A380: Designed for LAX

The Environmental Benefits Of the New Larger Aircraft

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It’s great to be back in LAX…
A380 First of the two visits in March 2007
The A380 capacity change in context

The revolution of 1970
707-320B to 747-100

150 pax
+150%
747-100 – 375 pax

Evolution in the 21st century
747-400 to A380

747-400 – 402 pax
+35%
A380 – 555 pax
A380 Benefits

• Higher capacity
  ▸ 35% more passengers (passenger aircraft)

• Massive gains in economics
  ▸ 15% lower cost/seat
  ▸ 20% lower cost/pound of cargo

• Longer range
  ▸ More payload on critical routes
  ▸ New non-stop markets, simplified networks

• Passenger comfort
  ▸ Almost 50% more cabin floor volume
  ▸ More space per passenger
A380 – dimensioned for the future

A380 upper deck: true wide body comfort
A380 main deck: the widest cabin ever
More space per passenger than a 747
Internationally recommended balanced approach to airport noise reduction

- Noise reduction at source
- Operational procedures
- Land use & Planning
- Operating restrictions

Reducing noise impact of air transport

Manufacturers contribution
20dB airport noise reduction = 75% quieter!

Lateral Noise Level Corrected for Aircraft Thrust

Entry Into Service Date


Turbojets

1st generation turbofans

2nd generation turbofans
Continuous environmental pressure: the A380 had to bring a step change in environmental friendliness

Cumulated certificated noise values
(sideline + flyover + approach, in EPNdB)

Source ICAO, FAA
Technology for lower noise

- Better climb performance and lower approach speed
- Automated and customised noise abatement procedure for take off for further noise reduction
85 db noise contour from LAX at MTOW
85 db noise contour for a 5,000 nm mission

Noise contour surface (mi²)

- 46%

747-400 A380-800

Los Angeles

5,000 nm mission
Reducing noise at departure
ICAO standard procedures

ICAO defined two Noise Abatement Departure Procedures (NADP):
- which optimise noise and reduce impact in the airport vicinity
- by optimising aircraft speed, configuration and engine thrust

**NADP 1 Close in**
reduction of thrust level before slats/flaps retraction, noise reduction for sensitive areas **close** to airport.

**NADP 2 Distant**
slats/flaps retraction before reduction of thrust level, noise reduction for areas **distant** to airport.
Reducing noise at departure
The A380 Airbus Departure Analysis Software

ADAS calculates customised NADP enabling additional noise reduction up to 2 dB
The A380 is the quietest large aircraft

Cumulated noise value: Approach + sideline + flyover (EPNdB)

More passengers with less noise

Aircraft capacity (seats, 3 class)

Bigger

Quieter
A380 – The quietest in its class

A380 produces half the noise generated by the 747-400
A380 – The lowest emissions

Relative to CAEP4 limits. Based on certification data.

Setting a new standard for the environment
Conclusion: The A380 double noise benefit

1. The capacity effect
   - With 35% more capacity than the 747-400, the A380 allows airlines to cater for growth with fewer additional movements.

2. The technology effect
   - The A380 is an all new design benefiting from technological advancements in noise reduction, leading to halve the acoustic energy of a 747-400.
A380 entry into service
October 25, 2007
21st Century flagship

A380  525 seats  8200nm
A380F  150 tonnes  5800nm
196 orders & commitments from 17 customers
SIA A380: comfort, space and luxury

Singapore Airline Suites
A cabin class **beyond** First class

New Business Class
The world's **widest** B/C seat

New Economy Class
More personal **space**

**UD boarding**
**Quietest cabin**
**Special lighting features**
**New version of KrisWorld IFE: eX2**

**Only in A380**

A dream becomes reality