

Key Data  
**2004**

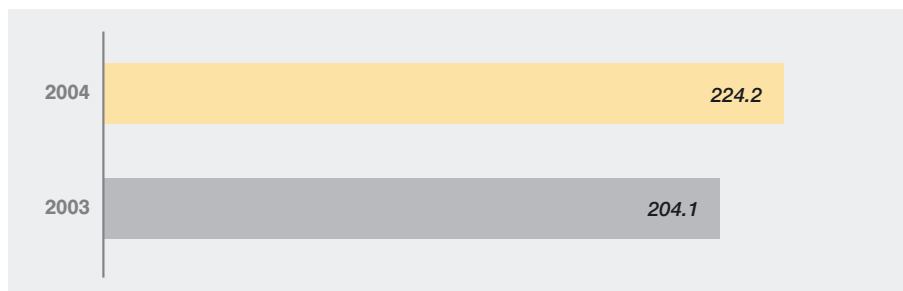




## Lufthansa Systems Key Data 2004

Revenue in million euros	2004	2003
<b>Airline Core Applications</b>	<b>492.7</b>	<b>473.6</b>
Airline Solutions		
Infrastructure Services		
<b>Systems Integration</b>	<b>88.5</b>	<b>96.3</b>
Cargo & Logistics		
Administration & Finance		
MRO		
<b>Business Services</b>	<b>46.8</b>	<b>40.8</b>
Airline Flight Support		
BPO & Services		
<b>Total Revenue</b>	<b>628.0</b>	<b>610.7</b>
<b>EBIT</b>	<b>66.0</b>	<b>46.8</b>

### Revenue outside the Lufthansa Group in million euros





## Business development at Lufthansa Systems in fiscal year 2004

Lufthansa Systems was able to boost its earnings considerably in fiscal year 2004 compared to the previous year despite the persistently difficult economic situation in the aviation industry and weak growth momentum in Germany. At 61.0 million euros, the operating result was 56.4% above that of the previous year.

Lufthansa Systems recorded revenues of 628 million euros, up slightly from the previous year. While revenues generated outside the Lufthansa Group grew by 9.8% to 224.2 million euros and reached a share of 36% of total revenues, sales to Lufthansa Group companies declined slightly despite an increase in volume as a result of the cost-saving implementation of new technologies.

### Market and product developments

The year 2004 was marked by a modest improvement of the investment climate in the aviation industry but the anticipated high growth rates did not materialize. Despite this, Lufthansa Systems was able to add new customers from the airline and aviation industry. Outside the industry, we signed two major IT infrastructure outsourcing contracts and expanded our business with logistics service providers.

In 2004, the continued development of our product portfolio focused on the modernization and modularization of core passenger system applications. In this context, Lufthansa Systems launched its FACE project – Future Airline Core Environment – which is intended to develop a hosting solution for all passenger processes that is independent of global distribution systems (GDS). FACE deals with the migration of core elements such as reservation, inventory and check-in to a client/server platform.

The electronically generated color-coded route charts for aircraft cockpits (Lido RouteManual) were yet another innovation developed by Lufthansa Systems. With the Lido RouteManual, we are breaking new ground in database-aided chart generation, because these charts are no longer drawn by hand and in black and white but are created electronically from a navigation database, which has been set up especially for this purpose. The Lido RouteManual is a key step toward the Lido electronic RouteManual, designed to make the paperless cockpit a reality in the near future.

The contract awarded by the Latin American airline TACA is one example of our global sales success. TACA opted for a comprehensive modernization of its IT systems and will use solutions from Lufthansa Systems for passenger services, revenue management, and network and route planning. In Asia, Lufthansa Systems was able to strengthen its market position by signing a network management contract with Shanghai Airlines.



### **Training at Lufthansa Systems**

In 2004, a total of 43 trainees of Lufthansa Systems, Lufthansa Passage and Lufthansa Technik successfully completed their training as IT specialists. Last year, Lufthansa Systems introduced a new trainee concept in cooperation with the Rhein-Main vocational academy. After completing a two-year course in Business Studies and Information Technology at the vocational academy, students must pass an examination at the Chamber of Industry and Commerce to become IT specialists. After one more year, students earn their final diploma.

### **Strategy and outlook**

The core competence of Lufthansa Systems lies in the international airline and aviation market where the company is among the world's largest and most experienced providers of IT services.

Due to the moderate recovery of the airline industry, Lufthansa Systems expects airlines to be more willing to invest in 2005. We believe that the IT market in the aviation industry has bottomed out. As Lufthansa Systems has designed its products and services to reflect the processes of the airline and aviation industry, it is the only provider in the market able to offer its customers an integrated full-service portfolio from a single source.

This portfolio is subject to ongoing development and offers airlines a wealth of options for increasing efficiency by optimizing their core processes. The modular design of our passenger systems solutions enables airlines of all sizes to deploy reservation, check-in and ticketing modules exactly as needed.

Airlines constantly have to adapt their services to changing market conditions and need to cut costs in order to be competitive. This results in an increased demand for outsourcing services. Lufthansa Systems offers airlines a comprehensive portfolio of business services. In addition to traditional licensing and consulting services, Lufthansa Systems is also expanding its Application Service Providing (ASP) business. The company therefore expects to achieve a considerable increase in revenues from the operation of IT solutions in 2005.

Infrastructure Services at Lufthansa Systems provides IT solutions for large and medium-sized companies across all industries. In IT outsourcing projects, customers can transfer their IT systems to Lufthansa Systems, which then operates and manages them in its own data center. Partial or complete IT outsourcing can result in considerable cost savings for our customers. More and more trading and industrial companies put their trust in the expertise and capabilities of Lufthansa Systems.

Overall, business outside the Group will continue to grow, as in recent years. The operating activities of Lufthansa Systems will focus on its home market of Europe and on further developing the American and Asian markets.





## Lufthansa Systems: Where innovation breeds success

Lufthansa Systems is one of the world's leading full-service IT providers for the airline and aviation industry. Thanks to our many years of airline experience and our extensive technological know-how, we have established ourselves over the past ten years in a leading position in an increasingly complex market.

When the company was founded on January 1, 1995, our product portfolio was comprised of individual airline- and aviation-related applications. In a single decade, we have developed these into a complete and innovative portfolio that is closely aligned with the business processes of our customers. They continue to face ever greater challenges as a result of market globalization, increased competitive pressure to innovate, pressure on costs, sudden fluctuations in demand and, not least of all, the very complexity of today's business processes.

Our decades of experience in the airline and aviation industry mean we are also able to provide solutions and technologies to other sectors in which IT standards are comparable to those applied by airlines. These customers are primarily large and medium-sized companies from industry and the financial sector.



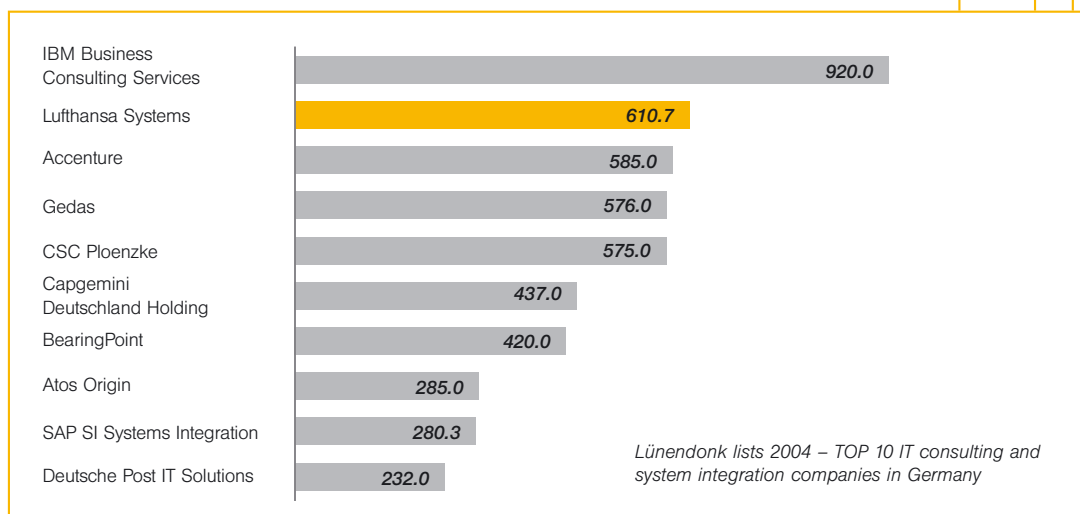
### 2004: A successful year in all areas

An increasing number of well-known companies in the airline industry and in other industries place their trust in Lufthansa Systems' expertise. We have once again increased our business with a number of long-standing customers. In addition, we have gained new customers such as the Latin American airline TACA, which will soon manage all of its airline core processes with IT solutions from Lufthansa Systems. In 2004, we have added a growing number of customers among low-fare airlines. Outside the airline industry, the European Bank of Fund Service GmbH (ebase) decided to outsource a major part of its IT infrastructure to us. The bank was followed by chemical company Almatris, which also entrusted us with establishing a new infrastructure.

### A steady look to the future

To a large degree, Lufthansa Systems' position as a market leader is a result of its innovative thinking, which we continue to demonstrate year after year. In December 2004, we initiated the FACE project, which enables us to provide airlines with a passenger management solution that is independent of global distribution systems. The modular design and innovative architecture of this new passenger management solution provides airlines with cutting-edge technology in combination with groundbreaking IT architecture.

Similarly, Lufthansa Systems had a pioneering role with the Lido RouteManual project, which was completed last year and is already in service with several airlines. We were the first supplier to introduce database-generated navigation charts – a true innovation in the field of flight operations. With the opening of the new Enterprise Operation Center (EOC) in our new data center in Kelsterbach, we now have one of the most modern operation centers in Germany. Furthermore, document management is a new addition to our portfolio with the introduction of our Digital Pen, which captures handwritten information in digital form online.





## Management and optimization of airline core processes

With our extensive product and service portfolio in the field of Airline Solutions, we provide airlines with IT solutions that enable them to take advantage of the best possible management and optimization of their core processes. This includes passenger management systems, as well as solutions for network planning and control, flight rotation and crew planning, and systems for fast and flexible pricing and targeted revenue management. The MultiHost solution provides all the applications needed to integrate and automate the airline core processes of a passenger airline. The modernization of this integrated system solution reached a significant phase at the end of last year.

### **FACE – the path to a new passenger management solution**

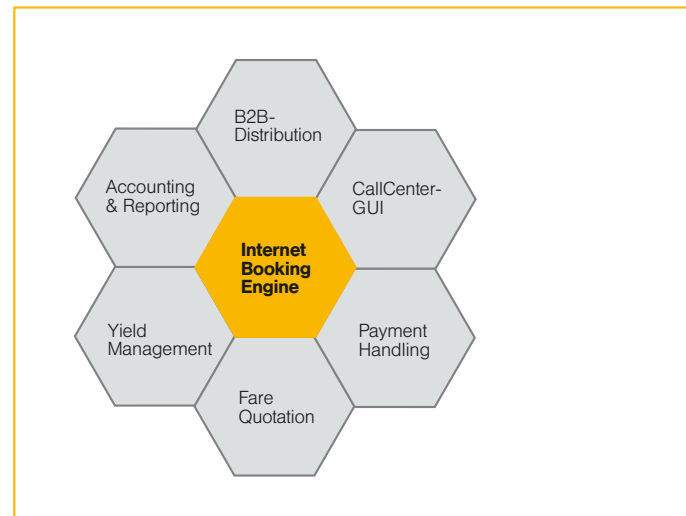
With the FACE project – Future Airline Core Environment – we are building a passenger management for all passenger processes that is independent of global distribution systems (GDS). The new passenger system offers airlines additional flexibility, enabling them to choose from a variety of distribution channels and respond more quickly to changing market conditions. The system also allows us to customize our hosting solutions to meet the needs of airlines with different business models. Over 40 airlines have been using the MultiHost solution for some time now and will experience a seamless transition from their old systems. New hosting customers can also anticipate a smooth migration to their new solution. Lufthansa Systems expects the implementation of its customized passenger management solution to be completed by 2006.

The development of Airline Availability Manager was a decisive step forward for the FACE project. The system processes availability requests from Internet providers, direct sales channels and travel agents. Previously, these availability requests were transferred directly to the inventory system that centrally manages all seats available at an airline, which resulted in respective transaction costs to the airline. The client-server-based technology of the Availability Manager mirrors the airline's inventory, relieving the load on the original system and saving previously incurred cost of transactions.



Our FlexLine product line, which is specially designed to meet the needs of low-cost carriers, is an example of the modular design of IT solutions. This allows low-cost carriers to maintain efficient and reliable control over their sales processes and keeps them well prepared for steady future expansion. The portfolio includes an Internet booking engine and a booking GUI for call centers. It can be expanded with a revenue management system customized specifically for the needs of low-cost carriers.

All of Lufthansa Systems' products and solutions are developed on a modular basis and can therefore also be integrated across different business processes. An example of this capability is the major contract we won last year from TACA. The Latin American airline will use IT solutions from Lufthansa Systems to handle all of its core processes, including flight planning and control and revenue management. The MultiHost solution enables TACA to automate and fully integrate the airline's core processes of sales, ticketing and passenger processing. In addition, Lido OC will support the company's route planning. The considerable capabilities of our products, and the integration of the solutions, offer quantifiable benefits to TACA. All of these features – and the product's cost-effectiveness – were decisive in gaining the five-year contract.



### Experts in route planning

In the field of Airline Flight Support, we supply international airlines with products and services to support their flight preparation and supervision. These enable the airlines to optimize both their daily operations and to analyze each completed flight within the context of its long-term planning. To improve cost efficiency and operational flexibility, aeronautical data, systems and work processes are integrated into the products. The primary aim of these electronic flight support solutions is to improve flight performance by maximizing payload, reducing fuel consumption and optimizing aircraft usage. All of the innovative IT solutions provided by the Airline Support business segment are based on the Lido navigation database, which contains all aeronautical data available worldwide.

An important new development in this area is the Lido RouteManual. These new navigation charts break new ground in database-aided chart generation. The charts differ considerably from the charts used previously, because they are no longer drawn with the help of a CAD tool but created electronically from a database. The key benefit is that charts no longer have to be updated one at a time, because all changes made in the database are automatically included and are available for all charts.

Thanks to color-coding and the use of intuitive icons, the charts are very easy to read, despite the complex nature of their content. The Lido RouteManual is an interim step toward the Lido electronic RouteManual, designed to make the paperless cockpit a reality in the near future. Lufthansa has been flying with the Lido RouteManual since the beginning of September 2004. Airbus Industries has also expressed great interest in the Lido RouteManual and plans to make the electronic charts available on all Airbus models. In fact, Airbus will now be integrating our Lido electronic RouteManual in the Onboard Information System (OIS) of the new A380.





## System integration: A combination of new IT solutions and established IT infrastructure

System integration has been a key element of our product and service portfolio for many years. Experienced consultants and developers support customers from all sectors in developing, implementing, and integrating new software solutions with their existing applications. For many companies, exchanging information within a system and across departmental and corporate boundaries provides substantial efficiency benefits. However, system diversity often means that these integration projects come with a considerable extra effort. We assist our customers in developing and implementing the IT solutions they need at a favorable price. Our aim in doing so is to increase the efficiency and speed of company procedures in order to maintain or enhance a competitive advantage.

Thanks to our many years of experience and specific expertise, Lufthansa Systems has also established itself as a provider of business process outsourcing (BPO) solutions in this high-growth market. Here, we assume complete responsibility for our customers' business processes, and offer them – in addition to sustainable cost savings - increased flexibility and the ability to concentrate on their core competencies. We have over ten years of experience in the BPO business with an emphasis on revenue accounting, airline flight support and revenue management services.

### **We optimize business processes**

Our long-standing customer Finnair is convinced of our expertise in revenue accounting. In September 2004, the Finnish airline signed an agreement for the implementation of the SIRAX accounting system. Lufthansa Systems began the project just four weeks later. It is scheduled for completion in October 2005 with the transition to routine operation.

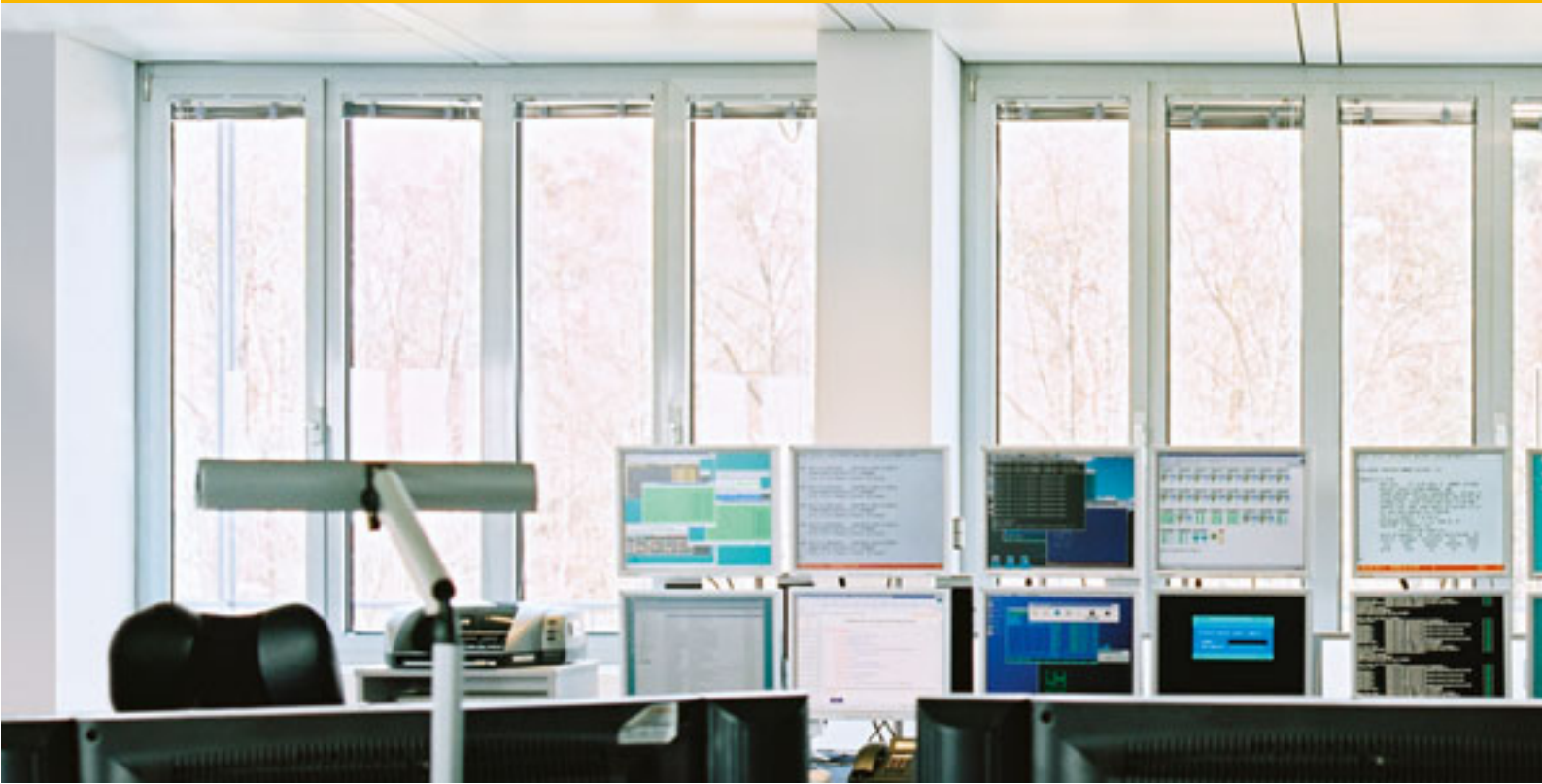
Our partnership with Finnair represents another step toward establishing SIRAX as the standard revenue accounting solution for the airline market. The system controls the accounting process of an airline by matching ticket sales with actual flight data. Integrated sub-processes support the billing of interline flights among airlines. The complexity of fare structures, code share agreements, alliances, taxes and commissions in the air traffic industry makes the system an important and necessary control and management tool. It also provides detailed, real-time information both for executives and finance departments. This is a significant step toward optimizing revenue accounting business processes, thus improving airline profitability.





#### **Quality control in aircraft maintenance**

Lufthansa Systems also possesses profound expertise in MRO (maintenance, repair & overhaul). The highly complex aircraft servicing and maintenance business requires the highest levels of quality, security and accountability. The SAP industry solution Aerospace & Defense is an innovative MRO system in whose development we played a major role as a long-standing SAP partner. The IT solution efficiently and cost-effectively supports the extremely sensitive MRO business in connection with all aircraft maintenance processes. We successfully implemented a new application system for Lufthansa Technik in 2004, which enables it to handle the global complaint management for the entire Lufthansa fleet. Developed by Lufthansa Systems on the basis of SAP, the MARIS (Maintenance Record Information System) solution is the central application used by Lufthansa Technik to document aircraft logbook information.



## Customized IT solutions offer cost-efficiency for all industries

With Infrastructure Services, Lufthansa Systems provides IT solutions for large and medium-sized companies across all industries. As a full-service provider, we offer a seamless portfolio of products and services customized to meet the needs of each customer. These range from process-related consulting services to operational support for sophisticated heterogeneous IT systems. We also offer our customers the opportunity to outsource part or all of their IT systems to Lufthansa Systems. This frequently involves a server consolidation, which reduces infrastructure costs while at the same time making them more transparent.

Network management is another important component of our Infrastructure Services. We plan, implement and manage a multitude of powerful global networks for our customers. Innovative telecommunications networks such as wireless LAN and network-based telephony (Voice over IP) play yet another key role in these services. Via Application Service Providing (ASP), we provide our customers with centralized software, computing capacity, and helpdesk services, which are billed by usage.


In April last year, we opened a new Enterprise Operation Center (EOC) in our data center. The EOC optimizes the communication mechanisms involved in receiving, diagnosing and sorting out technical disturbances, thereby reducing response and processing times.





Our position as IT provider for all industries was once again underlined in 2004 when we closed contracts with the COMINVEST Group and the chemical company Almatris. The European Bank for Fund Services GmbH (ebase) and Cominvest Asset Management GmbH, which are both part of the COMINVEST Group, outsourced considerable sections of their IT infrastructure. Lufthansa Systems has since taken over operational management of a total of 175 ebase servers and 450 terminals. Almatris commissioned us to set up a complete infrastructure throughout its 15 international offices.

The Mobility Package and Mobility Audit products have been part of our service portfolio since November last year. These products are aimed at medium-sized and large enterprises in any industry that want to include mobile or remote staff in business-critical processes or to exchange mobile data with suppliers. By taking part in a one-day Mobility Audit, IT managers can experience the potential benefits that mobile technologies have to offer their companies. With the aid of mobile applications, known as Mobility Packages, employees can access corporate data no matter where they are – a service that could prove to be of critical importance during a sales pitch or service visit.



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