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The Honorable Gregory Kausner
USD(A&S)
1010 Defense Pentagon
Washington, DC 20301-1010

Subject: Sec. 854 of NDAA for FY 2022-Recommendations for Cadre of Software Development and Acquisition Experts

Dear Undersecretary Kausner:

Please consider the recommendations herein when you establish a cadre of software (SW) development and acquisition experts to implement the subject provision in the NDAA for FY 2022.

Pertinent Excerpts from Sec. 854

The experts shall—

- Advise and assist in integration of modern SW development practices such as agile SW development.
- Advise and assist in leveraging industry best practices for SW development, deployment, upgrades, and sustainment.
- Foster culture change necessary to enable the Department of Defense to embrace and leverage modern SW practices by educating key stakeholders in considerations regarding the integration and incorporation of agile SW development practices with systems acquired under the major capability acquisition pathway.
- Advise and assist in the development of requirements and acquisition strategy for a system.

Recommendations from Letters to You and/or Chairman Smith

My previous letters to you and/or Chairman Smith provided recommendations for Agile SW development. Please consider the following excerpts when establishing the cadre of experts and defining their charter, duties, and requested advice, including advice on industry best practices.

8/6/21 Letter to Kausner, subj: Recommendations to Amend NDAA and DoD Policy; Agile Methods, Technical Debt, and Award/Incentive Fees

Proposed Revisions to Adaptive Acquisition Framework (AAF)

Neither DoDI 5000.87 nor the other acquisition policies and guides in the AAF cover the use of incentive or award fees to “acquire products...that satisfy user needs with measurable and timely improvements to mission capability, material readiness, and operational support, at a fair and reasonable price” (DoD Directive 5000.01).

Consequently, please consider the following remedy. Revise DoDI 5000.02, “Operation of the AAF,” to add award/incentive fee criteria that are dependent on:

- a. Achieving the goals and features of each software iteration and increment in the Product Roadmap (or backlog) on a timely basis and
- b. Reducing the total open deficiencies in the Technical Debt, especially Type I or critical deficiencies.

9/15/21 Letter to Kausner and Smith, subj: Revision to Letter dated August 10, Further Refined Amendment to NDAA to Assess Agile Practices on F-35 Block 4 SW Development

Address the product backlog in addition to the technical debt, as follows.

1. ... assess the following when Agile practices are used on programs to acquire SW that is embedded in weapon systems and other military-unique hardware systems:
 - Does the contractor maintain traceability in requirements decomposition from the source requirement (e.g., feature) to lower-level requirements (e.g., user story) as well as from the road map to the prioritized backlog?
 - Are metrics identified and tracked that are used to impact decision making? Do the metrics allow traceability from the road map through releases and items in the product backlog?
 - The extent to which award/incentive fee criteria are used that are dependent on:
 - a. Achieving the goals and features of each software iteration and increment in the Product Roadmap (or backlog) on a timely basis and
 - b. Reducing the total open deficiencies in the technical debt, especially Type I or critical deficiencies.

When DFARS Clause 252.234-7002 – Earned Value Management System is applied, require that:

- Metrics for decision making are identified, tracked, and used as base measures of earned value.
- Reported earned value is consistent with achieving the goals and features of each software iteration and increment in the Product Roadmap (or backlog).
- The reported earned value schedule variance is consistent with the open deficiencies in the technical debt, especially Type I or critical deficiencies.
- The reported earned value schedule variance is consistent with the growth in the product backlog that is caused by failure to achieve the goals and features of each software iteration and increment.

9/19/21 Letter to Smith, subj: Request to Revise H.R. 4350 Report 117–118 regarding Agile Contracting Mechanism

- When developing and implementing a new, agile contracting mechanism, use GAO-20-590G *GAO Agile Assessment Guide* (Agile Guide) as a source of best practices. Per the introduction, “This Agile Guide is intended to address generally accepted best practices for Agile adoption, execution, and control.”
- Maintain traceability in requirements decomposition as published in Agile Guide.
- Use Agile metrics for technical management, program management, and Agile methods as published in Agile Guide.



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CC:
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