



Winds of Change: The Airline Industry in 2004

MIT Global Airline Industry Program

Prof. Cynthia Barnhart

April 15, 2004



MIT Global Airline Industry Program

- Objectives

- Develop a body of knowledge for understanding development, growth and competitive advantage in the airline industry
- Educate airline industry's future leaders
- Increase the number of Ph.D. and other graduate students engaged in airline-related research
- Produce authoritative research reports and educational materials

The Multi-Disciplinary Team

Approximately 14 students

- Arnold I. Barnett
- Cynthia Barnhart
- Amedeo R. Odoni
- Peter P. Belobaba
- John-Paul Clarke
- Jody Hoffer Gittell
- R. John Hansman, Jr.
- Thomas A. Kochan
- Robert B. McKersie
- Nancy L. Rose
- Stephane Bratu (Ph.D., Transportation, 2003)
- Terence Fan (Ph.D., Transportation, 2003)
- Thomas Gorin (Ph.D. student, Transportation)
- Silka Janusewski (Ph.D, Economics 2003)
- Alex Lee (Ph.D. student, Aero and Astro)
- Susan Martonosi (Ph.D. student, Operations Research Center)
- Shan Lan (Ph.D, Transportation 2003)
- Andrew Von Nordenflycht (Ph.D. student, Sloan School of Management)

Economics, Sloan School, ICAT, CTL, ORC, Aero/ Astro, CEE, Brandeis

Ongoing Research

Impacts of Security Requirements

- Implications for Security Research (Barnett/ Martonosi); Airport Terminal Planning Under New Security Requirements (Odoni); **LFM Internships at Continental and United (Kochan/ Hansman/ Miller/ Bogusch)**

Changing Airline Operations

- Impacts of Flight Delays on Passengers (Barnhart/Bratu/Samardi); System Study of Airport Delays at Newark Airport (Clarke/Evans); Network Structure and Productivity (Barnhart/ Bratu/Samardi); Demand Management (Odoni/Fan), Robust schedules (Barnhart/ Clarke/Lan)

Labor/Management Relations

- Airline Employment System Transformations: Case studies of incumbent airlines' attempts to restructure their employment systems (von Nordenflycht/Kochan); Competitive Strategies of the Low Cost Airlines: How Do People Add Value? (Gittell/Kochan/McKersie/von Nordenflycht)

Industry Structure and Competition

- Low-Fare Entry in Airline Markets: Revenue Management and Network Flows (Belobaba/ Gorin); Changes in Regional Economic Connectivity (Hansman/ Tam); Financial Survival of Air Carriers (Clarke/Lee) ; Economic analysis- Lagaardia (Rose, Janusewski); **Amedeus Internship (Dorinson/ Belobaba)**

Educational Initiatives

“E-PODS” Airline Educational Game prototype

- Co-development with Boeing of competitive airline planning and management simulation game
- Prototype used in 16.75 Airline Management for two terms
 - E-PODS used by five student teams to simulate fleet planning, route evaluation, scheduling and pricing decisions in a competitive airline environment
- Boeing continues to provide programming and maintenance resources

New subjects

- The Airline Industry (16.71J/1.232J/15.054J)
 - 8 participants of the Global Airline Industry Program, now in its 3rd year
 - Textbook preparation underway
- Modeling and Operating Aerospace Transportation Systems (16.432).
- Aircraft Systems Engineering (16.982).

Numerous case studies and learning modules

MIT Global Airline Industry Program: Funding and Sustainment

- Established in September 1999 with a 3-year grant from Alfred P. Sloan Foundation
- Second round of funding secured from the Sloan Foundation to support research from 2003-2005
- Currently exploring mechanisms to form industrial and government partnerships to establish self-sustaining program
 - Industry Advisory Board

Agenda

Winds of Change: The Airline Industry in 2004

- 8:30-9:15** **Introduction and Welcome** (Prof. Cynthia Barnhart, MIT)
Keynote Address: Jeffrey N. Shane, (Under Secretary for Policy, US Department of Transportation)
- 9:15-10:30** **The Changing Industry Environment** (Chair – Dr. Peter Belobaba, MIT)
- Highlights of Recent Industry Trends (Prof. John Hansman, MIT)
 - Overview of the Low-Cost Carrier Market Worldwide (Drew Magill, Director Market Analysis, Boeing Commercial Airplanes)
 - Low Cost Carriers in the US: Shifting Strategies Required for the Next Growth Phase (Bill Swelbar, President, ECLAT Consulting)
- 10:30-11:00** **Coffee Break**
- 11:00-12:30** **The Response of Legacy Carriers** (Chair – Prof Nancy Rose, MIT)
- The Four Billion Dollar Question: How Does a Legacy Carrier Get Cost Competitive? (Scott Nason, VP – Revenue Management, American Airlines)
 - Network Productivity Improvements (Christoph Klingenberg, EVP – Future European Operations, Lufthansa German Airlines)
 - The Evolution of Airline Marketing (Joanne Smith, VP – Marketing, Song)
 - Moving Towards Customer-Centric Pricing (Montie Brewer, EVP – Commercial, Air Canada)
- 12:30-1:45** **Lunch – Dining Room**
Featured Speaker: Donald J. Carty (Retired Chairman and CEO, American Airlines)

Agenda (continued)

- 1:45-2:45 Labor and Employee Relations – Good News, Bad News** (Chair: Prof. Robert McKersie, MIT)
- Report on Labor-Management Working Group (Prof. Tom Kochan, MIT)
 - **Panel Discussion**
 - Jerry Glass, SVP, Employee Relations, US Airways
 - Pat Friend, President, Association of Flight Attendants
 - Don Treichler, Director, Airline Division, International Brotherhood of Teamsters
 - Harry Risetto, Partner, Law Firm of Morgan Lewis.
- 2:45-3:15 Coffee Break**
- 3:15-4:30 Air Transportation System Financing Issues** (Chair: Jane Garvey, MIT, Former FAA Administrator)
- Air Transportation Taxes and Fees (Prof. Joakim Karlsson, Daniel Webster College)
 - The Airline/Airport Relationship (David Plavin, President, Airports Council International – North America)
 - The Cost of Aviation Security (Prof. Arnold Barnett, MIT)
 - Airline Financing Challenges (Thomas Cahill, Morgan Stanley)
- 4:30-5:30 Reception**