



Acquisition Research Program:
Creating Synergy for Informed Change

Global Aerospace Industries: Major Changes Ahead?

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OVERVIEW & OUTLINE

- PREVIOUS YEARS' WORK: SOURCES OF RAPID CHANGE
- FOCUS: BOEING-EADS RIVALRY
- THE KC-X SAGA ENDS
 - BOEING WINS, DESPITE ODDS MAKERS
 - WHY?
- BELEAGUERED DUOPOLISTS?
 - THE CASH COWS: B737, A320
 - THREATS
 - REGIONAL JETS (BOMBARDIER, EMBRAER)
 - CHINA (COMAC)
 - RUSSIA? (IRKUT, SUKHOI)
 - BOEING AND EADS RESPOND
 - NEW VARIANTS: A320(NEO) AND B737MAX
 - PARTNERSHIPS



KC-X SAGA (apparently) ENDS

- THIRD (FOURTH?) ITERATION
 - EADS THE ODDS-ON FAVORITE TO WIN
 - BOEING'S FINAL OFFER
 - HOW BOEING MIGHT HAVE GOTTEN THERE
- EXPLAINING THE BOEING WIN
 - A LOGICAL CONSEQUENCE OF THE 2010 RFP
 - CHANGING CRITERIA
 - POLITICS



EXPLAINING THE BOEING WIN

- A CLEAR RESULT OF THE 2010 RFP
 - Mandatory Requirements (Pass/Fail)
 - Total Proposed Prices (TPPs)
 - Boeing: \$21.4B
 - EADS: \$23.4B
 - Total Proposed Price to Total Evaluated Price (TEP)
 - Fuel (Boeing, \$0.5B)
 - Basing (Boeing, \$0.3B)
 - Warfighting (EADS, \$0.8B)
 - TEPs: Boeing (\$19.6B; \$21.6B)
 - Non-mandatory Requirements (tiebreaker) not needed



EXPLAINING THE BOEING WIN

- CHANGING CRITERIA

- Harder look at basing
- Pass/Fail grading for Mandatory Requirements
 - Both posed “acceptable” risk
 - Fixed price contract made risk less of an issue
 - Extension of operating life (25 to 40)
 - Changing airlift picture (C-17s, MCRS-16)
 - ➔ Shift from “best” to “good enough?” (From modernization to recapitalization?)

- POLITICS

- Rep. Dicks’ claim about fuel costs
- Balance of congressional power



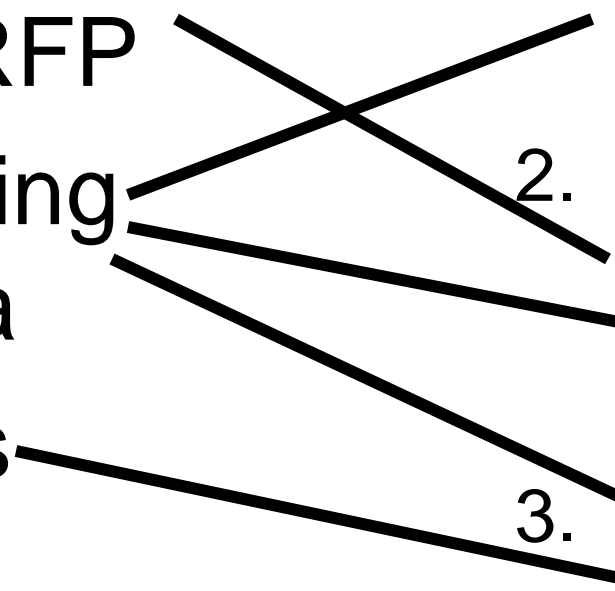
EXPLAINING THE BOEING WIN: Explanatory Frameworks

Reported Reasons

- Result of the 2010 RFP
- Changing Criteria
- Politics

Allison's Three Models

1. Unitary Rational Actor (pure microeconomics)
2. Organizational Behavior (or bureaucratic process)
3. Governmental Politics



KC-X POSTSCRIPT: Strengthened Acquisition Processes

- Gen Schwartz: "... the model for ... proper requirement discipline, proper program execution, proper partnering and collaboration with the contractor."
- OSD: "readily understandable and transparent source selection criteria ... results fully transparent to parties concerned."
- Protest-resistant source selections?
- LAS Aircraft affair?



BELEAGURED DUOPOLISTS?

- Phenomenally successful narrow-body airliner families: Boeing 737, Airbus 320
- “Bread and butter” for both companies
- Potential new entrants
 - Age of designs (especially 737)
 - Profits to be made ... which makes option to enter valuable
- Potential new players
 - Regional Jet Manufacturers
 - COMAC C919
 - Russian Companies



REGIONAL JETS

- Bombardier's C Series
 - 100-149 seats – A319, smaller B737s
 - Cost-saving advantages of newer design
 - Extensive international outsourcing: esp. China, EU, with associated risks
- Embraer
 - E190 at 114 passengers
 - No stated interest in competing with Boeing & EADS



China's Entry

- C919: 168-190 passengers
- Advantages of newer design
- Captive market (≤ 85 ordered in PRC)
- Partnership with Bombardier
- Difficulties
 - Intellectual property protections
 - Still in development
 - Support network



Russia

- Superjet International: joint venture between Sukhoi (49%) and Alenia (51%)
 - Seats 78-105
 - Captive market: Aeroflot
 - Difficulties include international certifications, development delays
- Irkut MS-21
 - 150-215 passengers
 - Also planned for Aeroflot (≥ 190)
 - Extensive development subsidies
 - Technical risks, such as carbon fiber wing



Assessing the Threats

- Potential cost advantages of new designs
- Reliability and availability of support a potential problem
- Other “non-design” barriers: lack of fleet commonality considerations
- We rate Bombardier the most likely entrant, but definitely not a sure thing



Understanding the Situation: Contestable Markets

- Central idea: the extent to which markets are “contestable” causes monopolists and oligopolists to behave more like competitive firms
- Incumbents’ Reactions
 - Product variations: A320neo and B737MAX
 - Partnerships: e.g., Boeing and Airbus with Embraer, Airbus with COMAC
 - The duopolists are not beleaguered ... yet



WRAPPING UP

- FOCUS ON EADS-BOEING RIVALRY ... WITH COMMERCIAL AND MILITARY COMPONENTS
- KC-X COMPETITION AS A MAJOR MANIFESTATION: B767 VS. A330, AMONG OTHERS
- NARROW-BODY MARKET A PROFITABLE DUOPOLY
- POTENTIAL ENTRANTS A POTENTIAL SOURCE OF MAJOR AND RAPID CHANGE ... BUT NOT NOW

