



Key data on sustainability
within the Lufthansa Group
Issue 2009

Balance

Company/Social responsibility/Environment/Corporate citizenship





Training and continuing education – Step by step

The newly built Lufthansa Training & Conference Center in Seeheim, located about 40 km south of Frankfurt Airport, offers an optimum environment for effective learning and successful networking. The new training rooms feature the latest technical equipment and can be flexibly combined in their varying capacities. The “Spanish Steps” are the most prominent element of the entry hall. They connect the two levels of the lobby, the building’s communicative center point.

At a glance

Business performance data¹

		2008	2007	Change
Revenue	million €	24,870	22,420	+ 10.9%
of which traffic revenue	million €	19,998	17,568	+ 13.8%
Operating result	million €	1,354	1,378	- 1.7%
Profit/loss from operating activities	million €	1,383	1,586	- 12.8%
Net profit/loss for the period	million €	599	1,655	- 63.8%
Total assets	million €	22,408	22,320	+ 0.4%
Cash flow from operating activities	million €	2,473	2,862	- 13.6%
Capital expenditure	million €	2,154	1,378	+ 56.3%
Equity ratio	percent	30.9	30.9	± 0.0%

Personnel data

		2008	2007	Change
Number of employees (on 31.12., respectively)		107,800	105,261	+ 2.4%
of these, in Germany		65,695	64,434	
of these, outside Germany		42,105	40,827	
Staff costs ¹	million €	5,692	5,498	+ 3.5%
Revenue/employee ¹	€	230,016	222,467	+ 3.4%
Staff costs/revenue ¹	percent	22.9	24.5	- 1.6PP
Average age	years	40.4	40.3	+ 0.2%
Part-time ratio, absolute	percent	26.5	26.8	- 0.3PP
Part-time ratio, men	percent	14.0	14.3	- 0.3PP
Part-time ratio, women	percent	42.7	43.8	- 1.1PP
Share of women in management	percent	14.6	15.0	- 0.4PP

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Environmental data^{2,3}		2008	2007	Change
Resource consumption				
Fuel consumption ⁴	tonnes	7,673,141	6,781,412	+ 13.1 %
Fuel consumption, specific, passenger transportation	l/100 pkm	4.34	4.32	+ 0.5 %
Fuel consumption, specific, freight transport	g/tkm	236	228	+ 3.7 %
Emissions				
Carbon dioxide emissions	tonnes	24,170,394	21,361,449	+ 13.1 %
Carbon dioxide emissions, specific, passenger transportation	kg/100 pkm	10.93	10.88	+ 0.5 %
Nitrogen oxide emissions	tonnes	112,820	98,584	+ 14.4 %
Nitrogen oxide emissions, specific, passenger transportation	g/100 pkm	50.6	49.8	+ 1.5 %
Carbon monoxide emissions	tonnes	17,095	15,313	+ 11.6 %
Carbon monoxide emissions, specific, passenger transportation	g/100 pkm	8.5	8.6	- 1.4 %
Unburned hydrocarbons	tonnes	2,066	1,901	+ 8.7 %
Unburned hydrocarbons, specific, passenger transportation	g/100 pkm	1.0	1.0	- 3.4 %

Transport performance data		Balance^{2,3}	± 2007	Annual Report⁵	± 2007
Size of active fleet (on December 31, 2008) ⁶		521	+ 7	534	+ 21
Number of flights		819,120	+ 10.4 %	830,819	+ 10.9 %
Passengers carried ⁷		70,459,927	+ 11.7 %	70,542,834	+ 12.2 %
Freight and mail carried	tonnes	1,918,500	+ 0.4 %⁸	1,918,500	+ 0.4 %
Seat kilometers offered, SKO	million pkm	194,039	+ 15.3 %	195,431	+ 15.6 %
Freight tonne kilometers offered, FTKO	million tkm	14,974	+ 14.4 %	15,141	+ 12.9 %
Tonne kilometers offered, TKO	million tkm	34,288	+ 14.7 %	34,960	+ 15.2 %
Passenger kilometers transported, PKT ⁷	million pkm	158,822	+ 14.0 %	154,155	+ 14.2 %
Freight tonne kilometers transported (incl. third-party performance), FTKT	million tkm	9,153	+ 6.0 %	9,530	+ 5.4 %
Tonne kilometers transported, TKT ⁷	million tkm	25,058	+ 10.8 %	24,992	+ 10.5 %

1 Source: Lufthansa Annual Report 2008.

2 For the reporting year 2008, the data presented in *Balance* refers to the following companies: Lufthansa Passenger Airlines (Lufthansa Passenger Airline and Lufthansa Regional: Lufthansa CityLine, Air Dolomiti, Eurowings, Contact Air, Augsburg Airways), Lufthansa Cargo and SWISS, excluding the share of third parties as Lufthansa can influence neither performance nor the equipment used (see also table "Share of third parties" on page → 68).

Values of the previous year recalculated to make them comparable.

3 Types of flights taken into account: all scheduled and charter flights.

4 See also table "Fuel consumption" on page → 68.

5 Companies referred to as in 2, but including the services of third parties, as these contribute to the Group's results. Types of flights as in 3, but including ferry flights, as these represent costs.

6 *Balance*: aircraft operated by the Group; Annual Report: aircraft in the Group's possession. See also the overview of the Group fleet on page → 27.

7 *Balance*: on the basis of all passengers aboard; Annual Report on the basis of all revenue passengers.

8 Value for the previous year corrected.

Dear Readers,



Despite the escalating effects of the global financial and economic crisis and the resulting insecurities in the market, Lufthansa was again able to assert itself successfully in 2008 – recording the second-best result in the company's history. Over 70 million passengers, more than ever before, entrusted themselves to our services and documented their loyalty by awarding us top scores in customer satisfaction. This clearly confirms the course we have chosen.

We assume that 2009 will be one of the most difficult years ever for the air transport industry, but Lufthansa is well prepared. We are in good shape – financially, strategically and operationally. All business segments of the Lufthansa Group have positioned themselves positively and promisingly. This is all the more important, as economic success is the fundamental prerequisite for fulfilling our self-commitment to performing equally well in two other disciplines of sustainability – environmental care and social responsibility. Above all, we intend to improve our environmental balance sheet substantially by making goal-oriented investments – for example in new aircraft. Lying ahead of us is the largest fleet renewal program in the history of Lufthansa. Flying is becoming quieter, fuel consumption is declining significantly, and the “3-liter aircraft” has become reality. Starting with the example of Lufthansa Technik, you can read in this issue of *Balance* on how environmental care is lived out each day at the Lufthansa Group and which measures are set to improve our environmental balance sheet even further.

As you do so, it will also become clear just how valuable our employees' self-awareness, basic attitudes and professional qualifications are. A company's success stands or falls with its employees – in the area of environmental protection as well. This is why we make investments not only in the latest technologies but also in people. We rely

increasingly on internal training and continuing education. This is another part of our social responsibility.

And it is part of securing the future. In this context, we are pleased to have optimum conditions for training once again, thanks to the reopening of the entirely new Lufthansa Training and Conference Center – Lufthansa's “soul” – rebuilt on its previous site in Seeheim.

As always, we strive to convince through quality and performance. This applies to all companies within the Group, and we also bring our influence to bear on partners, suppliers and the framework of conditions in which we operate. Lufthansa has committed itself comprehensively to sustainable business development. It was this same conviction that motivated us back in 2002 to become the first airline worldwide to join the UN Global Compact. Today, we still maintain an unwavering focus on the principles anchored there.

Given our well-coordinated, reliable, highly committed team of employees and managers, we are confident that we can continue to perform excellently in the market, even under the current difficult conditions. This issue of *Balance*, whose reading I recommend to you highly, provides comprehensive insights into important aspects of economics, ecology and social responsibility. I thank you for your interest, your trust and your suggestions – stay with us!

A handwritten signature in black ink, appearing to read 'W. Mayrhuber', with a stylized flourish at the end.

Wolfgang Mayrhuber

Chairman of the Executive Board and CEO
Deutsche Lufthansa AG

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About this report

The present sustainability report *Balance* informs stakeholders and the interested public about the activities, advances and goals of the Lufthansa Group in the areas of business, social responsibility, environment and corporate citizenship. The data presented in this report refer to the financial year 2008.

The report is divided into the following main chapters:

- The chapter **The Lufthansa Group** offers an overview of the Group's five business segments and the principles of its value-based corporate policy. It also systematically highlights all activities that promote a transparent and open culture of dialogue with stakeholders and emphasizes the particular importance that sustainability has at Lufthansa.
- The focal point of the chapter **Our business** is Lufthansa's economic development, as sustainable business practices require economic success in the first place. The article "Strong brand(s) – Promising future" takes a look at the topic of brand management at Lufthansa against the background of the consolidation process in the air transport industry. Furthermore, this chapter informs readers about the importance of sustainable business development particularly in times of crisis and about the roles of quality and innovation in the company's success.
- The chapter **Social responsibility** presents the most important personnel-related indicators for 2008. The article "Taking the lead through education" is dedicated to the internal education system at Lufthansa and describes ways of adapting it optimally to increasing requirements and current structural changes. Further topics are diversity, work-life balance, employment policy based on partnership, employee safety and health protection.
- The chapter **Environment** deals in depth with the topic of environmental care at Lufthansa. It shows which measures the Group implements to improve the environmental compatibility of its passenger and freight flights over the long-term and to consistently take advantage of energy savings potentials. The chapter's focus is the article "Green MRO – The greening potential of aircraft maintenance," which presents equally innovative energy-saving, resource-sparing technologies and concepts that the Group has developed in the MRO business segment.
- The chapter **Corporate citizenship** summarizes the Group's social and cultural activities, and provides insights into numerous projects supported by Lufthansa's Environmental Sponsorship Program. This year the chapter's focal point is the relief organization HelpAlliance, which was founded by Lufthansa employees and celebrates its ten-year anniversary in 2009.
- In the chapter **SWISS Balance** reports again this year about the activities of the Lufthansa Group company Swiss International Air Lines, which has been fully consolidated since summer 2007.

Scope of consolidation

Reporting for the business year 2008 with regard to transport performance, fuel consumption and emissions from flight operations is based on the following scope of consolidation:

- Companies¹: Lufthansa Passenger Airlines (Lufthansa Passenger Airline and Lufthansa Regional with Lufthansa CityLine, Air Dolomiti, Eurowings, Contact Air, Augsburg Airways), Lufthansa Cargo and SWISS. Excepted are third-party services, as Lufthansa has no influence either on their performance or on the aircraft operated.
- Types of service¹: all scheduled and charter flights.

Due to changes in the portfolio, the figures in this report are only to a limited extent comparable with those reported for the previous year (reporting year 2007). For example, SWISS was only fully consolidated from the second half of 2007.

There are also differences in approach compared to the Annual Report 2008 when calculating passenger numbers and the related indicators PKT, PTKT and TKT: The economic performance indicators in the Annual Report are based on the number of revenue passengers. By contrast, this Sustainability Report takes into account all passengers aboard – including employees traveling on business and for private purposes. The reason: Every passenger that boards an aircraft affects the environment.

Methodology of calculations

Kerosene in absolute terms

The calculation of kerosene consumption is based on actual flight operations, according to the so-called “gate-to-gate” principle. This includes all phases of a flight – from taxiing on the ground to flying detours and in holding patterns in the air.

Emissions in absolute terms

The calculation of emissions from flight operations is based on the actual transport performance (i.e. actual load factors) and the actual absolute quantity of kerosene consumed during the year in review. In this context, each aircraft-engine combination that exists in the fleet is considered separately, and the corresponding values are calculated by means of computer programs provided by the respective aircraft and engine manufacturers. The annual average flight profile of each subset in 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 (UHCs) in particular. Carbon dioxide (CO₂) emissions do not require special calculation methods, as they are generated in a fixed relationship to the quantity of kerosene burned. The combustion of one tonne of kerosene generates 3.15 tonnes of CO₂.

Specific consumption and emission values

Calculating specific consumption and emissions entails expressing absolute values in relationship to transport performance. For example, the ratio “liters per 100 passenger kilometers” (l/100 pkm) is calculated on the basis of actual load factors, distances actually flown and the kerosene actually consumed. The distances used in the calculations are great-circle distances.

¹ Unless a different scope of consolidation is named expressly.

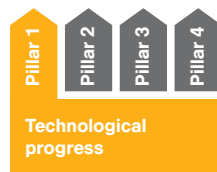
Evaluation and validation of data and information

Graphic illustration of the four-pillar model for climate protection

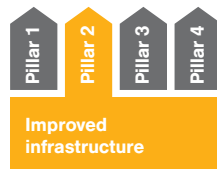
In 2005, Lufthansa and other European airlines developed a four-pillar model for climate protection, which comprises the entire spectrum of practicable measures and is supported by the International Civil Aviation Organization (see also the article “Four pillars for climate protection” on page → 69). Wherever the graphic illustration of the four-pillar model is shown in this report (see examples below), it refers to a concrete implementation example at Lufthansa.

Examples

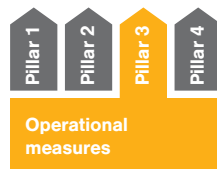
- Innovation in aircraft and engine technologies.
- Alternative fuels.



- Improved use of airspace.
- Airport infrastructures adapted to needs.



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



- Global emissions trading to complement the other three pillars, which have priority in every case.



Environmental management system

The data used in this report were collected by means of Lufthansa’s environmental management system. This system also determines the methods for data verification and its transmission to the division Group Environmental Issues. The basis for data collection is Lufthansa’s own database for sustainability.

Accuracy

The figures shown in tables are rounded due to considerations of presentation. However, values indicating changes from the previous year always refer to precise figures. For this reason, it is possible that a specific value may remain the same from one year to the next, while a relative change is indicated.

Publication dates of this report

Balance, the Sustainability Report of the Lufthansa Group, is published once a year in a German and an English edition. The German edition of the previous year’s report was published on July 16, 2008, the English edition followed shortly thereafter.

Additional information on the Internet

In addition to this report, Lufthansa also informs readers on the Internet about activities in the area of sustainability within the Lufthansa Group and also provides additional detailed environmental data from the individual business segments.
→ www.lufthansa.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 discernible information, facts and expectations available at the time. They can, therefore, only claim validity up to the date of their publication.

Since forward-looking statements are by their 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. Lufthansa makes a point of checking and updating the information it publishes. It cannot, however, assume any obligation to adapt forward-looking statements to accommodate events or developments that may occur at 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.

The Lufthansa Group

Corporate profile

Deutsche Lufthansa AG is an aviation company with operations worldwide. The Group operates in five business segments, each of which takes a leading role in its respective area. The Lufthansa Group includes over 400 subsidiaries and associated companies. Through its strategic business segment Passenger Transportation and its business segment Logistics, Lufthansa offers mobility for passengers and freight. The business segments MRO (Maintenance, Repair and Overhaul), IT Services and Catering offer comprehensive services for the Group's own airlines and for companies outside the Group.

The Lufthansa brand has always stood for quality, reliability and innovation. At the end of 2008, the Lufthansa Group counted 107,800 employees worldwide. Corporate headquarters is in Cologne. Frankfurt, Munich and Zurich are the key hubs in the company's worldwide route network. Hamburg, Dusseldorf and Berlin are further important locations for the Group.

At Lufthansa, environmental awareness is a basic part of our corporate culture. This is demonstrated by our careful use of resources, ongoing support of climate research and political commitment to a future-oriented infrastructure and an internationalized air traffic control system in Europe.

Passenger Transportation 2008		changes compared with 2007
Revenue	18,393 million €	+ 15.3%
Operating result	722 million €	- 12.6%
Number of employees on Dec. 31	48,599	+ 2.9%



- www.lufthansa.com
- www.swiss.com

Business segment Passenger Transportation

Passenger Transportation is the Group's strategic business segment. The Group's airlines have leading positions in the industry. The business segment Passenger Transportation includes the Lufthansa Passenger Airlines¹, SWISS and Germanwings as well as the equity investments in British Midland (bmi), JetBlue and SunExpress. Lufthansa is characterized by a comprehensive product portfolio, which addresses each market segment with a tailor-made offer. At the end of 2008, the fleet of this business segment comprised 515 aircraft.

During the business year 2008, Lufthansa actively participated in the industry's ongoing consolidation process: In September, the acquisition of an initial 45-percent participation in SN Airholding, the parent company of Brussels Airlines, was decided. In December, the Supervisory Board approved the planned acquisition of Austrian Airlines. Both acquisitions are subject to a number of preconditions, including the approval of the competition authorities and the European Commission for the necessary restructuring aid to Austrian Airlines.

In addition, Lufthansa Italia was introduced in November 2008 as a new brand in Italy, under which Lufthansa started flight operations on February 2, 2009 from Milan. From there, the airline flies to eight European destinations and three Italian cities. Among the special characteristics of Lufthansa Italia's offer are a new inflight concept which is geared to the Italian market, the deployment of Italian-speaking flight attendants, and an improved infrastructure at Milan Malpensa Airport in close cooperation with the airport operator SEA.

¹ Deutsche Lufthansa AG and Lufthansa Regional

Logistics 2008		changes compared with 2007
Revenue	2,907 million €	+6.3%
Operating result	164 million €	+20.6%
Number of employees on Dec. 31	4,655	+1.0%



→ www.lufthansa-cargo.com

Maintenance, Repair and Overhaul (MRO) 2008		changes compared with 2007
Revenue	3,717 million €	+4.1%
Operating result	299 million €	+2.0%
Number of employees on Dec. 31	19,804	+4.8%



→ www.lufthansa-technik.com

Business segment Logistics

Lufthansa Cargo is the Group's service provider for the logistics business and one of the leaders in international freight transport. Beyond a worldwide network with about 300 destinations, Lufthansa Cargo offers its customers clearly-defined shipment times as well as high quality and safety standards. The wholly-owned Lufthansa subsidiary has 19 Boeing MD-11F freighter aircraft at its disposal. It also uses the freight capacities of Lufthansa passenger aircraft and of the Boeing 747-400ERF freighters of its Chinese joint-venture Jade Cargo International. Additional capacities are chartered as needed.

The largest part of cargo shipped is handled at Frankfurt Airport, the company's most important hub. The second-most important hub for freight transport is Leipzig/Halle Airport, which counts among the most modern and highest-performing hubs in Germany, offering Lufthansa Cargo a secure base for planning and investments over the long term. Lufthansa Cargo has joined forces with DHL Express to found the freight airline AeroLogic, which will start operations in 2009. Since 2007, Lufthansa Cargo has cooperated with DHL Express in flying with its MD-11F freighters from Leipzig/Halle to a number of destinations worldwide. Lufthansa Cargo AG has its headquarters in Kelsterbach, near Frankfurt.

Business segment MRO

With a market share of 15 percent, Lufthansa Technik AG is the world's leading provider of MRO (Maintenance, Repair and Overhaul) services. The Hamburg-based Lufthansa subsidiary offers more than 600 customers worldwide a broad service portfolio in the area of maintenance, repair and overhauls of civil aircraft.

The Technik Group, which comprises 32 companies, is divided into six product divisions: Maintenance, Overhaul, Engines, Components, Landing Gear and VIP Jets. As a comprehensive provider, it offers the entire range of variously structured products and product combinations from individual repairs of equipment to the full integration of entire fleets including reserve supplies.

The company's most important overhaul, logistics and development center is located in Hamburg; its largest maintenance operations in Germany are in Frankfurt, Munich and Berlin. Additional stations exist at all larger German airports and at 50 further locations around the world. Over the past years, Lufthansa Technik has pursued new participations and locations in a focused manner to complement and expand its product portfolio according to market- and customer-specific criteria.

IT Services

2008		changes compared with 2007
Revenue	657 million €	-3.2%
Operating result	40 million €	+73.9%
Number of employees on Dec. 31	3,033	-2.2%



→ www.LHsystems.com

Catering

2008		changes compared with 2007
Revenue	2,325 million €	-3.0%
Operating result	70 million €	-30.0%
Number of employees on Dec. 31	30,273	+0.6%



→ www.lsgskychefs.com

Business segment IT Services

Lufthansa Systems AG is one of the leading IT service providers worldwide for the airline and aviation industry. Its product portfolio covers the entire range of information technology services: from consulting to the development and implementation of industry solutions and even to the operation of these solutions in its own computer center. The company is divided into five business areas: Airline Management Solutions, Passenger Airline Solutions, Airline Operations Solutions, Industry Solutions and Infrastructure Services. Its computer center – located at the company's headquarters in Kelsterbach, near Frankfurt – is one of the most advanced and highest performing facilities of its kind in Europe.

The regular customers of Lufthansa Systems comprise 200 renowned airlines worldwide. Numerous corporations from other industries also rely on the know-how of Lufthansa Systems in the area of consulting and infrastructure services. These include above all logistics companies, financial service providers, publishing companies and customers from the areas of transport and health care.

Business segment Catering

LSG Sky Chefs is the global leader in providing solutions for airline catering, inflight equipment and inflight management. The LSG group, which comprises about 200 facilities worldwide, supplies nearly all international airlines, numerous low-cost airlines and regional carriers with meals and beverages. In 2008, the wholly-owned Lufthansa subsidiary produced 427 million meals for more than 300 airlines, which corresponds to a market share of about 30 percent of global airline catering.

In addition to other ground services, LSG Sky Chefs also operates airport lounges and retail outlets. To increase its competencies and expand its product range, LSG Sky Chefs counts above all on cooperations and partnerships with specialty providers in the areas of logistics, IT and equipment. The company has its headquarters in Neu-Isenburg, near Frankfurt.

Service and finance companies

The Lufthansa Group complements its five business segments with service providers in the finance and service industry sectors. These include Lufthansa AirPlus Servicekarten GmbH, Lufthansa Flight Training GmbH and Lufthansa Commercial Holding GmbH (LCH), which holds Lufthansa's financial participations, among others. On April 11, 2008, Lufthansa sold its equity investment in the ground handling company GlobeGround Berlin GmbH, held indirectly by Lufthansa Commercial Holding, to the WISAG Group, Frankfurt/Main.

Principles of Strategy of the Lufthansa Group

Lufthansa has a clear strategy for positioning itself in the ever-changing market environment of global air transport. At the center of this strategy is the focus on core competencies and profitable growth.

Our values are the basis for reaching our goals



Focus on customer benefits

The customer is the focal point of our business activities. We consistently tailor our services to customers' needs and offer specific products under the Lufthansa premium brand. Using our multi-product approach, we offer our customers mobility à la carte – from Budget to First Class – at tried-and-tested Lufthansa quality. All our efforts are service-oriented and synonymous with quality, innovation, competence and reliability.

Accent on core skills

We consistently align our activities with our core skills. Those skills encompass management of flight networks, airline core processes such as operating processes on the ground, as well as the provision and maintenance of infrastructure and production factors.

System partnerships set the pace

Intensive system integration strengthens our competitive advantage over other locations, airlines and alliances. We cooperate closely with major partners, suppliers and infrastructure providers in integrating and optimizing our core processes.

Attractive working environment

Our staff is integral to our success. We offer them good working conditions, commensurate incentives for personal development and an energizing, international corporate culture. That makes us an attractive employer for qualified, motivated and service-minded personnel.

Long-term profitability

In the interests of our investors, we strive for sustainable and pacesetting value creation in the aviation business. That goal is furthered by sound risk and financial management.

Social responsibility

We are committed to maintaining a balance. Environmental protection, sustainable development and long-term support for social projects are in equal measure prime objectives of our corporate policy.

Corporate governance

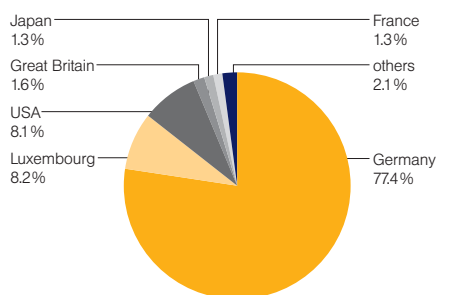
Management and corporate structures

Lufthansa is a German stock company with headquarters in Cologne. The company employs the dual management structure ordinarily followed in Germany. The Group's Executive Board is solely responsible for steering the company, aligning it strategically and increasing its value long-term. The Group's Supervisory Board elects, monitors and advises the Executive Board.

Deutsche Lufthansa AG fulfills two functions: It is the ultimate parent company as well as the largest operating company within the Group. With the exception of Passenger Transportation, the individual business segments are managed as independent Group companies. Controlling and profit-transfer agreements exist between the Group and these companies. They are individually responsible for their respective operations and results. Their management teams are continuously monitored by their own supervisory boards, which include representatives of the Group Executive Board among their members.

Shareholder structure by nationalities

on 31.12.2008, in percent



Shareholder structure

The Lufthansa share has been traded on German stock exchanges since 1966. It is represented in the German Share Index DAX and is part of the Prime Standard of Deutsche Börse (German Stock Exchange). Lufthansa fulfills the highest level of international transparency requirements related to this standing. The company's share capital is divided into 457.9 million registered shares, which are held by about 344,000 shareholders. According to the standards of Deutsche Börse, the free-float quota was at 100 percent for Lufthansa shares at the end of 2008. At the end of 2008, 77.4 percent of the Lufthansa share capital was held by German shareholders. To maintain its international traffic rights and air transport operating permit, Lufthansa must be able to prove at any time that the majority of its shares are in German possession.

For more detailed information on the shareholder structure, please see page → 30 of the printed Lufthansa Annual Report 2008 or the online version at:
→ www.lufthansa.com/investor-relations

Corporate governance

Responsible company management in line with the rules of effective corporate governance is a substantial part of Lufthansa's identity. The efficient, transparent structures and processes implemented by the company reflect this approach splendidly. Furthermore, Lufthansa places the greatest importance on open and clear corporate communications in order to respond to demand for information from shareholders, employees, customers and the public – thus preserving and strengthening their trust in the Group. Since 2002, Lufthansa has fulfilled all the recommendations of the German Corporate Governance Code and additionally also follows most optional suggestions.

Compliance

The goal of the Lufthansa Compliance Program is to familiarize employees with important legal regulations by providing them with focused information and thus to anchor these in everyday work. The Compliance Program consists of the building blocks Competition, Capital Markets, Integrity and Corporate Compliance.

While Competition Compliance is geared above all to employees who deal with issues related to competition in their daily work, Capital Markets Compliance addresses issues concerning insider law and ad-hoc publicity. Since 2006, Lufthansa has guarded against corruption with its newly introduced program module Integrity Compliance, which among other things includes guidelines for dealing with invitations, gifts and other benefits. Finally, Corporate Compliance links all existing company regulations and creates a connection to other compliance-relevant areas.

Lufthansa's Compliance Office is part of the Group's Legal Department. Furthermore, Compliance Officers were named at the Group companies, who ensure the Group-wide adherence to the Compliance Program.

Ombuds system

To allow the confidential transmission of information about economic crimes, Lufthansa has set up an ombuds system. It is an additional preventative measure against economic crimes and is aimed at protecting Lufthansa and its employees.

Employees who do not want to reveal their identity can give relevant information to an ombudsman outside of the company. This function is fulfilled by a lawyer, who expands the circle of possible contact persons – in particular supervisors, personnel services, employees' council, audit department, Group security and legal department – and who maintains a relationship based on special trust.

The ombudsman transmits the facts received from the informer to Lufthansa. When doing so, he is fully bound by the legal profession's oath of confidentiality and has the right to refuse to give evidence vis-à-vis official investigating authorities. Furthermore, the ombudsman is not obligated to release documents or any other information – unless the informer specifically requests such disclosure. Therefore, any disclosure of the informer's identity toward Lufthansa or third parties without his or her agreement is ruled out.

"Informers do not have to fear any unfavorable consequences either related to labor law or in any other way," confirms Constantin von Geyr, Head of the Compliance Office. Exception: should an informer premeditatedly misuse the ombuds system, for example to harm other employees. Employees can transmit information to the ombudsman by e-mail, letter, fax or in person. A personal meeting between the ombudsman and the informer is preferred.



Principles of the "UN Global Compact"

Human rights

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

Labor

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

Environment

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

Anti-corruption

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

Pioneering role: Lufthansa is the first airline to adhere to the Global Compact

The activities of the Lufthansa Group are supported by ethical ways of doing business, which are guided by the basic principles of human community – an aspiration which the company also documents through its numerous memberships.

Thus, Lufthansa became the first airline worldwide to adhere to the universal principles of the UN Global Compact. The company has actively supported this initiative of the UN Secretary-General since 2002. The compact concluded between companies and the United Nations obligates participants to publicly promote the ten principles of the Global Compact (see overview at left) and actively drive their implementation forward. The principles cover the areas of human rights, employment, environment and anti-corruption measures.

E-learning program on human rights

On December 10, 2008, the 60th anniversary of the Universal Declaration of Human Rights, the "International Year of Learning about Human Rights" was launched. As a contribution, Lufthansa encourages its employees to participate in an e-learning program on the subject of human rights on the Internet page of the United Nations System Staff College: → www.unssc.org. The goal is to further familiarize the Group's employees with those principles of the Global Compact that concern maintaining human rights.

Declaration signed

In a further move marking the 60th anniversary of the Universal Declaration of Human Rights, Wolfgang Mayrhuber, Chairman of the Executive Board and CEO of Deutsche Lufthansa AG, signed an international CEO declaration together with the representatives of 260 companies from around the world in December 2008. In this declaration, the company heads make a commitment to maintaining and promoting human rights within their spheres of influence.

Article in the Global Compact Yearbook 2008

As in previous years, Lufthansa again published an article in the Global Compact Yearbook during the reporting year, this time on the subject of biodiversity. In the context of the ongoing Communication on Progress (COP), the Group also makes its important publications available on the Global Compact web site, which always includes the current issue of the Sustainability Report *Balance*.

→ www.unglobalcompact.org

Memberships relevant for environmental care and sustainability:

- B.A.U.M. – Bundesdeutscher Arbeitskreis für Umweltbewusstes Management (Federal Working Group for Environmentally Aware Management)
→ www.baumev.de
- econsense – Forum Nachhaltige Entwicklung der Deutschen Wirtschaft e.V. (Forum for Sustainable Development of German Business)
→ www.econsense.de
- Initiative Pro Recyclingpapier
→ www.papiernetz.de
- 3C – Combat Climate Change
→ www.combatclimatechange.org

Furthermore, Lufthansa is an active member in a number of sustainability and environmental working groups and committees, including:

- econsense Management Circle and several project groups (Sustainability Management, Renewable Resources, Sustainability/Financial Markets)
- VDR Sustainability Committee
- DRV Environmental Committee
- AEA Climate Change Working Group
- IATA Environmental Committee
- BDLI Working Group “Eco-efficient Flying”
- StarAlliance – Environmental Concept Team
- BDI Climate Initiative

Further memberships

Beyond the Global Compact, Lufthansa is also a member of the International Chamber of Commerce (ICC Deutschland). The Group not only implements the suggestions of the ICC commission “Business in Society,” but it also adheres to the 16 principles of environmental management spelled out in the ICC’s “Charter for Sustainable Development.” These include, for example, an environmentally-oriented management approach as a priority goal, training for employees with regard to environmental issues, and impact assessment and research studies to record and reduce the environmental effects of products, procedures, emissions and wastes. Moreover, Lufthansa adheres to the ICC’s “Conduct Guidelines to Combat Corruption in Business Dealings.” Lufthansa is also a member of Transparency International and of Deutsches Netzwerk Wirtschaftsethik e.V.

Additionally, Lufthansa is represented in the Federal Union of German Employer Associations (BDA), including participation in the working groups “CSR” and “Corporate Personnel Policies.” The company is also active in several working groups (such as “Diversity” and “Demography”) of the German Association for Personnel Management.

- www.arbeitgeber.de
- www.dgfp.de
- www.dnwe.de
- www.icc-deutschland.de
- www.transparency.de

Stakeholder dialogue



Communication creates understanding

Lufthansa takes the expectations and interests of its stakeholder groups seriously. The company is convinced that an open and trusting exchange with its stakeholders is an important condition for making entrepreneurial decisions that are viable over the long-term. For this reason, the Group has traditionally maintained an intensive dialogue with its stakeholders. Beyond customers and employees, they include shareholders and analysts, neighbors and local communities, representatives from science, education, politics and public administrations, suppliers and contractual partners, and non-governmental organizations.

In 2008, exchanges with our stakeholder groups again took place at a great variety of levels.

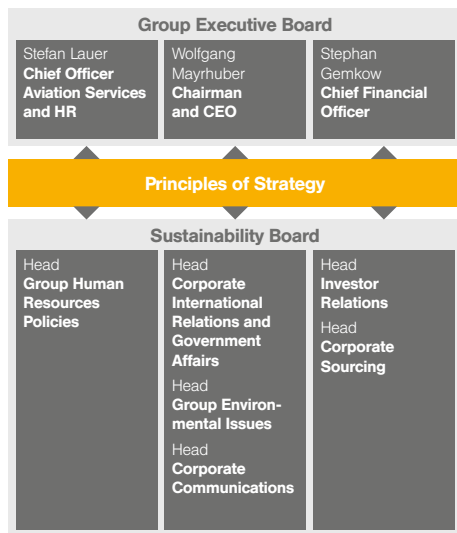


1 Lufthansa participated in the initiative "Kunst privat!" (Private art!) in 2008 by opening the Lufthansa Aviation Center and its art collection to an interested public. **2** Numerous school classes from the Rhine-Main area participated in the educational initiative "Lufthansa Experience Knowledge." **3** Town meeting in Frankfurt with member of the Executive Board Stefan Lauer and employees of flying personnel. **4** As part of the annual Investors' Day, member of the Executive Board Stephan Gemkow provided comprehensive background information to analysts and investors on June 25, 2008 in Munich. **5** Thomas Kropp, Head of Corporate International Relations and Government Affairs, at the econsense Annual Conference In Dialogue 2008 "Climatech – Technologies for Climate Protection." **6** Wolfgang Mayrhuber, Chairman of the Executive Board and CEO, at the Lufthansa Festival of Baroque Music 2008 at Westminster Abbey in London with the Dean of Westminster and the Lord Mayor of Westminster.



Stakeholder dialogue

Stakeholder group	Facts
Customers	<p>Meetings of the Customer Advisory Boards (event-related).</p> <p>Customer Satisfaction Survey 2008: After a record score of 7,434 points in 2007, the Customer Profile Index (CPI) rose once again, by 218 points to 7,652 points.</p>
Employees	<ul style="list-style-type: none"> • Daily communication via the Lufthansa intranet, weekly employee newspaper "Lufthanseat," additional internal publications for specific target audiences. • Realignment of internal publications for employees with customer contact. <p>Implementation of a communications platform on the Lufthansa intranet on the basis of Web 2.0 (eTeaming).</p> <p>Employee dialogue: including Town Meetings and Open Door Executive Board (members of the Executive Board in discussion with employees).</p> <p>Works meetings.</p> <p>Employee development discussions.</p> <p>Employee Feedback Management (EFM) in 2008 at Lufthansa Passenger Airline and corporate functions.</p> <p>Lufthansa Cargo Environmental Weeks.</p>
Neighbors and local communities Frankfurt	<ul style="list-style-type: none"> • Regular discussions with mayors and neighboring communities as well as authorities at the hub in Frankfurt. • Discussions and professional presentations by the Hub Management on the Frankfurt hub's importance for Lufthansa and the region, and on the airport's expansion. • Invitations to interested people and institutions from the surrounding area, such as business associations, to visit the Lufthansa Base in Frankfurt. • "Lufthansa Taster Days" – career information event for 240 high-school students from 26 schools in the Rhine-Main area, at different departments of Lufthansa subsidiaries. • Support for the Regional Gallery Darmstadt to realize an exhibit of contemporary art. • Support for the new construction of an operations building for Workshop for the Disabled in Mörfelden-Walldorf, where work is also produced for the Lufthansa Group, in the form of a donation. • Lufthansa Rhine-Main Cup 2008; large youth soccer tournament in cooperation with the soccer club SC Opel in Rüsselsheim. • Support for Girls' Day.
Neighbors and local communities Munich	<ul style="list-style-type: none"> • Regular discussions with representatives of governments of German Länder, mayors and neighboring communities as well as authorities at the hub in Munich. • Discussions concerning the topic of airport expansion. • Invitations to interested people and institutions from the surrounding area to visit the hub in Munich. • Support for the City of Munich in the festivities for the 850th anniversary of the city. • Support for the recruitment campaign "850 Talents" of the City of Munich in the context of the city's anniversary. • "Student Taster Internships" for high-school students from the surrounding area. • Support for Girls' Day.
Shareholders and analysts	<p>Road shows and investors' presentations with the participation of members of the Executive Board and representatives of Investor Relations in Europe, the USA and Asia. In 2008, more than 450 individual and group discussions with institutional investors and analysts were conducted.</p> <p>Corporate presentations at bank events and share forums and five events for private shareholders.</p> <p>Conferences and telephone conferences with participation of members of the Executive Board.</p> <p>Investors' Day at Terminal 2 at our Munich hub.</p> <p>Monthly "Investor Info," including current sales figures, in addition to "Shareholder Info," which is published twice a year.</p> <p>Continuous expansion and improvement of the information offered to shareholders and analysts. For its further optimization, the Internet page was redesigned in its entirety, giving shareholders and analysts even more varied options for information and independent analysis. Another goal was to have the Internet page meet current requirements, such as RSS feeds. It is now available at → www.lufthansa.com/investor-relations</p>
Science and education	<p>Continuation of the educational initiative "Lufthansa Experience Knowledge" in cooperation with the Ministry of Education and Cultural Affairs of the state of Hesse, as well as other cooperations with partners in science and education. See also the article "Education" on page → 97.</p>
Politicians and authorities	<p>In 2008, participation of the Group's Executive Board and/or Executive Board in the following events and others:</p> <ul style="list-style-type: none"> • Parliamentarian evening on air transport, Deutsches Verkehrsforum, Berlin. • Lufthansa Environment and Quality Day, Frankfurt. • Panel discussion at Deutsches Verkehrsforum, Berlin. • Panel discussion Air Transport Congress, Berlin. • Panel discussion with the Bündnis 90/Die Grünen group in the Bundestag (Federal Parliament), Berlin. • Panel discussion Stock Exchange Forum of DAI, Frankfurt. • Parliamentarian evening of the EU Parliament, Brussels. • Conference of the Export Chamber of Commerce in São Paulo. • Executive Committee "Themenwelt," Business Initiative FrankfurtRheinMain. • Hessian Day of Entrepreneurs, Wiesbaden. • German Employers Day. • Round Table Business of the CDU. • Annual Conference of econsense, Berlin. <p>Presentations:</p> <ul style="list-style-type: none"> • European School of Management & Technology, Berlin. • Financial Markets Forum, Luxembourg. • Boeing conference, London. • Frankfurt School of Finance & Management, Frankfurt. • BDA seminar of the Institut für Sozial- und Wirtschaftspolitische Ausbildung e.V. • Delegation of the Indian Chamber of Commerce. • Social Forum of Friedrich Ebert Foundation. <p>Federal Ministry for Family, Seniors, Women and Youth – work in the CSR company network.</p> <p>UN Global Compact – work in the local network and working group Human Rights.</p>
Suppliers and contractual partners	<p>Partnership-oriented business relations, based on an honest and binding dialogue.</p> <p>Use of the electronic platform → www.fairpartners.com</p>
NGOs	<p>Active dialogue, support for national and international environmental and species-protection organizations, support for a number of aid projects.</p>



Sustainability is an integral part of our corporate culture, and its management is organized as depicted above.



Sustainability at Lufthansa

Lufthansa places great emphasis on developing the company in sustainable ways. This concern has been firmly anchored in the Group's Principles of Strategy (see page → 11) for many years. It comprises the numerous efforts aimed at improving climate and environmental protection, employee satisfaction, training and continuing education at all Group levels, and sustainable development to increase the company's value long-term.

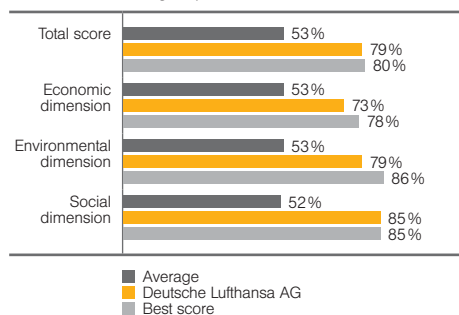
The basic framework for managing and controlling sustainability-related processes at Lufthansa is defined by the Sustainability Board. This interdisciplinary cross-departmental body is part of the top management level and is composed of the heads of Investor Relations, Corporate Sourcing, Corporate Communications, Corporate International Relations and Government Affairs, Group Human Resources Policies and Group Environmental Issues.

The implementation of sustainable goals, strategies and measures within the Group is the task of Environmental Management and Human Resources Management (see articles "HR Management at Lufthansa" on page → 42 and "Environmental management at Lufthansa – A success story" on page → 64). Moreover, each company area has its own responsible person with regard to the content of this subject. It is part of Lufthansa's strategic goals to further expand environmental management at the Group level and within its subsidiaries by 2020.

In this context, an open and constructive dialogue with the public and the stakeholder groups plays an important role (see "Stakeholder dialogue" on page → 16). The report *Balance* is now appearing here for the 15th consecutive year. Published initially in 1994 as an Environmental Report, it now comprises all dimensions of sustainability (download at → www.lufthansa.com/responsibility). To render the discussion concerning the subject "aviation and the environment" more factual, Lufthansa continued in 2008 the advertising campaign it initiated in 2007. Using a basis of data and facts, the company informed the public about measures that help limit the environmental effects of air transport and the further steps that are necessary in this area from Lufthansa's perspective.



Corporate Sustainability Assessment 2008
SAM Benchmarking Report



Our commitment is officially recognized: Lufthansa was again listed in the renowned Dow Jones Sustainability Index (DJSI) at the beginning of September 2008. Only three airlines are represented in the DJSI. Compared to the year before, the Group improved its scores in all three assessment dimensions – economic, ecological and social characteristics – and in 2008 attained its highest total score since its first listing in 1999. Lufthansa thus ranks just a nose behind the index’s leading airline (see bar graph at left). The company improved at an above-average rate in the area of social issues and is now the industry leader with regard to this performance area. In the area of environmental characteristics, Lufthansa received top rankings for noise reduction and local air quality.

The DJSI is managed by Switzerland-based Sustainable Asset Management Indexes GmbH (SAM). Lufthansa has occupied a firm position in this widely-accepted index for many years and counts among the top 10 percent of companies worldwide with a leading position in the various aspects of sustainability. At the same time, SAM listed Lufthansa in its “Sustainability Yearbook 2009,” the most comprehensive reference title worldwide to assess the sustainability performance of individual companies. As in the previous year, the company received the honor of being ranked in the “SAM Gold Class.” Lufthansa is also represented in the renowned sustainability indices FTSE4Good, Ethibel and ASPI.



Panorama

GreenBuilding certificate for the Lufthansa Aviation Center

Since January 30, 2009, Lufthansa has had it in black and white: It meets the most stringent environmental and climate protection requirements also when it comes to constructing new buildings. On this day, the EU Commission named the company as a partner in the European "GreenBuilding" program. The Group received this distinction for its consistently energy-efficient, resource-sparing concept for the construction of its administrative building, the Lufthansa Aviation Center, at Frankfurt Airport.

Read more about this topic in the article "Lufthansa – Partner of the European 'GreenBuilding' program" on page → 80.



The final countdown has begun

Hamburg-Finkenwerder, February 21, 2009: With the transport of the horizontal stabilizer for the first Lufthansa Airbus A380 to Toulouse for final assembly, the service launch of the Lufthansa fleet's new flagship draws another step closer. Starting with the summer timetable 2010, the A380 will make its completely new dimensions of travel a reality at Lufthansa as well. With a specific fuel consumption of about 3 liters per 100 passenger kilometers, this newest-generation airliner is set to improve the Group fleet's ecological efficiency substantially. Featuring the "quietest cabin in the sky," the A380 also sets new standards in comfort for our passengers. Lufthansa has ordered 15 of these wide-body aircraft. Each one secures about 400 new direct jobs.

Currently, Lufthansa is evaluating about 20 points around the world as possible A380 destinations. Emphasis will be given to routes to Asia and North America.

Precision landing: New flight simulators lower energy consumption dramatically

Over the past two years, Lufthansa Flight Training has acquired innovative flight simulators that are equipped with electric drive systems instead of conventional hydraulic oil pressure systems. The result? Today the Lufthansa subsidiary consumes only a fifth of the energy it used to require for simulator movements.

Find more about this topic in the article "Lufthansa Flight Training: Innovative simulators save 80 percent of energy" on page → 79.



AirPlus now uses 100-percent hydropower-generated electricity

At AirPlus, climate protection has the right-of-way: Since January 2009, this Lufthansa subsidiary has covered 100 percent of its energy needs at company headquarters in Neu-Isenburg with electricity that is generated with hydropower. By switching to eco-electricity, the world's leading provider of solutions to pay and account for business travel now avoids up to 1,200 tonnes of CO₂ emissions per year. The new contract signed with the public utility in Neu-Isenburg is initially set to run until the end of 2010. Beyond this, the contractual partners are planning a joint project to optimize the energy efficiency of AirPlus's four buildings in Neu-Isenburg in a sustainable manner.

You may find further information on the topic of Corporate Social Responsibility (CSR) at AirPlus in the company's first CSR Report, which is available at → www.airplus.com/csr



Lufthansa wins 2nd prize in the competition "Cultural Diversity at the Work Place"

It was for its "wide-ranging approach to its diversity activities" that Lufthansa won 2nd prize in the category "Large Corporations" in the competition "Cultural Diversity at the Work Place." This competition is linked to an initiative of the German Federal Government's integration commissioner, Secretary of State Dr. Maria Böhmer. She donated the prize together with the BVR (a German federation of cooperative banks) and Deutsche Bank. Lufthansa received this honor in December 2008 in Frankfurt.

You may find detailed information about the topic of diversity at Lufthansa in the chapter "Diversity – Obligation and opportunity," starting on page → 42.

A long tradition: Crane protection at Lufthansa

For over three decades now, Lufthansa has worked actively in Germany and abroad to protect the bird in its corporate logo. To increase the effectiveness of its commitment, the airline continuously seeks close alliances with nature and species protection organizations around the world – when searching for a suitable location for the new European Crane Center, for example, or organizing crane counts in Ethiopia.

Read more about this topic in the article "Species protection under the sign of the crane" on page → 101.



Our business

Strong brand(s) – Promising future

The air transport industry is traversing a process of far-reaching consolidation. In the present environment, Lufthansa aims through its strategic alignment at generating profitable growth. Profitability has priority over size in this case. Only in this way can the aviation company maintain its competitiveness in the future and expand it further. During the current phase of upheaval, Lufthansa's strategy plays an important role, as it has already produced an enhanced brand portfolio. Thus, Lufthansa has secured itself ample room to maneuver as the market consolidation moves ahead.



The mounting pressures from enormously volatile fuel prices, overcapacities and roller-coaster demand have brought existential difficulties for numerous airlines. This has triggered a wave of consolidation that has only been accelerated by the global financial crisis and the recession that accompanies it. The IATA estimates the industry's loss for the financial year 2008 to be more than 8 billion US-dollars and expects further losses for 2009 amounting to 4.7 billion US-dollars. Many smaller, financially troubled airlines have had to or will have to look for stronger partners to keep their flight operations going. Many others have not accomplished this goal and have vanished from the market.

This continuing phase of fundamental change illustrates that the extremely competitive market environment in air transport pardons no management errors. In these trying times, the only successful players are those who, like Lufthansa, are economically strong and select the right options. Thanks to its solid

financial basis, Lufthansa is able to act in a goal-oriented manner in this competition and to shape its Group portfolio with lasting value creation in mind.

Lufthansa's spectrum of strategic activities comprises the integration of SWISS, for example, which was concluded in July 2007. In 2008, the path was prepared for the integration of Brussels Airlines and the Austrian carrier AUA¹.

In this process, one aspect has gained increasing importance over the last few years, especially for airlines: a brand-strategic orientation. The reason is that a strong brand or a system partnership of several strong brands increases a company's competitiveness.

From single-brand company to flexible Group

Since its completed privatization in 1997, Deutsche Lufthansa AG has chosen a path from a monolithic single-brand company (i.e. the company equals the brand) to a flexible Group that is now active in five different business segments.

“Our new brands live on their country-specific characteristics. If we preserve these, we'll also retain our customers.”

Benita Struve
Director Corporate Brand Management
and Corporate Design at Lufthansa



Background

Benita Struve has headed the department Corporate Brand Management and Corporate Design since March 2008. As a business administration graduate, she has comprehensive knowledge in the area of marketing communications and many years of experience in agencies with international activities.

Between graduating from high school and starting her business administration studies at the Ludwig Maximilian University in Munich, Benita Struve flew as a Lufthansa flight attendant for two years. After her studies, she worked at agencies including BBDO in Dusseldorf, Sai, Westall, Tomkins in Munich and Michael Conrad & Leo Burnett in Frankfurt, there as a member of the management team. In October 2000, she returned to the Lufthansa Group as the Head of Advertising and Brand Management.

Lufthansa is the premium brand under which both the Group and the Lufthansa Passenger Airlines operate. It enjoys a high level of awareness and a first-rate reputation. The striving for aeronautical perfection is the brand's central value – and the “DNA” of the Lufthansa Group. This common denominator also defines the interaction of the business segments and other brands in the portfolio, especially in the business segment

Lufthansa plays an active role in the consolidation process of the European air transport industry. Its goal is to bundle strengths by means of partnerships, so that competitiveness and overall profitability are reinforced long-term.

¹ Both acquisitions are subject to a number of preconditions, including the approval of the competition authorities and the European Commission for the necessary restructuring aid to Austrian Airlines.

With Lufthansa Italia, the Group has chosen a new path in the context of organic growth.

Passenger Transportation, where safety, quality and service translate the striving for perfection into concrete terms.

Hard to copy: Brands and people

In the case of services, two things are very hard to copy: brands and people. Brands represent values and a promise of quality and performance. In the battle for market share, their trademarks are the decisive, nonverbal unique features. Brands reach their target audiences on an emotional level associated with lifestyle. They are the basis for a company's identity.

From branded house to house of brands

With its existing structure consisting of five business segments – Passenger Transportation, MRO, Logistics, Catering and IT Services – the Group has pursued an umbrella-brand strategy (branded house). By integrating third brands, especially in the business segment Passenger Transportation, the Group's core business, the change from branded house to house of brands has been implemented step by step.

In the framework of this multi-brand strategy, the new brands retain their own identity. The airlines can serve all their target audiences within their markets, and in some cases even enter into competition with other Group brands. By integrating the

independence of the respective airlines, the product offers become more varied and more attractive for customers. At the same time, this approach expands system strength and improves profitability through optimum generation of earnings and realization of cost synergies.

In particular, "flag carriers" such as SWISS, Brussels Airlines and Austrian Airlines play a special role in their home markets. They act as respective "centers of competence": "Our new brands live on their country-specific characteristics. If we preserve these, we'll also retain our customers," says Benita Struve, who heads Corporate Brand Management and Corporate Design. "SWISS is the most persuasive proof for this." Furthermore, acquisitions in countries outside of Germany and Switzerland improve the quality of the route network and customer loyalty.

The variety of offers within this portfolio ranges from inexpensive flights to private jets – and the added brands enhance the portfolio further in a quality-appropriate fashion. "All offers are quality and reference products within their respective categories. This creates in part competition between the offers, but taken together they're complementary," says Thierry Antinori, Executive Vice President Marketing and Sales at Lufthansa Passenger Airlines.



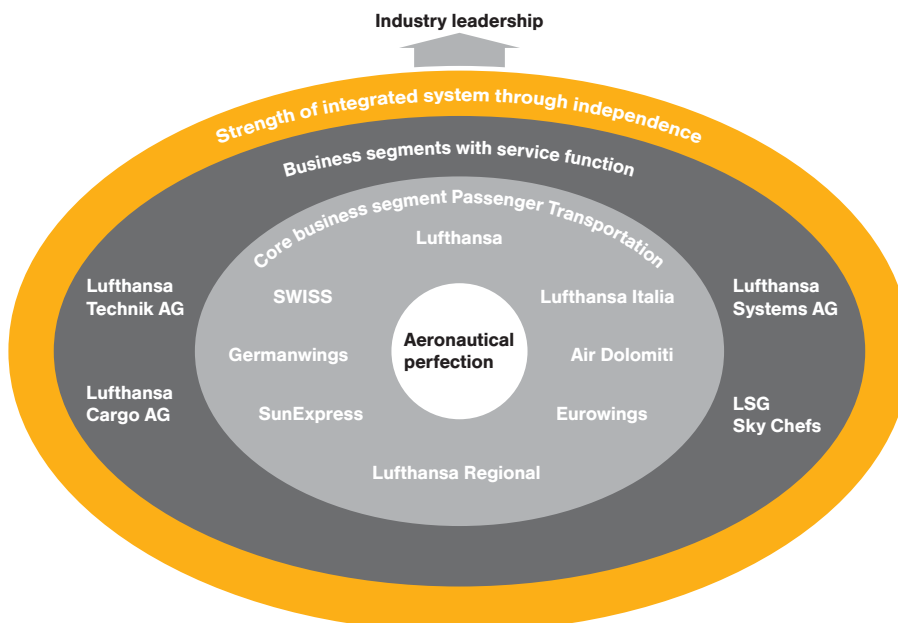
Lufthansa Italia – A new path toward success

Apart from integrating third brands, Lufthansa is also choosing new paths in the context of organic growth. In November 2008, the Group presented a new brand bearing the crane logo in Italy, "Lufthansa Italia," which unites the well-known Lufthansa values of reliability and high quality with Italian flair. In this way, Lufthansa has been offering the best connections from Milan to eight European metropolises since February 2009. In addition, the airline serves three cities in Italy. At the beginning of 2009, Lufthansa founded a separate Italian airline under the new brand and applied for an Italian Air Operator Certificate (AOC).

Customer orientation is the first priority

Customer orientation plays a central role in brand management. "It is our philosophy to come to our customers," adds Struve. "We regularly assess our brand values by means of worldwide surveys." Elements such as the frequent flyer program Miles & More, which offers customers numerous advantages, contribute to the uniqueness of the brands of the Lufthansa Group.

The common denominator of all brands residing within the Group and its subsidiaries is aeronautical perfection. It is the "DNA" of all the Group's "flying" companies, so to speak.





Nearly all airlines claim to offer quality and good service. In the Lufthansa family, however, the mix of network, product and service quality creates unparalleled system strength.

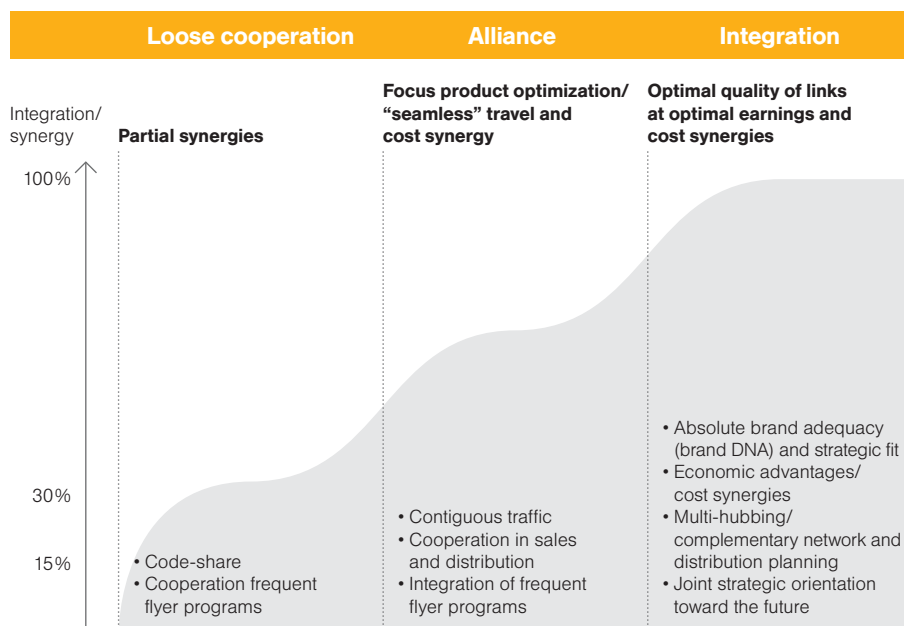
Employees as brand ambassadors

A central and new element of brand management at Lufthansa is its “Brand Academy,” which represents the philosophy and vision of the brands within the Lufthansa Group. The goals of the Brand Academy, which is an integral component of the new Lufthansa Training & Conference

Center in Seeheim, south of Frankfurt, are to create understanding for the significance of the brand as a separate subject and to provide brand orientation to employees and partners. Via the Brand Academy, Lufthansa also intends to put in place the foundations for stringent and market-oriented action. The training sessions, which last from three to six hours, are directed primarily toward managers and employees who are in close contact with customers. “We count on experience-related learning rather than teacher-centered instruction. One tends to remember things learned in this way better than the

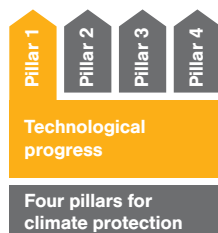
contents of a lecture,” explains Benita Struve. For example, employees discover which effects changes in the route network and the pricing structure might have on the brands of the Lufthansa family and, in turn, on the Group’s profitability.

In the dynamic process of airline consolidation, the close gearing of brand management and Group strategy plays a decisive role. With its current brand portfolio, the Lufthansa Group is favorably positioned in the competitive environment and prepared for a promising future.



The options for associations range from loose cooperations to full integration. It is important not to create sluggish structures that would weaken the company’s speed of reaction and ability to act in competition. Apart from product and service synergies, the economic advantages naturally play an important role. An integration produces the optimum result, including from a brand-strategic orientation.

The Lufthansa Group fleet



Largest fleet renewal program in the company's history

Lufthansa takes advantage of all options to further reduce the environmental effects of flying. Its goal is to make mobility ecologically compatible and thus viable over the long term. Therefore, the Group continuously invests in new aircraft as they increase efficiency, reduce fuel and operating costs, and lessen the environmental burden.

The current order volume comprises over 150 aircraft – making this the largest fleet renewal program in Lufthansa's history.

Shaping growth in environmentally aware ways

In 2009 alone, 50 of the new aircraft on order are to be delivered. The fuel consumption of the new long-haul aircraft, the Boeing 747-8 Intercontinental and the Airbus A380, is about 13 percent lower than that of the long-haul aircraft Lufthansa currently operates: the Boeing 747-400, Airbus A340-300, A340-600 and A330-300. Advanced aerodynamics and the latest engine technology also reduce the noise emissions of these aircraft. For example, the noise footprint of a Boeing 747-8 Intercontinental at takeoff is about 30 percent smaller than that of a Boeing 747-400.

Lufthansa has ordered 15 Airbus A380s. From 2011, the Group's intercontinental fleet is to be further renewed with 20 efficient Boeing 747-8 Intercontinentals. This makes Lufthansa the first airline worldwide to have both of these new, advanced wide-body aircraft models on order. Both set a new ecological milestone with a kerosene consumption of only about 3 liters per passenger and 100 kilometers.

You can find information on the fleet renewal at Lufthansa Group company SWISS in the article "SWISS – Flying smart for the environment" on page → 110.

The fleet, which is largely in the unrestricted ownership of the Group, offers a high level of operational flexibility and allows Lufthansa to adapt its growth to market conditions and to take advantage of market opportunities. On December 31, 2008, the Lufthansa Group fleet comprised 534 aircraft. This includes the aircraft of the Lufthansa Passenger Airline, SWISS, regional partners Lufthansa CityLine, Air Dolomiti, Eurowings, Germanwings, and Lufthansa Cargo.

Quality at the highest levels

The development of a new cabin product for Lufthansa's First Class has now been completed. The new First Class will show its fresh face in flight operations for the first time at the beginning of 2010. The Economy Class of the long-haul fleet has been further upgraded with the installation of individual video monitors since November 2007. This gives all passengers access to a comprehensive inflight entertainment program via his or her own screen. The revised cabin furnishings of the short- and medium-haul fleet will also provide more comfort. The fleet of Lufthansa Regional was significantly rejuvenated in 2008 and its cabin design was adapted to that of Lufthansa.



The cockpit segment of the first Lufthansa Airbus A380, here being transported overland to Toulouse for final assembly.



The countdown has begun: The first ever Lufthansa A380 is approaching its final assembly stage. The enormous horizontal stabilizer was painted in Hamburg-Finkenwerder and then flown to Toulouse aboard an Airbus "Beluga" for final assembly.

Group fleet

on 31.12.2008

(changes compared with 2007)

	in possession ¹	age	in operation ²	age
Deutsche Lufthansa AG (Lufthansa Passenger Airline)	282 (+18)	12.9 (+0.2)	251 (+5)	12.9 (+0.0)
Lufthansa CityLine	73 (-1)	8.6 (+1.0)	72 (-2)	8.5 (+0.8)
Air Dolomiti	14 (±0)	8.4 (+1.0)	19 (±0)	11.1 (+1.0)
Eurowings	36 (±0)	12.4 (+1.0)	35 (+2)	12.0 (+0.8)
Germanwings	25 (-2)	4.7 (-1.5)	25 (-2)	4.7 (-1.5)
Contact Air	0 (±0)		11 (±0)	8.5 (+1.0)
Augsburg Airways	0 (±0)		11 (±0)	8.1 (+0.1)
SWISS European	24 (±0)	9.1 (-0.3)	20 (±0)	10.9 (+1.0)
SWISS International	61 (+6)	10.0 (+1.1)	58 (+4)	10.0 (+1.1)
Business segment Passenger Transportation	515		502	
Lufthansa Cargo	19 (±0)	11.0 (+1.0)	19 (±0)	11.0 (+1.0)
Business segment Logistics	19		19	
Group	534 (+21)	11.2 (+0.4)	521 (+7)	11.1 (+0.4)

1 Aircraft in the Group's possession.

2 Aircraft operated by the Group.

The operative fleet of the Lufthansa Group

Lufthansa Passenger Airline



LH: 33 aircraft, 127 seats, 2,500 km range

Boeing 737-300



LH: 30 aircraft, 111 seats, 2,500 km range

Boeing 737-500



LH: 20 aircraft, 132 seats, 3,500 km range

Airbus A319-100



LH: 36 aircraft, 156 seats, 3,500 km range

Airbus A320-200



LH: 33 aircraft, 190 seats, 2,900/4,100 km range

Airbus A321-100/200



LH: 7 aircraft, 246 seats, 4,050 km range

Airbus A300-600



LH: 14 aircraft, 221 seats, 10,000 km range

Airbus A330-300



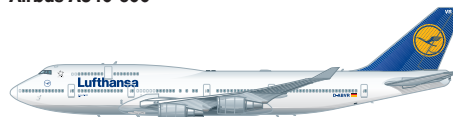
LH: 28 aircraft, 266/221 seats, 11,100/12,700 km range

Airbus A340-300



LH: 20 aircraft, 306 seats, 12,600 km range

Airbus A340-600



LH: 30 aircraft, 352 seats, 12,500 km range

Boeing 747-400

Lufthansa Regional



EN: 6 aircraft, 46 seats, 900 km range
C3: 5 aircraft, 44 seats, 900 km range

ATR42-500



EN: 8 aircraft, 64 seats, 900 km range
C3: 6 aircraft, 68 seats, 900 km range

ATR72-500



CL: 18 aircraft, 93 seats, 2,200 km range

Avro RJ85

Legend

- 4U = Germanwings
- IQ = Augsburg Airways
- C3 = Contact Air
- CL = Lufthansa CityLine
- EN = Air Dolomiti
- EW = Eurowings
- LH = Lufthansa Passenger Airline,
Lufthansa Cargo
- LX = SWISS

Number of aircraft in operation on 31.12.2008

Range indicated in general with maximum number of passengers or payload, respectively.

* maximum number of seats, different versions in operation.

SWISS



BAe 146-200

EW: 5 aircraft, 92 seats, 1,600 km range



BAe 146-300

EN: 5 aircraft, 99 seats, 1,800 km range
EW: 10 aircraft, 98 seats, 1,800 km range



CRJ200

CL: 22 aircraft, 50 seats, 2,000 km range
EW: 18 aircraft, 50 seats, 2,000 km range



CRJ700

CL: 20 aircraft, 70 seats, 2,300 km range
EW: 2 aircraft, 70 seats, 2,300 km range



CRJ900

CL: 12 aircraft, 86 seats, 2,000 km range



DHC 8-300

IQ: 2 aircraft, 50 seats, 1,200 km range



DHC 8-400

IQ: 9 aircraft, 72 seats, 1,200 km range



Avro RJ100

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



Airbus A319-100

LX: 7 aircraft, 138* seats, 3,000 km range



Airbus A320-200

LX: 19 aircraft, 168* seats, 3,650 km range



Airbus A321-100

LX: 6 aircraft, 200* seats, 3,200 km range



Airbus A330-200

LX: 11 aircraft, 230* seats, 8,400 km range



Airbus A340-300

LX: 15 aircraft, 228 seats, 10,500 km range

Germanwings



Airbus A319-100

4U: 25 aircraft, 144* seats, 3,500 km range

Lufthansa Cargo



Boeing MD-11F

LH: 19 aircraft, 516 m³/89.4t, 7,000 km range

Quality and innovation



Lufthansa aims to continuously improve its quality company-wide and to motivate its employees to achieve top performance. In this spirit, Lufthansa honors excellent teams with its annual Quality Award. The picture shows Wolfgang Mayrhofer, Chairman of the Executive Board and CEO of Deutsche Lufthansa AG, at the ceremony for the Quality Award 2008.

Always ahead of its time: Innovations at Lufthansa

Innovations are an essential factor to keep ahead of the competition. Lufthansa has always aimed at recognizing important trends and market developments as early as possible and at translating these into tailor-made products. This becomes particularly visible in passenger transportation, where numerous processes in the service chain, from reservations to boarding cards, now function as paperless “e-services.”

Traveling with mobile boarding card

Since April 2008, Lufthansa passengers have had the option of using a paperless boarding card rather than a conventional paper document. Today, this service is available on 400 routes in Germany and Europe and can be requested in two ways: by means of a mobile device with Internet access via → mobile.lufthansa.com or by computer via online check-in. The system then sends the mobile boarding card either to the customer’s e-mail address or by SMS link to his or her Internet-enabled mobile phone. In addition to the air traveler’s name, the flight number and the departure time, the boarding card also contains a 2D barcode optimized for mobile telephones, which the passenger can use to pass security checks and to board the aircraft once the barcode has been read again by a scanner at the departure gate. This innovative mobile service makes flying with Lufthansa even more flexible, simple and comfortable. If desired, printed boarding cards remain available at check-in counters and from self-service check-in machines.

Electronic tickets only

Since June 1, 2008, Lufthansa has been issuing electronic tickets (etix) exclusively, thereby implementing the relevant guideline of the international industry association of airlines (IATA, International Air Transport Association). The prerequisite for the new paperless e-services at check-in and boarding, etix significantly increases customer utility and travel comfort. Moreover, electronic tickets allow Lufthansa to realize savings potentials. The environment benefits as well: As etix reduces paper consumption, about 50,000 fewer trees need to be cut down each year, according to IATA figures. By the end of 2008, Lufthansa had also linked the databases of 139 airlines worldwide to its etix database. Thanks to this kind of electronic “interlining,” passengers can transfer between the participating airlines in a paperless mode. Lufthansa has converted all its stations in Germany and abroad to etix.

Award-winning pricing policy

Lufthansa sets the standard with regard to online bookings via its portal → www.lufthansa.com. In 2008, the company became the first German airline ever to be awarded the TÜV Rheinland certificate for transparent pricing. The jury thus honored the overall agreement between the expected, the advertised and the actual final price. At Lufthansa, the price contains all taxes, fees and surcharges, so that customers do not have to expect hidden extra costs. Participation in the TÜV Rheinland test, which comprises 80 individual criteria, is voluntary.

Setup of the company’s own private jet fleet

As the first scheduled airline worldwide to do so, Lufthansa has been setting up its own fleet of private jets since March 2008. The company will operate a total of nine private jets: three Cessna Citation CJ1+s (light size = four passengers), two Cessna Citation CJ3s (small size = six passengers), two Cessna Citation XLS+s (mid size = seven passengers) and two reconfigured CRJ 200s corresponding to the Challenger 850 (large size = 12 passengers). The background for this move is the consistently rising demand for flights with private jets, which offer customers



significantly more flexibility in their travels. In addition to operating its own private jets, Lufthansa cooperates with selected certified partners to be able to meet peaks in demand at any time.



New lounges: Comprehensive service in exclusive surroundings

Lufthansa will continue the investment program in its worldwide lounges in 2009 – including in Germany and the USA. At Frankfurt Airport, for example, First and Business Class passengers as well as participants of the frequent flyer program Miles & More have been able to enjoy an exclusive Welcome Lounge since January 27, 2009. It allows passengers to sleep aboard the aircraft up to the very last moment and then to take a welcome shower and have a leisurely breakfast at the new lounge, which extends over 1,200 square meters and two levels.

Almost twice as big and updated from the ground up is how the Lufthansa Lounge at New York's John F. Kennedy Airport has been presenting itself since the beginning of January 2009, after being renovated. There, premium customers find everything they need to freshen up and relax during a layover or after their flight on three levels covering a total of 1,500 square meters. Besides Business and Senator Lounges, the offer also includes an exclusive First Class Lounge: First Class and HON-Circle customers can now have a preflight dinner there, for instance, allowing them to sleep undisturbedly during their flight.

Innovative products are continuously developed in other business segments of the Lufthansa Group as well. For example: With the Cyclean Engine Wash and the Advanced Recontouring Process (ARP), two new, future-oriented technologies have been implemented at Lufthansa Technik. (More information on this topic can be found in the article "Green MRO – The greening potential of aircraft maintenance" on page → 58)

Award-winning Group – Lufthansa received the following prizes and awards in 2008: (selection)

- Award of "Travel Industry Manager 2008" for Wolfgang Mayrhuber, Chairman of the Executive Board and CEO of Deutsche Lufthansa AG
- Prize "Best Brands 2008" for the best corporate brand, given by Gesellschaft für Konsumforschung (GfK)
- "German Marketing Prize 2008" of the German Marketing Association
- World Airline Award 2008: Among 59 airlines, Lufthansa was elected the best airline in Europe
- Business Traveller Award 2008 for "Best Business Class to Europe" in the USA by Business Traveller Magazine
- Awards for Miles & More at the U.S. "Freddie Awards" – the "Oscars" of frequent flyer programs
- Award for mobile Internet: Media prize "made for mobile Award" for the mobile Internet portal mobile.lufthansa.com in the category "Mobile Internet" at the Media Forum North Rhine-Westfalia
- Lufthansa Cargo: "Best freight airline worldwide" according to a global survey of the renowned U.S. logistics trade magazine Air Cargo World
- "German Logistics Prize" together with Fraport AG at the 25th German Logistics Congress for the concept of integrated passenger and baggage logistics at the Frankfurt hub
- "2008 Best European Airline MRO Operation Award" for Lufthansa Technik of the U.S. trade magazines Aviation Week and Overhaul & Maintenance
- 2nd Prize for Lufthansa in the competition "Cultural Diversity at the Work Place"

Challenges for our business

Sustainable economic development secures the future and creates trust – Even during times of crisis

Just like an aircraft flying at an altitude of 10,000 meters, the air transport industry is influenced by constantly changing external conditions. And just as pilots are trained to handle turbulences of any kind, Lufthansa as a company must be able to handle all types of “weather.” From a long-term perspective, the air transport industry is fundamentally a growth industry. Historic correlations have shown that for each 1 percent of growth in the gross national product there is 1.5 percent of growth in passenger volumes in mature markets – and even up to 2.5 percent in growth markets. Over the short term, the wide range of fluctuation in demand and in cost factors, such as the price of fuel, can influence profitability substantially. Lufthansa is prepared for these developments and places great value on a sustainable orientation of its corporate development – from securing profitability and managing financial risks to taking far-reaching strategic decisions.



Thanks to its conservative depreciation policy, which has resulted in about 70 percent of the fleet being unencumbered, the Lufthansa Group has created an exceedingly high level of flexibility.

Profitability

Due to the worldwide scope of its business activities, Lufthansa is exposed to a high degree to global and regional changes in macroeconomics and to competition. The decisive factor in competition is the continuous improvement of cost structures. Lufthansa is working on this, both by means of structural steps to continuously increase its cost flexibility and through its Group-wide initiative to secure lasting profitability, “Upgrade to Industry Leadership.”

These efforts are also complemented as needed by profitability-securing measures aimed to produce results over the short-term. To this end, the business segments swiftly adapt their current production to declining demand. For example, the effects of the present recession led to Lufthansa Cargo's decision as early as December 2008 to cut back capacities massively in several steps by a total of about 20 percent. In addition, a cost-cutting program designed to systematically check expenditures for projects and other activities against their absolute necessity to operations has since gone into effect. Executive Board and employee representation have also agreed on applying for short-time work. The other business segments have also reacted early on to declining demand by adapting their capacities and cost bases accordingly.

To make its production and cost base more adaptable, Lufthansa has significantly increased its degree of flexibility Group-wide in recent years. To emerge as a winner from the dynamic market developments, being able to react as flexibly as possible to fluctuations in the levels of demand is decisive for securing profitability and long-term corporate success. This applies in equal measure to capacity growth and cost base. Therefore, the company's flexible capacity planning focuses on its aircraft. Thanks to its conservative depreciation policy, which has resulted in about 70 percent of its fleet being unencumbered, the Lufthansa Group has created an exceptionally high level of flexibility extending far beyond the usual capacity management. This fleet gives Lufthansa the greatest-possible degree of flexibility, allowing it to use shifts in roll-over times to adapt short-term capacity growth to prevailing market conditions. Thus, in difficult periods, aircraft deliveries can increase cost efficiency without automatically increasing capacities. In this way, the offer can be reduced at very short notice by carrying out routine checks or withdrawing aircraft from service ahead of the planned date. But Lufthansa is also able to increase its offer again at

short notice by delaying the planned decommissioning of aircraft. This kind of flexibility is the basis of Lufthansa's demand-oriented strategic approach to the capacities it offers.

The Group's cost base demands similar flexibility. The share of fixed costs has been reduced significantly in all business segments over the last years. All five segments are now much better able to adapt their external and personnel costs to demand. For example, innovative working-time models contain either on-demand performance elements beyond a fixed number of contracted hours or long-term working-time accounts that can be used to adapt working hours to higher or lower demand without causing additional or idle costs. Beyond this, all business segments have negotiated crisis clauses in their collective wage agreements that offer short-time options by applying predefined criteria, which reduces the risk of more drastic measures.

Upgrade^o to Industry Leadership

Beyond all the necessary short-term cost savings options, it is important not to lose sight of sustainable development. Therefore, Lufthansa also continues to work on achieving top profitability within the industry – independent of current conditions – by pursuing the Group-wide initiative “Upgrade to Industry Leadership,” which was launched in 2007. To this end, more than 100 new projects have been implemented, many of them within the individual business segments. Particular leverage is to be generated by cooperation projects that allow several Group areas to bundle together their individual performance and innovative forces. One such example is the project “Procurement Leadership,” which aims at developing Lufthansa's purchasing functions up to a recognized benchmark leading to savings expected to reach 200 million euros by 2011. Other comprehensive projects are designed to further develop the Group-wide real-estate management or to bundle inclusive efforts for lasting reductions of fuel costs and emissions. All these projects aim at strengthening Lufthansa's profitability in a sustainable fashion and at anchoring its leading position with regard to this dimension.

Risk management

Operative and financial risks are the constant companions of the air transport industry. To identify these and keep their effects within narrow boundaries, the Group has operated a structured risk management system for many years. Lufthansa views the conscious control of opportunities and risks as an integral factor of corporate governance. For this reason, it has no dedicated organization for risk management. Instead, this function is integrated into existing business processes. The system used to identify risks at an early stage and to manage them consists of multiple building blocks which are systematically interlinked and embedded across the entire Lufthansa Group. These components range from comprehensive risk committees ensuring business risk identification and assessment to continuous risk controlling in the context of planning and control processes within the business segments and the systematic management of single risk (for more information see the Annual Report 2008 from page → 114). Thus, Lufthansa takes the manifold Group-wide financial risks (e.g. fuel prices, currency exchange rates, financing risks, etc.) into account by following a comprehensive and structured hedging policy based on intensive analysis of the earnings effects and dependencies. The long-term and systematic hedging of currency exchange and fuel price risks over a 24-month period, for example, leads to a reduction of volatility and makes effects from the risks more plannable. It allows the company to maintain its selected course for a longer period of time and gives it more time to react in an adequate manner to changes in the framework of conditions under which it operates.



Strategic development of the company

Lufthansa applies the principle of sustainability to strategic decisions regarding business development as well. In this area, the Group has always acted with farsightedness, as numerous examples can substantiate: Twelve years ago, Lufthansa was the driving force for and cofounder of the world's first global airline alliance, as it recognized early on the necessity of being able to offer passengers a globe-spanning network. Today, the Star Alliance counts 21 members and 18,000 daily flights to almost 1,000 destinations worldwide. Thus, it is not only the largest network by far, but also a decisive reason for Lufthansa's success. These cooperations allow swift access to markets while limiting investments and market entry risks.

Where it makes strategic and economic sense to do so, Lufthansa is willing to invest in more profound partnerships. In this vein, the Group demonstrated similar farsightedness with regard to the acquisition and successful integration of SWISS: Today, the transaction is considered exemplary for acquisitions in the air transport industry, as the two companies complement each other outstandingly and far-reaching synergies are being realized. The Group has also allowed these experiences to inform its decisions in the current consolidation process. The planned acquisition of Austrian Airlines and the participation in Brussels Airlines follow the same proven risk-return principles (see also the article "Strong brand(s) – Promising future" on page → 22).

Value-based management

Adding value in a sustainable fashion is the driving force behind the overall development of the company. To reach this goal, the Group has been steered according to the principles of value-based management since 1999, and it thus actively pursues the goal of increasing the company's value lastingly. This approach is applied to all processes concerning planning, steering and control. Goal-oriented, sustainable and continuous growth in the company's value is thus to be secured for its investors. The degree to which this goal is reached is measured continuously and communicated through internal and external reporting. The decisive parameter for measuring this success is the Cash Value Added (CVA). The CVA is based on the expected return of all investors and indicates if value was added during a certain period. For this purpose, a minimum cash flow, which takes the cost of capital employed and other factors into account, is deducted from the achieved cash flow (EBITDAplus). If the CVA is positive, Lufthansa has achieved its goal of adding value¹. The company's expressed goal is to add value over the respective industrial cycle.

By applying this system of value-based management, the Group ensures that its responsibility towards its investors is anchored in the steering of the entire company. From the CVA are derived operating indicators and value drivers which the respective business segments use to steer their operative development. Key parameters for making decisions concerning investment steering are also derived from the CVA. Moreover, it includes incentives for managers and employees to act in the sense of the company's goals and to commit to an entrepreneurial spirit, as adding value is also anchored in a performance-related remuneration scheme.

¹ For more information on the calculation of the CVA, see also the Lufthansa Annual Report 2008, chapter 1.4.2.



The Internet page → www.lufthansa.com/investor-relations has been completely redesigned, giving shareholders and analysts even more diversified options for information and analysis.

Communications

The responsibility towards shareholders also gives life to an intensive and active dialogue with them. Lufthansa is well aware of the industry's volatility and the resulting increased need for information on the part of risk bearers. The Group places great value on a relationship based on mutual trust with shareholders who are interested in sustainable growth and the continuous development of value. Its investor-relations work, therefore, aims particularly at maintaining and further strengthening the basis of trust between shareholders and company. The contact and open exchange of the company's investor-relations and creditor-relations work at conferences, investor days and in many individual discussions ensure a high level of transparency, which in turn guarantees a shared comprehension of Lufthansa's perspective. In 2008, the Investor Relations department documented – with ten investor conferences for institutional and private investors, 32 road shows and more than 400 individual discussions – the degree to which this obligation and responsibility is lived out by the company.

The Annual Report 2008 is available at → www.lufthansa.com/investor-relations in PDF or online versions and can also be ordered there.

In these difficult times, the questions of many interested investors are primarily focused on how the company plans to meet the challenges lying ahead. Can Lufthansa remain on course? Which options for evasive action are available to the company and how quickly can it implement them? Lufthansa Investor Relations will, therefore, ensure a high degree of transparency and availability in 2009 by keeping shareholders continuously informed about current company decisions and further business developments.

At the stock exchange, sorrow and joy went hand in hand for Lufthansa and its shareholders in 2008. A price loss of almost 39 percent meant at the same time a significantly better performance than that of all the airline's competitors – and even better than the DAX. This relative advantage vis-à-vis the competition expresses the trust of shareholders in Lufthansa to handle the challenges of the currently difficult market environment and to emerge strengthened from the crisis. Aiming at the sustainable development of the company, the measures described in this report will contribute significantly to justifying this trust.

Social responsibility

Taking the lead through education

The ever-rising quality standards of our service and information society and the advancing decentralization of corporate structures pose new challenges for education management at Lufthansa. For this reason, the company's Human Resources managers are constantly working to adapt its internal education and training system optimally to more stringent demands and current structural changes. Faster and better ways of learning secure competitive advantages in a market environment characterized by ever-increasing competition.

The focus of Lufthansa's innovative educational strategy is on linking the development of its employees as individuals to the development of the company as a whole – while taking into account the differing challenges found at different Group companies. Therefore, Lufthansa aims at keeping the professional knowledge of its employees – whatever their age – up-to-date at all times in order to ensure their ability to perform in their respective task areas.

Another key goal of Lufthansa's training and education system is to promote the employability of its staff and to ensure that its managers and trainees obtain and maintain their qualifications. A further objective is to realize the transfer of knowledge and know-how across the entire company.

"In a globalized industrial environment, a company's success will depend to an even greater extent on the knowledge and competence of the people it employs. Thus, training and continuing education are key investments in the future of both the company and its employees," explains Dr. Martin Schmitt, Senior Vice President Executive Personnel at Lufthansa. By pursuing continuous educational activities, Lufthansa not only increases the speed with which it adapts to changing market and environmental conditions, but it also provides its employees with the means to support the company long-term in reaching its strategic goals. "Investing in our employees' education and training allows us to promote knowledge, competence, creativity and innovation, and thus to develop success factors that are difficult to imitate," adds Dr. Michael Christ, Head of Corporate Executive Development and Lufthansa School of Business.

Transferring tailor-made knowledge is part of the company's strategy, as the development of each employee also benefits the development of the Group.

Long-term strategic planning

The Lufthansa School of Business and the company's Education Management department share the responsibility for the strategy and control of educational policies across the Lufthansa Group in the areas of executive development and human resources policies. These units also monitor the long-term strategic planning of training capacities and the expansion of knowledge management. The professional training of employees takes place both in a centralized and also in a decentralized fashion within the Group companies. In addition, operations-related training and in-house courses for pilots, flight attendants and aircraft technicians are coordinated and carried out within the respective Group companies. Furthermore, all those responsible for training meet regularly in expert rounds to exchange information and coordinate activities.

A broad range of apprenticeship professions

The Lufthansa Group's training activities comprise three qualification paths: its classic dual apprenticeships, its dual degree programs and its in-house training for flight personnel. In 2008, about 2,600 employees started their professional training within the company.





In the framework of the classic dual apprenticeships, interested young people can currently choose from a total of 25 apprenticeship professions across the entire Group. These range from Specialist for Air Transport Services, Specialist for Forwarding and Logistics Services and Aircraft Electronics Technician or Aircraft Mechanic, Engines, to Catering Cook. In 2008, 330 apprentices started their professional training at Lufthansa – with favorable prospects for the future as the Group trains primarily for its own needs.

Twenty-three dual degree courses

The concept of dual degree courses continues to gain in importance, as they combine practical training within the company with theoretical study at a university. Currently, Lufthansa offers trainees 23 different dual degree courses, all of which have been designed in cooperation with renowned academic institutions. The degrees that can be obtained within the Group or at its subsidiary companies Lufthansa Technik, Lufthansa Systems, Lufthansa Cargo and LSG Sky Chefs range from a master's degree in mechanical engineering or business information technology to a Bachelor of Science in Aviation Management. In 2008, 303 graduates completed their academic careers at Lufthansa.

The advantages of these dual degree courses are obvious: They offer fast-paced, goal-oriented learning at a university in combination with practical experience and the direct application of learned material on the job. In this way, Lufthansa Technik, for example, receives employees who are optimally trained for and adapted to its specific needs and requirements and who have become familiar during their training with the working methods, philosophy and mentality of the company and colleagues. Both sides benefit from shorter familiarization periods, a deeper understanding of work processes and a stronger identification with the company.

“In a globalized industrial environment, a company's success will depend to an even greater extent on the knowledge and competence of the people it employs.”

Dr. Martin Schmitt
Senior Vice President Executive Personnel at Lufthansa





Of great importance for the early identification, recruitment and promotion of young professional talent is university marketing, a function that exists both at the Group level and at the individual Group companies. For this purpose, Lufthansa maintains specific contacts with selected universities and universities of applied sciences as well as student-related organizations in Germany and abroad. Lufthansa uses presentations, workshops, company visits and recruitment events to inform students early on about the different opportunities for starting work at the Group.

In 2008, Lufthansa continuously expanded its links with universities in the target markets China, India, USA and Eastern Europe. To internationalize its university marketing further, the company also launched a cross-border internship program in early 2009 in cooperation with AIESEC, the largest student organization worldwide.

Leading the way in pilot training

The training and continuing education of service professionals and pilots is the responsibility of the wholly-owned subsidiary Lufthansa Flight Training GmbH (LFT), which has set industry standards for many years. Those who decide in favor of a job in the cockpit receive training from LFT that – in theory and practice – far exceeds the legally-defined requirements.

Lufthansa offers its future pilots two training options: either a two-year in-house training course or a four-year dual degree course. The two-year training course leading to the qualification of Junior Pilot is specifically designed to meet the needs of Group companies Lufthansa Passenger Airline, Lufthansa Cargo and Germanwings.

In 2008, the Bremen-based pilot school introduced a new training concept, “progresso,” which corresponds to the current standard of the future-oriented Multi Crew Pilot License (MPL) issued by the International Civil Aviation Organization (ICAO). This innovative concept enables training within a framework that is better geared to the needs of other airline customers at LFT. That advantage is also assured by the latest-generation flight training equipment and the newly-introduced Cessna Citation CJ1+ aircraft operated by LFT’s pilot school.

The four-year dual course of academic study and pilot training combines aeronautical and theoretical training at the pilot school with a degree in Engineering at the technical university in Bremen. Students complete their bachelor’s thesis in cooperation with aviation companies.

Continuing education at Lufthansa – There’s no better way to learn

Lufthansa provides its employees the assistance, programs and tools they need to qualify themselves for dealing with current and future professional tasks in accordance with their personal interests and competence. “It is obvious that the further development of individual employees has a significant influence on the long-term sum of the company’s results,” says Gerhard Jahn, Head of Training Policies at Lufthansa. For this reason, employees have the opportunity to acquire tailor-made knowledge through the numerous internal continuing-education offers and thus to expand their competence and skills. The resulting increase in know-how benefits not only the company but also the employees themselves, as they improve their personal level of employability.



For the training of its up-and-coming pilots, Lufthansa uses Citation CJ1+ jets.

The Lufthansa School of Business (LHSB)

The LHSB, for instance, offers a strategically-oriented training program to develop and maintain interdisciplinary competencies and to assure needs-oriented continuing education for employees and managers. Across the boundaries of individual Group companies, it offers management programs, training courses and platforms for dialogue and information. In addition, it contributes to making the Group more international: Not only has the LHSB expanded its offers of seminars in English in Germany and at locations abroad, but it has also developed educational events on the topic of intercultural competence and training programs in the area of foreign languages.

By offering these learning opportunities, the LHSB links the professional development of individual employees and managers with that of the company, while promoting the required processes of change across the Group. Furthermore, the LHSB contributes to the establishment of a shared management culture at Lufthansa and allows the expansion of personal networks.

The LHSB's training spectrum encompasses management seminars for senior executives. Employees who are promoted to the management level for the first time receive structured support as they assume their new responsibilities through specialized

Award-winning training and continuing education activities

The Lufthansa School of Business has regularly received international awards for its work, including several corporate university awards and, in the context of a Hewitt Study, the distinction as "European Top Company for Leaders."

"Investing in our employees' education and training allows us to promote knowledge, competence, creativity and innovation, and thus to develop success factors that are difficult to imitate."

Dr. Michael Christ
Head of Corporate Executive Development
and Lufthansa School of Business



courses aimed at expanding management-relevant competencies. The LHSB's portfolio also includes advice on the executive MBA (Master of Business Administration) programs that experienced employees may select for their continuing education and as an intense preparation for their roles as managers. These programs are strongly oriented toward practice and internationalism.

Corporate College

The LHSB is also home to the interdisciplinary courses of its Corporate College. With varied offers aimed at both operations-related and voluntary continuing education, this unit helps ensure that employees below the management level acquire and maintain interdisciplinary competencies. Examples for this approach include leadership seminars for team, shift or project managers and IT trainings. Other seminars provide employees with key qualifications to improve their competencies related to working methods and social skills. In 2009, the focus of this area was on topics concerning intercultural competence and preparation for working abroad. The trainers' qualifications ensure that courses across the Group fulfill the same high level of quality. Voluntary continuing education courses in areas such as business administration, foreign languages and information technology round off the Corporate College's scope of offers. In 2008, the focus topic here was business administration; in 2009, it is health.

The LHSB's repertoire of teaching methods ranges from attended events and e-learning to "blended learning," which combines the advantages of attended events with those of e-learning. In addition, the school constantly assesses the use of new media and how these can be integrated into continuing education. Two examples are mobile learning and game-based learning. Moreover, all training events organized by LHSB are subjected to continuous quality management.

Knowledge management – a competitive advantage

Lufthansa's Knowledge Management sector is concerned with areas including knowledge transfer, knowledge assessment, glossaries and libraries. "Knowledge Management has the goal of motivating employees to pass on their personal knowledge," explains Gerhard Jahn. The best example for this approach is the company's "knowledge relay." This practice ensures that employees starting in new positions receive all important information from their predecessors and take advantage of their accumulated experience. Using a systematic process, a trained moderator helps the person providing knowledge to identify and impart particularly his or her subconsciously internalized know-how. In a second step, the moderator works together with the recipient

to uncover possible “knowledge gaps” and then balances out the varying topic areas.

“The moderated exchange of knowledge between predecessors and successors helps the latter to prepare more thoroughly for the change of position and to familiarize themselves more quickly with the new scope of tasks,” Jahn emphasizes. Therefore, ongoing projects can be continued seamlessly. Moreover, all parties concerned can avoid frequent consultations, potential errors and redundant work. This type of comprehensive startup support and orientation is especially motivational for successors, while it enables knowledge providers to close their previous tasks entirely.

Feedback instruments implemented Group-wide

The professional development of employees and the individualized format of the continuing education offered at Lufthansa are closely linked to a well-developed culture of giving feedback. The available instruments here are the electronic Lufthansa Leadership Feedback (eLLF) and the electronic Lufthansa Professional Feedback (eLPF), whose contents and processes are coordinated optimally. While eLLF places its focus on the actual management tasks, the eLPF concentrates primarily on the operative professional context of supervisors and employees below the management level. In 2008, about 1,700 managers and employees took advantage of these two instruments.

Both feedback systems are based on the Lufthansa Leadership Compass, a competence model that has been established Group-wide. In addition, they allow for 360-degree feedback, which is composed of assessments made by different groups of people and by the employee himself. Such multi-perspective feedback identifies the perceived strengths and provides input on the potential areas of development. The recommendations made to employees are directly linked to the training programs offered by the LHSB. With support from the “training navigator,” employees can identify the educational products best-adapted to their needs.

Worldwide talent management

Furthermore, the LHSB is tied directly into the process of securing successors. With its global talent management system, the company has established an instrument that makes it easier to search for the best-qualified junior employees and helps bind talented employees to the Group long-term. To record the potentials and performances of managers at all levels of seniority, as well as those

of talented employees below the management level, Lufthansa has implemented compatible talent management processes on a worldwide basis (see detailed information in the article “Finding and binding talent” in *Balance* 2007, starting on page → 36, to order a copy visit → www.lufthansa.com/responsibility).

Future trends in education management

The further development of talent management is regarded as a future trend in the area of education management. This example illustrates clearly that Lufthansa attends to such trends at an early stage. In optimizing the company’s talent management, its managers always regard the development of the Group and the personal progress of the employee as two sides of the same coin.

Beyond this, there are other strategic activities at Lufthansa in the area of future-oriented education management: namely to promote dialogue and communication, to support internationalization and to strengthen entrepreneurship, networking and systems skills.

Lufthansa invests in education

In 2008 alone, Lufthansa invested 194 million euros in training and continuing education for its employees. In this manner, the company takes into account its increasing need for a well-trained, qualified workforce. At the same time, it assumes important social responsibility by training young people.

The “Spanish Steps” are the dominant element in the lobby at the new Lufthansa Training & Conference Center. They connect the two levels of the lobby, the building’s communicative focal point.



The LHSB develops its future orientation by means of a systematic strategic process, in the framework of which those responsible determine content-related action areas at two-year intervals. These are subsequently used to adapt the training programs as needed.

Pleasurable learning in an attractive environment

The reopening of the Lufthansa Training & Conference Center (LTCC) in Seeheim in February 2009 is an important milestone for the company's internal education system, which has always performed at high levels. Lufthansa has invested around 100 million euros in its new education and meeting center. The entire training area was designed according to scientific insights gathered by the Fraunhofer Institute. The LTCC's new features include 80 training and seminar rooms, as well as 11 IT training rooms equipped with the latest media technology. Furthermore, generously-sized terraces and pavilions in the park encourage relaxed learning outdoors.

“Seeheim is not only our new home base for inspiring learning but also for intercultural encounters.”

Dr. Ulrike Seidl
Vice President Infrastructure Projects and
Facility Management at Lufthansa



“Seeheim is our new home base not only for inspired learning but also for intercultural encounters,” says Dr. Ulrike Seidl, Vice President Infrastructure Projects and Facility Management at Lufthansa. “The LTCC is the visible expression of the high priority that the topic of education enjoys within the Group. This is because our well-qualified employees are one of the most important pillars for Lufthansa's continued success in global competition.”



HR management

HR management platforms across business segments to coordinate personnel-relevant topics

HR Board

Chairman: Group Executive Board member in charge of Aviation Services and Human Resources

Labor Relations Directors/Members of Executive Boards in charge of personnel within Group and HR heads of corporate functions

HMC – HR Management Conference

Chairman: Senior Vice President Executive Personnel

Heads of Personnel of Lufthansa business segments and selected corporate functions

HMF – HR Management Forum

Chairman: Director Corporate Principles Personnel Policy

HR heads of all Lufthansa companies and HR corporate functions

HMX – diverse, independent committees

e.g. working time, job market, education, demography, health management, personnel development, travel, etc.

HR management at Lufthansa

HR management is represented at Lufthansa at the Group Executive Board level by Stefan H. Lauer. He heads the Group department Aviation Services and Human Resources and is also the Labor Relations Director of Deutsche Lufthansa AG.

The legally independent business segments each have their own labor relations directors. These functions are exercised at the Executive Board level together with other board tasks. At Lufthansa Passenger Airline, the HR functions are headed by the Executive Vice President Service and Human Resources.

The HR Board (HRB) provides a regular “coordination roundtable” for the discussion of HR topics with general relevance. Similar coordination structures are available (e.g. for issues in personnel politics) at more frequent intervals for the personnel managers of the individual business segments – the HR Management Conference (HMC) – and in several joint meetings a year for all personnel managers – the HR Management Forum (HMF). There are also similar structures for collective bargaining topics and for management policies and development. Furthermore, fundamental strategic issues arising from the HR areas are discussed every two to three years with the department managers and heads of advisory departments at a Group-wide HR conference.

In addition to such coordination roundtables, Lufthansa uses a full range of modern communication tools to optimally interlink its personnel units Group-wide, beginning with the intranet itself and extending to “collaboration rooms” and intranet forums. In future, all of these will be expanded to become even more important pillars of exchange.

Diversity



At the center of all diversity activities at Lufthansa are the dimensions of age, disability, gender, nationality/ethnicity, religion/ideology and sexual orientation. Companies with a varied employee structure are better able to manage the increasing individualization of products, heterogeneity of customers and globalization of business processes. Furthermore, advancing demographic change not only demands defining new concepts in personnel policy but also adhering to legal guidelines, which often differ from region to region.

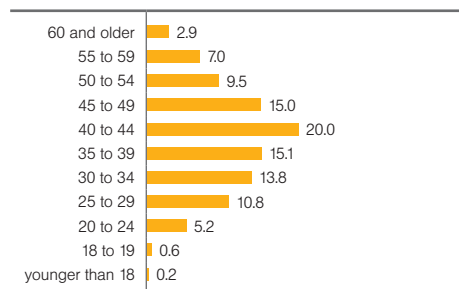
Obligation and opportunity

Globalization and demographical change create complex challenges for companies. Lufthansa – which has always been characterized by heterogeneous customer and employee structures – recognized the value of diversity for the company early on and established the management of this important resource as an instrument of HR policy.

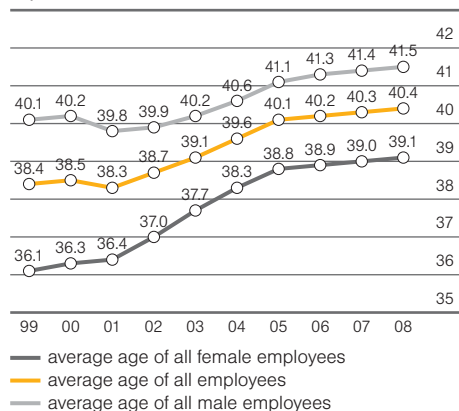
Boost for creativity and innovative power

A milestone on this path was the creation of the organizational unit “Change Management and Diversity” in 2001. It reflects the realization that companies whose working environment is free from prejudices and exclusions are more competitive and more successful in business. Additionally, they benefit not only from a measurable increase in creativity, innovative power and mobilized potentials, but also from a decrease in intercultural conflicts. In other words, it pays off to respect and appreciate employees’ individuality. In this context, diversity is understood to mean gender, age, disability, nationality/ethnic origin, religion/ideology and sexual orientation. The basic tenets for this approach are anchored in the company’s philosophy and offer guidelines for tolerant and open interaction among employees.

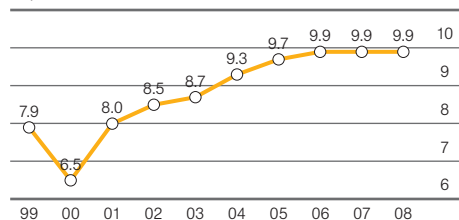
Age structure at the Lufthansa Group¹
2008, distribution in percent



Average age at the Lufthansa Group¹
in years



Share of employees over 55¹
in percent



Acting instead of reacting

The forecast aging of society and its consequences for business preoccupied Lufthansa again in 2008. Accordingly, the company identified 12 action areas to actively handle demographic change, which the Group has been working on ever since.

The action areas

1. Role within the company	7. Regulations
2. Employability	8. Abrupt exit from gainful employment
3. Personnel development	9. Management of knowledge and experience
4. Ability to work	10. Work-life balance
5. Motivation	11. Personnel marketing
6. Performance and change	12. Cohabitation of the generations

The activities derived from the action areas vary according to the business activities of the respective Group companies. All these measures share the common aim of ensuring and promoting the employability and performance of the company’s employees through comprehensive health and education management – especially with regard to its “senior professionals.”

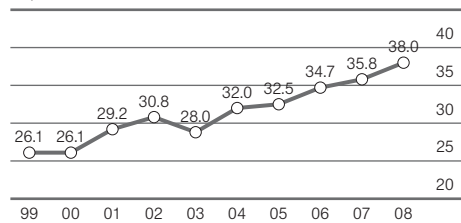
One area of emphasis of this initiative has been to anchor lifelong learning for employees of all ages across the Lufthansa Group. The company’s employees must also prepare themselves for longer working lives, due in part to recent pension reforms in Germany. In addition, this demographic development may reduce the number of potential employees that Lufthansa is able to tap into in the future. It is thus becoming even more important to tie older, more experienced employees to the Group and to help keep them fit. In 2008, 9.9 percent of the company’s employees were over 55 years of age. Lufthansa considers the continuous acquisition of tailor-made knowledge as the key for maintaining and expanding the employability of individual employees up to retirement age.

Staff planning tools – a look into the future

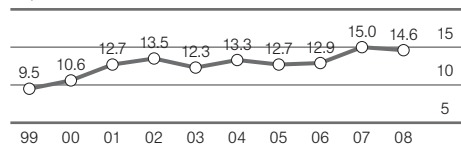
Lufthansa supports its employees’ independent expansion of competencies by providing a framework of favorable conditions for further education measures. The development of these conditions is based on analyses gained by means of staff planning tools. These analyses allow forecasts concerning the long-term developments of the workforce. For example, a “traffic-light system” is used by the managers of the Lufthansa Group to recognize potential bottlenecks and take corrective action at an early stage: While green indicates that the company’s planning is likely to be in line with future developments, yellow points to demographically influenced recruiting problems, and red signals alarm and the need to take immediate action.

¹ Scope of consolidation partly excluding LSG outside Germany, BizJet International Sales & Support Inc., Lufthansa Technik Airmotive Ireland Ltd., Lufthansa Technik Airmotive Ireland Leasing Ltd., Lufthansa Technik Aircraft Component Services, Lufthansa Technik Philippines, Shannon Aerospace Ltd., Hawker Pacific Aerospace Inc. (US), Hawker Pacific Aerospace Ltd. (UK), AirLiance Materials LLC.

Women in management positions with staff responsibility at the Lufthansa Group¹
in percent



Women in management positions at the Lufthansa Group²
in percent



Lufthansa Technik AG uses an especially comprehensive approach owing to its often quite lengthy qualification periods. Here, the total personnel requirements for the next 5 to 25 years are extrapolated from the production program and compared with the expected staff levels. The results show not only immediate but also mid- and long-term needs concerning training, transfers and recruitment. To derive measures, these needs can be analyzed by means of color codes across the organization and qualification structures. In the tool, approved measures can also be depicted and implementation steps tracked. Using a scenario technique, the most varied assumptions can be simulated, so that long-term effects of changing prevailing conditions on employment can be determined quickly and integrated into planning.

Well-positioned: Women at Lufthansa

Lufthansa is determined to increase further its share of women in management positions, which reached 14.6 percent in 2008. For this reason, the Group continued its participation in the intercompany cross-mentoring program for female managers which was launched in 1998 at Lufthansa's initiative. In 2008, employees from nine large German corporations formed a total of 55 "tandems," composed in each case of a female junior manager (mentee) and a senior manager (mentor) from companies such as Sanofi-Aventis, Hewlett Packard or Deutsche Bank. Conversely, top managers at Lufthansa coached female mentees from the other participating companies.

One goal of cross-mentoring is to accompany and advise female managers along a portion of their career paths. Another is to transfer knowledge beyond the company's boundaries and to support performance-oriented women in their personal career strategies. Last year's mentees evaluated their participation as a success: More than half indicated that they now act with more self-assurance and that they handle challenges with greater peace of mind. In addition, 70 percent of participants were able to advance financially and 40 percent hierarchically – though only 30 percent attribute this success to mentoring. The mentors also benefit from this process. They very clearly appreciate considering personnel development issues from an entirely different perspective.

Lufthansa has been active in the forum "Women in Business" since 1992. There, those responsible for women's issues, diversity and equal opportunity at more than 20 large German companies regularly exchange their experiences, successes and best practices. The forum focuses on ideas and solutions that help to ease the way into management positions for female employees, improve the compatibility of family and work, and contribute to reducing stereotypes.

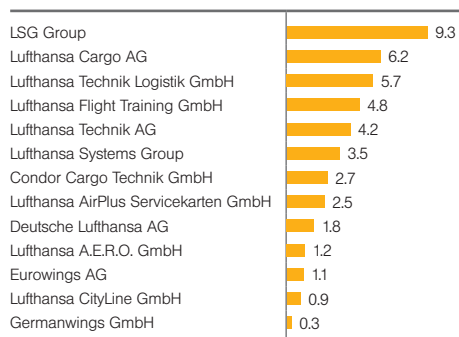
No contradiction: Women and technology

Even though girls as a rule have better secondary school results than boys, they continue to be underrepresented in scientific and technical professions. This also applies to many jobs in aviation, such as pilots, aircraft mechanics and freight handlers, which continue to be seen as classic "male domains." To change this situation and to dispel girls' reserve with regard to careers in technical fields, Lufthansa starts its support for women while they are still at school. In this spirit, the company again opened its gates in 2008 to inform female high-school students in the context of the

¹ Scope of consolidation excluding Lufthansa CityLine, Lufthansa A.E.R.O. GmbH, Lufthansa AirPlus Service-Karten GmbH, LSG outside Germany, Lufthansa Systems Berlin GmbH, Lufthansa Systems AS GmbH.

² Only Deutsche Lufthansa AG, Lufthansa Cargo AG, Lufthansa Technik AG, Lufthansa Systems AG, Lufthansa Flight Training GmbH, Lufthansa Revenue Services GmbH, LSG, Lufthansa CityLine.

Disabled people at the Lufthansa Group in Germany 2008, distribution in percent



Lufthansa provides a sign-language interpreter for its hearing-impaired apprentices during their training to become tool mechanics.

traditional Girls' Day about the diverse worlds of work at Lufthansa. The invitation drew 241 girls between the ages of 12 and 16 who demonstrated their interest in Lufthansa as an employer. Their glance behind the scenes included a visit to the Lufthansa Flight Training Center at Frankfurt Airport. There the girls were able to take a close look at a flight simulator and get firsthand insights into the everyday professional life of a female pilot. At Lufthansa Cargo, the program included a number of games on the subject of freight transport. Girls' Day was rounded off by aircraft visits and practical exercises in the hangars of Lufthansa Technik.

Integrating instead of excluding

Another important goal of Lufthansa's personnel policy is to integrate people with disabilities into the professional environment. For many years, the number of employees with physical or mental disabilities at LSG Sky Chefs and Lufthansa Cargo has exceeded the legal minimum quota of 5 percent. Business segments with flight operations have a harder time reaching this quota due to legal requirements, as only in a few exceptional cases is it possible to employ people with disabilities as members of flight crews.

In integrating disabled people into the working world, Lufthansa applies tried-and-tested instruments. One such example is an innovative mentoring program. Experienced managers personally accompany disabled mentees for a whole year to support them in their professional development. 2008 saw the close of the fourth edition of this program, in which six tandems participated.

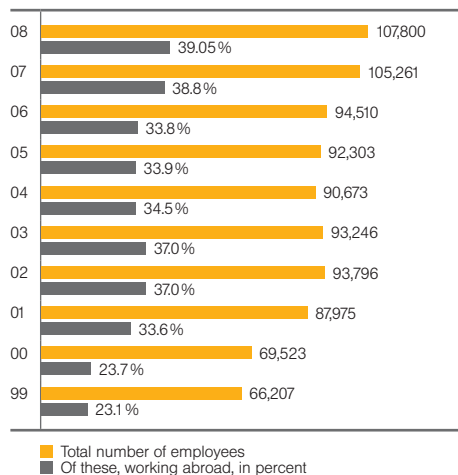
In Hamburg, Lufthansa Technik launched the project "Training for the Deaf," which permits young hearing-impaired people to complete training as machine tool mechanics. During their practical and theoretical training, the company provides these apprentices with a sign-language interpreter to help overcome language-related barriers. In 2008, three hearing-impaired trainees thus started their professional lives. In addition, Lufthansa Technik in Hamburg and Lufthansa Cargo in Frankfurt both cooperated with workshops employing disabled people.

Integration Day at Lufthansa

The fact that people with disabilities are welcome at the aviation company was also underlined by the Lufthansa Integration Day on December 3, 2008 in Frankfurt. Organized on the occasion of the "European Day of Disabled Persons," this event was aimed toward disabled high-school students who are about to choose a professional career. In a dialogue with representatives from various Group companies, these young people found out more about the numerous training and study opportunities within the Group. By talking to disabled employees, they also had the opportunity to gain a firsthand impression of the open and tolerant corporate culture at Lufthansa. Visits to the Lufthansa Aviation Center (the company's administration building) and the Flight Training Center gave insights into the daily work at Frankfurt Airport, making for the successful conclusion of the Integration Day.

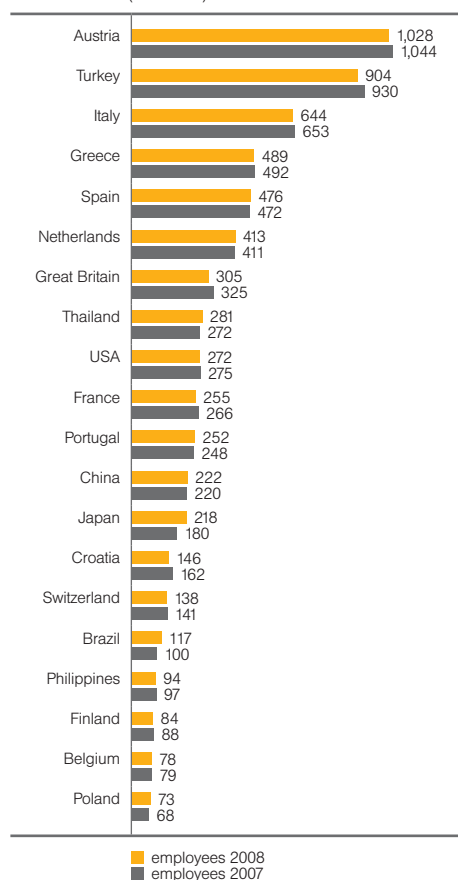
Share of employees working abroad at the Lufthansa Group

Total employees vs. employees working abroad



Employees in Germany with foreign citizenship at the Lufthansa Group

2008 vs. 2007 (selection)



This graph shows the 20 most strongly represented nationalities among employees. Altogether, Lufthansa employs people from 125 nations in Germany.

Thinking outside of the box

Lufthansa employees encounter colleagues and customers from foreign cultures nearly every day. The Group employed people from 155 countries in 2008. In Germany alone, 125 nations are represented. International cooperations and participations also do their part to boost the frequency of such encounters. The customer structure of this “global player” is just as heterogeneous as its workforce. Therefore, the ability to interpret characteristics typical for particular cultures and to react to them appropriately is a key competence for all Lufthansa employees. With the goal of improving the employees’ intercultural competencies, the Corporate College offers a range of further education events in the form of presentations and seminars. This offer is complemented by intercultural workshops at the business segments Passenger Transportation, Lufthansa Flight Training, Lufthansa Technical Training and Lufthansa Cargo. The focus in all cases is on everyday work situations.



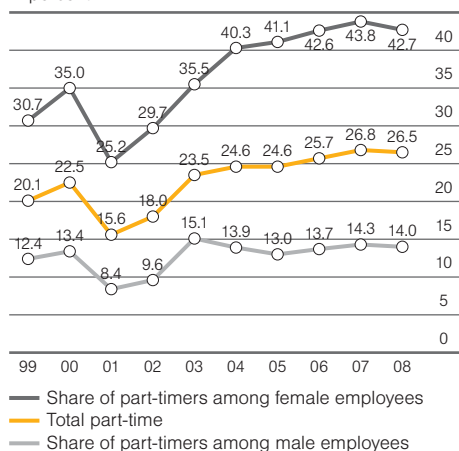
Going global: Transfers abroad

At Lufthansa, all signs point to internationalization. This trend is also illustrated by the increasing number of transfers abroad – from Germany to a foreign country, from another country to Germany, or from one foreign country to another. In 2008, such transfers involved about 700 employees; about another 700 worked short-term, meaning up to six months, at a foreign subsidiary. To ensure that these “expats” and their families find their bearings quickly in their host countries, Lufthansa offers them a wide scope of support services. These include mandatory intercultural trainings for the future country of work, free preparatory flights to get familiar with the location and find housing, language courses for spouses, and additional language lessons or private tutoring for children.

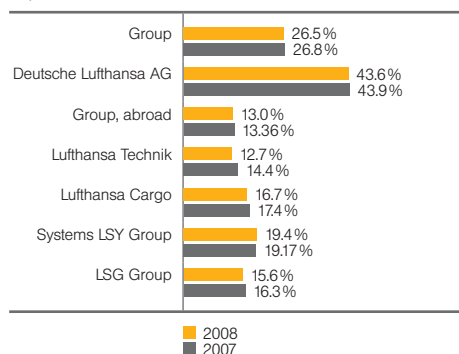
Work-life balance

Flexible working hours strengthen Lufthansa's competitiveness

Part-time employment at the Lufthansa Group
in percent



Part-time work by Group companies
in percent



Flexible working hours have been a basic component of the organization of work at Lufthansa for many years. By continuously adapting its work schedules, the Group responds to the changing needs of the employees and the company alike, and thus offers both sides more scope in structuring working time: Lufthansa gains the possibility of assigning its employees in line with demand and customer preferences, while employees can better reconcile their professional and private lives. Both aspects help to strengthen the aviation company's competitiveness and thus secure jobs.

Lufthansa introduced flexible working hours as long ago as the 1970s and has continuously developed this approach ever since. Step by step, more flexible elements have replaced fixed core working hours. And since November 2008, there have no longer been any threshold values applied to working time balances for Lufthansa employees under the flexitime scheme in Frankfurt. This means that the final assessment of their total hours worked takes place only every 18 months. By that time, employees need to have brought their flexitime account into balance or within the tolerance value of plus or minus 50 hours. Employees are encouraged to offset their worked overtime by taking days off. If the surplus exceeds 50 hours at the end of the 18-month assessment period, those overtime hours expire. By contrast, if there is a shortfall of more than 50 hours, the employee needs to expect a corresponding pay deduction. "This model allows Lufthansa to cover work peaks or projects much better than before, while adhering to the legal and tariff-related guidelines. The employees gain new leeway to design their work and private lives, and the company benefits from a declining share of unproductive working hours," says Claus Wachenheim, Director Human Resources Germany until the end of 2008, stressing the advantages.

Two working time models to choose from

All the same, Lufthansa not only continued to develop its flexitime model further in 2008, but also established the concept of "working time based on trust" at the company. An important step on this path was the signing of the company agreement by the same name, which successfully concluded the test run of unsupervised flexitime launched in mid-2006 at the Lufthansa Aviation Center in Frankfurt. A comparable model was agreed upon in April 2008 for the administrative functions in Cologne.

The new system promotes first and foremost a culture of trust within the company, as all employees document the hours they have worked themselves. This assumes a responsible use of one's own working time. As employees strike a balance between their professional and private obligations in a task-oriented manner, they expand their scope to design their own schedules. Supervisors have a special role in this model: They are responsible for an even distribution of work loads within their teams, thus avoiding that their employees are under- or overworked.

With unsupervised flexitime and flexitime, all employees at the locations in Frankfurt and Cologne have two modern working time systems to choose from. The only exceptions to this rule are those employees who work shifts. Fundamentally, it is up to each Lufthansa employee to decide which working time system he or she prefers.

About one quarter of all employees at the two locations paid according to collective wage agreements have adopted unsupervised flexitime. If we include all employees in Frankfurt and Cologne paid outside collective wage agreements, more than 50 percent of Lufthansa's employees in its administrative areas no longer participate in the conventional form of recording working time.

New day-care centers improve compatibility of family and job

Besides more flexible working time offers, instruments such as leaves of absence, options for child care and elder care, and counseling and finder services help create a balance between work and family. Another important step forward in this area are the new child day-care places at the Frankfurt location, where among other measures a cooperation agreement with a child-care center close to the airport has been in force since early August 2008. Now, a minimum of six places at the "Kinderarche" in Frankfurt Sindlingen are available to employees for their children aged eight weeks to three years. Despite the longer opening hours, from 7 a.m. to 6 p.m., parents need only pay the usual supplement for day-care places in Frankfurt. It is even possible to expand the professional care to include the bilingual education of children in German and English.

Notwithstanding this new offer, employees can continue to use the tried-and-tested offers of the "Family Service," an external, independent consulting and finder service, which helps Lufthansa employees in locating individual child-care solutions. Among its tasks is the free-of-charge assignment of child minders, nannies, baby-sitters or homework tutors. Family Service only charges a fee for the placement of au pairs. During holiday periods, for example, the service's offers expand to include trips for young people. In 2008, the Family Service recorded 627 counseling and information sessions, and 284 placements.

At the same time, Family Service offers employees the option of using an emergency service: In addition to regular care, the Lufthansa employees at 13 locations across Germany can take their children at short notice to an emergency child-care center. Additionally, the Family Service can help employees find an emergency child minder, who ensures care at short notice – in the event of an urgent business trip or if a mother herself is sick. A total of 200 families took advantage of this kind of ad-hoc support in 2008.

At Lufthansa, supporting families also comprises intensive communication with the employees. In this spirit, numerous interested employees at the Frankfurt location took advantage of Family Day, organized for the third time in 2008. They attended presentations and discussion rounds to gather information about the company's internal offers surrounding the compatibility of professional and private lives. At the same time, the employees' children had the chance to participate in a Group-wide painting competition. The pictures they submitted are on exhibit in the cafeteria at the Lufthansa Base at Frankfurt Airport, thus helping to keep the topic of family present in an everyday work setting.

A further building block in Lufthansa's activities to improve the balance between work and family is temporary work leave for family-related reasons. For this purpose, there is parental leave, an option that is now increasingly used by fathers as well: In 2008, there were 106 fathers at Lufthansa in Germany who took advantage of the legally permitted paternal leave, 41 more than the year before.



“Elder Care” – Help with looking after family members

In addition to child-care options, the Family Service also supports Lufthansa employees in looking after older relatives through its Elder Care. With this initiative, the Group takes the demographic changes in society into account. The Family Services offers are varied: Experts give employees advice concerning all questions on care models and financing options. Moreover, it finds household help, shopping assistance or transportation services as needed to thus relieve the employees in need of support.

Since July 1, 2008, a new law on caregiving periods has been effective in Germany. Its goal is to permit employees to give care to close relatives at home and thus to improve the compatibility of work and family care. The new regulations allow employees to remain absent from their work for up to ten days at short notice or to apply for a care period of up to half a year. Lufthansa has fulfilled the requirements defined by this law for a long time. In 2001, the aviation company created the option for employees to take up to 364 days for the care of relatives through the company agreement “Lufthansa Family Time.” The new legal guidelines expand this period once again by half a year. An extension or a further “Lufthansa Family Time” are possible in individual cases.



Active in retirement – The association of former Lufthansa employees

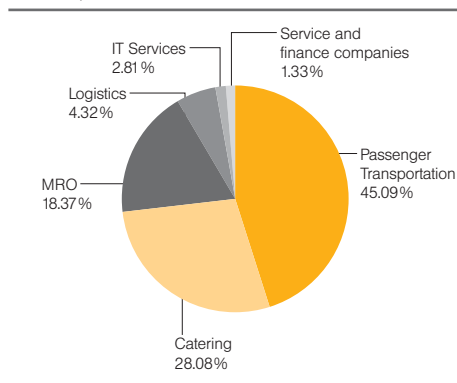
Retired employees from all business segments and Group companies have joined regional associations at numerous Lufthansa locations in Germany, Europe, North America and South America. These organizations are all part of the Association of Former Lufthansa Employees. Around the world, this organization boasts more than 3,000 members, who participate in events such as anniversaries, Christmas parties and annual meetings long after having left their jobs at Lufthansa. Furthermore, members can actively exchange information via the association’s own home page and the “The Lufthansa Senior,” its quarterly informational magazine. Lufthansa supports these activities with financial means to allow all interested retirees close ties to the company and former colleagues well beyond their professional lives.

Employment policy based on partnership

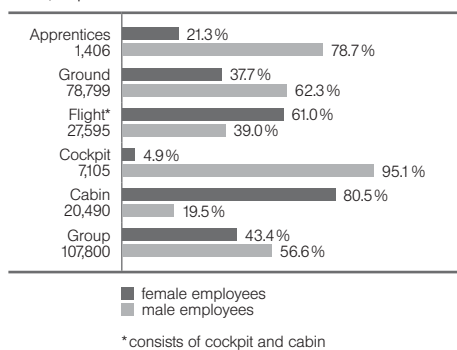
Fair play in the workplace

Lufthansa has always been and remains a popular employer. This fact is illustrated not only by the large number of 110,000 applications (2007: 100,000) which the company received in 2008. But there are also numerous surveys that testify to the aviation company’s continued attractiveness. For example: A ranking of employers published in November 2008 in the German business magazine “Wirtschaftswoche” asking 4,900 young university graduates about the most popular companies in Germany showed that Lufthansa occupies a top position in many categories. Among economists, for example, the company comes in second, right after Porsche; among engineers, Lufthansa Technik ranked sixth. The IT service provider Lufthansa Systems scored seventh among computer science graduates. And among graduates in the arts and humanities, Lufthansa ranks third on the scale of popularity, behind the German Foreign Affairs Ministry and Google.

Distribution of employees within the Lufthansa Group 2008, in percent

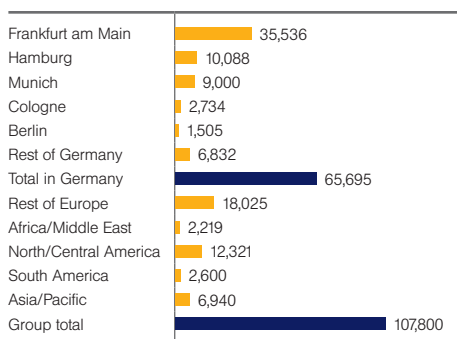


Employees by group and gender 2008, in percent



Lufthansa employees 2008

Jobs around the world



The reasons for Lufthansa's high reputation among applicants include the fact that aviation is seen as an attractive industry and Lufthansa's work environment as especially positive. Furthermore, there are the good working conditions and an employment policy known to be based on partnership, which always considers both the requirements of the company and the needs and interests of its employees.

“Employee Feedback Management”: Asking what is of concern to employees

Employee surveys are a central control instrument for a company's success. Lufthansa has taken advantage of this option since 1999 to determine the level of satisfaction among its employees. In 2008, the company deployed its Employee Feedback Management (EFM) for the sixth time as a systematic barometer of employee morale. The EFM's goal is not only to highlight strengths, but also to identify weak points and to make full use of the optimization potential implied therein.

About 40,000 employees at the Lufthansa Passenger Airline and other Group divisions were called upon to express their opinions, for example, on operational aspects, such as “cooperation and leadership,” “information and communication,” “learning and innovation” or “general working conditions.” Participation reached 53 percent of eligible employees – 3 percent more than in 2004. In addition to general and job-specific sections, the questionnaire also contained for the first time questions concerning the Group's error and learning culture, forming one area of emphasis of the 2008 EFM. Employees had the option of filling in the form online or on paper.

Satisfaction increased

Compared with the 2004 survey, the current poll showed higher levels of satisfaction across all topic areas. For example, employees feel even more connected to the company than four years ago. And looking back, 81 percent of respondents would again decide in favor of Lufthansa when choosing a career path. Moreover, 88 percent of respondents are convinced that their work makes an important contribution to the company's success. And 90 percent are certain that the aviation company will successfully defend its place in competition over the years ahead.

Stronger commitment – More satisfied customers

Another increase was observed in the area of “employee commitment,” which measures the degree to which the respondents identified with Lufthansa and to which they felt bound by the company's goals. That the employees' commitment, motivation and willingness to perform has increased can also be deduced from customer satisfaction, which reached a historical high level in 2008 – a correlation supported by numerous empirical studies. Lufthansa measures customer satisfaction annually by means of the Customer Profile Index, which has been calculated since 2001. After a record level of 7,434 points in 2007, the indicator increased again by 218 points in 2008 to reach 7,652 points.

In order to learn from the results of the EFM and bring about positive changes, the Group's managers actively seek an open dialogue with their teams. The reason: The more extensively individual employees are informed about the results of the survey, the greater their willingness is to support and drive forward necessary processes of change.

In addition to the Employee Feedback Management, Lufthansa has also established regularly recurring employee evaluations as an essential element of employee policy. Emphasis here is placed on defining the employee's desires and expectations, identifying his or her individual needs for continuing education and defining shared goals.

“JobChange”: Protection against unemployment

Operations-related restructurings cannot always be avoided. To make the consequent effects as socially compatible as possible for the affected employees, Lufthansa employs its placement system “Job Change.” It is specifically designed for colleagues who are looking for new professional perspectives within the Group as a result of such restructurings. “JobChange” is characterized by simple control mechanisms and lots of leeway in finding a new, adequate job. Moreover, this instrument of staff policy enjoys a high level of acceptance within the company, underscoring once again that Lufthansa exercises its responsibility for employees during times of change as well.

Dependable help in times of need

Lufthansa looks after employees who find themselves in overwhelming, life-threatening, desperate situations through no fault of their own. In Germany, they can apply to the “Lufthansa-Unterstützungswerk.” It can provide financial support earmarked for specific purposes by means of grants or loans; no legal right to these measures exists, however. For local staff employed abroad, appropriate support can be provided directly from the respective personnel service.

Codetermination in company decisions

It is unchanged corporate policy to clarify apparent conflicts of interest between company management and employee representatives in an open and transparent process. Fair cooperation in all areas creates the necessary balance to advance the company in the market. The increase in differentiated opinions and opinion leadership represents a growing challenge for all parties involved, a development also reflected in society as a whole. Flexibility and the ability to react in the market are the guidelines applied to all joint efforts in this area.

Constructive partnership between unions and management

Lufthansa offers its employees conditions that ensure them social and material security not only during but also following their professional careers. The basis for these conditions are the collective agreements which the company concludes with the unions “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 justly – an objective whose achievement is compounded by the plurality of unions at Lufthansa.

Thus, the 2008 round of collective bargaining was marked by high expectations on the part of the union ver.di and the employees it represents. As a result, there were several warning strikes, followed by a full-fledged strike lasting five days at the end of July 2008. Nevertheless, the wage partners succeeded in negotiating mutually acceptable compromises, which take both the employees' interests and the company's economic requirements into account. In the end, this constructive pay dispute strengthened the tried-and-tested partnership between unions and management.

Active pay and social policy abroad as well

Internationalization and globalization do not remain without effect for the business and personnel processes at Lufthansa. As a company with international operations, its pay and social policies are thus guided by the general conditions in countries outside Germany. This is of importance for shaping the wage policies abroad for locally employed staff at Deutsche Lufthansa AG and Lufthansa Cargo AG. In 2008, the two companies counted a total of about 6,000 employees in 75 pay areas, each of which requires an independent consideration of all claims. The center of attention is the long-term definition of working conditions, which depends on operational requirements, the local labor market and the employees' needs – including remuneration rules, working conditions and social benefits systems. Beyond that, the company coordinates cross-border pay policy processes and develops tailor-made concepts for this purpose. The managers of the individual business segments charged with this task are continuously accompanied in the operative implementation of their corporate strategies as concrete, country-specific pay policy.

Finally, the company engages in regular “knowledge management” concerning its pay policies. This includes above all the further development of materials and concepts for the operative work of collective wage agreements. Examples include models for the designing of wage agreements, employment conditions and modern, performance-oriented remuneration systems. Pay policy know-how and expertise are passed on to designated colleagues in the external organization by means of training and coaching.

Profit sharing

Deutsche Lufthansa AG has promoted its employees' participation in the company's economic success and its capital in the spirit of partnership for many decades. As long ago as in 1970, a special bonus payment came with the option of subscribing to employee shares.

Thus, the economic success of 2007 also directly benefited the employees paid according to collective wage agreements last year. In addition to a company- or business segment-specific component of a profit share of up to 17.55 percent of one monthly salary, employees received a one-time payment of 658 euros. That is 220 euros more than the year before.

As an alternative, Lufthansa employees have the opportunity of acquiring traditional employee shares or a larger number of shares by means of an interest-free loan. Last year, the Group offered the loan-financed share program called “LH Chance” for the 11th time. For 12 years now, Lufthansa managers have had the option of participating in the share program “LH Performance,” which requires a personal investment as the condition for loan-financed share purchases.

Lufthansa counts on the creativity of its employees

Lufthansa trusts in the innovativeness of its employees. By further developing its internal ideas management, the company has strengthened the employees' link to continuous improvement and anchored their creative potential even more deeply in its corporate culture.

Lufthansa Innovation Prize awarded

For the same reason, the Lufthansa Innovation Prize was awarded for the second time in 2008 for particularly excellent ideas. This special prize is intended to express just how important “thinking outside of the box” and consistently reconsidering one’s products and processes are for innovative ability – and thus for the competitiveness of the companies within the Lufthansa Group.

In 2008, the Lufthansa employees made more than 2,900 suggestions for improvements, about 23 percent more than in 2007. The cost savings during the first year of implementation amounted to 7.3 million euros. For the last five years, employees have been able to make their suggestions online via the Group-wide platform “Lufthansa Impulse.” In 2008, the online ratio reached more than 88 percent, which means that the process of ideas management is getting close to the goal of “paperless processing.”

Lufthansa Impulse goes international

Last year, Lufthansa started expanding its ideas management abroad as well. “Until recently, Lufthansa Impulse addressed itself above all to employees in Germany,” explains Wolfgang Servay, Head of Corporate Idea and Innovation Management. “Our goal is to enable the Lufthansa organizations abroad to tie their employees into the ideas management as well.” To this end, Impulse developed a concept, together with units of the Lufthansa Passenger Airline, which explores how the creative potential of employees at locations abroad can also be tapped. “Impulse International” is to take off in spring 2009, initially in the framework of a pilot project concerning the station management in Chicago.

Efficient solutions through focused ideas campaigns

Many functional areas have already had good experiences with focused ideas campaigns. Problem areas are delineated with precision, and often large groups of employees are included in solving the problem. Accordingly, the department Global Aircraft Handling and Baggage Processes launched the ideas campaign “All suitcases on board!” in July 2008 in cooperation with Lufthansa Impulse. Its goal is to further improve the quality of baggage handling. All employees in direct or indirect contact with baggage were called upon to hand in their ideas for the further optimization of baggage handling. Wolfgang Servay is very satisfied with the quality of the ideas submitted: “You can tell that our colleagues have taken a really close look at this and know at which points in the process there is room for improvement.” The campaign ended in fall 2008. Thanks to numerous bright ideas from the employees, baggage performance at Lufthansa has already been significantly improved.

Another ideas campaign was launched at Lufthansa Cargo. Called “Qualifighter,” it aimed at mobilizing the innovativeness of its employees in Commercial Accounts and associated units regarding how they think the processes in these work areas could be simplified.

The employees of Lufthansa Flight Training have also been called upon to develop ideas on the subject of “cost savings.” Initiated last year, the cost optimization project “ESP +8” is accompanied by Lufthansa Impulse. For all projects, the plus points from the perspective of those in functional areas included not only the suggestions for improvements but also the communication of problem areas to the employees.



Employee safety and health protection

Health management



Award for the Medical Service

During the 79th annual conference of the Aerospace Medical Association, which took place in May 2008 in Boston, Lufthansa's Medical Service was presented the John A. Tamisea Memorial Award. It honors the service's long-standing volunteer commitment to the German Academy for Flight and Travel Medicine, which Lufthansa founded in 1991 in cooperation with the German Association for Aviation and Space Medicine. The institute supports research projects that, among other purposes, examine the long-term effects of shift work.

Health – Prerequisite for successful work

An optimum corporate health management system is one of the most important factors for remaining successful in the global competition for markets and customers. For this reason, Lufthansa pursues a comprehensive corporate health management. Its core element is the creation of a working environment that increases both health and job satisfaction. Preventing health risks on the job and eliminating the causes for the reduced well-being of employees play key roles in this context.

Healthy into the future

Preventing illness is the top priority in Lufthansa's health concept. Therefore, physicians specialized in industrial, aviation and tropical medicine at the company's Medical Service primarily aim not at the swift restoration of the ability to work, but at long-term physical and psychological well-being. To this end, they work closely together with the Group's Occupational Safety and Social Counseling services.

Prevention instead of treatment

Aiming at maintaining health long-term, Lufthansa offers its employees numerous options for medical checkups. In 2008, more than 40,000 employees took advantage of these exams. In addition, 4,500 employees took part in the annual flu vaccination, provided free of charge. Its goal is to help employees make it healthily through the cold months, an aim shared by the campaign "Healthy Through the Winter." In Frankfurt and Munich, a voluntary vein screening program was offered as prevention against vascular illness. In addition, the Medical Service offered optional, free screenings for diseases of the skin and intestine for flight crews and ground personnel.

Comprehensive information on health issues, both on the Group's intranet and in its internal print media, accompanies the preventative measures of the Medical Service. Topics range from preventative and tropical medicine to tips on how to deal with digestive disorders on trips or with lactose intolerance. Lufthansa transmits this professional knowledge by means of numerous publications to interested persons outside the company as well. Thus, the Medical Service published its Handbook of Aviation Medicine and Medical Assistance on Board, which takes Lufthansa as an example to cover all aspects of medical attention that might be needed in the air.

Worldwide medical network

An additional building block in Lufthansa's health management is its unique worldwide network of contract physicians, which comprises more than 200 medical doctors in 82 countries. Should the need arise, they treat Lufthansa's employees and passengers at the respective locations. The characteristic shared by all these physicians is their high degree of professional and intercultural competence. On October 10, 2008, they met for the eleventh time at the "International Conference of Contract Physicians," which takes place every four years. This event does more than facilitate exchanges on current standards in aviation medicine: It also allows participants to familiarize themselves with the latest medical equipment available on board Lufthansa aircraft.

Fit through exercise

Muscular tension, lumbago, slipped disks: The list of typical back ailments is a long one. To prevent illnesses of the motion apparatus from developing in the first place, regular back coachings are offered in many company areas directly in the workplace. While these activities alone cannot solve this common illness, they help to strengthen the individual responsibility of each employee.

At Lufthansa Technik in Hamburg, interested employees had the chance to participate in a long-term study aimed at detecting diabetes. The company also launched "Lufthansa Technik Let's go," to make employees aware of their kinetic behavior and to simultaneously generate donations for the employee relief organization HelpAlliance.

However, only those who also follow a balanced nutrition plan stay healthy and fit over the long term. This convinced the wholly-owned Lufthansa subsidiary LZ Catering to launch the initiative "Food & More" in April 2006. In the company cafeterias LZ operates, Lufthansa employees have since then been able to enjoy light, carefully prepared meals and snacks. To prevent valuable vitamins and nutrients from being lost, all food is prepared at the lowest-possible temperatures and with as little water and fat as is practicable.

Social counseling

Since the middle of the 1980s, the Social Counseling service has supported Lufthansa employees through all kinds of professional and private difficulties. Conflicts on the job, personal crises, addictions or psychological illnesses are just a few of the problems for which the nine graduate social education workers and social workers in Frankfurt, Hamburg, Cologne and Munich can give support. Additionally, they help to organize efficient assistance for heavily indebted employees. Just like physicians, they are legally bound to confidentiality.

Moreover, these sociologists advise the Group's managers: In continuing education courses and special manager trainings, these experts provide useful background knowledge and helpful tips for everyday work situations – on how to handle social conflicts and stress, for instance. Course participants also learn to recognize the consumption of addictive substances and how to react appropriately in such situations.

Job safety

Organization of on-the-job safety within the Group

At Lufthansa, the department Group Job Safety coordinates all important job-safety activities in cooperation with physicians, social counselors, and above all the responsible persons at the Group's business segments. Its goal is to maintain – and if possible to increase – the employees' ability to work by continuously optimizing job safety processes. One important element is the identification and assessment of hazards in work processes, which is carried out jointly with the operational partners. In the next step, measures are initiated to continuously decrease the number of accidents and to detect risks of occupational diseases and other work-related health hazards. At the company's technical division in Hamburg, the safety experts focus on the aircraft maintenance workshops and issues such as operational safety and the integration of health and safety protection into the production, quality and environmental protection requirements of global production processes. In Frankfurt, the specialists are primarily concerned with the areas of flight operations and business administration. They are supported by job safety colleagues in Berlin and Munich, who ensure that all Lufthansa employees at these locations are optimally looked after as well. The activities of these safety engineers and technicians are, of course, in accordance with German and European legal requirements on job safety.

All job safety measures are designed on location to fit specific work areas in coordination with managers and employees. Beyond the classic spectrum of tasks, the internal job safety team offers additional services – including advice on health promotion, safety trainings, special instruction for employees in the noise laboratory, as well as expansion and updating of health-related information on the Lufthansa intranet.

More than 750 voluntary job safety commissioners

Lufthansa's voluntary job safety commissioners are an important source of support for the safety engineers. In 2008, more than 750 employees took on this task at the company's German locations. In their work areas, they function as initial contact person for their colleagues, identify technical or organizational defects, and inform their supervisors and, if needed, a job safety specialist. They acquire the required knowledge in the framework of internal continuing education courses.

Fire drill at the Lufthansa Aviation Center

A further area of emphasis in 2008 was a large-scale fire drill at the new office building Lufthansa Aviation Center (LAC) at Frankfurt Airport. In the event of danger, the task there is to evacuate 1,800 employees as swiftly as possible. Fifty-three volunteer fire-prevention assistants also took part in the trial alarm. Moreover, Lufthansa commissioned TÜV Rheinland to survey the employees at the LAC on aspects of job safety. The goal of this survey was to draw up a comprehensive threats analysis for the building. The questionnaire handed out for this purpose also contained questions concerning satisfaction with job tasks, communication with supervisors, the building's internal climate, the availability of information and work materials, and the opportunities for further education and development.



Just follow your nose: "Smoke & Smell"

To help promote and maintain safety awareness in flight operations, Lufthansa launched the focal campaign "Smoke & Smell" in 2008. The goal of this campaign is to sensitize cockpit and cabin crews toward safety-relevant smells and signs of smoke development on board aircraft. For this purpose, the employees were asked to indicate their associations triggered by different "smell samples." The results were systematized and captured in a database, which today helps Lufthansa Technik to identify sources of danger more rapidly. Lufthansa CityLine is planning to run "Smoke & Smell" in 2009 at its location in Cologne.

LSG Sky Chefs: Uncompromisingly ergonomic

Job safety and health protection also enjoy a high priority in the new building which Lufthansa's catering subsidiary, LSG Sky Chefs, occupied in May 2008 in Frankfurt's Gateway Gardens district. Thanks to the high incidence of daylight, the rooms are naturally bright and the climate is generally pleasant. Above all, however, the employees benefit from the new electric hanging conveyor belt. "Before, employees had to move the dirty trolleys from the loading ramp to the washing facility by means of dollies. Today, they glide through the hall in a fully automatized fashion, thanks to the electric hanging conveyor belt," enthuses Luigi Aprile, employee at LSG Sky Chefs. Even better: As the trolleys are kept at a height of 40 centimeters, employees hardly have to bend down at all to discharge them. Moreover, the new cooled conveyor belts in food production have proven to be doubly useful: While respecting the stringent hygiene regulations to perfection, they allow employees to work under pleasant room temperatures.

Facts 2008 and Outlook 2009 (selection)

Area	Facts 2008	Outlook 2009
Training	25 apprenticeship professions and 23 dual degree courses within the Lufthansa Group. 330 new apprenticeship positions and a total of 303 students within the Group.	Continue training and continuing education activities. Integrate dual degree courses at more locations.
	Service Professionals (cabin and ground): 3,715 new Service Professionals hired.	Hire new flight attendants and employees for passenger handling on the ground, depending on economic development.
	Cockpit crews: 300 new trainee pilots enrolled in training.	Offer new apprentice positions.
Continuing education	Broad range of offers in professional and cross-discipline training programs to support continuous development of employees. 194 million euros invested in training and continuing education.	Expand and maintain employees' professional and cross-disciplinary competencies by means of a broad range of educational offers.
Employability	6 qualification days on average per employee in 2008.	Solidify the element of lifelong learning in corporate culture.
Employee safety and health protection	Health care concept implemented.	Introduce exercise and nutrition program "M.O.B.I.L.I.S."
Demographic change	Analyze, identify and implement measures, communication, controlling.	Make health an area of emphasis at the Corporate College.
Diversity	Mentoring for women, mentoring for employees with disabilities, Girls' Day, Integration Day for disabled people, offers for child care expanded.	Invest in the inclusion of diverse groups.
Dialogue with employees	Regular Town Meetings in different Lufthansa areas (members of the Executive Board in dialogue with employees). Regular Open Door events in the offices of the member of the Group Executive Board in charge of Aviation Services & HR. Sixth Employee Survey carried out in 2008. Employee Feedback Management (EFM) for about 40,000 employees at Lufthansa Passenger Airline and corporate functions.	Continue dialogue; implement results from EFM.
Dialogue with social partners	Continuous development of agreements with collective-bargaining and operation partners. Participation in "Social Dialogue" at EU level as AEA member (Air Crew Working Group, Ground Handling Working Group). Discussions at works council conferences.	Continue dialogue in Germany and continue participation in "Social Dialogue" at EU level.

Environment

Green MRO – The greening potential of aircraft maintenance

Numerous options are open to the aviation industry for making a contribution to climate protection. At Lufthansa, in particular, environmental care has been an established part of corporate culture for many years. All of the Group's business segments work with determination on developing innovative technologies and concepts which save energy and conserve resources. And they are doing so successfully, as the example of Lufthansa Technik demonstrates.



For the aviation industry, conserving kerosene is the key to reducing the environmental effects of flying. Apart from the ecological necessity, this also becomes a purely economic requirement against the background of highly volatile fuel prices. Saving fuel helps to limit CO₂ emissions, in whose worldwide volume the aviation industry currently has a share of 2 percent. Given the growth forecasts for air transport, policymakers and public opinion leaders have exerted increasing pressure on airlines and engine manufacturers to lower CO₂ emissions and to achieve traffic growth in climate-neutral ways. Lufthansa's declared goal is to reduce the specific CO₂ emissions of its Group fleet by 25 percent below 2006 levels by 2020. The vision of the airlines represented by the International Air Transport Association (IATA) calls for even more: totally emissions-free air transport in 50 years!

For this reason, Lufthansa and other European airlines developed as early as 2005 a far-reaching four-pillar model for climate protection, which demonstrates the entire range of measures that can be implemented. The developments of the past years make it clear that technological progress (Pillar 1 of the model) in particular can help conserve appreciable quantities of kerosene.



Cyclean Engine Wash – this technology developed by Lufthansa Technik to clean aircraft engines offers measurable ecological and economic advantages.

For example, by regularly renewing its fleet over the last 40 years, Lufthansa has substantially lowered its specific fuel consumption (i.e. the consumption per passenger kilometer).

The maintenance, repair and overhaul of aircraft – MRO in aviation jargon – has a share in this positive trend. MRO is the core business of Lufthansa Technik AG. It acts rather like a small, but significant adjusting screw in a larger machinery of possibilities that the Lufthansa Group can use to move step by step toward reaching its ambitious climate goals. These potentials can be summarized under the heading “Green MRO.” In particular, kerosene can be saved by improving maintenance, reducing weight and optimizing aerodynamics.

Competence center Lufthansa Technik

At Lufthansa Technik, long-term environmental protection has been an important corporate goal for a long time. As the world's leading provider of technical services for civil aviation, the company has developed numerous new procedures and processes that help aircraft to consume less fuel and thus produce lighter environmental burdens. In addition, the Group company always endeavors to conserve natural resources in its daily work processes.

“Our customers expect that we offer the same quality and environmental standards worldwide.”

Ralf Wunderlich

Head of Environmental Management at Lufthansa Technik



The entire air transport industry benefits from the proven know-how of this maintenance specialist and its innovative developments. Lufthansa Technik not only supports the Lufthansa fleet with its technical services, but also offers its expertise to many other airlines worldwide. More than 600 customers currently trust the competence of the Hamburg-based company.

The great importance of sustainability and environmental protection at Lufthansa Technik is also evidenced by the fact that it is the first company in the MRO industry to have obtained an integrated certification according to the internationally renowned environmental standard ISO 14001, the European eco-audit regulations EMAS and the job-safety specification OHSAS 18001. As long ago as 1996, the Lufthansa subsidiary was the first aircraft maintenance provider worldwide to introduce an environmental management system on the basis of EMAS.

Over the past years, Lufthansa Technik has developed a number of innovative maintenance procedures that reduce the environmental effects caused by aircraft operations. “This includes measures to improve engine performance, for example by means of

modern engine wash procedures and optimized repair methods,” says Ralf Wunderlich, Head of Environmental Management at Lufthansa Technik.

Cyclean Engine Wash – The revolution in engine cleaning

Among these new products is the Cyclean Engine Wash, a particularly efficient way of cleaning aircraft engines. The technology for this procedure was developed by Lufthansa Technik and offers airlines measurable ecological and economic advantages.

“Engine washes have been an issue for some time now,” explains Wunderlich. “Dust, pollen, sand, salt, chemicals, hydrocarbons and insects pollute an engine over the course of time, thereby reducing its performance. But as the engine must continue to produce the same performance, it is exposed to greater stress and wears out sooner. It consumes more kerosene and its exhaust gases are also hotter. After cleaning, an engine runs better again.”

Until recently, aircraft engines were fully flooded with water in the process of cleaning. Including drying, this took up to five hours – too long to consistently carry out the engine washes required. For economic reasons, airlines accept such long ground times for their aircraft only reluctantly. With Cyclean Engine Wash, Lufthansa Technik has streamlined the cleaning process in such a way that it takes less than one hour and thus fits perfectly into the operative processes of airlines. “This makes the planning of regular engine washes feasible,” Wunderlich emphasizes.

In this innovative process, a rotating nozzle injects water directly into the dirty compressor, so that only 180 to 200 liters are needed per cleaning. At the moment, Lufthansa Technik uses water alone for the cleaning process. “But now our specialists are also investigating whether we might achieve an even bigger effect by adding a detergent,” says the environmental manager. Beyond this, the company is currently evaluating the options for recycling this polluted water.

With the Cyclean Engine Wash, airlines can cut back their kerosene requirements by about 0.5 percent and reduce their CO₂ emissions proportionally. For example, a short-haul aircraft with an annual fuel consumption of 5,000 tonnes lowers its CO₂ emissions by 79 tonnes; a long-haul aircraft saves about 790 tonnes of CO₂. This new technology gives Lufthansa the potential to cut its kerosene consumption by up to 25,000 tonnes a year, depending on the fleet. This is equal to avoiding 75,000 tonnes of CO₂ emissions. Thanks to the new cleaning procedure, aircraft engines are exposed to less thermal stress, which increases their life span considerably, while maintenance costs decline. Furthermore, engines cleaned this way function more efficiently from a thermodynamic point of view.

Advanced Recontouring Process (ARP) – this process was developed by Lufthansa Technik and is unique worldwide. It optimizes used compressor blades in such a way that they work even better after recontouring than new ones.

ARP – Repairing instead of buying new

Another Lufthansa Technik innovation in the area of aircraft engine overhauls is its Advanced Recontouring Process (ARP). Compressor blades are among those engine components that are most exposed to significant mechanical stresses and thus have a limited life span. Until recently, airlines were forced to replace these costly compressor blades when they wore out with new ones. Now they have the option of having their used blades overhauled.

With ARP, Lufthansa Technik has developed a computer-controlled, automatic grinding process, during which a laser beam first examines the state of the compressor blades. In a second step, the component is restored to its optimized aerodynamic form. “Unique worldwide, this process optimizes the used compressor blades in such a way that they work even better after recontouring than a new one. This goes to show what is possible in the context of overhaul work,” underlines environmental manager Wunderlich.

The ARP not only extends the life of compressor blades by 25 percent – as well as that of the entire compressor – but also lowers kerosene consumption and emissions. Lufthansa’s Boeing 747-400 and Airbus A340-300 fleets emit 5,500 tonnes less CO₂ per year as a result.





Challenges in the area of weight and flow

Beyond this, the experts at Lufthansa Technik are participating in the development and implementation of aerodynamic measures which aim at keeping an aircraft's air resistance as low as possible and thus saving fuel. The MRO provider's Weight and Balance Engineering ensures that the Lufthansa fleet emits 38,000 tonnes of CO₂ less per year.

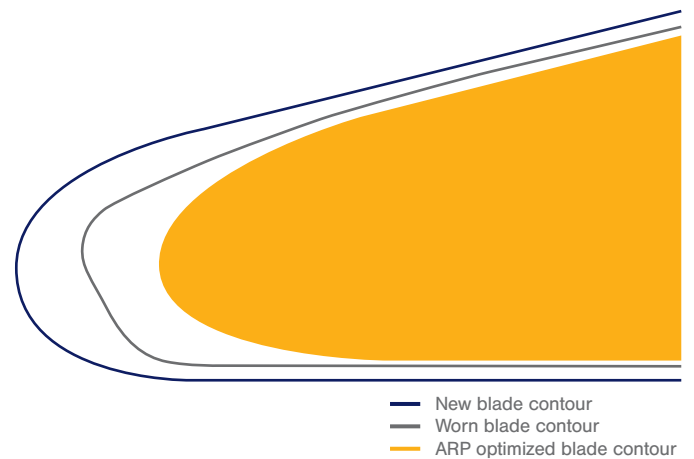
"For example, we have designed calculation methods at Lufthansa Technik to place containers, palettes and loose freight in an optimum manner aboard aircraft," says Wunderlich. "Using Optimized Load Planning, an aircraft is given its ideal center of gravity, which in turn reduces its air resistance."

In the context of maintenance work, technicians also always smooth out all uneven areas on the surface of the aircraft's outer shell, especially at the point where the wings are attached to the fuselage. Moreover, they regularly check and adjust the landing flaps and the inboard flight spoilers. Optimally adjusted, flaps and spoilers improve an aircraft's aerodynamics by reducing the generation of vortices.

Further conservation potential has been opened up thanks to several initiatives launched by Lufthansa Technik engineers to

reduce the weight loaded aboard aircraft. For the Lufthansa fleet, for example, 6,300 tonnes of kerosene can be conserved and 20,000 tonnes of CO₂ avoided per year – all because the experts have managed to reduce the weight of passenger seats by about 1 to 2 kilos per seat.

ARP – Transforming old into better



Especially active in environmental protection

However, Lufthansa Technik does more than just develop environmentally compatible solutions for its customers; the MRO provider also keeps a watchful eye on protecting the environment in its own work processes. This approach is especially evident in three areas: the use of hazardous substances, the sustainable use of natural resources and the reduction of greenhouse-gas emissions in infrastructure and production.

For many years, Lufthansa Technik has used low-emissions paint systems and replaced hazardous substances, such as chlorated solvents and corrosive agents, with substances that are biologically degradable. In addition, the aviation technology company has compiled a “gray list” of hazardous substances that may no longer be used as they harm the environment and the process chain. This guideline is already in effect for all Lufthansa Technik’s locations and subsidiaries in Germany; it is also binding for sup-



pliers. "Using this list, our suppliers can check in advance if a product can be used within the Lufthansa Technik Group or not," emphasizes Bernd Schröder, Lufthansa Safety Engineer at the Hamburg location. Currently, the maintenance specialist is in the process of establishing the gray list at all Group companies worldwide as a standard procedure. New subsidiaries must also adopt this standard, even if far less stringent regulations are in effect in the countries where they are located.

Moreover, Lufthansa Technik stipulates through an overriding guideline that production processes are to be as sustainable as possible. This approach is expressed, for example, by a more responsible and efficient use of natural resources such as energy and water. In the same vein, the waste recycling rate at the company now stands above 70 percent. And a water management system at the Hamburg location helps to conserve 20,000 cubic meters of drinking water per year.

30 percent lower CO₂ emissions

To reduce greenhouse-gas emissions in the areas of infrastructure and production by at least 30 percent by 2012, Lufthansa Technik completed a feasibility study for its Hamburg location in 2008, revealing a range of concrete implementation opportunities. In addition, the company counts on advanced technologies whenever production venues are rebuilt or remodeled, such as in the area of lighting management (see article "Saving energy, taking a load off the environment, lowering costs" on page → 78).

All system partners bear responsibility

For the Lufthansa Group, the future-oriented developments provided by Lufthansa Technik are an important building block in its eco-efficiency strategy, yielding ecological and economic usefulness in equal measure. Lufthansa has defined its range of tasks clearly and is now in the process of developing and implementing all of these projects competently.

The vision of emissions-free flying can only be realized with any seriousness if all partners in air transport accept their share of responsibility. This includes aircraft and engine manufacturers, airport operators, and particularly policymakers, who have not yet optimized their sovereign task of air traffic control and coordination from an ecological perspective (byword: Single European Sky). Lufthansa will not slacken in its efforts to achieve the greatest-possible contribution to lightening the environmental burden by cooperating with all system partners.



With the Airbus A380, the environmental compatibility of flying takes a giant step into the future.

The cornerstones of our strategic environmental program – Perspectives until 2020

In 2008, Lufthansa adopted new goals for environmental and climate protection. The program, which comprises 15 guidelines, is guided by the internationally accepted Four-Pillar Strategy for air transport, which includes the entire range of practicable measures for climate protection in aviation.



Flight operations

Reduction of specific CO₂ emissions by 25 percent by 2020, compared to 2006 levels.

Support for the ACARE goal of reducing nitrogen oxide emissions by 80 percent by 2020, compared to 2000 levels.

Promotion of alternative fuels

Goal: adding a synthetic fuel component of 5 to 10 percent by 2020.

Continuous fleet renewal

The current volume of orders comprises more than 150 aircraft.

Continue and expand measures to increase efficiency

in operational areas (e.g. distributing aircraft loads optimally, optimizing flight routes, flying at variable speeds).



Infrastructure/market-based mechanisms

Active participation in developing and realizing infrastructure improvements (e.g. Single European Sky and demand-related expansion of airports).

Implementation of a three-year test phase of emissions-related airport charges at Frankfurt and Munich Airports since January 1, 2008.



Buildings

Ecological construction

Taking the latest aspects of energy savings and resource conservation into account when planning, renovating and constructing buildings.

You can find a detailed description of the strategic environmental program on the Internet at:

→ www.lufthansa.com/responsibility

Environmental management at Lufthansa – A success story

As long ago as in the 1970s, clearly defined responsibilities were in place for environmentally-relevant issues at Lufthansa. Over the last decades, environmental management has been expanded continuously across the entire Group. At the beginning of 2008, Lufthansa set another clear example by adopting a new strategic environmental program whose long-term perspectives stretch to the year 2020. One of the goals the airline has adopted is to reduce the specific CO₂ emissions of its Group fleet by 25 percent compared to 2006 levels, in accord with the Fuel Efficiency Goal of the International Air Transport Association (IATA). Other components of this strategy are the expansion and strengthening of environmental management at the Group level and at the subsidiaries.

The Group's Executive Board has the overall responsibility of ensuring that Lufthansa fulfills its tasks in environmental protection and adheres to the Group-wide guidelines regarding environmental care. The Head of Group Environmental Issues and his department, which coordinates Group-wide environmentally-relevant goals, strategies and measures, reports directly to the Executive Board. He is also a member of the Sustainability Board (see article "Sustainability at Lufthansa" on page → 18).

The Executive Board divisions and all Group companies with environmental relevance also have an Environmental Commissioner, their own Environmental Departments or a contact person for environmental issues. About 30 environmental experts from the entire Group meet twice a year at the in-company Environmental Forum to exchange experiences, to discuss shared goals, measures and activities, and to develop strategies for the future.

More than 120 environmental measures

A comprehensive database serves as the information basis for the department Group Environmental Issues. Every year, the latest data from all Group companies regarding kerosene and energy consumption, emissions, noise, waste, freshwater consumption and wastewater disposal are stored in this database. In addition, it contains important personnel and economic data. Using this information, the experts generate instructive ratios that help improve the Group's environmental performance on a continuous basis. An environmental projects database provides an overview of the Group's goals and measures in this area. For example, it shows that Lufthansa has carried out or is still carrying out more than 120 individual measures in order to reach its environmental goals. Every year, new environmental goals and measures are added. Lufthansa reports continuously about its current levels of achievement regarding these goals and measures; an overview of this information is available on the Internet at → www.lufthansa.com/responsibility

Furthermore, the environmental experts have accompanied the introduction of numerous innovations across the Lufthansa Group. This includes such pioneering feats as the environmentally friendly conveyor-belt dishwashing system at LSG Sky Chefs, the particularly efficient procedure to clean aircraft engines at Lufthansa Technik or the fuel-saving flight planning software Lido Operations Center from Lufthansa Systems. Beyond this, Lufthansa has for many years supported numerous projects in climate and noise research, whose results are in turn plugged into the Group's environmental care (you can find more information on this topic in the article "Research at Lufthansa" on page → 83).

News from the Group companies



Lufthansa Cargo – Environmental certification according to ISO 14001

All Lufthansa subsidiaries contribute with their environmental activities to the successful environmental performance of the Lufthansa Group. For example, Lufthansa Cargo bundles its commitment to responsible ways of handling environmental protection under the title “Cargo Climate Care.” Lufthansa’s freight subsidiary had been working since 2007 to implement an environmental management system at the Frankfurt location, which was certified at the end of 2008 according to the internationally recognized environmental standard ISO 14001. The key steps along the way to certification are that a company develop its own environmental guidelines, implement a comprehensive environmental management organization that includes the definition of clear responsibilities, and formulate its own environmental program (see → www.lufthansa-cargo.com → Company → Environment). “Granted by a team of independent experts, this certification confirms that we’ve created a sound basis with our environmental management system to improve our environmental performance in the future as well,” explains Bettina Mörth, Environmental Manager at Lufthansa Cargo. “As our next step, we’re planning to expand this environmental management system to other stations, too.”

In a parallel move to the implementation of its environmental management system, Lufthansa Cargo launched further internal and external initiatives in the area of environmental communications in 2008. For example, the employees at the Frankfurt location had the opportunity to gather information on the topics of mobility, waste, heating, energy and water in the context of five environmental campaign days, held in fall 2008. For 2009, further events around the topic of environmental protection are being planned.

Lufthansa CityLine – Nine years of successful, systematic environmental management

The environmental management operated by Lufthansa CityLine remains a leader in industry comparisons. Since 1999, this Lufthansa Group company has been one of only two airlines whose environmental management system has been certified both according to the worldwide-valid standard ISO 14001 and the European eco-audit regulations EMAS II. For this year, Lufthansa CityLine is planning a renewed recertification and revalidation. In addition, its subsidiaries CityLine Canadair Simulator und Training GmbH and CityLine Avro Simulator und Training GmbH received the ISO 14001 certificate in July 2008 for their environmental management system, which had already been validated according to EMAS II in 2007.

LSG Sky Chefs – Competitive factor environmental management

In 2008, LSG Sky Chefs further expanded its environmental management so that its activities to lessen the burden on the environment now go well beyond the legal requirements. In doing so, the wholly-owned Lufthansa subsidiary has also consolidated its leading market position, as these days the issue of environmental protection enjoys increasing importance in competition. For this airline caterer, the greatest challenge lies in its cultural and geographic diversity, given that it operates at 201 locations in 49 countries. “Emphasizing the areas of energy, water and waste management, our approach takes regional differences into consideration. While the focus is now on conserving energy in Europe, it is on avoiding waste in Asia and South America. Each region determines its area of emphasis itself,” explains Walter Vreden, Environmental Manager at LSG Sky Chefs. “As a first step, we have designed the different elements of our environmental management so as to allow for certification according to ISO 14001 later on.”

For example, all locations of this globally active company now report their environmentally relevant data in standard format directly via the Internet to headquarters. In this way, recording errors can be avoided because data no longer have to be copied from numerous e-mails and Excel sheets into a single comprehensive document. Another advantage is that the locations receive their environmental statistics immediately after inputting their data. "For the first time, we have environmental statistics on a standardized basis," Vreden underlines.

Lufthansa Technik expands its environmental management

Lufthansa Technik is the very first company in the MRO industry (Maintenance, Repair and Overhaul) to hold an integrated certification according to ISO 14001, EMAS, and the job-safety specification OHSAS 18001. Moreover, a number of subsidiaries within the Lufthansa Technik Group already have certified environmental management systems, including Shannon Aerospace Ltd. in Ireland and Hawker Pacific in Britain. For 2009, the inclusion of further subsidiaries into the Group-wide environmental management has been planned, starting with Lufthansa Technik Sofia in Bulgaria. "Our customers expect that we offer the same quality and environmental standards worldwide – no matter which company in the Lufthansa Technik Group provides a service," explains Ralf Wunderlich, Head of Environmental Management at Lufthansa Technik.

You can find detailed information on this subject in the article "Green MRO – The greening potential of aircraft maintenance" on page → 58.

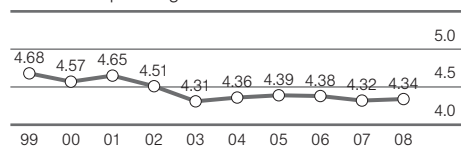
N3 Engine Overhaul Services – Environmental management system with certificate

Furthermore, N3 Engine Overhaul Services (N3) received confirmation of the successful introduction of its environmental management system in July 2008: This joint-venture of Lufthansa Technik and Rolls-Royce in the area of aircraft engine maintenance was certified according to ISO 14001 by TÜV Thüringen. "We have taken environmental protection into account from the earliest planning stages and introduced our own environmental policies," says Wolfgang Kühnhold, Director and General Manager at N3. "Our environmental technologies are exemplary in our industry."

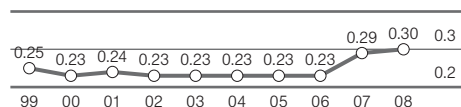


Kerosene and emissions

Specific fuel consumption in passenger transportation
in liters/100 passenger kilometers



Specific fuel consumption in freight transportation¹
in liters/tonne kilometer



Specific fuel consumption remains at low level

In 2008, Lufthansa was able to keep its specific fuel consumption for passenger traffic at a stably low level. At 4.34 liters of kerosene per 100 passenger kilometers during the reporting year, it was only minimally above the value of the previous year at 4.32 liters of kerosene per person and 100 kilometers. This implied specific emissions of CO₂ at 10.9 kilos per 100 passenger kilometers in 2008. The specific fuel consumption of long-haul aircraft was only 3.68 liters of kerosene per 100 passenger kilometers, while their specific CO₂ emissions amounted to 9.3 kilos per 100 passenger kilometers.

¹ On the basis of FTKT (freight tonne kilometers transported).

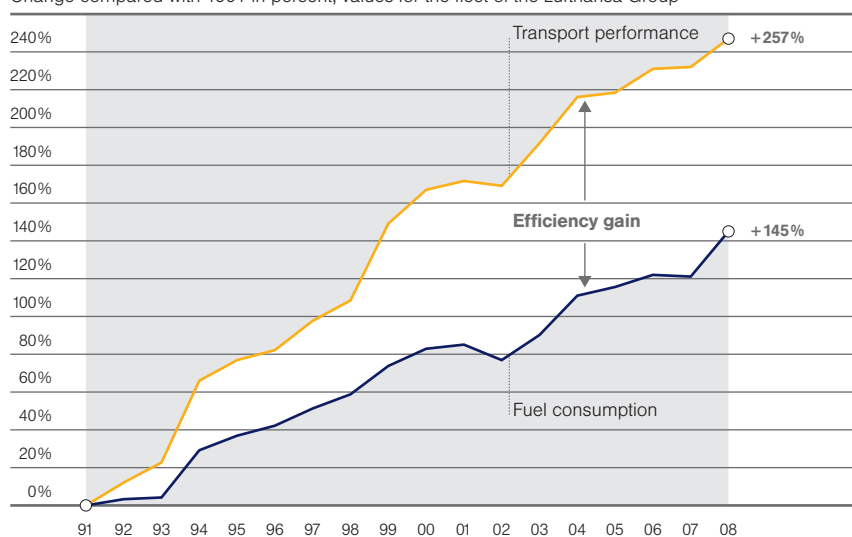
Between 1991 and 2008, Lufthansa reduced the specific fuel consumption and the resulting specific emissions of its passenger fleet by a total of 30 percent. Thus, the Group reached 90 percent of its goal to reduce fuel consumption by 33 percent during this period. There are two main reasons why the remaining 10 percent could not be realized: First, the subsidiaries Condor and Thomas Cook, both active in the charter and tourism business, dropped out of the Group in this period. This market segment is usually characterized by exceedingly high seat-load factors and thus high levels of efficiency. As a result, the elimination of this part of the fleet caused the specific fuel consumption of the Group to worsen. Second, according to the original fleet development plans, the first Airbus A380 wide-body jets should have gone into service at the end of 2007. Delays in the delivery of these modern and especially fuel-efficient aircraft also contributed to the fact that Lufthansa did not fully reach its ambitious conservation goal within the planned time frame. However, the airline's planning continues to call for a reduction of the specific fuel consumption of its passenger aircraft by a total of 38 percent by 2012, compared to 1991 levels.

The title of most fuel-efficient aircraft within the Group was again won by the Airbus A340-300s at SWISS. In 2008, their specific fuel consumption came to a mere 3.24 liters per 100 passenger kilometers, which corresponds to CO₂ emissions of 8.2 kilos per 100 passenger kilometers (see also diagrams "Specific fuel consumption by type of aircraft" and "Specific CO₂ emissions by type of aircraft" on page → iii).

Since 1991, Lufthansa has been able to decouple transport performance from environmental effects in a sustainable fashion in the business segment Passenger Transportation: Over the past 18 years, the Group's transport performance increased by 257 percent, while its fuel consumption and CO₂ emissions rose by only 145 percent.

Decoupling of transport performance and fuel consumption

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



Fuel consumption¹

2008 (in tonnes)

	Passengers	freight	total	share
Scheduled flights²				
Lufthansa ³	4,644,214	1,828,880	6,473,094	(81.7%)
SWISS	868,992	331,055	1,200,047	(15.2%)
			7,673,141	(96.9%)
Third parties ⁴	99,150	141,067	240,217	(3.0%)
Other flights⁵			6,890	(0.1%)
All flights			7,920,248	(100.0%)

Emissions^{6,7}

2008 (in tonnes)

	Passengers ± 2007	freight ± 2007	total ± 2007
CO₂	17,366,598 (14.5%)	6,803,796 (9.9%)	24,170,394 (13.1%)
NO_x	80,305 (15.7%)	32,515 (11.6%)	112,820 (14.4%)
CO	13,444 (12.4%)	3,651 (9.0%)	17,095 (11.6%)
UHC	1,519 (10.1%)	546 (4.9%)	2,066 (8.7%)

Share of third parties⁴

2008

Flights		3.1%
Passengers		2.0%
Tonne kilometers transported, TKT⁸	tkm	2.8%
Fuel consumption	tonnes	3.0%
Carbon dioxide emissions	tonnes	3.0%



The absolute fuel consumption of the Lufthansa fleet increased by 13.1 percent to 7,673,141 tonnes (see table at left). The reason for this significant increase is the integration of SWISS, which occurred for the full year for the first time. This Lufthansa Group company had been included in the Group consolidated financial statements for the very first time for the second half of 2007. Including third-party services and other flights, kerosene consumption amounted to 7,920,248 tonnes. The category “third-party flights” includes aircraft chartered from other airlines, for example to maintain Lufthansa services in the event of strikes. The category “other flights” includes necessary test and training flights (i.e. flights on which no paying passengers are carried). By including these figures for the first time, Lufthansa improves once again the description of its environmental statistics. At the same time, doing so makes it clear that the contribution of these flights to the Group-wide fuel consumption is quite small.

Lufthansa and its Group companies apply numerous measures in their continuous work to increase the ecological efficiency of flight operations. This includes the operation of modern and efficient engines as well as the use of the latest technologies in aircraft maintenance (see the article “Green MRO – The greening potential of aircraft maintenance” on page → 58 on this topic). In addition, all processes with relevance in terms of weight are observed with the greatest care, including optimum fuel and freshwater quantities, the use of lighter ovens in aircraft galleys and the installation of lighter seats. Furthermore, pilots fly at variable speeds on flight routes that are as close as possible to the ideal. They are supported in their work by innovative solutions such as the Electronic Flight Bag (EFB) and the global flight planning system Lido Operations Center.

New software helps lower fuel consumption

Lufthansa CityLine, the largest of five partners flying under the Lufthansa Regional brand, has developed a new software in cooperation with Berlin-based PACE GmbH that perceptibly increases the efficiency in regional air transport. With this innovative tool, pilots can calculate en route the optimum flight profile (speed and altitude) according to the “cost-index” method, and thus save fuel and avoid emissions.

Should there be any deviations after takeoff from the flight plan set up beforehand, the software Pancelab CI OPS takes all relevant data into account to help pilots operate at the cost-optimum point: maintenance and personnel costs, fuel prices, remaining distance, punctuality and atmospheric conditions such as wind and temperature. “When kerosene prices are high, the economically optimal speed is most often also the ecologically optimal one,” explains Captain Joachim Scheiderer,

1 Actual fuel consumption in tonnes due to flight operations on the basis of all flight events under LH flight numbers. Recorded are consumption values from gate to gate, i.e. including taxiing on the ground as well as holding patterns and detours in the air.

2 Scheduled flights, charter flights.

3 For the reporting year 2008, the following companies are included: Lufthansa Passenger Airlines (Lufthansa Passenger Airline and Lufthansa Regional: Lufthansa CityLine, Air Dolomiti, Eurowings, Contact Air, Augsburg Airways) and Lufthansa Cargo.

4 Includes flights operated by airlines not belonging to the Group, which take over services at short notice on Lufthansa’s behalf, e.g. in the event of capacity bottlenecks.

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

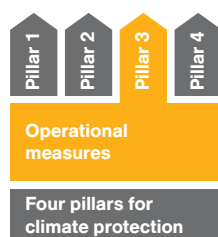
6 Absolute emissions in tonnes from flight operations (all scheduled and charter flights). Recorded are consumption values from gate to gate, i.e. including taxiing on the ground as well as holding patterns and detours in the air. See also “About this report,” “Methodology of calculation” on page → 6.

7 For the reporting year 2008, the following companies are included: Lufthansa Passenger Airlines (Lufthansa Passenger Airline and Lufthansa Regional: Lufthansa CityLine, Air Dolomiti, Eurowings, Contact Air, Augsburg Airways), Lufthansa Cargo and SWISS, excluding third-party services, as no influence can be taken on their performance and the equipment they operate.

8 Without road-feeder service and chartered partial capacities of Lufthansa Cargo, as no data for fuel consumption and emissions are available for this performance.

Manager Flight Operations Engineering CRJ at Lufthansa CityLine and responsible for the regional airline's fuel conservation program. "Calculating conservatively, the new procedure helps us to conserve about 2 to 3 percent of kerosene per year, or about 4,400 to 6,600 tonnes. At the same time, we avoid between 13,800 and 20,700 tonnes of CO₂ emissions," he emphasizes. "Initial tests are letting us hope for even better results and confirm the IATA's assertion that fuel savings of more than 6 percent are possible."

Since February 2009, the new software has been available on all Bombardier CRJ700 and CRJ900 aircraft. Interlinked with the new Electronic Flight Bags, it ensures optimum user-friendliness for the complex calculations associated with the cost-index procedure. This innovative application has initially been designed for regional aircraft.



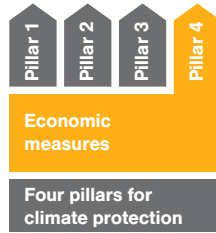
Lufthansa Cargo is testing more lightweight containers

To conserve additional kerosene, Lufthansa Cargo has been running tests since fall 2008 to see whether lightweight containers might replace the standard containers currently used in air freight transport. Innovative composite materials on the basis of plastic make the new container about 12 kilos lighter than the current version, which weighs about 80 kilos. Should the entire stock of standard containers at Lufthansa Cargo be replaced by the new "flyweights," the freight airline would be able to conserve an estimated 27,500 tonnes of kerosene over the next ten years and thus lower CO₂ emissions substantially. Tests with 1,000 containers are to be concluded by the end of 2009. "A decision depends above all on whether the lighter containers can be repaired easily and at low cost," explains Lutz Grzegorz, Head of Global Handling Management at Lufthansa Cargo.

Four pillars for climate protection

Currently, air transport has a share of about 2 percent of the emission of the six Kyoto greenhouse gases. With the aim of lowering fuel consumption and the related CO₂ emissions on a continuous basis, Lufthansa and other European airlines developed a comprehensive four-pillar model for climate protection in 2005. The goal is to again lower the specific CO₂ emissions significantly by 2020.

The First Pillar – technological progress – includes all opportunities that open up as a result of improved aircraft and engine technology. With support from technological innovation, the air transport industry has been able to reduce its specific kerosene consumption by 70 percent since 1970. In addition, the development and use of alternative fuels suitable for air transport hold an enormous potential for climate protection, a potential which should be tapped in the future (see also pages → 72/73). The Second Pillar – improved infrastructure – also offers an enormous potential to avoid CO₂ emissions. Airports that are expanded in line with demand can help to avoid "traffic jams" in the air and energy-wasting holding patterns. And a standardized European air space (the Single European Sky) would make flight operations in Europe substantially more efficient. The Third Pillar – operational measures – includes measures such as the operation of efficiently-sized aircraft, the reduction of on-board weight, more efficient maintenance processes and the use of direct flight routes whenever possible. For the Fourth Pillar – economic measures – Lufthansa counts on the regulatory force of such measures as including airlines in a global emissions-trading system.



Specific emissions in passenger transportation in kilogram, gram/100 passenger kilometers



The trading of emissions rights

By signing the Kyoto Protocol, which was passed in 1997, the European Union (EU) has agreed to reduce its greenhouse-gas emissions to counteract global warming. One key building block of European climate protection policy aimed at reaching these goals is the trading of emissions rights, which was introduced in 2005 and has so far been limited to stationary installations. According to resolutions passed by the EU at the end of 2008, air transport is also to be included in the EU's emissions-trading system from 2012. As a result, emissions rights will have to be bought for all flights taking off from and/or landing at an EU airport from that time on.

The key points of the EU resolutions are as follows:

1. In 2012, airlines affected by the EU emissions trading will be allocated a quota of previously determined emissions rights by the EU member states responsible. The total quota corresponds to 97 percent of the average CO₂ emissions of the years 2004 to 2006, and will be reduced to 95 percent in 2013 and thereafter.
2. Airlines whose CO₂ emissions are above this threshold at that point in time will have to buy additional rights on the market for emissions rights.
3. Moreover, the EU has decided that airlines have to bid in annual auctions for 15 percent of the emissions rights allocated by the respective member states.

As air transport is a growth industry and airlines have so far been unable to switch to alternative sources of energy, it is to be expected that airlines will have to acquire additional emissions rights. Lufthansa has already set up a project team responsible for the implementation of the new processes that will result for the company from the trading of emissions rights.

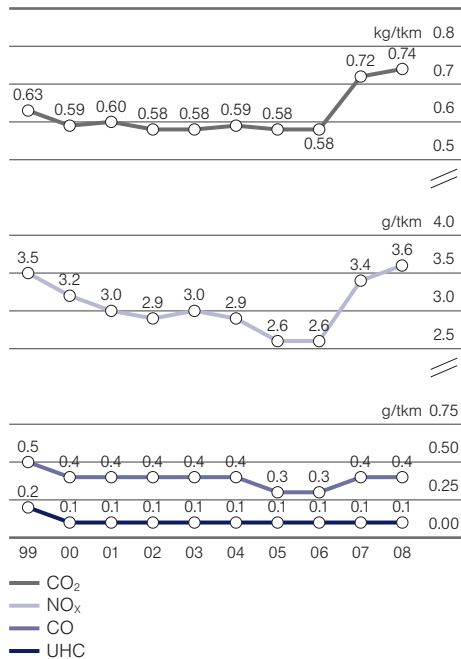
The consequences for the air transport industry

The air transport industry, however, does not consider the EU resolutions as leading to the desired effect, because a conclusive overall concept for reducing emissions from air transport is missing, for one. Furthermore, a form of emissions trading that is limited to the EU would lead to significant cost burdens – especially for European airlines – and thus cause distortions in international competition, without achieving significant positive climatic effects. The industry estimates the annual costs of trading emissions rights to be between 3 and 6 billion euros at the airlines affected. But these amounts could rise even further if the price for one emissions certificate should be above the price of 35 euros per tonne of CO₂ assumed for the forecast.

A frequently heard line of argumentation is that the trading of emissions rights would accelerate the development of more efficient technologies. This is not inescapably true for air transport, as fuel costs have always been a strong driver for the use of the most efficient technologies available (the proof of this argument is delivered by a joint study published by the DLR Institute for Transport Research and the ifeu Institute¹). According to this study, no other mode of transport has realized greater efficiency gains over the last 15 years than air transport. One also

¹ The Energy and Emissions Balance Sheet of Transport: Previous Developments and Future Technological Reduction Potentials, DLR and ifeu Institute (2006), in German.

Specific emissions in freight transport
in kilogram, gram/tonne kilometer



must take the long timeframes for aircraft development and operation into account. Therefore, the trade of emissions rights can only have a very limited effect in this area.

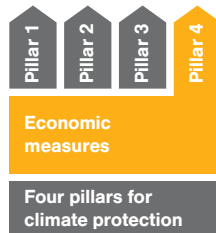
Another consideration is that a form of emissions trading limited to the EU only could mean that the big European hubs such as Frankfurt, London or Paris, which depend on intercontinental transfer traffic, might be faced with massive losses. In the future, travelers between the USA and Asia would simply switch to routes via the Gulf states, for example, as these tickets would not be burdened with the extra costs, even though often more CO₂ is emitted on such routes. This would be ecologically and economically counterproductive.

Instead of counting on an inefficient and competition-distorting form of emissions trading – because it is limited to the EU – Lufthansa advocates the effective reduction of emissions in the context of a consistent strategy. This is to be achieved, for example, by optimizing flight operations and operating a modern, especially fuel-efficient fleet, which in turn continuously lower fuel consumption and thus CO₂ emissions. Lufthansa pleads for giving priority to the creation of an efficient air space infrastructure (byword: Single European Sky) and for intensively promoting the use of innovative technologies. The implementation of the standardized European air space alone would mean that enormous savings potentials in air transport could be realized immediately through the use of optimized flight routes. In addition to these priority measures, Lufthansa and other airlines advocate a form of global emissions trading that is sound and does not distort competition, meaning it should include all countries and all airlines.

Emissions-related airport charges being tested

One project designed to promote the operation of modern and environmentally friendly aircraft is now in the middle of its three-year test run: On January 1, 2008, the airports in Frankfurt and Munich introduced an emissions-related component to their take-off and landing fees.

The project was largely developed by the initiative Air Transport for Germany in co-operation with the associations ADV and BDF, and the Federal Ministry of Transport. As one of the initiative’s founding members, Lufthansa has advocated such a voluntary switch in take-off and landing fees. This economic incentive to reduce nitrogen oxide emissions is to serve as a signal for the future research and development activities of aircraft manufacturers, while helping to improve the local air quality around airports. The project’s test run will end on December 31, 2010. Should its evaluation be positive, this system could also be a sound model for a Europe-wide system of emissions-related airport charges, according to the experts.



Contribution to climate protection: Voluntary compensation of CO₂ emissions

Despite the many measures to reduce CO₂ emissions that have been implemented at Lufthansa, it is still not possible to avoid them all. For a number of years, however, interested individuals, companies and organizations have had the possibility of compensating for part of their CO₂ emissions elsewhere – by investing an appropriate amount of money in climate protection projects that have proven to help avoid the corresponding quantity of CO₂ emissions.

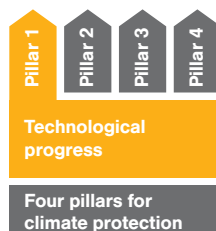
Lufthansa and SWISS also give their passengers the option of making a voluntary contribution to climate protection. For this purpose, they integrated the corresponding link on their flight reservations platforms → www.lufthansa.com and → www.swiss.com in September 2007. There, customers can find out the amount of CO₂ emissions caused per passenger by their flights. At the same time, they have the option of compensating for “their” CO₂ emissions via this link. Lufthansa and SWISS were among the first airlines to offer their customers this type of voluntary CO₂ compensation. Meanwhile, 27 airlines worldwide (as per November 2008) have taken this step. Moreover, the International Air Transport Association (IATA) has formulated guidelines concerning CO₂ compensation to ensure a standardized procedure as far as possible. Lufthansa and SWISS follow these guidelines.

According to the environmental information service provider Ecosystem Marketplace, about 65 million tonnes of CO₂ were compensated through voluntary measures globally in 2007. Compared with the 24.6 million tonnes compensated the previous year, this is almost a threefold increase. A large percentage concerned the compensation of CO₂ emissions caused by air travel. Experts assume that these values will again more than double for 2008.

In offering voluntary climate protection donations, Lufthansa and SWISS cooperate with the renowned Swiss nonprofit foundation “myclimate – The Climate Protection Partnership.” It guarantees that donations flow into projects certified according to the highest climate protection standards. You can find further information on the Internet at → <http://lufthansa.myclimate.org>. Beyond this, participants in the frequent flier program Miles & More have the option in the context of the initiative Miles to Help of donating their award miles to selected projects that help to protect people and the environment (you can find further information in the article “The alternative for committed customers: Donating miles for a worthy cause” on page → 96).

Development of alternative fuel makes progress

Lufthansa has also set itself the goal of adding 5 to 10 percent of synthetic fuel to conventional kerosene by 2020. Within the limits of its possibilities, the company endeavors to support fuel producers in the search for environmentally compatible fuels. This search has gained much in intensity over the past few years. It has become apparent that alternative fuels can be produced via various technological paths.



For example, on April 17, 2008 Choren Industries GmbH opened the first plant worldwide to produce synthetic fuel from biomass (BTL, or Biomass to Liquid) in the Saxon town of Freiberg. The raw materials in this case are lumber scraps and other wood waste. Shortly before that, PetroSun had launched the commercial production of biodiesel from algae in Rio Hondo, Texas. Moreover, the oil company Royal Dutch Shell is planning to construct a similar plant in Hawaii. There, plant oil is to be produced from algae, serving as the basis for second-generation biofuel. Pilot plants for this purpose also exist in Germany and the Netherlands. Further

perspectives for the production of biofuels are opened up by hydrotreated vegetable oil (HVO) and *Jatropha curcas*, a shrub belonging to the spurge family and indigenous to tropical and subtropical areas.

The air transport industry is working intensively on the certification of alternative fuels. In this context, test flights with different fuel variants have been carried out, forming the basis for certifying alternative fuels for use in air transport. "With regard to tomorrow's fuel supply, the best alternative for Lufthansa remains fuel from biomass," says Dr. Karlheinz Haag, Head of Environmental Issues at Lufthansa.

You can find detailed information on BTL and alternative fuels in aviation in the article "When kerosene becomes scarce ..." on page → 52 of *Balance* 2007, which can be ordered or downloaded at → www.lufthansa.com/responsibility

Fuel Dumps 2008		changes compared to 2007
Events, total	31	+4
Quantity, total	976 tonnes	-3.4%
Medical reasons	12	±0
Technical reasons	18	+5
Other reasons	1	-1

Fuel Dumps: Safety first

To ensure the safety of passengers and crews, fuel dumps under exceptional circumstances cannot be avoided. Given the high level of technical aircraft maintenance, they occur exceedingly rarely at Lufthansa. Yet no airline in the world is entirely free of them. Whenever pilots are forced to make an unscheduled landing for technical or medical reasons, they first need to empty the fuel tanks until the aircraft's maximum permissible landing weight is reached. Fuel dumps affect only long-haul flights, as short- and medium-haul aircraft are able to land fully loaded and with full tanks.

Noise emissions

Research for quieter flying

Aspects such as gas and noise emissions values play an important role in the process of acquiring new aircraft. Aircraft and engine manufacturers have achieved perceptible advances over the past years, advances which have a particularly positive effect on the long-haul aircraft ordered by Lufthansa, the Airbus A380 and the Boeing 747-8 Intercontinental: The noise values of these future fleet members are significantly lower than those of their predecessors.

At the same time, Lufthansa has been actively committed to the research network "Quiet Traffic" since 1999 to obtain improvements for existing aircraft as well. An initiative of the German Aerospace Center (DLR), the research network counts on the interdisciplinary cooperation of industry, research and modes of transport. Three of the initiative's working groups examine specific issues related to road, rail and aircraft noise. Two further working groups deal with subjects concerning all modes of transport, such as noise effects and the development of evaluation procedures.

In the working group "Aircraft Noise," the partners developed and carried out a number of research projects between 2003 and 2008, which were supported by the Federal Ministry of Economics and Technology. You can find information about the projects LEXMOS and NASGeT in the article "Research at Lufthansa" on page → 83.



A Lufthansa Boeing 747-400 flies over the DLR's array of microphones (top); one of the 276 microphones used (bottom).

Noise measurements on the Boeing 747-400

Lufthansa headed the third joint research project, FREQUENZ (Research on reducing and determining the source noises on civil aircraft by experimental and numeric means), which consists of three sub-projects flowing one from the other. The tasks ranged from simulation of noise generation on aircraft components ("design-to-noise") to wind-tunnel experiments and the development of prototype measures.

For this purpose, it is necessary to better understand even the most complex noise generation mechanisms. In this context, Lufthansa and the DLR have earned pioneer status in the analysis of aircraft noise sources by having conducted five joint measurement campaigns. Following the first four campaigns between 2001 and 2006 (three with an Airbus A319 and one with a Boeing MD-11F), overflights with a Boeing 747-400 took place in September 2008. The DLR was responsible for carrying out the acoustic measurements of these overflights.

To accomplish this, two teams from the DLR locations in Braunschweig and Berlin installed a total of 276 microphones at the eastern end of the runway at the Schwerin/Parchim airport. The pilots flew their Boeing 747-400 over the microphone system at six-minute intervals, changing the position of the flaps and landing gear as well as the flight speed on each approach.

Another part of the test series consisted of simulated takeoffs. Varying take-off thrust settings and overflight speeds provides insights into the individual noise-generating sources on the engine, such as the fan, inlet or thrust nozzle. The aircraft was refueled several times during testing to keep the basic conditions of the measuring flights as stable as possible. In this way, the researchers can better compare the data recorded during different overflights.

Tracking aerodynamic sources of noise

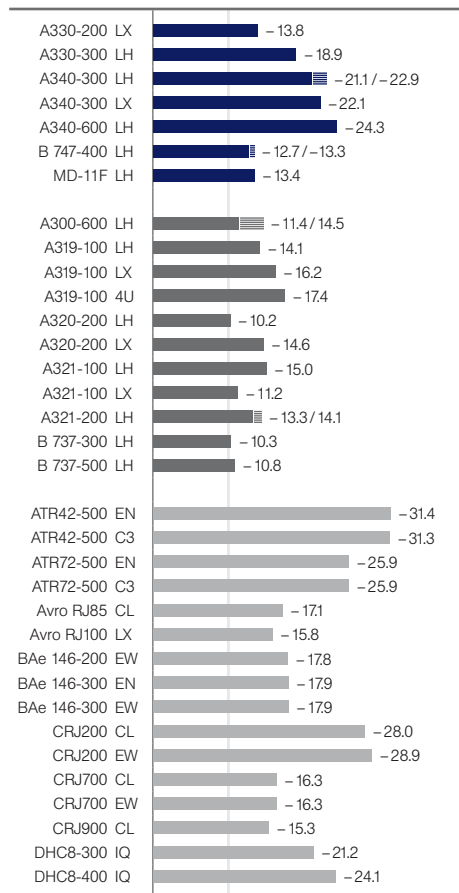
These measurements are the first important step along the path toward noise reduction measures. Many more steps will have to follow. Measurements on overflying aircraft are necessary as researchers can best track the individual aerodynamic noise sources in this way. Special attention is given to the leading edge, the landing flaps and the landing gear. "Wherever there are hollows, edges and corners, the airflow during flight can generate noises in various ways," explains Dr. Gerd Saueressig, who accompanies the project at Lufthansa. The more complex the component (e.g. the landing gear), the more difficult it is to determine the source of noise. Once the source has been identified unequivocally, the task is to decode the mechanism of noise generation. Only in this way can experts later develop targeted countermeasures.

In the course of four days, the B747-400 performed almost 100 measuring flights. The measuring team from Berlin alone recorded 1.7 gigabytes of data during each overflight. Naturally, it will take some time to analyze this enormous quantity of data.

The information recorded will serve to improve a computer-based simulation process. For this purpose, the DLR will develop a "partial noise source model," into which information on the most important noise sources, their strengths, directional characteristics and relations to each other will then be fed. The scientists will use this model to expand the DLR aircraft noise simulation tool SIMUL, allowing them in future to better analyze flight procedures on four-engined wide-body aircraft and thus to identify improvement options. This action is the continuation of the successful cooperation between DLR and Lufthansa in the joint project LANAb which was concluded in 2007. It systematically continues the work started in that context on the Airbus A320 family.

Margins below the noise limit of ICAO chapter 3*

Lufthansa Group fleet (active fleet on 31.12.2008) in EPNdB



Grouping of aircraft types according to MTOW:
 ■ under 50 t ■ 50 to 150 t ■ above 150 t

This division ordinarily corresponds to a grouping of intercontinental, continental and regional aircraft.

*New ICAO-Chapter-4 limit, which has been effective for new aircraft since 2006: -10.0 EPNdB when compared with Chapter 3.

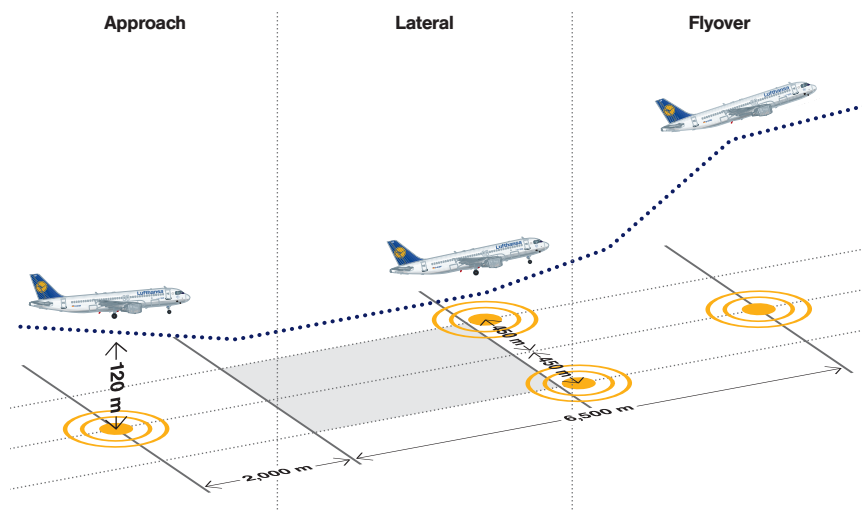
The bar chart above indicates the sum of the differences between measured value and threshold value at the three measuring points by type of aircraft. Where necessary, the values based on the reduced maximum take-off weight prevailing in flight operations are indicated. For a few fleets, there are different values for individual sub-fleets, which are in part due to different versions of the aircraft and their engines according to year of construction. In the graph, these differences are taken into account by showing a range of values, as a complement to the standard practice of showing the lowest value.

Apart from Lufthansa and DLR, the FREQUENZ consortium includes aerospace companies, such as Airbus, Rolls-Royce and EADS, as well as several universities. The research partners are determined to drive the development of retrofit measures and analyses of flight procedures forward. For example, using the improved simulation tool and advanced calculation programs, the scientists intend to analyze flight procedures in a systematic way that will take the aspects of noise, pollutants and safety into account. The research partners are hoping that Germany's federal government will continue to support their research work.
 → www.fv-leiserverkehr.de

How do aircraft manufacturers measure noise?

Noise level measurements are carried out in the context of the flight tests that are part of the aircraft certification process. To ensure that data are comparable, a number of standard conditions must be observed with regard to wind and weather. The measurements are recorded at three different reference measure points.

- 1 To measure the approach, a microphone is placed 2,000 meters in front of the runway threshold directly under the approach line. At this point, the aircraft is on a 3-degree approach decline path at an altitude of 120 meters.
- 2 The aircraft's lateral noise projection during takeoff is recorded at two lateral reference measuring points. Two microphones are placed left and right of the departure line at a distance of 450 meters from the noisiest point of a takeoff with full thrust. The value for certification results from the average of these two measurements.
- 3 The reference measuring point for takeoff (flyover) is located under the departure line of a standard takeoff at a distance of 6,500 meters from the aircraft's brake-release point.



Intermodal transport



Interlinking modes of transport sustainably

Lufthansa advocates the implementation of intermodal transport concepts that interlink air, rail and road transport in intelligent ways. For this purpose, the Group has closely cooperated with partner companies for many years.

AIRail-Coach 21: Just like flying

In this spirit, Lufthansa has cooperated since 2001 with Deutsche Bahn (German Rail) in the context of the AIRail project. AIRail allows Lufthansa passengers to travel at “altitude zero” on board an ICE high-speed train from Cologne or Stuttgart to their connecting flight leaving from Frankfurt Airport. While passengers traveling between Cologne and Frankfurt may select from 25 daily train connections, those traveling between Stuttgart and Frankfurt have 12 frequencies to choose from. And since October 2008, passengers traveling between Cologne, Bonn/Siegburg and Frankfurt benefit from an exclusive Lufthansa area in coach 21 of the ICE trains. Among other amenities, it offers Business-Class travelers a separate ten-seat panoramic lounge.

Another convenient offer in mobility is also highly popular: Rail & Fly, the feeder service of Deutsche Bahn, takes Lufthansa passengers from any German rail station to their international connecting flights.

Environmentally friendly: the Lufthansa Airport Bus

Another plus for the environment is the Lufthansa Airport Bus. Powered with alternative fuels, it runs 12 times daily between Frankfurt and Strasbourg. In addition, the airline offers further resource-sparing feeder services, such as the Lufthansa Airport Shuttle from the cities of Mannheim and Heidelberg to Frankfurt Airport and from several points in southern Germany and Austria to Munich Airport.

Combination road-and-rail transport

Intermodal concepts have also become an integral part of doing business at Lufthansa Cargo. The logistics specialist ships nearly 5 percent of all freight shipments on the ground in Europe by means of combined road-and-rail transport. In this way, 1 million road kilometers can be avoided every year. In 2008, Lufthansa Cargo shifted its freight trucks running between Frankfurt and Munich and stations in northern Italy to the rails between Freiburg and Novarra and between Wörgl and Trento 50 times a week (2007: 43 times a week). Ad-hoc shipments are also handled in this way, provided the rail company is able to provide additional capacities beyond the ones contractually agreed.

Lufthansa Cargo also takes advantage of the combination road-and-rail transport for truck shipments between the European continent and the British Isles. Up to 40 times a week, the company sends freight from the French town of Coquelles via the Eurotunnel to Folkstone. In addition, further daily connections are being planned for 2009 between the Frankfurt and Leipzig hubs.

Mobility management

Eco-efficient ways of getting to work

To make employees' trips between home and the workplace less stressful and less of a burden on the environment, Lufthansa has been committed to sustainable mobility concepts for many years. For example, in the context of a collective-bargaining regulation agreed as long ago as 1995, the Group supports offers and services of public modes of transport and thus allows employees to obtain "job tickets" either at reduced rates or free of charge. At the location Frankfurt alone, about 30,000 Lufthansa employees were entitled in 2008 to use job tickets, which take a considerable load off the environment. Moreover, Lufthansa makes the use of job tickets possible at the locations Berlin, Cologne, Dusseldorf, Hamburg, Kassel, Mannheim, Munich, Nuremberg und Stuttgart. In 2008, Lufthansa spent about 6 million euros on this service.

An ideal complement to the job ticket is the Lufthansa CarPool. Lufthansa set up this service in 1989 with the goal of providing its employees rental cars for business and private uses. This is an attractive solution not only for flying personnel but also for employees who travel by car for business – or for private purposes – as CarPool dispenses with the need to purchase one's own car. In any case, the Lufthansa CarPool is a sound alternative to having a little-used private car, a fact that leads to the optimized use of the CarPool. A positive side effect: As CarPool vehicles are available at short notice and for short durations, they often replace private cars, which leads to a more efficient use of the limited parking space at company locations.

Mobility analysis at Lufthansa Technik

Services such as job ticket and CarPool also exist at Lufthansa Technik in Hamburg. There, a little more than a quarter of the approximately 8,800 employees count on the bus, train or bicycle for getting to work. In 2008, the Lufthansa subsidiary commissioned a mobility analysis with the goal of increasing this number through further innovative mobility offers. The results are currently being discussed with the works council.

CARRIVA

Car-sharing club Carriva: More mobility, less traffic

At Frankfurt Airport, Lufthansa and its project partner Fraport have jointly supported the innovative car-sharing club Carriva since April 2008. The goals of this new mobility service are to offer the employees of the participating companies an efficient, environmentally compatible solution for their trip to and from their place of work, to reduce the number of cars on the road during rush hour, and thus to take a considerable load off the environment. Many hundreds of employees working at Frankfurt Airport drive at the same time and on the same routes to work – most of them alone in their cars.

Carriva's special feature: Unlike for trips arranged by car pooling services, participants are not locked into fixed times, but are taken from door to door at the time they choose. Driver and passenger agree on these trips at short notice by mobile phone; the telephone connection required to do so is set up in the background by a central computer. This is made possible by an intelligent linking of mobile telephony and Internet technologies. The Federal Ministry for Traffic, Construction and Urban Development promoted not only the development of the software required for this purpose but also a range of measures to increase awareness of Carriva among employees. Until the "critical mass" of members required for the real-time operation of this computer-assisted phone service has been reached, spontaneous car pools are being formed by e-mail and Internet.

Lufthansa runs advertisements for the initiative in its internal publications, helps organize information stands and provides conference rooms free of charge as needed. At the end of 2008, there were already 1,000 members registered at Carriva – about 40 percent of them Lufthansa employees. Initially, the association is offering its services only to employees at Frankfurt Airport, but intends to expand its offer Germany-wide over the mid-term. At the biannual architecture exhibition in Venice in 2008, Carriva was part of the German contribution entitled “Updating Germany. 100 Projects For A Better Future.” The initiator and founder of Carriva is Berlin-based entrepreneur Klaus Homann.

→ www.carriva.org

Energy and resource management

Saving energy, protecting the environment, lowering costs

Lufthansa works constantly on maintaining a balance between ecological and economic requirements. A central adjusting lever here is efficient energy management, which the Group companies take into account by means of highly varied activities. All of these measures aim at lowering the consumption of resources, which means that energy costs drop at the same time.

Energy management’s tasks and goals

The department Facility Management is concerned with issues of energy management at the Group level. One of its tasks is to develop concepts that lower the energy consumption and costs of individual buildings. In the area of operations, its tasks range from assessing the current situations of individual buildings to controlling whether energy savings measures actually have the desired effects. In Frankfurt, this included examining the Lufthansa Aviation Center (LAC), the administration building which the company first occupied in July 2006, for “wattless current” in 2008. This problem concerns that share of electricity that oscillates between producer and consumer without being transformed into effective performance – that makes neither lights burn nor computers perform calculations. The result: “We could not prove wattless current at any point in the LAC,” says Sevda Yildirim, Energy Manager at Deutsche Lufthansa AG. Therefore, there is no need to install equipment to compensate for wattless current.

In addition, Facility Management has an advising function: It supports the employees who are responsible for infrastructure in all issues of energy management and investigates which buildings are suitable for alternative energy concepts – whether it be on the basis of photovoltaics, solar collectors, geothermal solutions, or combined heat and power schemes.

An established institution – The annual Energy Forum

Facility Management has organized the Energy Forum since 2004. Once a year, the one-day, Group-wide event brings those responsible for infrastructure at all Group companies around the same table. The Forum serves not only to inform on the latest developments in the energy industry, but also to create a platform for the intensive exchange of experiences and opinions. In addition, the participants receive valuable impulses from professional presentations given by carefully selected external speakers. In 2008, the event’s motto was “Sustainable, competitive and secure energy.” The Energy Forum will again take place in 2009.

Knowing how: New brochure with tips on saving electricity

Furthermore, Facility Management will be publishing a brochure for the first time in the first half of 2009, to give Lufthansa employees simple tips on saving energy at the workplace and at home. It is to appear as a supplement to the Group's employee newspaper "Lufthanseat" with a circulation of 74,000 copies.

Lufthansa Technik: Energy transparency reduces electricity consumption

In 2008, Lufthansa Technik launched a pilot project at Frankfurt Airport to promote more energy transparency, a move also aiming at a concrete contribution to resource conservation. Since March last year, an innovative software designed by Berlin-based company deZem allowing the visualization of energy data in real time has been run on a building serving as a reference. With the help of this software, the Lufthansa subsidiary is now able to depict precisely the electricity consumption and thus the energy costs of this building, which was built in the 1970s. It is also able to identify and tap into savings potentials. "For this property alone, electricity costs amount to about 900,000 euros a year," reports Harald Weinand, who is responsible for corporate environmental protection at Lufthansa Technik's aircraft maintenance wing. The desire to implement comprehensive energy controlling, make operating costs transparent and trace hidden electricity gobblers was correspondingly great.

To kick off the pilot project, Harald Weinand and his team first defined 176 measuring points, installed main and subsidiary meters divided into hierarchical levels, and indicated these in a blueprint. The next step was to document all electricity consumption at the property by means of the deZem software. Here, the analysis and depiction of results is carried out in real time via the deZem web site. In this way, Lufthansa Technik has been able for the first time to identify the high-volume electricity consumers in Building 401 and to trace their consumption precisely, minute by minute. To find out if the consumption profiles correspond to the actual work processes, those responsible for the project sought out a direct dialogue with the departments. "High consumption rates outside of work peaks are a sure sign of electricity being consumed uselessly somewhere in the building," Weinand sums up the advantage of energy transparency. Checking the equipment and machines used in the area affected quickly shows the cause – such as an air conditioner operating continuously – which can then be eliminated. "Today, we know not only how our electricity costs come about, but also what we can do in concrete terms to lower our energy requirements." This becomes possible through "before-after" comparisons, which help to evaluate the use of selected energy conservation measures comprehensively and makes savings potentials immediately visible. Lufthansa Technik is currently considering the idea of applying the deZem technology to other buildings as well, thereby optimizing the energy consumption of further buildings at Frankfurt Airport over the mid-term.

Lufthansa Flight Training: Innovative simulators save 80 percent of energy

Remarkable savings effects have also been realized by Lufthansa Flight Training (LFT). For over 50 years, the Lufthansa subsidiary has prepared flight attendants and pilots for their future work by means of state-of-the-art simulators. In April 2007, the company introduced a new generation of especially energy-efficient flight simulators. The launch was made with a Boeing 737-800 simulator at the Lufthansa Flight Training Center in Berlin; in June 2007, an Airbus A320 simulator went into operation at the LFT Center Vienna.

In contrast to conventional simulators, these innovative models are driven not by hydraulic oil pressure but by electric systems. The resulting energy savings is enormous: “Since the switch, we’ve been saving at least 80 percent of the energy previously needed for the simulator movements. This corresponds to 31.5 kWh per hour of simulator operation,” says an enthusiastic Dr. Norbert Wiesner, who accompanied the introduction of the innovative systems at Lufthansa Flight Training. Yet these were not the only energy-efficient simulators that helped to teach cockpit crews their skills in 2008: There was also one A320 simulator each in Frankfurt and Berlin, and a Dash8-Q400 in Vienna. More simulators are set to start operations in 2009: one Boeing 777 type in Berlin, one A330/A340-600 type in Munich, and one for the new Lufthansa flagship A380 in Frankfurt. Planning from 2010 also calls for a B747-8 Intercontinental simulator in Frankfurt.

More light, less electricity – New lighting system at Lufthansa Cargo

Lufthansa Cargo’s Import Hall at Frankfurt Airport, which has a surface of about 30,000 square meters, was equipped with a new lighting system between July 2008 and March 2009. “The previous lighting system, which was 25 years old, consumed a lot of energy and no longer conformed to job-safety requirements because it was not bright enough in certain places,” explains Ralf Wendt, Head of Facility Management at Lufthansa Cargo, regarding the motivation for exchanging the ceiling-mounted light fixtures. Now, the new lighting system illuminates the spacious hall evenly and uses substantially less energy to do so: While the lamps used to consume more than 2.1 million kilowatt-hours of electricity per year, this value has fallen to currently only 725,000 kilowatt-hours. In this way, the freight airline saves not only 66 percent of its electricity needs but also 170,000 euros per year – and avoids 800 tonnes of CO₂ emissions. “All these facts made the decision for the investment very easy for us,” says Wendt. He adds: “Further projects of this kind are not to be excluded.”



Presentation of the “GreenBuilding” certificate to Lufthansa representatives on January 30, 2009 at the LAC: Stephan Kohler, Chief Executive of Deutsche Energie-Agentur (3rd from left) presents the certificate to Thomas Baumgartner (freelance energy consultant at Lufthansa), Dr. Andreas Waibel (Manager Environmental Issues), Sevda Yildirim (Energy Manager), Dr. Ulrike Seidl (Vice President Infrastructure Projects and Facility Management) and Ekkehard Gottschalk (Head of Facility Management) (from left to right).

Lufthansa – Partner of the European “GreenBuilding” program

New standards in resource-conserving construction have been set by the Lufthansa Aviation Center (LAC), the company’s administration building at Frankfurt Airport, which it occupied in July 2006. Thanks to a complex structure consisting of thermo-active exposed-concrete ceilings, sensitive automatic shading mechanisms and a highly insulated facade, the LAC requires only about one-third of the heating energy of a conventional office building. Thus, the LAC’s annual consumption of heating energy falls below the currently valid Energy Savings Directive by 58 percent. For electricity, it is 15 percent less – a value that is likely to improve again once the technical optimization phase has been completed. Accordingly, the building’s low-energy concept helps Lufthansa to avoid 12,000 tonnes of CO₂ emissions per year. Given the building’s particularly favorable consumption values, the EU Commission has named Lufthansa a partner of the European “GreenBuilding” program, thereby honoring the company for its function as a role model in climate protection.

“We’re pleased to be a partner of the ‘GreenBuilding’ program of the EU Commission. This confirms that Lufthansa assumes a pioneering role in the area of energy-efficient construction,” explains Dr. Ulrike Seidl, Vice President Infrastructure Projects and Facility Management at Lufthansa. “Taking advantage of ecological and economic saving potentials with determination not only increases our competitiveness, but also benefits the environment.”

→ www.lufthansa.com/LAC

dena

dena (Deutsche Energie-Agentur) acts as a national contact point for the “GreenBuilding” initiative, which is supported by Germany’s Federal Ministry for Transport, Building and Urban Affairs. Any private or public owner of a nonresidential building can become a “GreenBuilding” partner if their newly constructed or renovated buildings’ primary energy requirements fall at least 25 percent below those defined in the Energy Savings Directive for heating, electricity and warm water. Participation in the program, which was launched by the EU Commission in 2005, is voluntary. The environmental data of partner buildings, including those of the LAC, are stored in a database on dena’s Internet page → www.green-building.de.



LSG Sky Chefs thinks and acts ecologically

Lufthansa subsidiary LSG Sky Chefs is also guided by environmental thinking in planning its infrastructure. The latest example in this vein is its new operations building, located in the Frankfurt district Gateway Gardens, which the catering specialists inaugurated in May 2008. The ecological elements realized in this building are remarkably diversified: For example, continuous rooflights allow the use of natural light as the main source of illumination for the production halls (see article "LSG Sky Chefs: Uncompromisingly ergonomic" on page → 57) and thus the conservation of electricity. In addition, these continuous rooflights are highly insulated, so that the daylight falling into the building has little influence on the inside temperature. And the new building can be shaded in an efficient way that significantly reduces the need for cooling.

The catering operation's heart is its cooling generation plant. To lower its energy needs in a sustainable fashion, the company has optimized the system's variable control by means of computer simulations. With this measure alone, LSG Sky Chefs now saves 30 percent on its annual energy needs for the new building.

Equally noteworthy are the three advanced cooling tunnels in the beverage warehouse, which the company acquired as an alternative to conventional, energy-intensive cold stores. Operated with brine-cooled air, these tunnels make it possible to cool bottles and cans already stored in trolley drawers from 22 degrees Celsius to between 2 and 5 degrees Celsius within seven to eight minutes. For this purpose, the plastic containers are placed on a conveyor belt and automatically passed through the cooling tunnel, where the air has a temperature of minus 42 degrees Celsius. Using this new procedure, about 10,560 bottles of mineral water, 2,340 bottles of soft drinks and 3,184 bottles of white wine, and more are cooled every day. In winter, heat exchangers make the waste heat produced by cooling processes usable for heating offices.

The use of district heating, which the Group company in Frankfurt uses to heat 12 dishwashing machines, promises further energy-related advantages: "We expect to avoid more than 5,000 tonnes of CO₂ emissions per year in this way," explains Peter Salbreiter, who is responsible at LSG Sky Chefs for technical projects. "This corresponds to the CO₂ emissions of 750 single-family homes on average."

Furthermore, the company treats its wastewater in several steps. The goal here is to lower the amount of pollutants and to take a burden off the water treatment plants. The procedure includes removing coarse substances, skimming off oils, and separating sludges. It also involves a further, biological step in which microorganisms remove all organic pollutants still remaining in the wastewater. Beyond this, LSG Sky Chefs recycles more than 60 percent of production-related wastes.



A view of the new engine maintenance facility in Hamburg.

Ecologically exemplary: New engine maintenance facility

On December 15, 2008, Lufthansa Technik opened a new maintenance facility for aircraft engines in Hamburg. This innovative building is based on a resource-sparing concept that takes its entire life cycle into consideration, including its future disposal. For example, the roofs of the halls are equipped with generous skylights. These glazed openings ensure that in many areas of precision mechanical work the prescribed light intensity of 800 lux can be attained during bright daylight hours without adding artificial light. "To reach such high levels of illumination, one ordinarily needs a lot of electricity," explains Clemens Ruebcke, the responsible project manager at Lufthansa Technik. "We hope that skylights will mean not only significantly reduced energy requirements, but also a lower rate of wear and tear on light-bulbs." An automatic shut-off system contributes to this goal by turning off electric lights wherever daylight creates sufficient natural illumination.

Motion and presence detectors in siderooms, hallways and lavatories also help reduce the electricity consumption in office areas. In addition, multiple electricity meters record consumption rates by source and promote a more conscious use of energy among employees.

Natural ventilation

Thanks to the skylights and large windows, the maintenance facility can also be ventilated in natural ways. On cooler days, the exchange of air is augmented by heat exchangers in the roof, which retain heat from the building's interior. In summer, this same equipment blows cool outside air into the building at night, as needed. Moreover, Lufthansa Technik has largely done without air conditioning for its office spaces. Ventilation flaps integrated into the ceiling areas of the window elements ensure low-draft natural ventilation wherever it is permitted and practicable. An electricity-dependent mechanical ventilation system is found exclusively in inside offices that open onto the hall.

Economical water consumption

To help limit its consumption of precious freshwater resources to the unavoidable amount, the company counts consistently on rain collection basins to gain water for industrial applications. For this purpose, rain water is collected from the roof in two containers with a total capacity of about 1,000 cubic meters. From there, it flows into the office wing, where it is used for a number of tasks, such as flushing toilets. The hall is also equipped with a seeping system, which feeds the rain water from certain parts of the roof to trees in the adjoining area. This measure prevents damage to these trees that would have otherwise occurred due to the construction of a sheet-pile wall, which has reduced the level of the water table.

Research at Lufthansa

Scientific research – The basis for efficient climate protection

To be able to assess the environmental impact of air transport in an objective manner, targeted scientific research is an absolute necessity. For this reason, Lufthansa supports a number of scientific projects, whose results form the basis for the Group's effective environmental care. In 2008, the project CARIBIC in particular yielded interesting insights for the participating scientists.

EU research project MOZAIC

Atmospheric research on long-haul flights

The research project MOZAIC (Measurement of ozone, water vapor, carbon monoxide and nitrogen oxides aboard Airbus in-service aircraft) was established in 1993 by European scientists, aircraft manufacturers and airlines. Its goal is to obtain a far-reaching understanding of the processes at work in the atmosphere and to research the effects of human activities on its composition. The researchers' interest focuses on effects related to ozone and water vapor at altitudes between 9 and 12 kilometers. To acquire a broad database, which then serves as the point of departure for studies concerning the chemical and physical processes in the atmosphere, data has been captured on about 2,300 flights a year since 1994. In 2008, three Airbus A340-300 long-haul aircraft were en route every day for this project – including two operated by Lufthansa. These aircraft are equipped with sensitive sensors, which continuously measure the atmosphere's ozone, water vapor, carbon monoxide and nitrogen oxide content while the aircraft is in flight. Collected for 15 years worldwide, this data is an ideal basis for improving the accuracy of global climate models. Since the termination of EU research funds in 2004, the airlines and research institutes participating in MOZAIC have continued these measurements at their own expense.

You can watch a video about the MOZAIC project on the Internet at:

→ www.lufthansa.com/responsibility → Environment → Kerosene & Emissions
→ www.fz-juelich.de



The main routes of CARIBIC measuring flights carried out with the Lufthansa Airbus A340-600 "Leverkusen."

EU research project CARIBIC

Atmospheric measurement laboratory aboard the "Leverkusen"

In 2008, the basic atmospheric research project CARIBIC (Civil Aircraft for the Regular Investigation of the Atmosphere Based on an Instrument Container) concentrated on Asia. The preferred destination for the CARIBIC container was Chennai (previously Madras), located in the Indian state of Tamil Nadu, where it recorded the enormous plume of pollutants during the Indian summer monsoon. In this region, which features the world's highest concentration of population and rising levels of industrialization, large and rapidly increasing quantities of climate-active gases are emitted. The monsoon has a massive effect on the transport of the emitted gases, and is thus of great importance for the chemical processes in the atmosphere and climate change.

The monthly flights from Frankfurt to Chennai allow a systematic analysis of the concentrations of greenhouse gases in the upper troposphere. In the course of the CARIBIC flights, the researchers observed how the methane concentration in particular increases in the regions influenced by the monsoon during the summer months and how this area of high methane concentration shifts under the monsoon's influence. In analyzing the measured data, CARIBIC scientists work together with colleagues from the U.S. aeronautics and space administration NASA.



CARIBIC coordinator Dr. Brennkmeijer (right) explains the project's measuring procedures and data capture system as part of the Lufthansa Quality Day in Frankfurt.

With the help of the CARIBIC container, the scientists also measure the incidence of mercury. Industrial activities such as burning coal and garbage and processing ore are responsible for one-third to one-half of atmospheric mercury. Once elemental mercury is emitted, it remains for about one year in the atmosphere and is distributed all across the globe by air streams. Despite long-term research, many aspects of the atmospheric mercury circulation still remain in the dark. For example, the different sources' shares in mercury emissions and their geographic distribution are scarcely substantiated. Also unknown is the oxidation mechanism which ties elemental mercury into mercury compounds. The CARIBIC measurements are aimed at making a contribution to answering these questions. Successfully so: They have shown for the first time that gaseous mercury in the stratosphere is transformed into a particle-bound form.

CARIBIC is a long-term joint project of the Max Planck Institute for Chemistry (Max Planck Society), the Institute for Tropospheric Research (Leibniz Society), the Institute for Meteorology and Climate Research and the German Aerospace Center (both Helmholtz Society) as well as two further partners in Germany and six in five other European countries. This unique project employs the Lufthansa Airbus A340-600 "Leverkusen," which transports a scientific measuring container weighing 1.6 tonnes in its cargo hold every month. Thus, CARIBIC's flying observatory provides detailed, precise data on a number of trace elements and the concentration and spatial distribution of aerosols. This includes ozone, water vapor, nitrogen oxides, aerosols, greenhouse gases, carbon monoxide, mercury, organic compounds and chlorofluorocarbons.

You can watch a video about the CARIBIC project on the Internet at:

→ www.lufthansa.com/responsibility → Environment → Kerosene & Emissions

→ www.caribic-atmospheric.com



EU research project IAGOS

Development of an infrastructure to observe the Earth's atmosphere on a global scale with support from civil aviation

IAGOS (Integration of routine Aircraft measurements into a Global Observing System) is a further development of the MOZAIC project. A total of ten partners from the research sector and the aviation industry participate in this project. Launched in April 2005, IAGOS is to make a substantial contribution to the creation of an atmosphere monitoring network by 2009. The goal is to set up a measuring infrastructure that allows civil aircraft in flight (in situ) to routinely record data on atmospheric trace substances, aerosols and clouds – worldwide and on a broad basis. At the center of these research efforts are lightweight, low-maintenance instruments, which can be integrated into airline operations in an efficient manner. These newly developed instruments are to be tested in mid 2009 aboard Lufthansa aircraft. The data IAGOS is set to generate will be of central importance for climate research and numerical weather forecasting.

In September 2008, the IAGOS-ERI (ERI stands for European Research Infrastructure) was set up in addition. The goal of this follow-up project is to create the long-term operating and financial conditions to ensure that the instruments newly developed in the context of IAGOS are put into operation worldwide.

→ www.fz-juelich.de/icg/icg-ii/iagos

→ www.iagos.org

EU research project TBCplus

Development of highly resistant ceramic coatings for engine combustion chambers

Lufthansa Technik, in cooperation with renowned European aviation institutions, has developed an innovative ceramic protective coating for the combustion chambers and turbine fan blades of aircraft engines. After receiving the necessary licenses from the aviation authorities, the experts began testing components equipped with this additional protective element in a long-term experiment that started in 2007. "The relevant components are in operation in two engines at Lufthansa Cargo. We expect that this long-term experiment will run for another two years," reports Tim Lübcke, who shares the responsibility for this future-oriented project at Lufthansa Technik. A visual check for damage and wear-and-tear (using a boroscope) in 2008 showed no differences between conventional and the newly-coated components. "This is to be taken positively," explains Lübcke.

Building on the insights gained in the course of the project, the innovative coating process will have its influence on new engine designs, and thus contribute to increasing fuel efficiency and reducing emissions of pollutants. The ceramic protective layer remains stable even at very high gas temperatures, which means it protects components better against overheating. With the thermal barrier coatings (TBCs) currently in use, changes in the surface of these materials have been observed repeatedly, particularly in hot areas. Such changes might decrease heat insulation properties or lead to flaking. The consortium expects that using the new-type TBCs will improve the component life span and performance of the engines in use today.

Balance will report on this project again when the long-term test series has been completed and new results are available.

EU network AERONET

Network for the coordination of European research projects on aviation issues

The network AERONET gathers together all important players in European aviation: aircraft manufacturers, airlines, airport operators, research institutions, universities, public authorities and political representatives. The project's goal is to facilitate the exchange of experience and knowledge and to smooth the way for the competitive and environmentally compatible development of Europe's aerospace industry.

AERONET is particularly committed to advancing aircraft and engine technology with regard to possibilities of reducing CO₂ and other harmful emissions across the entire air transport system. This approach comprises aircraft, flight routings and airport operations alike. Taking into account the debate on the international level, the network searches for specific measures that can help to reduce emissions of CO₂ and other pollutants from air transport. Here, AERONET sees itself as a link between atmospheric research and aviation technology research.

In its role as a platform for the exchange of experience and information, AERONET helps in important ways to advance Europe's position in international competition. For example, it gives engine manufacturers more immediate access to the latest research results regarding the effects of air transport on the atmosphere. In addition, AERONET supports the European Commission in identifying relevant issues for its network of research programs and supports the initiative toward joint projects.

→ www.aero-net.org



Interdisciplinary research network “Quiet Traffic”

Joint research projects to lower traffic-related noise emissions

To reduce traffic-related noise emissions, the research network “Quiet Traffic,” initiated by the German Aerospace Center (DLR), counts on interdisciplinary cooperation between industry, research institutions and the transport industry. Within the network, three working groups examine the specific issues from the areas of road, rail and aircraft noise. Two other working groups analyze issues concerning all modes of transport, such as noise effects, traffic management, sound propagation and noise optimization.

The program section “Aircraft Noise” has been led by the Head of Group Environmental Issues at Deutsche Lufthansa AG since the launch of the research alliance in 1999. Between 2004 and 2008, the members of this working group developed and implemented the following projects supported by Germany’s Federal Ministry of Economics and Technology:

- **The joint research project LEXMOS** (Quiet engine nozzle systems and advanced methods for the localization of noise sources) was headed by Rolls-Royce Deutschland. Computer simulations and experimental settings were used to investigate how sound is generated at the edges of engine nozzles. Moreover, Rolls-Royce and the DLR developed a microphone measuring system that can be used to make measurements in closed engine test beds largely free of interference. The DLR’s experts also used this technology with success in the project FREQUENZ in 2007.
- **In the joint research project NASGeT** (Innovative active/passive systems for noise reduction on engines), researchers investigated how sound generation can be influenced actively via adjustable engine components. This project was headed by EADS Innovation Works.
- **The joint research project FREQUENZ** (Research on reducing and determining the source noises on civil aircraft by experimental and numeric means) was headed by Lufthansa and consisted of three sub-projects flowing one from the other. The scope of tasks comprised simulations concerning sound generation on aircraft components (“design-to-noise”), wind-tunnel experiments and the development of practicable measures.

You can find further information on the FREQUENZ project in the article “Research for quieter flying” on page → 73.

→ www.fv-leiserverkehr.de

EU research project ERAT

ERAT (Environmentally Responsible Air Transport) was launched at the end of 2007. Its goal is to develop concepts that help to reduce the environmental effects of aviation-generated noise and emissions in the vicinity of airports and to improve air quality – without causing capacity reductions at the airports affected and while meeting all safety standards and criteria of economic efficiency. Insights into more environmentally compatible flight procedures, formerly developed in individual projects such as Sourdine II or OPTIMAL, are to be applied to ERAT. It is also planned to consider and analyze new approaches in air traffic management in a comprehensive approach. Sample analyses for two European airports are planned. Lufthansa has a consulting role in ERAT, with an emphasis on aeronautical issues and experience.

Besides Lufthansa, ERAT counts another ten partners, including Airbus, Eurocontrol, the German Aerospace Center (DLR) and the French engine manufacturer Snecma. The research project will continue until the end of 2010.

Epidemiological study of cosmic radiation

Continuation of a research project concerning possible mortality risks for cockpit and cabin crews

As early as 1997, epidemiologists at Bielefeld University investigated whether cosmic radiation has measurable health effects on flying personnel. Together with the German Cancer Research Center and the Professional Association of Vehicle Operators, they analyzed causes of death among all flying personnel working for Lufthansa or LTU between 1960 and 1997. The study concluded that there were no indications that work-related increased exposure to cosmic radiation leads to a general, significantly increased mortality risk due to diseases associated with radiation. To further increase the validity of this study, the investigation period was extended in a follow-up project to 2003. The preliminary results, which are now available, appear to confirm the results of the initial study.

Corporate citizenship

Through self-initiative to a recognized institution: Ten years of HelpAlliance

No bigger than 5 by 10 centimeters, the ad in the November 1998 issue of “Lufthanseat” had been placed by two Lufthansa employees looking for like-minded “campaigners” to set up a charitable joint project. Their goal was to bundle the activities of socially committed colleagues across the company under a single umbrella. Not quite a year after that first call appeared in the Group’s staff newspaper, the HelpAlliance was founded. Since then, the HelpAlliance has successfully supported more than 60 projects.



In September 1999, 13 representatives from all across the Group founded the "HelpAlliance e.V. – Lufthansa employees lend a helping hand." In 2009, the politically and confessionally independent employee organization celebrates its ten-year anniversary. It looks back over more than 60 projects that either have been successfully concluded or are still being supported, as well as numerous cases of aid provided when human plight has followed natural disasters.

The HelpAlliance's work focuses on people who often do not even have the bare necessities of life – especially in developing nations. The main task of the charitable association is to collect donations and to apply these funds in meaningful ways. In order to improve the living conditions of those affected in a significant way, all measures are guided by the central motto "Help for Self-help."



Ad-hoc aid or long-term projects – the HelpAlliance aims at giving support above all to underprivileged children in the world's poorest countries.

Three types of projects

The aid organization's projects are divided into long-term HelpAlliance projects, short-term supported projects (i.e. supported in relation to an event) and emergency aid projects (e.g. following an earthquake or flood). In terms of content, the emphasis is placed on the areas of education, health and nutrition. Almost as a rule, the HelpAlliance's work focuses on children and adolescents. For good reason: "Access to education or professional training is both a central and a lasting way out of the trap of poverty," says Rita Diop, First Chairwoman of the HelpAlliance since May 2005. In some cases, this means that the aid organization must help cover people's basic needs to make education possible in the first place.

Since its foundation ten years ago, the HelpAlliance has launched, coordinated and accompanied a total of 19 long-term projects, 24 supported projects and 19 emergency aid projects. With the donations generated in the framework of the first fund-raising campaign in December 1999, the aid organization was able to initiate no fewer than nine projects at once, including the renovation of a roof at a hospital supported by "Freundeskreis Ostafrika-hilfe" (Friends of East Africa Aid). Moreover, the HelpAlliance was able to finance the construction of an institutional kitchen and a multifunctional room for a child-care facility in Benin and assume the costs for schooling and meals at an orphanage in Lagos, Nigeria, for an entire year.

Then as now, the HelpAlliance counts 13 Full Members; five of its original founders are still active. From the beginning, they have been backed by Supporting Members, of whom there were 1,153 at the end of 2008, and the Friends of HelpAlliance, a worldwide network of internal and external volunteer helpers. Every member is active in one or more aid projects, such as small business startups, street-kid projects, schools, training centers, orphanages

On-board collection program "Small Change – It's a Big Help"

Launched in 2001, the on-board collection program "Small Change – It's a Big Help" represents the largest single source of donations for the HelpAlliance. The principle is straightforward: Lufthansa customers still holding coins and bills in foreign currency after a trip abroad have the opportunity to donate the "left-overs" from their holiday funds. For this purpose, they can find small re-sealable bags on board long-haul flights, which the cabin crews collect and pass on to the HelpAlliance. In addition, there are donation pillar-boxes that invite travelers to be socially committed. These are located in the employee areas and the Lufthansa lounges at German airports and in New York, and in the public areas of the hubs in Frankfurt and Munich.

Development of donations:

- 2001: 207,175 €
- 2002: 232,692 €
- 2003: 216,539 €
- 2004: 238,023 €
- 2005: 294,870 €
- 2006: 279,575 €
- 2007: 260,939 €
- 2008: 230,433 €*

Start of Condor's participation: October 2003

* All figures quoted for 2008 in this article are preliminary, as the final figures were not yet available when it went to press.

or bush hospitals. The areas of involvement are above all in the world's southern hemisphere – in Africa, Asia and South America – but also in places such as Romania. Typically, almost all projects are supported by a registered association in Germany where the applicant – either a Full Member of the HelpAlliance or another Lufthansa employee – has a board-level function.

Diversity of projects

There is a broad scope of activities among the long-term HelpAlliance Projects: "Patenschaftskreis Indien" (Child Sponsorship Circle India), for example, has worked to support the children of ethnic minorities and marginal social groups in central India for many decades. Constructing or renovating boarding schools and financing tuition and meals mean that today not only many girls but also many children of the "dalits," India's "untouchables," can take advantage of a school education.

In the African country of Malawi, the association "Hope," which was founded by flight attendants, supports a hospital with donations and cargo shipments – including urgently needed respiratory and electrocardiographic equipment, surgical instruments, syringes and other medical supplies. In Rwanda, the association "Friends of Rwanda" purchased and shipped a solar collector. For the first time, physicians at a medical station in the western part of the country now have sufficient light to treat illnesses or to assist with births. In addition, the unit makes it possible to run a refrigerator to store medicines. At the moment, a focused transfer of know-how is taking place so that local staff are able to maintain the solar unit independently.

You can find detailed information on the individual projects supported by the HelpAlliance on the web site → www.help-alliance.com

Ten years of HelpAlliance – Milestones of a success story

- **September 1999:** Foundation of the HelpAlliance
- **January 2000:** Backed by the first donations and member contributions, the HelpAlliance can give support to nine projects at once
- **May 2001:** Introduction of the on-board collection program "Small Change – It's a Big Help" on Lufthansa long-haul flights; installation of the first donation pillar-boxes in the employee areas and in the Lufthansa lounges at German airports and in New York
- **October 2003:** Introduction of the on-board collection program on Condor long-haul flights as well
- **2005:** Within six months the HelpAlliance collects donations of more than 1 million euros for the victims of the tsunami
- **November 2006:** Introduction of Miles to Help – an initiative of the frequent flyer program Miles & More
- **December 2007:** For the first time, the number of Supporting Members surpasses the threshold of 1,000
- **Since 2008:** Program to sponsor children in Nigeria and India

In accordance with the UN Convention on Children's Rights and the UN Global Compact

Children are in special need of protection. To help them as much as possible, the work of the HelpAlliance orients itself by the guidelines of the UN Convention on Children's Rights and the principles of the UN Global Compact (see also article "Pioneering role: Lufthansa is the first airline to adhere to the Global Compact," page → 14). "We have always counted on an intense dialogue with those concerned and developed solutions that best fit their life situations," says Rita Diop.

How are projects selected?

The initiative for a project is always launched by committed Lufthansa employees. Most often as a result of strong impressions an employee has had on vacation or – in the case of flight personnel – during layovers at foreign destinations. For each project, a well-thought-out application must be submitted first. It must define the project goal, the type of measures planned and the financial aid required. The board decides whether an application is accepted or rejected by a simple majority vote. The amount of the allocated aid depends on the application – provided there is enough money is the HelpAlliance's till. Furthermore, well-founded arguments need to demonstrate that the project will make a difference long-term. In its role as a fiduciary administrator, the aid organization is responsible for investing donated funds in measurable added value. Whether an application is accepted or rejected also depends on the applicant's willingness to accompany "his" or "her" project as a volunteer on location. But this has never been a problem – on the contrary. "Our colleagues are passionate about their causes," says Diop.

To ensure the projects' success, Lufthansa employees are supported on location by experienced, reliable partners who advise them. As a rule, the aid organization declines requests from external applicants, as it would not be possible to guarantee that the funds provided are actually used for the purpose stated. This also applies to projects in war zones: "As we cannot check in such cases what happens with the money locally, we do not want to take any risks," clarifies Rita Diop. Applications for aid projects in affluent industrial nations are also turned down.

Support from Lufthansa

The Lufthansa Group has supported the HelpAlliance right from the start. Thus, the company has not only released the First Chairwoman and one further colleague from their regular full-time duties; it also makes a Lufthansa flight attendant available for the HelpAlliance ten days a month to handle administrative tasks and look after the on-board collection program (see insert "On-board collection program 'Small Change – It's a Big Help'" on page → 89). In addition, the association benefits from office space and the IT equipment that goes with it at the Lufthansa Base at Frankfurt Airport. Above all, however, Lufthansa supports the humanitarian commitment of its employees by providing transport capacities free of charge. "If we had to finance the transport of relief supplies out of our own



HelpAlliance – Employees lend a helping hand: The crew of Lufthansa flight LH564 to Accra visits the HelpAlliance-supported project “Kinder Paradise” in Ghana. The project’s goal is to diminish the suffering of street children. For both sides, the impressions gained are always overwhelming.

pockets, our work would not be possible in its current form,” sums up Rita Diop. Beyond this, the company participates in producing the aid organization’s annual Activity Report.

Not to be underestimated in their effect are the numerous donations in kind from colleagues across the company. Not all donations, however, contribute to the association’s goals. For example, the HelpAlliance views donations of clothes with a rather critical eye, as they might have an adverse effect on the development of regional trading structures.

Every step a donation

Monetary donations, on the other hand, are more useful and more forward-looking. These are in part generated by the employees themselves through highly diverse initiatives. While some sold coffee mugs displaying the company’s crane logo during their leisure time, 585 teams of three at Lufthansa Technik literally counted their steps for four weeks in 2008. Recorded by a pedometer, their steps were compensated in money by the management. For each 2,000 steps made, one cent went to the HelpAlliance. In this way, 2,445 euros were collected. “The colleagues at Lufthansa Technik are pragmatists and thus born collectors of donations,” Diop explains.

A wave of cooperativeness

The aid organization considers the willingness of Lufthansa’s employees and the Group’s Executive Board to donate generously after the tsunami which devastated parts of Southeast Asia in December 2005 a special success. Under the motto “A Future

“For Lufthansa employees, ‘responsibility’ is not just an empty, pleasant-sounding word but rather something brought alive by their actions, each and every day. More than 60 successfully implemented projects in ten years leave no room for doubt about that. It gives me great pride and joy to be the patroness of such an active and dynamic employee organization.”

Sabine Weber
Patroness of the HelpAlliance



Interview with Rita Diop, First Chairwoman of the HelpAlliance

Rita Diop has worked for Lufthansa since 1986. A graduate in American Studies, she has been committed to the HelpAlliance since the beginning of 2000 – initially on a volunteer basis as the first of currently about 200 “Friends of HelpAlliance” and since 2001 as a Full Member. In spring 2005 she was elected First Chairwoman of the aid organization and released by Lufthansa for this task.

What persuaded you to accept the chairmanship of the HelpAlliance?

I first became aware of the organization in December 1999. Soon after that I spontaneously offered my help and for many years wrote the HelpAlliance’s press releases after work. I’ve also accompanied a project in Senegal since 2002. If you’ve been rooted in an organization for so long and so deeply, you aren’t inclined to refuse the mandate of its members, who have elected you. Nor could I easily decline the responsibility, especially since I was already a deputy. Still, the decision wasn’t easy for me. After all, you don’t leave a satisfying job just like that and without knowing what lies ahead – no matter how passionate you are about making a humanitarian commitment.

What type of project do you accompany in Senegal?

The project is located in Leona, a district of the city of Saint-Louis, in the north of Senegal. I had traveled to Senegal on several occasions at the time and discovered Leona more or less by accident. What is special is that the 15,000 inhabitants of Leona decided at one point to take their lives into their own hands. This is why they elected a council that helps them realize projects that benefit everyone – a regular garbage removal service, for example. The money didn’t really go any further than that. We started with small projects at the time, such as installing a public computer room or offering free tutoring. These initial successes gradually led to the construction of a community center, which today offers literacy courses for street kids and is home to a kindergarten and a training center for young women and girls.

How did it come about that Lufthansa released you full-time for your work at the HelpAlliance?

That change was closely linked to the flood disaster in Southeast Asia. At that time, the Lufthansa Group had decided to provide aid to the affected region through the HelpAlliance. The organizational challenges were enormous. We realized very quickly that this project far surpassed the limits of classic volunteer work. Administrating donations of 1.07 million euros as efficiently and as usefully as possible is a task that can’t be taken care of after work or on weekends – at least not if it’s to be serious and audit-proof. And as the number of projects has increased rather than decreased over the years, the release has remained unchanged.

for the Children,” donations amounting to 1.07 million euros had been collected by the end of 2006 to benefit the victims of the disastrous flooding. In the framework of this aid campaign, 5,000 employees donated a total of 14,000 working hours, whose monetary value of 300,000 euros was first donated by the Executive Board and then doubled again.

In January 2009, the final tsunami project was concluded. It was initiated by a Lufthansa Technik employee and supported in Sri Lanka by the “Deutsche Gesellschaft für Technische Zusammenarbeit” (GTZ). Initially, a primary school was constructed in that country’s coastal region, followed later by a secondary school. As the HelpAlliance had no project experience in this island nation, it involved the Eschborn-based organization for long-term development right from the start. “We’re very grateful to the GTZ. It not only supervised the construction site but also bore the cost of the interior furnishings of the secondary school,” reports Rita Diop.

Volume of donations declines slightly

Over the past ten years, the HelpAlliance has received donations of about 5 million euros. The performance balance sheet of the charitable projects it has been able to support during this time is



At the Nice View Children Village in Kenya even the smallest ones get support – something that is easier as a team effort.

“We have always counted on an intense dialogue with those concerned and developed solutions that best fit their life situations.”

Rita Diop
First Chairwoman of the HelpAlliance



impressive: The HelpAlliance has constructed or renovated four hospitals, 12 orphanages, and 37 schools or training centers. About 5,000 children a year can now attend school. Moreover, two school busses have been purchased.

In 2008, the volume of donations declined overall to about 640,000 euros, compared with about 710,000 euros during the previous year. According to the HelpAlliance’s First Chairwoman, the unfavorable global economic situation since fall 2008 is only one of the reasons for this development. “The discussion concerning the events at the German section of UNICEF have lead to a general loss of trust in relief organizations,” explains Diop. The HelpAlliance has felt the effects of



this as well – notwithstanding its efficient administration of donations, its clear criteria for the allocation of funds and its honest, transparent communication.

The sum of donations is composed of regular contributions from Supporting Members, project-dedicated donations, and nondedicated donations which the HelpAlliance allocates based on needs. It also includes donations from the program Miles to Help and the on-board collections.

Sponsoring a child

In 2008, Lufthansa employees again came up with numerous ideas on how to meaningfully alleviate the plight of disadvantaged people. This also includes an initiative of two Full Members of the HelpAlliance: Since summer 2008, they have been beating the drum with flyers and articles on the Internet and intranet for child sponsorships designed to benefit children in two project countries. In this way, 50 young Nigerians are to get access to higher education. “Just 25 euros a month is enough to give these kids a real perspective for the future; in India it’s only 15 euros,” says Arnd Klinge, one of the two project initiators and an active flight captain at Lufthansa. Moreover, this is a way to help to strengthen

the middle class in this west-African country shaken by corruption, violence and ethnic conflicts. Another area of emphasis for the child sponsoring project is central India, though the focus on the subcontinent is somewhat different. “There, the main issues are to give children sufficient medical care and nutrition – and a chance to learn to read and write in the first place,” Klinge continues.

Ten years of HelpAlliance prove impressive: The history of this aid organization is a story of successes, large and small, that are due to the unyielding commitment of Lufthansa employees. In the future, they will not diminish their efforts in fighting the causes of sickness and misery in the world – whether it is a question of enabling children to attend school, securing basic medical care for underprivileged families or drilling a well that covers the water supply for an entire village. The HelpAlliance will continue to build stable bridges into the world during the next ten years as well.

Corporate citizenship

In society – For society

In 2008, Lufthansa once again supported numerous civic projects and thus assumed its social responsibility. As an active part of its corporate citizenship, the Group commits itself to the areas of culture, social projects, education, sports and environmental sponsorship. To ensure that this commitment leads to the desired effects, Lufthansa concentrates its efforts on a selected range of projects, an approach which permits comprehensive administrative supervision.

Culture

Lufthansa Festival of Baroque Music:

“As a provider of sustained arts sponsorship ... Lufthansa should be lavished with praise.” This is what “The Times” wrote in its critique of the Lufthansa Festival of Baroque Music in London.



The concert performed at Westminster Abbey is always one of the highlights of the Lufthansa Festival of Baroque Music. On May 21, 2008 the Choir of Westminster Abbey, accompanied by St. James's Baroque, sang works by John Blow and Georg Friedrich Händel. The conductor was James O'Donnell.

Eleven concerts took place between May 15 and 21, 2008, once again delighting the demanding, knowledgeable London public. Among the artists performing were the “crème de la crème”: the English Concert with soloist Carolyn Sampson, the Collegium Vocale Gent conducted by Philippe Herreweghe, Concerto Soave with Maria Cristina Kiehr, The Choir of Westminster Abbey together with St. James's Baroque conducted by James O'Donnell. Westminster Abbey and St. John's Smith Square were joined in 2008 by two new venues: St. Margaret's Church – located right next to the Abbey and serving as parish church to the British Parliament – and the prestigious Westminster School.

Naturally, the budgets for such events are limited. Therefore, Lufthansa concentrates its cultural commitment on this first-class festival, rather than supporting a number of smaller events as one of many sponsors, in what might be called the “watering-can principle.” The Lufthansa Festival of Baroque Music maintains only two exclusive partnerships: with Lufthansa's system partner Rolls-Royce plc and with the BBC and its classical-music channel “Radio 3” as a media partner with international broadcasts. In this manner, Lufthansa has successfully applied its demand for premium quality to its cultural sponsorship as well.

The enthusiastic response of the festival audiences, which every year also include Lufthansa's premium status customers in England, confirms that this orientation toward outstanding quality is recognized and appreciated. 2009 marks the festival's 25th year of existence. Accordingly, this event will be celebrated with an exquisite program: Under the title “1659-1759: 100 Years of English Genius,” the festival will commemorate the 350th anniversary of the birth of Henry Purcell and the 250th anniversary of the death of Georg Friedrich Händel. Our English friends have always “adopted” the latter without hesitation as a fellow countryman. This is actually not as far-fetched as it may seem, considering that Händel crowned his artistic career in London. He lived there from 1712 until his death in 1759 and is buried in Westminster Abbey, which makes him a veritable key figure for building cultural bridges between Germany and England. And building these bridges has been one of Lufthansa's concerns since the festival's foundation.

→ www.lufthansafestival.org.uk



Twelfth edition of the Lufthansa New Year's Concert in Berlin

For already the 12th time, Lufthansa invited guests to attend its traditional New Year's Concert in Berlin, taking place this year on January 26, 2009. Nearly a thousand accepted the company's invitation to experience the virtuoso performance of the RIAS Youth Orchestra at the "Konzerthaus am Gendarmenmarkt," which delighted not only Lufthansa frequent flyers but also leading figures from politics, business, culture and the media. Conducted by the 35-year-old Israeli Ariel Zuckermann, these young musicians from 20 countries offered an impressive display of their skills. On this particular evening, the repertoire of the prize-winning orchestra featured works by Beethoven and Shostakovich. Prominent guests included Parliamentary Speaker Norbert Lammert and the ambassadors of 25 different countries.

Social projects



The newly constructed orphanage Mothers' Mercy Home in Kiambu was inaugurated on November 28, 2008. Karl-Heinz Köpfler, member of the Executive Board of Lufthansa Cargo AG, and Fokko Doyen, Head of the MD-11F fleet and Chairman of Cargo Human Care, followed a tried-and-tested Kenyan tradition by each planting a tree in the presence of Bishop Timothy Ranji.

Cargo Human Care:

Humanitarian aid for the needy population in Nairobi, Kenya

Uncomplicated and professional medical help for the people in Nairobi – that is the basic idea of the humanitarian aid project "Cargo Human Care" (CHC). Employees at Lufthansa Cargo founded the charitable organization in cooperation with German physicians in 2004. The cargo airline's Executive Board has supported the aid project from the very beginning. Lufthansa Cargo provides flight tickets for physicians and available transport capacities aboard their MD-11F freighter aircraft, both free of charge. In this way, medical equipment and aid supplies can be shipped directly to Nairobi.

In 2008, Lufthansa Cargo again flew German physicians of various specialties to Kenya twice a month on average to spend three days treating acute and chronic illnesses on a volunteer basis. In addition, the air freight experts regularly transported urgently needed supplies and medical equipment to Nairobi for use at the Medical Center in Buru Buru and at "Mothers' Mercy Home" (MMH). These two institutions form the focus of Cargo Human Care's commitment.

Under a single roof:

New orphanage and medical center at Mothers' Mercy Home

Beyond providing much-needed medical aid, Cargo Human Care was also able to implement a further project: the new construction of an orphanage on the site of Mothers' Mercy Home. Thanks to numerous donations in the context of the campaign "F.A.Z. Readers Help" carried out by the newspaper Frankfurter Allgemeine Zeitung and the professionally coordinated construction planning done by an employee at Lufthansa Cargo, 84 boys and girls were able to move on November 29, 2008 from their previous corrugated-iron dwellings into the modern building made from stone. Eventually, more than 120 children are to live there. Besides bright bedrooms for four boys or girls each, the building offers modern sanitary facilities with showers, rooms for those in charge and two sickrooms for children.



Since the end of February 2009, the new building has also housed a medical station with two treatment rooms and a pharmacy. The Medical Center ensures, among other things, that children infected with the immune-deficiency illness AIDS regularly receive their antiviral medications. Three full-time employees look after such tasks: one doctor's assistant, one nurse and one "medical officer," who has extended medical competencies and is also available when no doctors are on location. In addition, the center gives treatment to patients from the surrounding slums – just like the SOS Medical Center in Buru Buru.

Since October 2008 Lufthansa Cargo has also covered the costs for an employee who – in the context of a “voluntary year of social work” – relieves the CHC’s board of administrative tasks and coordinates the association’s public-relations activities. Since its foundation, the initiative Cargo Human Care has been able to give help to more than 4,000 people in Nairobi.

→ www.cargohumancare.de



The alternative for committed customers: Donating miles for a worthy cause

In November 2006, Miles & More introduced the initiative Miles to Help, thereby allowing participants in Lufthansa’s frequent flyer program to donate their premium miles in favor of selected projects that protect people and the environment. Choices include the HelpAlliance, the international lake network “Living Lakes” and the aid organization “SOS Children’s Village.” In 2008, more than 50 million miles were collected for charitable purposes in this way.

Donations from the program allowed the HelpAlliance to finance tuition for more than 550 children in India last year. In addition, the aid organization was able to pay the annual salaries of seven nurses in Africa. Thanks to donations made in 2008, the lake conservation network Living Lakes, today active on all continents, was able to protect 90 hectares in Brazil’s Pantanal region and thus to save a further part of the world’s largest wetland from destruction. Moreover, donations of miles made it possible to give comprehensive support to 120 orphans in Asia – covering education, preventative health care, social care and accommodation.

Junior Round Table: Young professionals take on social responsibility

In the context of the Group-wide network Junior Round Table (JRT), young employees have had the opportunity since 2005 to make a volunteer contribution to social causes. This network is open to both university graduates who have been with the Group for less than two years and young pilots who also work on the ground.

The JRT supports career starters in their integration into the Group and promotes the expansion of internal networks. At the end of 2008, the JRT had 515 members in Frankfurt, Hamburg, Munich, Cologne and Zurich. Currently, the 214 women and 301 men are distributed over five working groups with the emphases “Social Commitment,” “Guided Visits,” “Lectures,” “Communication” and “Culture.”

The team “Social Commitment,” for example, dedicates its free time to efforts aiding children and adolescents. By means of a raffle, they earned more than 1,000 euros to benefit a school project in Hamburg. One JRT effort in Frankfurt supported the association “Healing Children’s Hearts”: 27 children with heart disease experienced the world of flying firsthand during a visit to Frankfurt Airport in April 2008. JRT members also helped with the grape harvest in Erbach, located in Germany’s Rheingau region, to promote a worthy cause: The revenues from this charity event were used to benefit needy children and adolescents living in the Rhine-Main area. Moreover, in the context of a Christmas tree campaign, they collected gifts – large and small – from the employees of the Lufthansa Group to be distributed at an orphanage in Rödelheim and the Hermann Luppe House.

Since January 2008, SWISS has had its own network for young professionals: the Swiss Young Network (SYN). Already attracting 120 participants by the end of 2008, SYN has the same goals as the Junior Round Table and is organized in a similar way. As the two programs are interlinked, the JRT members living and working in the Zurich area can take part in all SYN events – and vice versa.

Education



Exciting classroom: clever heads in the cockpit.

Clever class trip with “Experience Knowledge”

Education is one of the most important resources for innovation, growth, affluence and progress. For this reason, Lufthansa has initiated and supported for many years educational projects designed to fill boys and girls of all ages with lasting enthusiasm for the world of aviation. One example is the school-related educational initiative “Experience Knowledge,” which the Group developed in cooperation with the Ministry of Education and Cultural Affairs of the state of Hesse.

Given the positive response to the first knowledge and experience days in November 2006, Lufthansa expanded “Experience Knowledge” in May 2008 with a DVD containing interactive teaching materials. The target audience encompasses pupils in the eighth to tenth grades at all types of schools. The company has since distributed about 7,000 DVDs to schools in all parts of Hesse. Moreover, this free educational offer enjoys strong demand from teachers in other German federal states. Schools in Austria and Switzerland and even universities have also shown lively interest in these multimedia learning and teaching materials on the world of knowledge surrounding civil aviation.

In October 2008, Lufthansa accentuated a further extracurricular trend by organizing a school competition in the framework of “Experience Knowledge.” Three winning classes – one ninth and two tenth grade classes from the Rhine-Main area – had the opportunity to immerse themselves for one day in the working world at Lufthansa. The focus was on gaining insights into a variety of training professions – including less well-known ones such as aircraft mechanic or specialist for warehouse logistics. Apprentices and heads of training welcomed the 65 young people between 14 and 17 years of age, showed them around Lufthansa Technik’s workshops and hangar in Frankfurt, and even encouraged them to try things firsthand. The goal was to provide practice-oriented perspectives to young people who are about to make career choices and to ease their transition into the working world. “Experience Knowledge” will be continued in 2009 as well.

→ www.lufthansa.com/erlebnis-wissen

“Technology for kids. Fascination Flying” – Entusing young is half the battle won

To familiarize children and adolescents with scientific and technological phenomena early on and to awaken their long-term interest in aviation, the starting signal was given in summer 2008 for a year-round program of events surrounding the successful lecture series “Technology for Kids. Fascination Flying.” This new educational initiative is a joint project of the Hamburg University for Applied Sciences (HAW) and the initiative “Aviation Location Hamburg,” which is supported by Lufthansa Technik.

The program got underway with a two-week summer camp for 30 young aviation enthusiasts currently searching for a professional orientation. In lectures and laboratories at the HAW, the adolescents aged 14 to 16 occupied themselves for two and a half days with topics such as cabin construction and aerodynamics in the wind tunnel. This was followed by two days of gathering practical experience – for example, by soldering, stamping and engraving in Lufthansa Technik’s training workshop and by taking a look behind the scenes in the area of aircraft overhaul. The second week served to deepen further the impressions and insights gathered at the companies the week before. The summer camp will again take place in 2009.

Aviation technology close up is also the objective of the "FascinationFlyingClub." With the participation of Hamburg-based aviation companies and suppliers – also including Lufthansa Technik in future – the club has offered monthly events for children aged eight to 12 and adolescents aged 13 to 16 since September 2008.

Taking place from February 11 to March 25, 2009, the fourth edition of the lecture series "Technology for Kids. Fascination Flying" again enthralled numerous children. One of the presenters was Captain Claus Cordes of Lufthansa Cargo, who answered the gripping question: "How do I steer an aircraft?"

→ www.technik-fuer-kinder.de

→ www.faszination-fuer-technik.de

business@school

EINE INITIATIVE VON THE BOSTON CONSULTING GROUP



An intelligent car radio and "hole-fix" – these creative business ideas helped Hessian high-school students to convince the jury of business@school. The first prize was donated by LSG Sky Chefs.



Mathematics delighted high-school students visiting the Lufthansa Aviation Center in Frankfurt on the occasion of the "Science Year of Mathematics."

business@school: Student entrepreneurs big time

Why do some companies flourish, while others just don't take off? To find answers to this question and many others from the realm of business, about 2,200 high-school students participated in business@school in 2008. The goal of this initiative, which was founded in 1998 by management consultants The Boston Consulting Group and has been supported by Lufthansa since 2002, is to familiarize students in grades 10 to 13 with business topics in a practice-oriented manner. Over the past ten years, the number of participating schools in Germany, Austria, Switzerland, Singapore, Italy and Norway has increased from two in the first project year to 80 in 2008/2009. To acknowledge the commitment of the companies participating in business@school, German President Horst Köhler – in his function as patron of the competition "365 Locations in the Land of Ideas" – awarded the distinction of "Selected Location 2008" to business@school.

In the project year 2008/2009, 43 Lufthansa employees have made a volunteer ten-month commitment to business@school. Of these, 26 come from the business segment Passenger Transportation, ten from Lufthansa Technik and seven from other areas of the Group. During their four to six visits to "their" schools, these "god-parents" not only teach key qualifications such as team work and time management but also train the students' entrepreneurial thinking. In addition, they impart insights into the structures of companies, explain key terms such as revenue, profit or progress report, and teach students how to read a balance sheet. Furthermore, they support the students in designing their own business ideas.

"Science Year of Mathematics": High-school students from all over Germany do their calculations with Lufthansa

Mathematicians are specialists in high demand. Without the complex knowledge of these "numerical wizards," modern aviation would not be possible. This also applies to Lufthansa, where mathematics play a central role in many corporate areas. In daily flight operations, for instance, pilots make numerous calculations, such as to determine fuel quantities or optimize navigation. The compilation of timetables and simulations also are the product of comprehensive calculations. To acquaint high-school seniors with the practical applications of mathematics, Lufthansa participated in the Science Year of Mathematics – an initiative of the Federal Ministry for Education and Research – by organizing, among other events, a "Mathematics Student's Day." On June 7, 2008, 150 young men and women from all over Germany were invited to the Lufthansa Aviation Center at Frankfurt Airport to learn more about a range of mathematics-related jobs. In the process, they calculated values such as the shortest flight route between Frankfurt and Vancouver. The prerequisites for participation: An online application on a dedicated Internet page and good grades in mathematics.



Lufthansa participates in the continuing education initiative "Africa's up and coming"

"Action is golden": Following this maxim, Lufthansa joined forces with 18 other leading German companies to found the qualification program "Africa's up and coming" in 2008. This first shared continuing education initiative of German business allows 20 junior managers from African countries south of the Sahara to live and work in Germany for one year. The starting signal was given on October 17, 2008 at the Lufthansa Aviation Center at Frankfurt Airport, where a first meeting between participants and representatives of the partner companies took place.

Since then, the young African managers have not only become more acquainted with the German language and culture, but they have also been following a number of management trainings. In addition, each participant spends two blocks of five months each at one of the partner companies to gather precious experience on the job. The goal is to apply the know-how gained in Germany in a focused manner once the participants have returned to their home countries. The eight women and 12 men are all university graduates with professional experience. They are from Kenya, Tanzania, Ghana, Rwanda, Namibia, Uganda, Zambia, Zimbabwe and Ivory Coast. More than 2,000 men and women applied for the program. The continuing education initiative "Africa's up and coming" is supported by the Robert Bosch Foundation and the Zeit Foundation.

→ www.afrika-kommt.de

In the context of the Science Year of Mathematics, Lufthansa set up two further events: Firstly, high-school students from the 11th grade upward were able to participate in an online mathematics quiz on aviation-related topics at → www.Be-Lufthansa.com. For a chance to win the main prize – a flight within Europe for the entire class – a total of 325 school classes got busy "crunching numbers." Secondly, a scientific symposium for Lufthansa's employees in Operations Research took place on June 13, 2008. The goal of the presentations by experts from research and practice and of the working groups was to improve the networks linking colleagues interested in mathematics.

A commitment to more fairness in opportunities

Lufthansa is the first DAX-30 company to support the educational initiative Teach First Germany, which aims at more fairness in opportunities for high-school students on their way to entering the job market.

At the the beginning of the 2009/2010 school year, about 150 outstanding graduates of German universities will start two-year volunteer teaching assignments at secondary schools located in socially troubled areas. These "fellows" are to be active beyond the classroom as well: They will supervise homework, tutor pupils, promote parental support, facilitate cooperations with companies offering professional training, carry out job-applications training and initiate the founding of student businesses. During their second year, they will also work on their own training and continuing education.

Lufthansa supports the career development of the first 150 fellows of Teach First Germany with free seminars on conflict management and intercultural competence at the Lufthansa School of Business. Furthermore, the initiative's graduates are to benefit from the attractive junior employee programs at the partner companies involved.

To ensure that this project is a success story, only graduates with excellent grades and a high degree of personal suitability are to be admitted to the program. A strict application and selection process has been put in place to accomplish this. These teachers-to-be will acquire the necessary didactical and pedagogical competence during a training phase comprising more than 300 teaching units. In addition, they will be accompanied by experienced pedagogues for the entire two-year period.

→ www.teachfirst.de

Sports

Lufthansa – The “Airline of Sports”

Without financial support from the state and business, high-performance sport is often not possible. For this reason, Lufthansa has been an active partner of sport for many years and has supported, among other organizations, the German Sports Aid Foundation (GSAF) since 2007 as its first “National Sponsor.”

To complement this commitment, Lufthansa increased the number of its sponsorships within the GSAF’s patronage program for highly talented young athletes from five to ten in 2008. With an eye on the 2010 Winter Olympic Games in Vancouver, Lufthansa accompanies young athletes competing in disciplines including Nordic combination, Alpine skiing and biathlon on their way to the summit in sports. Lufthansa reimburses individual sports-related costs of the ten up-and-coming athletes in the patronage program.

In addition, Lufthansa regularly supports the events organized by the GSAF, including the “Golden Sports Pyramid,” the “Sports Ball,” the “Festival of Encounter” and the “Elite Forum” in Liebenberg.

Partner of the German Olympic Sports Confederation

Sports sponsoring is an investment in the future of society. Beyond its commitment to the German Sports Aid Foundation, Lufthansa has supported both Olympic and Paralympic athletes for many years. In 2008, Lufthansa extended its contracts with the German Olympic Sports Confederation and the German Paralympic Sports Confederation and will thus accompany the German teams to the Winter Games 2010 in Vancouver and the Summer Games 2012 in London.



As the “Airline of Sports,” Lufthansa not only supports associations, clubs and teams traveling to sports events abroad but also participates in selected world and European championships held in Germany.

The different facets of Lufthansa’s commitment to sports are described in the current brochure “Lufthansa – Airline des Sports.” It can be ordered (in German) on the Internet at → www.lufthansa.com/verantwortung. In addition, Lufthansa has compiled everything sports fans might want to know about sports events on the Internet page → www.lufthansa.com/fanflug

Environmental Sponsorship Program

Protecting nature – Securing the future

To preserve biodiversity lastingly, Lufthansa supports German and international environmental and nature protection organizations. One area of emphasis is on the activities concerning the protection of threatened crane species and their habitats.

Species protection under the sign of the crane

The Lufthansa Environmental Sponsorship Program has been committed to the protection of cranes for more than 30 years. At least 11 of the 15 species of this majestic migratory bird around the world continue to be threatened by extinction. Protecting their breeding, resting and gathering areas consistently is the decisive lever to stabilize population numbers over the long term. Lufthansa works for this goal worldwide and closely cooperates with numerous nature and species protection organizations.



**Kranichschutz
Deutschland**

Location for a European Crane Center found

To provide a sound basis for the protection of the company's heraldic bird, Lufthansa joined forces in 1991 with Naturschutzbund Deutschland (NABU) and the environmental foundation WWF Deutschland to set up the Crane Protection Germany Working Group. In particular, Lufthansa supports the Groß Mohrdorf-based Crane Information Center, which is maintained by the Working Group: Thousands of cranes use the Rügen-Bock region in Mecklenburg-Western Pomerania as sleeping waters, breeding grounds and feeding area – a spectacle of nature that draws more than 15,000 people every year. As the number of visitors has exceeded existing capacities for many years, Crane Protection Germany is planning the construction of a new European Crane Center nearby. A suitable location southwest of the village of Günz has already been found. In 2008, Lufthansa supported the acquisition of eight hectares of arable land. Construction is expected to start in 2010.

Furthermore, Lufthansa participated in the realization of the traveling exhibit "Magic of the Cranes." Since its launch at Frankfurt's Senckenberg Museum of Natural History in 2005, the exhibit has described the fascinating world of the cranes and their importance to the world's arts, cultures and myths in many cities – including in 2008 at the Ostpreußisches Landesmuseum in Lüneburg and in 2009 in the Senckenberg Museum's natural history collection in Dresden.

Ethiopia: Counting cranes from the air

In 2008, Crane Protection Germany also advanced its international cooperation project "Eurasian Cranes *Grus grus* in Ethiopia." The project's goal is to declare the region surrounding Ethiopia's Tana Lake – extremely rich in bird species – a nature reserve as quickly as possible. According to bird counts, 95 percent of all crowned cranes living in Ethiopia are concentrated in this area.

In January 2009, representatives of Crane Protection Germany traveled to Spain's Extremadura region, to investigate the situation of the cranes in Europe's most important wintering area. Discussions with the Spanish nature protection organization Adenex ("Asociación para la Defensa de la Naturaleza y los Recursos de Extremadura") and with Lufthansa were also part of the program.





Lufthansa receives “Good Egg Award”

On the occasion of its 35-year anniversary, the International Crane Foundation (ICF) presented Lufthansa with the “Good Egg Award.” With this prize, the ICF honors individuals and organizations who have rendered outstanding service to the protection of cranes. Lufthansa received the award as a gesture of gratitude for its long-term support for the ICF. It was presented on September 27, 2008 in Baraboo, Wisconsin, where the International Crane Foundation has its headquarters.

→ www.savingcranes.org

In addition, Lufthansa supports the crane protection projects of the following nature and species conservation organizations:

euronatur



EuroNatur Foundation

Project countries: Spain and Israel

→ www.euronatur.org



Society for the Protection of Nature in Israel (SPNI)

Project country: Israel

NatureLife International

Project country: South Africa

→ www.naturelife-international.org



South African Crane Working Group

Project country: South Africa

→ www.ewt.org.za



Earth Day 2008: Lufthansa informed its customers in the USA and Canada via publications and videos about its commitment to environmental care.

Earth Day and “Green Ambassadors” – Lufthansa’s commitment in North America

In 2008, Lufthansa took part in Earth Day in North America for the first time. This day is celebrated annually on April 22 in more than 150 countries worldwide and bundles a broad range of activities that help to protect the environment. Lufthansa took advantage of this day to inform its customers at all 22 stations in the USA and Canada through publications and videos on its commitment to environmental issues.

Earth Day quiz: The winner was clear in advance

In addition, Lufthansa organized a quiz in the context of Earth Day to benefit the Arbor Day Foundation, a charitable U.S. environmental protection organization. For each participation card passed out at check-in and completely filled out by Lufthansa passengers, the foundation planted a tree in California. The organizers were satisfied with the results of the Earth Day quiz: “Thanks to the lively participation of our customers, the Arbor Day Foundation was able to plant a total of 2,000 trees,” enthuses Jennifer Urbaniak, Lufthansa’s media spokeswoman in New York, who coordinated the campaign countrywide. All the more so, as within a few weeks in summer 2008 alone 3,400 hectares of forest fell victim to fires. Furthermore, Lufthansa matched all donations to the HelpAlliance collected on Earth Day on board its North America flights with an equal donation to the climate protection initiative “myclimate.”

“Green Ambassadors” named

Lufthansa took Earth Day 2008 as the occasion to name several “Green Ambassadors” in North America. All Lufthansa employees, they coordinated and enthusiastically supported Earth Day at the various stations. However, their commitment did not end on the evening of Earth Day. In fact, they are active year-round to launch environmental protection projects at the local level and in their own offices. Within their regions, they also act as the first contact for colleagues who would like to contribute ideas concerning environmental and sustainability issues.



Volunteer commitment: Numerous colleagues, girl scouts and Nassau County Executive Thomas R. Suozzi (center) participated in the cleanup campaign of the nature conservation area Roosevelt Preserve organized by Lufthansa employee Alexander Schleifer.



Ceramic instead of plastic

Take Green Ambassador Steven Conn, for example. An account manager at Lufthansa in Washington, he was able to win over a local chain of coffee shops to an idea for a cooperation: To reduce the consumption of disposable cups, Lufthansa provided them with reusable ceramic cups, which customers could take home as a gift. Environmentally conscious customers were further rewarded by getting a second cup of coffee at half price. In addition, Steven Conn made sure that motion detectors were installed at Lufthansa’s city office in Washington in order to cut electricity consumption. Alexander Schleifer, an office employee in East Meadow, near New York, organized a big cleanup campaign for his part: Together with colleagues, the Green Ambassador cleaned up plastic waste and other refuse in a nearby nature conservation area, Roosevelt Preserve. And in Portland, Oregon, used newspapers and magazines that come off Lufthansa aircraft no longer go into the trash but are used in classrooms all over Oregon during German classes – another idea launched by local Lufthansa employees and honored in 2008 by the magazine Condé Nast Traveler with a “World Savers Award.”

Long-standing nature and species protection

However, Lufthansa has been actively committed to environmental protection in North America since long before Earth Day 2008. The Group also supports the international lake network “Living Lakes,” which counts two partner lakes in North America: Mono Lake in California and the Columbia River Wetlands in Canada. And the International Crane Foundation (ICF), which is dedicated to the protection of the crane, has been able to count on Lufthansa’s support for more than 20 years – in North America, home to two especially endangered crane species, and elsewhere.



Ten years of Living Lakes – Ten years of support from Lufthansa

The Earth’s lakes and wetlands are habitats for numerous animal and plant species, and also fulfill an important role as drinking water reserves. Pursuing the goal to protect and conserve lakes and wetlands lastingly, the international environmental foundation Global Nature Fund (GNF) founded the international lake network “Living Lakes” in 1998. Lufthansa has supported this initiative, which celebrated its tenth anniversary in June 2008, from “day one” with financial and logistical means and with accompanying communication efforts. The project currently counts 55 lakes and wetlands worldwide – including the Pantanal in Brazil and Lake Baikal in Russia.



Living Lakes not only commits itself to the protection, renaturation and rehabilitation of lakes and wetlands, but also actively contributes to the environmentally and socially compatible development of lake regions. The initiative functions as a forum for professional exchange between the partner organizations associated with the network. Such exchange is important, as the challenges and possible solutions are usually similar in the different lake areas.



With the goal of imparting enthusiasm for nature and lake conservation to employees and their family members, Lufthansa has been a partner since 2004 for the “Nature Summer Camps” initiated by the GNF and traditionally set up in Living Lakes regions. In 2008, the two- to three-week active holidays took their participants to South Africa (“Nature Experience Camp”) and India (“Nature and Social Camp”).
→ www.globalnature.org

First international environmental protection auction: Lufthansa successfully “buys” endangered jaguar in the Pantanal

Going, going, gone: At the first international environmental protection auction, which took place on May 29, 2008 in Bonn, Lufthansa made the highest bid for the protection of endangered jaguars in Brazil’s Pantanal region. With this amount, the company contributes to the conservation of the biological diversity in the Earth’s largest inland wetland. Only an estimated five jaguars, the world’s third-largest member of the cat family, still live and hunt there. The auction complements the support the Pantanal currently receives in the framework of the cooperation between Lufthansa, Living Lakes and Miles to Help (see also the articles “Ten years of Living Lakes – Ten years of support from Lufthansa” on page → 103 and “The alternative for committed customers: Donating miles for a worthy cause” on page → 96).

The funds generated by the auction allow these nature protection organizations to continuously monitor the jaguar population by means of digital camera traps and to develop measures that secure the animals’ long-term survival. The nature protection auction was launched by a joint initiative of the environmental foundation Global Nature Fund and the Dutch organization Triple E. It took place for the first time as part of the 9th UN Conference on Biological Diversity (COP9) in Bonn. The auction’s symbolic character also helped to generate publicity that raised awareness of the issue of biodiversity.



ONE NATURE • ONE WORLD • OUR FUTURE
UN Conference on Biological Diversity Bonn 2008

In the context of Lufthansa’s commitment to the initiative “Naturallianz,” the company was represented with an information stand at the “Plaza of Diversity,” set up by the Deutsche Bundesstiftung Umwelt (DBU) in parallel to the UN Conference on Biological Diversity. The goal was to inform about the company’s commitment to the area of environmental sponsorship.
→ www.plaza-of-diversity.org

Bonn Convention: A voice for the nomads of the animal world

Be they migratory birds, marine mammals, bats or antelopes – migratory animals are ambassadors for species diversity. Scientists estimate their number at 8,000 to 10,000 species worldwide. To protect this natural wealth, the Bonn Convention on the Conservation of Migratory Species of Wild Animals (CMS) has taken up the cause of protecting nomadic species in the wild since 1979. Wars, population growth, tourism, fishing and the effects of climate change all reduce their habitats further and further.

To expand the available knowledge on the living, feeding and breeding habits of species that cross national borders and to help develop meaningful protection measures, Lufthansa has endowed an international dissertation prize since 2004 in cooperation with the magazine National Geographic Deutschland. On December 2, 2008, the “UNEP/CMS Thesis Award” was given for the second time on the occasion of the 9th CMS Conference in Rome. It was presented to South African biologist Samantha Lara Petersen, whose research highlighted the ecological effects of by-catch as it occurs in deep-sea fishing. Every year, more than 20,000 sea birds alone – including those of eight threatened species – perish in the trawl and long-line nets



Lutz Laemmerhold, Director Public Relations at Lufthansa, presents the South African biologist Samantha Lara Petersen with the “UNEP/CMS Thesis Award,” endowed by Lufthansa and National Geographic Deutschland.

of fishing vessels plying the waters off the coasts of South Africa. 32 young researchers from 18 countries competed for the research prize, which is awarded every three years and offers prize money of 10,000 euros.



Support group “Friends of CMS”

Moreover, Lufthansa is a founding member of the support group Friends of CMS, an initiative that includes representatives from business, politics, science and the media. The group supports, among other initiatives, the “UN Year of the Gorilla 2009.” The goal of this United Nations’ campaign is to save these highly endangered anthropoid apes from extinction. In September 2008, Friends of CMS also sponsored a professional event of the Frankfurt Zoological Society, at which experts consulted on measures to protect biological diversity (see also article “Frankfurt Zoological Society: Dialogue among nature conservationists” on page → 107).

In the framework of its commitment to Friends of CMS, Lufthansa financially supported the creation of the group’s website → www.friendsofcms.de in 2008. Since early 2009, interested visitors have been able to find comprehensive information concerning the activities of the support group. To promote achievement of the Bonn Convention’s goals, Lufthansa also makes logistical capacities available. In this way, the company facilitated an exchange of experiences concerning the protection of marine turtles in March 2008: Experts from around the world came to Africa to participate in the conference organized by the CMS.

→ www.cms.int

→ www.friendsofcms.de



Tarsier made by Steiff: A symbol for the protection of the rain forest

As the destruction of the world’s rain forests advances, biological diversity invariably declines. The tarsier (*Tarsius syrichta*) – a small nocturnal lemur with enormous eyes, indigenous mainly in Indonesia and the Philippines – symbolizes the protection required by irreplaceable animal and plant species. To contribute to the conservation of the tarsier’s habitats, Lufthansa and NatureLife-International launched the tarsier as a stuffed animal in 2008, exclusively for the Rainforestation Farming project. NatureLife-International receives 5 euros from the sale of each tarsier, which is manufactured as a limited edition by stuffed-animal specialist Steiff.

Rainforestation Farming: Making a meaningful link between nature and culture

For about ten years, Lufthansa has supported the model project Rainforestation Farming on the island of Leyte in the Philippines – a joint initiative of the foundation NatureLife-International, Hohenheim University and Visayas State University. By pursuing the goal of reforesting cleared areas of rain forest and giving poverty-stricken people a viable perspective for the future, Rainforestation Farming interlinks building blocks from ecological agriculture with those from sustainable forestry. More than 30 trial areas have already been restored using this method.

Successful application in China too

The rainforestation-farming method has also been used in China since 2007. There, NatureLife-International in cooperation with the Tian Zi Biodiversity Research & Development Center and the Bulang Heritage Foundation have succeeded in recultivating to a near-natural state five hectares of land severely damaged by opium plantations in the Bulang mountains in the Xishuangbanna Province. Further areas are to follow.

In a complementary move, the foundation also supports the interdisciplinary project “Living Landscapes China” (LILAC), carried out by the universities in Hannover, Passau, Kassel, Berlin, Gießen and Hohenheim. Among other aspects, LILAC investigates how the remaining primeval forests in the country’s southwest – home to the last elephants in China living in the wild – can be conserved long-term. For this purpose, the scientists have developed a concept to export the produce cultivated in the framework of Rainforestation Farming to Europe; examples include ginger, orchids and spices. As this approach generates added value which exceeds the farmers’ own needs, further incentives are created to protect their own natural environment.

Moreover, scientists from Germany and China are currently developing a geoinformation system to collect data on soil and weather conditions, population density, flora and fauna. This information is to indicate which areas in China would be suitable candidates for Rainforestation Farming. Lufthansa provides logistical support in the framework of this project.

Nature protection, the battle against poverty, and sustainable development are three elements that are linked in another project, also located in the Bulang Mountains. There, members of the mountain people "Dai" harvest and sell tea made from the golden orchid, which grows in the region's last natural tea forests. One-hundred percent of the blossoms and leaves of *Dendrobium chrysotoxum* come from certified harvest in the wild and are set to be sold in Europe as well.

EURONATUR

Europe's "natural treasures" in the viewfinder – Lufthansa supports EuroNatur's photo competition

In its 15th year of existence, the EuroNatur photo competition concluded with a record: 320 photographers from 25 countries submitted 1,500 fascinating photographs of Europe's "natural treasures" in 2008 – more than ever before. The non-profit foundation EuroNatur organizes this competition in cooperation with Lufthansa, the magazine natur+kosmos and the international nature-and-animal film festival NaturVision. A jury selected the 12 most beautiful photographs on April 28, 2008 in Stuttgart. These unique shots can be admired in the EuroNatur wall calendar 2009 – including robins in hoarfrost, fighting wading birds, cranes in a blizzard, or a Hungarian marsh woods landscape. Moreover, the winning entries were shown in the August issue of natur+kosmos and are accessible on the Internet pages of EuroNatur and NaturVision.

Lufthansa supports the sale of this calendar to its employees by offering a discount of 4 euros per copy. Revenues benefit the foundation's nature protection projects, which serve the conservation of threatened European landscapes and species. Offering attractive prizes, the EuroNatur photo competition will again take place in 2009. In autumn, the most captivating photos will receive a prize in the context of an exhibition and then be used as subjects for the EuroNatur calendar 2010.

→ www.euronatur.org



Frankfurt Zoological Society: Dialogue among nature conservationists

In the context of its Environmental Sponsoring, Lufthansa also supports the exchange of expertise between the employees of the Frankfurt Zoological Society (ZGF) and nature-and-species-protection organizations around the world. Furthermore, the company makes transport capacities available to facilitate the transfer of knowledge between experts from developing and emerging nations. For many years, Lufthansa has also maintained an animal sponsorship for two Japanese cranes at the Frankfurt Zoo.

As a founding member of the support group "Friends of CMS" (Convention on the Conservation of Migratory Species of Wild Animals or Bonn Convention), Lufthansa also promotes a partnership contract with the UNEP/CMS Secretariat of the United Nations signed by the Frankfurt Zoological Society in December 2008 on the occasion of the UN Conference on Biological Diversity in Rome. The goal is to join the forces of the two organizations during the "UN Year of the Gorilla 2009" for the benefits of threatened animal species (see article "Bonn Convention: A voice for the nomads of the animal world" on page → 104)

→ www.zgf.de

Species-appropriate and safe animal transport

Lufthansa Cargo transports "living freight" only if the rules of the "Live Animal Regulations" of the International Air Transport Association (IATA), the worldwide industry organization of airlines, are met and the shipment is in accord with the Washington Convention on International Trade in Endangered Species of Wild Flora and Fauna (CITES). Each of the more than 20,000 annual animal shipments is preceded by a strict verification procedure. Animals without official proof of origin do not travel, nor do animals caught in the wild. The same yardstick is applied to animals threatened by extinction, whose trade is forbidden according to Annex 1 of CITES. The only exception made is for shipments between zoos.

In addition, the "Frankfurt Animal Lounge," the new animal handling center which Lufthansa Cargo inaugurated in February 2008, meets the stringent EU rules concerning hygiene and veterinary medicine. Here, the freight airline proves its quest for quality and innovation once again. On a surface of almost 4,000 square meters, all departments necessary for handling shipments in accordance with the animals' needs are located close to each other.

SWISS

SWISS – Ensuring long-term viability

Overall, 2008 was a good year for SWISS – thanks again to the lasting synergies with Lufthansa. SWISS grew more profitably and strongly than the market and was able to follow up its successes of recent years. The company strives to remain profitable even during economically difficult times, in order to continue to invest in its fleet and products and to maintain its route network.



Editorial **SWISS invests in a modern fleet**



Taking a responsible approach to environmental concerns remains a basic component of corporate culture at SWISS, even during times of economic turbulence. In accord with the entire air transport industry, SWISS advocates sustainable ways of interacting with the environment. Our investments of well over 2 billion Swiss francs in the renewal of the Airbus A330 fleet with A330-300s from 2009 and the European fleet with the Bombardier CSeries from 2014 are significant steps in this direction. These new aircraft will further lower specific fuel consumption and reduce noise emissions, in part drastically. Our modern fleet and these new aircraft in particular help us to provide our customers with the highest levels of quality in every detail and to fulfill our responsibility for environmentally compatible mobility. This approach will ensure our company's long-term viability and allow SWISS to continue to offer attractive, secure jobs in the future.

Christoph Franz

Chief Executive Officer, Swiss International Air Lines

SWISS at a glance

		2008	2007	change
Operating business				
Revenue	million CHF	5,267	4,895	+ 76%
EBIT ¹	million CHF	507	542	- 6.5%
Employees ²		7,366	7,160	+ 2.9%
Transport performance				
Fleet (operating)	aircraft	78	74	+ 4
Destinations		76	71	+ 5
Passengers	million	13.5	12.2	+ 10.3%
Freight carried ³	million tkm	1,227	1,162	+ 5.6%
Seat load factor	percent	80.3	80.2	+ 0.1 PP
Freight load factor	percent	77.6	84.6	- 7.0 PP
Environment				
Fuel consumption ⁴	million tonnes	1.26	1.13	+ 11.5%
Specific fuel consumption, passenger transportation (actual load factor)	liters/100 pkm	3.85	3.85	± 0.0%
CO ₂ emissions absolute ⁵	million tonnes	3.96	3.56	+ 11.2%

1 To align its accounting principles to those of its parent company Lufthansa, SWISS adopted a new accounting policy on January 1, 2008 of including the impact of currency movements on the end-of-period valuation of its net working capital in its EBIT result. EBIT for 2007 has been recalculated and restated for comparability purposes, and is now CHF 29 million lower than previously stated.

2 As of October 1, 2008, 484 employees of SWISS Technik changed over to Lufthansa Technik Switzerland.

3 Including mail.

4 Including consumption of wet leases under SWISS flight numbers.

5 New calculation method from 2008, newly calculated for 2007. Therefore, these values have changed slightly compared with the values published earlier.

Our business

SWISS – Switzerland’s national airline

For SWISS, 2008 was characterized by significant growth. Switzerland’s national airline achieved double-digit growth for the third year in a row.

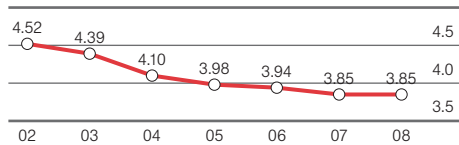
SWISS created several hundred new jobs in Switzerland in 2008 – especially in the area of flying personnel – and even expanded its route network slightly. In 2008, the airline served 76 destinations on four continents and carried 13.5 million passengers aboard its fleet of 78 aircraft.

Switzerland’s national airline embodies many typically Swiss values, such as “personal care”, “quality in every detail” and “typically Swiss hospitality” – we do our best to ensure that our passengers feel right at home. SWISS is committed long-term and at various levels to an economical use of resources and sees a responsible course of action with regard to the environment as a basic component of its corporate culture. As a part of the Lufthansa Group and a member of the Star Alliance, SWISS maintains its mission to be a quality airline connecting Switzerland with Europe and the rest of the world.

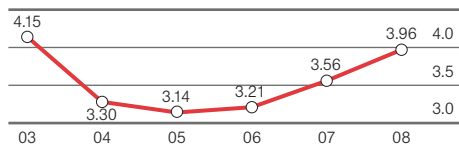
Environment

SWISS – Flying smart for the environment

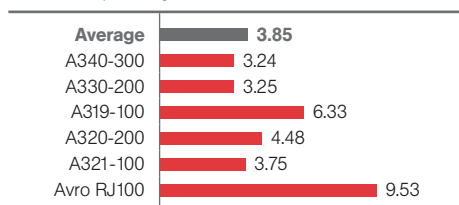
Specific fuel consumption in passenger operations¹
in liters/100 passenger kilometers



Absolute CO₂ emissions of the SWISS fleet²
in million tonnes



Specific fuel consumption by type of aircraft in passenger operations (2008)
in liters/100 passenger kilometers



Stable environmental ratios despite increased capacities

Working from a solid economic base allows SWISS to meet the high standards it has set for itself and to make ecological investments. SWISS has implemented numerous measures to further lower its fuel consumption, particularly in the area of weight reduction. At the same time, the fleet aged by one year. And aging increases the engines’ fuel burn, even when aircraft and engine maintenance are excellent. Nevertheless, SWISS was able to keep its specific fuel consumption at the previous year’s outstandingly low level. In 2008, it amounted to 3.85 liters of kerosene per 100 passenger kilometers. This consumption value continues to be among the lowest in the airline industry. We are proud of this achievement.

A change in calculation methods analogous to the one at Lufthansa as of 2008 (with recalculations for 2006 and 2007) now allows the distribution of emissions between freight loaded and passengers transported. The CO₂ emissions for freight in 2008 were 840 grams per tonne kilometer (2007: 820 grams).

Fleet renewal

Investments of significantly more than 2 billion Swiss francs in new aircraft

SWISS continuously invests in new, state-of-the-art aircraft for both economic and ecological reasons. From spring 2009, SWISS has begun replacing its Airbus A330-200s with modern Airbus A330-300 long-haul aircraft. The first A330-300 started operations in April. Compared with the predecessor model, these aircraft consume about 13 percent less fuel per passenger. The main reason for this is the substantially higher number of seats on the new A330-300s as compared to the predecessor model. Simply put, more seats mean lower specific fuel consumption. The aircraft’s more advanced and more fuel-efficient engines are another important factor.

¹ 2002 – 2005 including freight and wet leases. New calculation method from 2006 excluding wet leases.

This allows us to show the values for freight and passengers separately.

² Including wet lease.



The new-generation CSeries will help SWISS to lower its fuel consumption substantially.

CSeries – Facts and figures

Operating costs:	minus 10 percent
Fuel consumption:	minus 25–30 percent
CO ₂ emissions:	minus 90,000 tonnes per year
Noise emissions:	10–15 dB quieter

SWISS sets new benchmarks in environmental compatibility

SWISS is also investing in its European fleet and, starting in 2014, will replace its Avro RJ100s with a new generation of aircraft over the space of about two years. Thanks to the most advanced engines and high-tech materials, the CSeries aircraft manufactured by Bombardier set new benchmarks with regard to economic efficiency and environmental compatibility. High levels of passenger comfort, low operating costs, significantly quieter engines and lower CO₂ emissions are the key criteria that led SWISS to decide in favor of the CSeries. With the “geared turbofan” manufactured by Pratt & Whitney, engines featuring the very latest technology are set to go into operations. Lightweight materials, such as new aluminum alloys and carbon fibers, mean an important reduction in weight. As a result, the CSeries will enable SWISS to reduce its fuel consumption substantially, by more than one-quarter when compared with the Avro fleet. CO₂ emissions will be lowered by about 90,000 tonnes per year – the equivalent of the CO₂ emissions of 7,000 flights between Zurich and London City. A CSeries aircraft is 10 to 15 decibels quieter than an Avro RJ100 – for the human ear, this means cutting the perceived noise by more than half. In this way, SWISS also lives up to its responsibilities toward the people living in the vicinity of airports.

However, airlines are faced with limitations when it comes to fleet modernizations. Currently, there are no technological alternatives available for the most frequently operated aircraft types worldwide, the Airbus A320 and the Boeing 737. Manufacturers have been working for a long time to develop an engine that combines greater fuel efficiency with more performance, aiming at a reduction in fuel burn of 30 percent. At the moment, they hold out this as a prospect for 2020. SWISS has set itself the goal of counting among those airlines whose healthy profitability allows them to finance and operate the latest low-emissions, low-noise aircraft as early and as quickly as possible.

Innovations on the new A330-300s

In the context of acquiring new aircraft, SWISS has been able to implement a number of innovative improvements. For example, fitting the SWISS Business seat with an air cushion makes it about 4 kilos lighter when compared with using conventional seat foam. This world premiere was developed in Switzerland in close cooperation with SWISS and underscores the company’s innovative strength. Less weight means lower fuel burn – and the SWISS Business seat will not only be installed on the new A330-300 fleet but also replace the Business Class seats on the existing Airbus A340s. This new seat technology alone will help SWISS to avoid burning more than 650 tonnes of kerosene per year and simultaneously reduce CO₂ emissions by more than 2,000 tonnes.

Another example illustrates just how much every kilo counts: Using a more lightweight material for the service trolleys employed aboard aircraft leads to a weight reduction of about 240 kilos per aircraft, and simultaneously makes working with them more comfortable. This measure lowers the fuel consumption of the new A330-300 fleet by another 380 tonnes of kerosene, which corresponds to 1,200 tonnes of CO₂. An additional positive effect: Thanks to the new materials, the trolleys’ life span is also substantially longer.

Alongside such technological advances, an aircraft’s utilization also plays a significant role with regard to its specific fuel consumption. It makes good economic and ecological sense to adapt the capacities offered to the market situation. SWISS has been exceptionally successful in accomplishing this. The airline increased its seat capacities and managed to sell this additional offer in its entirety. The seat load factor

Examples of measures in the context of the Four-Pillar Strategy

- Precise route calculations and thus accurate forecasts regarding kerosene burn, helping to reduce the quantity of fuel carried in aircraft tanks.
- Selection of shorter routes, especially on long-haul flights, as much as this is politically feasible.
- Direct flight routings, especially within Europe.
- Direct procedures for landing approaches (in cooperation with airports and air traffic control).
- Engine start-ups only after takeoff clearance has been secured (waiting at the terminal instead of on the runway with engines running).
- Reduction of weight loaded on aircraft.
- Investment in more lightweight seats (completed on European fleet, long-haul fleet from April 2009).

of 80.3 percent for 2008 remains at the high level of the preceding year. Thus, its aircraft utilization – measured in terms of both seat load factor and freight – is above average when compared with that of other European airlines.

Four-Pillar Strategy in Environmental Policy

In accord with the aviation industry, SWISS works for a continuous reduction of greenhouse-gas emissions. This commitment is based on four pillars:

- **Technological progress** (e.g. low-emissions engines, more lightweight aircraft)
- **Improved infrastructure** (e.g. more efficient use of airspace and airports)
- **Operational measures** (e.g. shorter and more direct flight routes, fuel-saving procedures for approach and departure)
- **Economic measures**

In favor of a global emissions trading system

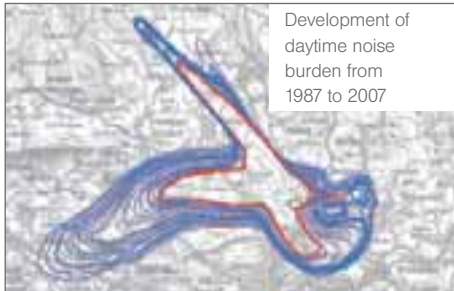
As a fourth pillar, economic measures are to create incentives to reduce CO₂ emissions. Examples of positive incentives include tax reductions or financial support to accelerate roll-over. Another instrument is emissions certificates: According to new European Union (EU) regulations, airlines must compensate part of their CO₂ emissions with emissions certificates from 2012 onwards. The relevant EU guideline provides that this obligation will also be applied to airlines from non-EU states. However whether EU laws are able to obligate non-EU airlines to compensate their CO₂ emissions when their aircraft fly outside EU airspace remains a contentious issue.

SWISS considers an open Emission Trading System (ETS) an appropriate means to reduce CO₂ emissions. However, trading emissions rights should only be used to reduce CO₂ emissions that cannot be avoided by other measures. Furthermore, trading emissions rights must not distort competition. The Emission Trading System presented by the EU does not fulfill these criteria. In a globalized industry such as air transport, a regional solution leads to a massive additional financial burden for European airlines and puts them at a disadvantage vis-à-vis their competitors from outside Europe. Moreover, the EU is actually introducing a hidden tax with the planned auction of emissions certificates. Therefore, SWISS rejects this regional solution. It advocates a global ETS that covers all states and airlines with a neutral effect on competition. SWISS is working together with other airlines on a proposal being formulated for the ICAO (International Civil Aviation Organization).

Implementation of a standardized European airspace thwarted by lack of political will

For more than two decades, Europe's airlines have been advocating the realization of a Single European Sky (SES) at long last – and that air traffic control manage the airspace over large areas and across national borders. From the perspective of SWISS, it is an unacceptable failure of European politics that this project has still not been implemented despite the fact that introducing SES would reduce fuel consumption in Europe by up to 12 percent. So far, however, the necessary political will has been lacking.

At least Switzerland's civil and military aviation authorities – together with their counterparts in Belgium, France, Germany, Luxembourg and the Netherlands – have taken a first, promising step. In November 2008 they signed a treaty providing for the creation of a joint functional block of airspace, dubbed FABEC (Functional Airspace Block Europe Central).



Development of daytime noise burden from 1987 to 2007

Area with noise burden over 60 dB.
 Laq = 60 dB (Day IGW ES II)
 — 2007 — previous years
 Source: Unique

Innovation means less noise

SWISS counts on innovative technologies to reduce its noise emissions. Over the past 20 years, the area surrounding Zurich Airport strongly affected by aircraft noise has shrunk by about two-thirds despite the fact that the number of aircraft movements has increased by almost 50 percent. And this development is not over yet. In the context of the fleet renewal that replaces the long-haul Airbus A330-200s with new Airbus A330-300s, noise emissions will be reduced even further. The Rolls-Royce Trent 772 engines of the Airbus A330-300s are currently the quietest available in their performance class.

The airport as a controversial political issue – SWISS takes its neighbors' concerns very seriously

SWISS's home base, Zurich Airport, is an important engine for the Swiss economy. Over the years, numerous companies have located near the airport. Thousands of jobs have been created not only by companies active at the airport itself, but also in surrounding companies that benefit directly or indirectly from their proximity to the airport.

However, areas close to the airport are equally attractive for residential construction. Over the last two decades, thousands of new housing units have been built. As a result, the country's most important transport hub is now surrounded by densely populated residential areas.

SWISS takes the concerns of people living – in Switzerland and in neighboring Germany and France – in the vicinity of its hub airports very seriously. As a concession to local residents, SWISS has agreed to extending the ban on night flights to seven hours, as set out in the future operations regulations in Zurich. However, the key condition for this remains that SWISS will be able to use Zurich Airport without restrictions during the remaining hours of operations. Worldwide, no other airport with an intercontinental hub knows an absolute ban on night flights like the one already in effect in Zurich today. Any further restrictions on operations would above all affect SWISS.

Communications

The thirst for knowledge on subjects related to aviation and the environment is considerable. This is evidenced by the numerous inquiries that reach SWISS. The airline wants to make this knowledge available to a wide range of publics in easily understandable language, thus helping to render the often emotional public debate more factual. To this end, the Internet page on environmental issues at → www.swiss.com was redesigned and expanded in spring 2009. Here, SWISS provides information about the environment and aviation in general as well as specific data on its continued efforts in this area. Special care has been taken to clearly distinguish between facts and positions.

Social responsibility

SWISS as an employer

Attractive jobs

In surveys conducted in Switzerland, SWISS has firmly established its position among the leaders when it comes to the question of the country's most popular and most attractive employer. Provided it will remain possible for the airline to grow in line with demand at its home base in Zurich, it will also be possible to maintain and expand the number of jobs it offers – insofar as macroeconomic developments do



SWISS has created jobs above all in the area of flying personnel.

not force the company to take countermeasures. This rule of thumb remains valid: Each long-haul aircraft added to the fleet brings with it directly about 110 jobs at the airline plus indirectly 100 jobs at suppliers while inducing another 100 jobs in Switzerland. This leads to significant added value for Switzerland as a business location. Over the past three years, SWISS has created more than 1,000 jobs.

Lifelong learning and change are fixed components of a dynamic working environment such as the one at SWISS. The company offers its employees the opportunity to take part in internal training courses (e.g. in management, project management and soft skills). Career starters and other employees who distinguish themselves with high-level performance may be selected for special development programs. Besides the possibilities of focused professional development, these programs also offer a platform for networking to other areas within the company.

Young employees who have just started their work at SWISS may join the SWISS Young Network. Members of this network meet regularly for lectures, guided visits or informal exchanges. The network's goal is to facilitate the integration of new employees, the exchange of experience between departments and the creation of social networks within the company.

In 2008, SWISS employed 108 women on a management contract, which represents 21 percent of all management positions. Furthermore, 77 people completed internships at SWISS, and the company employed 20 apprentices.

In the area of training and development, the company carried out 250 training days as well as individual development measures for its personnel on the ground. Beyond that, employees in management positions have the option of a short break either to "recharge their batteries" or to take continuing education courses. For this purpose, all managers are allowed a certain number of days off per year, which can alternatively be accumulated over several years. These days off can be used for health-promoting holidays, wellness measures or continuing education. In addition, SWISS contributes up to a set amount to the costs for hotels, treatments or continuing education courses.

2008 was a successful year for SWISS, and the company's employees shared in this success as well. Besides the profit-sharing schemes for managers, SWISS also offered a corresponding model and a voluntary one-off bonus for employees working under collective wage agreements.

Companywide health management

This summer, the airline will launch a comprehensive, companywide health management system for its employees called "SWISS Health Care."

This new health management system is a further measure to position SWISS as an attractive employer over the long term. SWISS focuses on the health of its employees both as an expression of its appreciation and as a recognition of its social responsibility. The measure is also aimed at boosting the employees' job satisfaction as well as their physical and mental presence at the workplace. An effective and comprehensive internal health management system gives our employees the opportunity to select from a wide range of offers and measures with a preventative character. Furthermore, they can opt for professional support in difficult health-related situations. In the final analysis, only healthy employees are able to perform effectively.

Special Assistance Team SWISS

In the Special Assistance Team SWISS (SATS), the airline has put together a high-performance unit to look after in an optimal manner individuals and their relatives who might be affected by an incident or accident in flight operations. SATS is also part of the emergency protection team of Canton Zurich, which it supports in the event of incidents in flight operations and other types of accidents in the canton. SATS's 430 volunteer members comprise employees at SWISS and other partners, all of whom participate regularly in continuing education days in order to be prepared for future events.

A commitment to society

SWISS assumes its corporate responsibility for society and – together with its employees – commits itself to supporting activities in the areas of social issues, culture and sports.



Thanks to donations made by SWISS passengers, a "SWISS House" could open its doors in Phuket, Thailand.

One more "SWISS House" at SOS Children's Village

There could hardly be a more representative example of social commitment than this joint effort between SWISS and its customers. Combined support from the airline, its employees' long-established children's aid organization and its passengers' inflight donations has made possible yet another relief project benefitting disadvantaged children in a "Third World" nation.

In January 2009, the SWISS House was inaugurated at the newly-opened SOS Children's Village in Phuket, Thailand. The construction of the SWISS House, one of 12 new houses opening their doors to the Village's young residents, was financed by the generous donations of the airline's passengers. The children's living expenses and care are funded by the SWISS Staff Foundation for Children in Need. In November 2007, a SWISS House was inaugurated in Dar es Salaam, Tanzania.

In 2007, SWISS passengers donated a total of over 150,000 Swiss francs, either on board aircraft or at the airports. The donations that the company collected in 2008 came to a similar amount.

Music, film, the arts and sport

By investing in long-term, stable partnerships, SWISS aims to bring its values of "personal care", "quality in every detail" and "typically Swiss hospitality" to life. In doing so, SWISS counts on continuity so that its customers, partners and employees may benefit fully from this commitment.

SWISS concentrates its sponsoring activities on the internationally renowned cultural and sports events of the Top Events of Switzerland association. The high quality of these events and their attractive hospitality platforms support the values of SWISS in an optimum manner. Moreover, SWISS also works with selected image partners and internationally renowned institutions in Switzerland, including its long-standing cooperation with the Zurich Opera House. In sports, SWISS concentrates on the Omega European Masters, a prestigious golf tournament held each year in Crans-Montana, and World Class Zurich, reputed to be the world's finest track-and-field meet. In addition, SWISS is proud to be Roger Federer's official and preferred scheduled airline. SWISS handles the Swiss tennis ace's air transportation, flying him and his support team safely and reliably to tournaments around the globe.

Furthermore, SWISS supports the junior team of the Kloten Flyers, a professional ice hockey club, with a significant sum each year and assists sports associations in the communities surrounding Zurich Airport.

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Glossary

3C – Combat Climate Change The 3C initiative comprises globally active companies which are committed to climate protection. The initiative's goal is to demonstrate global approaches to solving a global problem. Lufthansa joined the 3C initiative in 2007.
→ www.combatclimatechange.org

ACARE Advisory Council for Aeronautics Research in Europe. Created in 2001, the ACARE council consists of representatives from the EU member states, EU Commission, Eurocontrol, the European aerospace industry, research institutions and others. Its main task is to develop and implement the strategic research agenda (SRA) for Europe's aerospace sector.
→ www.acare4europe.org

AEA Association of European Airlines.
→ www.aea.be

ASPI Advanced Sustainability Performance Index. Lufthansa features in the ASPI Index, which was set up in 2001. This index depicts the financial performance of the 120 best companies of the Dow Jones EURO STOXX according to the criteria of sustainability. The prerequisite for being listed in the ASPI Index is the systematic integration of the long-term interests of stakeholders in the context of corporate policy, strategy and activities. The index is run by the agency Vigeo in cooperation with Stoxx Ltd.
→ www.vigeo.com

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 the stratosphere, lying above that. 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 8 to 12 kilometers above sea level at the poles. The temperature in the tropopause, the transition layer between troposphere and stratosphere, drops to only 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 8 and 13 kilometers. According to the latest research, air traffic emissions do not contribute to the reduction of the ozone layer.

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. At currently 450 members, it is the largest of its kind in Europe. Lufthansa has been a member of the Working Group since 1997.
→ www.baumev.de

BDI Bundesverband der Deutschen Industrie e. V. (Federal Association of German Industry)
→ www.bdi-online.de

BDLI Bundesverband der Deutschen Luft- und Raumfahrtindustrie e. V. (Federal Association of German Aviation and Space Industry)
→ www.bdlid.de

Branded House Describes a situation in which all of a company's offers are marketed under a single brand name, whereby the company and the brand are identical.

Carbon dioxide (CO₂) Gas resulting in nature from the burning or decomposition of organic masses (e.g. plant material) and from the breathing process of humans and animals. The greenhouse gas CO₂ remains for about 100 years in the atmosphere. Scientists attribute the increase of 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 2.2 percent of man-made CO₂ emissions are due to air traffic. (Source: German Aerospace Center)

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 reduces noise emissions 20 to 40 kilometers ahead of the runway threshold (Frankfurt). At Frankfurt Airport, it can only be used at night due to capacity restrictions.

Change Management Change Management comprises all the measures a company uses to introduce or adapt to change. The more intensively employees are informed about and involved in the processes of change, the more successful these changes will be.

Chapter-4 aircraft Aircraft that meet the regulations of 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 from 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 take-off weight and number of engines.

Corporate University Corporate education institution for professionals and managers. See also Lufthansa School of Business (LHSB).

Customer Profile Index (CPI) The Lufthansa Passenger Airlines, in cooperation with renowned institutes, continuously conduct worldwide surveys and

thus assess the level of customer satisfaction. These data are compiled in the Customer Profile Index, which informs the entire company in the form of a single figure about the current status of customer satisfaction.

Decibel (dB) 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 the sound's 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.

Deutsches Netzwerk Wirtschaftsethik (DNWE) German Network for Business Ethics. DNWE is a nonprofit organization, in which Lufthansa has been a member since January 1998. DNWE has about 450 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

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 German Aerospace Center. The DLR serves scientific, economic and social purposes. It maintains 30 institutes, testing facilities and operational sites. Its 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

Dow Jones Sustainability World Index The leading sustainability index worldwide lists the top 10 percent of companies in each industry, whose sustainable approach to corporate management is exemplary. Lufthansa was again listed in 2008.

DRV Deutscher ReiseVerband e.V. (German Travel Association)
→ www.driv.de

econsense – Forum for Sustainable Development of German Businesses is 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

Elder Care Term for giving care to older next of kin. Elder care is part of Diversity Management. When needed, the Lufthansa Family Service puts employees in contact with care providers for family members in need.

EMAS Environmental Management and Audit Scheme, colloquially referred to as EU eco-audit regulations. European regulations concerning environmental management and certification.

Employee shares are usually offered to staff at preferential prices and with favorable terms of payment. Ordinarily, they are subject to a blocking period, during which they may not be sold.

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 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 is 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

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 Index introduced by the Financial Times and the London Stock Exchange in 2001. The FTSE4Good lists only companies with above-average performance in the areas of human rights, social standards and environmental protection. Lufthansa has been listed since 2001.

→ www.ftse4good.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 airspace 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 determined so far in plant or soil samples after fuel dumps.

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. Lufthansa has been a member since 2002.

→ www.unglobalcompact.org

Great Circle Distance 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 gas is carbon dioxide from the combustion of fossil fuels. It accounts for about 77 percent of the greenhouse effect attributable to human activities. Methane, primarily generated by agriculture and large-scale animal husbandry, contributes about 14 percent to the anthropogenic greenhouse effect. Other artificial greenhouse gases are nitrous oxide (N₂O), fluorocarbons (FCs and HFCs), sulfur hexafluoride (SF₆) and chlorofluorocarbons (CFCs). Source: World Resources Institute (WRI), 2005.

House of Brands Used to describe companies that place their offers/products under different brands in the market without necessarily communicating the association with the parent company. Company and brand are thus not absolutely identical.

IATA International Air Transport Association. The umbrella organization of international commercial aviation.
→ www.iataonline.com

ICAO International Civil Aviation Organization. A United Nations agency that develops internationally binding norms for civil aviation.
→ www.icao.int

ICC Deutschland German chapter of the 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.icc-deutschland.de

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

→ www.papiernetz.de

Intermodal transport Transport system that uses at least two modes of transport – such as train and plane – integrated in a transport chain to carry people or goods from door to door. Thanks to a global approach, existing transport capacities can be used more efficiently.

ISO 14001 International environmental management system. Companies hereby 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

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. Due to its manufacturing process, it does not contain benzene hexachloride either. Worldwide, aircraft currently consume almost 258 million tonnes of kerosene per year. This represents about 6 percent of the world's primary energy requirements in crude oil.

Kyoto Protocol Codifies binding goals for reducing emissions of greenhouse gases. It was passed in 1997 as an amendment to the protocol concerning the formulation of the United Nations Framework Convention on Climate Change (UNFCCC) and was ratified in February 2005.

Layover Period of time a flight crew spends at an airport en route or a destination airport before beginning work on the next flight.

Lufthansa School of Business (LHSB) Germany's first corporate university. It has received multiple awards for the worldwide standards it establishes for the development and training of professionals and managers. The LHSB supports processes of change within the Group and promotes a shared management culture.

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.

MTOW Acronym standing for maximum take-off weight of an aircraft.

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. Depending on the type of aircraft and operational conditions, this value varies between 6 and 20 kilos per tonne of fuel burned. Air traffic has a share of 2–3 percent in 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.

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 (O₃) Molecule consisting of three oxygen atoms formed in the stratosphere. 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.

Passenger kilometers (PKO/PKT) Measure for transport performance in passenger carriage (number of passengers multiplied by distance flown). Here one distinguishes between available transport performance (PKO, passenger kilometers offered or synonymously SKO, seat kilometers offered) and actual transport performance (PKT, passenger kilometers transported).

Person tonne kilometer (PTKT)

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

Seat load factor (SLF) Passenger-related measure of utilization of aircraft: The ratio of transport performance (PKT, passenger kilometers transported) to capacity (PKO, passenger kilometers offered).

Single European Sky (SES) Unified European airspace. This initiative of the European Union aims at optimizing traffic flows, standardizing licenses for air traffic controllers, harmonizing technology and thus maintaining safety, capacities and punctuality in growing air transport.

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.

Tonne kilometer (TKO/TKT) Measure of transport performance (payload multiplied by distance). One distinguishes 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.

Trace gases Gases of which there are only very small amounts present in the atmosphere (e.g. ozone, methane, nitrous oxide, etc.) but which are of great significance for the Earth's climate and the chemical processes in the atmosphere.

Transparency International Anti-corruption organization, of which Lufthansa has been a member since 1999.
→ www.transparency.de

UNEP The United Nations Environmental Program.
→ www.unep.org

UN Global Compact see Global Compact.

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

Volatile Organic Compounds (VOCs) 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.

VDR Verband Deutsches Reisemanagement e.V. (German Association of Travel Management)
→ www.vdr-service.de

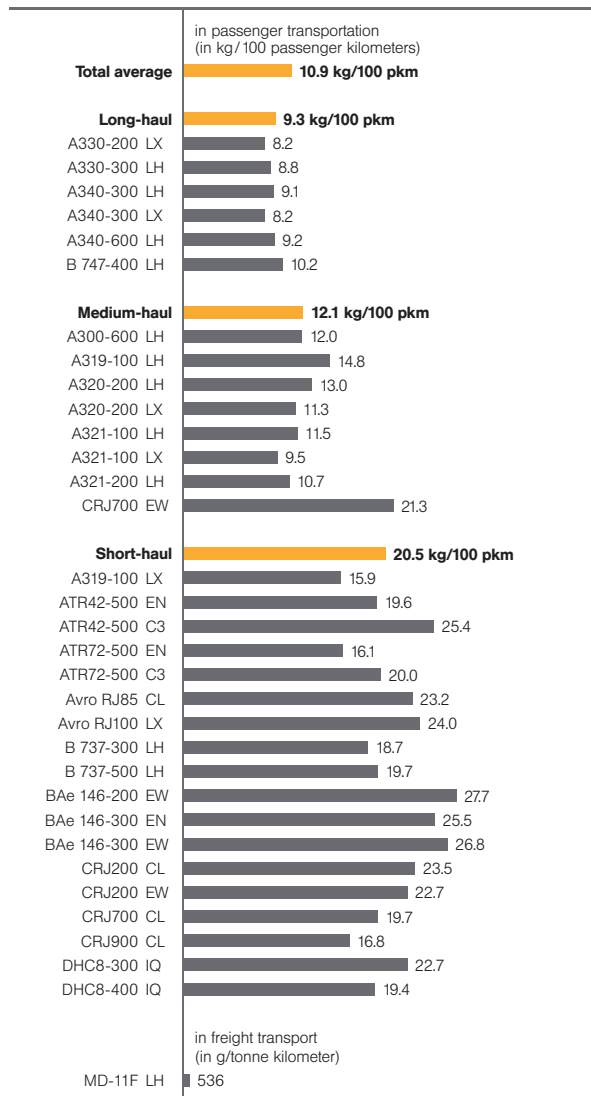
Water vapor is the most important greenhouse gas, even ahead of carbon dioxide. Without water vapor from natural sources, the Earth's surface would be around 22 degrees Celsius cooler. This makes water vapor responsible for two-thirds of the natural greenhouse effect (33 degrees Celsius). For each kilo of kerosene burned, 1.24 kilos 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.

Work-life balance Refers to a healthy equilibrium between work and private life.

Fleet overview: CO₂ emissions, fuel consumption and NO_x emissions

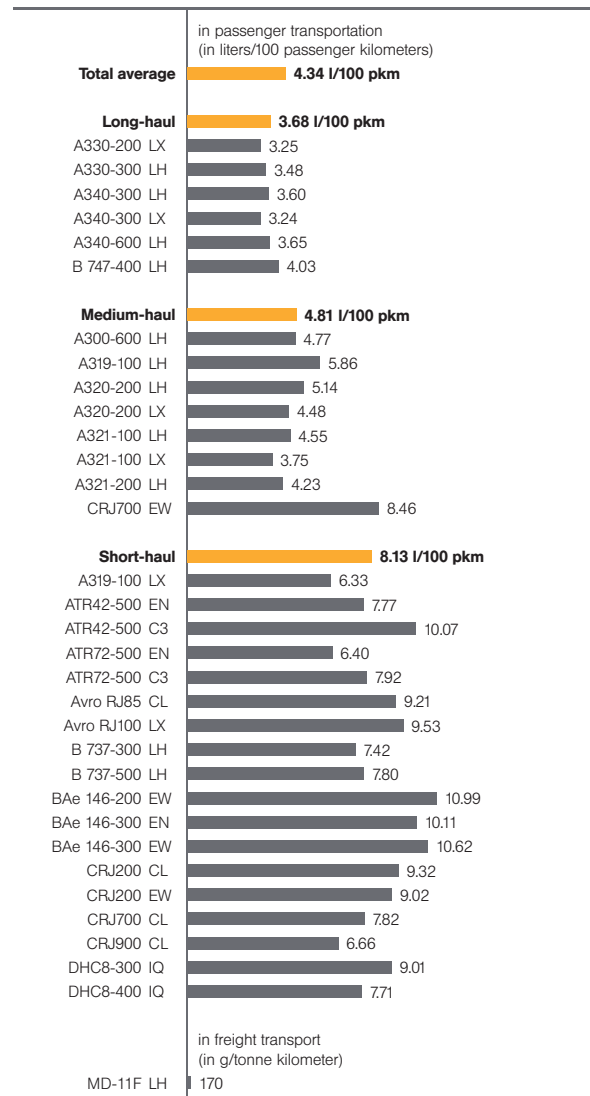
Specific CO₂ emissions by type of aircraft

Lufthansa Group fleet (active fleet in 2008)



Specific fuel consumption by type of aircraft

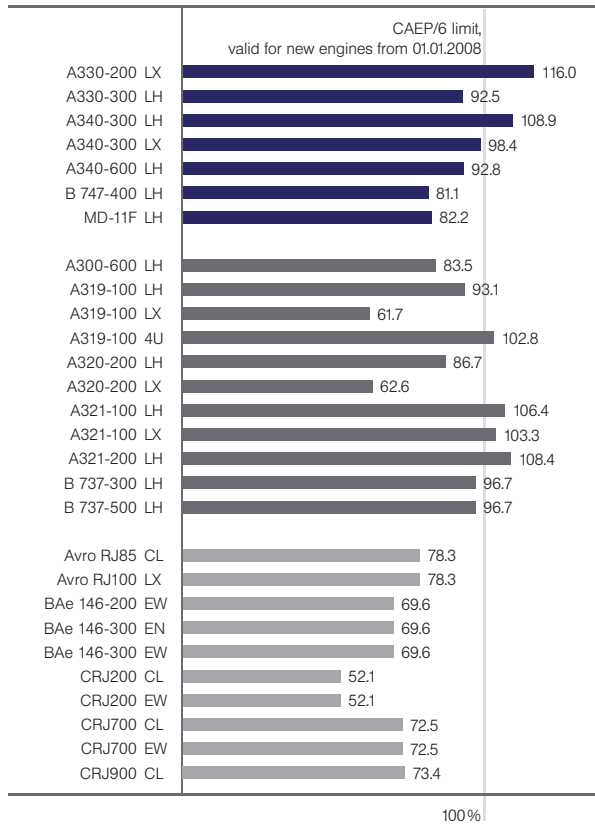
Lufthansa Group fleet (active fleet in 2008)



4U = Germanwings
 C3 = Contact Air
 CL = Lufthansa CityLine
 EN = Air Dolomiti
 EW = Eurowings
 IQ = Augsburg Airways
 LH = Lufthansa Passenger Airline,
 Lufthansa Cargo
 LX = SWISS

Definition of traffic areas:
 Short-haul under 800 km
 Medium-haul 800 to 2,500 km
 Long-haul above 2,500 km

**NO_x emissions by type of aircraft
in comparison with the future CAEP/6 limit in percent**
(active jet fleet on 31.12.2008)



Groupings of aircraft types by MTOW:
 ■ under 50 t ■ 50 to 150 t ■ above 150 t

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You can find contact partners in the Lufthansa Group companies at:
→ www.lufthansa.com/responsibility



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15 years of *Balance*: This report appears here for the 15th consecutive year. Published for the first time in 1994 as an environmental report, today it includes all the dimensions of sustainability.