



**Lufthansa**



Lufthansa.com, a WebSphere Based  
IBM Airline Portal and Services Solution

[www.lufthansa.com](http://www.lufthansa.com)



# Agenda

1. Introduction of Lufthansa and our Online Strategy
2. Services provided by Lufthansa.com
3. Solution & Technology
4. Summary & Outlook

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Project Manager



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# Introduction of Lufthansa and our Online Strategy

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# Lufthansa - the Aviation Group consists of various business segments

## Deutsche Lufthansa AG, Cologne

**Passenger Airline**  
Lufthansa Passage Airline



**MRO**  
Lufthansa Technik AG



**Logistics**  
Lufthansa Cargo AG



**IT Services**  
Lufthansa Systems GmbH



**Catering**  
LSG Lufthansa Service Holding AG



# Lufthansa's daily business - customer contacts around the clock

## At a day at Lufthansa

- We make **1,836** take-offs and landings
- We carry **155,000** passengers and **4,700** tons of freight
- We answer **24,000** phone calls
- We make **1,000** price adjustments
- We serve our passengers with **920,000** meals
- We service **1,430** aircrafts
- We provide a network with **204** destinations in **81** countries
- We have **424** planes in the air at the same time
- We have **16.000** flight attendants in the field (**4.100** pilots)



# Since 1996 Lufthansa is providing sales and services on the internet

## History

- In **April 1996** Lufthansa starts its website for marketing purposes
- In **November 1996** a self developed booking engine was integrated. The installation has to be done via Floppy or CD. Prices were valid for 1 quarter of a year.
- The operations and the development of the platform was done in house.
- The monolithic booking engine reached its scalability and maintainability **in 2001**.
- **In 2003** the RFP for „Reengineering lufthansa.com“ was send out to potential suppliers
- **8 years after** the first launch of the website in April 2004 a contract with IBM and AMADEUS is signed to Reengineer and operate the new Lufthansa Platform.



# Lufthansa.com Re-engineering was initiated to provide the basis for the improved online services with the following goals

## Improve Customer Online Experience

- More Search Options for Finding adequate flights
- More Flight Options for the customer to choose from
- Attract Online shoppers with attractive exclusive online prices
- Full access to account information and former transactions

## Increase Platform Scalability

- Prepare for growth in online sales and service usage
- Ensure an optimal customer experience with fast response times and excellent service levels
- Reuse platform functionality for multiple customer groups and additional use cases

## Reduce Time-To-Market

- React faster to changes in the market
- Offer new enhanced functionality for Lufthansa customers sooner
- Make business value driven decisions about the platform with less technical restrictions

## Higher Profitability

- Lower cost per transaction
- Benefit from the platform's superior economies of scale
- Decrease the cost for future development by taking advantage of reusable portlets and service components
- Benefit from the out-of-the box features of the used standard products

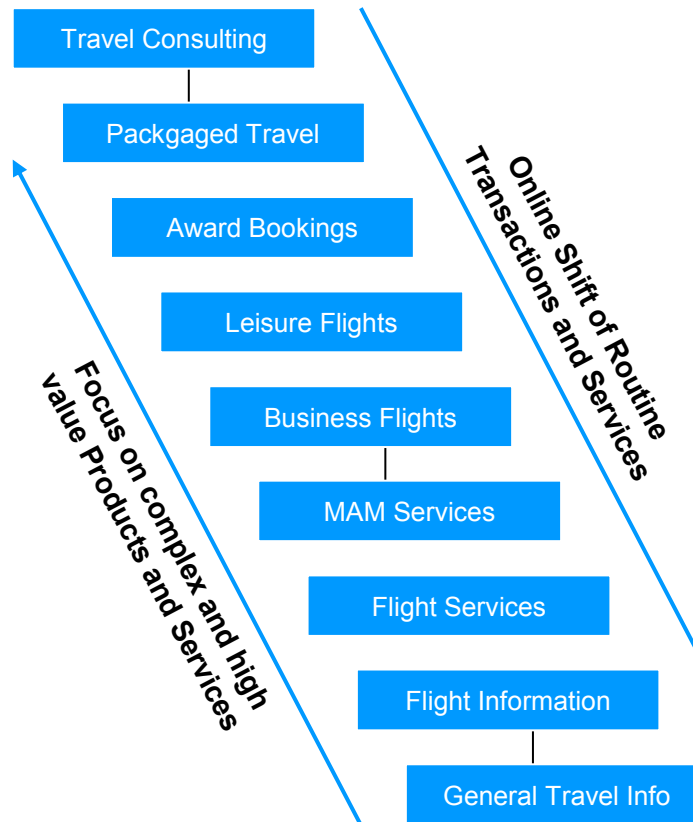
# Lufthansa.com had to advance to a major Lufthansa sales and customer service channel



## Call Center/City Offices

- Lufthansa Call Centers and City Offices focus on complex products and services like flights, hotel and rental car packages
- Lufthansa differentiates the Call Center service level for its customers according to their business value to Lufthansa

## Lufthansa Product & Services Portfolio



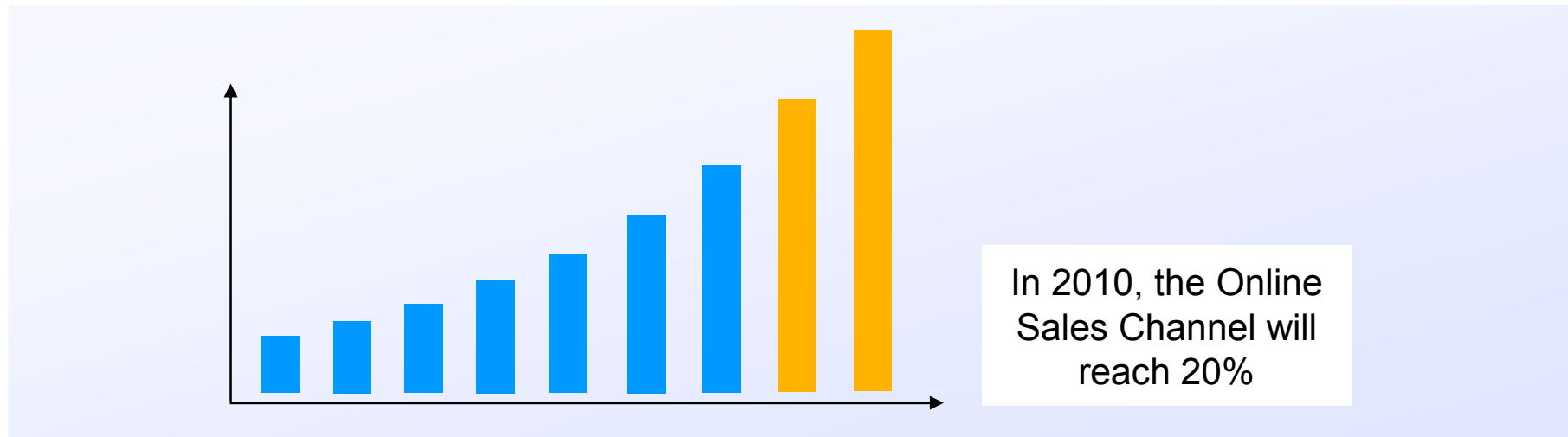
- Lufthansa offers a wide variety of its products and services online
- Lufthansa aims to make simple and recurring transactions available to customers via online self-services to provide comprehensive service to customers at lower cost
- Lufthansa has positioned its online channel as the most cost-efficient way to purchase Lufthansa products and services

## Lufthansa.com



## Lufthansa.com is Lufthansa's third-largest and most cost-effective sales channel

- 2002: Every 125th passenger booked via Lufthansa.com
- 2009: Every 6th passenger booked via Lufthansa.com
- Channel grows „double digit“ year-by-year
- Channel shift towards Lufthansa.com even in financial crisis



# Portal Technology enables Lufthansa's go to market strategy in different regions of the world

80 country sites in 12 languages



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# Services provided by Lufthansa.com

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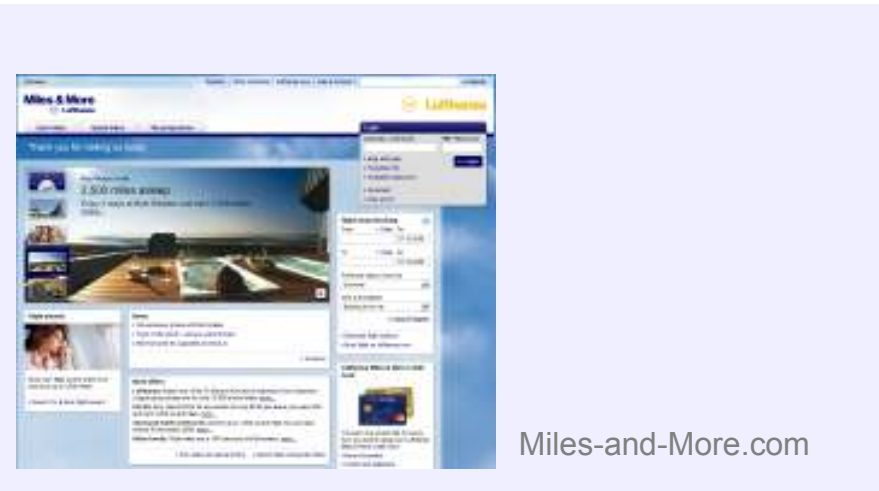
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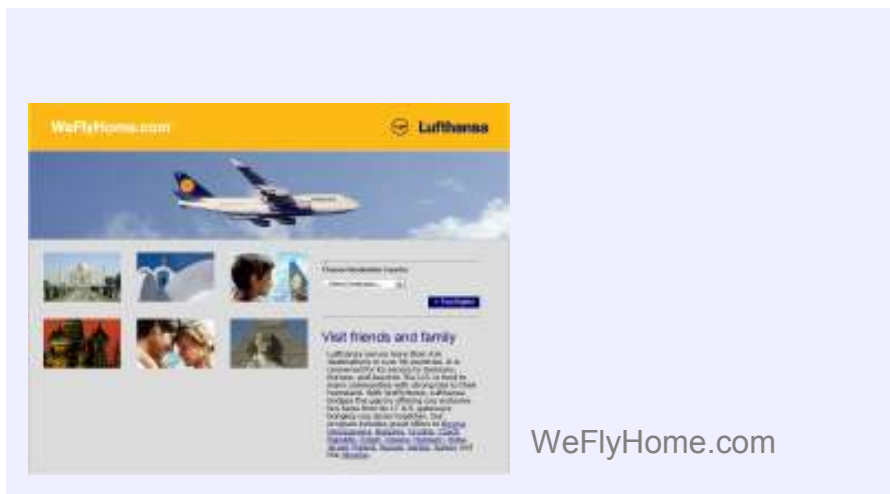
# One Portal – Multiple Brands



Lufthansa.com



Miles-and-More.com



WeFlyHome.com



Lufthansa-Agent.com



# Online Ticket Sales

- The portal's key functionality is online ticket sales
- Different flows reflect needs of customer groups, e.g.
  - Schedule driven
  - Fare driven
- Integration of Amadeus booking engine

Hamburg (HAM) to San Francisco (SFO)

Lowest Price<sup>1</sup>

	Returning Wed 13 Jan	Returning Thu 14 Jan	Returning Fri 15 Jan	Returning Sat 16 Jan	Returning Sun 17 Jan	Returning Mon 18 Jan	Returning Tue 19 Jan
Departing Sat 12 Dec	€ 629	€ 629	€ 629	€ 629	€ 629	€ 629	€ 629
Departing Sun 13 Dec	€ 681	€ 681	€ 681	€ 681	€ 681	€ 681	€ 681
Departing Mon 14 Dec	€ 681	€ 681	€ 681	€ 681	€ 681	€ 681	€ 681
Departing Tue 15 Dec	€ 681	€ 681	€ 681	€ 681	€ 681	€ 681	€ 681
Departing Wed 16 Dec	€ 711	€ 711	€ 711	€ 711	€ 711	€ 711	€ 711
Departing Thu 17 Dec	€ 761	€ 761	€ 761	€ 761	€ 761	€ 761	€ 761
Departing Fri 18 Dec	€ 881	€ 881	€ 881	€ 881	€ 881	€ 881	€ 881

<sup>1</sup> Indication of total price in Euro (EUR). It includes airfare, taxes, fees and charges for 1 adult.

The displayed price is including the ticket service charge if method of payment is direct account debiting or PayPal. In case of any form of payment apart from direct debit account or PayPal, a ticket service charge of EUR 15 (for continental flights) or EUR 20 (for intercontinental flights) per person applies. In case of payment via direct account debiting or PayPal the ticket service charge is discounted by 5 EUR, hence a ticket service charge of EUR 10 (for continental flights) or EUR 15 (for intercontinental flights) applies. These fees apply to customers with German billing address. Please note that the ticket service charge is non-refundable.

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# Online Check-In

- The portal contains online check-in functionality
  - Seat selection via seatmap
  - Printing of boarding passes
  - Request for mobile barcodes

1. Flight selection   2. Check-in flights and data collection   3. Seat selection   4. Check-in confirmation

**1 Please select your flight (click on each flight separately)** ?

Flight Number	From	To	Date	Departure Time
LH001	Hamburg	Frankfurt/Main International	26/10/2009	06:05
OS262	Frankfurt/Main International	Salzburgo - W.A. Mozart	26/10/2009	08:35

[Previous Flight](#)   [Next Flight](#)

**2 Please select your seat (click on each passenger separately)** ?

Passenger	Selected Seat	Class
WALTER, MICHAEL MR	23A	Economy

**AIRBUS A321**

23 24 25 26 27 28 29

A B C D E F

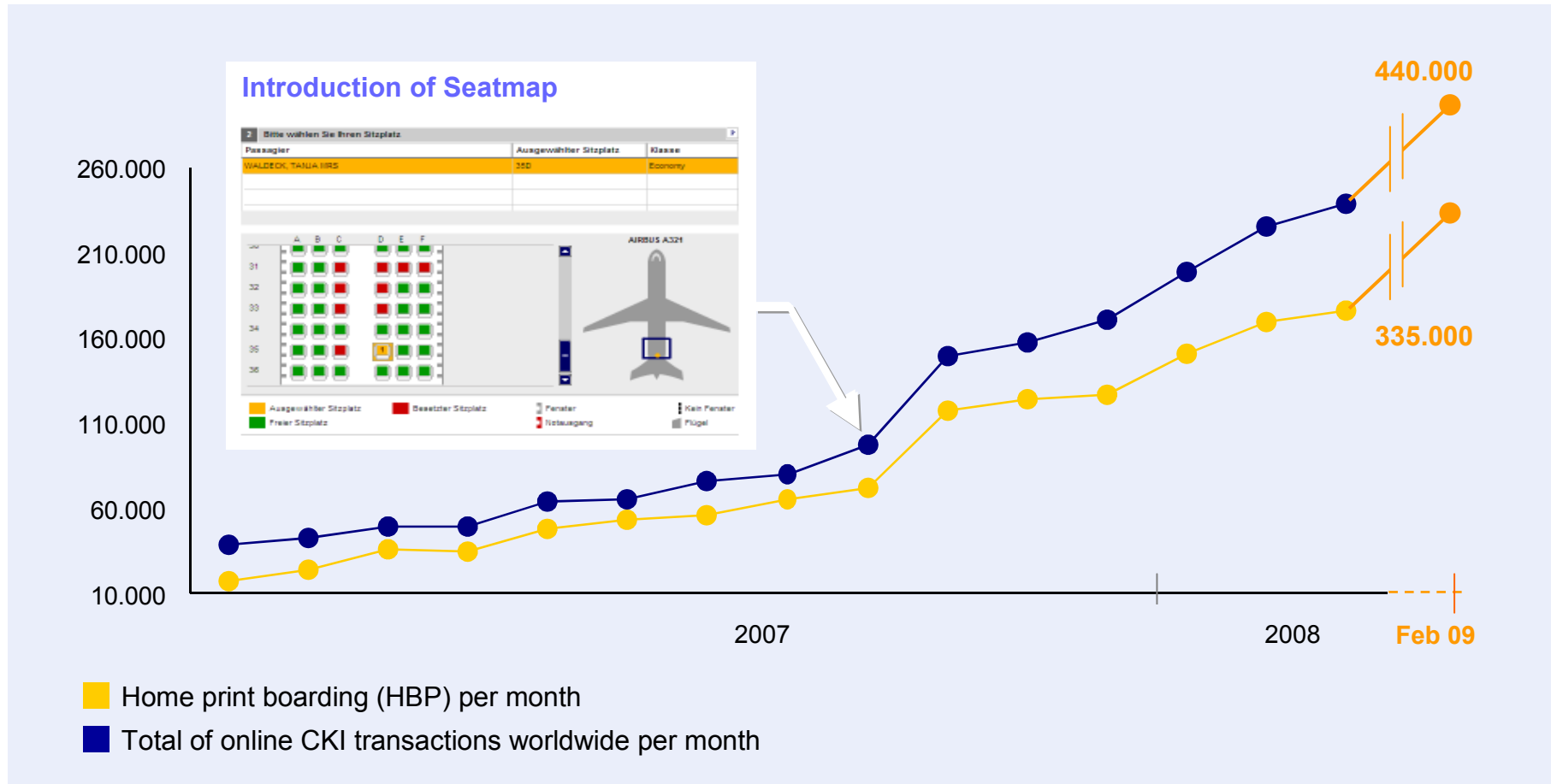
Selected Seat    
  Occupied Seat    
  Window    
  No Window  
 Free Seat    
 Emergency Exit    
 Wing

Please select a seat for all passengers on all flights and then click on "Confirm seat selection for all flights" to continue with your online check-in.

[Complete seat selection for above flights](#)

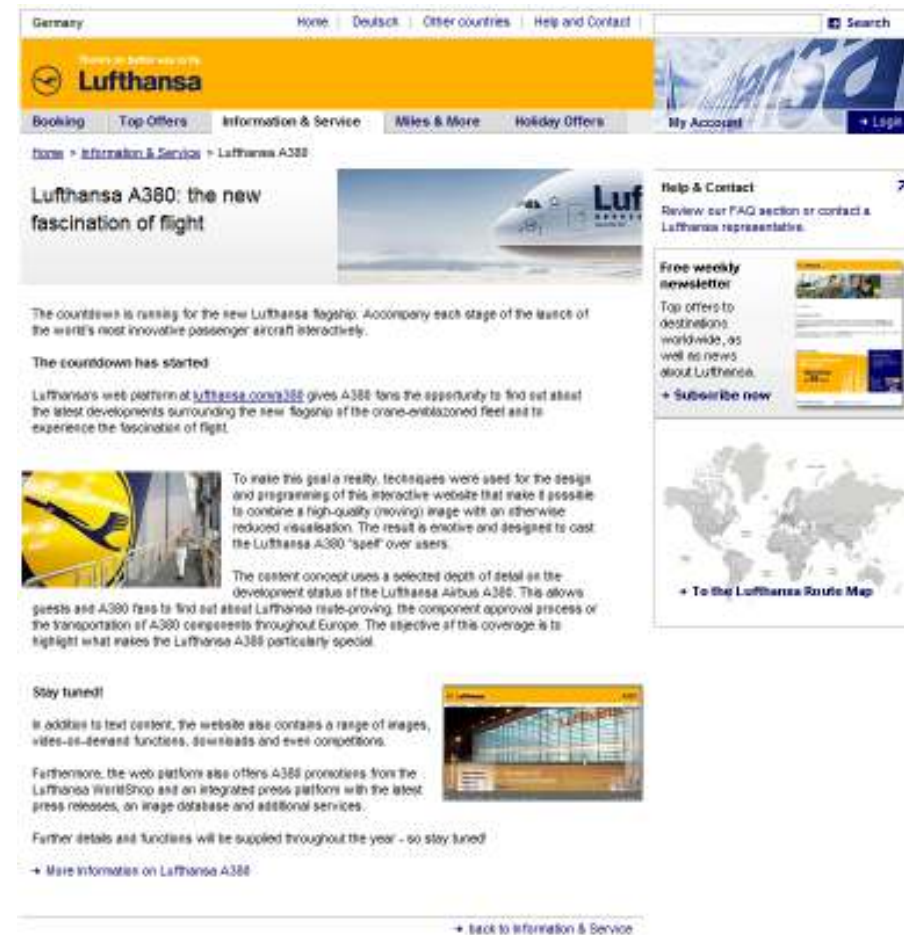
# After introducing the Seatmap online check-in (CKI) has increased above average

Currently 16,000 customers use online check-in every day




# Content Management System Integration

- Lufthansa.com is a „Content Driven Portal“
- The content editor can influence wide areas of the portal through the CMS
- The content is rendered dynamically by a flexible set of content portlets








## CRM and Loyalty System Integration

- Multi million user repository integrated in WebSphere Portal
- Multiple account transactions are available through lufthansa.com and miles-and-more.com, e.g.
  - Flight Award Booking
  - Login / User Profile Management
  - Account Statement

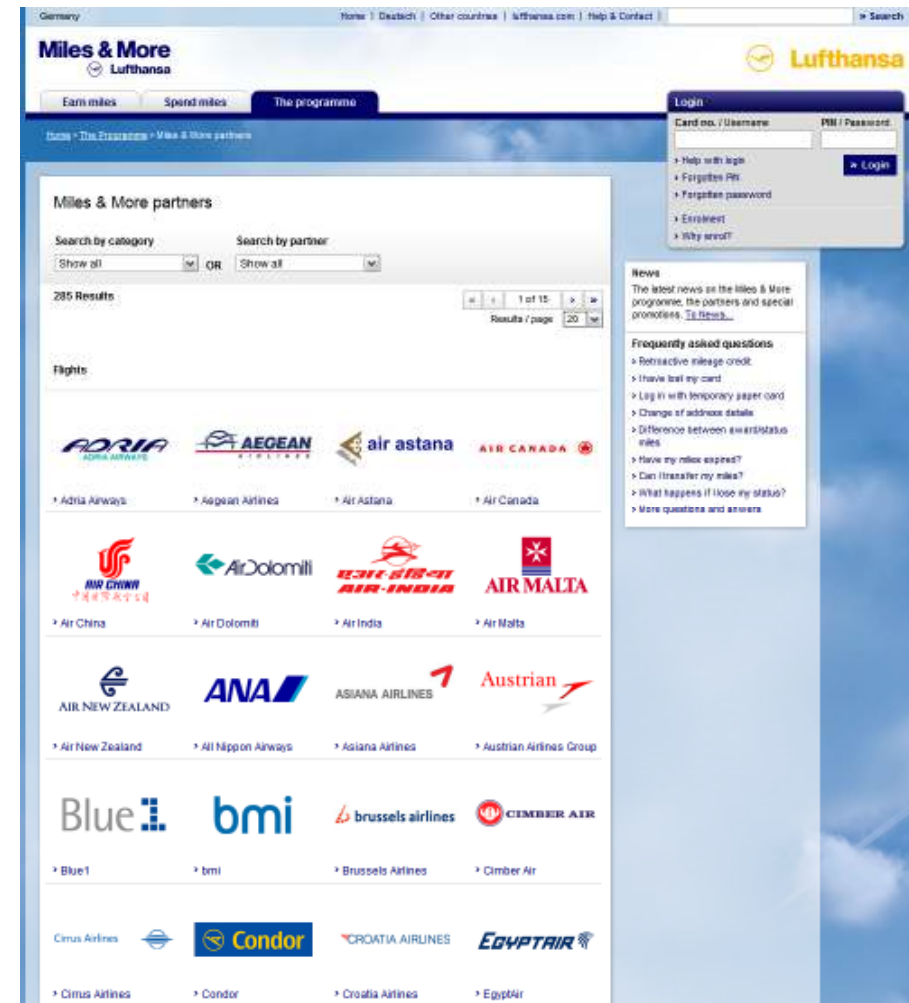


Miles & More is the loyalty program of



# Miles & More Partner Integration

- Flexible browsing of offers from 285 Miles & More partners
- Integration with Worldshop



# Lufthansa.com Facts and Figures – 2009

## Facts and figures

- 3.7 million bookings / **plus 37%** in 2009
- 2.9 million cash bookings
- 0.8 million award bookings
- In October 2009 the number of bookings in 2008 was **exceeded**
- **2 billion** internet page impressions in 2009
- **Every 10 seconds** a booking is done on lufthansa.com in Germany
- The „average monthly Conversion“ (Ticket/Visit in%) is at **3.9 %** in Germany



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# Solution & Technology

# 3

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## Lufthansa.com is „One-Stop Shopping“ at IBM

„One Stop Shopping“ significantly reduces efforts for the client

Single contract with IBM – managed by

- Service Levels
- Requirements



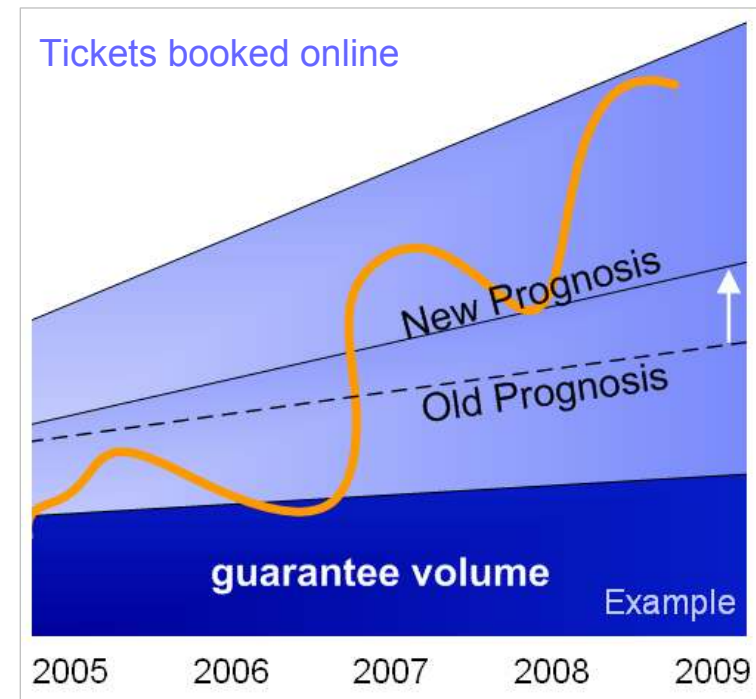
IBM is responsible for orchestration of

- Services
- Infrastructure
- Software



# Lufthansa.com Service Level Agreements cover Capacity, Response Times, and Availability – combined with a Forecast of Growth

- Basis for service level agreements are requirements for
  - Response times
  - Availability
  - Capacity – including forecast of future transaction volume
- Transparent Measurement and Reporting
  - Are all service levels reached?
  - What's the current platform load?
- Dynamic extension of platform capacity on demand
  - Unpredictable incident
  - Higher volume growth than expected



- Transaction based pricing

## Lufthansa.com Portal is optimized for High Request Volume

- Around 1,600 portal page impressions on the 100 meters
- During peaks even more...
- How to achieve that?
  - Dynamic Infrastructure
  - Optimized Software
  - Linear scaling on CPU power without bottle necks
  - Active capacity management for restricted resources



# Volcano Eruption in Iceland in April 2010 impacts Lufthansa's flight operations – which severely increased load on Lufthansa.com

- Air traffic control closed European airspace after eruption of volcano in Iceland
- Incident duration is unknown
- Airline customers want to get the latest status of their flights and/or rebook their flights



Volcano Eruption



No Flights



+70% Load



# Volcano Eruption in Iceland – Scaling on Demand with WebSphere Portal and IBM Maintenance & Operations

- Lufthansa.com is the company's face to the customers – stability in crisis is key
- Challenges for IBM's operations & maintenance team
  - Heavily increased load (+ 70%)
  - Shifted customer behavior – different transactions are called
  - Nearly no lead time for preparation
- „Is my flight cancelled?“ – 22 times more online transactions for Arrival / Departure information
- Lufthansa.com Portal is running stable and serves customer requests quickly



April 12th: 51,144 transactions

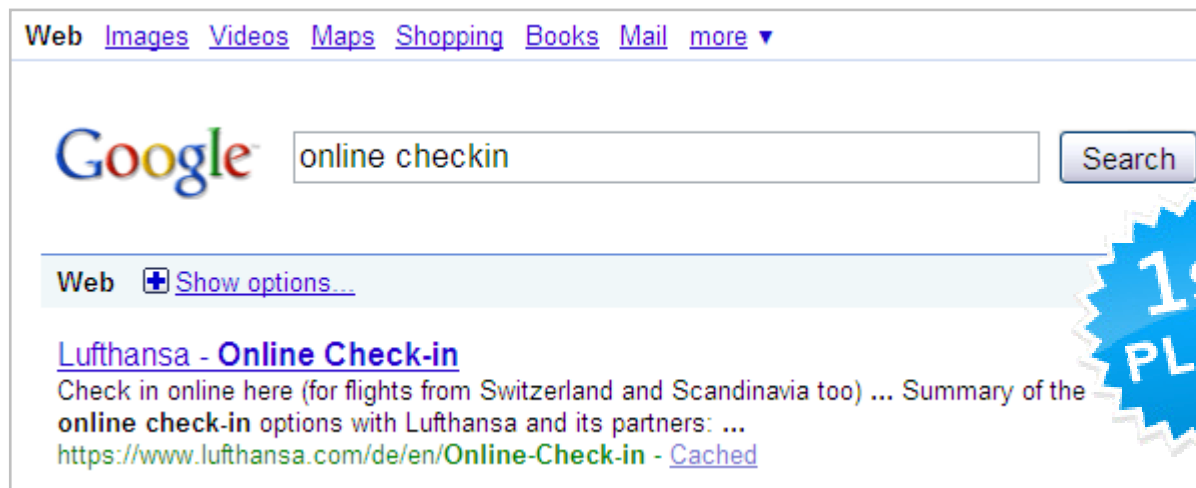
April 19th: 1,197,366 transactions



# The Key Success Factors for Lufthansa.com are Performance, Stability, and Agility ...

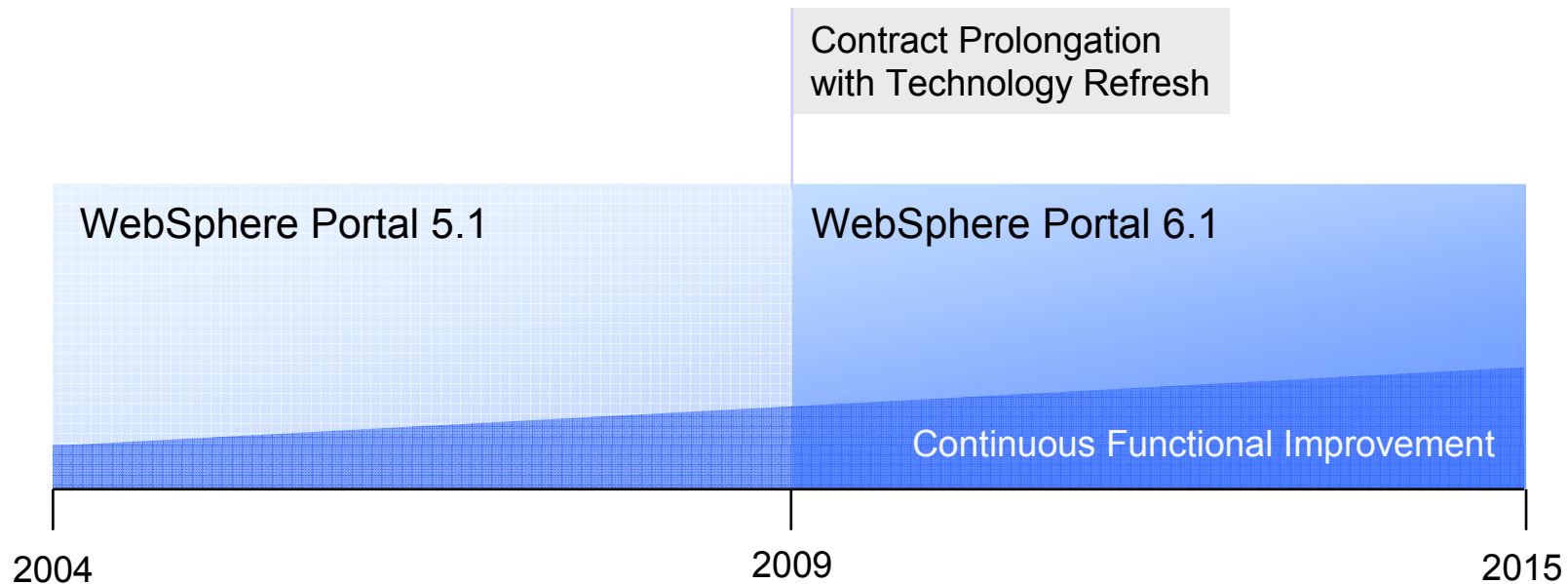
## ... but also:

- Web Reporting – Transparency for Conversion Rates
- Content Driven Portal – Highly customizable by business departments without lead times
- Seamless partner integration – The portal is your face to the customer!
- Search Engine Optimization – Named URLs



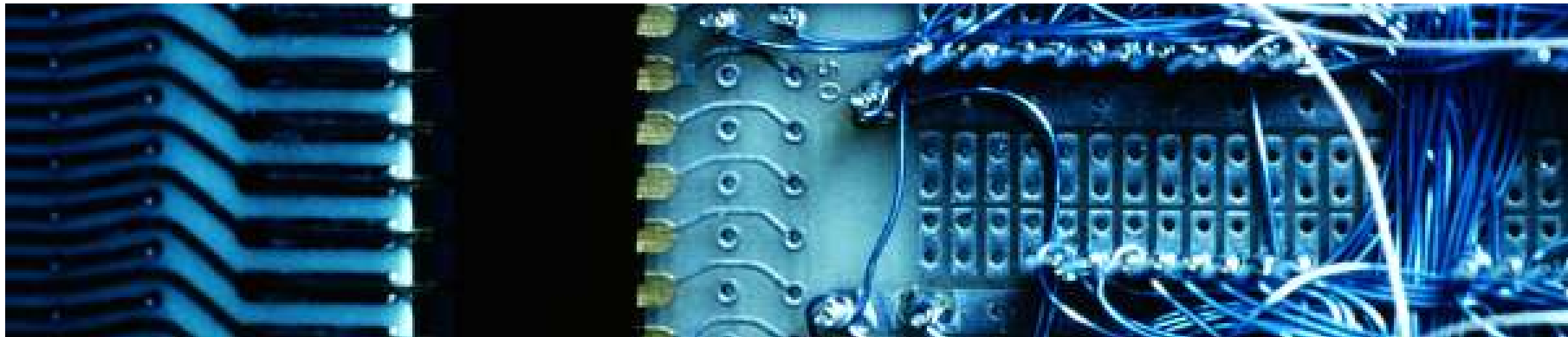
## Lufthansa.com on WebSphere Portal – a Success Story since 2004

- Lufthansa.com is running on WebSphere Portal since 2004
- Contract for Operations & Maintenance until 2015

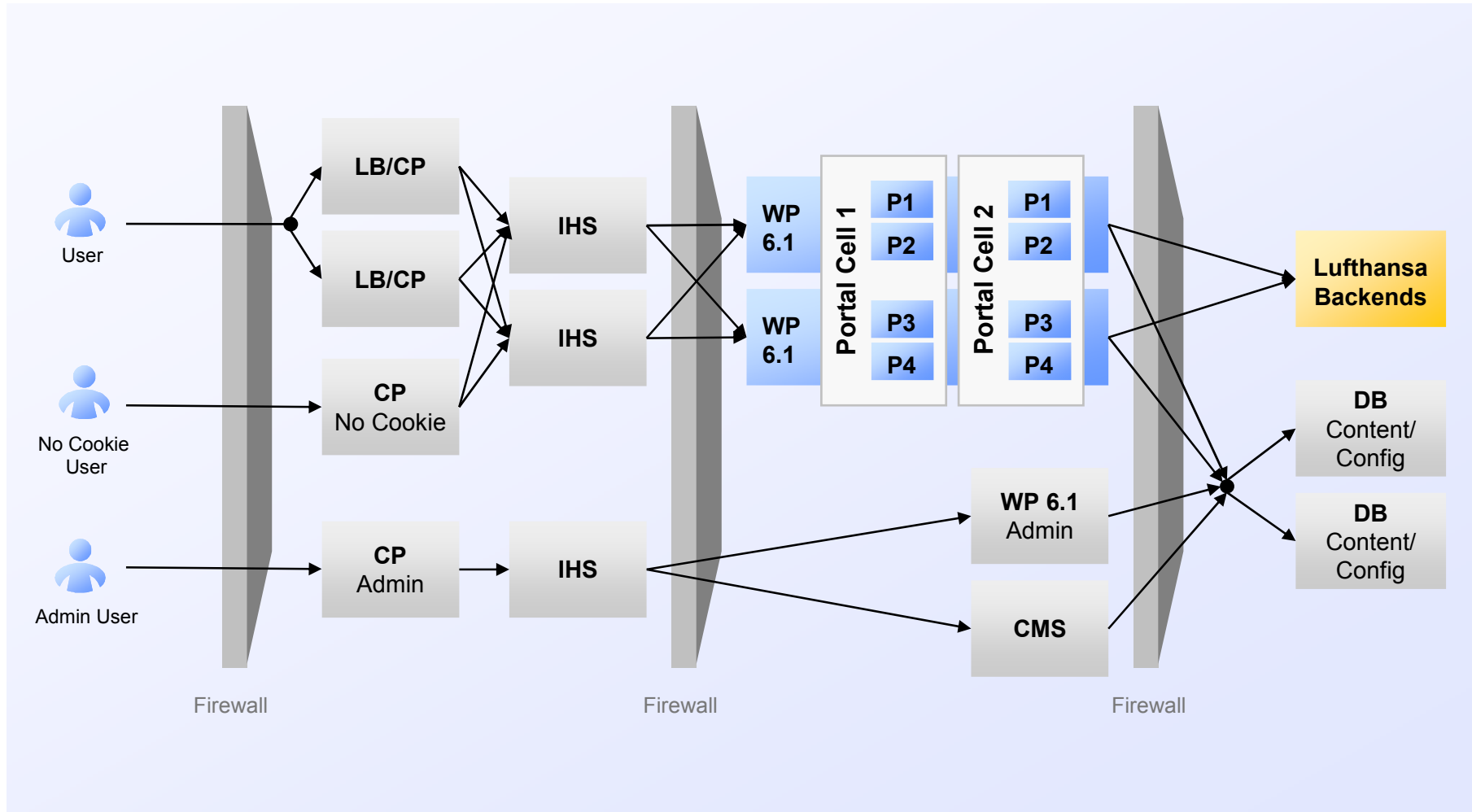


## Lufthansa.com is based on IBM Technology

- WebSphere Portal 6.1
- WebSphere Application Server 7.0
- WebSphere Caching Proxy
- IBM Http Server
- 64bit Java
- IBM p-Series Power 6 with Micropartitions
- AIX 6.1
- IBM e-Business Hosting Center



# High Availability is achieved with 2 co-located Portal Cells – Optimized Hardware usage combined with Efficient Manageability



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# Summary & Outlook

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# Joint effort of Lufthansa and IBM combined with latest IBM technology fully achieved – and even exceeded – the project goals


## Improve Customer Online Experience

- More Search Options
- More Flight Options from
- Attract Online shoppers with competitive online prices
- Full access to account transactions

*- Improved customer experience enabled by IBM software*  
*- Extended functionality with very high customer acceptance* 


## Increase Platform Scalability

- Prepare for growth in user usage
- Ensure an optimal response times and availability
- Reuse platform functionality for new groups and additional markets

*- Proven scalability of IBM platform*  
*- Volcano ash cloud, pilot strike, weather conditions, marketing campaigns, A380 introduction* 


## Reduce Time-To-Market

- React faster to market changes
- Offer new services to customers sooner
- Make business changes to the platform via content management

*- Four major releases / year*  
*- Acceleration path for agile development*  
*- Instant platform changes by business departments via content management* 

## Higher Profitability

- Lower cost of ownership
- Benefit from economies of scale
- Decrease development and maintenance costs by taking advantage of standard components
- Benefit from standard platform

*- 20% cost savings by initial IBM solution*  
*- On top 10% cost savings: latest technology in 2009*  
*- Plus higher profitability (increased sales figures)* 

## We have demonstrated that Lufthansa benefits from the holistic IBM product offering

- Consulting and implementation through IBM Global Business services
- Application maintenance with global delivery
- Hosting at IBM data centre
- IBM Portal-Software for flexibility
- IBM pSeries for best in class scalability and on demand support



**Integrated services and products for maximum synergies**



# The strategic partnership between Lufthansa and IBM enables each party to bring in their core competencies



**Lufthansa**

## Responsibilities Lufthansa:

- Requirements
- Governance
- Acceptance Test



## Responsibilities IBM:

- Consulting
- Services
- Software
- Hardware
- Maintenance
- Operations / Hosting

## Managed via Service Level Agreements in Contract

- Capacity
- Response Times
- Availability
- On Demand Model

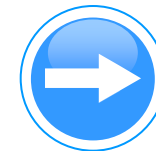


**Lufthansa**



# As a strategic partner IBM supports the evolution of Lufthansa.com through different project phases

Define	Enable	Empower	Enhance	Prolongation
Definition of Contractual Base	Detailed Architecture and Process Design	New Booking Engine	Process Redesign and Optimization	Process Redesign and Optimization
Solution Design	Replacement of Hard- & Software Infrastructure	Integration CRM System	New platform functionality for further customer groups	New platform functionality for further customer groups
	Responsibility of Hosting & Maintenance to IBM		Add Portal Sites and new country concept	Add Portal Sites and new country concept
RFP and Contract Negotiations	Release 1a	Release 1b/1c	Further Enhancements	New Infrastructure
2004	2005	2006	2009	2009



# Vision – Lufthansa.com is a universal multi-airline / multi-brand portal



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# Questions



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