



Defense Acquisition in Transition

6TH ANNUAL ACQUISITION RESEARCH SYMPOSIUM

New Patterns of Collaboration and Rivalry in the US and European Defense and Aerospace Industries

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PART OF A CONTINUING EFFORT TO UNDERSTAND AN INCREASINGLY COMPLEX ENVIRONMENT

- FY07/08: “Echoes across the Pond: Understanding EU-US Defense Industrial Relationships” (last year’s Symposium)
- FY08: “New Patterns of Rivalry and Collaboration in the US and European Defense and Aerospace Industries” (today)
- FY09: “Global Cooperation and Competition in the Defense and Aerospace Industries” (in progress)



OUTLINE

- INTRODUCTION
- BOEING 787
- KC-45 COMPETITION
- FOREIGN DIRECT INVESTMENT IN US DEFENSE MARKET
 - BAE
 - EADS
 - FINMECANICA
- SOME CONCLUDING THOUGHTS



BOEING 787: an Extrapolation From the B777 Project

CONTEXT: THE B-777 SUCCESS

- **CARBON FIBER REINFORCED PLASTIC (CFRP)**
- **EXTENSIVE OUTSOURCING**
- **“PAPERLESS” DESIGN**



B-787, A NEW TYPE

- EXTENSIVE USE OF COMPOSITES (CFRP)
- INCREASED FUEL EFFICIENCY (~20%)
- PASSENGER AMENITIES
 - HIGHER HUMIDITY
 - LARGER WINDOWS
- EVEN MORE OUTSOURCING
 - 70% OF AIRFRAME
 - ... WITH 30 TIER 1 SUPPLIERS
 - METHOD OF SHARING RISK
- COMMERCIAL SUCCESS, MEASURED BY INITIAL ORDERS



SUPPLY CHAIN PROBLEMS

- RELIED ON PAST RECORD OF “TRUSTED RELATIONSHIPS” WITH SUPPLIERS
- FAST-PACED PROGRAMS
- INSUFFICIENT MONITORING
- DELAYS FOR FIXING
- ➔ MID-PROJECT VERTICAL INTEGRATION
 - SOME ASSEMBLY AND SYSTEMS INTEGRATION FUNCTIONS RETURN TO BOEING
- BENEFITS NONETHELESS, SUCH AS FACILITATING INNOVATION IN LOWER TIERS



IMPLICATIONS FOR DOD

- GLOBALIZATION AS FACT
- CONTINUING IMPORTANCE OF BEING A KNOWLEDGEABLE CUSTOMER
 - ... FOR BOTH INTERMEDIATE AND FINAL PRODUCTS
 - ... WITH IMPLICATIONS FOR HUMAN CAPITAL POLICY
- EMULATING SUCCESSFUL “COMMERCIAL PRACTICES” IS NO PANACEA
 - E.G., BETTER TO HAVE EMULATED TOYOTA THAN EXTRAPOLATED FROM THE 777 PROJECT



KC-45 CONTEXT

- AERIAL REFUELING AS A CORE COMPETENCE ...
SINE QUA NON OF POWER PROJECTION
- AGING OF KC-135 FLEET
 - RISKS OF HIGH COSTS, LOW AVAILABILITY
 - ILLUSTRATED BY CURRENT KC-135Es
- KC-767 LEASING OPTION
 - STARTING RECAPITALIZATION
 - HEDGE AGAINST KC-135 FAILURE
 - ... A RATHER BIZARRE ENDING



“KC-X” COMPETITION

- “Key Performance Parameters”, AND “Best Value”
- FINAL RFP, 31 JAN 2007
 - NG-EADS OBJECTION TO ORIGINAL RFP
- EXTENSIVE PUBLICITY, LOBBYING CAMPAIGNS
 - TO INCLUDE A KC-30 OFFSET PACKAGE
- AWARD TO KC-30, 29 FEB 08 ... CLOSE



BOEING'S PROTEST, 11 MAR 08 ... SUSTAINED

- GROUNDS FOR PROTEST INCLUDED ...
 - WEIGHTING OF “EXTRA” FUEL AND PASSENGER CAPACITY
 - EVALUATION OF RISKS
 - COST ASSESSMENTS
 - EFFECTS OF BASING CHARACTERISTICS (ESPECIALLY RAMP SPACE NEEDS)
- SUSTAINED BY GAO, 18 JUN 08
 - “SUBSTANTIAL,” SIGNIFICANT ERRORS
 - SEEMED TO GO BEYOND KEY BOEING ALLEGATIONS



ABORTIVE NEW COMPETITION

- “AMENDMENTS AND CLARIFICATIONS” TO RFP ISSUED, 6 AUG 08 ... WITH SOURCE SELECTION LATE 2008
- BOEING THREATENS TO PULL OUT ... INSUFFICIENT TIME FOR COMPETITIVE PROPOSAL
- UPDATE: COMPETITION SLIPPED
- CURRENT STATE: MULTIPLE VETO HOLDERS ... GRIDLOCK?



SOME HYPOTHESES, AS QUESTIONS

- ARE PROTESTS INEVITABLE?
 - VERY SMALL NUMBER OF LARGE, WINNER-TAKES-ALL COMPETITIONS
- IS A PROTEST-PROOF SELECTION CONSISTENTLY ACHIEVEABLE?
 - COULD NG-EADS HAVE SUCCESSFULLY PROTESTED AN AWARD TO BOEING?
 - IS “PERFECTO” CONSISTENTLY DOABLE?
- SHOULD WE RECONSIDER THE STANDARD MODEL?
 - SOVEREIGN MONOPSONIST VS. COMPETITORS
 - QUARRELSOME COMMITTEE VS. AGILE OLIGOPOLISTS



RECOMMENDATIONS

- RESOLVING THE KC-45 GRIDLOCK
 - DUAL SOURCING?
 - OUT-OF-COURT SETTLEMENT?
- GLEANING LESSONS LEARNED
 - FORENSIC CASE STUDY ... THAT GOES BEYOND AIR FORCE LESSONS LEARNED EXERCISE
 - ... LOOKING FOR MULTIPLE CAUSES AND SYSTEMIC FAILURES
- UNDERSTAND THAT MAJOR SOURCE SELECTIONS ARE INDUSTRIAL POLICY MEASURES



FOREIGN DIRECT INVESTMENT IN US DEFENSE INDUSTRIES

- LEGISLATIVE AND REGULATORY FRAMEWORK
- THREE CASES: anonymous interviews
 - EADS
 - FINMECCANICA
 - BAE
- SOME OBSERVATIONS



LEGISLATIVE & REGULATORY FRAMEWORK

- WWI: SEIZURE OF GERMAN ASSETS, ON NATIONAL SECURITY GROUNDS
- TRADING WITH ENEMY ACT (TWTE) ALSO APPLIED IN WWII
- REVIEW COMMITTEE (CFIUS) ESTABLISHED 1975
- TWTE AMENDED IN 1977
- SUBSTANTIAL TWO-WAY FDI FOR US (ESPECIALLY 1980s AND BEYOND)



Legislative & Regulatory Framework (cont)

- EXON-FLORIO AMENDMENT (1988)
 - STRUCTURE FOR CFIUS REVIEWS
 - ... WITH BROAD MANDATE
- BYRD AMENDMENT (1992)
 - MOTIVATED BY CSF-THOMSON'S PROPOSED ACQUISITION OF LTV
- FOREIGN INVESTMENT AND NATIONAL SECURITY ACT (FINSA, 2007)



EADS (European Aeronautic Defence and Space Company)

- EADS' North American Business Lines: aerial tankers, rotorcraft, transport aircraft, defense electronics, space
- INTERVIEW COMMENTS
 - SUPERIORITY OF A330 VS. B767
 - FACILITIES FOR KC-30 ASSEMBLY
 - EADS AS GLOBAL COMPANY
 - ABILITY TO SATISFY ITAR REQUIREMENTS



EADS STRATEGEMS

- LEAD WITH OFFSETS (reabeled if needed)
 - CUSTOMER HAS RIGHT TO “DOMESTIC RETURN” FROM FOREIGN PRODUCTS
 - ... WITH A MAJORITY OF US CONTENT
- ADAPTING TO THE MARKET
 - ENTRY TO THE DOLLAR AREA
 - US PARTNERS (SUCH AS NG) TO PROVIDE “FIREWALLS” FOR SATISFYING US TECHNOLOGY REGULATIONS



FINMECCANICA

- CORPORATE STRATEGY BASED ON ALLIANCES WITH OTHER FIRMS
- VIEW OF NORTH AMERICA
 - OFFSETS DON'T RULE; QUALITY DOES
 - RIPE FOR INVASION
 - US FIRMS OVERLY DEPENDENT ON DOD's FMS STRUCTURE ABROAD AND SIZE OF DOMESTIC MARKET
 - AGING WORK FORCES
 - ADAPTED TO HIGHLY BUREAUCRATIC PROCESSES
 - ITAR OBJECTIONABLE, FOR A NUMBER OF REASONS
 - ➔ AGILE NICHE PLAYERS CAN THRIVE



BAE SYSTEMS

- REINCARNATION OF GENERAL DYNAMICS?
 - AGGRESSIVE ACQUISITION STRATEGY ... PREFERABLY SUCCESSFUL US FIRMS
 - ...FOR GROWTH AND DIVERSIFICATION “TO MEET THE NEEDS OF ALL MILITARY SERVICES”
- OFFSETS RULE: “necessary to focus on creating jobs”
- LOOKING LIKE AN AMERICAN COMPANY
 - BOARD OF DIRECTORS
 - COMPLIANCE WITH SECURITY REGIME
 - PLAYING THE POLITICAL GAME



THOUGHTS ON THE “CASES”

- WHAT MAKES US MARKET ATTRACTIVE?
 - PUSH: THE EXPORT IMPERATIVE
 - PULL: US DEFENSE MARKET; PROSPECTS OF US PARTNERS
- OVERCOMING OBSTACLES?
 - WORKING AROUND REGULATORY BARRIERS
 - PRODUCTION FACILITIES IN US
 - FINDING GOOD NICHES
- A REAL TWO-WAY STREET?



CLOSING THOUGHTS FOR THE REPORT

- DEFENSE INDUSTRY INCREASINGLY INTERNATIONAL, AND INCREASINGLY COMPLEX (NOT ORIGINAL)
- INCREASING SIZE (AND RISK) OF PROJECTS -- RELATIVE TO SIZE OF FIRMS
- RISE OF “CO-OPETITION”



(MORE) CLOSING THOUGHTS

- RISE OF THE FIRM, AT EXPENSE OF THE “SOVEREIGN” CUSTOMER?
- PROBLEMS FOR DEFENSE ESTABLISHMENTS
 - ADAPTING THE BUREAUCRACY TO THE NEW ENVIRONMENT – INDUSTRIAL AND MILITARY AFFAIRS
 - BEING A FULLY KNOWLEDGEABLE CUSTOMER

