Welcome to Management Process

As a life cycle logistician (LCL), you must understand management process and what is expected of you on each project. This topic will cover processes such as Analysis of Alternatives (AoA) and System Operational Effectiveness (SOE) and the LCL's role in them.

Objectives

After finishing Management Processes, you will be able to:

- Identify the LCL's role in the development of Analysis of Alternatives (AoA).
- Identify the LCL's role in Affordable System Operational Effectiveness (SOE).
- Identify the LCL's role in market research and how it is a valuable tool.
- Recognize commercial support benefits to the DoD and how they are assessed.

This lesson presents you with the LCL's role in the management process associated with evaluating product support capabilities.

Analysis of Support Alternatives

The analysis of support alternatives is an essential element of the overall Analysis of Alternatives (AoA) that is conducted during the Materiel Solution Analysis phase. AoAs may also be conducted in other phases due to changes to threats, costs, or technology. The purpose of the AoA is to provide an analytical comparison of the operational effectiveness and cost of proposed materiel solutions to shortfalls in operational capability. AoAs document the rationale for identifying and recommending a preferred materiel solution.

An AoA is the evaluation of the performance, operational effectiveness, operational suitability and estimated costs of alternative systems being considered to meet a mission capability. The AoA assesses the advantages and disadvantages of alternatives being considered to satisfy capabilities, including the sensitivity of each alternative to possible changes in key assumptions or variables. The AoA is one of the key inputs to defining the systems capabilities in the Capability Development Document (CDD).

Select each term below to read its definition:

- Operational Effectiveness
- Operational Suitability

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Operational Effectiveness

“Measure of the overall ability to accomplish a mission when used by representative personnel in the environment planned or expected for operational employment of the system considering organization, doctrine, supportability, survivability, vulnerability and threat.”

Operational Suitability

“The degree to which a system can be placed and sustained satisfactorily in field use with consideration given to availability, compatibility, transportability, interoperability, reliability, wartime usage rates, maintainability, environmental, safety and occupational health, human factors, habitability, manpower, logistics supportability, natural environment effects and impacts, documentation and training requirements.”

Analysis of Alternatives (AoA)

The AoA is an important element of the defense acquisition process. An AoA is an analytical comparison of the operational effectiveness, suitability, and life-cycle cost of alternatives that satisfy established capability needs. After the Materiel Development Decision, the AoA is initiated to examine potential materiel solutions with the goal of identifying the most promising end-state materiel solution, thereby guiding activities of the Materiel Solution Analysis phase. Additionally, the AoA is

- Required of all major defense acquisition programs.
- Incorporates policy and guidance provided by the Office of the Director, Program Assessment and Cost Evaluation.
- Contributes to the selection of a preferred materiel solution that satisfies the capability need documented in the approved Initial Capabilities Document (ICD).
- Assesses critical technologies, including technology availability, maturity and risk.
- Provides the basis for the Technical Development Strategy at Milestone A and information for DoD leaders to debate and assess a potential program's capability and affordability.
- Emphasizes innovation and competition.
- Justifies the rationale for formal initiation of an acquisition program at Milestone B.
- Establishes acceptable boundaries of risk and a baseline analysis that may provide a foundation for subsequent business case analysis.
- Describes and includes the results of the supportability analyses and trade-offs conducted to determine the optimum support concept as part of the preferred system concept. It should also include the assumptions used in the analyses.

Analysis of Alternatives (AoA), Cont.

For more comprehensive information, the Air Force Office of Aerospace Studies has published an AoA Handbook and assessment guidelines that may be found at the DAU Acquisition Community Connection (ACC) website. Additionally, Chapter 3 of the Defense Acquisition Guidebook (DAG) contains information on the AoA.

Additional information on the results of an AoA can be reviewed in this RAND article.

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Ground Rules

Ground rules must be defined for scenarios, threats, environment, and constraints/ assumptions.

Alternatives

Alternatives may include:

- Retaining one or more existing systems, representing a benchmark of current capability
- Major upgrades or service-life extensions to existing systems
- Alternatives directed by AoA reviews
- A description and rationale for some alternatives that are nonviable.

Concepts

Concepts addressed include those for operations and support.

Measures

Measures addressed include:

- Mission tasks
- Measures of effectiveness
- Measures of performance

Analysis

Analysis includes effectiveness, life cycle cost, and cost-effective comparisons.

AoA Organizational Approach

Responsibility for the AoA is assigned to an AoA study team and not the program office. The program office may provide assistance and data to the working team that conducts the AoA. In some cases, a federally funded research and development center may be assigned the AoA. The AoA study team is staffed with a diverse mix of military, civilian and contractor personnel.

The AoA Study Team is usually organized along functional lines into panels with a chair for each:

- Effectiveness Analysis Panel
- Threats and Scenarios Panel
- Technology and Alternatives Panel (responsible for defining the alternatives)
- Operations Concepts Panel (for each alternative)
- Cost Analysis Panel

In most cases, the effectiveness analysis panel occupies the central position and integrates the work of the others.

AoA and Product Support Responsibilities

Recall that the purpose of the Materiel Solution Analysis phase is to assess potential materiel solutions and develop a Technology Development Strategy (TDS). This includes identifying and evaluating affordable product support alternatives with their associated requirements to meet the operational requirements and associated risks. The activities in this phase are critical to acquisition program success and achieving materiel readiness. Why?

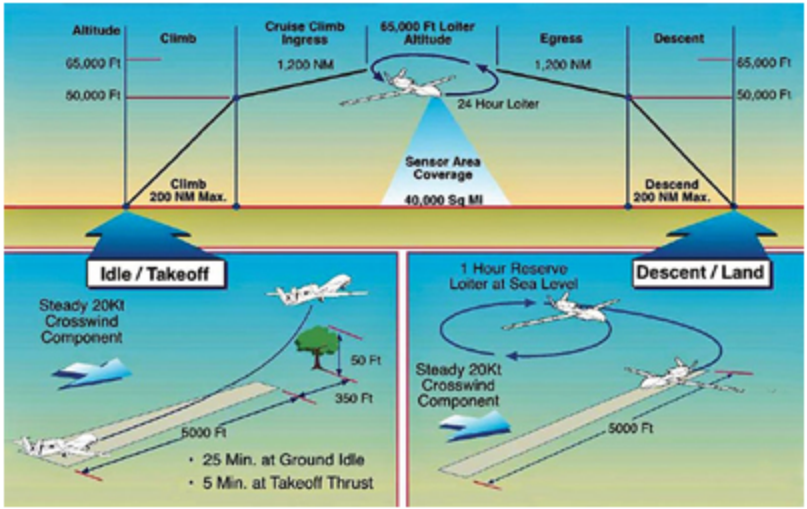
This is the first opportunity to influence supportability and affordability by balancing technology opportunities with operational and sustainment requirements. In determining the optimally balanced requirements, emphasis is not only on the reliability and maintainability of potential materiel solutions, but also on assessing cost-effective responsiveness and the relevance of support system and supply chain alternatives.

In other words, this is the first chance to identify cost, schedule, performance, and supportability considerations that represent the trade space available to the PM.

AoA and LCL Responsibilities

From this perspective, the AoA is a key activity during the Materiel Solution Analysis phase. The LCL plays a critical role in the AoA by identifying and defining possible maintenance and sustainment concepts – product support solutions - to evaluate. These alternative approaches to product support must be consistent with the concept of operations, including the physical and operational environment, of the systems being evaluated. To accomplish this, the LCL's responsibilities include:

- Clearly specifying the support concept and support performance of the baseline or current capability.
- Defining and analyzing support concepts for each alternative under consideration to include performance based support options.
- Assessing the physical and operational maintenance environment of each alternative under consideration.
- Determining the system level sustainment metrics and values that provide the balance between mission effectiveness, life cycle cost, logistics footprint, and risk for each system alternative and associated sustainment and maintenance strategy.
- Understanding and assessing the implications of an evolutionary capability to supportability.



AoA and LCL Responsibilities, Cont.

Additional LCL responsibilities when conducting an AoA are:

- Clearly specifying the ground rules and assumptions for the assessment of effectiveness and cost of life cycle support.
- Identifying and assessing best product support/logistics practices from other defense programs and the commercial sector.
- Clearly delineating the potential risks in support performance for each materiel alternative and associated support concept under consideration.
- Estimating the support costs as an element of life cycle costs for each of the system alternatives to include design, development, production and sustainment costs associated with implementing each support concept.
- Working with the modeling and simulation community to identify and use appropriate supportability models for estimating support risks and costs for various alternatives.

AoA Support Concepts

In the AoA, each alternative under consideration may have more than one potential support concept or alternative that could be assessed. The following are examples of how alternatives could be defined.

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Alternative One

Existing system(s) providing current capability supported by DoD's current logistics support concept.

Alternative Two

An upgrade to existing system with a combination of existing logistics support and performance-based logistics support.

Alternative Three

A new materiel solution with DoD serving as the product support integrator providing performance-based logistics support.

Alternative Four

A new materiel solution with the prime system integrator serving as the product support integrator providing performance-based logistics support.

Alternative Five

Evolutionary materiel solution with continual trade-off analysis to determine the most effective and affordable performance-based logistics support.

Knowledge Review

Alternative 3 is a new materiel solution with DoD serving as the product support integrator providing performance-based logistics support.

- [x] True
- [ ] False

Check Answer

The statement is **true**. Alternative 3 is a new materiel solution with DoD serving as the product support integrator providing performance-based logistics support.

Knowledge Review

Which alternative is a new materiel solution with DoD serving as the product support integrator providing performance-based logistics support?

- [ ] Alternative One
- [ ] Alternative Two
- [x] Alternative Three
- [ ] Alternative Four
- [ ] Alternative Five

Check Answer

Alternative Three is a new materiel solution with DoD serving as the product support integrator providing performance-based logistics support.

Effectiveness Analysis

Effectiveness analysis in the AoA is based on three levels of factors:

1. Mission tasks -- derived from mission needs
2. Measures of effectiveness -- describing how well the mission tasks are performed
3. Measures of performance – describing functional capabilities

Mission Tasks for Product Support

The LCL focuses efforts on the mission tasks that require product support capabilities. For example, these factors may be related to support:

Mission Task 1: Provide agile, responsive war fighting capability (as it relates to the capability shortfall).

- Measures of effectiveness: deployed logistics support manpower, deployed test and support equipment, deployed spares, design reliability
- Measures of performance: operational availability, mission reliability, logistics footprint

Mission Task 2: Provide real-time logistics knowledge to operational commanders.

- Measures of effectiveness: number of systems/sub-systems covered by diagnostics, number of systems/sub-systems covered by prognostics
- Measures of performance: percent of fault isolation by diagnostics/prognostics, percent of fault detection by diagnostics prognostics, accuracy of predicted mission-ready systems

Importance of Sensitivity Analysis

Some of the ground rules, assumptions, and estimates of performance in an AoA, especially during the Materiel Solution Analysis Phase, may be subject to error. Typically, a few critical assumptions drive the results of the analysis. If a change in a variable or assumption changes the ranking of the effectiveness and/or cost of the various alternatives, then the results are sensitive to that factor. The sensitivity analysis provides a level of assurance that the uncertainties in the analysis have been documented and assessed. A sensitivity analysis must be performed for both effectiveness and cost.

Assumptions and variables that may create sensitivity to support alternatives may include:

- The estimates associated with the reliability for the proposed materiel solutions
- The DoD logistics manpower requirements
- The assumptions related to diminishing manufacturing sources for the life cycle
- The cost of prognostics/diagnostics
- Assumptions regarding competition
- Assumptions regarding the acquisition of technical data and/or spares

Assessing Affordability

The AoA must also assess the life cycle cost of each alternative -- how much the capability solution will cost to develop, produce, operate, and retire.

Some alternative solutions may have more than one support option. In those instances, one alternative could have two different costs depending upon the support alternative. Select each item below to read about examples of support-related cost factors that need to be considered when assessing affordability.

Integrated product support

Segmented performance-based support

Supportability factors that may affect upfront design and production costs

Popup Text

Integrated Product Support

- Dollar per operating hour based on industry performance-based support
- Cost of a product support integrator (DoD or industry) service
- Cost of DoD management to include contracting of the integrated product support effort
- Cost of potential incentives/ shared savings initiatives

Segmented Performance-Based Support

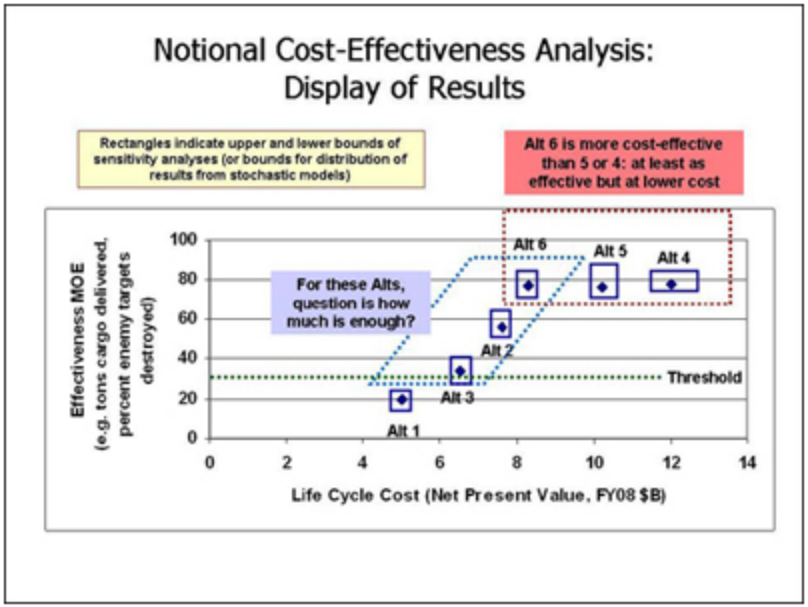
- Cost of spares
- Cost of supply management
- Cost of repairs
- Cost of sustaining engineering
- Cost of DoD management to include contracting

Supportability Factors That May Affect Upfront Design and Production Costs

- Some supportability factors that may impact upfront design and production costs
- Reliability – some alternatives may require redundancy or more costly material to obtain higher reliability
- Maintainability – some alternatives due to technology may require more costly test equipment and/or training
- Built-in diagnostics/prognostics – some alternatives may require more development than others to incorporate reliable diagnostics
- Real-time networked, weapon system information – capability requirements for logistics C2 and/or joint logistics

Reducing the Number of Alternatives

The comparison of alternatives typically reduces the original set of alternatives to a small set of viable alternatives for decision makers to consider. In most cases, the alternatives will have different effectiveness and cost. In some cases, the alternatives may have equal cost and be assessed based on the lowest cost or based on the greatest effectiveness. A common tool for comparisons of alternatives is a scatter plot of effectiveness versus cost.



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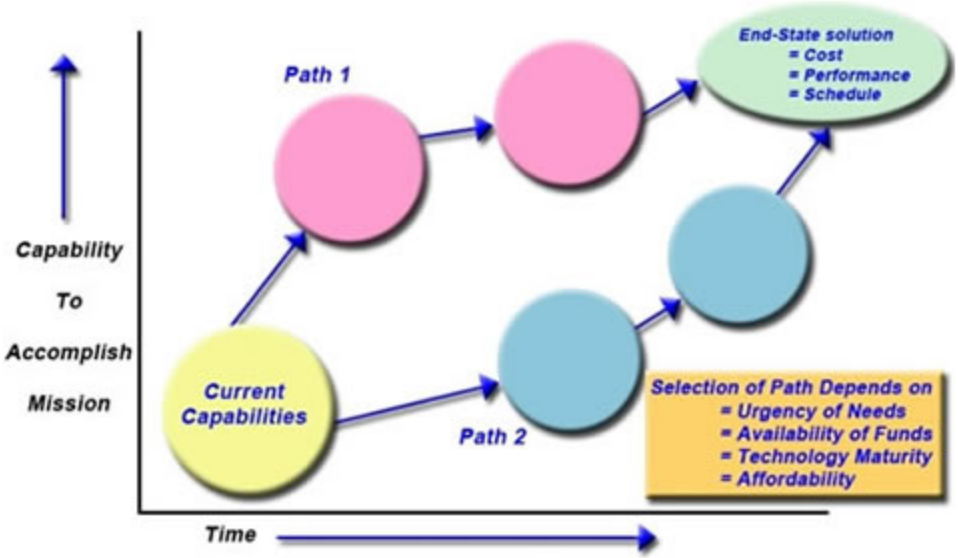
Long Description

Notional Cost-Effectiveness Analysis: Display of Results. This shows figure 3.3.3.7.F1., Sample Scatter Plot of Effectiveness versus Cost, from the Defense Acquisition Guidebook. There is a graph with an x-axis representing Life Cycle Cost (Net Present Value, FY08 $B). Values range from 0 to 14 in increments of 2. The y-axis is labeled as Effectiveness MOE (e.g., tons cargo delivered, percent enemy targets destroyed). Values range from 0 to 100 in increments of 20. There are 6 alternatives plotted. Alt 1 is plotted at (5, 20). Alt 2 is plotted at approximately (7.5, 55). Alt 3 is plotted at approximately (6.5, 35). Alt 4 is plotted at approximately (12, 79). Alt 5 is plotted at approximately (10.5, 77). Alt 6 is plotted at approximately (8.2, 79). There is a dotted horizontal line plotted at approximately 32, indicating that this is the Threshold for Effectiveness MOE. Alt 1 is located below the threshold. Alt 3, Alt 2, and Alt 6 provide increasing Effectiveness MOE. Alt 6, Alt 5, and Alt 4 provide approximately the same Effectiveness MOE. There is a dotted box drawn around Alt 3, Alt 2, and Alt 6 with the following question posed: For these Alts, question is how much is enough? There is a dotted box drawn around Alt 6, Alt 5, and Alt 4 with the following comment made: Alt 6 is more cost-effective than 5 or 4: at least as effective but at lower cost. There is a note regarding the dotted boxes: Rectangles indicate the upper and lower bounds of sensitivity analyses (or bounds for distribution of results from stochastic models).

The Support Challenge for Evolutionary Programs

A schedule/time dimension is considered in the AoA, especially for evolutionary programs. An evolutionary approach has important implications for product support capabilities. The support concept must be aligned to and evolve with the materiel solution.

Contingency plans for extending the support of some delivered capabilities may need to address schedule delays in capability/materiel solution evolutions. The results of the AoA provide input for the TDS that begins to define the technology roadmap.



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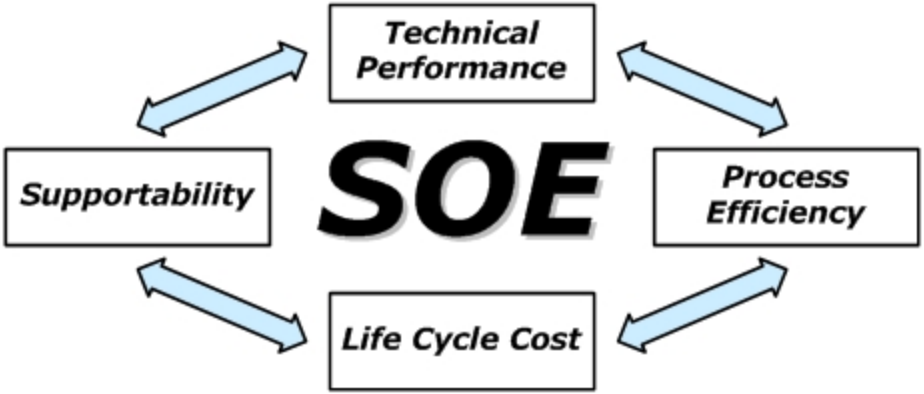
Long Description

This graphic shows Figure 3.3.2.1.F1, Establishment of an Evolutionary Acquisition Strategy, from the Defense Acquisition Guidebook. It depicts the role of the AoA during the Materiel Solution Analysis phase in developing the Technology Development Strategy (TDS) as part of an Evolutionary Acquisition strategy. There is a graph with an x-axis of Time and a y-axis of Capability to Accomplish Mission. Near the intersection of the axes is a circle labeled “Current Capabilities”. Two paths emanate from the Current Capabilities: Path 1 and Path 2. Both paths lead to a circle in the upper right quadrant labeled as “End-state solution: Cost, Performance, Schedule”. Both paths lead to the end state through two interim circles. Path 1’s circles occur earlier in time and at a higher capability to accomplish the mission than Path 2’s circles. The selection of the path depends on the urgency of needs, availability of funds, technology maturity, and affordability.

System Operational Effectiveness (SOE)

The SOE concept involves the interdependent relationships among:

- **Technical Performance** – meeting the warfighter's functional capability requirements
- **Supportability** – reliability, maintainability and support features (i.e., operational suitability features that cut across reliability, maintainability and the supply chain)
- **Process Efficiency** – system operation, maintenance, servicing and producibility
- **Life Cycle Cost** – life cycle cost and total cost of ownership of the system



The PM's goal is to maximize the total operational effectiveness of the weapon system. This model helps to evaluate trade-offs.

During the Materiel Solution Analysis phase, the LCL should influence "designing for support." In later acquisition phases, the LCL will "support the design."

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Popup Text

Life Cycle Cost

Life Cycle Cost (LCC): The total cost to the government of acquisition and ownership of a system over its useful life. It includes the cost of development, acquisition, operations, and support (to include manpower), and where applicable, disposal. For defense systems, LCC is also called Total Ownership Cost (TOC).

Total Cost Of Ownership

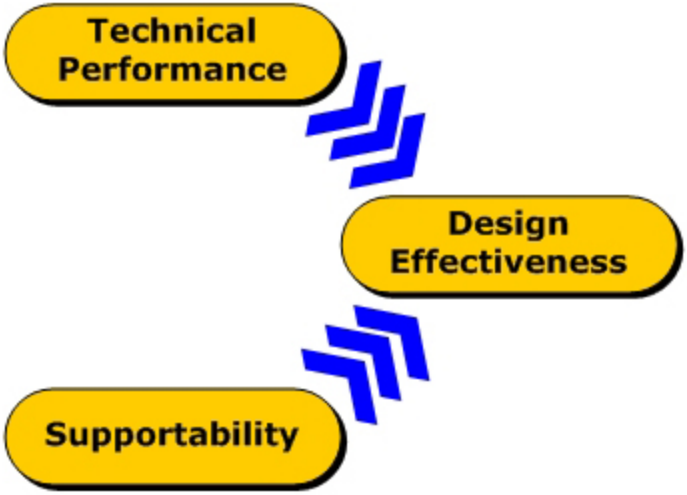
Total Ownership Cost (TOC): A concept designed to determine the true cost of design, development, ownership, and support of DoD weapons systems. At the DoD level, TOC is comprised of the costs to research, develop, acquire, own, operate, and dispose of defense systems, other equipment, and real property; the costs to recruit, retain, separate, and otherwise support military and civilian personnel; and all other costs of the business operations of the DoD. At the individual program level, TOC is synonymous with the Life Cycle Cost (LCC) of the system.

Long Description

The graphic includes four boxes in a circular pattern connected by double-headed arrows. The four boxes have the following text: Technical Performance, Supportability, Process Efficiency, and Life Cycle Cost. The acronym SOE (representing System Operational Effectiveness) is in the center of the four boxes. The graphic depicts the interdependent relationship of the concepts in the four boxes and the fact that they combine to form the larger concept of SOE.

System Operational Effectiveness (SOE), Cont.

Technical Performance: Designed-in functions capabilities result in system performance. Functions refer to the desired mission abilities the system should be capable of executing in the operational environment. This includes high-level functions such as intercept, weapons delivery, electronic jamming, surveillance, etc. down to the lowest subsystem level supporting functions (e.g., process signal). Capabilities refer to the various desired performance attributes and measures, such as maximum speed, range, altitude, accuracy (e.g., "circular error probable") down to the lowest subsystem level (e.g., frequencies). Each of these must be prioritized and traded off to achieve an acceptable balance in the design process.



Supportability: Supportability includes design factors of the system (i.e., reliability, maintainability and support features) and its product support package

Design Effectiveness: Design Effectiveness refers to the balance between the key design features of technical performance and supportability. Performance and supportability must be considered together during system design, accounting for system's anticipated operational, maintenance and support concepts.

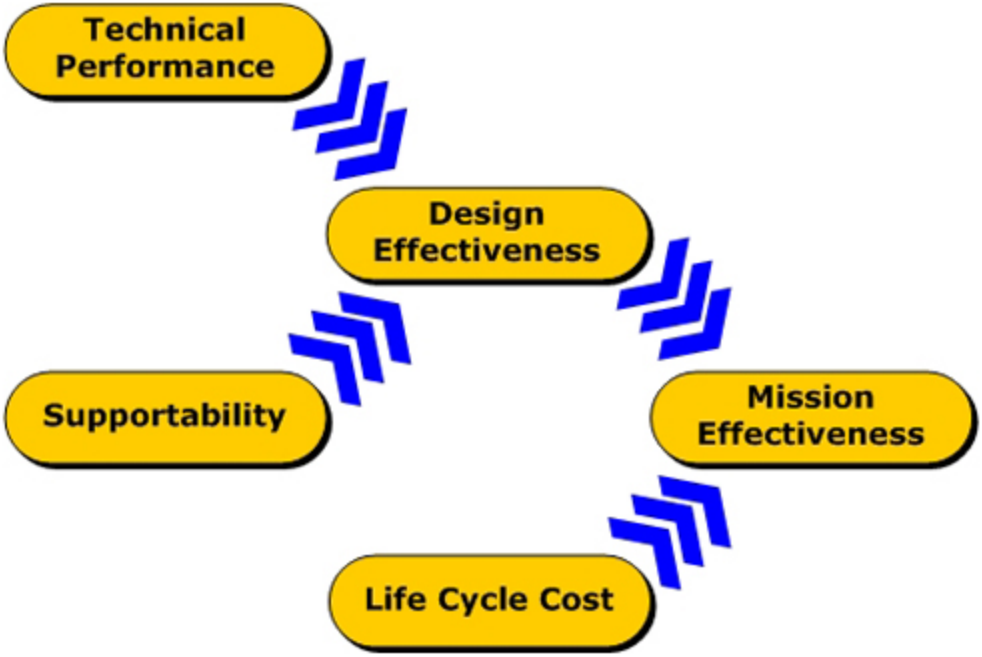
Process Efficiency

Achieving process efficiency requires early and on-going focus on the elements of logistics support. According to the Supportability Guide, process efficiency can be improved by:

- Application of optimization methods to reduce necessary capital investment within the system support infrastructure, e.g., spares optimization and personnel allocation optimization.
- Application of continuous process improvement, re-engineering and control to enhance efficiency of the logistics process.
- Application of process improvement-oriented technologies, e.g., asset visibility and tracking technologies, e-commerce and supply chain management, failure diagnostics and prognostics, and multi-media technologies for documentation and training.
- Development of innovative concepts such as condition-based maintenance and enterprise integration.
- Development of innovative contractual and management structures such as Performance Based Logistics.

Mission Effectiveness

Mission Effectiveness is critical because it reflects the Warfighter's ability to accomplish the mission (including the number of systems/sorties required to accomplish the mission) and directly impacts their workload. It reflects the balance achieved between the design and the process efficiencies used to operate and support the system, including the product support package and the supply chain. When mission effectiveness is balanced against life cycle cost, affordable SOE is achieved.



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Long Description

Design effectiveness and process efficiency feeding into Mission Effectiveness. Then Mission Effectiveness and Life Cycle Cost combine to make Affordable SOE.

Knowledge Review

Which of the choices below enable Design Effectiveness?

- [ ] Life Cycle Cost and Mission Effectiveness
- [x] Supportability and Technical Performance
- [ ] Mission Effectiveness and Process Efficiency
- [ ] Technical Performance and Process Efficiency

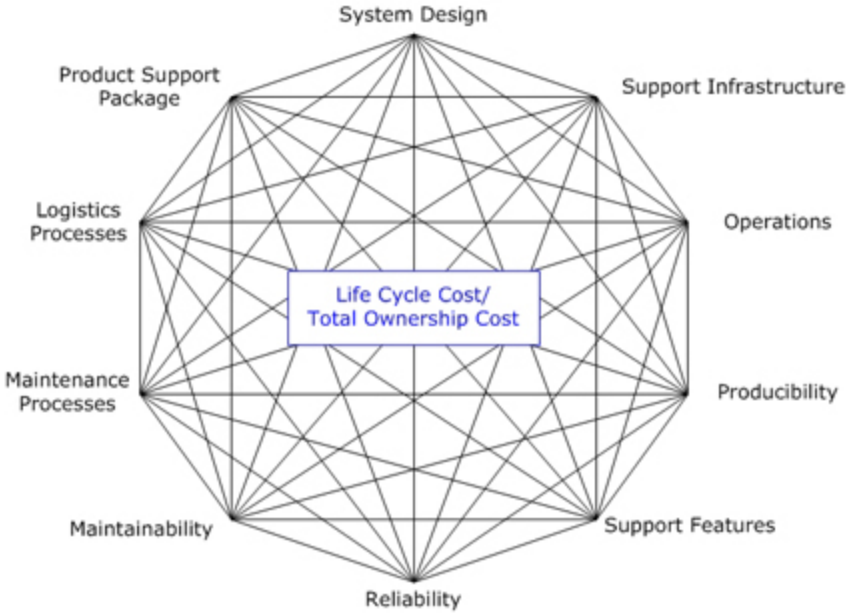
Check Answer

Supportability and Technical Performance contributes to and enables Design Effectiveness.

Timing of SOE

The best opportunity for the LCL to influence future system availability and affect SOE is during pre-acquisition. At this early stage, the LCL identifies how system reliability, maintainability, and supportability can be increased and logistics footprint can be decreased. The LCL provides information to ensure that program capability requirements documentation balances capability, life cycle cost, and availability.

As stated earlier, the Affordable SOE concept involves trade-offs between technical performance, supportability, process efficiency, and life cycle cost. Therefore, the LCL needs to understand the interrelationships between the basic SOE elements and the cause-and-effect of design decisions made during the Materiel Solution Analysis phase and future system operations and support. For example, certain design decisions to increase performance could create logistics process inefficiencies that would make the program unaffordable.



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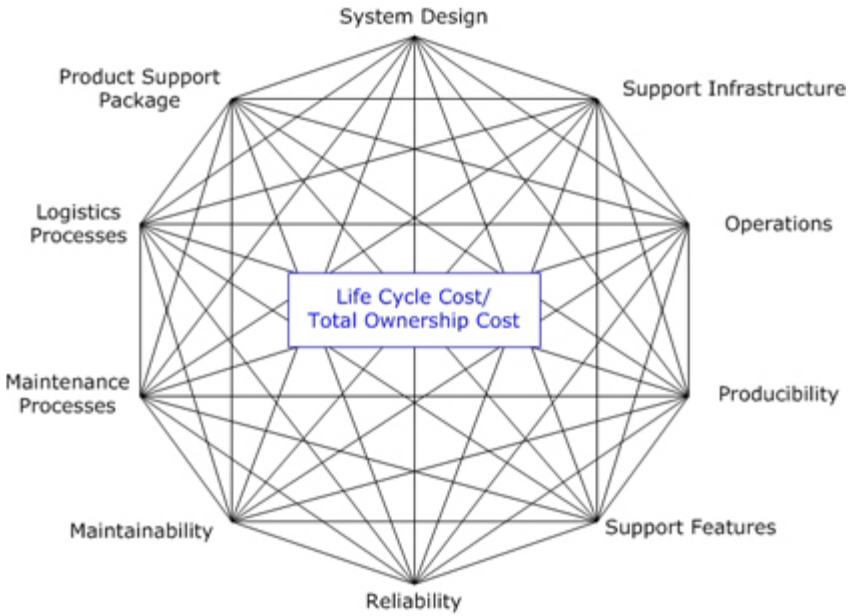
Popup Text

Affordable SOE Interrelationships

Below is a pictorial display of the complex interrelationships of the basic elements of Affordable SOE. Achieving the optimal balance across these complex relationships requires proactive, coordinated involvement of organizations and individuals from the requirements, acquisition, logistics, and user communities, along with industry. Consequently, because of the complexity and overlapping interrelationships full stakeholder participation is required in activities related to achieving affordable mission effectiveness.



Long Description

A geometric representation of the complex interrelationships of the basic elements of Affordable SOE. The graphic has ten points labeled: System Design, Support Infrastructure, Operations, Producibility, Support Features, Reliability, Maintainability, Maintenance Processes, Logistics Processes, and Product Support Package. There are lines drawn through the graphic that link all of these points to each other. On top of the graphic is a box with the words, “Life Cycle Cost/Total Ownership Cost” inside.

Market Research

The evaluation of product support capabilities must include an assessment of commercial technologies, products and services. Thus, LCLs must participate in market research.

Market research is a primary means of determining the availability and suitability of commercial items and the extent to which the interfaces for these items have broad market acceptance, standards development organization support, and stability.

Market research supports the acquisition planning and decision process by supplying technical and business information about commercial technology and industrial capabilities. Federal Acquisition Regulations (FAR) Part 10 requires the acquisition strategy to include the results of completed market research and plans for future market research.

Market Research as an LCL Tool

Why is market research valuable to the LCL?

- When commercial products are feasible alternatives for meeting defense capability needs, market research is needed to define and assess feasible support alternatives. The existing capabilities and practices for supporting the commercial product(s) may provide a commercial support alternative that needs to be assessed.
- In some cases, a commercial capability is similar to defense capabilities, such as electronics, propulsion and aviation. Commercial support capabilities and practices may provide feasible support alternatives for similar defense capabilities.
- Commercial services could provide elements of performance-based logistics to meet defense support requirements.
- Other ongoing DoD programs may also provide excellent sources of information regarding the application of commercial products and practices.
- Commercial equivalents of some support functional capabilities may be available, such as spares management, product knowledge-based information systems, prognostics and diagnostics management, etc.

Commercial Benefits to DoD

Commercial support technologies, products, and services can provide many benefits for DoD.

- If a commercial product support capability can be used to meet DoD requirements, the broader business base of both commercial and defense customers can provide lower costs through shared logistics infrastructure costs (i.e. spares, warehousing, engineering, information systems, test and support equipment, etc.) and may also provide the benefits of continuous improvement and/ or technology refreshments depending upon the nature of the business deal DoD can arrange.
- If a commercial product support practice with relevance to DoD requirements can be identified and assessed, the understanding of the costs and risks of such a practice to defense product support alternatives can be valuable. While the practice may be new and innovative to DoD, the commercial sector may have already determined its feasibility and effectiveness.
- If the commercial sector has established support organizations to provide support services for various product support functions, either integrated in terms of delivery or guarantee of product availability, or segmented, in terms of managing spares, technical information, etc., DoD can benefit from either leveraging similar service requirements or applying the commercial service model to defense requirements.

Aspects of Market Research

The LCL needs to understand how to conduct market research.

Market research is a term that represents a continuous process for gathering data and information on product characteristics, suppliers' capabilities, and the business practices that surround both. Two primary phases of market research are:

1. **Market surveillance** is the broad and continuous process of staying abreast of common industry trends, business practices, and emerging technologies that are available in the commercial sector. Acquisition personnel performing market surveillance are not looking to fill any specific need, but are attempting to determine if commercial capabilities exist that may meet defense needs.
2. **Market investigation** is aimed at satisfying a specific need. Market investigation has a narrow focus and a specific time frame. Its purpose is to determine with a high degree of confidence whether or not commercial technology, items, or services can satisfy the requirement. Once a requirement has been established by the Initial Capabilities Document (ICD), a market investigation can be used to gather data on specific items appearing to meet the military need.

For more information you can download the SD-5 (Market Research: Gathering Information About Commercial Products and Services) document.

Knowledge Review

Which of the following represents a continuous process for gathering data and information on product characteristics, suppliers' capabilities, and the business practices that surround both?

- [x] Market Research
- [ ] Commercial Benefits
- [ ] SOE Timing
- [ ] System Effectiveness

Check Answer

Market Research represents a continuous process for gathering data and information on product characteristics, suppliers' capabilities, and the business practices that surround both.

Market Surveillance Sources

Data sources, or techniques, for performing market surveillance include:

- Subscribing to and reading trade journals.
- Maintaining an active membership with professional societies.
- Personal contacts with other DoD components, federal agencies, and private industry, to include attending other defense program office meetings where commercial products and practices are being used to meet defense requirements.
- Communication with the user community.
- Industry representatives at industry shows, conferences, or symposiums.
- On-line (Internet) automated databases to include both defense and commercial sources. Many of the Services have lessons learned databases that may provide useful insights.
- The OSD office on industrial base policy provides various industrial base assessments that may be useful in certain instances.

Market Investigation Approach

The market investigation approach can be characterized in six major steps, all of which contribute to the form, fit, and function of market research. Select the links below to review each step.

1. Summarize market surveillance
2. Identify sources
3. Survey manufacturers/ support providers
4. Check references
5. Evaluate candidates
6. Document results

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Summarize Market Surveillance

Step 1: Review and summarize what the team has already learned from market surveillance activities. This helps the team prepare to investigate specific areas of concern or fill information gaps within what is normally a limited time for performing the investigation.

Identify Sources

Step 2: Survey of literature and other available information about potential candidate items that seem to meet the basic requirements of the user. Information sources are developed from on going market surveillance, advertisements in the Federal Business Opportunities as “Sources Sought” or “Request for Information,” and advertising in trade publications.

Survey Manufacturers/ Support Providers

Step 3: If the identification of sources finds promising items, the next part of the process takes place. Detailed questionnaires can be sent out to pull in more specific data on candidate products or services. Teams may go out to industry provider sites and commercial user sites to view the products or services. Candidate products may ultimately be leased or purchased for some system specific testing. A sample of the available item may then be used or examined by potential military field users. The survey of manufacturers is also a critical step for logistics as it can provide useful data on potential logistics requirements. Some of the general types of information collected from manufacturers may include; General performance specifications; Supplier capability; Market acceptability criteria; Supportability issues; Available test data; and References for current customers.

Check References

Step 4: This step is to determine whether actual performance satisfies current customers. The goal is to verify if a product (or service) performs as described during the previous steps of the market investigation. This should also include a review of past performance and product quality from reliable

sources like government databases, consumer protection organizations or user groups. Commercial airlines, trucking or shipping fleets are just a few examples of commercial users who may be able to provide source data on commercial product acceptance and quality of vendor items.

Evaluate Candidates

Step 5: The purpose of this step is to use the information gathered to determine if a commercial and/ or NDI acquisition of a product or service is feasible. This consideration should include an assessment of risk as well as technical performance characteristics of candidate items. The outcome of the market investigation should determine if: (a) One or more items meet the requirements. (b) One or more candidate items can be modified to meet the requirements. (c) One or more potential candidate's items can meet the need if certain requirements are relaxed. (d) One or more candidate's items can be modified to meet a more relaxed set of requirements. (e) A Commercial and/ or NDI purchase is feasible.

Document Results

Step 6: Document Results. This documentation effort provides a historical record of the research effort and evidence of proper application to the acquisition. It may also serve in the future as additional data for another research team's efforts on similar products or services. It is may also used by the contracting office to help determine commercial terms and conditions, and to tailor contract clauses.

Commercial Feasibility

Commercial Feasibility assesses the feasibility of using a commercial product or service to meet defense capability requirements and can be addressed by asking two questions:

1. Will the product or service effectively satisfy the user's mission requirement?
2. Will it function and can it be supported in the user's intended environment?

The commercial item or service must be supportable in the anticipated mission environment. The LCL must address two issues to determine whether the item or service qualifies for a commercial acquisition strategy.

The First approach compares the potential military mission profile to the current commercial user profile. The differences provide a measure of risk that must be considered.

The Second approach addresses supportability planning. The LCL must determine whether the existing commercial support infrastructure is adequate to satisfy user supportability objectives or a new, military unique support infrastructure is required.

Popup Text

First Approach

If operational practices and procedures, and maintenance requirements and tasks are fairly similar under both profiles, the logistician can predict with a fair degree of certainty that the equipment is supportable in the military environment. Thus, support items such as training simulators, parts manuals, nomenclature identification and associated usage rates; technical publications for the equipment and any ancillary support or test equipment could transition into the defense user's intended environment with little difficulty. If a gap exists between the commercial and military profiles for support issues, the risk must be identified and managed by the LCL. If only a marginal correspondence exists between the two profiles, the logistician may pursue a logistics concept tailored to the defense profile. This may include the acquisition of the necessary technical data and information associated with any high-risk areas. For example, an issue such as initial and long term training certification can prove fatal to any deployment if ignored or poorly managed, particularly if the equipment places heavy demand upon human integration with the equipment for successful operation. Going commercial acquisition implies rapid deployment. The logistician cannot begin addressing high risk support issues soon enough in the acquisition process.

Second Approach

For example, if publications development for a similar commodity item would be thirty-six months, then interim contractor support would be required for at least as long as a contract option. This gross planning factor early on allows for the in-house development by the Government (or through separate contract) if the commercially available technical publications prove to be not usable for the military program. If the commercial publication is unusable, then organic maintenance may be delayed until a new publication is written - hence the option for an interim contract support period until the new publication is available.

Summarizing the LCL's Role

The LCL's role in market research is to assist in collecting and reviewing the available data collected and determine if any of the surveyed commercial products and/ or services can meet defense supportability requirements.

Commercial products and/or services may require tailoring to meet defense requirements, especially in terms of ensuring that support capabilities can reach the battlefield and that logistics information will be accessible and integrated into battlefield command, control, communications and intelligence and joint logistics plans.

Many commercial support practices may be applicable to and integrated with overall defense product support concepts and strategies. Gathering information to better understand the intricacies of developing and implementing innovative commercial practice may be very valuable when evaluating product support alternatives. Reviewing other commercial practices may also prove to be very beneficial given the increased emphasis on joint operations.

Based on the results of the commercial product and practice assessments and any requisite demonstrations, the LCL needs to identify and investigate any technology strategy and/ or acquisition strategy changes that would be beneficial to the life cycle support aspects of the program.

D

Long Description

Based on the results of the commercial product and practice assessments and any requisite demonstrations, the LCL needs to identify and investigate any technology strategy and/or acquisition strategy changes that would be beneficial to the life cycle support aspects of the program.

Knowledge Review

Which step of the market investigation approach includes a survey of literature and other available information about potential candidate items that seem to meet the basic requirements of the user?

- [ ] Step 1: Summarize market surveillance
- [x] Step 2: Identify sources
- [ ] Step 3: Survey manufacturers/support providers
- [ ] Step 4: Check references

Check Answer

Step 2: Identify sources includes a survey of literature and other available information about potential candidate items that seem to meet the basic requirements of the user.

Management Processes Summary

You have completed Management Processes and should now be able to:

- Identify the LCL's role in the development of the Analysis of Alternatives (AoA)
- Identify the LCL's role in Affordable System Operational Effectiveness (SOE)
- Identify the LCL's role in market research and how it is a valuable tool
- Recognize commercial support benefits to the DoD and how they are assessed

Lesson Completion

You have completed the content for this lesson.

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