# Top 50 Translate System Task Performance Metrics Impact Product Support Actions Consider Design Characteristics

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DoD can keep chugging along, reporting short-term operational success, while simultaneously short changing interests of Field-level Troops by not applying adequate resources towards product quality/innovation & sustainment requirements. Capacity for applications described in this report currently consider only subset of missions and focuses on equipment-specific planning factors.

Future work will expand application to include other missions and will include additions or process advance of existing features—for example, the addition of a consistency test for relative task importance selection.

In accounting for multiple missions, we face two significant challenges:

The first challenge is how to deal with common tasks when considering multiple missions. It may be the case that a single command centre is all that is required to accommodate multiple missions, but the equipment needed to support each mission may differ in some way. In other words, although the task is "common," there may be unique, mission-specific requirements for accomplishing it.

Second challenge concerns sequencing tasks and assigning relative importance at the task level versus the mission level. A typical example might be transport of equipment to new staging area. If mission A is designated more important than mission B, does that mean that all tasks associated with mission A have absolute priority? If not, how do we provide the user with the ability to designate exceptions at the task level?

- 1. Consider reliable/available factors emphisise modularity; for example, ease and speed of replacement by user, built-in fault isolation, and design or selection of operational modules and parts
- 2. Design or produce embedded diagnostic, prognostic, and maintenance information systems
- 3. Acquire all logistics metrics relevant to the materiel system and associated support items for use in maintenance planning process.
- 4. Plan and participate in logistics demonstration and applicable developmental tests to confirm adequacy of materiel system maintenance concept and plan.
- 5. Establish activities to perform functions/tasks to develop and sustain adequate

maintenance support for new materiel or fielded material across service life

- 6. Participate in test /evaluation integrated product team and provide requirements to test planners
- 7. Prepare and execute maintenance requirements/constraints during materiel acquisition contract package; conduct and sponsor research programmes to improve performance of engineering operations.
- 8. Generate maintenance workforce performance metrics on fielded systems from all levels of maintenance, including depot level, for use in establish service life estimates to support develop/application of new weapons/equipment
- 9. Identify areas requiring maintenance/engineering actions and provide appropriate input to budget; conduct pilot industrial base maintenance programs.
- 10. Update technical criteria to prescribe scope, depth, and frequency of inspection and maintenance operations performed on materiel systems.

### Top 10 Activities Evaluate Options for Mission Requirements Solution Measure Progress Update Design Decisions

- 1. Trade-off studies among requirements, design options and other cost, schedule and performance factors
- 2. Risk mitigation during design process to identify/evaluate sources of utilised tech, design, manufacturing, test/support processes
- 3. Configuration control for system products, processes and related updates include verify function/physical characteristics of item design
- 4. Assess capture/control baseline track tech match/trace serve as ready reference for systems engineering effort.
- 5. Establish performance metrics provide measures of tech develop/design quality meet system cost/schedule requirements
- 6. Create update medium controls ensure all internal/external interface requirement changes communicated to configuration items.
- 7. Structured programme review demonstrate/confirm completion of established results and plan exit criteria
- 8. Determine reliable/maintain O&S costs estimate and design system component operate potential

- 9. Make available/accurate readiness measures for logistics support resource required to perform update assess
- 10. Predict potential design impact include support perform estimate, cost/readiness improvement and programme risk reduce efforts

### Top 10 Measure Contractor Logistics Product Support Performance Metrics Utilised Demo Task Schedule

Here we present metrics programme offices use to assess Contractor Logistics Support performance. DoD must measure only what the contractor can control and reward behaviours it wants to encourage.

Since Contractor Logistics Support contracts for different programmes buy different services, the metrics vary by mission. When the contractor provides total logistics support and assumed responsibility for total system performance, broad metrics of weapon system availability, such as mission capable rate, are used.

But most weapon systems do not rely completely on Contractor Logistics Support instead utilising some mixture of in-house and contractor support so it is important to select metrics that measure only what is under the control of the contractor.

#### 1. Capable Supply:

Percentage of time an aircraft can fly at least one but not all of its missions for reasons attributed to supply

#### 2. Issue Effectiveness:

Percentage of customer requests filled by items in the inventory; include fulfillment of any request, not just requests for items the supply is authorised

3. Mission Incapable Awaiting Parts:

Percentage of time aircraft is unable to perform its assigned mission because of a lack of parts

4. Mean time between repairs:

Flying hours divided by repair actions

5. Mean time between failure:

Measure of reliability for reparable items; the average amount of time that all parts of an

item perform within their specified limits

6. Repair turnaround:

Measure of the length of time to repair an item and return it to the stock system

7. Break rates:

Number of breaks, defined as landings with write-ups requiring major maintenance that ground the aircraft, per sortie

8. Mean time to repair:

Basic measure of maintainability: the total maintenance time divided by total number of failures

9. Availability:

Capable hours divided by total possessed hours

10. Mission-capable Rate:

Percentage of all possessed aircraft capable of fulfilling at least one of their assigned missions

## Top 10 Tasks Milestone Schedule Tools Present Monitor/Control Ability for Product Support Activities

Repair Site Self-assessment evaluations did not produce the desired effect, which was to ensure repair personnel took action to address immediate problems and prevent reoccurring deficiencies. In addition, because repair personnel did not include required repair supporting documentation that identified the dates items were shipped, whether the repair occurred, the dates of the repair, and who verified the repair, Repair Services Administration did not have reasonable assurance that contractors repaired the equipment.

- 1. Simple to prepare and update format info
- 2. Determine preparation expense
- 3. Prepare using application tools
- 4. Relate activities and calendar dates
- 5. Useful first step for prep complex type schedules

- 6. Reliable estimates of repetitive work
- 7. Estimate effects of early/ late activity start
- 8. Represent dependencies of activity schedule tech
- 9. Reflect activity plan duration or event date uncertainty
- 10. Quick/easy list consequences of other actions

### Top 10 Format Questions Set Out Process Steps for Meeting Product Support Team Project Schedule/Budget Goals

If you're having a hard time deciding what steps in a process will work for you, work your way through these questions and scenarios:

- 1. What are intended goals/outcome of your project, and how will you and your client determine if the project is successful in generating satisfactory returns?
- 2. Is it product you'll create for your client? An experience? A specific deliverable?
- 3. Who will participate in the project based on your goals and do they have requisite skill sets to produce results?
- 4. How are the teams you'd like to assign to the project structured to work?
- 5. Does the Client Subscribe to good way of working and certified to established business practices?
- 6. Are you aware of how client budgets are in play and how will fiscal constraints impact your team?
- 7. Are there any outside factors you need to take into account when planning like dependencies, project or client values, etc.?
- 8. What is already working for your team? What is working for your clients? Also, what isn't working?
- 9. Is there technology involved? If yes, what is the technology? Does your client employ anyone with tech expertise?
- 10. What is the timeline for the project, and will your client require your services after your work is complete?