A Perspective on Cost and Schedule Impacts of Non-Technical Project Management

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- Objectives (1 -2 minutes)
- Background (2 – 5 minutes)
- Non-Technical Project Management (2 – 5 minutes)
- Schedule Impacts (2 – 5 minutes)
- Cost Impacts (2 – 5 minutes)
- Benchmarking (2 – 5 minutes)
- Discussion (5 – 10 minutes)
Objectives

- Share perspectives and observations of increasing Non-Technical Project Management (NTPjM) labor and cost trends on Nuclear Weapon programs
- Solicit feedback and engage in substantive discussion regarding cost estimating and analysis of NTPjM
- Share contact information and develop relationships for collaborative efforts
Sandia National Laboratories – Responsible for nuclear weapon systems and components over their entire lifecycle, from original design through final dismantlement and disposal. Responsibility includes design, qualification, certification, and assessment of the non-nuclear subsystems and system qualification as well as integration with delivery vehicles.

The nation’s nuclear weapons must *always* work when commanded and authorized by the President of the US and must *never* detonate otherwise.

https://www.energy.gov/nnsa/articles/nnsa-awards-sandia-national-laboratories-management-operating
Non-Technical Project Management

Program Management

Project Management (PjM)

Technical PjM

NTPjM
Non-Technical Project Management

Technical Responsibility

- What
  - Generate technical inputs
  - Create technical activities
  - Assign technical resources

- Who
  - Development Engineer
  - Production Engineer

NTPjM Responsibility

- What
  - Collect data
  - Manage tools
  - Generate reports
  - Other

- Who
  - Scheduler
  - Project Planning and Controls
  - Project Controller
  - Project CAM
  - Project Manager
  - Program Manager
  - Other

Technical Responsibility

- What
  - Review, approve, present, and respond to technical questions related to PM reports

- Who
  - Development Engineer
  - Production Engineer

**NTPjM Schedule Impacts**

**NTPjM Labor Ratio = NTPjM Labor Hours/Engineering Labor Hours**

**NON-TECHNICAL PROJECT MANAGEMENT LABOR RATIOS**

= 1 Fiscal Year

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**NTPjM Cost Impacts**

\[ \text{NTPjM Cost Ratio} = \frac{\text{NTPjM Labor Cost}}{\text{Total Labor Cost}} \]

**NON-TECHNICAL PROJECT MANAGEMENT COST RATIOS**

= 1 Fiscal Year

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Presented for the ICEAA 2021 Online Workshop - www.iceaaonline.com
Benchmarking

NTPjM Cost Ratio = NTPjM Labor Cost/Total Labor Cost

- Interview 1 NTPjM – 2-3%
- Interview 2 NTPjM – 4%
- Interview 3 NTPjM – 5-7.5%
- RAND includes technical – 11.2%
- Interview 4 includes technical – 12%

SNL NTPjM μ = 7.7%
NTPjM Benchmark μ = 4.3%

Summary
• All programs have notable upward trends of NTPjM
• Program E has 2x the NTPjM cost ratio as Program B at a comparable point in the acquisition life cycle

Discussion
• How do others distinguish Technical PjM vs NTPjM?
• Do you feel that your institutions are spending more time and money on NTPjM?
  – Are your institutions seeing similar trends?
• How do your institutions deal with NTPjM from a CE&A perspective?
  – Recalibrating cost models with respect to NTPjM?
Discussion

Questions/Suggestions?

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