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Insights

**Integrated System Support**  
**Logistics Support Analysis**

## What is a Logistics Support Analysis (LSA)?

The Logistics Support Analysis (LSA) is the principal tool used to:

- Design the products relevant to maintainability, reliability, testability and to optimise life cycle costs, and
- Define all required resources to support the product in its intended use, during in-service operation.

# Integrated Logistics Systems and the Future

## LSA Objectives

Integration of logistics and supportability into the integrated product development programme organisation ensures the following:

- Design reflects test data assessments, supportability alternatives and trade-off alternatives,
- Detailed specification requirements,
- Logistic resource planning is adjusted as necessary,
- Operational availability and readiness thresholds are met,
- The item is supportable in the expected operational environment,
- The operational environment/s is/are accurately assessed, and
- The support system achieves expected performance.

The purpose of the Logistic Support Analysis (LSA) program is to increase the overall value provided by the product development programme organisation - to its stakeholders.

For existing in-service products, this is achieved by identifying enhancements to extant sustainment support arrangements and new sustainment requirements resulting from items such as upgrades to current systems and introduction of add-ons or augmenting capabilities. For instance, optimised inventory holdings due to reduced lead-times as a result of streamlined procurement processes; alternatively, less maintenance down-time as a result of extended scheduled-maintenance (servicing) intervals as a result of the introduction of non-perishable synthetic oils.

## Strategic Management and Capability Development work together

For any given capability the LSA strategy will:

- Seek to maximise opportunities for interoperability various vendors and partners and standardisation across the fleet.
- Support the current usage rate to meet the required operational tempo.
- Complete a suite of LSA activities designed to authenticate the actual requirements for system supportability.
- Alignment of LSA outputs with strategic project priorities and user capability requirements.
- Defining work packages for the delivery of each LSA activity.
- Assign resources and responsibilities for the performance of LSA work package activities.

## Framework for success

The benefits of applying the LSA framework against the sub-program are that it provides:

- An all-encompassing approach to Supportability Analysis covering both Mission Systems and their support systems.
- A co-ordinated development of the entire logistics support package.
- A consistent and traceable process to reduce Life Cycle Cost and improve operational availability, in accordance with ILS goals and to comply with programme constraints.
- Enhancements to asset performance and sustainment support focused on achieving cost-effective and value-for-money support for a materiel system in the context of the operational preparedness requirements.
- An Integrated Logistics Support Instruction (ILSI) tailored to address specific supportability, preparedness and materiel sustainment requirements.
- Adaptable sustainment functions that can be integrated and are interoperable with joint and coalition management systems.
- Sustainment systems supportive of the forward deployment of capability, may it be an application or a vehicle.

## Limits to Success

The LSA is limited by a number of factors such as:

- The quality of source information used in the analysis.
- The limits of extrapolation and prediction from analysis to the 'real' world environment.
- Dependence on tools and techniques with inherent limits, for example, RAM analysis and reports are only true on average, which is why a specialist is always key. For example, 'garbage-in equals garbage-out.'

## Lethal, Agile, Mobile - or - Track record, fit for purpose, strong standards

Support resources need to integrate with the logistics-related design parameters - this integration is referred to as a design interface. Common requirements are:

- Reliability,
- Maintainability,
- Standardisation,
- Interoperability,
- Safety,
- Security,
- Useability,
- Environmental; and Hazardous Material (HAZMAT),
- Privacy (information control), and
- Legal

## Do you need ILS Specialists?

Booker Harris is pragmatic and experienced - we have a number of experienced and accredited ILS Practitioners, System Solution Architects and Engineering Consultants. Please contact us should you require further assistance or information.

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