Cost of T&E: Implementation of TEMP Part Four Web-Based Application

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Ice Breaker:
How Does Each Stakeholder View T&E?

Warfighter	SAE
Systems Engineer	OSD
Contractor	Program Manager

T&E Myths on Cost and Schedule

1. T&E costs too much
   - *Truth: The cost of T&E is very small in the big picture; DT&E is usually ~ 8-10% and OT&E ~1.5% of program acquisition costs*
2. Testing takes too long
   - *Truth: Very few programs are significantly delayed by testing; mostly, system performance problems and fixes cause the delays; only in a few cases, have testing issues led to delays*
3. Industry should do all the testing
   - *Truth: We tried this before and a government/industry test team is best to meet program requirements with proper oversight*

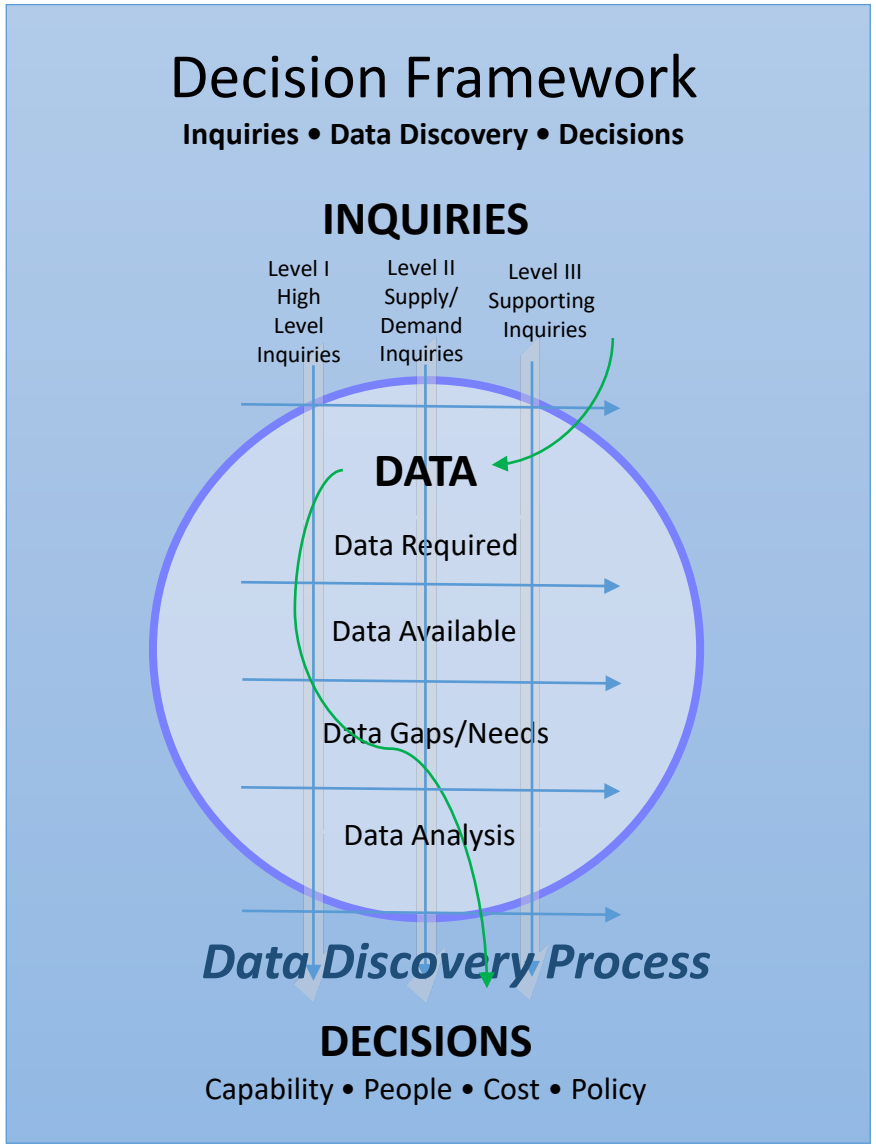
Summary based on past DON and OSD studies

A Better Understanding of T&E Costs is Needed!

DON T&E Optimization Campaigns

- Purpose
  - Reduce T&E costs
  - Increase T&E speed/agility
  - Address T&E of new technologies
- Process
  - Look at three different sets of inquiries
    - High Level
    - Supply and Demand
    - Supporting
- FY2018 Start
- Continue as needed

Better Inquiries, Better Data, Better Decisions!



Examples of DON T&E Inquiries

- High Level Inquiries (Level I)
  - How do we go faster?
  - How can we reduce costs? T&E should cost…
  - How do we better understand the demand for T&E resources/capabilities?
- Optimization - T&E Board of Directors Inquiries (Level II)
  - Are we fully leveraging M&S to reduce the cost of T&E?
  - How can we better understand and capture T&E costs?
  - What constitutes our Undersea test and training ranges enterprise?
  - What constitutes our Air test and training ranges enterprise?
- Specific/Tactical Inquiries (Level III)
  - Are there opportunities to integrate/consolidate test and training ranges?
  - Can we go to a single solution to modernize certain range tracking systems?
  - Why do we have multiple program offices managing test and training ranges?

Better Inquiries, Better Data, Better Decisions!

T&E Optimization Campaigns

- Assessment efforts to date:
  - Open Air Range Enterprise
  - Undersea Range Enterprise
  - Electronic Warfare Test and Training
  - ACB20/AMDR Cross Functional Team
  - Cost of T&E (TEMP Part Four (TP4))
  - Targets Assessment
  - High Energy Laser Test Capabilities

Deliverables: Campaign Leads and stakeholders identified, POA&Ms, gap analyses, roadmaps and identification of key products

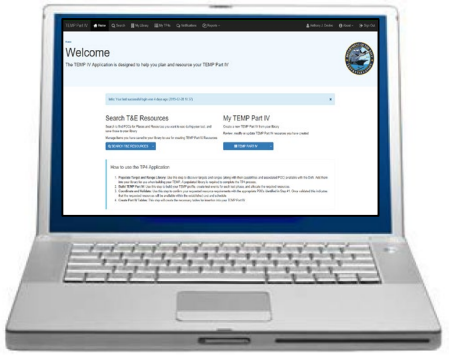
OSD/Service Cost of T&E Efforts

- Section 839b NDAA 2018
  - Requirements for Collection of Cost Data on T&E
- May 2018 - DOT&E efforts with Chief Management Officer Test Reform Management Group on T&E Cost Fidelity (TE-7)
- April 2019 - DOT&E established Cost of T&E Working Group
  - Involves DD,DTE&P and DTRMC
  - Support requested from Services and Agencies

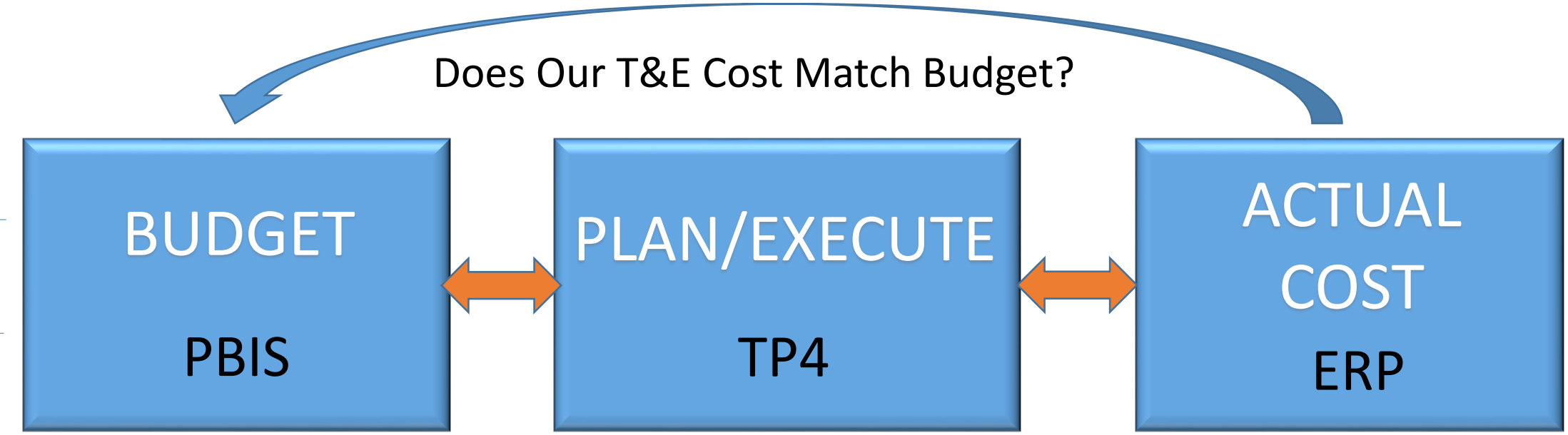
In Early FY2018 DON T&E Embarked On Its TEMP Part Four Tool

What is TEMP Part Four (TP4) Tool?

- Web tool for capturing program T&E resource requirements in the TEMP
  - Labs / Facilities / Ranges / Manpower / Targets / Test Assets / Test Articles
- Programs can search for T&E capabilities
  - Better coordination with T&E infrastructure management
- Captures and provides improved cost estimates for T&E
  - Identify T&E costs elements (L/F/R, Targets, Assets, Personnel, Program)
  - Aligns T&E costs with T&E budget program elements
  - Creates a T&E demand forecasting capability across the DON
- Provides real-time aggregated data of T&E demands across all programs
  - Enables investment insight to the T&E Capability needs and shortfalls
  - Identify Target demands and move away from Target needs estimating



T&E Financial Life Cycle



Mechanism

What we have to date

- Create T&E Serial
- Program Element (PE) Number

T&E Funding (PEs)

What we are working on

T&E Planned Cost | T&E Execution

- Test Phase (DT/OT/LFT&E) | MIL-STD-881D
  - Test Event
    - Test Resources
      - T&E Management
      - Program Office
      - Targets
      - Test Articles
      - Test Assets
      - Fleet Forces/Manning

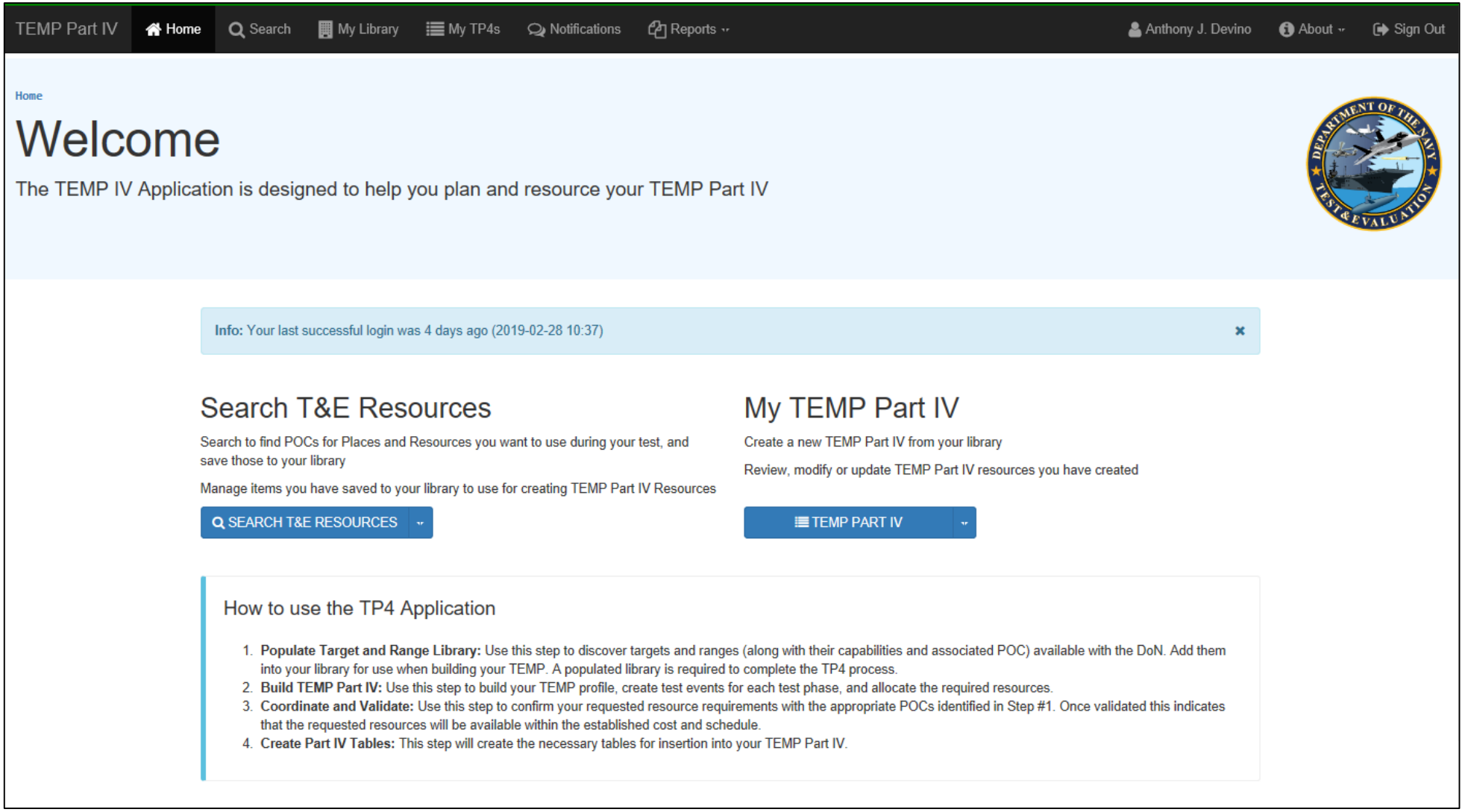
- Current MIL-STD doesn't line up with T&E practice
- Organizations are not consistent in implementing MIL STD

TP4 Structural Breakdown

Level 1	Total T&E Costs
Level 2	Test Phase **(DT/OT/LFT&E)**
Level 3	Test Management • **Test planning and execution staff** • **COTF/MCOTEA planning support** • **Reliability Engineering analysis** • **Safety engineering analysis** • **Travel** • **Training**
	Test Resources (applied for each Test Event) • **Lab / Facility / Range (L/F/R)**– Creates/Identifies the program demand of our T&E Test Capabilities • **Program Office** (costs for individual test events) – Travel – Additional Test Personnel – Training • **Targets** – Identifies N94 target/payload requirements – Smaller target – Program funded • **Test Article** – System/Sub-System Under Test • **Test Assets** – Instrumentation needed for test – Additional systems needed for test • **Fleet Forces Manning** – Fleet personnel needed to support test event

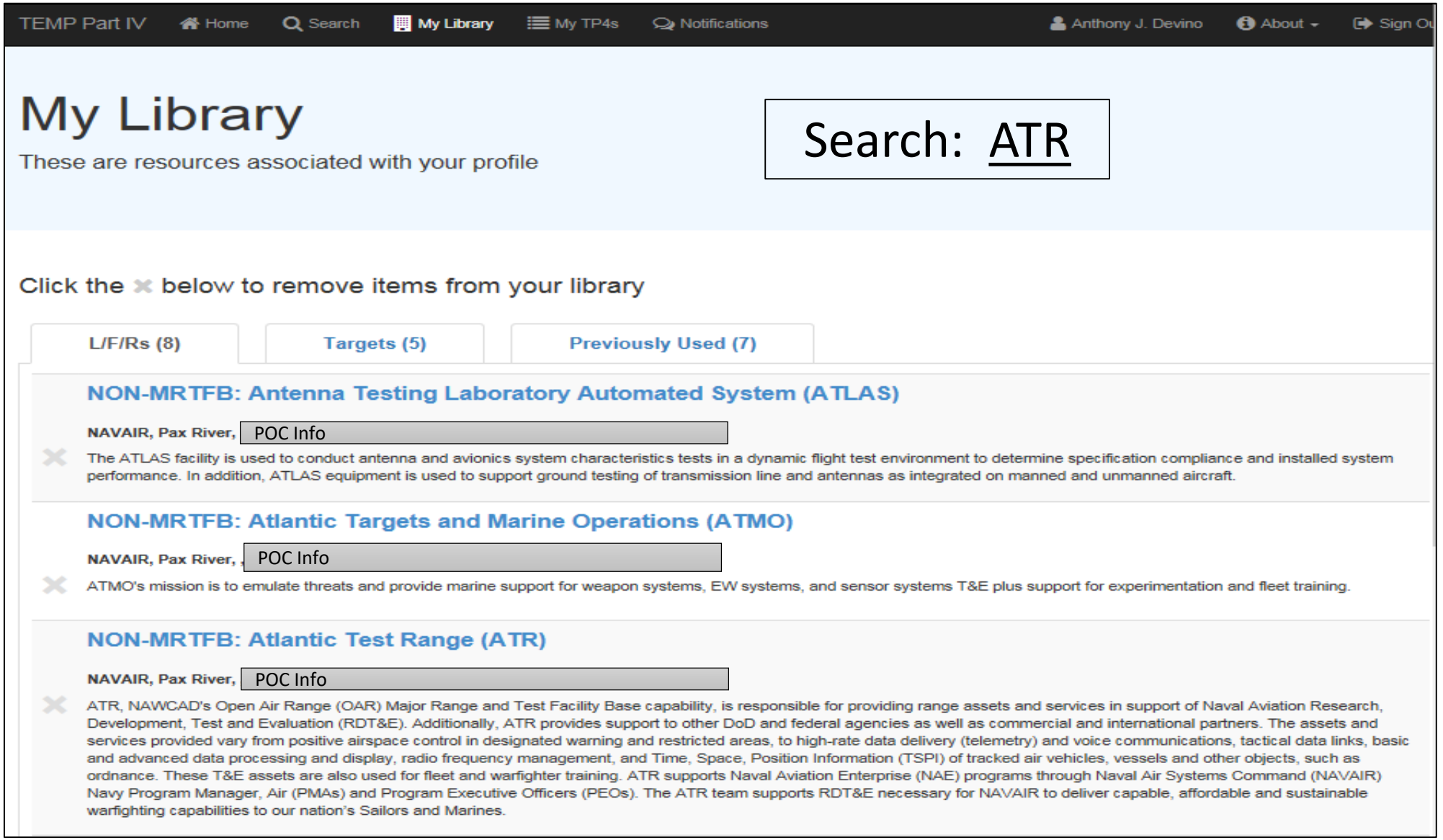
Provides a <u>common structure</u> to input costs and <u>aggregate the data</u>

Two Parts of TP4



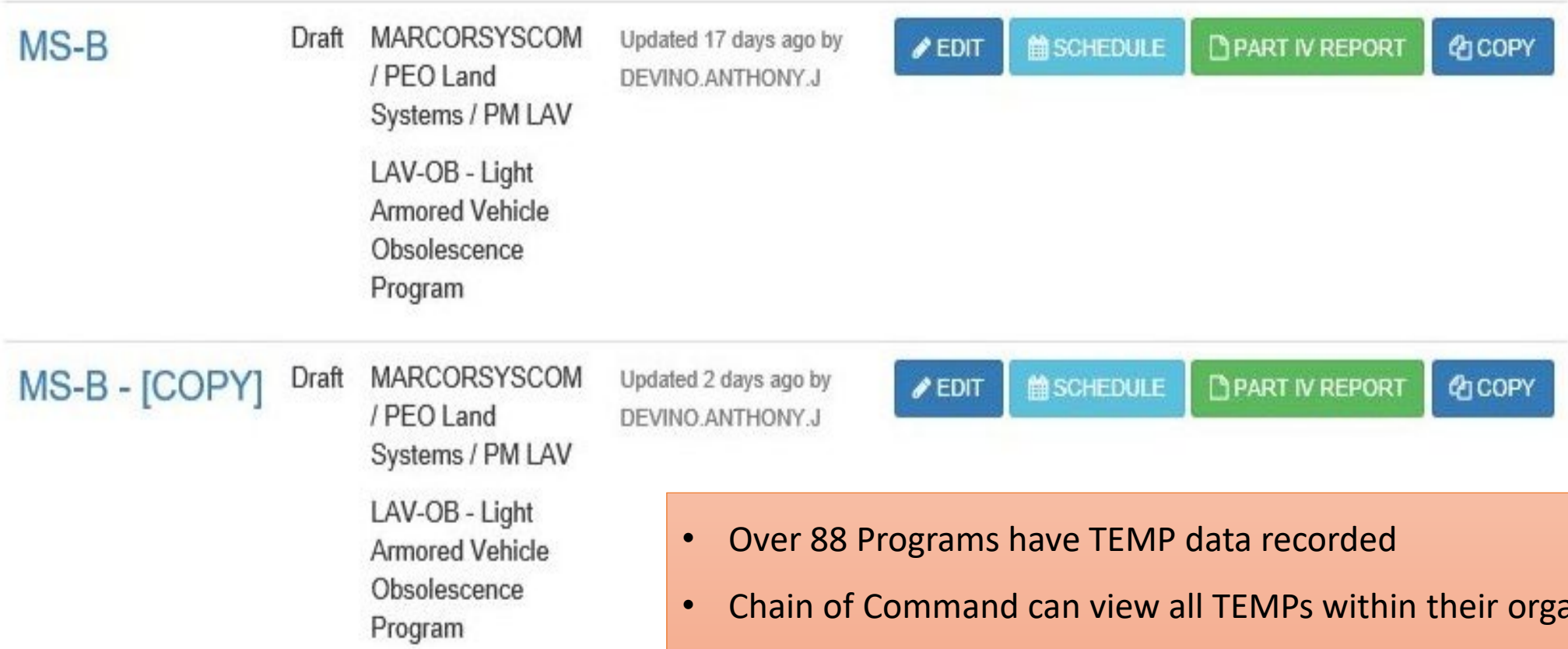
CAC-enabled, Web-based, Secure Access, Resource Tool for DON Users

Search T&E Resources



My TEMP Part IV

ACME Vehicle Program



- Over 88 Programs have TEMP data recorded
- Chain of Command can view all TEMPs within their organization
- T&E WIPT members have access to information

Note: Default is View mode, programs can authorize Edit mode authority

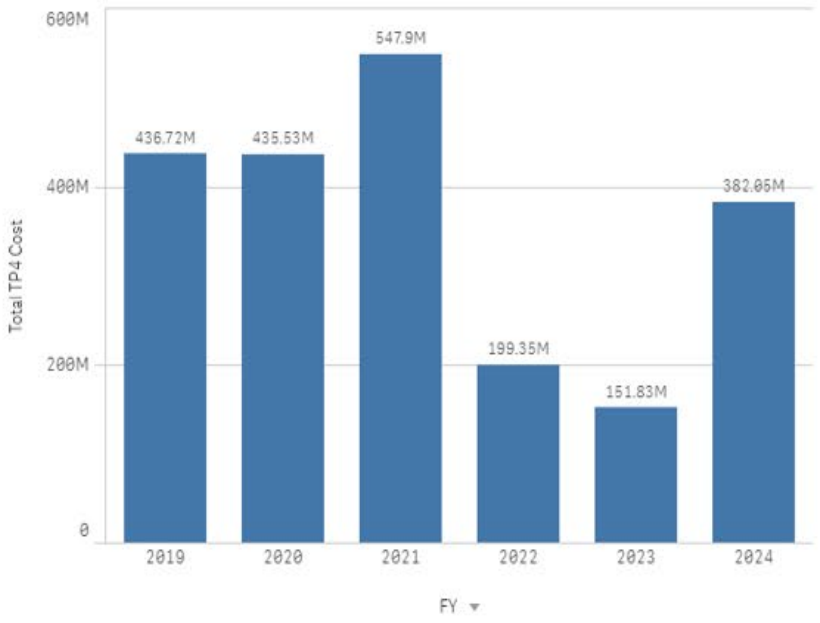
Data Analysis Example

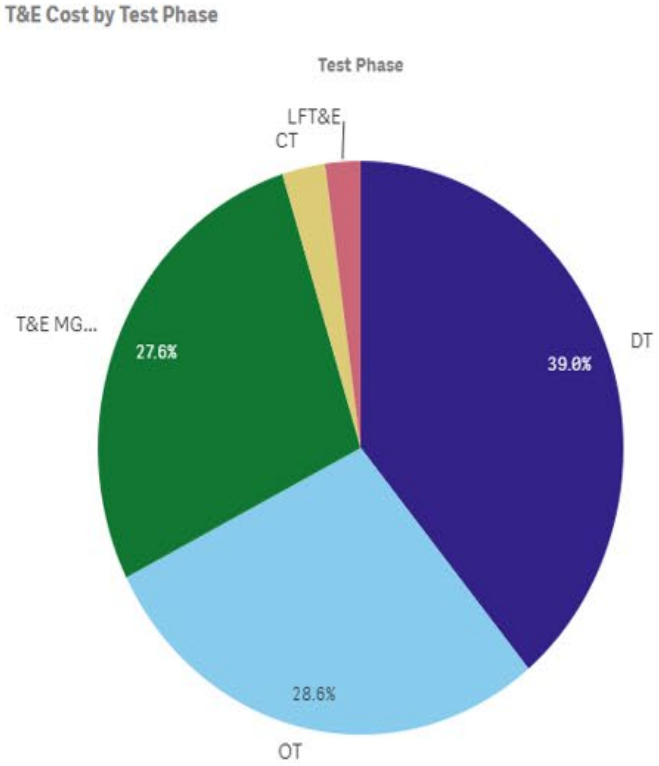
Total TP4 Cost

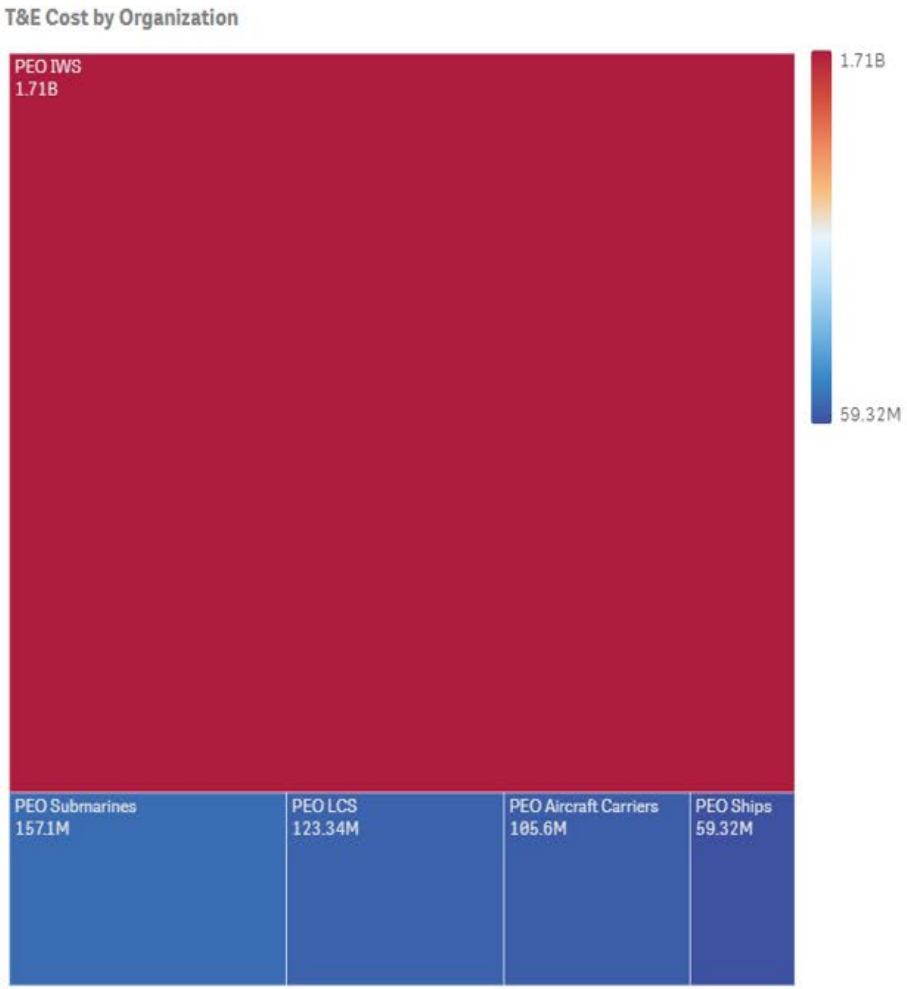
2.15B

Reporting Programs

29







Search levels: SYSCOM, PEO and Programs

Summary and Conclusions

- TP4 integrates T&E resource demands across programs
- The tool is a significant enabler for DON programs to search, coordinate and identify their T&E resource requirements
- SECNAVINST 5000.2E now mandates programs with TEMPs to develop resource summary inputs using TP4

TP4 Will Enable DON T&E To Better Forecast And Use Its Limited Resources Wisely

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Questions?