



Technology and Innovation for the Next Century of Flight

Dan Mooney

Vice President, Product Development
Boeing Commercial Airplanes

November, 2004

SAE *International*

World Aviation Congress

It's All About the Passenger

Passengers want


- Safe, reliable service
- Non-stop, point to point flights
- More frequency choices
- Comfortable Surroundings
- Lower fares

point to point

Passengers Drive Airline Strategies and Product and Technology Development

Increased Liberalization

Airline Business Strategies

- 
- Safe, reliable service
 - Non-stop, point to point flights
 - More frequency choices
 - Lower fares

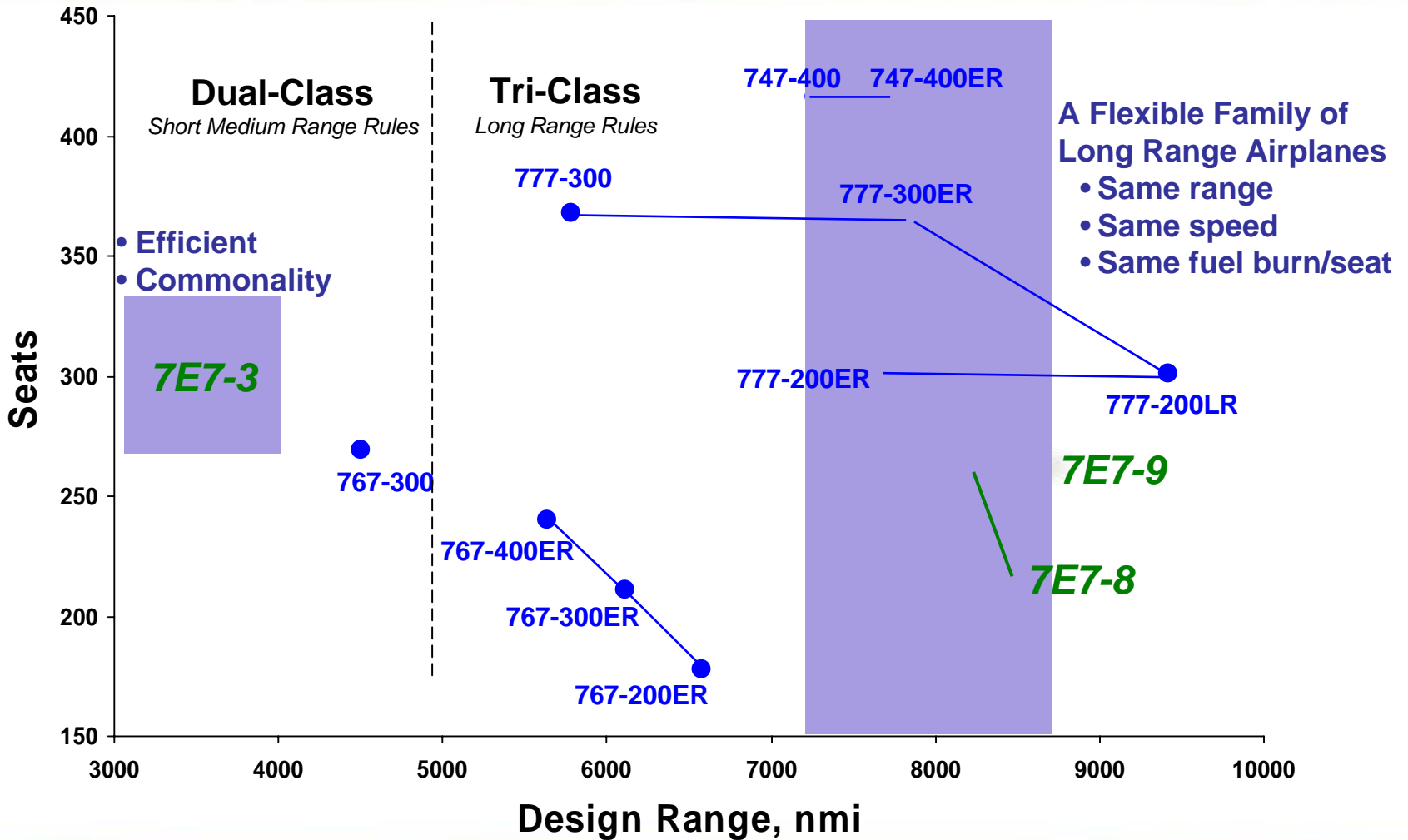
Increased Airplane Capabilities

7E7 - The Next Great Advance In Flight

- **New levels of airplane**
 - Efficiency
 - Capability
 - Comfort
 - Environmental responsibility
- **A single airplane family serving a wide spectrum of markets**
- **Designed with the investor, operator and passenger in mind**



The 7E7 Brings New Capability to the Middle of the Market

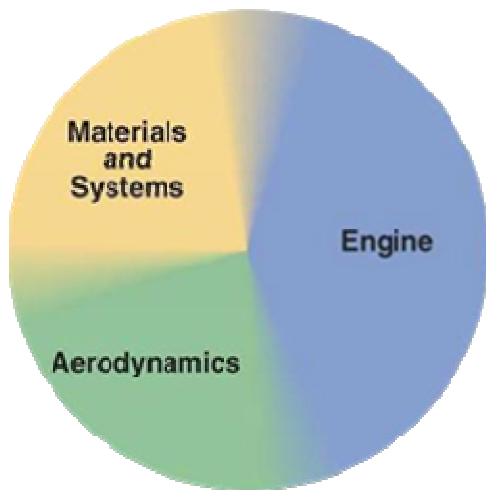


Innovations That Add Value

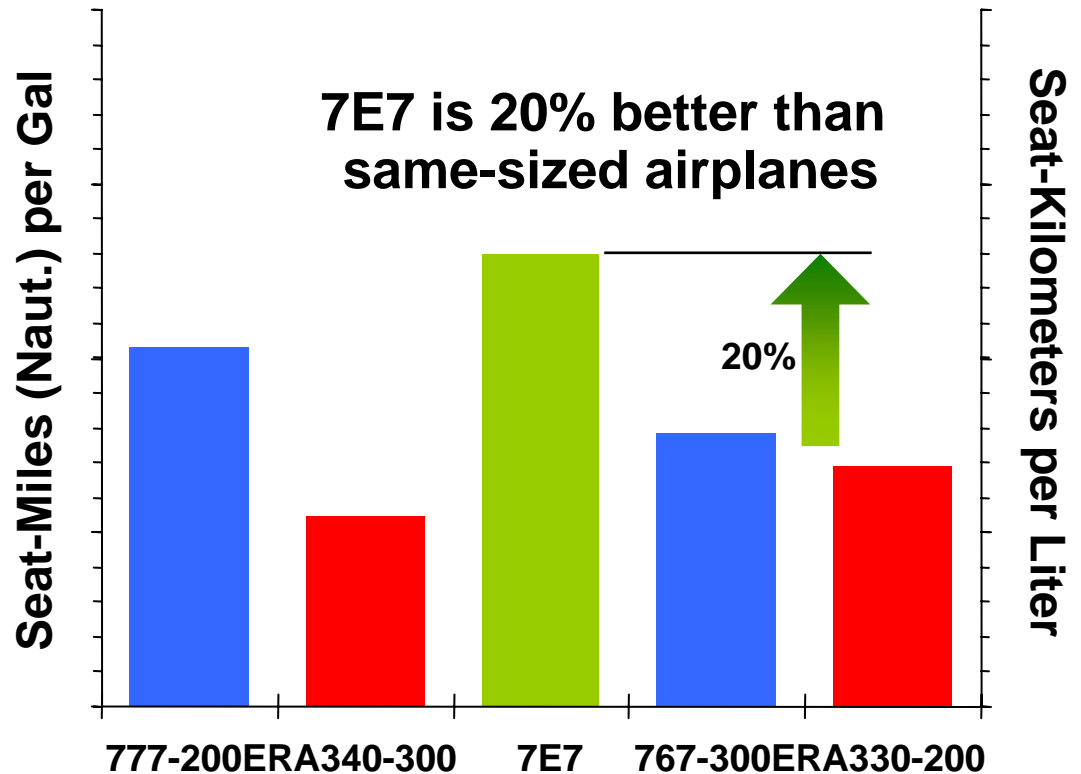


Unparalleled Fuel Efficiency

Enablers



It's more than just engines!



- Based on 3,000 nmi (5,600 km) trip
- A330 and A340 Boeing assessments in red

New Technologies Make the 7E7 Possible

- Configuration
- Propulsion
- Manufacturing
- Flight Deck
- Materials
- Systems



New Design Tools Enable Better Results

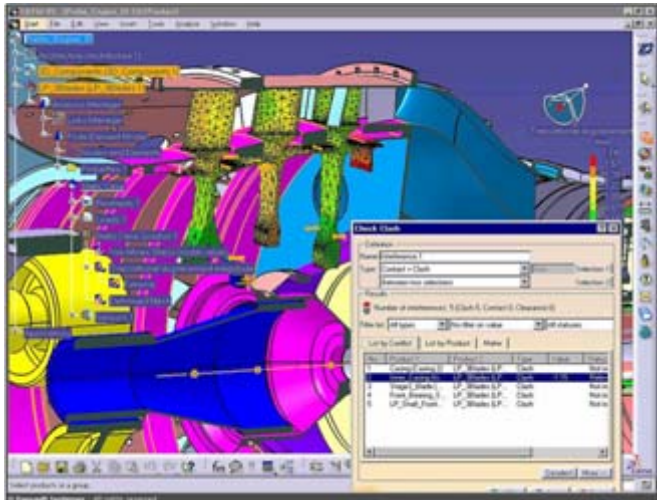


Improved capabilities

- Real-time collaboration between partners
- Single database documentation
- Advanced human factors modeling
- Increased relational design
- Assembly and maintenance process design

Benefits

- Real-time design changes
- Improved efficiencies
- Fewer errors



Continuing Advances in Aerodynamics Technology

- **Simultaneous multi-disciplinary optimization**
- **21st century Computational Fluid Dynamics**
- **Highly integrated wind tunnel testing**
- **Aerodynamic solutions complementing advanced materials**

