A Program Analysis and Evaluation of MRTFB Investment and Modernization Programs

Mr. Paul Mann
Principal Deputy
Test Resource Management Center
5 October 2017

Study Purpose

- **How do we measure how well we are doing across our T&E Enterprise?**
- **Identify impediments to efficient recapitalization of T&E infrastructure and expansion of test capabilities**
  - Why does it take so long?
  - Why does it cost so much?
  - Why are we not meeting our customers' objectives?
- **Identify best practices**
  - What are the conditions for success?
  - Who has implemented processes that work?
- **Implement best practices**
- **Drive out "worst" practices**
- **Institutionalize and REWARD Improvement**

Study Background

- **DoD spends in excess of $500 million per year to sustain and modernize existing test capabilities and to develop and install new capabilities**
- **Some past I&M projects have:**
  - Great Examples of Success (Do we know why?)
  - Suffered significant cost increases
  - Incurred significant schedule slips
  - Not satisfied the requirements of the systems they were intended to support
- **We should review our I&M processes to ensure that:**
  - We deliver affordable, capable, required full operational capability (ontime!)
  - We most efficiently utilize available resources
  - We are agile in supporting customer requirements

Study Task

- **TRMC tasked Institute of Defense Analyses (IDA) to conduct a series of case studies on past and current I&M projects to:**
  - Identify what works and what doesn't in the acquisition of test capabilities
  - Identify ways to "instrument" the I&M acquisition process to enable the community to monitor the health of that process
  - Recommend the level and type of oversight TRMC should apply to Service I&M projects
- **We intend this study to be the starting point!!!!**
- **A collaborative process to identify and implement ways to speed the delivery of test capabilities to those that rely on them – the DoD program managers and senior decision-makers**
- **Higher Velocity Learning**
- **Reject Status Quo**

Initial Case Studies

- **Advanced Range Tracking Imaging System (ARTIS) – CTEIP, Army-led**
- **Next Generation Electronic Warfare Environment Generator – Multiple Jammer Characterization System (NEWEG-A) – CTEIP, Navy-led**
- **Multispectral Sea and Land Target Simulator (MSALTS) – CTEIP, Army-led**
- **Multi-Level Secure – Joint/Coalition Network Environment (MLS-JCNE) – CTEIP, Navy-led**
- **Synthetic Battlefield Emitter System (SBES) – CTEIP, Army-led**
- **Range Radar Replacement Program (Army)**
- **Early Launch Tracking System (ELTS) – MDA/WSMR**
- **Integrated Networked Enhanced Telemetry (iNET) – CTEIP, Air Force-led**

Study Approach

- **Identify program of interest – Diversity**
- **Collect program documentation**
- **Analyze program**
- **Interview program participants, which may include, as appropriate (What really happened and Why?)**
  - Requiring activity
  - Project managers
  - Customers
  - Other stakeholders
- **Prepare individual project evaluations**
- **Prepare overall program execution assessment**
- **Identify lessons learned and share ideas on solutions that improve implementation plans in collaboration with the T&E community**

Individual Project Evaluation Approach

- **Overall project status:**
  - Did the program meet (or likely will meet) performance objectives?
  - Did the program meet (or is likely to meet) cost and schedule objectives?
- **Areas of analysis:**
  - Technology: Was the technology sufficiently mature at program initiation? If not, was a risk reduction phase included to manage program risk?
  - Acquisition Strategy: Was an appropriate acquisition strategy developed at program initiation? Was the acquisition strategy followed?
  - Cost and Schedule Baselines: Were formal cost and schedule baselines established at program initiation? How were changes to those baseline approved?
  - Requirements: Were requirements clearly stated at program initiation? Were they approved by all stakeholders? How were requirements tradeoff managed?
  - Decision points: How were decision points managed?
  - Is Risk treated consistently across the Enterprise ?
  - What is the Probability of Program Success?

Probability of Program Success

- **Established method of representing the health of acquisition programs**
  - Standardized
  - Repeatable
- **Well defined metrics and scoring criteria**
- **Provides a rich source of knowledge about:**
  - What to measure
  - How to measure
  - When to measure

We don’t need to invent anything new, but rather adapt the best methods already employed.

Initial Observations

- **Lack of mature (defined & achievable) requirements at initial approval make cost and schedule estimates unreliable**
  - It may take far longer to develop requirements than originally estimated
  - Specifications vs. true requirements (with trade space)
  - Convoluted (vice stream lined) integrated process teams
- **Program schedules and budgets are set before an acquisition strategy is approved**
- **Executing organizations do not always have sufficient bandwidth and/or expertise to effectively execute a project**
- **Frequent Project Manager turnover increases risk of failure**
- **Fixation on financial execution vice program success**
- **User is disconnected from program execution**