

Appendix Suggested Case Study Outline

- I. Executive Summary (1 page)
 - II. Table of Contents
 - III. Lists of Figures and Tables
 - IV. Acknowledgements
 - V. Author bios (with pics if desired)
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1. Introduction
 2. High level aircraft overview
 - Primary mission/market
 - High level metrics (dates of program, production run,...)
 - Includes 3 view and short aircraft system description
 3. Program overview
 - Program Timeline
 - Context of program
 - Technical (including previous related aircraft)
 - Political
 - Market
 - Competitive products and factors
 4. Value proposition
 - Key stakeholders
 - Value expectations of the key stakeholder groups (specific to that aircraft)
 - Aircraft value proposition
 5. Requirements
 - High level (Systems level) requirements
 - Flow down of key requirements – design drivers
 6. Detailed vehicle description
 - Configuration
 - Key configuration descriptions
 - Performance
 - Unusual stability/control features
 - Description of major sub-systems
 - Include key design decisions
 - Influence of system level requirements
 - Subsystem Interfaces
 - Weight breakdown and history during development
 - Non-recurring (development) cost breakdown and history of program cost
 7. Systems engineering and program management approach
 - Systems engineering methods/processes employed
 - Requirements management
 - IPPD and IPTs

- Simulation methods (CAD, CAE)
 - Validation and verification approach
 - Program management approach
 - Lean or related principles utilized
 - Resource loadings
 - Risk management
 - Key program decisions
 - Design closure (weight, cost, performance, schedule)
- 8. Lifecycle considerations
 - Design for manufacturing, testing, support
 - Prototyping
 - Verification, validation, certification
 - Manufacturing
 - Product support
 - Recurring (production and support) costs
 - Disposal (if appropriate)
 - Derivatives (if appropriate)
- 9. Operating experience
 - Initial Operating Experience (IOE) Summary
 - Sales/deliveries
 - Accidents/anomalies/airworthiness directives
 - Maintenance support
 - Operating costs
- 10. Conclusions
 - Key features which characterize this aircraft program
 - Value delivered to key stakeholders
 - Key metrics
 - Success or failure
 - Compared to program goals
 - Compared to competition
 - Effectiveness of system engineering and program management
 - Supported by metrics if possible
 - Lessons learned for future aircraft designs/programs
- 11. References
- 12. Appendices as appropriate

Intellectual property matters

- Report should be copyrighted by the authors
- All material taken from other sources must be noted
- For the case study to be made public (print or electronic) permission needs to be obtained from sources of embedded material. Guidelines will be given in class

Formatting

- Microsoft Word should be used for the report. Final Word document is required.
- PDF versions are required for each version.
- Hardcopy should be single sided.
- Color graphics should be legible when reproduced in black and white.
- Text should be double space.