DESAER - desenvolvimento aeronáutico S/A

DESAER is a brazilian company, constituted with this denomination in 2017 and formed by people with strong past in the aeronautical development branch; it is installed at Incubaero, a department of the Casimiro Montenegro Filho Foundation at ITA.



Integrated Product Support Plan - IPSP

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Approval sheet

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Review history:

Review number	Date	Description
0	2020-11-21	Preliminary review

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1. Introduction

A few preliminary words

2. Concept of Operations

Concept of Operations (CONOPS) for a given system (limited to an enterprise or business or capability system) is a description of the concept of how human and technical resources within the system solution are to interact to result in the enterprise or business or capability outcome. That is, a CONOPS is a conceptual description of the operational part of the system solution. The operational part of the system solution is that part of the solution which is intended to meet the requirements on the system which serve an end-use purpose

3. Concept of Support

How the system might be supported in an operational environment? Describe here the desired support infrastructure and manpower considerations for maintaining the system after it is deployed. This includes specifying equipment, procedures, facilities, and operator training requirements.

4. Concept of Maintenance

How the system might be kept operationally capable of performing an assigned mission? Levels of repair, Repair time, Testability requirements, Support equipment needs, Training and Training Aids, Devices, Simulators, and Simulations, Manpower skills, Facilities, Inter-service, organic and contractor mix of repair responsibility, Deployment planning/site activation, Development of preventive maintenance programs, Condition-Based Maintenance, Diagnostics/prognostics and health management, Sustainment PBL planning. Post-production software support.

5. Scope

Write here what this project will NOT do, the border of the system.

6. System description

Broadly describe here the system development activity, the development effort, something about hardware, software, materials, personnel, facilities, and processes.

7. Project management

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Describe here how it is expected to keep the system in the expected level of availibility.

8. Team composition

Jeff Bezos, Larry Page, Mark Zuckerberg, Warren Buffett, and Bill Gates.

9. Vendor selection

Describe here how the vendors will be raised, and under which criteria they will be selected, according to the acquisition program. Supportability attributes are important basis for selection. Supportability criteria includes product cost; reliability and maintainability (R&M), or testability and diagnosability; repairability, vendor maturity/stability; repair and service life support capabilities.

10. Control procedures

Describe here how each life cycle phase will be controlled. The technical staff, and working groups involved.

11. Reviews

Describe here the processes to ensure accurate IPS data, how the IPS manager will conduct meetings with related engineering personnel, and sponsors, as well as the responsible for the agendas.

12. Program objectives

Objectives tailored to the project, which are aligned with the program directives, should be included in this section.

13. Development process

Include all engineering and support disciplines applied to the design/development process, as well as consise and complete descriptions.

14. Maintenance management

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Development of maintenance procedures; Use of R&M predictions, and failure mode, effects, and criticality analysis (FMEA); Definition of corrective maintenance and the required manpower, tools, and test equipment to support maintenance; Logistics engineering, maintainability, and spares provisioning functions; Coordination of all related inputs, outputs, and dependencies among the IPS elements; Obtaining cost data from procurement for the logistics analysis for cost studies and maintenance planning activities.

15. Manpower and personnel

Personnel required for installation, checkout, operation, handling, and sustaining maintenance of the system and project associated test and support equipment should be identified, trained, and available prior to any field testing. Describe the use of the workload analysis results, data collection techniques that include interviews with user experts. Describe how the personnel requirements analysis will be performed in conjunction with the logistics analysis, and focus on identifying the skills needed to operate, maintain, and support the system.

16. Supply support

spares, repair parts, consumables, special supplies, and related inventories needed to support prime mission-oriented equipment.

17. Support equipment

special tools and test equipment requirements.

18. Training and training support

This section should discuss the development of a training package to include training equipment requirements during the development phase of the project, and provide descriptions of the necessary courses and equipment to conduct the training to support the operation and maintenance. Course schedules should be included and should coincide with the installation and activation of the system.

19. Technical data

System installation and checkout procedures; Operating and maintenance instructions; Inspection and calibration procedures; Modification instructions; Facilities information; Drawings, and specifications.

20. Computer resources

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Provide a list of nonoperational computer resources required for logistics planning and implementation.

21. Package, Handling, Storage and Transportation

Include packaging and handling of spare and repair parts sufficient to accommodate shelf life requirements, and vendor repair and restock. Packaging, Transportation, Storage, and Usage requirements.

22. Facilities and infrastructure

All facility design and activation activities that will occur during the development and production phases. Detailed facility requirements Flow chart/schedule outlining for ensuring the facility meets specifications. Installation planning data should be provided to the logistics engineers for the assessment of life-cycle cost impacts related to support facilities. Power requirements, cabling diagrams, physical layouts, and accessibility for maintenance will be essential inputs to the project database and maintainability task analyses.

23. Product Support Management

Define and plan the activities for Logistics Support Analysis (LSA) and monitors the performance of LSA activities along the project life to ensure LSA data is delivered to fulfil supportability requirements.

24. Design influence

Identify opportunities for influencing the design, develop the most cost-effective support concept, and define logistics support resource requirements to minimize life cycle cost.

25. Sustaining Engineering

Describe here what will influence the product characteristics and may enable the operation of the product in accordance with the performance and design requirements.

26. Contractor Logistics Support

Overall support requirements; Assigning full responsibility for ensuring the system infrastructure is maintained and available for use; Operational availability requirements; How to maintain and manage the baseline hardware and software configuration; How to perform hardware and software modifications;How to provide enhancements to the technical documentation; Issue and receipt of equipment.

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27. Post production

Potential problems due to inadequate supply; Analyse and process end-of-life issues; Alternatives to satisfy potential support issues that may surface at the operational site; Maintenance, including configuration management; Supply support;Facilities and infrastructure;Training and training support; Safety, including control of substances hazardous to health considerations; Technical publications; PHS&T; Software resources.

28. Supportability analysis

Describe how the level-of-repair analysis will be accomplished. The failure reporting and corrective action system should be described in this section and should include the three basic phases of the failure reporting and corrective action system process: 1. Collection of prediction data 2. Combining test data with prediction data 3. Use of field data Determine the cost drivers in acquisition, operation, and support Identification of risk areas relative to life-cycle costs, as early as possible, on behalf of reaching an optimum logistics support program.

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