AIA AEROSPACE INDUSTRIES ASSOCIATION

ASD AeroSpace and Defence Industries Association of Europe

S3000L

International procedure specification for Logistics Support Analysis (LSA)

SX000i

S2000M   S3000L

S4000P   S5000F   S6000T

SX001G   SX002D   SX004G   SX005G   SX006R

Introduction

▶ **Challenge of product supportability**
Develop a cost optimized support concept for long-living and complex technical **products**

▶ Each long-living and technical complex product requires an optimized support system to guarantee **proper operation**, **high availability** and the performance of **corrective** and **preventive** maintenance within adequate costs.
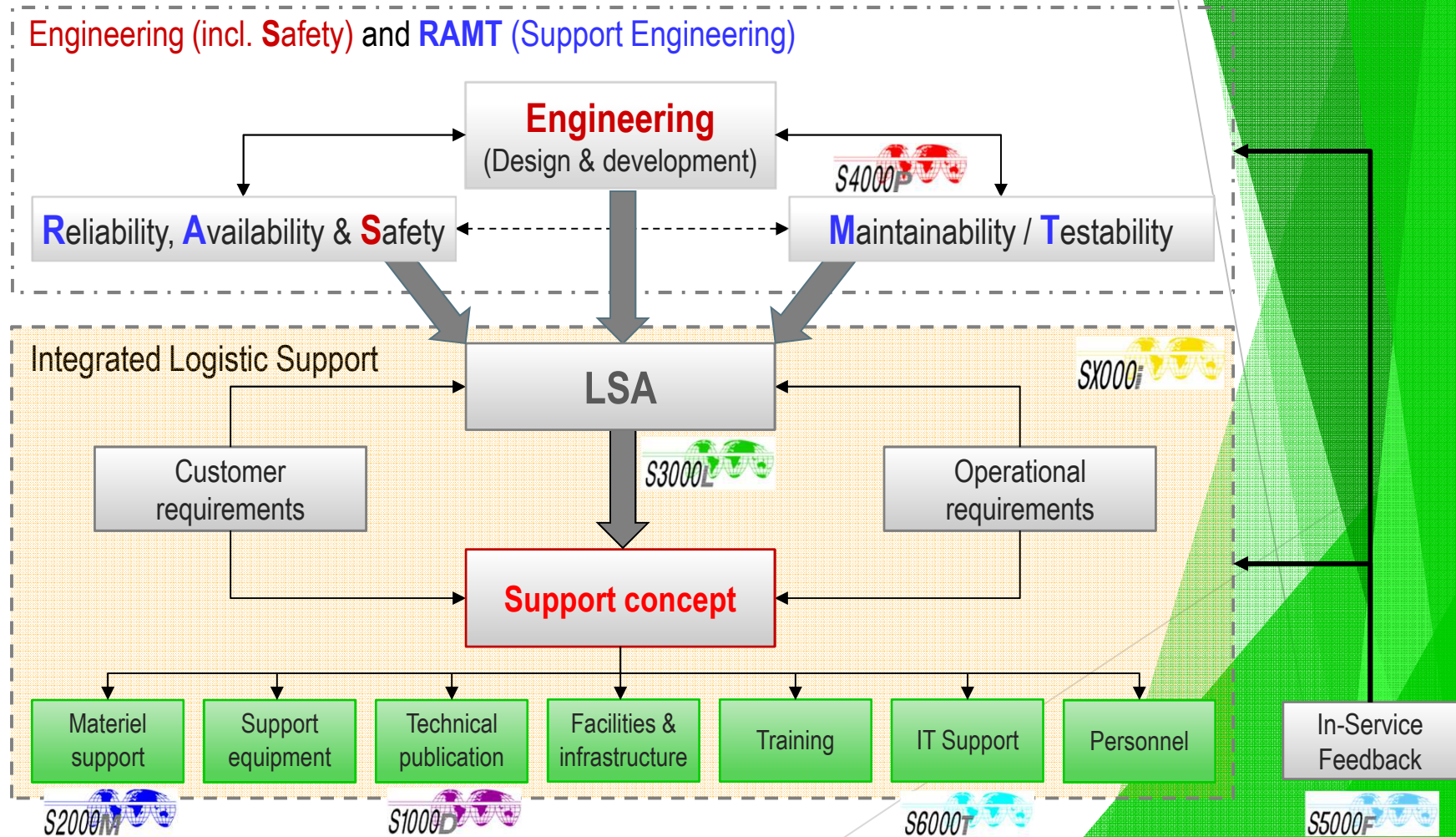
Product support **tasks** (⇨ support concept) comprise:

▶ **Corrective** maintenance (repair, replace)

▶ **Preventive** maintenance (e.g. scheduled inspection/overhaul, preventive replacement of components)

▶ **Operational support** (e.g. transport, handling, package, storage, servicing)

What is included in S3000L?

The main aspects

▶ Description of the **project environment / LSA business process**

▶ **Product breakdown** methodology (Product, Product variants, breakdown elements, parts, LSA candidates)

▶ **Influence on design** by supportability engineering

▶ Identification/documentation of **task requirements** (corrective, preventive and operational support)

▶ Identification of **tasks**

▶ Maintenance Task Analysis (**MTA**)

▶ Level of Repair Analysis (**LORA**)

▶ Development of a Preventive Maintenance Program (**PMP**)

▶ In-Service Support Optimization (**ISSO**), included in S3000L, Issue 2.0

▶ **IT baseline** (UML **data model** and **XML schema** for data transfer)

▶ Terms, abbreviations and acronyms

Content and issue history

- Chapter 1   Introduction to the specification
- Chapter 2   General requirements   ✓ setting the baseline
- Chapter 3   LSA process
- Chapter 4   Product structures and change management in LSA
- Chapter 5   Influence on design
- Chapter 6   Human factors analysis   ✓ identify task requirements
- Chapter 7   Failure Mode Analysis for corrective maintenance
- Chapter 8   Special event and damage analysis
- Chapter 9   Operational support analysis
- Chapter 10   Development of a preventive maintenance program
- Chapter 11   Level of repair analysis   ✓ perform MTA
- Chapter 12   Task requirements and maintenance task analysis
- Chapter 13   Software support analysis
- Chapter 14   Life cycle cost considerations
- Chapter 15   Obsolescence analysis
- Chapter 16   Disposal analysis
- Chapter 17   In-service LSA
- Chapter 18   Interrelation to other ASD specifications
- Chapter 19   Data model   ✓ provide IT solutions
- Chapter 20   Data exchange
- Chapter 21   Terms, abbreviations and acronyms
- Chapter 22   Data element definitions

- 06/2009 ASD/AIA S3000L, Issue 0.1
- 06/2010 Completion and publication of ASD/AIA S3000L, Issue 1.0
- 10/2014 Completion and publication of ASD/AIA S3000L, Issue 1.1
- 02/2015 Completion and publication of S3000L XML schema for data exchange
- Publication of ASD/AIA S3000L, Issue 2.0 is planned end of 2019/1st quarter of 2020

Projects

Examples for projects using S3000L (including project specific tailoring)

▶ NATO, Allied Ground Surveillance, NATO AGS
military system of systems

▶ SAAB, Gripen 39 E/F
military product (fighter aircraft)

▶ Thyssen Krupp Marine Systems (TKMS), U212
military product (submarine)

▶ Airbus, C-295
military product (transport aircraft)

▶ Nexter, VBMR Griffon
military product (armed vehicles)

▶ Dassault, C-130
military product (transport aircraft)

Summary

▶ Logistic Support Analysis (LSA) is an **integral element** within the ASD/AIA S-Series of ILS Specifications

▶ Logistic Support Analysis (LSA) is an **extended process to analyse** carefully all elements of a complex technical product. The final goal of this analysis process is to establish an optimized support concept at reasonable costs during the complete product life cycle.

▶ Logistic Support Analysis (LSA) is the **basic and obligatory information/data source** for the successional ILS disciplines (e.g. technical publication, support equipment, material support)

▶ S3000L provides basic information by **UML data model, XML schema** to enable implementation within an IT solution

Thank you for your attention !

Dipl.-Ing. (TU) Peter Eichmüller
Vice Chairman of ASD/AIA S3000L
Steering Committee
Expert Logistic Support Analysis