THE RISE AND DEMISE OF AIRBUS A380

Timing of Entry
Defining the Organization's Strategic Direction

The late 1990s.

The rise of the hub-and-spoke model

- Allowed airlines to connect flights with other cities across the globe.
- Supported airport stopovers and airport shopping, creating a symbiotic relationship between airlines and airports.

What supported this ?

- Very large aircrafts

Why ?

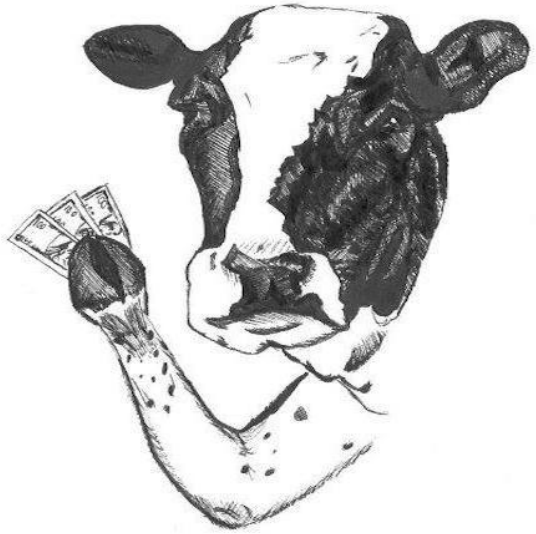
- More seats per plane
- More fuel efficient
- Less cost per seat

Existing Monopoly

Boeing B747

- Wide body and spacious interior
- Ideal for both passengers and cargo operators

They sold over 950 units between 1965 to 2000.



Airbus wanted to play

Formation of Airbus Consortium

- Allowed airlines to connect flights with other cities across the globe.
- Supported airport stopovers and airport shopping, creating a symbiotic relationship between airlines and airports.

Early Challenges and Successes

- First aircraft, The A300, wide body aircraft – Poor market response
- 1981, The A320 narrow body aircraft – Huge success.
    - Over 400 orders before its first flight.

Shift in Market Dynamics

- Long haul flights
- Hub & Spoke model

Monopoly

- Boeing's Dominance

Emerging Duopoly

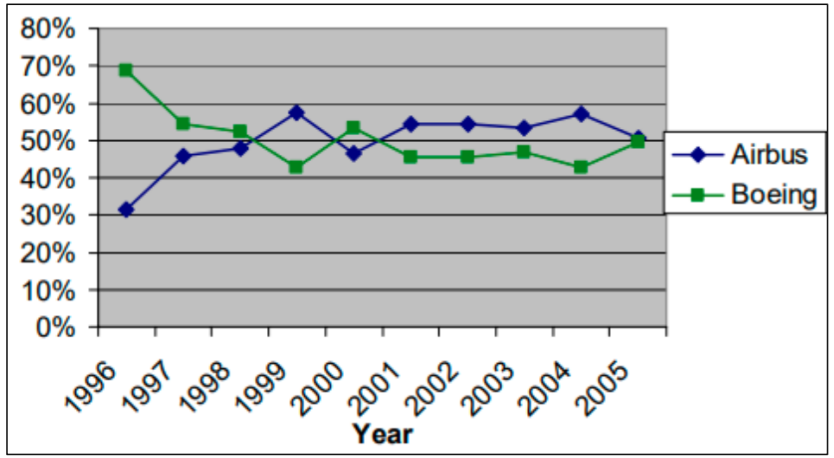
In 1997 demand was forecasted to drive the airlines market to $1 trillion over the next two decades.

The two giants were on a race

B747 was driving Boeing's game.

- Operating profit of US $40 million per plane
- Selling price was US $150 million per plane
- an average of 27 planes per year (1989 to 1999)

EXHIBIT 1: AIRBUS AND BOEING MARKET SHARE



Source: Ivan Png, Airbus vs Boeing, Managerial Economics, Cases, National University of Singapore, https://www.comp.nus.edu.sg/~ipng/mecon/cases/Airbus.pdf, accessed July 2021.

How did they do this ?

Reliance on extensive supplier networks globally for manufacturing components.

- Boeing – Everett & Renton at Washington
- Airbus – 5 different locations in Europe. Final assembly at Toulouse, France, or Northern Germany.

Airlines Reaction

By 1998, the airline industry had consolidated into two distinct market segments:

- **Hub-and-spoke market:** Dominated by established and powerful carriers.
- **Peripheral markets:** Serviced by point-to-point carriers, exemplified by Southwest Airlines.

Preference to similarity

- **Why ?** Because crew qualification played a major factor.

This influenced Boeing & Airbus to build commonality in all their models to promote sales & decrease operating costs.

Ending the 747 Monopoly

"If Airbus Industries was to become a real global player, the 747 monopoly would have to end. Airbus was making efforts at this time to get 30 percent of the market, and we thought that this just would not be possible in the long term if we did not get a complete set of aircraft in our program"

-Jean Roeder, Senior executive at Airbus

A380 Launch Timeline

1988

Study of Airbus started

1990

Project announced to challenge Boeing dominance

1994

Idea of superjumbo A3XX project

1998

Airbus clinched 56% of market for new aircrafts with 556 new orders

2001

Airbus A3XX design finalized and named as A380

2005

First prototype released in Toulouse

Behind the scene

Number 380:

A departure from the Airbus sequence (A300 to A340).

Symbolic Alignment:

The digit 8 mirrors the double-deck interior cross-section of the model.

Lucky Number:

In Asian countries, especially China (a promising growth market at the time), 8 holds significance.

Cost Efficiency Goal:

The target was a 15–20% reduction in operating costs compared to the existing Boeing B747–400.

Barriers to entry

BOEING	AIRBUS
DEVELOPMENT COST: $20 BILLION	**DEVELOPMENT COST:** $11.9 BILLION
DEVELOPMENT TIME: 2-5 YEARS	**DEVELOPMENT TIME:** No data (But optimistic)
MARKET ESTIMATION: 530 AIRCRAFTS BY 2025	**MARKET ESTIMATION:** 1200 AIRCRAFTS BY 2025 $416 Billion Market value
SEATS: 600	**SEATS:** 500

Unsuccessful talks between airbus and Boeing for a joint venture in the super-jumbo market.

Key Factors Driving Decision

Operating Costs

- Importance of fixed operation costs per seat.
- Goal: Maximize revenue through efficient operation.

Hub-and-Spoke Networks

- Significance in airline operations.
- Role of high-capacity aircraft in revenue maximization.

Airport Slot Availability

- Impact of limited slots on revenue generation.
- Advantage of using larger aircraft (A380) to accommodate more passengers.

Passenger Preferences

- Benefits of large aircraft:
- Increased comfort standards.
- Lower fuel consumption per passenger.
- Lower costs per passenger mile.

Economic Feasibility

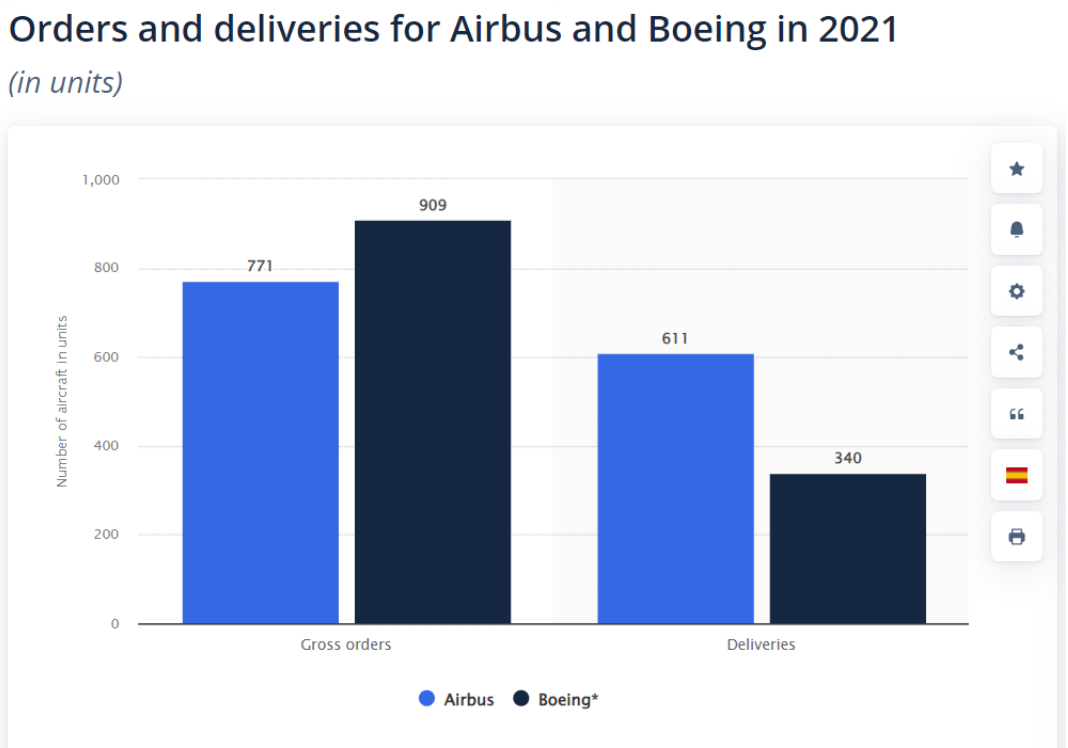
- Preference for lower airfares.
- Role of hub connections in achieving cost-effective travel.

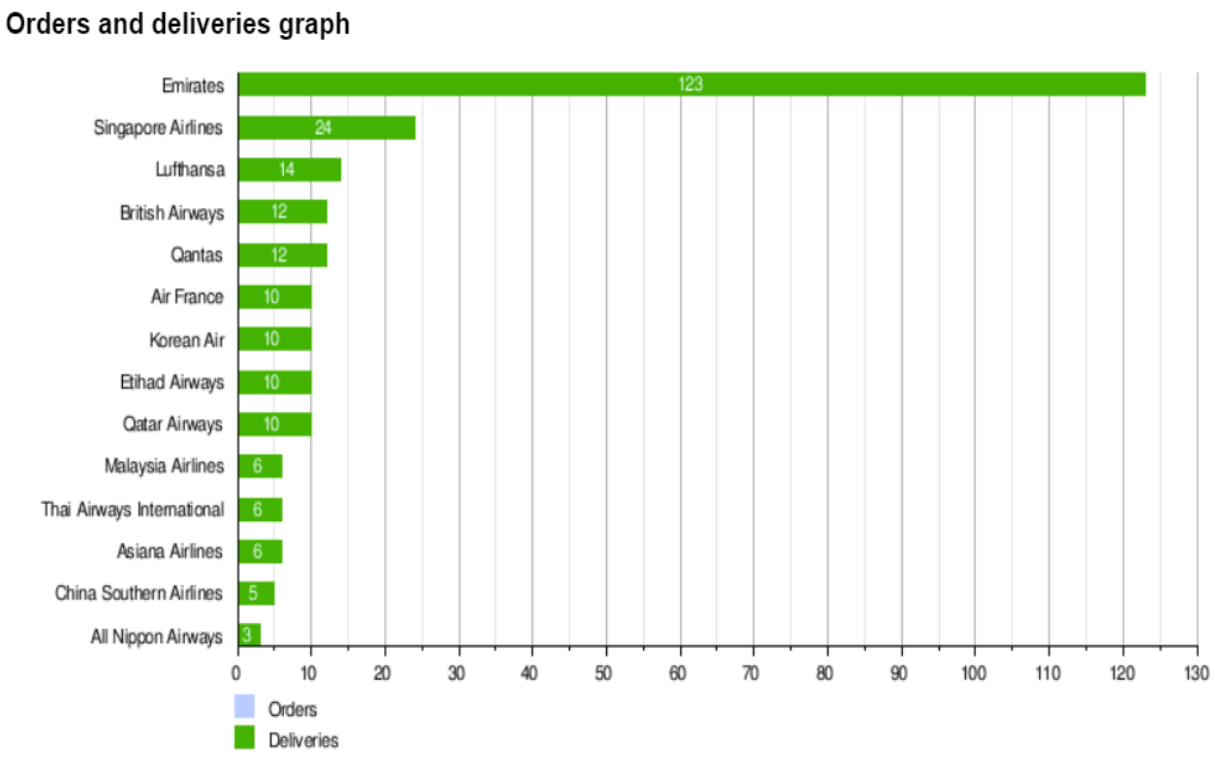
Rise of A380

- The Airbus A380, introduced in 2005, was a revolutionary aircraft in the aviation industry, known for its size and capacity.
- It was the world's largest passenger airliner, designed to accommodate the growing demand for air travel, particularly in high-density routes.

Early Orders and Confidence:

- 2001 - Airbus secured 50 firm orders from six major airlines, including Air France, British Airways, Emirates Airlines, Qantas Airways, Singapore Airlines (SIA), and Virgin Atlantic.
- Demonstrated strong confidence in the A380 project, with the same airlines also taking options to buy another 42 of the new jets.





Production Timeline

Manufacturing began - wing-box component

Final assembly

April 27th – First flight with SIA took off

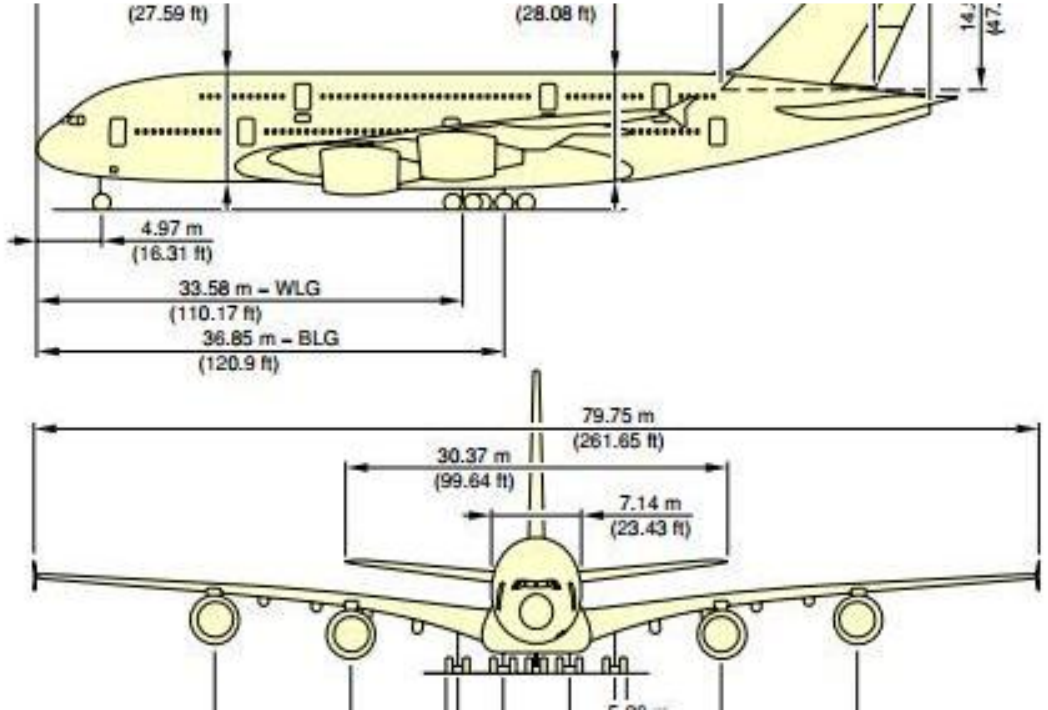
2002 | 2003 | 2004 | 2005

Subassembly

Prototype unveiled

Features and Specifications

- Double-deck, four-engine jet
- World's largest passenger airliner until the Boeing 777X entered service in 2023.
- Seating capacity of 550 passengers and a maximum capacity of 853 passengers.
- Powered by four Rolls-Royce Trent 900 turbofan engines
- Range of 8,000 nautical miles (14,800 kilometers).



Unique features

- A spacious cabin - first-class suites, business class seats, and economy class seats.
- On-board bars, lounges, and showers.
- Advanced noise-reduction technology.
- A fuel-efficient design that allows airlines to save money on operating costs.

Impacts of A380:

Market Impact:

- Increased Airbus's visibility in the high-capacity aircraft market
- Airlines were able to offer new solutions, consolidate frequencies, and introduce new routes

Operational Benefits:

- British Airways used the A380 to consolidate frequencies and release valuable slots for new destinations
- Thai Airways replaced 10 weekly flights between Bangkok and Paris with a daily A380 flight to serve high-demand routes.

Network Optimization:

- SIA switched all three daily Boeing 747 frequencies to A380 on its London to Singapore route, capturing high levels of demand and carrying more passengers.

Revenue Potential and Industry Recognition

01

Seating capacity - allowing airlines to reduce per-passenger costs and offer lower fares, attracting travelers who prefer non-stop flights.

02

Increased retail and restaurant revenue

03

Estimated operating margin - between 14% to 19%, highlighting its profitability and appeal to airlines seeking to improve their financial performance.

04

Innovative design and passenger-focused features - one of the most popular jets among passengers and industry experts.

Retail and Tourism Revenue

- **Increased retail and restaurant revenue**
- **Reduced landing fees**
- **Increased connecting traffic**
- **Increased tourism**
- **Example:** Emirates concentrated on long-haul traffic flows between Europe, Asia, India, and Australia via its hub in Dubai, serving both primary and regional airports. Dubai's tourism benefited from this system, and it was reported that more passengers were stopping at Dubai for tourism, conference, and business purposes. Tourism in the regions and countries linked by the Emirates has also benefited.

A380: From Ascent to Descent

- In 2005, Airbus set the stage for an epic battle, launching the A380 with the audacious goal of dethroning Boeing's iconic 747.

- Picture a world where aviation dreams knew no bounds, where the A380 emerged as a beacon of innovation, promising unparalleled luxury and boundless possibilities.

SO, WHAT WENT WRONG?

A380: Navigating Stormy Skies

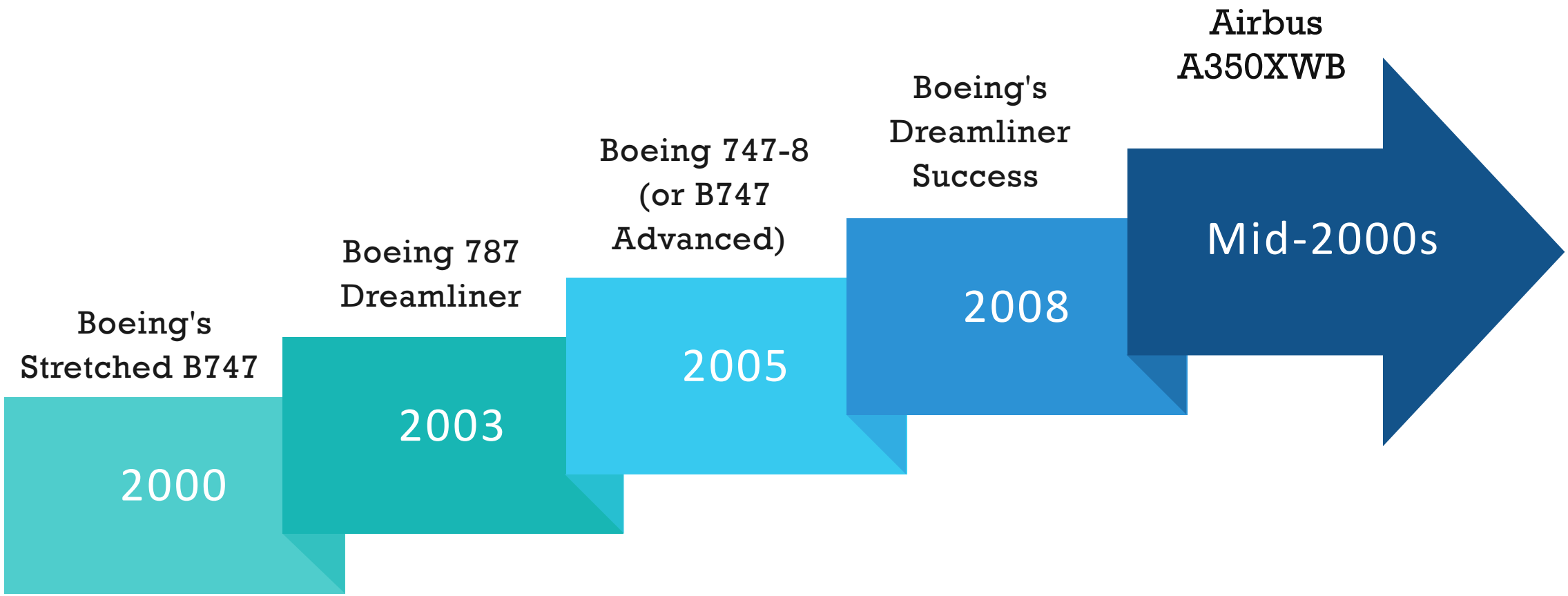
- In 2004, the U.S. government filed a case against Airbus at the WTO, alleging illegal subsidies amounting to $6.5 billion from the EU.
- In retaliation, the EU filed a complaint against the U.S. over $19 billion in aid provided to Boeing.
- Over the years, the WTO ruled that both Airbus and Boeing had received unfair subsidies, impacting market dynamics.

Allegations

- Significant delays in A380 production due to complex activities such as wiring installation, weight testing, and cabin interior customization.
- Initial projected development cost of $10.7 billion more than doubled to over $25 billion by 2016.
- Production challenges included transporting huge parts between facilities and building new infrastructure.

Production Delays

Boeing's Strategic Evolution: Navigating the Aviation Landscape



Shifting Skies: Market Dynamics

- An era of transformation dawned as airlines embraced a more agile, point-to-point flight strategy, diverging from the traditional hub-and-spoke model.

- As the industry adapted, the demand for colossal aircraft like the A380 dwindled, their grandeur overshadowed by the need for nimbleness and efficiency.

Source: Author's own, adapted from Orders and Deliveries, Airbus, Commercial Aircraft, https://www.airbus.com/aircraft/market/orders-deliveries.html, accessed July 2021; Orders and Deliveries, Boeing, Commercial, https://www.boeing.com/commercial/#/orders-deliveries, accessed July 2021.

- **Shift from Hub-and-Spoke to Point-to-Point**
- **Decreased Demand for Very Large Aircraft**
- **Emergence of Boeing's 787 Dreamliner**

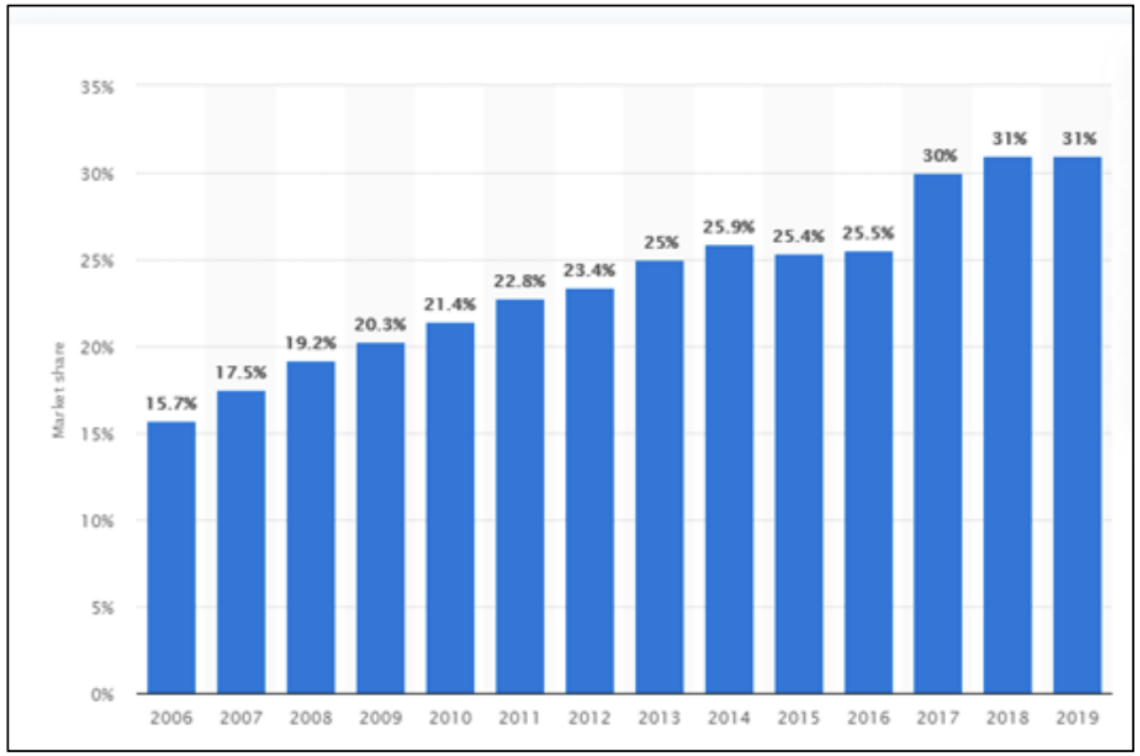
How did the 2008 recession impact the aviation strategies?

Fall in Demand

- Declining demand for very large aircrafts by 2010
- Economic downturns affecting air traffic growth.
- Shift in airline strategies towards more direct flights.
- Emergence of low-cost carriers favoring smaller, more fuel-efficient aircraft.

Growth of budget airlines

EXHIBIT 6: GROWTH OF BUDGET AIRLINES (LCC GROWTH)

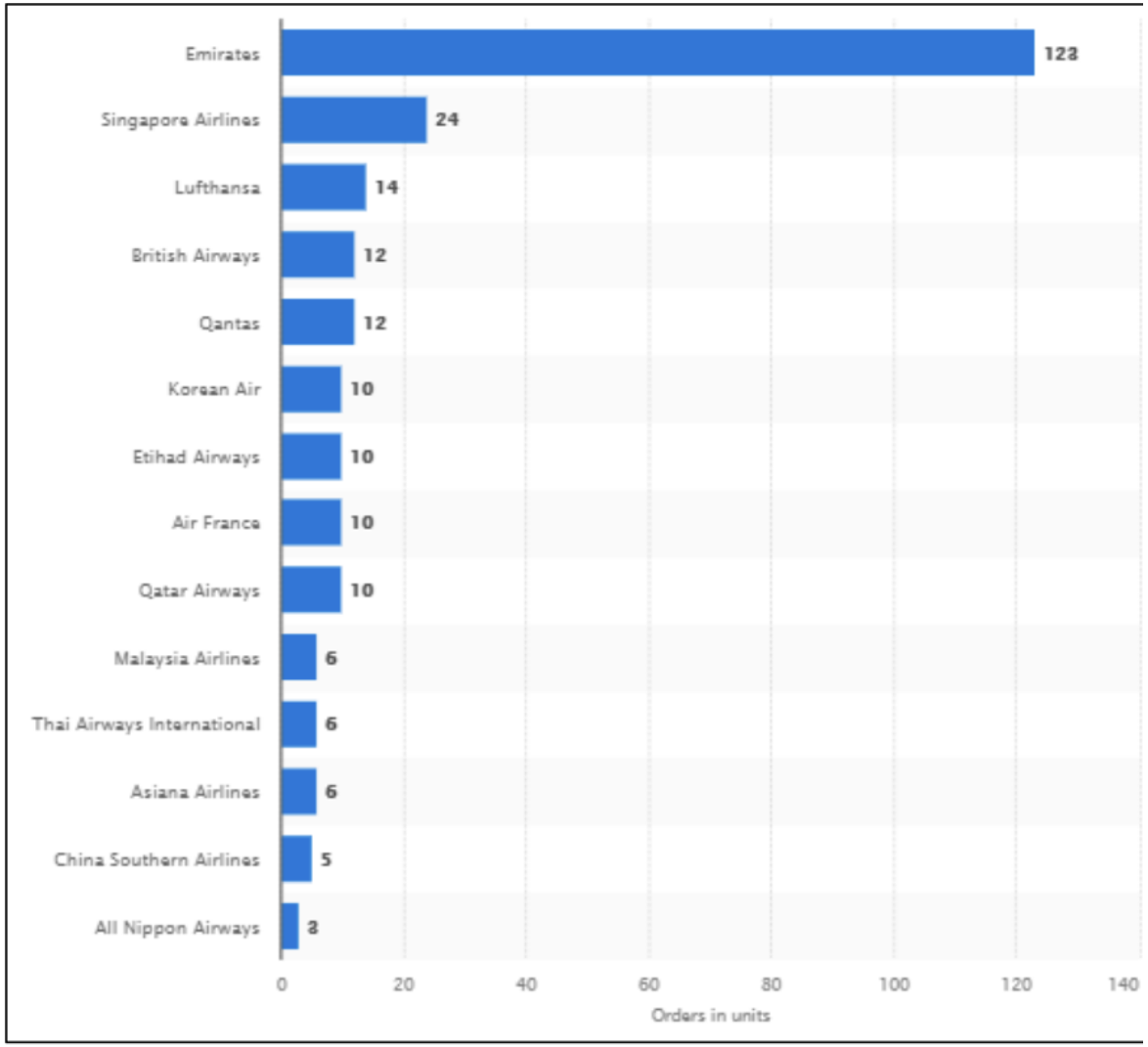


Source: Low cost carriers' worldwide market share from 2007 to 2020, Aviation, Statista, https://www.statista.com/statistics/586677/global-low-cost-carrier-market-capacity-share/, accessed July 2021.

Navigating Turbulence: A380 Challenges

- Limited profitability in Asia-Pacific despite dynamic growth.
- Underestimation of airport infrastructure expenses.
- Limited route flexibility due to size constraints.
- Financial considerations
- Market Impact

EXHIBIT 5: MAJOR CLIENTS OF THE A380



Source: Statista, Aerospace & defense manufacturing, Number of A380 orders from Airbus as of March https://www.statista.com/statistics/263125/number-of-a380-aircraft-orders-from-airbus/, accessed Septem

Losing Buyers

- Order deferrals due to technical issues, shifting strategies
- Unexpected delivery delays
- Subpar economic performance
- Operational Challenges

Market Response and Adoption

- Operational challenges affected aircraft yield and efficiency.
- Limited adaptation of A380 for cargo market needs.
- Muted response from Chinese market due to demand and yield concerns.

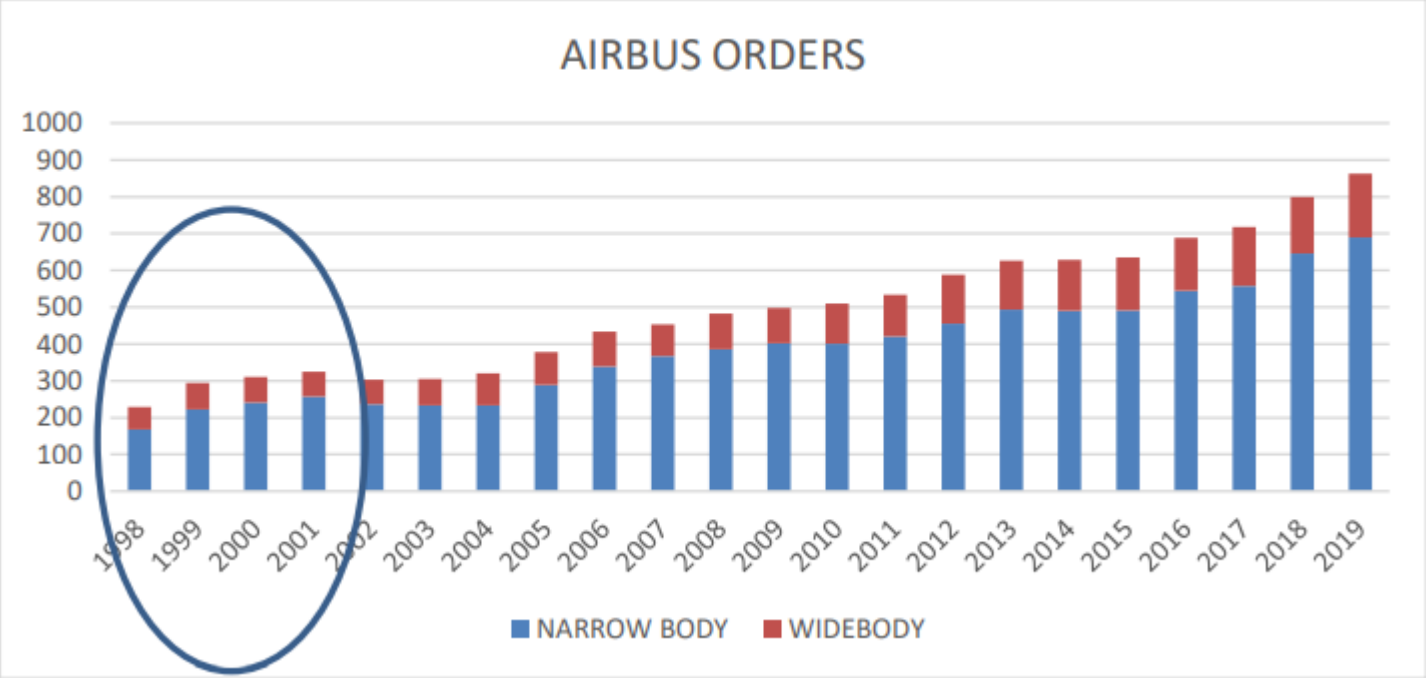
Fading Horizons: Loss of Customer Confidence

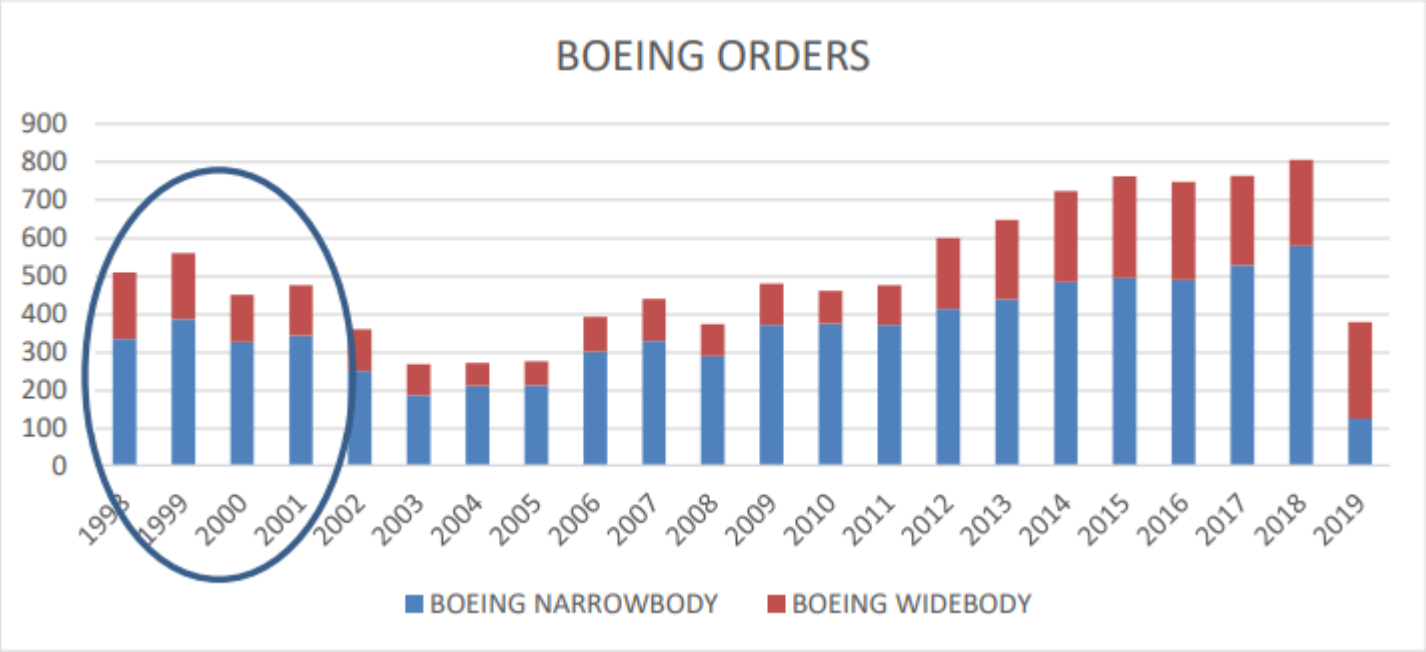
- In 2014-2015, a mere 15 orders trickled in, painting a grim picture of dwindling demand and waning enthusiasm for the A380.
- The year 2019 delivered a crushing blow as Emirates, a cornerstone of the A380 program, axed 39 orders, casting a shadow of uncertainty over the aircraft's future.
- As market dynamics evolved, rival aircraft emerged as preferred choices, leaving the A380 behind in the race for airline patronage.

Narrow – bodies market trend

Growth in point-to-point routes	1
High fuel efficiency	2
Extended ranges	3
Higher maximum take-off weight	4
Rise of low-cost carriers (LCCs)	5
Willingness of passengers to accept smaller cabins	6
Projected growth in the narrow-body market	7

Airbus vs Boeing Deliveries (1998 – 2012)





Growing China Market

- China's Aircraft Market
- Future Demand
- COMAC's Role
- Potential Competitor

Airbus Market Lead

- Airbus vs. Boeing (2019)
- Boeing's Challenges
- Airbus's Strengths
- Market Position

Environmental Adaptations

- **Airbus's Initiatives**
- **Boeing's Approach**

"We think the laws of physics don't need to change to make hydrogen competitive on planes, it's just a lot of work on technologies, on demonstrators, on testing, on regulations, on certification to make it work, we believe it's feasible within the time frame that we have developed" - Airbus CEO

Market Potential and organizations Strategic Considerations

Market Shifts

Competitive Response from Boeing

Timing of entry

QUIZ ROOM

Thanks
for
flying
with us