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The Honorable Stephen A. Feinberg Dep. Secretary of Defense 1010 Defense Pentagon Washington, DC 20301-1010

Subj: Big, Beautiful Bill Act and a Digital Engineering Capability

Dear Hon. Dep. Secretary of Defense Feinberg:

Sec. 20006 of the Big, Beautiful Bill Act provides \$10M for the improvement of the budgetary and programmatic infrastructure of the Office of the Secretary of Defense. Improving the programmatic infrastructure should include establishing a digital engineering (DE) capability as required by Section 231 of Public Law 116-92. Per DoD policies, a DE capability includes:

- 1. The goals of the DE Strategy to
 - a. Exchange information via automated transformations
 - b. Use the authoritative source of truth (ASoT) to:
 - Produce digital artifacts, support reviews, and inform decisions
 - Make informed and timely decisions to manage cost, schedule, performance, and risks.
- 2. Per DoDI 5000.97 DE, a DE capability that supports the direction provided in Section 231 of Public Law 116-92. Key elements of DE capability for use in the systems engineering plan (SEP), include:
 - DE ecosystem (e.g., architectures, data infrastructures, computing capabilities, and use of available DoD shared resources).
 - Digital models, including digital twins.
 - · Digital threads.
 - Digital artifacts, including schedules.
- 3. Per DODI 5000.87, automated tools to collect metrics to assess and manage the performance, progress, speed, cybersecurity, and quality of the software development, its development teams, and ability to meet users' needs.

To collect technical performance and schedule progress metrics, the capability requirements of the DE ecosystem should include the specifications of a common data file and format for transforming the schedule status of digital artifacts in the DE ecosystem to the contractor's Integrated Master Schedule (IMS). I recommend that the program manager be given authority to define, in the SEP, the Work Breakdown Structure level, characteristics, criteria, and data elements of digital artifacts that will be in the digital thread. For artifacts that are on the critical path, the data elements should include planned and actual start and finish dates.

More reasons to implement a DE capability and examples of ASoTs are in my white papers:

- 1. Common Sense Project Management: "When you come to a fork in the road..."
- 2. Integrating the Embedded Software Path, Model-Based SE, MOSA, and DE with Program Management

I recommended four strategic objectives to transform the acquisition of weapon systems in my letter to you dated March 15, Subj: Initial Acquisition Reform to Do List. One of these was "Institutionalize DE." The related implementation tactic was "Real-time, automated status reports that are based on ASoTs. Replace botched metrics with outcome-based metrics." I have been advocating for DoD to get the authorization, budget, and statutory ability to do everything on the list. Good luck.

The white papers may be downloaded from www.pb-ev.com at the White Papers tab.

Yours truly,

Paul J. Solomon

CC:

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