IMPLEMENTATION OF ISO STANDARDS FOR WORK BREAKDOWN STRUCTURES AND EARNED VALUE MANAGEMENT

WHAT IMPACT WILL THEY HAVE ON THE COMMUNITY AND THE USE OF CURRENT STANDARDS?

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Overview

• Background
• Approach
• Additional Considerations
• US Government/Industry Reaction?
Background

• ISO Standards (EVM/WBS)
  – Earned Value Management
  – Work Breakdown Structures
    ▪ ISO 21511:2018(E) – “Work Breakdown Structures for Project and Programme Management”
  – Informative Documents
    ▪ For information purposes only, are not under any obligation to be used or complied with
Background (Cont’d)

• US Standards

  – Earned Value Management Systems
    ▪ EIA-748C EVMS Standard (32 Guidelines - requirements EVMS must meet)*
    ▪ PMI - EVM Practice Standard 2nd Edition (Best Practice)

  – Work Breakdown Structures
    ▪ PMI – Work Breakdown Structure Practice Standard 2nd Edition (Best Practice)

* Used as normative document - provide rules, guidelines or characteristics for activities or their results
APPROACH
Approach: Earned Value Management

• US - EIA 748C:
  - 32 Guidelines which focus on five “basic areas”
    - Organization
    - Planning, Scheduling, and Budgeting
    - Accounting
    - Analysis/Management Reports
    - Revisions/ Data Maintenance

- Best practices – considered Program/Project Management
Approach: Earned Value Management (Cont’d)

- ISO - ISO 21508:2018(E)
  - 11 Step Process
    - Step 1: Decompose the project or programme scope
    - Step 2: Assign responsibility
    - Step 3: Schedule the work
    - Step 4: Develop time-phased budget
    - Step 5: Assign objective measures of performance
    - Step 6: Set the performance measurement baseline
    - Step 7: Authorise and perform the work
    - Step 8: Accumulate and report performance data
    - Step 9: Analyse performance data
    - Step 10: Take management action
    - Step 11: Maintain the baseline
  - Standardized Approach
Approach – Work Breakdown Structures

• US – MIL-STD 881D (Key Takeaways)
  – Product-Oriented
  – Parent-Child relationship (100% Rule)
  – Specific commodities identified
  – Required use of the WBS and extensions
  – Philosophy of WBS development against life cycle
  – Logical decomposition and level of reporting
  – Specific numbering approach
  – Specific development requirements
  – Dictionary development
Approach – Work Breakdown Structures (Cont’d)

• **ISO - ISO 21511:2018(E)**

  - Purpose
  - Context
  - Hierarchical decomposition
  - Parent-child relationships
  - Progressive elaboration
  - Characteristics
  - Development
  - Creation
  - Description of the project or programme work breakdown structure elements
  - Composition work breakdown structure dictionary
  - Integration of multiple work breakdown structures
  - Relationship to organizational breakdown structure
  - Relationship to contracts
  - Relationship to functional areas
  - Relationship to other structures
  - Control of work breakdown structure
  - Uses and benefits of the work breakdown structure
ADDITIONAL CONSIDERATIONS
Additional Considerations

• **US - EIA 748C**
  - System based evaluation vs. practice standard (best practices)
  - Government/Customer evaluates compliance with guidelines
  - Applicable at various levels of contract value
  - Not applicable on Firm Fixed Price contracts

• **ISO - ISO 21508:2018(E)**
  - Integrated baseline review
  - Demonstration review
  - Surveillance
  - No discussion of applicability
  - Earned schedule focus
  - Project/Programme integration
Additional Considerations (Cont’d)

• **US - MIL-STD 881D**
  - Appendices with examples of each Work Breakdown Structure commodity
  - Reference Government and Industry Directives, Guidebooks, Standards, Handbooks, etc.
  - Established WBS numbering for each element
  - Focused on specific areas of interest - cybersecurity, agile, ground systems, level of reporting
  - Family of systems and system of systems

• **ISO - ISO 21511:2018(E)**
  - Different types of Work Breakdown Structures
    - Product
    - Functional
    - Location
    - Feature
    - Deliverable and others
US GOVERNMENT/ INDUSTRY REACTION?
US Government/Industry Reaction?

• Does US Government change current standards?
  – EVM – EIA-748C
  – Work Breakdown Structure – MIL-STD 881D

• Does Industry change current standards?

• Can Government use ISO standards for same purpose as EIA-748C and MIL-STD 881D?

• Can Industry use ISO standards for same purpose as EIA-748C and MIL-STD 881D?

• Normative vs. Informative