# Group/project:

*Group 4 - Austere Field Light Attack Aircraft*

**PM/SE peer review provided by:** Group 5 – Personal Air Transport

This document contains the peer review grading sheet for the Systems Engineering and Project Management items addressed in the Design Synthesis Exercise as listed in the title.

Instructions for peer review

Please provide peer review towards the PM/SE aspects of the DSE reports of your peers, as allocated to you. Per deliverable / criterion, provide at least 1 tip (improvement suggestion) and 1 top (accomplishment).

**Consider the following guidelines (but addressing points beyond these guidelines is expected, especially for the deliverables not covered in these explicit guidelines):**

* Functional Flow Diagram (FFD)
  + Does the FFD adhere to standard formatting and syntax?
  + Does the FFD include functions in a logical sequence?
  + Does the FFD include functions to a sufficient level of detail for understanding the project from a functional point of view?
* Functional Breakdown Structure (FBS)
  + Does the FBS adhere to standard formatting and syntax (e.g. proper grouping of functions)?
  + Is the FBS sufficiently detailed (at least up to 3 levels)?
  + Does the FBS translate generic functions to DSE-specific functions (i.e., is the connection with the specific DSE mission statement made, including flow down to detailed functions)?
  + Are the common functions of different mission phases grouped together?
* Requirements Discovery Tree (RTD) & requirements tree
  + Does the RDT adhere to standard formatting?
  + Is there a complete specification of mission and system requirements (either in the RDT or in a dedicated list of requirements)?
  + Do the requirements adhere to the ‘requirements on requirements’?
  + Are the customer-provided (user-)requirements properly analysed, and, if need be, extended with requirements from the functional, market, risk and sustainability analysis?
  + Are sub-system requirements given, provided they affect the top-level system choices?
* Design Option structuring (tree) - DOT
  + Is / are the DOT(s) logically arranged?
  + Is / are the DOT(s) used to think broadly about design generation, i.e., does it include feasible as well as ‘blue-sky’ concepts?
  + Is the initial screening (= trade off) provided, and are the concepts that will enter the mid-term phase provided?
* Market analysis
  + Does the market analysis include stakeholder identification, market segmentation and initial size estimation?
  + Does the market analysis include competitor analysis (including SWOT and/or competitive positioning of the own product)?

**5 – Functional Flow Diagram(s)**

Tip:

Top:

**6 – Functional Breakdown Structure**

Tip:

Top:

**7 – Requirements Discovery Tree & Requirement Structuring**

Tip:

Top:

**8 – Technical Resource Budgets**

Tip:

* How exactly is the relative importance of a parameter decided based on the user requirements? You could give examples of user requirements that make a parameter “more important”.
* Which aircraft and/or how many aircraft were used as reference for the weight estimation?

Top:

* Clear explanation of the contingency management values/margins.

**9 – Technical Risk Assessment**

Tip:

* Any particular reason why risk ID RIS018.a contains ‘.a’?
* No mention of the continuous nature of the risk management process. Is the overview of risks now frozen or could more be added later?
* Small detail: what does ‘Seq.’ in table 8.1 mean? In the text that column is referred to as “sub-ID”

Top:

* Very large amount of risks defined.
* Nice and clear structure of the risk management process.
* Clear division between mitigation techniques based on quantification and the risk map.

**10 – Design Option Tree(s)**

Tip:

Top:

**11 – Contingency Management**

Tip:

* The term “contingency plan” was used in section 8.2 for risk strategies. Perhaps make a clear distinction between the budget contingency values and the risk-related contingency plan. Or show their interrelation: the contingency values in the budget breakdown is based on risk/uncertainty.

Top:

* Contingency values are clearly established for every design phase.
* Budget contingency plans clear and detailed.

**12 – Market Analysis**

Tip:

Top:

**25 – Sustainable Development Strategy**

Tip:

Top: