due to a change in survey methodology, a direct comparison with the previous year's CPI score is not possible. As a parallel measure, Net Promoter Scores (NPS®) have been determined regularly since 2014. Customers are asked whether they would recommend their current travel experience with Lufthansa to friends or acquaintances. To calculate an NPS, the percentage of passengers who are less than enthusiastic about their experience (Detractors) is subtracted from the percentage of those who would strongly recommend it to others (Promoters).

In 2014, Swiss cooperated with scientists at St. Gallen University to determine how satisfied passengers are with "green" products, such as CO₂ compensation, as an additional offer and what potential such products might have. The survey showed that 14 percent of all passengers are particularly interested in such products. At the same time, there is a general willingness to pay a higher price for green products. According to the survey there is a continuously growing segment of cus-

tomers who place an emphasis on environmental protection and sustainability.

A further central aspect concerning customer satisfaction is how the Lufthansa Group handles its customer feedback management and dialogue with passengers. One of the Group's principles is that employees respond to each customer reaction worldwide as quickly as possible. Under the umbrella of the Passenger Dialogue Services program the aviation company realigned its feedback management in 2013. It is now based on the four pillars of reachability, speed, problem solving and learning from feedback (see page 73, *Balance* 2014). The goal is to be "best in class" in handling customer reactions. Moreover, customer comments are an important basis for the Company for further improving customer satisfaction. Lufthansa German Airlines alone receives about 200,000 valuable customer observations via diverse communications channels.

¹ Net Promoter® and NPS® are registered trademarks and Net Promoter Score and Net Promoter System are trademarks of Bain & Company, Satmetrix Systems and Fred Reichheld

Flight safety and health protection have top priority for the Lufthansa Group

For the Lufthansa Group, the safety and health of passengers, crews and employees rank first and foremost. With the crash of Germanwings flight 4U9525 on March 24, 2015, the Lufthansa Group faced an emergency the like of which we all hoped would never occur. Germanwings and Lufthansa announced immediately their intentions to do everything within their power to accompany and support the family members and friends of the accident victims in the best possible way.

In coordination with Germany's federal aviation authority, the other German airlines and the German aviation association, the Lufthansa Group airlines introduced a new procedure for cockpit occupancy immediately following the accident. Under the new procedure, two authorized persons must be present in the cockpit at all times for the duration of a flight.

As a further precautionary measure, the Lufthansa Group has expanded its safety structures. Supplementary to the safety pilots at the individual member airlines, a new group-wide function was created and assigned comprehensive responsibility for examining and further refining all processes relevant to flight safety. Alongside his current function as safety pilot at Deutsche Lufthansa AG, Captain Werner Maas has held the new post of Group Safety Pilot since March 27, 2015. In this new capacity, he reports directly to the Chief Executive Officer of Deutsche Lufthansa AG, Carsten Spohr.

For the purposes of flight safety, all airlines within the Lufthansa Group have Safety Management Systems (SMS) that follow the requirements of the International Civil Aviation Organization (ICAO). The aims of these systems are to assess the safety level of flight operations, to detect and evaluate any safety hazards in advance, and to lower the risk of accidents by implementing suitable countermeasures (see page 74, *Balance* 2014).

IOSA Audit – The most comprehensive safety standard in aviation

An independent assessment of the safety standards at the airlines within the Lufthansa Group is carried out every two years by means of the IATA Operational Safety Audit (IOSA). Internationally, IOSA is

Special Assistance Team

The Lufthansa Group has a qualified Special Assistance Team (SAT) at its disposal. About 1,500 employees from different companies across the Lufthansa Group have voluntarily completed training and continuing education units to be knowledgeable in providing "psychological first aid" in the event of an emergency situation. Only a short time after the Germanwings accident, more than 200 SAT members gave support to family members.

the most widely recognized and accepted standard for flight safety. All airlines within the Lufthansa Group fulfill the IATA safety standards in their entirety. In 2007, Lufthansa Cargo became the very first IOSA-registered freight airline worldwide. Ever since that first successful completion of an intensive audit, the Lufthansa Group's freight specialist has been trailblazer in the area of flight safety standards for cargo airlines.

In 2014, Lufthansa became the first Lufthansa Group airline to be audited in accordance with the new Enhanced IOSA Standard, which is set to become mandatory from September 2015.

www.iata.org/iosa

Broad portfolio of medical offers

To meet the rising demand for medical transport and the clarification of passengers' medical issues, the Lufthansa Group has for some time continuously expanded the health-related services it offers customers (see page 75, *Balance* 2014). For this reason, the aviation company's Medical Service has offered the Passenger Medical Care division since 2009, among other options.

With the so-called Patient Transport Compartment (PTC) Lufthansa offers a service that is unique worldwide. The technical equipment of this "airborne intensive care unit" leaves nothing to be desired in comparison with those in hospitals and allows seamless medical care and monitoring of patients in critical conditions. The spacious



The Patient Transport Compartment (PTC) – a unique service worldwide – was jointly developed by Lufthansa's Medical Service and Lufthansa Technik.

interior offers room for one patient couch, two seats for a physician and a Lufthansa escort (PTC Medical Crew Member) as well as for all medical equipment, medications and consumable supplies required.

In comparison with conventional ambulance aircraft, the use of the PTC offers numerous advantages. For example, patients benefit from time savings of up to 50 percent as the PTC module is fitted aboard a commercial airliner. Since June 2015, the PTC has been available on all Lufthansa Group long-haul flights leaving from or arriving in Frankfurt and Munich. Lufthansa's Medical Service developed the PTC jointly with Lufthansa Technik. The central contact point for advice on and coordination of all patient transport aboard Lufthansa aircraft is the Medical Operations Center (MOC). Up to 100 intensive-care patients are transported in the PTC every year.

With the program "Doctor on Board", which currently consists of more than 9,000 physicians worldwide, Lufthansa again assumes responsibility for its passengers (see page 75, *Balance* 2014). In addition, the Company puts passengers in contact with selected panel doctors at all of its destinations (a fee is charged) should they need urgent medical attention.

www.LH.com/uk/en/Travelling-healthy

Austrian Airlines and Swiss also offer their passengers a broad scope of medical services. For example, Swiss passengers may consult the "Health and travel" guide online to access information on "Flying and health". Moreover, this Lufthansa Group airline was certified in May 2014 by the foundation ECARF (European Center for Allergy Research Foundation) as the first airline worldwide to cater for allergy sufferers.

Study on cabin air quality on short-haul flights as well

The Lufthansa Group also sets milestones in the area of cabin air quality. To guarantee the best possible air quality and to identify hazards from pollutants at an early stage or to rule them out entirely, the Company conducted a comprehensive series of measurements in the cockpits of Airbus A380s. The study, which drew data from more than 800 flight hours, centered on the use of a measuring kit jointly developed with Hannover Medical School (MHH) and did not show any pollutant load in a single case (see page 75, *Balance* 2014). The same applies to the occurrence of so-called smell events. The measuring kit identifies and quantifies nearly 200 substances that could potentially be present in cabin air.

In November 2014, the aviation company extended the cabin air research to short-haul Airbus A321s. Measurements of cabin air were conducted until April 2015 and comprised data from 44 flights within Europe. The study's results are expected to be published in the course of this year.



The Laboratory Services department at Lufthansa Technik serves customers inside and outside the Lufthansa Group.

Laboratory Services analyze on-board fluids

Aircraft systems require a multitude of fluids, the operational capability of which must be checked at regular intervals. This is the responsibility of Lufthansa Technik's Laboratory Services division in Frankfurt, which looks after customers within and outside of the Lufthansa Group. The focus of its laboratory chemical and physical analyses is on parameters such as appearance, acid value, density, water content, conductivity and viscosity. The results enable inferences to be made concerning the condition and functionality of motor oil and hydraulics fluids. Beyond this, the experts also test on-board kerosene samples for pollution with germs, as this can cause damage through corrosion.

Recognized fire laboratory for aviation

An important safety and quality function is also fulfilled by the five test laboratories of Lufthansa Technik's Central Materials Technology in Hamburg. The task of this recognized fire control institution is to test all materials used in the construction of aircraft for their flammability and certify them according to the fire protection regulations of the relevant aviation authorities. This applies equally to serially manufactured mass products and materials used on VIP aircraft. Not only the Lufthansa Group airlines rely on the expertise of Central Materials Technology at Lufthansa Technik, but also aircraft manufacturers, airline operators and suppliers. The background to this is that only a few companies maintain their own fire control laboratories and are allowed to issue aviation certifications.

Data protection and data security

Careful and secure handling of personal data is the basis for trusting business relationships. Protecting data shields the Lufthansa Group's customers, employees, shareholders, and suppliers from violation of their privacy rights through improper use of sensitive personal data. The Lufthansa Group protects and secures data according to the highest standards.

The Corporate Data Protection department ensures that Germany's Federal Data Protection Act (FDPA) is applied across the Lufthansa Group. It familiarizes our employees with the relevant legal provisions and conducts regular data protection audits. In addition, the Group's data protection experts advise the departments when new systems are introduced and procedures are designed or modified. This allows for the coordination of data protection and business concerns at an early stage.

The all-important first step is to make employees and managers aware of the risks related to data protection, so that they are able to detect and avoid them. During the reporting year, the emphasis of advice was on using customer data in ways that conform to data protection standards. Meanwhile, the conflict between German data protection legislation and ever-more frequent demands for passenger information from foreign authorities remains unresolved (see page 76, *Balance* 2014).

Mandatory guidelines ensure data protection

The framework for secure data handling within the Lufthansa Group is defined by its Data Protection Guidelines. Based on laws such as the FDPA and established principles

of data protection, they spell out concrete obligations regarding compliance with data protection laws. These guidelines also define rules to ensure Group-wide conduct that is compliant with data protection law, make risks related to data protection transparent, and safeguard against such risks.

An updated version of the Data Protection Guidelines has been in effect since December 2, 2014. In particular, the new chapter "Responsibility for data protection abroad" takes into better account the rising data protection requirements in countries outside of the EU. Furthermore, these rules were integrated into the Group guidelines for the purposes of handling data relating to orders.

Data protection is the responsibility of the Executive Board and the management of the respective Group company. They are assisted in the discharge of this responsibility by the Corporate Data Protection department, headed by Dr. Barbara Kirchberg-Lennartz. As in 2013, the Lufthansa Group recorded no significant risks or sanctionable violations concerning the protection of personal data in 2014. Moreover, data disclosure requests and customer feedbacks were handled in a timely fashion as a rule.

Systematic training

Training and informational measures concerning data protection are aimed at familiarizing employees and managers with the necessity of data protection, the key terms, the organization of data protection within the Lufthansa Group, and specific issues concerning individual areas.

The Web-based training course "The fundamentals of data protection" is mandatory for many Lufthansa employees. After signing an agreement to compliance with data confidentiality, new hires and job changers must complete this training within a short time. Since September 2014, the ensuing training certificates are valid for only three years, as opposed to the previous five years. In addition, the Group offers short specialized trainings online for certain target groups to intensify their knowledge concerning sensitive issues and particularities in their work areas.

Furthermore, employees can obtain information on this subject at any time on Corporate Data Protection's intranet pages. The department also reports on current data protection topics via a weekly internal blog.

Offsetting carbon emissions

Investing billions of euros in the world's most modern aircraft as well as developing and introducing innovative technologies and processes are important levers for the Lufthansa Group to conserve kerosene and limit emissions. Yet as long as aviation depends on fossil fuels such as kerosene, CO₂ emissions cannot be avoided altogether. Therefore, the Group companies Lufthansa, Swiss and Austrian Airlines as well as the Lufthansa subsidiary AirPlus offer their customers programs for voluntary CO₂ compensation.



Using compensation payments from Swiss passengers, myclimate supports this project in Kakamega, Kenya. Local materials such as clay are used for the production of efficient stoves. Later, indigenous trees are planted where the clay was dug out of the ground.

The aviation company's involvement in the voluntary offsetting of CO₂ emissions is firmly anchored in the Group's Environmental Strategy 2020 and part of the aviation industry's four-pillar strategy for climate protection (see page 42). An emissions calculator is available on the Internet portals of all Lufthansa Group airlines. Passengers can use this calculator to determine the individual CO₂ emissions caused by their journey and offset that amount accordingly. Calculations are made on the basis of actual flights and take into consideration a range of diverse parameters (see page 79, *Balance* 2014).

The offer to fly in a climate-neutral way attracted the interest of the Lufthansa Group's customers in 2014 as well. In total, passengers compensated emissions of over 16,000 tonnes of CO₂ (2013: over 14,000 tonnes), which corresponds to 54 flights from Frankfurt to New York with a Lufthansa Airbus A380.

AirPlus received the myclimate Award for its innovative product "Green Company Account" at the travel fair ITB 2015.



Different partners, one goal

While Lufthansa and Swiss cooperate with the Swiss charitable climate foundation myclimate www.myclimate.org, Austrian Airlines works with the climate protection initiative Climate Austria www.climateaustria.at. At myclimate, at least 80 percent of the CO₂ compensation payments go to selected climate protection projects in emerging and developing countries. They all have in common that they work towards lower emissions of greenhouse gases and promote development that is viable for the future. In addition, they are registered under the Gold Standard, which guarantees adherence to the highest requirements concerning sustainability – especially with regard to the environmental balance sheet and social compatibility.

Climate Austria's stringent requirements also guarantee that the climate protection donations from Austrian Airlines passengers benefit only selected projects – primarily in Austria. Here the focus is on initiatives in the areas of energy efficiency and renewable energies. The decisive aspect is that they avoid emissions and deliver added positive ecological and socioeconomic effects. In 2008, Austrian Airlines founded Climate Austria together with Austria's Federal Ministry of Agriculture, Forestry, Environment and Water Management, Kommunalkredit Public Consulting (KPC) and Vienna Airport.

Lufthansa Cargo offers customer-specific CO₂ reports

Providing optimized reporting is a goal pursued by Lufthansa Cargo. Since 2015, the freight airline has furnished company-specific CO₂ reports to its Global and Business Partners. These carbon emissions reports not only increase data transparency, but they also support customers in compiling their environmental balance sheets.

AirPlus permits climate-neutral business trips

Lufthansa subsidiary AirPlus, which likewise enables its existing customers to offset their CO₂ emissions through myclimate, has also achieved measurable success in the area of climate-friendly products. With AirPlus Green Reports (introduced worldwide in 2011) and AirPlus Green Company Account (available on the German market since 2014), two environmentally friendly solutions already feature in the portfolio of the world's leading provider of business travel payment and settlement solutions (see page 79, *Balance* 2014). At ITB 2015, the international tourism fair in Berlin, the Green Company Account received a myclimate Award honoring AirPlus's pioneering role in the field of innovative and sustainable financial products for the travel industry.

Support focuses on sustainable projects

Numerous projects benefited in 2014 from the voluntary climate protection donations made by the Lufthansa Group's customers. For example, Climate Austria supported inter alia a biomass heating system at Alpenzoo Innsbruck. Long-term, the new system will allow the zoo to avoid over 1,100 tonnes of CO₂ emissions. myclimate used compensation payments from Lufthansa and Swiss customers inter alia to support projects that provide locally produced, efficient cookers to the rural populations in certain parts of Kenya. These cookers replace traditional open fires, promote health, and prevent the clear-cutting of further forest areas. Donations from AirPlus customers were passed on by myclimate to a communal reforestation project in Nicaragua. There, newly planted forests protect communities of small-holding farmers from seasonal drought and flooding.

<http://lufthansa.myclimate.org>

<http://swiss.myclimate.org>

www.climateaustria.at

www.airplus.com



A man with a beard, wearing a dark jacket and a high-visibility yellow vest, is focused on working on the hub of a large aircraft tire. He is wearing black gloves and using a tool. The tire has 'BOEING 737' visible on its sidewall. The background is a bright, industrial setting.

Social Responsibility

Motivated, highly qualified employees are decisive for the Company's business success. As a socially responsible employer, we support our staff with transparent structures and processes as well as an attractive work environment.

143

nationalities are represented worldwide at the Lufthansa Group.

16

percent is the share of women at the management level in Germany.

9

dimensions form our new talent management philosophy.

Seizing the opportunities of change: Thinking the future, meeting new challenges, living out responsibility

The world is spinning faster and faster: Megatrends such as technological change, the digitalization of all areas of life and the constant increase in complexity are leaving their mark on all levels of society. The same is true of developments such as demographic change, growing globalization or the new demands being placed on the working world, to name but a few. Individually and collectively, they change the way in which companies do business and how employees work and communicate.

The Lufthansa Group is determined to seize the opportunities produced by change in order to strengthen its competitive position and secure its future viability. To achieve this goal, the aviation company is counting inter alia on a personnel strategy that tackles current and future challenges in a courageous and consistent manner. The Group launched initiatives as far back as 2012 to develop its corporate and management

cultures in a targeted manner across all business segments. This includes the project “Cultural Transition and Leadership”, which combined all approaches, resources and measures concerning change management, transformation support and leadership development. In 2013, Lufthansa reformulated its personnel strategy, which has served as the basis for all HR initiatives launched since.

“Culture and Leadership” – A Group-wide strategic action area

On July 9, 2014, the Executive Board named “Culture and Leadership” as one of seven fields of action within the strategic Group program “7to1 – Our way forward” (see page 18). This new dimension was added in turn to the strategic program “Forward with HR”. The focus on “Culture and Leadership” reflects the conviction that a modern, feedback-oriented leadership culture is essential in order to give timely responses to external factors of influence and to be perceived as an attractive employer in future as well. It likewise lays the foundation for motivated, entrepreneurially-minded employees who are able to question familiar processes and to modify them in the Company’s interest in a future-proof



HR Campaign Days at the Lufthansa Aviation Center at Frankfurt Airport: On October 14-15, 2014, internal and external experts briefed managers and employees at numerous information stands about career planning, reorientation and current trends in the working world.

manner. To accelerate this transformation process, the Lufthansa Group concentrated on the following aspects during the reporting year. These measures are accompanied by made-to-measure change management.

Sustainable implementation of the new leadership principles

An important building block in personnel strategy are the five leadership principles "Driving Business", "Leading Change", "Creating Spirit", "Fostering Talent" and "Mastering Complexity". They serve as a leadership model and support the Lufthansa Group's managers in directing their employees and departments across the Group according to a unified set of values. In the course of the reporting year, a number of measures helped to anchor the leadership principles even more deeply within the organization. These included the performance potential tool "Profile".

"Profile"

At the beginning of 2014, the Lufthansa Group launched "Profile" to provide a new basis for assessing the talent and performance of managers. This tool is a central instrument for employee performance evaluations and reviews. In the interest of the highest possible transparency, evaluations are carried out under the principle of multiple-assessor verification by several superiors within an area. Another innovation is that performance evaluations according to the Leadership Principles now consider not only the results, but also how they have been achieved. "Profile" is to be used Group-wide by the end of 2015. Furthermore, managers now have a wider margin of discretion concerning non-monetary incentives for their team members' individual performances. An open dialogue ensures that employees receive differentiated feedback concerning work results, conduct and individual talents at regular intervals.

"Spirit"

With "Spirit" the Lufthansa Group aims at creating – under the roof of the Lufthansa School of Business – made-to-measure instruments, methods, formats and contents that support the Company's HR strategy. The key idea behind this new concept is the necessity of lifelong learning. For this reason, "Spirit" focuses inter alia on topics such as reflecting on personal ways of handling change, cooperating on strategic topics across hierarchies and disciplines, introducing dialogue and participative formats particularly for operative staff, expanding digitalization and using social media.

Talent management

Since last year, the Lufthansa Group has also applied a new talent management philosophy guided by the principle "Every employee has talent!" Its nine core messages provide a clear orientation concerning the aspects that the Lufthansa Group will emphasize in future in the area of talent management. In implementing this approach, all HR instruments and processes are consistently assessed, adapted or evolved (see page 84).

Strategic personnel planning

In January 2014, the Lufthansa Group launched its "Strategic Personnel Planning" program with the goal of guiding and managing risks related to demographic changes. This not only makes an important contribution to the early analysis of possible discrepancies between future personnel levels and actual personnel needs. But it also supports the Company in securing the personnel resources of the future by means of appropriate measures. In a departure from previous approaches, the aviation company combines qualitative and quantitative analyses in a dynamic model that comprises a planning time-frame of 10 to 15 years. Another novelty is that the project team acts as a Group-wide competency center which supports the business segments in implementing strategic personnel planning.

The Lufthansa Group's HR strategy

The strategic program "Forward with HR" concretizes the Lufthansa Group's goals in the area of personnel. Developed further in 2014, these goals are to be implemented in the years ahead by means of specifically adapted instruments and measures:

- Increasing the organization's ability to transform
- Maintaining and expanding the Company's attractiveness as an employer
- Strengthening leadership and employee commitment
- Promoting sustainable and social responsibility
- Advancing efficient and future-oriented talent management processes
- Improving the culture of dialogue within the Lufthansa Group



Interview with Åsa Lautenberg

Vice President Corporate HR & People Strategy
Deutsche Lufthansa AG

➤ **You have been heading the department Corporate HR & People Strategy since July 1, 2014. What challenges are you facing?**

The Lufthansa Group is going through the greatest upheaval in its history, which means an enormous challenge for each employee. In the HR area, our task is to support the ensuing process of transformation with the targeted use of modern, synchronized HR instruments. For example, we've made the process of posting vacancies, filling jobs and managing performance transparent, professional and standardized across the Group. We aim to provide impulses in the right places in future as well, so that our Company will be able to act even more flexibly and cost-efficiently.

➤ **How do you intend to shift more responsibility to employees and managers and grant them more freedom at the same time?**

Studies show that employees today are motivated only to a limited degree by monetary incentives. To a much greater degree, they are seeking a meaningful type of work. In addition, employees observe with a critical eye how decision-making and communication processes and corpo-

rate values are actually lived out in the company. That's why in future leadership at Lufthansa will mean above all helping talents to develop their full potential. There is no question that managers will clearly have to assume a good bit more responsibility, as they must motivate and inspire their colleagues more than ever to achieve top performance. It is also clear that the Lufthansa Group wants to offer solutions that improve work-life integration and open up individual career paths more attuned to specific life phases. Therefore, we will be expanding our part-time and sabbatical offers in the course of this year.

➤ **What are you doing to drive the necessary cultural change forward?**

Many of the changes the Lufthansa Group has set in motion demand a rethink on the part of employees and managers. We want to act in more innovative, courageous and risk-accepting ways. This assumes, for example, that we compose our teams more diversely in terms of age, gender, cultural backgrounds, experience and competence, as this has proved to produce better performance. It is also crucial to provide creative impulses for questioning our conventional or habitual way of doing things.

Thus, we have not only introduced job rotation for management positions, but also launched a pilot project that allows employees to transfer from one Lufthansa Group airline to another as smoothly as possible.

➤ **Have you already set some goals for 2016?**

Indeed we have. Next year, a focus area will be the strategic project "HR Digitalization". Here we will be investigating the jobs of the future and evaluating which processes can be digitalized to an even greater extent. With this project, we are also aiming to increase efficiency further.

Besides, we're working on maintaining and deepening the commitment and trust of our employees – despite the current difficult climate. To achieve this, it is indispensable to establish a modern, open and less hierarchical management culture. Here the HR function stands by our managers as a sparring partner and supports them with effective instruments. One example is "Profile", a tool introduced Group-wide in 2014 for assessing performance and talent. Another is the new Group-wide employee survey "involve me!", which will begin in September this year.

Diversity and equal opportunity

Diversity as a strategic factor of success

Commonalities reunite; differences take us further. To take advantage of this potential, the Lufthansa Group has counted on systematic diversity management for many years – and thus also secures its ability to innovate and its competitiveness. The focus is on activating and fostering the multitude of talents, experiences, competencies and values that have always characterized the workforce of the globally active aviation group.

One area of emphasis in this context is effective concepts, instruments and measures that help employees make family and work increasingly more compatible. To develop and implement these is the task of the HR staff of Group companies, who work closely with the Lufthansa Group's commissioners for equal opportunity.

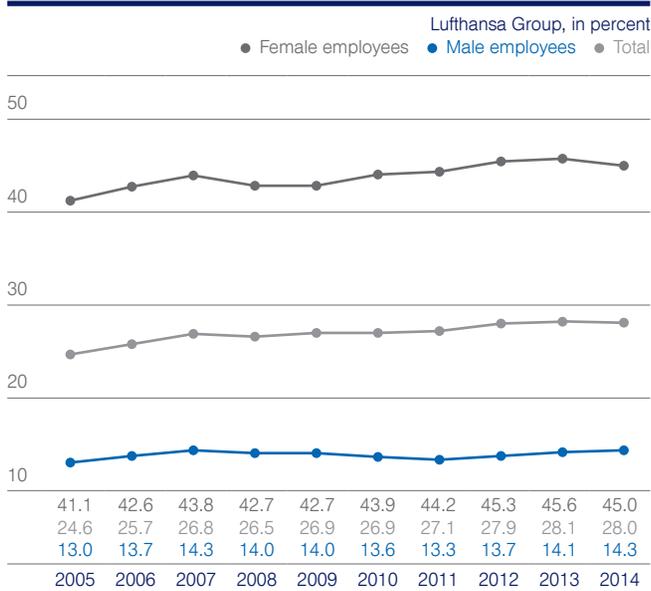
Lufthansa Group transparent on women's quota

To guarantee equal opportunities for men and women has been a matter of course at the Lufthansa Group for a long time and is anchored in in-house agreements, among others. The Company is working in a focused manner on filling management positions up to the Executive Board level with qualified women. Currently, two of five – and thus 40 percent – of the members of the Executive Board are women. In addition, the Company already fulfills the women's quota of 30 percent for the supervisory boards of listed and fully codetermined companies from 2016, which was

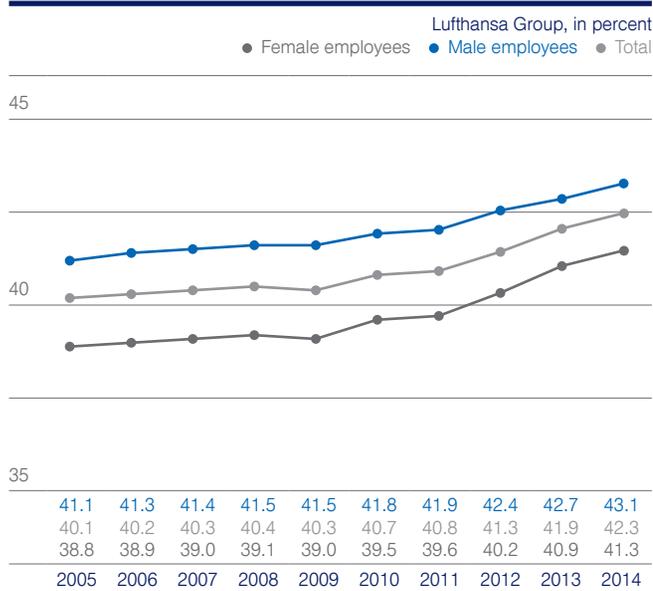


In 2014 the Lufthansa Group signed the "Diversity Charter", a corporate initiative to promote diversity in companies and institutions. Under the patronage of Federal Chancellor Dr. Angela Merkel, the charter aims to further acceptance, appreciation and inclusion of diversity in Germany's business culture. Organizations are to create a work environment that is free of prejudices. All employees are to be valued – independent of gender, nationality, ethnic origin, religion or ideology, disability, age, sexual orientation and identity. Pictured here are Ana-Cristina Grohnert, Chair of the Board of Charta der Vielfalt e.V. and (right) Dr. Bettina Volkens, Executive Board member and Chief Officer Human Resources and Legal Affairs at the Lufthansa Group.

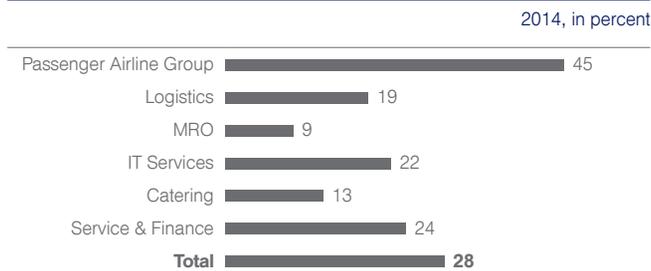
Part-time employment



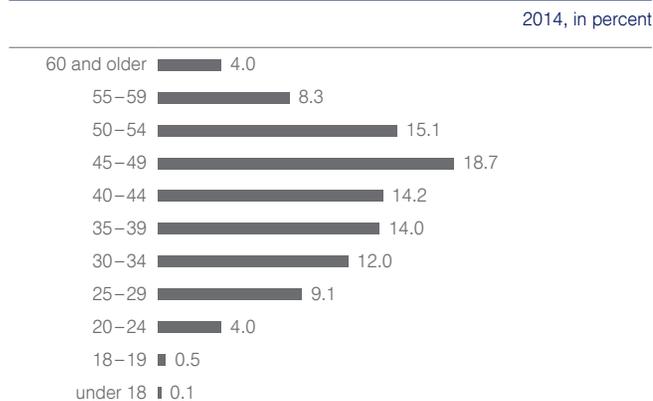
Average age²



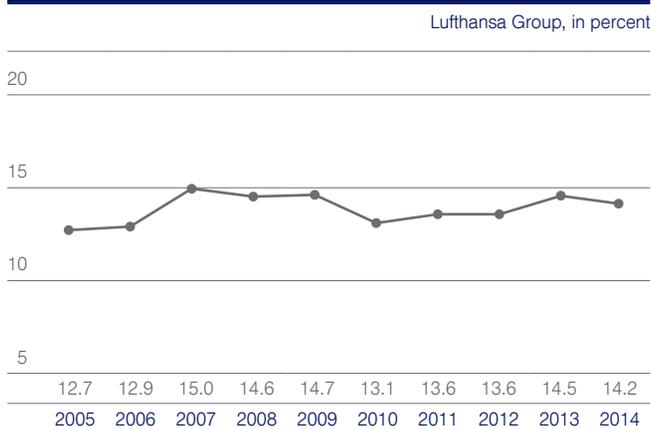
Part-time work by Group companies



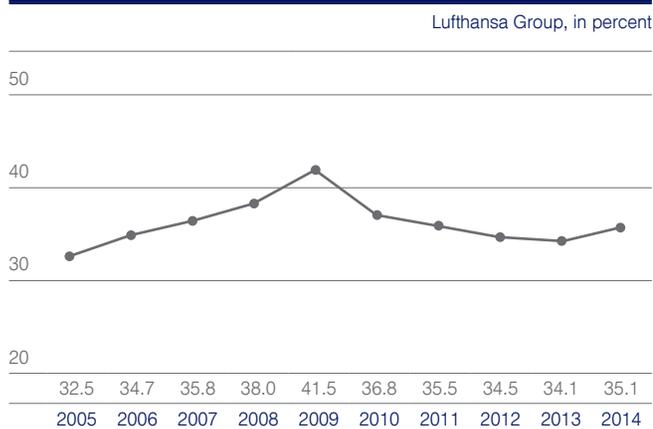
Age structure at the Lufthansa Group²



Share of women in management positions¹



Share of women with staff responsibility¹



¹ Scope of consolidation without LSG outside Germany, Swiss Aviation Training AG, LH Flight Training Berlin GmbH, Edelweiss Air AG, Swiss European Airlines AG, Swiss Aviation Software AG, TraviAustria GmbH, LH Malta Holding Ltd., LH Malta Aircraft-Leasing Ltd., Aerologic GmbH (consolidation partially with 25 percent), Shannon Aerospace Ltd. Co., LH Technik Malta Ltd., LH Technik Airmotive Ireland Ltd., LH Technik Budapest Repülögeb, Hawker Pacific Aerospace (US), LH Technik Landing Gear Services UK Ltd., BizJet Int. Sales & Support Inc., LH Technik North America Holding Corp., LH Technik Sofia OOD, LH Technik Component Services LLC, AirPlus Air Travel Card Vertriebsges. mbH, AirPlus International Ltd., AirPlus International S.r.l., AirPlus Payment Management Co. Ltd., AirPlus International AG, AirPlus International Inc., LH Malta Finance Ltd.

² Scope of consolidation partially without LSG outside Germany, Lufthansa Malta Holding Ltd., LH Malta Aircraft Leasing Ltd., Aerologic GmbH (consolidation partially with 25 percent), Lufthansa Technik Philippines Inc., Shannon Aerospace Ltd., Lufthansa Technik Malta Ltd., Lufthansa Technik Budapest Repülögeb, Hawker Pacific Aerospace Inc. (US), Lufthansa Technik Landing Gear Services UK Ltd. (formerly Hawker Pacific Aerospace Ltd., UK), BizJet International Sales & Support Inc., Lufthansa Technik North America Holding Corp., Lufthansa Technik Sofia OOD, Lufthansa Technik Component Services LLC, Lufthansa Malta Finance Ltd.

In the reporting year, the share of women pilots reached 5.4 percent.



passed by the German parliament on March 6, 2015. The legal basis is the German law for equal participation for women and men in executive positions, which came into effect on May 1, 2015.

In 2011, the Lufthansa Group set itself the goal of increasing the percentage of women in management positions by 30 percent by 2020 compared with 2010. Under this premise, the Group has been successful despite comprehensive restructurings in increasing the share of women at the management level in Germany from 15.5 percent in 2010 to 16.0 at the end of 2014. On a worldwide scale, the share of women in management positions at the Lufthansa Group rose from 13.1 percent in 2010 to 14.2 percent in 2014. To achieve its goal as planned, the Company energetically pursues its commitment to increasing the share of women in management.

Women on Boards Index: Jump into the Top 3

That the Lufthansa Group's efforts are paying off is also evidenced by the results of the current Women on Boards Index (WoB), which has been established during the last four years by the cross-partisan initiative "Women into supervisory boards". The index shows that the aviation company improved its position by one place to third rank, compared with 2013. The WoB aims at making transparent the development of women's share in management positions at 160 listed companies, including the DAX 30 corporations.

Cross Company Mentoring: Sparring partners for career advancement

Well trained employees are the key to the Lufthansa Group's success. To accompany and support young female managers in particular in their professional advancement, the Group initiated the Cross Company Mentoring program as long ago as 1998. Here, one mentee and one manager from different companies respectively form a "tandem" for one year. The focus of regular exchanges is on topics such as professional goals, positioning within the company, conflict management, time

management, but also job and family. Current participants in Cross Company Mentoring are Axel Springer, Robert Bosch, Commerzbank, Deutsche Bank, Fraport, Hewlett-Packard, Merck and Sanofi Deutschland. At the moment, ten mentors and ten mentees from Lufthansa are participating in the program.

The internal program "Go ahead", which was launched in 2012 as a supplement, is addressed at women aiming at a management-level position. This training format places particular emphasis on the topics of networking competence, personality, self-management and career planning (see page 51, *Balance* 2013).

At a glance

Of our 118,781 employees
 ➤ 44.65 percent are women.

They represent
 ➤ 35.1 percent of all employees with responsibility for other staff,
 ➤ 14.2 percent of all managers,
 ➤ 5.4 percent of all pilots.

The employees' average age is
 ➤ 42.3 years.

The quota of employees with severe disabilities in Germany is
 ➤ 4.0 percent.

As per 31.12.2014

Same pay for same performance

Equal opportunities are enjoyed by Lufthansa employees in the area of remuneration. For example, collective labor agreements in areas with binding collective pay agreement have guaranteed since the 1970s that men and women receive the same salary for the same work. Only in areas outside of collective agreements are salaries negotiated individually. However, the Lufthansa Group strictly observes that only experience, task relevancy and the measure of responsibility for employees, and budget are the differentiation parameters. To ensure that other criteria do not play a role in determining the level of remuneration, the aviation company also had its procedures audited by independent experts in 2013, who confirmed this as being so.

Work and private lives in healthy balance

The Lufthansa Group supports its employees with a range of measures in finding a healthy balance between professional and private lives over the different phases of life. When the balance between work and family can be achieved, both the employees and the Company benefit. A wide selection of work models and working time formats have supported employees for many years in organizing family life. These are complemented by offers for childcare, such as places in daycare centers or support from pme Familienservice GmbH in the event of care emergencies or during vacation time (see page 89, *Balance* 2014). Employees with family members who are ill or in need of care find specific support options through the pme Familienservice, with

which the Lufthansa Group has cooperated for many years. Counseling and placement of nursing staff are free of charge for employees. Presentations on topics such as care, powers of attorney or support obligations complement the service provider's offer.

Extension of vacation care

In the reporting year, the Lufthansa Group again offered the internal summer vacation childcare program "Luftkuppe – Kinder erobern die Lufthansa Welt" (Children discover Lufthansa's world). During each week of school vacation it offers 30 places in Frankfurt for Lufthansa employees' children aged between six and twelve years to explore together the world's largest aviation group. Given its enormous success, the full-day vacation program will take place in summer 2015 in Frankfurt for the third time. Thanks to the program's expansion to Munich, employees' offspring can now also go on a journey of exploration at the Munich hub.

In addition, in fall 2014 children of Lufthansa employees had the opportunity to join a Company vacation program for the first time during the school fall vacation.



The summer vacation childcare program "Luftkuppe" offers employees' children thrilling insights into the fascinating world of the Lufthansa Group.

Parent-child office for care bottlenecks

In the context of making the care infrastructure more flexible, the Lufthansa Group opened a parent-child office in July 2014 at the Lufthansa Aviation Center in Frankfurt. Two workstations equipped with computers and telephones are available for parents with unexpected or short-term care bottlenecks, so that they can work while their children play or read in the same room. This pilot project is set to run for a year and is an initiative of the "Familienkongress" ("Family Congress"), which Lufthansa organized in 2014 for its employees.

Supporting new role models for fathers

More and more fathers are leaving traditional role concepts behind to actively participate in family-related tasks. The Lufthansa Group supports this fundamental change of paternal roles in society by cooperating with "Väter gGmbH" ("Fathers Ltd.") at the Frankfurt and Hamburg locations. The offer is aimed at fathers working part- or full-time or being on parental leave, and comprises presentations and workshops on all aspects of fatherhood and work-life integration. This includes a recurrent presentation entitled "Being an enthusiastic manager and father – and how both can be in harmony". In addition, activities for fathers and their children are being planned. The goal is to facilitate the equal division of family and work for couples, so that professional achievement and a fulfilled family life are no longer mutually exclusive for men and women.

"LH New Workspace": Pilot project concluded successfully

In April 2014, the Lufthansa Group successfully concluded the pilot project "LH New Workspace". Over the course of six months, controlling and human resources employees tested innovative workstations and work setups at the Lufthansa Aviation Center (LAC) in Frankfurt, designed to take into account the increased demands on a mobile and flexible work environment and an improved compatibility of professional and family lives. Following positive feedback from participants, the Executive Board decided to implement the concept at the entire LAC by the first quarter 2016. Other locations have already started the introduction of the New Workspace. Information events accompany the changeover from conventional, primarily closed office structures to open space concepts incorporating "hot desking", in which employees use temporary workstations instead of fixed desks (see page 89, *Balance* 2014).

Indispensable: Intercultural competencies

People from 143 nations work at the Lufthansa Group. Therefore, it is an important goal for the Group's personnel strategy to understand, manage and take advantage of the related cultural diversity as a resource. The aviation company continuously develops its management approach and adapts it to changing basic conditions.

Cosmopolitanism and tolerance are a matter of course for an aviation group with international activities. Consequently, it is a central concern for the Lufthansa Group to further develop the dialogue and the understanding between the cultures, both internally and externally. For this purpose the Company has made a number of tailor-made continuing education modules available.



The parent-child office at the Lufthansa Aviation Center at Frankfurt Airport.

Employment policy based on partnership

Creating viable conditions for the future

The Lufthansa Group's success depends greatly on the ideas, enthusiasm and commitment of its employees. Therefore, the aviation company attaches the greatest importance to providing its employees with an attractive work environment and appropriate salaries. Likewise, it is an established tradition always to balance the economic interests of the Company with the expectations and needs of its employees.

It is tried-and-tested Company policy to settle clashes of interests between Company management and the bodies representing employees in a transparent manner. A fair approach to coexistence in all areas creates the balance needed to advance the Lufthansa Group's position in the market. The growing plurality of opinions and opinion leaderships, much like developments in society as a whole, is increasingly a challenge for all parties concerned. The guiding principles for joint efforts are flexibility and responsiveness.

Partnership in collective agreements

Lufthansa employs its staff under conditions that guarantee them social and material security not only during but also after their working years. These are established on the basis of collective agreements that the Company negotiates with its union partners Vereinte Dienstleistungsgewerkschaft (ver.di), Vereinigung Cockpit (VC), and Unabhängige Flugbegleiter Organisation e.V. (UFO). The goal is to treat all

employee groups within the Company fairly and justly – a desideratum that the multiplicity of unions within the Company presents with an array of increasingly challenging conditions. You can find the latest information on the ongoing collective bargaining negotiations at

www.lufthansagroup.com/media

Active pay and social policy abroad

Internationalization and globalization offer a broad range of opportunities for the Group's business and personnel processes. As a company with international operations, Lufthansa's pay and social policies are guided by conditions in the various countries. The focus is on long-term definition of the conditions of employment, which depend on the needs of the employees, operational requirements, and the local labor market – with the inclusion of compensation rules, working conditions, and pension schemes. Lufthansa defines these agreements in cooperation with internal

labor committees and employees. The Company is a party to collective wage bargaining with employees in about 25 countries. In all countries where Lufthansa acts unilaterally, the Company uses benchmarks and macroeconomic data such as inflation figures to review salaries at least once a year on the basis of market and competitiveness criteria. In countries with very high rates of inflation, this assessment is performed more often, given the circumstances, and usually leads to pay increases. In this way the Lufthansa Group offers continual review and adjustment of working conditions for its locally employed staff.

As a signatory to the UN Global Compact, Lufthansa has documented its support for freedom of association and the right to collective bargaining for all of its employees worldwide. Employees in any country where Lufthansa companies are active are free to lawfully organize themselves and become involved in defining their working conditions.

New company pension scheme

Today's attractive company pension scheme has been in place for Lufthansa employees since 1994. The aviation group attaches great importance to rewarding the performance of its employees in this additional way. In order to respond to the developments of the capital markets as well as the consequences of demographic change, the Company terminated the bargaining agreement with employees regarding the company pension plan in September 2013. The goal is to agree with the collective bargaining partners on modern, market-oriented retirement benefits that sustainably secure the Company's competitiveness (see from page 92, *Balance* 2014). All pension entitlements previously earned under the company pension scheme are secured and remain unchanged in any case.

The Company's management has proposed a new company pension scheme by which Lufthansa would pay amounts into an individual capital account for each employee and invest these funds on the capital market. Under this new system, the amount of the pension payments would be based on actual investment performance rather than on guaranteed pension levels. In addition, each employee would have the option of increasing the level of his or her company pension by paying in additional amounts themselves. Upon reaching retirement age, employees would also be able to choose individually either to have their retirement benefits paid out in a lump sum or to receive a lifelong monthly pension payment – a flexible solution that among other things would make it easier to bequeath pension claims.

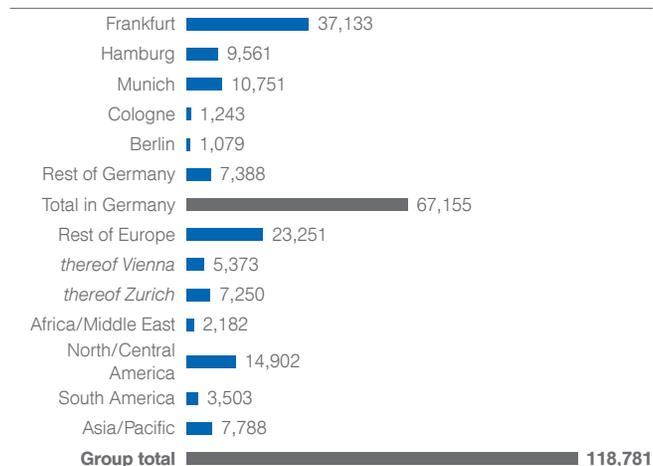
Lufthansa Group: Distribution of employees¹

Employees as of December 31, 2014

	2014	2013	change
Group employees	118,781	118,285	+0.4%
of which Passenger Airline Group	54,960	55,272	-0.6%
of which Logistics	4,663	4,660	+0.1%
of which MRO	20,079	19,917	+0.8%
of which IT Services	2,721	2,718	+0.1%
of which Catering	32,843	32,307	+1.7%
of which Service & Finance	3,515	3,411	+3.0%

Lufthansa Group: Jobs throughout the world

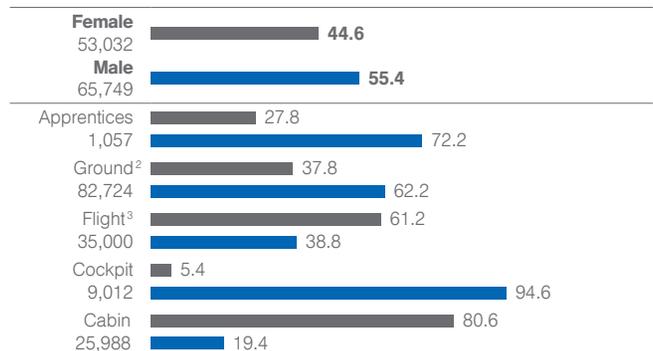
Employees as of December 31, 2014



Lufthansa Group: Number of employees by professional group and gender

Employees as of December 31, 2014, in percent

● Female employees ● Male employees



¹ Previous year's figures have been adjusted

² Without apprentices

³ Consists of cockpit and cabin



“involve me!”: First Group-wide standardized employee survey

For many years the Lufthansa Group has counted on regular employee surveys. With the introduction of the strategic program “7to1 – Our way forward”, which also includes the action field “Culture and Leadership” (see page 18), the importance of a modern, feedback-oriented leadership culture has further increased. The goal of employee surveys is to find out how satisfied employees are with their work, to what degree they identify with their employer and where they have identified weak spots (see from page 93, *Balance* 2014). The results and open comments thus obtained are the basis for an in-depth dialogue between managers and employees and the drivers of continuous improvements within the Company.

While each Group company conducted its own survey in the past, 2015 marks the first year in which a Group-wide standardized polling process is to be implemented. A significant advantage of the new proce-

cedure is that themes, questions and indices can be harmonized and results can be compared. The new survey concept will be known under a new name: “involve me!” Employees of the Lufthansa Group selected this name from among four alternatives.

COMPASS program: Job exchange offers more than jobs

The Lufthansa Group pursues a sustainable personnel policy that takes into account not only the Company’s requirements, but also the employees’ interests. This also applies to times of change, which are unavoidably accompanied by operational restructurings. For this reason, the aviation company has offered COMPASS (see page 93, *Balance* 2014), which was launched in 2013, in an expanded format since the beginning of 2015.

Since then, employees have been able to access in an even simpler, more efficient and direct way daily updated vacancies at more than 50 renowned partner companies, including the job portal JobStairs. As a further advantage, the job exchange lists significantly more offers than before, espe-

cially in the area of jobs paid according to tariff. An integrated map function allows the display of the searching company’s geographical location. For employees at Lufthansa German Airlines and in central functions the program also offers a free job application service with external advisors.

Program participants who wish to apply for a suitable job via the portal can also use this service to have their application documents checked, to obtain tips on how to optimize them and to be prepared for upcoming job interviews.

COMPASS is addressed to employees and managers whose jobs are threatened, who seek new professional challenges or who would like to become self-employed. To support the latter in an optimum way, the program also includes comprehensive, individual counseling for setting up a business as a self-employed entrepreneur. An online forum, where current and former users can exchange information anonymously, completes the range of counseling offers and online services within COMPASS.

In this way, COMPASS has evolved into an integral part of sustainable personnel policy at the Lufthansa Group.

Talent management

Charting tomorrow's course today

Success and the ability to innovate depend largely on qualified and motivated employees. Therefore, talent management is an important field of action for HR management at the Lufthansa Group and an integral part of its value-oriented Company policy. Taking individual needs into account and providing matching measures ensure the methodical, professional and personal development of employees.

The early identification of internal and external talent and the continuous development and qualification of employees are core building blocks of HR management.

To this end, the Lufthansa Group developed a comprehensive talent management philosophy in 2014. It provides for a clear and uniform understanding of talent management across the entire Group and gives all employees a clear means of orientation. At the same time, all talent management processes and instruments were adapted to the Lufthansa Group's five Leadership Principles (see page 73) and supplemented by new innovative concepts.

Leitmotif: "Every employee has talent!"

The basic principle of the new talent management philosophy is that all employees have talent. One of the aims here is to create an environment in which employees are increasingly empowered to shape their development themselves. The Lufthansa Group supports this path with corresponding talent management instruments and processes. These offer each employee more individual scope for shaping and assuming responsibility for their personal development. An example for the success of this approach is the response to the new transparent process for filling vacancies at the upper management levels: More than 1,700 candidates applied during the reporting year for nearly 250 managerial positions.

In addition, a stronger focus is placed on the fostering of talent as a central task of all managers. For this purpose, talent management creates adequate measures for all job phases an employee passes through within the Company – from recruitment to retirement.

Promoting horizontal career paths

Careers do not have to climb steadily upwards – on the contrary. Instead of always aiming at the next step on the hierarchical ladder, the Lufthansa Group's talent management would also like to enthrone employees to engage in horizontally-oriented internal and external career paths. After all, a change on the same level can also guarantee a multitude of opportunities for further development. A large potential for this type of a move is offered by the about 540 companies within the Lufthansa Group. In future, a number of measures will make it easier to fulfill rotation requests by managers and employees between business segments. A current pilot project is investigating which factors are relevant for employees when changing jobs between Lufthansa, Swiss and Austrian Airlines and how such changes can be facilitated. This may include transparent conditions for transfers or assistance in finding child care solutions or a tax advisor. This question becomes even more important when a job change involves a move to another country.

The Lufthansa Group's talent management: Nine key messages

A shared understanding of “talent management” at the Lufthansa Group is of decisive importance. The following nine key messages illustrate our Talent Management Philosophy.



01 /

Every employee has talent!

All employees are encouraged to enrich their working environment by using their different talents. The scope of Talent Management at Lufthansa includes all employees.



02 /

Different needs, different ways!

Talent, performance and flexibility of each employee match the business needs in different ways. Therefore, the intensity and pace of individual development activities will vary.



03 /

Talents shape their own future!

Having ambition and being proactive are the driving forces in career advancement. Talents can – and should – take ownership of their next career steps.



04 /

Up is not the only way!

Talent Management is about growing one's capabilities in the current role, in a new role on the same level and possibly on a different level – or also pursuing various careers.



05 /

Fostering talent is the key!

All leaders within the Lufthansa Group have to take responsibility for their employees' talents and focus on their further development to add value to the business.



06 /

Turn the spotlight on leading people!

Monitoring performance and managing both positive and negative consequences are a part of every leader's agenda. HR equips managers with the appropriate tools and processes.



07 /

Share and benefit!

All employees think and act as a part of the Lufthansa Group, personal development takes place across company borders. This makes the whole greater than just the sum of its parts.



08 /

Welcome diversity!

A multitude of perspectives enhances the competitiveness of the business. And sometimes it's not the familiar way that leads to the best results.



09 /

Employer of choice!

All Talent Management activities aim to become the employer of choice both for our current and for our future employees – in all markets we operate in.

Setting up a uniform talent landscape

Along with the investment in the exchange of talent between the Lufthansa Group companies, a uniform talent landscape is being set up Company-wide. A central role in this area is played by the new performance and talent assessment instrument “Profile” (see page 73). Introduced in 2014 for the majority of managers, it is to be rolled out step by step for additional employee groups across the Company. Every year, this HR instrument appraises afresh not only “what” an employee achieved but also “how” he or she did so. The insights gained in the process make it possible to assign suitable development measures to each employee. Unlike the logic applied until recently, “Profile” no longer focuses solely on the relatively small group of “high potentials” within a company. Instead, it considers all Group employees taking part in the assessment.

“Are you a nerd?” trainee program is looking for personalities

A contribution to winning highly qualified talent for the Lufthansa Group also comes from the newly-aligned ProTeam trainee program, which specifically addresses university graduates who would like to participate in shaping the Company’s cultural change. The selection considers neither grades nor subject of study: Instead the Lufthansa Group places the emphasis of its

search on the applicant’s personality. Every applicant has the opportunity to show his or her motivation and enthusiasm for Lufthansa in a two-minute video message. For the first time, the Company also paid special attention to whether individual trainees fit well together as a team. The 18-month program is characterized by a pronounced focus on change, culture and innovation. In addition, it gives trainees the opportunity to work intensively on themselves – be it in a social business in India or by means of a mutual peer coaching with other trainees of the same generation.

Accompanying communication measures

The Lufthansa Group continuously provides information about the new talent management philosophy by means of workshops and roadshows as well as internal media such as the Group’s staff newspaper, the news app or the intranet. In addition, the HR Campaign Days took place in 2014 at the Lufthansa Aviation Center in Frankfurt, offering information stands and presentations on a wide range of topics including talent management.



business@school

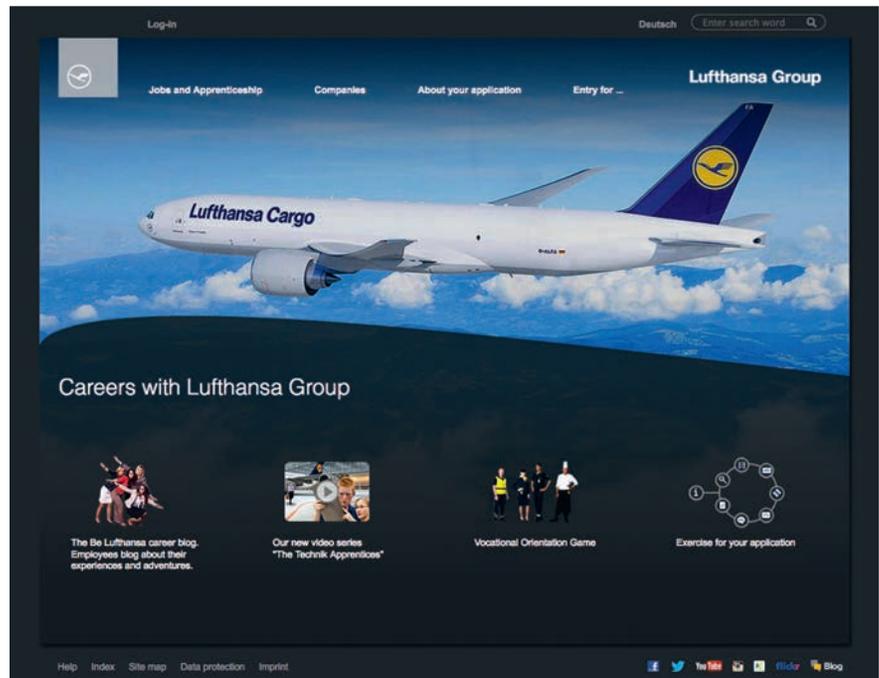
The Lufthansa Group has supported business@school, an educational initiative of the global management consulting firm The Boston Consulting Group (BCG), since 2002. Each year, the project gives over 2,000 high-school students the opportunity to experience business firsthand, acquire key skills for their future working lives and develop their own business ideas over the course of ten months. Launched with two schools in Germany in 1998, the student competition today involves over 90 schools in Germany, Austria, Italy, Switzerland and the United States. In January 2015, the Lufthansa Group gave its first-ever special award for Best Corporate Analysis in Phase I of the initiative – a field day at the Lufthansa Aviation Center at the Frankfurt hub. Currently, more than 30 Lufthansa employees are actively involved in business@school. Simone Menne, member of the Executive Board and Chief Officer Finance and Aviation Services at the Lufthansa Group (center), with the winners of the special prize.

www.business-at-school.net

An attractive employer

For many years, the Lufthansa Group has been among Germany's most popular employers. This is not least evidenced by the 130,000 applications the Company received during the reporting year. With about 6,000 visits a day, the career portal www.Be-Lufthansa.com serves as an initial contact point, providing comprehensive information about the numerous professional options available. The same goes for the Be Lufthansa career blog and the world's largest aviation group's Facebook page.

Right from the start, the Lufthansa Group has offered a broad spectrum of training and continuing education options. In 2014, the Group smoothed the way towards a professional career for more than 370 apprentices in 40 occupations requiring formal training. During the reporting year, high-school leavers and university graduates could choose from 61 different entry-level options, including study and training programs. A total of 1,350 junior employees at the Lufthansa Group pursued an apprenticeship or university studies in 2014. For the training year 2016, the Company is again on the lookout for 230 young people.



The Lufthansa career portal www.Be-Lufthansa.com was honored as "best career website" in Germany by research institute Trendence.

Employer rankings 2014

Regular top positions in all relevant employer rankings underscore impressively that investments in employee development and continuous education pay off. In 2014, the aviation group managed to achieve even better scores than for the preceding year: For example, business students chose the Lufthansa Group as Germany's fourth most attractive employer in the trendence Graduate Barometer 2014. And in the trendence European Graduate Barometer, Europe's largest survey of graduates with more than 300,000 respondents, the Company ranked among the top 20 business employers. Moreover, Swiss made it into the ranks of Switzerland's ten most attractive employers on a regional level in the Universum Study 2014.

Employee health and safety protection

Fit for the future

The Lufthansa Group's comprehensive employee health and safety protection aims at promoting and maintaining its employees' individual performance and motivation. In the reporting year, the Lufthansa Group's Medical Service began realigning itself as a Corporate Health Management center.

The organization of the Lufthansa Group's employee health and safety management is for the most part decentralized. This approach is against the background of the Group's heterogeneous portfolio of companies, which leads to pronounced variations in the requirements of individual business segments. A key supervisory position in the Company's health protection concept falls to the Medical Service, whose team of occupational, aviation and tropical physicians are responsible for all health-related issues concerning employees. This unit, whose quality management is certified according to DIN EN ISO 9001, has been headed by Dr. Lothar Zell since September 1, 2014.

In 2014, the Medical Service began realigning itself as a Center for Corporate Health Management. Its goal is to further increase the links between the Group companies' health managers and to promote the exchange of information on medical subjects. Furthermore, the newly created "Health Steering Committee" is to develop new guidelines and programs for all Group companies. Last year, one area of emphasis for the Medical Service was to provide comprehensive information and advice on Ebola for the Lufthansa Group's flying personnel.

Award for social counseling

Crisis and conflict situations can affect any of us. That is why the aviation company offers Lufthansa Social Counseling as a voluntary staff support service. This unit provides support for employees and managers in the event of job-related problems, as well as private, financial or family-related difficulties. Its wide-ranging service portfolio is available at numerous locations in Germany (see page 101, *Balance* 2014).

In 2014, Social Counseling organized a total of 133 workshops, training sessions and information events. The service's overall score in related participant satisfaction surveys was 1.67 (on a school grade scale from 1 to 6). Its offer includes half-day workshops on resiliency in times of change as well as a range of formats on health-promoting (self-)leadership, team building and conflict management. Social Counseling was also an established part of the HR Campaign Days, which again took place at the Lufthansa Aviation Center in Frankfurt during the reporting year. In March 2015, Lufthansa Social Counseling received the Soul@Work Award for its health-oriented accompaniment of organizational change processes.



Lufthansa Social Counseling received the Soul@Work-Award in March 2015.

Continuously optimized OHS processes

All significant activities in the area of workplace safety at the Lufthansa Group are coordinated by its Occupational Health and Safety (OHS) department – together with physicians, social counselors, work councils and those responsible at the respective Group companies. All activities aim to maintain and improve the employees' health and fitness for work by means of continuously optimized job safety processes (see page 101, *Balance* 2014). Just how successful these measures are is demonstrated by the example of Lufthansa Technik: The MRO specialist's Hamburg location was again rated as "Company with an exemplary occupational safety system" by Hamburg's Office for Occupational Safety in July 2014, receiving another six-year certificate to follow those from 2000 and 2007.

Health campaign "Cargo fit: Join the fun" at Lufthansa Cargo

In 2014, the Lufthansa Group's employees again benefited from a multitude of Corporate Health Management offers. For example, Lufthansa Cargo organized the health campaign "Cargo fit: Join the fun" in October in Frankfurt. It invited employees to test their flexibility, stress resistance and fitness over the course of one week and to immerse themselves into the topic of nutrition through interactive media. Participants also received health tips and individual fitness plans.



All materials used to manufacture Lufthansa uniforms regularly undergo human ecological laboratory analyses.

Lufthansa uniforms manufactured according to OEKO-Tex® Standard 100

Lufthansa equips its pilots, cabin crews and ground personnel with uniforms that are manufactured without harmful substances as well as in accordance with sustainable and fair principles. To guarantee this, all materials such as fabrics, yarns and buttons are tested in laboratories according to human ecological parameters. Only if each and every component meets the stringent independent tests for pollutants carried out by the OEKO-Tex® Association does the uniform manufacturer receive the quality label "Confidence in textiles – Tested for harmful substances according to OEKO-Tex® Standard 100". In addition, regular supplier audits at the production sites ensure adherence to the aviation company's supplier standards. These audits are carried out by a general contractor on Lufthansa's behalf and supervised regularly by Lufthansa employees.





Corporate Citizenship

To increase the efficiency of our social commitment, we will bundle our corporate citizenship activities under the umbrella of Lufthansa Group Social Care.

15

years of Help Alliance –
15 years of help for self-help

22,500

free medical treatments by Cargo Human
Care during the reporting year

30

More than 30 years of cooperation
with "Werkstätten für Behinderte
Rhein-Main e. V."

Lufthansa Group Social Care – For a culture of shared responsibility

The Lufthansa Group advocates responsible mobility, network links and worldwide connections. As targeted civic engagement secures and strengthens general, long-term cohesion within society, the aviation group strongly supports social issues (corporate citizenship) at home and around the world. To fulfill this responsibility even better in future, the Lufthansa Group has realigned its social commitment in 2015 by bundling all its corporate citizenship activities under a single roof: Lufthansa Group Social Care.

From now on the focus is to be above all on social and humanitarian projects. Complemented by selected activities in the areas of culture, sports and the environment, all these efforts are also to aim at creating utility for social issues.

Moreover, the Group has provided rapid and professional ad-hoc aid in the event of humanitarian crises and natural disasters for many years. Since February 2013, Lufthansa Cargo has also been part of a professional network of renowned aid

organizations. This cooperation with the emergency aid alliance “Aktion Deutschland Hilft” and its strategic partner “World Vision Deutschland” gives aid organizations direct access to Lufthansa Cargo’s logistics competencies for relief support outside of Germany.

Lufthansa Group Social Care has also defined and developed new social care guidelines. These stipulate that the aviation group is to support only those projects fulfilling its new funding criteria in future. A detailed evaluation matrix shows if this is the case.

Applying expertise – Providing impulses

An important building block in the Lufthansa Group’s corporate citizenship concept is to foster the social commitment of its employees and managers in ever more targeted ways. Its systematic expansion of Corporate Volunteering takes into account that today’s top talents seek not just a job, but rather a professional setting in which they

can combine personal involvement and future-oriented action. Facilitating this desire greatly increases a number of factors such as staff motivation, job satisfaction, company loyalty, intercultural competence and self-esteem. The community benefits as well: Practice shows that the greater a project’s long-term utility for society, the better people are able to contribute their individual expertise. Consequently, the Group-wide trainee program “ProTeam” is to be expanded in future by a four-week trainee assignment in a social business abroad.

Last year, employees from various departments across the Lufthansa Group had a special opportunity to combine entrepreneurial initiative and social commitment at the Haiti Entrepreneurship Camp 2014. Among the project’s strong supporters is the Help Alliance, the aid organization founded by Lufthansa employees (see page 95).

Humanitarian emergency aid

For many years, the Lufthansa Group has provided swift and uncomplicated help in the event of catastrophes – as a rule in close consultation with the German government and noted German aid organizations. The focus of this commitment is on aid flights providing initial logistical supplies to people in acute need as a result of flooding, drought, earthquakes or epidemics.

Ebola epidemic: Special flight with aid materials

On October 28, 2014, Lufthansa Cargo flew more than 70 tonnes of aid materials to West Africa on behalf of the United Nations Children's Fund (Unicef). This action was

against the backdrop of the largest ever Ebola epidemic, which broke out simultaneously in Guinea, Liberia and Sierra Leone last year. According to the World Health Organization's Ebola Situation Report on April 29, 2015, over 25,000 people in these West African countries have been infected by the Ebola virus and over 10,000 have died as a consequence.

Aboard the logistics specialist's MD-11 freighter were 200-plus tents, which were used locally as special isolation wards at or near hospitals. These Ebola Treatment Units (ETUs) allow care for Ebola patients at the strictest security and protection levels.



Preparations for a Lufthansa Cargo aid flight to West Africa.

Evacuation aircraft for Ebola patients

At the initiative of Germany's Federal Foreign Office, Lufthansa Technik refitted a Lufthansa Airbus A340-300 in only 11 days as an evacuation aircraft to fly highly infectious Ebola patients from the areas affected by the epidemic. Unlike smaller specialized aircraft, the A340 allows intensive medical care of critically ill patients during the flight. The central element of the evacuation aircraft is the Patient Transport Isolation Unit. It is located in a hermetically sealed low-pressure tent that is connected to two further air and gas-tight tents, which serve as safety locks and for disinfection when entering and leaving the isolation unit. On November 27, 2014, the Lufthansa Group handed the fully operational refitted Airbus over to Federal Foreign Minister Dr. Frank-Walter Steinmeier and Federal Minister of Health Hermann Gröhe.

The complex and technically demanding refit of this passenger aircraft was possible due to Lufthansa Technik's many years of experience with the construction and fitting of special cabin interiors for government, VIP and business aircraft. All work was carried out in close cooperation with the Robert Koch Institute in Berlin, the German government's central authority in the area of disease monitoring and prevention. The evacuation aircraft's humanitarian mission was initially limited to six months. More than 700 Lufthansa pilots and flight attendants volunteered within a very short time for duty on the evacuation aircraft "Robert Koch" and thus expressed their solidarity for the people in the areas affected by Ebola.



Evacuation aircraft: The complex and technically challenging refit was carried out by the experts at Lufthansa Technik.

"Africa is not Ebola": Noncommercial initiative of Brussels Airlines

To help bring more objectivity to the debate about the potential hazards of Ebola, Brussels Airlines launched the noncommercial awareness campaign

"Africa is not Ebola" on February 12, 2015. The goal is to remind the public – by joining forces with personalities from business, science, sports and culture – that only three of the 54 African nations are affected by the Ebola epidemic. Hence it is high time to end prejudices concerning Africa so that tourists, investors and companies return to the world's second-largest continent.

Earthquake in Nepal: Help Alliance calls for donations and plans aid for reconstruction

Following the earthquake in Nepal in April 2015, the Help Alliance launched a call for donations. In addition, the aid organization will support reconstruction projects in Nepal – as it has done previously in the wake of other natural catastrophes such as the tsunami in the Philippines or the earthquake in Haiti. To this end it cooperates with local professional partners. All project suggestions are carefully analyzed and evaluated by the Help Alliance.

Social commitment

Making a commitment to less privileged people around the world and a difference to society as a whole has a long tradition at the Lufthansa Group. This attitude is illustrated by numerous long-term aid projects and initiatives brought to life by its socially engaged employees and supported by its management.

help alliance

Help Alliance – Closer to the world. Closer to its people.

As long ago as 1999, employees from all parts of the Lufthansa Group brought the Help Alliance to life. The main task of this charitable association is to collect donations and to use these funds in a meaningful way for humanitarian causes. Since its early days, the aid organization has concentrated on the areas of education, health and nutrition while paying special attention to children and teenagers.

The scope of aid projects is varied and includes schools, training facilities, orphanages and projects for street children in Africa, Asia, Central and South America and Eastern Europe. To ensure long-term success, a Lufthansa Group or Condor employee is assigned to each project. He or she accompanies the project personally; this includes quality-assuring visits on location as well as reporting duties. The necessary planning security is provided by the Lufthansa Group, which has supported the Help Alliance since its foundation with funds, logistics and communications.

The employee organization's record is impressive: It looks back on 130 successfully supported projects and provides – together with the Lufthansa Group – emergency and reconstruction aid worldwide in the event of catastrophes. The bottom line is that the association has invested almost 10.5 million euros for humanitarian purposes over the past 15 years. More than 90 percent of all donations it administers flow directly into its aid projects. To ensure that people dependent on support will in due course successfully take charge of their own lives, all measures are guided by the principle of providing “help for self-help”. An annual report and its own website provide information about the association's work.

15 years of Help Alliance

In 2014, the Help Alliance celebrated its 15th anniversary at the Lufthansa Aviation Center. Joining in the celebrations were about 150 friends and supporters, including the association's new patroness, Vivian Spohr. She took the baton from her predecessor Bettina Lauer, who had championed the Help Alliance since 2009. For her tenure the wife of the Lufthansa Group's Chairman and Chief Executive Officer Carsten Spohr is planning among other things to increase awareness of the employee organization and to open up new sources of revenues. Furthermore, the aid organization's website www.helpalliance.org received a fresh look to mark the 15th anniversary.

“Companies, such as the Lufthansa Group, which embody certain values have an obligation to get involved in social issues. It is a stroke of luck that Lufthansa can count on employees who pull together.”



Vivian Spohr,
Patroness Help Alliance e.V.

Below is an overview of the Help Alliance's key projects during the reporting year.

Haiti Entrepreneurship Camp

During the reporting year the Help Alliance supported the first Haiti Entrepreneurship Camp, which took place in the capital Port-au-Prince. The pilot project aims at motivating young people to set up their own businesses and thus to disprove the widely held belief that success depends solely on social origins. Under the motto "driving business – driving future" lecturers from around the world – including many Lufthansa employees from different Group companies as well as local non-government organizations and institutions – taught about 30 young Haitian entrepreneurs between the ages of 24 and 42 business know-how in theory and practice over the course of two weeks. Given last year's great success, the camp will take place again in 2015.

Child Sponsoring Circle India

The Help Alliance has been committed to Child Sponsoring Circle India since 2004. This central Indian association maintains 20 boarding schools in Khandwa in the state of Madhya Pradesh. The project's focus is on 3,000 children from the ostracized "untouchables" caste who can be supported by neither their families nor their village communities. At the boarding schools they receive food, shelter, medication and education. Every year, 200 of them graduate from secondary school. In addition, Child Sponsoring Circle has operated a mobile hospital ward since 2008 with support from the Help Alliance and the frequent flyer program Miles & More.



Vivian Spohr, the patroness of the Help Alliance, during her visit to boarding schools run by Child Sponsoring Circle India.

“The approach that we can achieve more together than alone has proven itself a resounding success. A big ‘thank you’ to all who have supported us during the past 15 years.”



Rita Diop,
Chairwoman Help Alliance e. V.



The Help Alliance has supported the preschool project iThemba School Capricorn in South Africa since 2006.

iThemba School Capricorn

The iThemba School Capricorn is a preschool project in the townships of Cape Town, South Africa, that every year gives 75 underprivileged children the opportunity to attend school. The Help Alliance has supported this project since 2006. Given the positive response from both parents and the Capricorn district municipality, the iThemba School started construction of a primary school at the beginning of 2015. It is to accommodate 600 children and is slated for inauguration in January 2017.

Fundraising activities

Since 2012, the association has cooperated with betterplace.org, a charitable donations platform that permits users to support projects directly. The same is true for the more recent cooperation with ammado.com, thanks to an initiative by the ninth generation of the management development program “explorers”: Visitors can now reach this online platform, which meets the requirements of German and European data protection laws, via links on www.helpalliance.org and www.LH.com. The Lufthansa Group companies and cooperation partners participate as well in fundraising campaigns. Via Facebook, YouTube and the Help Alliance blog, the humanitarian aid organization maintains contact with its supporters and informs them about the progress of individual projects.

Small Change – It’s a Big Help

With the aim of building bridges into a better future for people in need, the Help Alliance launched the on-board collection program Small Change – It’s a Big Help in 2001. It offers Lufthansa Group passengers the opportunity to donate coins and bills in any currency they might be carrying on homeward bound long-haul flights. For this purpose, the seat pockets on board aircraft contain small sealable envelopes, which the flight attendants then collect and forward to the Help Alliance. In addition, valuable small change is also collected in donation pillars placed in employee areas, the Lufthansa Lounges at all German and selected international airports, and in the public areas at the Frankfurt and Munich hubs.

October 2002: start of Condor’s participation
 September 2011: start of Brussels Airlines’ participation
 July 2012: start of Austrian Airlines’ participation

On-board collection program

Development of donation volumes in euros¹

2014	497,823
2013	301,566
2012	318,380
2011	205,362
2010	286,184
2009	224,053
2008	230,433
2007	260,939
2006	279,575
2005	294,870
2004	238,023
2003	216,539
2002	232,692
2001	207,175

¹ As the final figures were not yet available at press time, all figures in this article mentioned for the reporting year 2014 are preliminary.

“Flight Mode app”:

Digital time out for a good cause

With the aim of supporting four Help Alliance school projects in India, Brazil, Benin and Vietnam, the Lufthansa Group published the “Lufthansa Flight Mode app” in December 2014 LH.com/flightmode. The goal of this Christmas campaign was to motivate the app’s users to take digital time out on board or on the ground for a good cause. To do so, they merely had to switch their mobile or smart phone to the off-line mode

– the “flight mode”. All off-line minutes registered worldwide by the app by December 24 were added up and turned into donations by the Lufthansa Group.

Traditional ways of supporting the work of the Help Alliance are a Supporting Membership, direct donations, the on-board collection (see page 97), Miles to Help, and child sponsorships.

www.helpalliance.org



15 years of Help Alliance





Cargo Human Care: At Mothers' Mercy Home the first graduates celebrate the successful completion of their course work.



Cargo Human Care: Take off, land, help

Cargo Human Care (CHC) is a registered charity set up jointly by Lufthansa Cargo employees and German physicians in 2007. From the start, Lufthansa Cargo has supported the initiative with air tickets and freight capacities provided free of charge. The basic idea of this Kenya-based aid project is to provide professional medical care to sick and needy people in an uncomplicated manner. Treatments are given at the Medical Center run by Cargo Human Care in Nairobi. It mainly looks after people living in the vicinity who cannot afford to see a doctor, as well as the children living at the orphanage Mothers' Mercy Home. The latter, the CHC's second important area of activity, is currently home to more than 115 orphans.

CHC draws from a pool of about 40 medical doctors from six specialty areas. Three times a month, physicians board an aircraft for a four-day stint as voluntary care providers in Kenya. Since 2008, their work in

Nairobi has added up to more than 2,000 days. What is more: In 2014 the CHC provided without charge about 22,500 treatments for about 6,500 patients – a new record. During the reporting year, the CHC again expanded the range of medical options it offers. Among these new treatments are plastic surgery and laparoscopic procedures, which German specialists perform on an inpatient basis at the local Nazareth Hospital. Furthermore, the aid organization cooperates with an eye clinic to treat cataracts.

Since 2011, Cargo Human Care has offered full or partial child sponsorships for sick, disabled and neglected children living in the area surrounding the Mothers' Mercy Home. There were 60 such cases in 2014. In addition, the CHC created education and training sponsorships during the reporting year – a support option that currently benefits more than 30 young people.

Dr. Sven Sievers, founding member and former second chairman of Cargo Human Care, was awarded the Order of Merit of

the Federal Republic of Germany on May 9, 2015 for his volunteer work in Kenya. Three years earlier, Fokko Doyen, MD-11F Fleet Chief at Lufthansa Cargo and initiator of Cargo Human Care, received the same award.

www.cargohumancare.de

Cargo Social Care: Cooperation with sheltered workshops

For more than 30 years, Lufthansa Cargo has joined forces with the registered association "Werkstätten für Behinderte Rhein-Main e. V.". This cooperation secures the jobs of 280 disabled persons, who each week produce about 2,400 lashing straps and each month repair about 11,000 straps used to secure air freight loaded on aircraft. All products meet the stringent Lufthansa Cargo quality requirements derived from the relevant ISO standards.



Swiss and SOS Children's Village together champion conditions that will allow children to take their lives into their own hands later on.

Swiss

For many years, Swiss has maintained close ties with the aid organization SOS Children's Villages. For example, the child welfare agency receives the "small change" in various currencies that the airline collects from passengers on board its flights and at a number of coin collection points. During the reporting year, a total of 185,000 Swiss Francs were collected in this way. Beyond that, Swiss supports the efforts of SOS Children's Villages with communications campaigns and transportation services. Also the Swiss Children's Foundation, set up by staff and managed by volunteers, can rely on financial, logistical and infrastructural support from the Lufthansa subsidiary. Moreover, Swiss employees can choose to have a voluntary donation to the Swiss Children's Foundation deducted from their salaries. The foundation uses these donations to finance the livelihoods of families in the SOS Children's Villages it supports around the world.

Austrian Airlines

The Austrian Group airline assumes its responsibility for social issues and supports globally relevant charities, social organizations, institutions and projects. This also includes the Life Ball. It is one of the largest AIDS charity events worldwide and takes place every year at Vienna's city hall. Its goal is to help people with the immune deficiency disease in unconventional ways and to remove the taboos surrounding HIV/AIDS. To mark the occasion of the Life Ball 2014, Austrian Airlines branded a Boeing 777, which has been flying around the globe in this special livery since April 1, 2014. In 2015, the Life Ball took place on May 16.

Brussels Airlines

After 2011 and 2014 (see page 109, *Balance* 2014), employees of the Lufthansa Group airline Brussels Airlines will once again participate in "Bike for Africa" in 2016. This mountain-bike event is an initiative of Brussels Airlines' b.foundation, which supports the social involvement of its employees. The route planned for next year covers 460 kilometers across Senegal and Gambia in West Africa. Revenues from the five-day cycling tour will benefit humanitarian projects.

Environmental sponsorship

Today, nearly a third of all known animal and plant species is considered to be endangered. This includes the crane, the Lufthansa Group's heraldic bird, for at least ten of the 15 crane species around the world are threatened in their existence. With the aim of putting a stop to the ongoing destruction of crane habitats, the Group has been active in crane protection for over 30 years.

Lufthansa supports numerous crane protection projects through the charitable working group Crane Protection Germany, which was founded in 1991 by Lufthansa, Naturschutzbund Deutschland (NABU) and the environmental foundation WWF Deutschland. Special emphasis is placed on the Crane Information Center (CIC), which Crane Protection Germany operates in Groß Mohrdorf (see page 110, *Balance* 2014). The CIC again drew about 15,000 visitors in 2014.

During the reporting year, Crane Protection Germany inter alia developed guidelines for the 92.2-hectare grassland area it received from Bodenverwertungs- und -verwaltungs GmbH (BVVG) as a transfer from national natural heritage land stocks. The goal is to preserve and expand the marshes and meadows surrounding the Günzer See, a coastal lake in the rural district of Vorpommern-Rügen, as breeding and resting grounds for aquatic and migratory birds. To maintain visitor access to this area, Crane Protection Germany is currently constructing a barrier-free observation deck ("Utkiek"), set to open in

October 2015. The project "Treasure on the Coast" is supported by Germany's Federal Agency for Nature Conservation.

Responsibility for the "bird of luck" was also assumed by a number of volunteer crane rangers from the ranks of Lufthansa employees in 2014. They used several days of active vacation to lend a helping hand to Crane Protection Germany.

Banding campaigns in Turkey and Ethiopia

In an effort to save the last 150 crane pairs in Turkey, Crane Protection Germany joined forces with partners to band and radio-tag a number of birds in 2014. Also in the pipeline are various banding and radio-tagging projects in Ethiopia.

www.kraniche.de

www.facebook.com/kranichschutz

No profit from wild animals

At Lufthansa Cargo "live freight" always flies safely and species-appropriately. In the interest of protecting wild animals, the freight airline refuses all commercial shipments of endangered species (see page 84, *Balance* 2010). For the same reason, the transport of endangered animal trophies has been strictly forbidden on Lufthansa Cargo flights for many years. To take its measures to protect wildlife a step further, the airline has decided not to accept trophies in Africa from species such as lions, elephants and rhinoceroses – including those that are legally shot or acquired. In this way, Lufthansa Cargo makes another contribution to animal and species protection.

www.lufthansa-cargo.de



Impressions of the crane ringing campaign in Ethiopia

Cultural commitment

Art is a precious resource which no society can do without. To underscore this conviction, the Lufthansa Group has been active in the cultural domain for many decades. Currently, the focus of our support is on musical institutions and performances of distinction.

Since 2010, the Lufthansa Group has supported the renowned Gürzenich Orchestra as First Global Partner. Resident at Cologne's Philharmonie, it is considered one of Germany's leading concert and opera orchestras. In February 2014, Lufthansa flew the 130-musician-strong ensemble to Asia for a concert tour, as part of its first long-term commitment to a symphonic orchestra (see page 113, *Balance* 2014).

Star-studded charity concerts

On the first Sunday of the 2014 Advent season, Lufthansa joined forces with the Gürzenich Orchestra and regional newspaper "Kölner Stadt-Anzeiger" to organize a charity concert. The sold-out performance generated net revenues of 20,000 euros for the benefit of the Lufthansa employee organization Help Alliance and "wir helfen", the aid association of Cologne publishing house DuMont-Schauberg. Whereas the Help Alliance's activities are worldwide

(see page 98), "wir helfen" looks after children and teenagers in distress across the Cologne region. Performing works by Tchaikovsky and Beethoven, star violinist Midori and conductor Michael Sanderling proved to be absolute crowd pullers. The next edition of this charity concert series will take place on October 18, 2015 – this year with cellist Gautier Capuçon and guest conductor James Gaffigan. In addition, the Gürzenich Orchestra ensures musical delights of the highest order for Lufthansa's employees at selected in-company events throughout the year.



The Gürzenich Orchestra supports the Help Alliance and "wir helfen" by giving a charity concert.

Sports sponsorship

For many years, the Lufthansa Group has extended its social commitment to high-performance sports as well. The “Airline of Sports” is a trusted and reliable partner of numerous renowned sports institutions, associations and clubs.

German Sports Aid Foundation

Since 2007, Lufthansa has been a National Sponsor of the German Sports Aid Foundation, an organization that currently supports about 3,800 athletes. Furthermore, the aviation group supports the foundation’s initiatives “Your Name for Germany” (see page 104, *Balance* 2013) and “Springboard Future – Sports and Career”. The latter helps world-class athletes start to prepare the way for their later professional development while still in their active sports careers. Currently, five Lufthansa managers serve as mentors for the same number of athletes, giving advice and practical support.

www.sporthilfe.de

German Olympic Sports Confederation and National Paralympic Committee Germany

As the official carrier of the German Olympic Sports Confederation and National Paralympic Committee Germany, Lufthansa flew the German national teams to both the Olympic Games and the Paralympic Winter Games 2014 in Sochi. In June 2015, the “Airline of Sports” also flew the German teams to the Azerbaijani capital, Baku, where the European Games took place for the first time. In addition, Lufthansa traditionally supports



The Boeing 747-8 named “Potsdam” shows both the words “Fanhansa” and the heartfelt thanks in the word “Siegerflieger” (Winners’ Plane) from Lufthansa and all fans to the German football team for its brilliant performance in Brazil.

the bids of German cities competing to host Olympic and Paralympic Games.

www.dosb.de / www.dbs-npc.de

Football

Lufthansa has been a close partner of the German Football Association since 2005. Ever since, the airline has flown all German national soccer teams to their away games as well as to European and world championships. Following Germany’s brilliant

victory at the FIFA World Cup in Brazil in summer 2014, Lufthansa brought the World Champions back home aboard a brand-new Boeing 747-8 – with the word “Siegerflieger” (“Winners’ plane”) painted on the fuselage. In November 2014, Lufthansa opted for an early extension of its partnership with the German Football Association until 2018. In addition, it is the Official Carrier of FC Bayern München as well as an official partner of the Eintracht Frankfurt team.

www.dfb.de / www.lufthansagroup.com/sports





Service and Information

Glossary / Editorial information /
Methodology of calculations /
Overview of the Lufthansa Group's fleet

Glossary

A

➤ Aerosols

Aerosols are solid and/or liquid particles that are suspended in the air. They reach the atmosphere by means of natural processes (wind, desert storms, volcanic eruptions) or human activities (combustion of biomass and fossil fuels). The most important aerosols are mineral dust, sea salt, cellular (biological) particles, soot, organic compounds, and sulfates. From a climatic perspective, aerosols are the opponents of greenhouse gases, as they can reflect incident light and thus have a cooling effect.

➤ aireg e. V. – Aviation Initiative for Renewable Energy in Germany

aireg is a registered association of leading German research institutions, Lufthansa and other companies in the aviation industry, and bioenergy producers. The goal of this initiative, which was founded in 2011, is to advance the development and introduction of regenerative aviation fuels in Germany and to inform the public at large about this topic.

www.aireg.de

➤ ATM – Air Traffic Management

Air traffic management ensures both the safe and the efficient movement of aircraft in all phases of operations.

➤ Atmosphere

The whole mass of air surrounding the Earth. It is divided into various layers, distinguished from one another by distinct differences in vertical bands of temperature. Important for air traffic are the two lower layers: the troposphere and, above it, the stratosphere. The troposphere's upper boundaries vary depending on season and latitude. They lie at altitudes of 16 to 18 kilometers above sea level at the equator, and at eight to 12 kilometers above sea

level at the poles. The temperature in the tropopause, the transition layer between troposphere and stratosphere, drops to about minus 60 degrees Celsius. It rises again in the stratosphere. The so-called ozone layer is also located in the stratosphere at altitudes of about 25 to 30 kilometers. Today's commercial aircraft fly at cruising altitudes of between eight and 13 kilometers. According to the latest research, air traffic emissions do not contribute to the reduction of the ozone layer.

B

➤ B.A.U.M. – Bundesdeutscher Arbeitskreis für Umweltbewusstes Management e.V. (Federal Working Group for Environmentally-Aware Management)

B.A.U.M. was founded in 1984 as the first independent environmental initiative of German business. With more than 500 members, it is the largest of its kind in Europe today. Lufthansa has been a member of the Working Group since 1997.

www.baumev.de

➤ BDL – Bundesverband der Deutschen Luftverkehrswirtschaft (German Aviation Association)

Lufthansa is a founding member of the German Aviation Association (BDL), which has represented the interests of the German aviation industry with a single voice since December 2010. Its main goals are to make politicians and journalists more aware of aviation's economic and employment-related importance and to strengthen Germany as a business location for aviation in general.

www.bdl.aero

C

➤ Carbon dioxide (CO₂)

Gas resulting in nature from the burning or decomposition of organic substances (e.g. plant material) and from human or animal respiration. The greenhouse gas CO₂ remains in the atmosphere for about 100 years. Scientists attribute the increase in atmospheric CO₂ 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 CO₂ result from the combustion process. Currently, about 2.42 percent of the CO₂ emissions due to human activities are caused by global air traffic. (Source: International Energy Agency (IEA) 2013, 2011 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 depends greatly on the thrust level: The emissions per kilogram of fuel burned are higher at idle settings, while taxiing, and on approach than during the climbing and cruising phases.

➤ CDA – Continuous Descent Approach

Procedure for a flight's approach phase that requires less engine thrust and is therefore quieter and more fuel efficient. However, this type of approach is possible only if there are no constraints due to heavy air traffic in the airspace concerned.

➤ CDP (previously Carbon Disclosure Project)

The CDP is an independent, charitable organization with a current membership of more than 820 institutional investors worldwide. The goal of this initiative, which was founded in 2000, is to motivate the world's largest listed corporations to make data on

their greenhouse gas emissions and their climate protection strategies transparent. For this purpose, the CDP and its partners jointly developed two indices: the Carbon Disclosure Leadership Index, which includes companies that make their emissions transparent to a particular extent, and the Carbon Performance Leadership Index, which takes concrete climate protection achievements into account.

➤ Chapter 4 aircraft

Aircraft that comply with the strictest noise protection standard currently in force – the Chapter 4 noise standard. The Environmental Committee (CAEP) of the ICAO agreed on this standard in September 2001. As a result, all aircraft newly certified since 2006 must remain cumulatively below the Chapter 3 noise levels by 10 decibels or more. The maximum noise emission values for aircraft were introduced by the ICAO under Annex 16 to the Convention on International Civil Aviation. Noise levels depend on the aircraft's maximum takeoff weight and number of engines.

➤ CO

see "Carbon monoxide"

➤ CO₂

see "Carbon dioxide"

➤ Codeshare

A codeshare is a flight segment that is sold under the flight number of one airline while being operated either partly or entirely by another airline. Both companies maintain their independent profiles in the market.

➤ Compliance

Compliance describes in their entirety all measures that ensure the lawful conduct of companies, their management bodies, and their employees with regard to legal directives and interdictions.

➤ Corporate Responsibility (CR)

Corporate responsibility expresses the degree to which a company assumes accountability for the effects its business activities have on employees, customers, society, and the environment.

D

➤ Decibel

Measuring unit for the intensity and pressure of sound. The difference in intensity between the softest sound the human ear can perceive and the pain threshold is 1:10 trillion. To depict this enormous range objectively, acoustics uses the logarithmic decibel scale. On this scale, the value "0" is assigned to the perception threshold (for a sound of 1,000 Hz) and the pain threshold at the value "130". An increase of 10 dB corresponds to a tenfold increase in sound intensity. For the perceived volume, a difference of 10 dB corresponds to half or double the volume. However, the human ear is not equally sensitive across the entire range of frequencies. Low and high sounds are not perceived as being equally loud even at the same intensity. For measurements, this difference is equalized and noted accordingly. The best known such notation is the *A value*, marked by the index dB(A). To measure aircraft noise, the EPndB (Effective Perceived Noise Decibel) unit is used internationally.

➤ Diversity

In a corporate context, diversity refers to all characteristics that distinguish employees from one another. Diversity management offers approaches for handling human differences for the benefit of company and employees alike.

➤ DLR – Deutsches Zentrum für Luft- und Raumfahrt (German Aerospace Center)

The DLR serves scientific, economic, and social purposes. It maintains 32 institutes and research centers. Its declared goal is to help – using the means of aviation and space flight – to secure and shape the future. In its work, the DLR also seeks cooperation and allocation of research tasks among European partners.

www.dlr.de

➤ DNWE – Deutsches Netzwerk Wirtschaftsethik (German Network for Business Ethics)

DNWE is a nonprofit organization of which Lufthansa has been a member since January 1998. DNWE has more than 600 current members, including many from German business, politics, religion, and science. At the same time, DNWE is a national association of the European Business Ethics Network (EBEN).

www.dnwe.de

E

➤ econsense – Forum Nachhaltige Entwicklung der Deutschen Wirtschaft e.V. (Forum for Sustainable Development of German Businesses)

An association of globally active corporations and organizations in German industry that have integrated the guiding principle of sustainable development into their corporate strategies. Lufthansa is a founding member of this cross-industry network, which was set up in 2000.

www.econsense.de

➤ **EMAS – Environmental Management and Audit Scheme**

European regulations concerning environmental management and certification; colloquially referred to as EU eco-audit regulations.

➤ **Equivalent continuous noise level (Leq)**

The Leq is a measure for the energetic average of all sound pressure levels over a defined period of time. All sound events that differ in intensity and duration are summarized according to mathematical rules. The resulting average value is an accepted and proven measurement of the *noise quantity* occurring over an observed time interval.

➤ **Ethibel – Ethibel Sustainability Index**

The independent Belgian agency Ethibel has listed Lufthansa in its Ethibel Investment Register and the Ethibel Sustainability Index (ESI). The ESI offers institutional investors, asset managers, banks, and private investors a comprehensive overview of the financial results of companies that distinguish themselves by pursuing sustainable business practices. Since the merger with Vigeo and Stock at Stake in 2005, this index has been part of Vigeo. However, Forum Ethibel continues to be responsible for the ethical criteria and the composition of the ESI. Updates of and calculations for the index are performed by the internationally renowned index provider Standard & Poor's.

🌐 www.ethibel.org

F

➤ **Freight performance (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”

➤ **FTSE4Good**

The index was introduced in 2001 by FTSE, a wholly owned subsidiary of the London Stock Exchange. It lists only those companies that meet the internationally accepted standards for corporate responsibility in the following dimensions: environmental management, climate change, human and labor rights along the supply chain, corporate governance, and anti-corruption efforts. Lufthansa has been listed since 2001.

🌐 www.ftse.com

➤ **Fuel Dump**

Dumping of fuel in flight due to emergency situations. A procedure used on long-haul aircraft before unscheduled landings (e.g. in the event of technical problems or serious passenger illness) to decrease the aircraft's weight to the maximum permissible landing weight. In the event of a fuel dump, special air space is assigned to the aircraft, if possible above uninhabited or thinly populated areas. Fuel is usually dumped at altitudes of 4–8 kilometers. A minimum altitude of 1,500 meters and a minimum speed of 500 km/h are required. The aircraft may not fly a fully closed circle. The dumped kerosene forms a fine mist in the turbulence behind the aircraft. Despite the use of highly sensitive methods of analysis, no contamination has been detected so far in plant or soil samples after fuel dumps.

G

➤ **Global Compact**

see “UN Global Compact”

➤ **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.

➤ **Greenhouse gases**

Gaseous substances that contribute to the greenhouse effect and have both natural and human (anthropogenic) causes. The most important natural greenhouse gases are water vapor (H₂O), carbon dioxide (CO₂), and methane (CH₄); the most important anthropogenic greenhouse gases are carbon dioxide from the combustion of fossil fuels and methane, primarily from agriculture and industrial livestock farming. Other artificial greenhouse gases are nitrous oxide (N₂O), fluorocarbons (FCs and HFCs), sulfur hexafluoride (SF₆), and chlorofluorocarbons (CFCs).

H

➤ **Hub**

In air transport, a hub is a central traffic point or an airline's transfer airport. Passengers and freight are transported from their point of departure to one of the airline's “home airports” (hub). From there, they are carried to their destination by a second flight alongside passengers and freight from other departure points, but with the same destination.

I**➤ IATA – International Air Transport Association**

The umbrella organization of international commercial aviation.

www.iata.org

➤ ICAO – International Civil Aviation Organization

A United Nations agency that develops internationally binding norms for civil aviation.

www.icao.int

➤ ICC – International Chamber of Commerce

The ICC was founded in 1919 as the World Business Organization. More than 1,500 business organizations and over 5,000 corporations are organized in the worldwide framework of the ICC. Lufthansa has been a member since 1955.

www.iccgermany.de

➤ ILO standards

Work standards of the International Labor Organization, which include, among others, the bans on child labor, forced labor, and discrimination as well as the fundamental right of freedom of association for employees.

➤ ISO 14001 – International environmental management system

Companies thereby receive an effective instrument that allows them to take environmental aspects into consideration in decisions relating to corporate policies and to continuously improve the situation of environmental care in relation to all daily tasks.

www.iso.org

K**➤ Kerosene**

Fuel for jet and propeller engines that is chemically similar to petroleum. Like diesel fuel or gasoline, kerosene is produced by distilling crude oil; unlike these fuels, kerosene does not contain halogenated additives.

L**➤ LHSB – Lufthansa School of Business**

The LHSB supports processes of change within the Group and promotes a shared management culture. It has received multiple awards for the worldwide standards it establishes for the development and training of professionals and managers.

➤ Low-cost segment

Airlines offering predominantly low fares, but featuring reduced or separately charged services on the ground and in the air. Flights are most often operated to/from airports outside of major population centers.

M**➤ Mentoring**

Instrument for targeted support of junior employees. Focuses on regular personal contacts between mentor and mentee.

➤ MRO

Acronym standing for maintenance, repair, and overhaul of aircraft

➤ MSCI Global Sustainability Index Series

The US index provider MSCI launched a series of sustainability indices in September

2010. The MSCI index family comprises seven environmental, two value-based and 15 best-of-class indices. These include shares of companies with high and medium market capitalization and are based on the MSCI World Index. They depict companies that are particularly committed to environmental, social and governance (ESG) issues. Lufthansa has been included in this index series since June 2015.

www.msci.com/esg-indexes

➤ MTOW

Acronym standing for maximum takeoff weight of an aircraft

N**➤ Nitrogen oxides (NO_x)**

Chemical compounds consisting of one nitrogen and several oxygen atoms. NO_x is defined as the sum of NO and NO₂ compounds. Natural sources include lightning and microbes in the soil. Nitrogen oxides are also generated in combustion processes under high pressures and temperatures. Both of these parameters have been increased in modern aircraft engines to significantly reduce fuel consumption as well as emissions of carbon monoxide and unburned hydrocarbons. However, future combustion chambers of an advanced design could help reduce NO_x emissions by 85 percent. Air traffic contributes 2-3 percent of man-made NO_x emissions. Climate models show that nitrogen oxides have increased the concentration of ozone at cruising altitudes by a few percentage points.

➤ NO_x

see "Nitrogen oxides"

O

➤ **oekom**

The oekom Corporate Rating evaluates the social and environmental compatibility of companies according to a selection of 100 industry-specific indicators on average. Companies that rank in the top of their respective industries in the context of an oekom Corporate Rating and fulfill the industry-specific minimum criteria are awarded the oekom Prime Status by oekom research.

📄 www.oekom-research.com

➤ **OHSAS 18001 – Occupational Health and Safety Assessment Series**

Job safety management system developed by the British Standards Institution in cooperation with international certification organizations.

➤ **Ozone**

Molecule formed in the stratosphere and consisting of three oxygen atoms. The ozone layer located in the stratosphere has an important protective function, as it absorbs harmful ultraviolet light. While ozone at higher altitudes is broken down massively by chlorofluorocarbons (CFCs), it develops close to the ground under the influence of sunlight from numerous precursor substances (summer smog) and irritates the mucous membranes. At current levels, nitrogen oxide emissions from air traffic at cruising altitudes cause an increase in atmospheric ozone, analogous to the generation of summer smog, estimated by scientists at 3–4 percent on the heavily-flown North Atlantic routes.

P

➤ **Passenger kilometer (PKO/PKT)**

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).

➤ **Pro Recycling Paper Initiative**

Founded in 2000, the initiative unites various industries and aims at promoting intensive use and the acceptance of recycling paper. Lufthansa is one of the initiative's founding members.

📄 www.papiernetz.de

R

➤ **RSB – Roundtable on Sustainable Biomaterials**

International initiative to develop a global standardization and certification system for agrofuels.

📄 <http://rsb.org>

S

➤ **SAFUG – Sustainable Aviation Fuel Users Group**

Initiative of airlines, aircraft manufacturers, and providers of refinery technology whose goal is to accelerate the development and commercialization of sustainable fuels for the air transport industry.

📄 www.safug.org

➤ **Seat kilometer**

Measure for the transport capacity available (SKO, seat kilometers offered).

➤ **Seat load factor (SLF)**

Passenger-related measure of aircraft capacity utilization: the ratio of transport performance (PKT, passenger kilometers transported) to capacity (PKO, passenger kilometers offered).

➤ **SES – Single European Sky**

Describes the efforts of the European Commission since the late 1990s to restructure European airspace for the purpose of optimizing traffic flows and dissolving the airspace's fragmented structure, which is defined by national borders and interests, by creating a limited number of Functional Airspace Blocks (FABs).

➤ **Slot**

Designated point in time at which an airline may use an airport's runway for takeoff or landing.

➤ **Stakeholder**

Groups or individuals who formulate their demands on a company (e.g. attainment of corporate goals) and pursue these either personally or through representatives. This includes shareholders, employees, customers, suppliers, and others.

➤ **Sustainable development**

According to the guiding principle of sustainable development formulated in 1987 by the World Commission for Development and the Environment (Brundtland Commission), "sustainable development is [...] a form of development that meets the needs of today's generation without jeopardizing the abilities of future generations to satisfy their own." For businesses, this means acting responsibly not only in economic matters but also in environmental and social issues. All three aspects – economic, ecological, and social – must be kept in balance.

T

➤ Tonne kilometer (TKT/TKO)

Measure of transport performance (payload multiplied by distance). A distinction is made between available transport performance (TKO, tonne kilometers offered) and the actual transport performance (TKT, tonne kilometers transported). In calculating payloads, passengers are taken into account by means of a statistical average weight.

➤ Town Meeting

Information event for employees at different locations of a company.

➤ Transparency International

Anti-corruption organization, of which Lufthansa has been a member since 1999.

 www.transparency.de

U

➤ UHC – Unburned hydrocarbons

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

➤ UN Global Compact

Global network in whose context the United Nations cooperates with private-sector corporations and civil action organizations to advance human rights, labor standards, environmental protection, and anti-corruption measures. Deutsche Lufthansa AG has been a member since 2002.

 www.unglobalcompact.org

V

➤ VOC – Volatile Organic Compounds

Volatile organic substances that are characterized by high steam pressure and thus evaporate easily into the atmosphere at room temperature. VOCs are present in solvents, cleaning agents, fuels, and other substances. In the presence of nitrogen oxides and intense sunlight, VOCs lead to the generation of ozone.

W

➤ Water vapor

The most important greenhouse gas, even ahead of carbon dioxide. Without water vapor from natural sources, the Earth's surface would be around 22 degrees Celsius cooler. This makes water vapor responsible for two-thirds of the natural greenhouse effect (33 degrees Celsius). For each kilogram of kerosene burned, 1.24 kilograms of water vapor are released. Concerns that air traffic might increase the concentration of water vapor in the stratosphere and thus change the climate have been refuted by scientific research. The German Aerospace Center (DLR) concluded that even a one hundred-fold increase in the quantity of water vapor emitted by air traffic would not result in a detectable climatic signal.

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Notes on the scope of consolidation and methodology for calculating absolute and specific consumption and emissions

Scope of consolidation

Reporting on transport performance, kerosene consumption, and emissions from flight operations in 2014 is – unless noted otherwise – based on the following scope of consolidation:

- Lufthansa (including its regional partners Lufthansa CityLine, Air Dolomiti, Eurowings), Germanwings, Swiss (including Edelweiss Air), Austrian Airlines and Lufthansa Cargo. Not included are services performed by third parties, as their performance and the aircraft they use are beyond our control.
- Types of flight service: all scheduled and charter flights.

Methodology of calculations

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 flying 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 hence on actual load factors and the actual absolute quantity of kerosene consumed in the reporting year. Transport performance is measured in tonne kilometers; i.e., payload transported over a distance. For passengers and their luggage, an average of 100 kilograms is

the standard estimate; for freight, it is its scale weight. Each aircraft/engine combination present in the fleet is considered separately, and the associated values are calculated with the aid of computer programs provided by the aircraft and engine manufacturers. The annual average flight profile for each subset of the fleet is then fed into these programs. This allows us to determine emissions in relation to flight altitude, distance flown, thrust, and load. This approach is necessary for nitrogen oxides (NO_x), carbon monoxide (CO), and unburned hydrocarbons (UHC) in particular. Carbon dioxide (CO₂) emissions do not require special calculation methods, as they are generated in a fixed ratio to the quantity of kerosene burned. The combustion of 1 tonne of kerosene generates 3.15 tonnes of CO₂.

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 guide for standardized calculation of greenhouse gas emissions for transport processes. This guide uses the same estimates for calculating payload as the Lufthansa Group. When traveled distances are calculated, 95 kilometers

must be added to the great-circle distance according to the guidelines of the EU emission allowance trading scheme. The International Air Transport Association (IATA) has separately developed its own calculation proposals, which deal with the division of fuel consumption between freight and passengers and attribute a larger share of fuel consumption to passengers because of the passenger-specific infrastructure. Although this method has no effect on the overall efficiency of a flight, it changes the apportionment between passengers and freight. There are still divergences between the two methods (including from the method used up to now by Lufthansa). We would welcome a standardized, internationally harmonized and accepted method.

Environmental management system

The Lufthansa Group collected the environmental data used in this report with the aid of its environmental management system. This system also defines how data are verified and transmitted to the Group Environmental Issues division. The basis for data collection is Lufthansa's own environmental database.

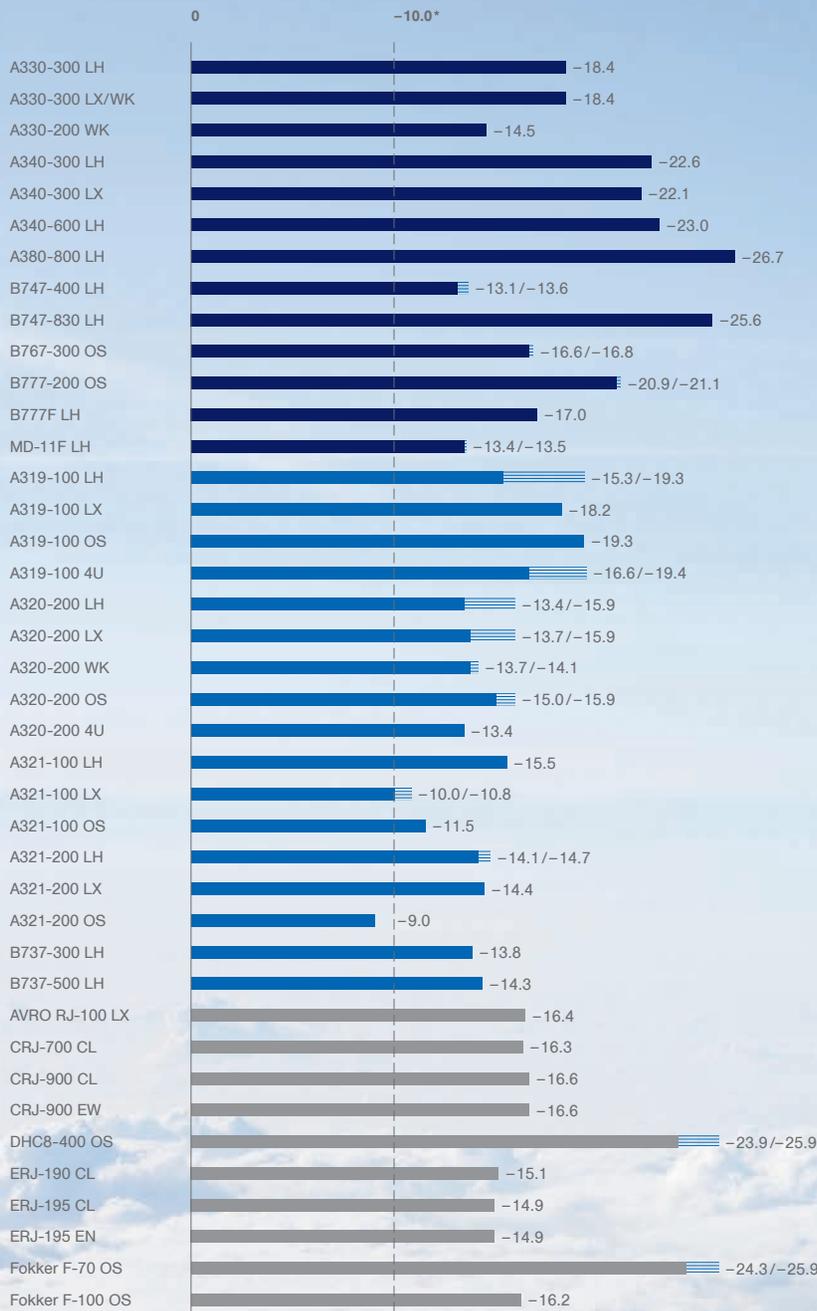
Accuracy

For presentation purposes the figures in the charts and tables are rounded. Changes from the previous year's figures and share percentages refer in each case to precise figures, however. For this reason it is possible that a reported value may remain the same from one year to the next even though a relative change is reported. Because of the rounding of share percentages, it is also possible that the sum of their addition may differ from the sum of the unrounded percentages. For example, as a result of rounding, share percentages may not add up to 100 percent even though it would be logical to expect them to.

Most stringent noise standards for the Lufthansa Group's fleet

Margins below the noise limit of ICAO Chapter 3 and Chapter 4

Active fleet of the Lufthansa Group on December 31, 2014
in EPNdB



Of the 605 aircraft in the Lufthansa Group's active fleet, 602 fulfill the stringent Chapter 4 noise standard of the International Civil Aviation Organization (ICAO). The most important element of Chapter 4 is the minus 10 EPNdB criterion (Effective Perceived Noise dB); see the vertical broken line in the overview on the left. The limits depend on the aircraft's maximum takeoff weight and number of engines.

The bar chart indicates the sum of the differences between the measured value and the threshold value at the three measuring points by type of aircraft (cumulated margin). Where necessary, the values based on the reduced maximum takeoff weight prevailing in flight operations are indicated. To allow a more transparent depiction, an improved method of analysis was developed for the previous issues of *Balance*, which include the individual noise certificate data of all Group aircraft. Different versions of an aircraft and its engines by year of construction are thus better taken into account. While the conservative approach used until reporting year 2008 meant that only the values of the sub-fleet with the lowest cumulated margin were reported to describe an aircraft fleet, the new analytical method used since reporting year 2009 means that the value ranges from the lowest to the highest cumulated margin are now indicated for many fleets. The analysis also takes into account any modifications to aircraft or engines that have been made in the meantime, thereby leading to modified noise data and cumulated margins in certain cases. In addition, numerous additions and withdrawals in individual fleets lead to changes in the value ranges reported.

Grouping of aircraft types according to MTOW (maximum takeoff weight):

- under 50t
- 50 to 150t
- more than 150t

This division generally corresponds to a grouping of regional, continental, and inter-continental aircraft

- 4U = Germanwings
- CL = Lufthansa CityLine
- EN = Air Dolomiti
- EW = Eurowings
- LH = Lufthansa, Lufthansa Cargo
- LX = Swiss
- OS = Austrian Airlines
- WK = Edelweiss Air

* New ICAO Chapter 4 limit, which has been effective for new aircraft since 2006: -10EPNdB when compared to Chapter 3.

Corporate Responsibility: Prizes, awards and indices



Every year, the Lufthansa Group and its Group companies receive numerous prizes and awards. This overview shows a selection of those relevant to sustainability:

2014

- The joint project E-PORT AN, in which the Lufthansa Group participates, secured the renowned **GreenTec Award 2014** in the category "Aviation" (see from page 50, Energy and resource management).
- The US airport Washington Dulles and the local LSG Sky Chefs Catering operation received the award **Best of Buildings 2014** from US Green Building Council (USGBC). The decisive factor for the award was the progressive use of modern products and methods, such as the microbiological system BIO-Amp™.
- A study commissioned by the German magazine Focus Money entitled "Mit gutem Gewissen" ("With a clear conscience") honored Lufthansa in 2014 with the **Gold Seal** for ecological, economic and social responsibility.
- Lufthansa Technik received two prizes in 2014 at the **Aircraft Technology Engineering & Maintenance Awards**: the first as best maintenance and overhaul operation in Europe and the second for its commitment in the area of employee qualification and training.
- In 2014 Hamburg's Office for Occupational Safety rated Lufthansa Technik for the third time as **Company with an exemplary occupational safety system**.
- Lufthansa LEOS, a subsidiary of Lufthansa Technik AG, won fourth place in the innovation category of **Aviation Award 2014** presented by Flughafen Stuttgart GmbH for the operational launch of the hybrid aircraft tug TaxiBot.

2015

- The US trade publication Air Transport World named the Lufthansa Group **Eco-Airline of the Year** in 2015 – for the second time in a row.
- At the tourism and travel fair ITB in Berlin, the Swiss climate protection organization myclimate bestowed a **myclimate Award 2015** on the AirPlus Green Company Account of Lufthansa subsidiary AirPlus as a pioneer for sustainable financial products in the travel industry.
- The project "Free Route Airspace Maastricht and Karlsruhe" (FRAMak) by Lufthansa, DFS Deutsche Flugsicherung and Eurocontrol won the **IHS Jane's ATC Award 2015** in the category environment. FRAMak aims to prove that cross-border direct routes and trajectories in the airspace over Belgium, Luxembourg, the Netherlands and large parts of Germany are feasible from an operational point of view and offer many advantages.
- The initiative Ludwig Erhard Prize awarded the distinction **Recognized for Excellence 4 Stars** to LZ-Catering. With the four-star certificate the former, a subsidiary of the European Foundation for Quality Management, honored the high-level entrepreneurial achievements of the expert for company restaurants.
- The Lufthansa career portal www.Be-Lufthansa.com was honored by the research institute Trendence as **best career website** in Germany. The jury praised inter alia its convincing and highly recognizable design, its clear presentation of contents, its lively animations and its clear navigation.

The Lufthansa Group is currently listed in the following sustainability indices and has received the following ratings:

- FTSE4Good
- Ethibel Excellence Investment Register
- Ethibel Sustainability Index (ESI) Excellence Europe
- ECPI
- oekom Prime Rating
- MSCI Global Sustainability Index Series

The operating fleet of the Lufthansa Group

(as of December 31, 2014)

Lufthansa and regional partners



Airbus A380-800 LH: 12 aircraft, 526* seats, 12,000 km range



Boeing 747-8 LH: 15 aircraft, 386* seats, 13,100 km range



Boeing 747-400 LH: 17 aircraft, 352* seats, 12,500 km range



Airbus A340-600 LH: 24 aircraft, 306* seats, 12,600 km range



Airbus A340-300 LH: 17 aircraft, 266* seats, 12,700 km range



Airbus A330-300 LH: 19 aircraft, 221* seats, 10,000 km range



Airbus A321-100/200 LH: 62 aircraft, 200 seats, 2,900/4,350 km range



Airbus A320-200 LH: 55 aircraft, 168 seats, 3,020 km range



Airbus A319-100 LH: 30 aircraft, 138 seats, 3,260 km range



Boeing 737-500 LH: 12 aircraft, 120 seats, 1,950 km range



Boeing 737-300 LH: 9 aircraft, 140 seats, 2,000 km range



Embraer 195 CL: 24 aircraft, 120 seats, 2,450 km range
EN: 10 aircraft, 120 seats, 2,450 km range



Embraer 190 CL: 9 aircraft, 100 seats, 3,390 km range



CRJ900 CL: 12 aircraft, 90 seats, 2,260 km range
EW: 23 aircraft, 90 seats, 2,260 km range



CRJ700 CL: 4 aircraft, 70 seats, 2,310 km range

Germanwings



Airbus A320-200 4U: 17 aircraft, 174 seats, 3,020 km range



Airbus A319-100 4U: 43 aircraft, 150* seats, 3,500 km range

Lufthansa Cargo



Boeing MD-11F LH: 15 aircraft, 516 m³/89.4t, 7,000 km range



Boeing 777F LH: 4 aircraft, 653 m³/102.9t, 9,045 km range

Swiss and Edelweiss Air



Airbus A340-300 LX: 15 aircraft, 219 seats, 10,500 km range



Airbus A330-300 LX: 13 aircraft, 236 seats, 8,400 km range



Airbus A321-100/200 LX: 8 aircraft, 200* seats, 3,200 km range



Airbus A320-200 LX: 23 aircraft, 168* seats, 3,650 km range



Airbus A319-100 LX: 5 aircraft, 138* seats, 3,000 km range



Avro RJ100 LX: 20 aircraft, 97 seats, 3,000 km range



Airbus A330-300 WK: 2 aircraft, 315 seats, 10,000 km range



Airbus A330-200 WK: 1 aircraft, 275 seats, 11,500 km range



Airbus A320-200 WK: 5 aircraft, 168* seats, 4,950 km range

Range indicated in general with maximum number of passengers or payload, respectively.
* Different versions in operation

Austrian Airlines



Boeing 777-200 OS: 5 aircraft, 312* seats, 11,500 km range



Boeing 767-300 OS: 6 aircraft, 225* seats, 9,800 km range



Airbus A321-100/200 OS: 6 aircraft, 200 seats, 2,360/3,500 km range



Airbus A320-200 OS: 16 aircraft, 174* seats, 4,300 km range



Airbus A319-100 OS: 7 aircraft, 138 seats, 4,500 km range



Fokker 100 OS: 15 aircraft, 100 seats, 2,000 km range



Fokker 70 OS: 7 aircraft, 80 seats, 2,085 km range



DHC 8-400 OS: 18 aircraft, 76 seats, 1,630 km range

Legend

4U = Germanwings	EW = Eurowings	LX = Swiss
CL = Lufthansa CityLine	LH = Lufthansa, Lufthansa Cargo	OS = Austrian Airlines
EN = Air Dolomiti		WK = Edelweiss Air



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