

Top 50 Suitability Factors Impact Contract Availability Requirements in Pursuit of Mission Readiness

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We found scenarios where some potential users of the Service Life Readiness Application did not receive information describing intended capabilities of the new tool because tech information about potential for product support utility was not effectively communicated with stakeholders and intended users.

Without effectively communicating critical information to potential users, useful feedback is not likely to be received as tool is designed, and persistent concerns regarding timeliness, usability & redundancy to not be effectively addressed.

Operational tests show that major programmes are often effective when they tested as operationally suitable, but the converse is not true. This correlation by itself does not prove causality, but it reinforces Logistics considerations that attributes of being interoperable, available, maintainable & reliable are important to achieving mission success.

For example, well-engineered systems that address suitability factors are probably also better positioned to be effective. Also, no matter its features, a weapon system may not serve its function if it is unreliable and unavailable to the warfighter.

Operations & Sustainment [O&S] cost implications in early system requirements and design must be taken into consideration. Many factors correlating with growth of O&S cost estimates i.e., all aspects of daily field level operations such as maintenance & fuel prices are outside of programme administrative control.

While programme bosses cannot control these external factors, impacts on fuel efficiency and maintenance costs e.g., system reliability, ease of maintenance & repair automation are present.

Usually, trade-offs must be addressed very early in system design, so functional teams must factor them in in early stages of programme planning so new affordability process sets goals/caps on service life sustainment costs e.g., at the point of the Materiel Phase Motion Decision points when bigger design changes can be made.

Don't dismiss trade-offs just because you cannot control the external factors and uncertainties remain.

Potential Operations & Support [O&S] Cost Considerations/Examples include:

1. Diagnostic & Prognostics
2. Condition-Based Maintenance
3. Repair capabilities for new materiel
4. Wear & Tear prevention/control
5. Modernisation requirements
6. Commonality/Standardisation
7. Open System Architecture
8. Designing for supportability
9. Reliability & maintainability
10. Materiel Source Shortage

Top 10 Spare Parts Design Features Provide Tech Performance/Support Selection

1. Reliability/maintainability engineering

Ensuring parts selected meet contractual requirements and proper design application is critical to ensuring reliability and maintainability requirements of the weapons systems or equipment acquisition contracts are met. Reliability and maintainability have a direct impact on both mission capability and service life cost. The part selection process will also reduce the use of parts with known built-in failure mechanisms, resulting in enhanced reliability and maintainability.

2. Standardisation

Reducing proliferation of part types used in system designs through standardisation is important for enhancing materiel readiness and interoperability and for reducing total service life costs. Selecting standard or commonly used parts within and across DoD weapons systems ensures reliable part types that reduce design risks are used and enhances inter/intra-departmental part commonality and interchangeability; reduces the variety of parts in the inventory; enhances part availability, reliability, maintainability, and economies of scale; and reduces part termination scenarios.

3. Part and supplier qualify

An important requirement for selecting parts is considering the source of supply and establishing disciplined part selection process in the design phase, as part of formal assessments to increase probability of using best available parts and maintaining a parts baseline to include rational approach to qualify suppliers, change suppliers, and/or switch parts. Must evaluate if path exists for verification testing and qualification articles. Standardisation limits introduction of new parts to enable consistent manufacturing planning and support systems and processes such as materiel requirements planning.

4. Design

Parts teams evaluate the effects of part selection on all applications, considering all requirements to ensure key design considerations are given sufficient emphasis and that processes are in place to avoid misdirected design practices.

5. Cost/funding

Parts teams ensure standardisation is taken into account to minimise costs e.g., maximise the use of parts already being used elsewhere and identifies funding required for perform activities to determine part will work as intended. Reduced acquisition lead-time is key factor when a preferred part is used so DoD and suppliers can frequently avoid the expense and delay of designing new parts, as well as issues associated with acquiring a new item with no available performance demo.

6. Materiel

Parts teams ensure materiel selection process accounts for special issue conditions and prevention deficits in utility also assess selected parts for availability and evaluates parts to mitigate future effects of not being available. Processes are established to minimise the use of suspect components, materials, and processes. Parts teams ensure qualification considerations have been properly addressed by identifying and performing

test/assess.

7. Process capability/control

Parts teams ensure strong communication foundation exists in determining consistency of the design to manufacturing processes and mandates processes are sufficient to satisfy the system requirements. Assurance must be made that special design considerations-- for example, the product performance, are sufficient for system requirements.

8. Quality Requirements

Parts teams ensure quality requirements have been established for different types and recommends root cause part failure assessment approaches, identification of failure effects on performance, and corrective action accountability. Proper controls are established to avoid introduction of suspect parts result of schedule and out-of-date conditions. An important factor in selecting quality parts suppliers is whether parts from selected supplier are found quality assured for application of use location. Suppliers must address both quantification of process control and implementation of process controls on manufacturing, materiel, transit, process changes and field-level customer satisfaction.

9. Enhanced logistics readiness/interoperability

When assemblies or systems share common components, repair time is shorter, because parts are more likely to be in the supply line. Using common components simplifies logistics support and enhances ability to function as substitute because fewer parts need to be stocked. Common parts translate to savings in procuring, testing, warehousing, and transit of parts.

10. Increased supportability of systems & equipment.

Preferred parts reduce risk and improve chances equipment will perform reliably. Preferred parts have a history of proven reliability, durability under testing and performance at stated levels. Use of preferred parts can reduce number of part failures, cutting down number of maintenance actions, increasing operational availability, and potentially precluding failures with potential to compromise success of critical missions.

Top 10 Questions Assess Weapons System Capability Requirements for Field-level Performance

All design statements we're making — 'I'm going to have depot repair' or 'I'm going to have contractor logistics support' — all decisions have to be tied to a contract deliverable in application status updates so we can assure ourselves that not only are we fully considering it, we're buying it and we'll deliver it. It is also essential we're taking a look at the requirements our capability teams outline for us in terms of performance characteristics:

1. What are our supply availability measures?
2. What is the mean time to repair?
3. How maintainable, reliable, available should the system be?
4. How to link requirements to operational sustainment review?
5. What happens after a weapons system is fielded?
6. Are all integrated product support elements being reviewed?
7. What do Services demand in terms of design work and performance?
8. How did the system perform in tests?
9. Is system proving utility out in operational theatre?
10. What factors are most important for administrative application mechanism?

Top 10 Service Equipment Portfolio Review Build Guidance Validate, Prioritise & Approve Requirements for Tactical Contract Decisions

DoD utilisation of existing contract review boards focused on efforts for assuring proposed contract solicitations are in compliance with existing guidance instead of supporting trade-off decisions in service portfolios or assessing opportunities for efficiencies and eliminating duplicative requirements.

DoD must have more visibility over contracted services and requirements, and to provide opportunities to collect metrics and assess lessons learned and best practices from contracting at individual level command levels and also across military departments to inform programming and budget decisions. DoD must have flexibility to ensure more tactical contracting elements are considered prior to contract award, such as workforce needs and the sufficiency of market research.

DoD has now been provided with flexibility in how they achieve objectives via structured process:

1. Inform, assess, and support trade-off decisions on service requirements cost, schedule, and performance for the acquisition of services
2. Identify opportunities for efficiencies to include realignment of requirements to better align to mission
3. Elimination duplicative capabilities and identify of strategic sourcing capabilities
4. Take broad view so operations are focused on requirements more than contracts
5. Create prioritised list of outcomes for both funded and non-funded existing and anticipated requirements
6. Establish authority of command or organisational unit owning requirements and funding located
7. Validate service requirement before approval of acquisition strategy
8. Allocate sufficient funding to be available for the proposed actions
9. Conduct appropriate acquisition planning and market research
10. Ensure proposed solicitation and proposal evaluation criteria are consistent.

Top 10 Performance Measures of Dispatcher Work Loads Direct Equipment Sales to Potential Customers

1. Total case lines authorised to participate as mechanism to procure services project, transaction or response that is “opened” and “closed” over a period of time to achieve resolution of a problem, claim, request, proposal or other complex activity

2. Total number of open cases impact workflow or business process must take place to move the case to its outcome. Within application, an alerts-style functionality will frequently exist against customer status updates
3. Undelivered value is most probable price that product should bring in competitive and open market under all conditions requisite to sanctioned sale with buyer and seller information brief assuming price is not affected by undue stimulus.
4. Status of anticipated standard/conditional offer sets out terms of sales purchase date and stipulates conditions to be met result in order contract agreement terms
5. Total purchase value of official sales added per unit over all units sold is total value added equivalents impact intermediate consumption.
6. Status of offer receipt is either accepted or countered sometimes, term 'subject to contract' is used in offers or acceptances to indicate that parties intend to be bound only under a formal contract execution.
7. Content Assessment of contract modification for mutually agreed changes or alterations to introduce or cancel specifications or terms of an existing contract, while leaving its overall purpose and effect intact.
8. Lists of secondary conditions send update order for 'In Progress' scenario state where processing can be triggered if a revision order does not match specifications provided in the update order.
9. Case closures transfer product balances from status updates to summary account at the end of product supply period.
10. Other case-by-case conditions