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ILS/IPS Strategy, Supportability & Sustainment Management

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ILS/IPS Strategy, Supportability & Sustainment Management

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Introduction

Organisations that operate complex assets, defence systems, transportation fleets, engineering platforms, industrial equipment, and critical infrastructure require a structured approach to ensure that their systems remain available, reliable, maintainable, and cost-effective throughout their operational life.

The **ILS/IPS Strategy, Supportability & Sustainment Management** course provides participants with a comprehensive understanding of Integrated Logistics Support, Integrated Product Support, supportability engineering, life-cycle management, and long-term sustainment planning. The programme focuses on how organisations can design, implement, and manage integrated support solutions that improve operational readiness while controlling total ownership costs.

Integrated Logistics Support and Integrated Product Support are essential disciplines for organisations involved in acquiring, developing, operating, or maintaining complex systems. They ensure that support requirements are considered from the earliest stages of system design and acquisition rather than being addressed only after an asset enters service.

A well-designed ILS or IPS strategy helps organisations reduce equipment downtime, improve maintenance efficiency, optimise spare parts inventories, strengthen technical documentation, manage ageing assets, and respond effectively to obsolescence and supply-chain risks. It also ensures that personnel, training, facilities, support equipment, technical data, information systems, and logistics resources are aligned with operational requirements.

The course examines the transition from traditional logistics support towards integrated product support, through-life support, and performance-based sustainment models. Participants will explore the relationship between system design, maintenance planning, reliability, availability, supply support, technical information, workforce capability, configuration management, and life-cycle cost.

The programme also addresses the growing role of digital technologies in asset sustainment. Participants will examine how predictive analytics, condition monitoring, digital twins, integrated maintenance systems, and asset performance data can support better planning and decision-making.

Through practical exercises, discussions, and case studies, participants will learn how to establish effective support strategies, evaluate supportability requirements, manage sustainment risks, and coordinate the various stakeholders involved in engineering, operations, maintenance, procurement, supply chain, finance, quality, and programme management.



Course Objectives

By the end of this course, participants will be able to:

- Understand the principles and objectives of Integrated Logistics Support and Integrated Product Support.
- Differentiate between traditional logistics support, ILS, IPS, through-life support, and sustainment management.
- Develop an ILS/IPS strategy aligned with operational and organisational requirements.
- Define measurable supportability requirements for complex assets and systems.
- Integrate reliability, availability, maintainability, and supportability into life-cycle decisions.
- Apply logistics support analysis techniques.
- Establish effective maintenance concepts and support structures.
- Improve spare parts planning, provisioning, and inventory management.
- Manage technical data, support information, and product documentation.
- Control system configuration throughout the operational life cycle.
- Evaluate life-cycle costs and total ownership costs.
- Establish sustainment performance indicators and reporting mechanisms.
- Understand performance-based logistics and outcome-based support.
- Identify and control obsolescence and ageing asset risks.
- Use digital technologies to improve maintenance and asset performance.
- Strengthen coordination between engineering, operations, maintenance, and supply-chain teams.
- Develop a practical improvement roadmap for ILS, IPS, and sustainment management.



Course Modules

Day 1: Foundations of ILS, IPS and Through-Life Support

- Introduction to Integrated Logistics Support.
- Objectives and business value of ILS.
- Introduction to Integrated Product Support.
- Differences between ILS and IPS.
- Traditional logistics support versus integrated support.
- Through-life support principles.
- System and asset life-cycle stages.
- Relationship between acquisition and sustainment.
- Operational readiness and mission availability.
- Total ownership cost concepts.
- Product support management.
- Design influence and supportability engineering.
- Maintenance planning and management.
- Supply support and spare parts management.
- Support equipment requirements.
- Technical data and publications.
- Training and training support.
- Manpower and personnel requirements.
- Facilities and infrastructure support.
- Packaging, handling, storage, and transportation.
- Information technology and logistics systems.
- Sustaining engineering requirements.
- Stakeholder roles and responsibilities.
- Developing an integrated support framework.



Day 2: Supportability Engineering and Logistics Support Analysis

- Principles of supportability engineering.
- Identifying operational support requirements.
- Translating operational needs into measurable requirements.
- Supportability planning during system design.
- Reliability principles and performance measures.
- Failure behaviour and failure patterns.
- Mean time between failures.
- Maintainability principles.
- Mean time to repair.
- Corrective and preventive maintenance requirements.
- Inherent, achieved, and operational availability.
- Availability modelling and assessment.
- Maintenance downtime analysis.
- Reliability growth programmes.
- Failure reporting and corrective action systems.
- Introduction to Logistics Support Analysis.
- Logistics Support Analysis processes and outputs.
- Maintenance task analysis.
- Failure mode and effect considerations.
- Repair-level analysis fundamentals.
- Support resource identification.
- Manpower and skill requirements.
- Training needs analysis.
- Facilities and support equipment analysis.
- Developing supportability performance indicators.
- Preparing a supportability requirement set.



Day 3: Maintenance Strategy, Supply Support and Resource Planning

- Developing an integrated maintenance concept.
- Corrective maintenance strategies.
- Preventive maintenance strategies.
- Condition-based maintenance.
- Predictive maintenance.
- Reliability-centred maintenance.
- Risk-based maintenance.
- Operator-level maintenance.
- Intermediate and depot-level maintenance.
- Contractor-supported maintenance.
- Maintenance policy selection.
- Maintenance task frequency.
- Maintenance resource planning.
- Repair-versus-replace decisions.
- Repair-level analysis methods.
- Centralised versus decentralised maintenance.
- Maintenance workforce planning.
- Tools and support equipment requirements.
- Supply support planning.
- Spare parts demand forecasting.
- Initial provisioning.
- Inventory optimisation.
- Critical spare identification.
- Repairable and consumable items.
- Stock level determination.
- Lead-time management.
- Supplier performance monitoring.
- Warehousing and distribution.
- Emergency supply support.
- Balancing availability and inventory cost.
- Managing spare parts shortages and excess stock.



Day 4: Sustainment Management, Life-Cycle Cost and Performance-Based Support

- Principles of sustainment management.
- Developing a sustainment management plan.
- Sustainment governance structures.
- Roles, authorities, and decision rights.
- Cross-functional stakeholder coordination.
- Sustainment performance reporting.
- Operational availability measures.
- Reliability and maintainability indicators.
- Supply-chain performance indicators.
- Maintenance performance measures.
- Life-cycle cost principles.
- Acquisition cost versus ownership cost.
- Operating and maintenance costs.
- Workforce and training costs.
- Inventory carrying costs.
- Facilities and support equipment costs.
- Upgrade and modification costs.
- Disposal and retirement costs.
- Identifying major cost drivers.
- Life-cycle cost estimation.
- Cost-risk assessment.
- Support alternative evaluation.
- Cost and performance trade-off analysis.
- Introduction to Performance-Based Logistics.
- Outcome-based support arrangements.
- Defining performance requirements.
- Service-level agreements.
- Performance incentives and penalties.
- Contractor and supplier accountability.
- Risk allocation between parties.
- Long-term support partnerships.
- Contract performance monitoring.
- Data transparency and reporting.



Day 5: Obsolescence, Digital Sustainment and Strategic Improvement

- Understanding system and component obsolescence.
- Diminishing manufacturing sources.
- Obsolescence risk identification.
- Obsolescence impact assessment.
- Proactive and reactive obsolescence management.
- Alternative sourcing strategies.
- Component substitution.
- Redesign and system modification.
- Lifetime procurement decisions.
- Technology refresh planning.
- Managing supplier dependency.
- Ageing asset management.
- Asset life-extension programmes.
- Obsolescence budgeting.
- Digital transformation in sustainment.
- Asset condition monitoring.
- Predictive maintenance technologies.
- Sensors and connected assets.
- Asset performance analytics.
- Digital twins in system support.
- Computerised maintenance management systems.
- Integrated logistics information systems.
- Automated performance dashboards.
- Digital technical publications.
- Remote maintenance support.
- Configuration data management.
- Data quality and data governance.
- Cybersecurity considerations.
- Assessing ILS/IPS organisational maturity.
- Identifying supportability gaps.
- Establishing strategic improvement priorities.
- Developing performance targets.
- Preparing an ILS/IPS improvement roadmap.
- Defining implementation milestones and responsibilities.



Why Should You Attend This Course?

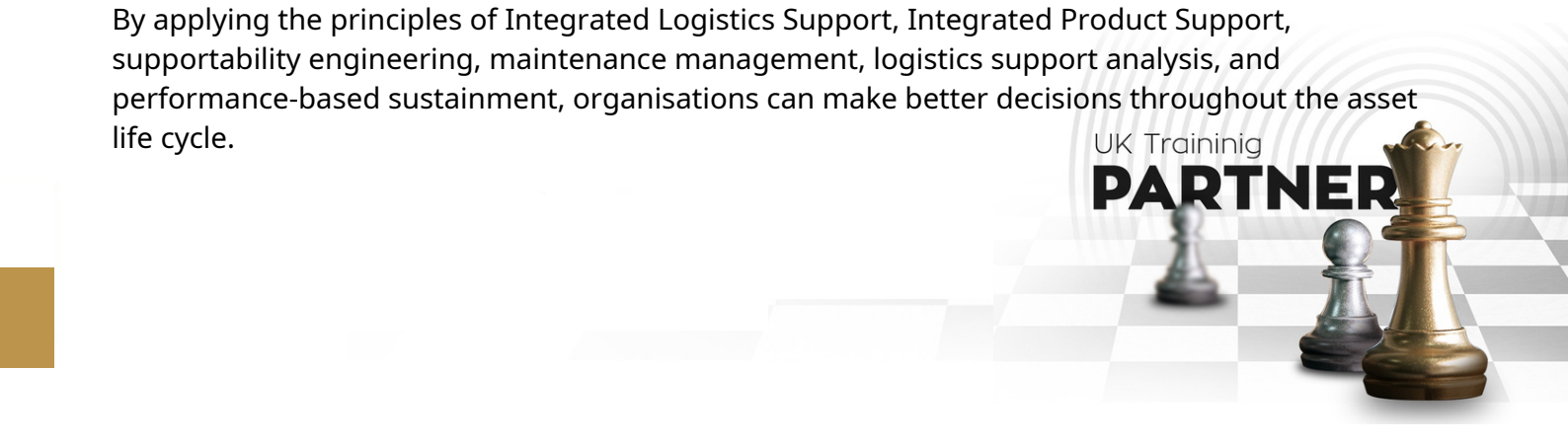
- Build a clear understanding of ILS, IPS, and sustainment management.
- Improve the operational availability of complex assets and systems.
- Reduce equipment downtime and service disruption.
- Develop integrated support strategies aligned with organisational objectives.
- Improve maintenance planning and resource allocation.
- Strengthen reliability, availability, and maintainability performance.
- Optimise spare parts and inventory levels.
- Reduce unnecessary logistics and maintenance costs.
- Improve coordination between engineering, maintenance, and operations teams.
- Integrate supportability requirements into system acquisition and design.
- Apply logistics support analysis methods in practical environments.
- Improve technical data and documentation management.
- Establish effective sustainment governance and reporting.
- Identify and control major life-cycle cost drivers.
- Evaluate maintenance, repair, and replacement alternatives.
- Understand performance-based logistics arrangements.
- Improve contractor and supplier performance management.
- Reduce risks caused by ageing systems and component obsolescence.
- Use digital technologies to support predictive maintenance.
- Improve asset data quality and decision-making.
- Develop measurable supportability and sustainment indicators.
- Strengthen organisational readiness and operational resilience.
- Support new acquisition and system modernisation programmes.
- Manage assets from acquisition through operation and disposal.
- Develop a practical improvement roadmap for existing support systems.
- Apply international good practices in integrated product support.
- Increase the long-term value and performance of critical assets.

Conclusion

Effective supportability and sustainment management are critical to the long-term success of complex systems and assets. Organisations must consider maintenance, logistics, technical data, training, infrastructure, supply support, reliability, and life-cycle cost as interconnected elements of a complete support system.

The **ILS/IPS Strategy, Supportability & Sustainment Management** course equips participants with the knowledge and practical tools required to develop integrated support strategies, improve system availability, reduce life-cycle costs, and strengthen operational readiness.

By applying the principles of Integrated Logistics Support, Integrated Product Support, supportability engineering, maintenance management, logistics support analysis, and performance-based sustainment, organisations can make better decisions throughout the asset life cycle.



Participants will leave the course with a structured understanding of how to assess support requirements, design effective maintenance and logistics solutions, monitor sustainment performance, manage long-term risks, and build resilient support systems that deliver measurable operational and financial value.

