Payload, Range and Speed: Where Will We Go and Why?
Fleet Mix and Growth Assessment

- High Capacity A380-747X
- Existing Widebodies 100-400 seats
- Long Range International
- RJ 70-100 Seats
- RJ 30-55 Seats

Seats vs. Range ~ 1000 nmi
ASM Forecasts Will Define “First Cut” Fleet Expansion
The Airline Cost, Revenue and Profit Scenario

Revenue & Cost ($)

Seat-miles

Fixed cost

Ownership
Indirect costs
Overhead
Administrative
Non-flying assets
The Airline Cost, Revenue and Profit Scenario
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The Airline Cost, Revenue and Profit Scenario

Opening up the profit potential

Revenue & Cost ($) - Seat-miles

Total revenue (RPMs) - Total cost (ASMs)

Profit
Optimizing The Interior Design . . .
Key Criteria for a Successful Interior

- Must be a “product differentiator” for the airline.
- Must encourage “re-booking potential” with passengers.
- Must produce maximum revenue from available cabin volume.
- Must be maintenance friendly, with common components.
Unit Seat Volumes

Fuselage volume per passenger ~ft³

- A380
- 777-300
- A340-600
- 747-400
- 777-200
- A340-300
- 767-400
- A330-300

One-class passengers (approximate)

“Study” optimum
The Shape of Our Past
The Shape of Our Future . . .
The High-Subsonic “Brick Wall”
The Standard Airplane

- Two Basic Objectives:
  1. Reduce airplane acquisition, operational, and maintenance costs.
  2. Preserve product differentiation for each airline.
The Airplane is Assembled as a "Frozen Tube"

- Basic interior architecture is identical for all customers (lavatories, stow bins, sidewalls).
- Minor flexibility for galley placement.
- Embedded wiring to all amenities with interfaces to "plug and play".
- Flight Deck is 100% standard.
Airline-Unique Features Are Installed at a "Finishing Center"

- Seats, closets, partitions
- IFE/Communications
- Décor (carpet, tapestries)
- Flight deck avionics "pin changes" only
Standardization Results in Savings by the Manufacturer That Can be Passed to the Airline

- “One build fits all”
  - No unique engineering required.
  - No out-of-position installations.
  - No special checkout or test procedures.

- Support system costs can be minimized
  - Consistent products developed as baseline for all airplanes.
  - “One pass” revision scenario for all services.
  - Standardization will facilitate common industry problem-solving.