AFOTEC’s Perspective on Operational Suitability Testing

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Overview

• Myth Busters
• What’s Changed?
• Suitability – An Afterthought?
• Operational Test Construct
• Acquisition Efficiencies
Myth Busters

• New rating scheme – no more E&S
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• E only – it’s all about effectiveness
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- Stoplight chart – no objective analysis
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MYTHS BUSTED!
What’s Changed?

• Customer-focused reports
  – Accurate, balanced, complete, clear, concise, cogent, and timely
  – Warfighter community
    ■ Can a unit equipped with the weapon system accomplish the mission?
  – Acquisition community
    ■ Is the weapon system effective and suitable?

• Capability-based OT&E
  – No longer “Pass / Fail”
    ■ Effective / suitable with limitations impacting operations
  – Mission Capability Rating
# Mission Capability Ratings

<table>
<thead>
<tr>
<th>MC RATING</th>
<th>DEFINITION</th>
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</thead>
<tbody>
<tr>
<td>FULLY MISSION CAPABLE (FMC)</td>
<td>Mission can be accomplished in the intended operational environment</td>
</tr>
<tr>
<td>MISSION CAPABLE (MC)</td>
<td>Mission can be accomplished, but with increased operational cost</td>
</tr>
<tr>
<td>PARTIALLY MISSION CAPABLE (PMC)</td>
<td>Only some aspects of mission can be accomplished And/Or</td>
</tr>
<tr>
<td></td>
<td>Mission can only be accomplished under some conditions</td>
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<tr>
<td>NOT MISSION CAPABLE (NMC)</td>
<td>Mission cannot be satisfactorily accomplished</td>
</tr>
<tr>
<td>NOT RESOLVED</td>
<td>Insufficient information to support a resolution</td>
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</table>
Suitability – An Afterthought?

• U.S. Code Title 10 requires AFOTEC to determine BOTH operational effectiveness and operational suitability

• Operational effectiveness is the overall degree of mission accomplishment of a system … (DAG 9.4.4)

• Operational suitability is the degree to which a system can be satisfactorily placed in field use, with consideration given to reliability, … (DAG 9.4.5)

• AFOTEC fulfills this mandate through the Operational Test Construct
Operational Test Construct

- Methodical, repeatable test construct is crucial for accurate, balanced, and complete reports
  - Foundation for all follow-on planning, evaluation, and reporting activities
  - Must capture CONOPS, desired capabilities, and defined requirements found in capability documents

- Extremely challenging test team activity
  - Involves participants across acquisition community
    - Each brings own perspectives, priorities, and agendas

- Test Constructs must use clearly defined terminology

A poorly built test construct today will ultimately produce bad reports years down the road
DAG “OT&E Best Practices”

1. Focus on the mission(s) that will be accomplished
2. Identify the operational capabilities
3. Develop measures and data requirements
4. Assess the degree of mission accomplishment
5. Link mission accomplishment to the key operational capabilities
# AFOTEC Test Construct

## Mission Statement

<table>
<thead>
<tr>
<th>Operational Capability</th>
<th>COI 1</th>
<th>COI 2</th>
<th>COI 3</th>
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<tbody>
<tr>
<td>Timeliness</td>
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<tr>
<td>Lethality</td>
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<td>Accuracy</td>
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<td>Survivability</td>
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<td>Maneuverability</td>
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<tr>
<td>Capacity</td>
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<td>Transportability</td>
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<td>Sustainability</td>
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<td>Interoperability</td>
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<td>Maintainability</td>
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<td>Availability</td>
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<tr>
<td>Reliability</td>
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</tbody>
</table>

## Effectiveness

- Timeliness
- Lethality
- Accuracy
- Survivability
- Maneuverability
- Capacity
- Transportability
- Sustainability
- Interoperability
- Maintainability
- Availability
- Reliability
Evaluation Taxonomy

Test Measures:
- Test Events
- DRs
- Ops Experience & Judgment
- Shortfall?
- Operational Significance?

Critical Operational Issues:
- DRs
- Ops Experience & Judgment
- Impacts on COI?
- Degree of Impacts?
- Severe
- Substantial
- Minimal

Mission Capability Resolution:
- DRs
- Ops Experience & Judgment
- Mission Accomplished?
- Some Aspects?
- Some Conditions?

Follow the flowchart for a detailed evaluation process.
WARNING!

AFOTEC Construct is not designed to facilitate m&m math

Colors are intended to visually display (1) significance of shortfalls, (2) degree of impact on COIs, and (3) overall Mission Capability Resolution
Delivering Capability

- Capability stool is supported by three legs
  - Cost
  - Schedule
  - Performance
- Current acquisition philosophies make for a very shaky stool
  - Promise the moon
  - Technology “creep” and “reach”
  - Get it now, fix it later
  - Fear of failure
  - Rush to failure
The Promise

Give the warfighter the tools to get the job done

Desired performance, on time, on budget
Schedule slips, cost overruns, performance deferred
Fail to Deliver

Fail to design, build, field, and sustain capable weapon systems

The Air Force weapons acquisition process is not credible
Truth in Advertising

Acquire weapon systems in attainable, capable increments

Under promise, over deliver!
Warfighter Focused!