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September 19, 2021

The Honorable Adam Smith
Chairman, HASC
2216 Rayburn House Office Building
Washington, D.C. 20515

Subject: Request to Revise H.R. 4350 Report 117–118 regarding Agile Contracting Mechanism

Dear Chairman Smith:

The subject report includes, in Title LII, an Item of Special Interest, "Additional Software Acquisition Contracting Mechanism." That item includes direction to the Secretary of Defense to assess whether a new, agile contracting mechanism would beneficial and to provide a report to the HASC. If the Secretary determines that a new agile contracting mechanism is needed, the report should include a plan to develop and establish that mechanism.

In the report, the Secretary shall include considerations of whether and how a new agile mechanism could have the potential to—

> (4) use cost estimates that reflect the anticipated size and complexity of the effort and leverage agile cost estimation best practices.

It is recommended that item (4) be amended to specify that one source of those best practices be GAO-20-590G GAO Agile Assessment Guide (Agile Guide). Per the introduction, "This Agile Guide is intended to address generally accepted best practices for Agile adoption, execution, and control."

It is also recommended that the report include additional considerations, as follows:

> (8) Maintain traceability in requirements decomposition as published in Agile Guide.

> (9) Use Agile metrics for technical management, program management, and Agile methods as published in Agile Guide.

Pertinent excerpts from Agile Guide follow:

Maintain Traceability in Requirements Decomposition

Without such traceability, a program cannot justify whether it is meeting the commitments made to various oversight bodies and, in turn, cannot establish whether the work is contributing to the goals of the program and thereby providing value.

In a Waterfall development, traceability is demonstrated through a requirements traceability matrix. In lieu of a requirements traceability matrix, Agile development requirements can be traced through Agile artifacts, such as the backlog.

Agile Metrics

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If the program does not collect Agile metrics for technical management, program management, and Agile methods, the government may not have the right information for effective contract oversight and will not be able to hold the contractors accountable for producing high quality deliverables. Table 10 provides an overview of these three metric categories that can be used throughout the Agile development life cycle to help enable effective contract management and oversight.

Table 10: Examples of Agile Metrics by Metric Category

Metric category	Description
Technical management	Includes metrics that measure the quality of the product delivered. For example, technical debt provides valuable information regarding the accumulation of deficiencies over time. Observing technical debt provides insight into the code quality, ensuring that code quality meets expectations and does not result in an excess of technical debt and the need for a complete program refresh if the code base no longer functions properly.
Program management	Includes metrics that monitor and report on the cost, schedule, and performance of an Agile program. For example, lead time provides information about how long it takes to move a feature from identification to release to management. This allows managers to observe how rapidly developers are able to meet customers' needs.
Agile methods	Includes metrics that measure how well the program leverages Agile methods. This can be observed at an organization level through policies in place to support Agile, at a program level through training staff, and at a team level by implementing repeatable practices and forming Agile teams that have direct contact to customers through a product owner. Metrics in this category can include how much customers use a new feature or how often working code is delivered and demonstrated.

Source: GAO. | GAO-20-590G

Documentation for these metrics can be found in the backlog, design documents, test scripts, or other sources and is typically updated regularly when using Agile methods. For additional information about these metrics and reports, see chapter 8.

Justification for Amendments

The amendments are necessary to ensure that GAO best practices are included in the report and in the potential agile contracting mechanism. We want to preclude another ruse like Earned Value Management (EVM). The DFARS requirement for contractors to be compliant with the EVM System standard, EIA-748, has resulted in a lack of regulatory requirements for EVM reports to address risk, technical performance, technical baseline (or product scope), and requirements traceability. EIA-748 does not address product quality. The EVM shortfalls are addressed in the letter to DAU President Woolsey, with a copy to you, dated Sept. 14.

This letter and the letter to Pres. Woolsey may be downloaded from my website.

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