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# Integrated Logistics Support (ILS) and In-Service Support (ISS) Course

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## Introduction:

Integrated Logistics Support ILS and In-Service Support ISS are the engineering and management disciplines that make a complex system supportable during design and keep it available, safe and affordable once it is in service. This one-week course is for ILS, logistics, supportability and RAM engineers, maintenance planners, spares and technical publications specialists, fleet staff and ILS managers, and each delegate leaves with an ILS/ISS support plan outline for a sample system. It is taught at practitioner level through case study work, using the ASD/AIA S-Series, a family of international specifications for product support data and processes.

## Course Objectives:

- Define the ILS elements and distinguish design-phase Integrated Logistics Support from In-Service Support once a system is fielded
- Apply logistic support analysis following S3000L, building candidate item lists, maintenance tasks and LSA database records
- Interpret reliability, availability and maintainability figures and select a maintenance concept and level of repair from them
- Compare initial provisioning, technical publications and training needs analysis approaches using S-Series material management, S1000D and S6000T
- Select an in-service support contract model and distinguish availability-based from performance-based logistics arrangements
- Justify through-life decisions on obsolescence, configuration change, data feedback and disposal using life-cycle cost evidence

## Target Audience:

- ILS and logistics engineers who define the support solution for a new system, deciding which ILS elements need analysis first
- Supportability and RAM engineers who model failure and repair data, judging whether a design meets its availability target
- Maintenance planners who build task lists and intervals, choosing between preventive, corrective and condition-based approaches
- Spares, provisioning and technical publications specialists who prepare support data, deciding stock levels and publication scope
- In-service support and fleet staff who run systems in operation, judging when data feedback should trigger a support change
- ILS and project managers who integrate support into delivery, deciding which contract model and support plan to adopt



## Course Outline:

### Day 1: Foundations of ILS and ISS Across the System Life Cycle

- ILS vs ISS: Design-Phase Support Planning Compared With Support of Fielded Systems
- The ILS Elements: Maintenance, Supply, Data, Training, Equipment, Facilities and PHS&T
- SX000i Integrated Product Support: The S-Series Guide Linking Support Processes Together
- Supportability Case and Design Influence: Shaping Design Early to Lower Support Burden
- Current-State Support Assessment: Gaps in an Existing Fleet or Project Support Solution

### Day 2: Logistic Support Analysis, RAM and Supportability Standards

- S3000L vs MIL-HDBK-502A: Two Approaches to Logistic and Product Support Analysis
- LSA Candidate Item List: Selecting Items That Need Detailed Support Analysis
- LSA Database Structure: Task, Item and Resource Records Exchanged Between Partners
- RAM Metrics: MTBF, MTTR and Operational Availability Calculated for a System
- DEF STAN 00-600 ILS Requirements: Structuring Support Deliverables on Defence Projects

### Day 3: Maintenance Planning, Spares, Publications and Support Resources

- Preventive vs Corrective Maintenance: S4000P Task Analysis Compared With Repair Planning
- Level of Repair Analysis: Economic and Non-Economic Factors Deciding Where Repairs Happen
- S-Series Material Management: Initial Provisioning, Spares Ordering and Stock Level Decisions
- S1000D Technical Publications: Data Modules, Common Source Database and Publication Planning
- S6000T Training Needs Analysis: Training, Support Equipment and PHS&T Requirements Set

### Day 4: In-Service Support Contracts, Data Feedback and Risk Control

- Availability-Based vs Performance-Based Logistics: Contract Models, Incentives and Risk Sharing
- S5000F In-Service Data Feedback: Failure, Usage and Maintenance Data Returned to Engineering
- Configuration Management in Service: Baselines, Change Control and Status Accounting Records
- IEC 62402:2019 Obsolescence Management: Proactive Monitoring, Resolution Options and Plans
- Fleet Health Monitoring: Condition Data, Trend Indicators and Support Change Triggers

### Day 5: Case Study: Building the ILS/ISS Support Plan for a Sample System

- ILS Plan vs ISS Plan: Scope, Owners and Content at Each Life-Cycle Stage
- Life-Cycle Cost Model: Acquisition, Operating, Support and Disposal Costs Compared for Options
- Case Support Analysis: Applying LSA, RAM and Level of Repair to the Sample
- Case In-Service Arrangements: Applying Contract Model, Data Feedback and Obsolescence Plan
- Support Plan Outline: Completing Elements, Through-Life Improvement and Disposal Planning for Handover



## Skills You Will Gain:

- Logistic Support Analysis
- Reliability, Availability and Maintainability Modelling
- Level of Repair Analysis
- Spares Provisioning
- Technical Publications Planning
- Obsolescence Management
- Performance-Based Logistics Contracting
- Life-Cycle Cost Estimation

## Why Attend This Course:

- From treating spares, manuals and training as separate tasks to planning all ILS elements as one support solution
- From estimating support needs by experience to deriving them from LSA records, RAM figures and level of repair results
- From signing support contracts on price alone to choosing between availability-based and performance-based models with evidence
- From scattered support notes to an ILS/ISS support plan outline for a sample system that can be adapted to a real fleet

## Conclusion:

Integrated Logistics Support and In-Service Support together decide whether a complex system can be maintained, supplied and operated affordably for decades, from first design review to final disposal. The course makes clear how ILS differs from ISS, how preventive maintenance analysis differs from level of repair analysis, and how availability-based contracting differs from performance-based logistics. It suits engineers, planners, specialists and managers in defence, aerospace, rail, energy and marine sectors who already work on support and now need a structured, standards-based method grounded in the S-Series.

## Frequently Asked Questions FAQ:

### What should delegates know before an Integrated Logistics Support and In-Service Support course?

Delegates should have working experience of engineering, maintenance, logistics or project roles on complex equipment. Familiarity with basic reliability terms helps, but no specialist software is needed; each S-Series specification and analysis method is introduced and then applied in case study work.



## How does an Integrated Logistics Support and In-Service Support course differ from a general supply chain course?

It focuses on supporting one complex system through its life, from supportability analysis in design to contracts, data feedback and obsolescence in service. A general supply chain course covers commercial flows of goods between organisations rather than engineering support for fielded equipment.

## Why does Integrated Logistics Support use logistic support analysis and an LSA database?

Logistic support analysis turns design and reliability data into maintenance tasks, spares, tools, skills and publications. Storing the results in an LSA database, as S3000L describes, keeps one consistent source that partners exchange and update as the design and fleet change.

## What do delegates take back from Integrated Logistics Support and In-Service Support training?

Each delegate takes back an ILS/ISS support plan outline for a sample system, covering the ILS elements, support analysis results, maintenance and spares approach, contract model, data feedback, obsolescence plan, life-cycle cost comparison and disposal, ready to adapt to a real project or fleet.

