

PBBE Reform: Performance Metrics Towards Completing the Freaking Product

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In a memo on planning, programming, budgeting, and execution reform (PBBE), Deputy Defense Secretary Kathleen Hicks directs that the Pentagon comptroller "will act as the lead for the PPBE reform agenda and implementing initiatives across the department, with the components in support." In his statement on PBBE reform, dated August 26, 2024, USD (Comptroller)/CFO Michael McCord committed to lead the Department's PPBE reform agenda of distinct initiatives for implementation across DoD.

Per the PBBE Final Report, the Commission "encourages OSD, Service, and DoD Component leadership to continue to review **performance measures** on a regular basis and expand what is included to ensure that strategic objectives are addressed; the regular use of measures will improve them."

My assessments and recommendations for performance measures are in a letter to Comptroller McCord. The following email conveyed the letter.

The attached letter to you, Subj: PBBE Recommendations Regarding Output-based Performance Metrics, dated August 29, includes a recommended implementation plan for issues in your statement on PBBE Reform, dated August 26, 2024. Implementation will satisfy your acquisition reform objectives and those of Sen. Eric Schmitt and Rep. Adam Smith.

The common objectives are:

1. Provide transparency and accountability of DoD acquisitions.
2. Use output-based performance metrics.
3. Complete "a freaking product at the end of the day."

I raised the same issues to former SASC staffer Peter Levine and HASC staffer Andrew Hunter in 2010 in the attached email. Although my recommended provision was included in the NDAA, there have been no acquisition reforms to achieve those common objectives.

This email and letter convey previous assessments by the DoD, the GAO, and the Section 809 Panel. We don't need more reviews. Just corroborate the previous assessments and implement recommendations that have been reiterated since 2004.

The letter to Comptroller McCord omitted USD LaPlante's commitment to adopt "digital engineering (DE) to feed the right cost, schedule, performance and risk data to our acquisition decision makers.," as stated in my letter to Dr. LaPlante, Subj: Realpolitik on DE, Outcome-Based Metrics, and Project 2025, dated July 17. The EVMS standard, EIA-748, provides guidance to determine earned value which is based on "the percentage

of work completed for a task" and then "applying that percentage to the total budget for the work. Management assessment may include the use of metrics for work measurement."

EIA-748's measurement of work is antithetical to the following DoD policies:

1. DoDD 5000.01, The Defense Acquisition System:

"Performance-based strategy" means a strategy that supports an acquisition approach structured around the results to be achieved as opposed to the manner by which the work is to be performed."

2. DODI 5000.97 DE:

Use DE methodologies, technologies, and practices across the life cycle of defense acquisition programs...engineering, and management activities.

Digital artifacts are the digital products and views that can be dynamically generated directly from digital models. These artifacts are created from the standards, rules, tools, and infrastructure within a DE ecosystem. Some common examples of digital artifacts include...design specifications, technical drawings , analytical results, software source code, test planning and cases, and schedules.

The performance measures for PBBE reform should be structured around the results (product) to be achieved, not the work performed. Schedule performance should be based on digital artifacts that can be dynamically generated directly from digital models. They are authoritative sources of truth that cannot be "easily manipulated."

Measuring the quantity of work performed is so 1967. Per a McKinsey Digital blog dated April 30, a "business built a digital twin that leveraged AI and machine learning to rapidly run multiple simulations of potential designs. This process generated insights that decreased time to market and increased first-time-right designs by up to 25 percent. Engineering capacity saw a 20 percent boost as time spent on manual physics models, which previously had used traditional methods and took hours, was reduced to seconds through the creation of a deep learning surrogate model."

Finally, the use of AI-generated software code reduces human effort. The speed of relevance is more important than the quantity of work. EIA-748 is not relevant. PBBE reform should incorporate the performance measures in the white paper, *Integrating the Embedded Software Path, Model-Based Systems Engineering, MOSA, and Digital Engineering with Program Management*, August 15, 2024 .

As Rep. Smith would say, use output-based performance metrics towards completing "a freaking product at the end of the day."