



**AIA /ATA/ ASD  
S1000D Users Forum**

***“S1000D: Realizing the Benefits of Integrated Logistics Support”***

**October 12- October 15, 2009  
Crowne Plaza Hilton Head Resort, Hilton Head, SC, USA**

***Track 1: Summary Tuesday October  
12***

***Creating the Vision for Integrated  
Logistics Support***



**AeroSpace and Defence  
Industries Association of Europe**



**Air Transport Association**

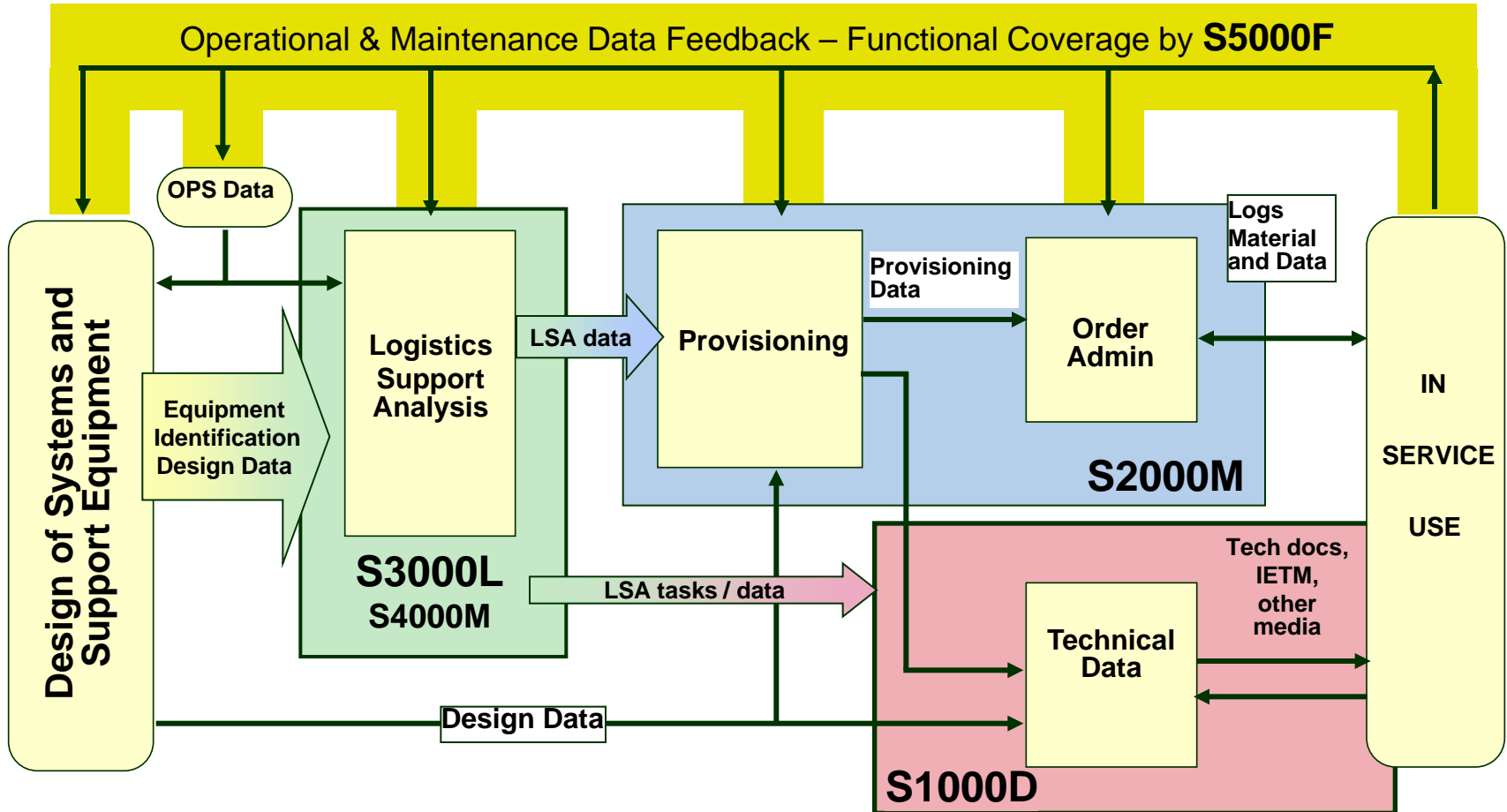


# S1000D ASD specifications

- **S1000D** - International specification for technical publications using a common source database
- **S2000M** - International specification for material management
- **S3000L** - International procedure specification for Logistics Support Analysis - LSA
- **S4000M** – International procedure handbook for the development of scheduled maintenance programs for military aircraft
- **S5000F** – International specification for operational and maintenance data feedback



# ASD's Vision





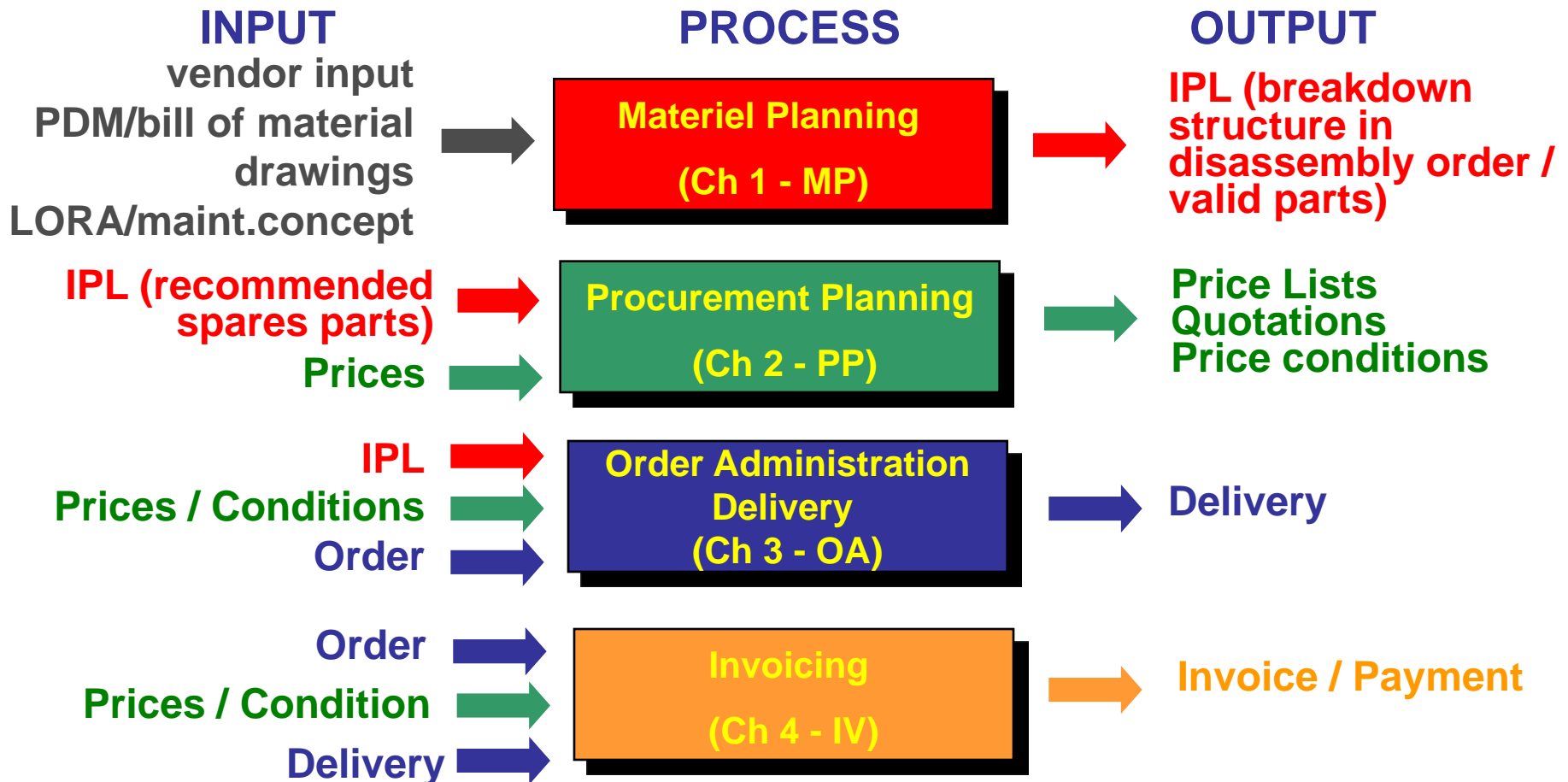
## Consistent parts data throughout your ILS environment

- S2000M
  - Materiel Management process for Military products
    - Can be used for a commercial program
  - Describes the business process between industry and customer
  - Chapter 6 is S2000M Lite



# S2000M Materiel Management

## S2000M Information Flow





## S2000M Materiel Management

### **next S2000M steps regarding ILS integration:**

- continue investigation on how to transfer current 'EDIFACT like' messages into XML
- continue actions to analyze PLCS / DEXs for S2000M integration
- continue work on publication of the XML version of the S2000M
  - harmonization of XML publication standard with the other ASD specs



# Let your LSA task data be the baseline for procedures and maintenance plans

## S3000L Purpose & Scope

- S3000L defines the processes, general requirements and related information exchange governing the performance of the LSA during the life cycle of aerospace and defense products.
  - Influence the product design relevant to maintainability, reliability, testability and optimize life cycle cost
  - Define all required resources to support the product in its intended use, during in-service operation
- May also be used for products from other industrial domains.
- S3000L is designed to cover all processes and requirements governing the performance of the LSA.



## S3000L - Milestones

- S3000L International Procedure Specification for Logistic Support Analysis (LSA)

January 2006	Inaugural meeting (Brussels)
March 2006	Kickoff meeting (Munich)
June 2009	Draft Specification Release (Brussels)
October 2009	End of official commenting phase
November 2009	Comment review & disposition (Tampa) (tentative)

- Available for download

[www.asd-stan.org/s3000L.html](http://www.asd-stan.org/s3000L.html)





## *Scheduled maintenance program data – the entry to LSA task data*

### **ASD S4000M**

- **Need:**
  - International procedure handbook for developing scheduled maintenance programs for military aircraft.
  - Mil - STDs and specification are either obsolete or too narrow in their scope.
  - Civil Specification MSG-3 is updated annually
  - Civil aviation maintenance specifications can not address the equipment and operational tempos and various environments of military aircraft.
  - Current problems developing scheduled maintenance programs for military aircraft.



*Scheduled maintenance program data – the entry to LSA task data*

## **ASD S4000M**

- **MILITARY CERTIFICATION: Based on Civil Certification plus:**
  - Development of a new dedicated pph for the military certification
  - Revision of civil analysis to cover specific issues of military operation
  - Development of analyses for specific military equipment / modifications based on MSG-3.



## S4000M Development of Scheduled Maintenance Programs for Military Aircraft

### GENERAL:

- **USE OF MSG-3 ANALYSIS PROCEDURE (latest issue)**
- **INCLUDES MISSION, OPERATIONAL AND ECOLOGICAL EFFECTS**
- **DIFFERENT SCENARIOS (crisis, war, deployment)**
- **HIGH/LOW UTILIZATIONS**
- **DEFINITION OF RESPONSIBILITIES AND INTERFACES (multi-national programs)**
- **IMPLEMENTATION OF CONFIGURATION DATA FOR ANALYSED/ REQUIRED INSPECTION TASKS (design baseline and built standard)**
- **POSSIBILITY TO DEVELOP CUSTOMIZED PPH USING EXAMPLE SHEETS**



## *Scheduled maintenance program data – the entry to LSA task data*

### **ASD S4000M**

- **Way ahead:**
  - **ISSUE 0.1 OF S4000M AVAILABLE AT ASD WEBSITE**  
[www.asd-stan.org](http://www.asd-stan.org)  
publication event at 2009-06-24 at ASD in Brussels
  - **FOUR MONTHS FOR COMMENTING**  
(2009-06-25 thru 2009-10-31)
  - **TWO MONTHS FOR COMMENTS REVISION**
  - **FIRST “OFFICIAL” ISSUE 1.0 IS FORESEEN FOR 1st QU 2010**



## *User and usage data feedback – Keep your tech data up to date*

- S5000F
  - Support the Customer
  - Support the Product
  - Manage the Contracts
  - Customer / Manufacturer / OEM / Support Provider need to have the same data and work together.

Visibility and access to data in a timely manner is essential to enable optimisation and improvements.



## What is S5000F?

- An Application Handbook for the performance of the Operational and Maintenance Data Feedback within the Aerospace and Defence Community.
- This data feedback completes the flow of information in the Product Life Cycle in an integrated manner by applying internationally accepted source standards.



## S5000 Project Overview

- Project authorised by ASD CPSC
- Conceptual approach and draft ToR's established and distributed to potential Participants
- Kick-off Meeting October 7, 2008 at EADS in Munich
- 1<sup>st</sup> Meeting March 2009 at Dassault in Paris
- On-going workgroup meetings and tele-conferences.
- 3<sup>rd</sup> Meeting October 2009 in Tampa Florida.
- First Draft September 2010 for industry comment.



# S Series Specifications for Sustainment

## Project Goal

- The expectation is to have a suite of standards for product support that will provide the seamless passage of technical data: logistics, provisioning, technical publications/IETMs, scheduled maintenance and maintenance data feedback.
- **Deliverables**
  - White Paper (In review)
  - Project Sheet (In Process)
  - Bi-weekly Meetings/Minutes
  - Face to Face Meetings
  - Development and Maintenance of S Series Specifications





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***Summary***

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## LOGSA view of the ASD Suite

- Process 50 Million transactions from the field
- GEIA-STD-0007, EIA 836A, Mil-STD-3008 Bridge to PLCS.
- Support S5000F – moves closer to the PLCS.
- EIA 836 DEX the fits Equipment and Design DEX
- GEIA 0007 DEX for LSA Data between S3000L/4000M and S2000M and S1000D
- Business rules Mil-Std for S1000D from the Army have been approved.
  - S1000D approved for use as an alternative specification



# A PLCS Repository – the Data Spider

- PLSC can be used for interoperability, Data exchange and long term archiving.
- Make PLSC extension to be Service Oriented Architecture.
- Case study with SAAB/Sorman Using PLCS and S1000D.
- Need to create and document mapping tables.



## S1000D in Russia

- Multiple projects in work or envisioned
- Main Players
  - Russian United Aircraft Corporation
  - “Russian Helicopters” Corporation
  - Russian Motor Building Corporation
  - Component Producers
  - National Aircraft Industry Association
  - Rosoboronexport



# S1000D in Russia Developing Issues

- Quality assurance
- Complete multilingual publications
- Incorporation of 3D models (developing API for 3D viewers, etc...)
- Tupolev: wide cooperation with component producers:
  - Over 40 enterprises
  - Harmonization of configuration management
  - Interaction via internet



# S1000D in Russia

## National Specifications

- S1000DR – Official translation of S1000D Issue 2.3 to Russian (has status of aviation handbook).
- GOST 2.6xx series – supports modular structure
- GOST 18675 – Renewed national civil standard: “Operational and repair manuals for aircrafts and aircraft equipment” – based on S1000D specification.
- New military standard: ”...manuals consist of data modules...”.



# Ground RADAR System Use Case

- Four Major Systems
  - AN/TPQ in the process of being fielded with S1000D
    - Four Major Systems
    - Managing 23 manuals
    - Managing XXXX pages
    - Three Tech Writers, One XML SME, One Training Lead
- Training was separate w/o a hand shake.
- Uniting Training and Field manuals with S1000D.
- Re-use was key to the decision to go to S1000D





# Civil Aviation Use-Case

- Boeing 787
  - Moved to SGML in the 1990s – Intelligent manuals. Shift thought process from Paper to content
  - Made leap of faith based on Theoretical Knowledge vs, Practical Knowledge
  - Civil Aviation - CPFs delivered and incorporated in 3.0.
  - Decided to provide the data and the tools for support of the a/c
  - It is all about providing the data to the customer in a effect methodology.
  - Regulatory Agencies as a customer.
    - Verification that information and components are correct.
    - Some agencies require their own data set.
  - Data effectively specific to each a/c
  - Intellectual property – Vendor developed data modules OEM feel they have IP rights and concern about disclosure to competitors.



## Civil Aviation Use-Case

- Changing research patterns from Chapter, section, subject to Search by keyword
- Shifting from a 3 month to 1 Month revision cycle. Increasing capacity needs, data storage, for OEM and Customer
- Customer synchronization. Need to have process change for more frequent cycles
- Task cards synchronized with procedural changes.