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The Honorable Pete Hegseth
Secretary of Defense
1010 Defense Pentagon
Washington, DC 20301-1010

Subj: Comments on Emil Michael's Confirmation Hearing and To Do List for Mr. Michael

Dear Hon. Secretary of Defense Hegseth:

My letter dated March 10 was revised to apply to Mr. Michael so he can get a jump start in his new job.

Please consider adopting the strategic objectives and tactics herein to fix the acquisition process.

Strategic **objectives** to transform the acquisition of weapon systems.

1. Hold contractors and DoD program managers **accountable** for **outcomes**.
2. Tear down NDIA's **barrier** to entry facing non-traditional defense contractors.
3. Eliminate **regulations** that increase costs and enable false reporting.
4. Institutionalize digital engineering (**DE**) and digital twins.

Implementation Tactics

1. Compliance requirements and reviews divert a program manager's focus from the product to the process. Reward real engineering, not financial engineering.
2. Real-time, automated status reports that are based on Authoritative Sources of Truth. Replace botched metrics with outcome-based metrics.

Problem

DoD does not acquire weapon systems that work and are completed on time and under cost. Federal statutes, regulations, and DoD policy provide incentives that reward deceptive practices and failure, not successful outcomes.

Mr. Michael's Responses to APQs at Confirmation Hearing

Mr. Michael's responses to Advance Policy Questions and his commitments support the recommended strategic objectives and implementation tactics above, as follows.

Michael Hearing Advance Policy Questions (Excerpts)		
Objective	Question	Response
Barrier	If confirmed, how would you ensure effective collaboration between your office, the USD for Acquisition and Sustainment, and the Services?	The statute that established the USD(R&E) gave it the mission of advancing technology and innovation, including by supervising technology transition. overcome the...valley of death is a core statutory responsibility...I will work to ensure that these relationships are functioning

		effectively to drive the innovation ecosystem.
Barrier, DE	What do you believe are the major barriers to DOD fully adopting modern software development approaches, and what additional steps...would you take to drive their adoption throughout DOD? Does the DOD have sufficient systems engineering (SE) expertise in its current workforce and contractor base?	enable new contractors to compete for DOD business so that we have a more robust ecosystem. perform critical acquisition tasks, such as SE, DE, production, quality assurance, manufacturing, information technology, agile software development, and testing.
DE	What changes, if any, do you believe should be made in the Department's SE organizations and practices?	prioritize modular open systems architecture, DE...to deliver capabilities to the warfighter.
DE	What are your views on the maturity and availability of digital twin or model-based SE tools in the commercial space, and their potential applicability for DOD needs.	digital twin and model-based SE tools... improve policy, guidance, and digital standards consistent with commercial best practices
DE	What are your views on the adequacy and effectiveness of the Department of Defense's developmental test and evaluation (T&E) activities?	ensure that T&E processes are properly structured to assess software-intensive systems leverage new SE approaches such as DE

Unfinished Business with Your Office and the Services

Mr. Michael committed to collaborate with the Office of the USD for Acquisition and Sustainment and the Services. Collaboration should include taking care of unfinished business in my letter to you, Subj: Unfinished Business with Former USD(R&E) Heidi Shyu and with F-35 Program, dated February 24.

Excerpts follow:

In 2021, I sent a letter to then-USD Heidi Shyu with recommendations for acquisition reform regarding digital engineering (DE) and model-based systems engineering (MBSE). The recommendations were included in my white paper, *Integrating the Embedded Software Path, MBSE, and DE with Program Management*.

Air Force Letter from SAF/AQ, Lt. Gen. Duke Richardson

The Department of the Air Force supports Ms. Shyu and her goals to modernize systems engineering processes while leveraging digital engineering and model-based systems engineering. I have provided a copy of your letter and white paper *Integrating the Embedded Software Path, MBSE, and DE with Program Management* to my staff for their consideration as they modernize acquisition policy to take full advantage of digital engineering and to enable the use of digital artifacts that accelerate our development, manufacturing, sustainment, and operations of warfighter capabilities. We agree the institutionalization of “going digital” must include program management if we are to be successful. We are collaborating with the Office of the Secretary of Defense to improve current directives, instructions, and guides to evolve systems engineering and program management practices with regards to utilization of digital engineering and model-based acquisition. Your recommendations are appreciated.

F-35 and Army

Excerpt (which also refers to F-35 program) :

Please take actions to hold Army program managers and contractors accountable if they fail. Per my letter to Rep. Wittman, June 17:

Integration of DE with PM

Returning to yesterday's letter, the proposed certification of the F-35 digital twin models is a band aid, not a cure. Please limit procurements until you get a DE ecosystem and outcome-based metrics. From my letter to USD LaPlante, May 16,

The F-35 program has been touting its use of Agile methods and the benefits of its SE Transformation for several years. Has the Block 4 subprogram *put its metrics where its mouth is*?



Don't let the program managers off the hook and settle for digital twins. Get certification of a DE ecosystem with outcome-based metrics.

Please follow up with the Secretaries of the Army and AF to verify that effective and sufficient actions were taken.

This letter and the cited letters are posted on my website, www.pb-ev.com, at the "Acquisition Reform" tab. The following white papers (at the White Papers tab) provide detailed implementation plans to achieve your objectives.

- "Outcome-based Metrics + SE = Integrated Program Management"
- "Common Sense Project Management: "When you come to a fork in the road..."
- "Integrating the Embedded Software Path, Model-Based Systems Engineering, MOSA, and Digital Engineering with Program Management"

Finally, I hope you agree with Lt. Gen. Richardson. He wrote "We agree the institutionalization of "going digital" must include program management if we are to be successful."

Yours truly,

Paul Solomon

CC:

Hon. Ken Calvert, HAC

Hon. Robert J. Wittman, HASC

Hon. Ro Khana, HASC

Hon. Roger Wicker, SASC

Hon. Elizabeth Warren, SASC

Jon Sindreu, WSJ

Steven Morani, DoD

Hon. Mike Rogers, HASC

Hon. Donald Norcross, HASC

Hon. Jim Jordan, HCOA

Hon. Joni Ernst, SASC

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Anthony Capaccio, Bloomberg News

Stephen Feinberg, DoD