**Paul Solomon**
**3307 Meadow Oak Drive**
**Westlake Village, CA 91361**
Paul.solomon@pb-ev.com

January 22, 2024

The Honorable Kathleen Hicks
Deputy Secretary of Defense
1010 Defense Pentagon
Washington, DC 20301-1010
.

Subj: NDIS Implementation Plan and NDAA Sec. 827, Modification to EVMS Requirements

Dear Deputy Secretary Hicks:

The National Defense Industrial Strategy (NDIS) provides a path that builds on recent progress while remedying remaining gaps and potential shortfalls. One shortfall is the DFARS Earned Value Management System (EVMS) clause in the defense industrial base (DIB) ecosystem. It should be booted out. Please include my recommendations in your pending ND implementation plan (Plan).

They address the following NDIS objectives:
1. Reduce barriers to entry to support competition by non-traditional suppliers and new entrants into the DIB, especially, innovative new technology developers.
2. Enable program managers to manage changes while maintaining the project focus and objectives.
   a. Ensure that requirements are well-defined and properly articulated.
   b. Ensure that clear milestones are set throughout the development process.
3. Shift from policies rooted in the 20th century that supported a narrow DIB.

The acquisition policies, guides, and training in the ecosystem should focus on Systems Engineering (SE) and Integrated Program Management (IPM), not the statement of work (SOW). We need to get the product requirements and the product right while meeting cost and schedule objectives, before entering production. Buy a product that works, not a SOW.

**Failure to Perform: Emphasize SE**
DoD has failed to integrate SE with IPM. I have called for reforms to fix that shortfall since 2001 when I presented the shortcomings of EIA-748, especially inadequate early warning.



In 2019, I repeated that message in a tutorial at the NDIA Missions and SE Conference.

"Integrating" never happened. Today, I propose *déjà vu sans* EV. DoD took a step in the right direction in 2017, but did not go the whole nine yards, when "Best Practices for Using SE Standards" was released:



**Best Practices for Using**

**Systems Engineering Standards**

**(ISO/IEC/IEEE 15288, IEEE 15288.1, and IEEE 15288.2) on**

**Contracts for Department of Defense Acquisition Programs**

April 2017

Prepared by:

Office of the Deputy Assistant Secretary of Defense for Systems Engineering

Office of the Under Secretary of Defense for
Acquisition, Technology, and Logistics

Excerpts;

SEP describes the integration of SE activities with other
program management and control efforts:

IMP, WBS, IMS, Risk Management Plan, TPMs

Per the "Background section, "it is in the best interest of both acquirers and suppliers to ensure that defense acquisition projects use effective SE processes as the core of the technical management effort." It should say" as the core of the technical *and program management* effort."

Despite the intent and validity of "Best Practices," DoD never gave it teeth. The document is full of "should's" and "suggested" language but short of contractual direction. So, we can expect the same program failures as we got from faulty implementation of the EVMS Standard, EIA-748. One EIA-748 guideline makes the use of TPMs optional and the guidance emphasized measuring the quantity of work performed, not the quality. As Einstein said, "Insanity is doing the same thing over and over again and expecting different results." A few excerpts, below, show the gaps and shortfalls in "Best Practices."

> 3.2 USE OF 15288 AND 15288.1 ON CONTRACT
> The acquirer **should** identify applicable requirements of the 15288 and 15288.1 standards by clause as part of the solicitation.

4.2 *SUGGESTED* REQUEST FOR PROPOSAL LANGUAGE
…shall deliver a SEMP, IMP and IMS that includes the applicable technical reviews and audits as documented in the SEMP. (Note: the shalls are negated by the "suggested.")

Today, the inauguration of the NDIS and passage of the NDAA for FY 2024, Sec. 827, opens the window for reform. Program Managers will finally be able to overcome the shortcomings of EIA-748, especially inadequate early warning.

**Revise DFARS**

The NDAA requires that DoD take action to revise DFARS with regard to software contracts. However, all new weapon systems are software-intensive. Therefore, I recommend that you go the whole nine yards and remove all EVMS requirements. If compliance with the EVMS guidelines is so beneficial and widely-accepted, as alleged by its stakeholders, then there should be no need to regulate it and perform compliance reviews. If a contractor chooses to use EVM, just reimburse the costs of its implementation. Additional, detailed justifications to boot the DFARS clause is provided in the attached ssubset of the 2019 tutorial, "It's *déjà vu* all over again."

OMB Circular No. A-4 prescribes how to change DFARS. The following steps are recommended for two scenarios; (A) apply to just software or (B) go the whole nine yards. Assume that it is not possible or appropriate, given the state of the evidence, to quantify or monetize certain effects. Then, identify and assess the non-monetized and unquantified benefits and costs. Present the evidence available in a manner that will allow policymakers and the public to determine how important the unquantified benefits or costs may be in the context of the overall analysis.

 **A. To exempt software from EVMS Requirements (per OMB Circ. No. A-4)**

5. Identifying the Potential Needs for Federal Regulatory Action
Evidence:
a. Comply with the NDAA for FY 2024 provision to exempt software contracts from the DFARS EVMS requirement.
7. Assessing Benefits and Costs
i) When not possible or appropriate, given the state of the evidence, to quantify or monetize certain effects, identify and assess the non-monetized and unquantified benefits and costs.
ii) Present the evidence available in a manner that will allow policymakers and the public to determine how important the unquantified benefits or costs may be in the context of the overall analysis.
iii) My white papers contain authoritative assessments of the failings of EVM as it has been practiced by DoD program managers and contractors. The papers also contain recommended actions to finally "provide joint situational awareness of program status and to assess the cost, schedule, and technical performance of programs for proactive course correction."

**B. Preferred Action: Boot, not Reboot, EVMS**

Please consider a novel approach to convince the policymakers and the public mandatory EVM is counter-productive. Request that NDIA develop and present two business cases, with evidence.
1. Zero-based budgeting: Let NDIA make the case to establish an EMVS clause, starting from scratch.

2. Hear no evil; see no evil": Let the NDIA develop a case for retaining the EVMS clause vs. discarding it. NDIA must be able to present credible evidence of quantified or unquantified benefits or cost savings from maintaining the status quo.

If NDIA cannot present convincing evidence that mandatory compliance with the EVMS guidelines should *not* go, then the EVMS clause *must* go. Use the Chewbacca Defense: "If the gloves don't fit, you must acquit."

## Reduce barriers to entry

The following slides were also presented at the 2019 conference. They are needed now more than ever.
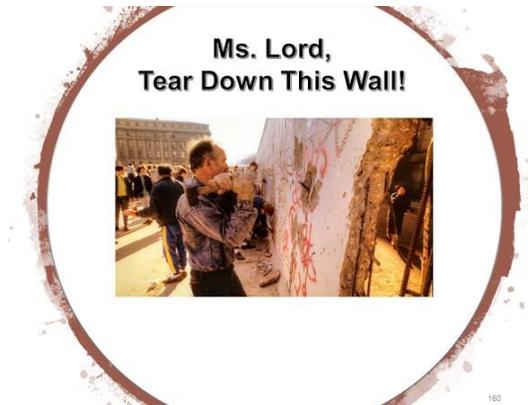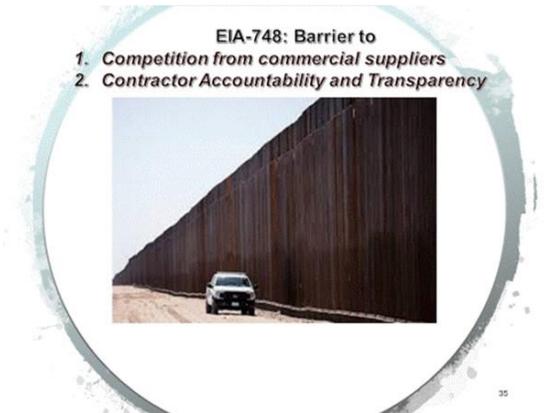


Additional information, including justifications and a detailed implementation plan, are provided in Appendix A "EIA-748 Guidelines Counter to NDIS Criteria and Objectives" and its cited white papers.

Yours truly,

Paul Solomon
CC:
Hon. Donald Norcross, HASC
Hon. Adam Smith, HASC
Hon. Robert Wittman, HASC
Hon. William La Plante USD(A&S)
Hon. Heidi Shyu, (USD(R&E))
Hon. Andrew Hunter, AF Asst. Sec. for AT&L
Anthony Capaccio, Bloomberg News

4

**Appendix A**
**EIA-748 Guidelines Counter to NDIS Criteria and Objectives**

| NDIS Section and Excerpt | Why EIA-748 Should be Booted |
|---|---|
| Foreword<br>Shift from policies rooted in the 20th century that supported a narrow defense industrial base…and also includes innovative new technology developers…with no previous relationship to the DoD | **EIA-748 Obsolete and a Barrier to Entry**<br><br>Ref: Fork(a)<br>EVMS Standard replaced the DOD document, "Cost/Schedule Control Systems Criteria," which had been used since 1967 for capital acquisitions.<br><br>EIA-748 does not address the state of knowledge and technology since it was prepared or last revised. It is still silent on the product or technical baseline, risk management, and on tracing the requirements baseline to the schedule and work packages. The Quality Gap has not been closed.<br><br>It is not used prevalently in the national and international marketplaces by commercial enterprises.<br><br>This paper provides a lower cost, effective alternative to EIA-748. There will be no regulatory requirement for EVMS and no compliance reviews. Tear down that regulatory wall that is a barrier to entry to Silicon Valley-type companies. |
| 2.3.2.1<br>Broaden Platform Standards and Interoperability<br><br>Utilizing widely accepted industrial standards will facilitate and simplify integration and production efforts.<br><br>Note: Applies to the adoption of open architecture principles in the design and development of platforms, not to Integrated Program Management or Systems Engineerign standards | **EIA-748 Not a best Commercial Practice**<br>Ref: DODI. 5000.01: Develop a Culture of Innovation.<br>Creativity and critical thinking will guide acquisition business practice. Acquisition professionals will seek, develop, and implement initiatives to streamline and improve the DAS. Managers at every level will consider and adopt innovative practices, including best commercial practices and electronic business solutions, that reduce cycle time and cost, and encourage teamwork.<br><br>**EIA-748 Not Prevalently Used in the National and International Marketplaces;**<br>(i) the problems addressed by the standard and changes in the state of knowledge and technology since the standard was prepared or last revised;<br>Ref: Fork<br>The most recent survey is the Grant Thornton 2016 Government Contractors Survey. 70% of respondents stated they would not use EVMS if not required to do so. 28% reported having contracts that require use of EVMS. Of those using EVMS, only 37% believe it to be a cost-effective |

| | |
|---|---|
| | management tool and only 25% would adopt EVMS voluntarily. |
| 2.3.2.2<br><br>Strengthen Requirements Process<br><br>• DODI 5000.02 emphasizes the importance of well-defined and properly articulated requirements<br>• Setting of clear milestones **_throughout the development_** process.<br>• Adopting agile and advanced virtual development methodologies<br>• **_Maintaining the project focus and objectives_** (on well-defined and properly articulated requirements) | Source: _EVMS-lite_<br>**Focus on Product, not Work**<br>• The lack of focus on product in the procurement process was discussed in Volume 2 of the Section 809 Report. Per Volume 2, "The current system focuses on process, not product.<br><br>EIA-748 includes only the "work scope" and is silent on product requirements |
| 2.3.2.6<br><br>Continue to Support Acquisition Reform Advance Acquisition Strategies Success working with non-traditional suppliers and new entrants into the Defense Industrial Base.<br><br>• Reform acquisition policies that unnecessarily burden or restrain the nation from rapidly attaining a proper, robust defense production posture<br>• Section 809 Panel:<br>   • Streamlining and simplifying regulations<br>   • Reducing acquisition process costs<br>   • Advancing professional development for acquisition personnel | Source: _Fork_<br>This paper provides a lower cost, effective alternative to EIA-748. There will be no regulatory requirement for EVMS and no compliance reviews. Tear down that regulatory wall that is a barrier to entry to Silicon Valley-type companies. |
| 2.2.2.1<br><br>Prepare Workforce for Future Technological Innovation<br><br>Invest in Upskilling and Reskilling Programs:<br>Providing employees with training opportunities to …enhance their careers helps to rebalance critical skill levels | Source: _EVMS-lite_<br>DCMA will retrain or augment its compliance review staff to add the systems engineering skills necessary to review compliance with the topics in the guidelines to be developed that incorporate the standards and principles of Table 1.<br><br>Source: _Fork_<br>• Retrain EVM specialists and team them with SE experts to focus on the developing product and risks to program success, not on EVM compliance reviews.<br>• In 2019, OPM, in consultation with the OMB and the Program Management Policy Council, issued |

| | |
|---|---|
| | a memo which defined "IPM competencies to select, assess, and train program and project management talent for the 21st century." The memo included Four technical competencies which are not covered in the EIA-748 guidelines: <br> • Quality Management - Knowledge of the principles, methods, and tools of quality assurance, quality control, and reliability used to ensure that a project, system, or product fulfills requirements and standards. <br> • Requirements Management - Knowledge of the principles and methods to identify, solicit, analyze, specify, design, and manage requirements. <br> • Risk Management - Knowledge of the principles, methods, and tools used for risk assessment and mitigation, including assessment of failures and their consequences. <br> • Scope Management - Knowledge of the strategies, techniques, and processes used to plan, monitor, and control project scope; includes collecting requirements, defining scope, creating a work breakdown structure, validating scope, and controlling scope to ensure project deliverables meet requirements. |
| **Glossary** <br> **FAR** <br><br> Compliance with FAR is essential for ensuring ***transparency,*** competition, and fairness in the procurement process | Source: *EVMS-lite* <br><br> Compliance with EIA-748 does not ensure transparency <br><br> The Section 809 Panel reported that "another substantial shortcoming of *EVM* is that it *does not measure product quality.* A program could perform ahead of schedule and under cost according to EVM metrics but deliver a capability that is unusable by the customer. |
| (a) white paper, *EVMS-lite,* "DOD Acquisition Reform: *EVMS-lite* and IPM, rev. 6, Jan. 9. 2024 <br> (b) white paper, *Fork* , "When you come to a fork in the road…", January 11, 2024 | |