

116TH CONGRESS  
2D SESSION

# S. 4508

To authorize a pilot program to explore the use of consumption-based solutions to address software-intensive warfighting capability.

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IN THE SENATE OF THE UNITED STATES

AUGUST 6, 2020

Mr. ROUNDS introduced the following bill; which was read twice and referred to the Committee on Armed Services

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## A BILL

To authorize a pilot program to explore the use of consumption-based solutions to address software-intensive warfighting capability.

1 *Be it enacted by the Senate and House of Representa-*  
2 *tives of the United States of America in Congress assembled,*

3 **SECTION 1. SHORT TITLE.**

4 This Act may be cited as the “Warfighting Software  
5 Enhancement Act of 2020”.

1 **SEC. 2. PILOT PROGRAM EXPLORING THE USE OF CON-**  
2 **SUMPTION-BASED SOLUTIONS TO ADDRESS**  
3 **SOFTWARE-INTENSIVE WARFIGHTING CAPA-**  
4 **BILITY.**

5 (a) FINDING.—In its final report, the Section 809  
6 Panel recommended the adoption of consumption-based  
7 approaches at the Department of Defense, stating, “More  
8 things will be sold as a service in the future. XaaS could  
9 really mean everything in the context of the Internet of  
10 things (IoT). Consumption-based solutions are appearing  
11 in many industry sectors, from last mile transportation  
12 (e.g., bike shares and electric scooters) to agriculture (e.g.,  
13 tractor-as-a-service for farmers in developing countries).  
14 Most smart phone users are familiar with software up-  
15 dates that provide bug fixes or new features. A more ex-  
16 treme example of technology innovation enabled by the  
17 IoT is the ability to deliver physical performance improve-  
18 ments to vehicles through over-the-air software updates  
19 . . . In the not-so-distant future, cloud computing and the  
20 IoT will enable consumption-based solution offerings and  
21 delivery models that are hard to imagine today.”

22 (b) SENSE OF CONGRESS.—It is the sense of Con-  
23 gress—

24 (1) that the Department of Defense should take  
25 advantage of “as-a-service” or “aaS” approaches in  
26 commercial capability development, particularly

1 where the capability is software-defined, and cloud-  
2 enabled;

3 (2) to support the Department of Defense's  
4 commitment to new approaches to development and  
5 acquisition of software;

6 (3) that the Department should explore a vari-  
7 ety of approaches, to include the use of consump-  
8 tion-based solutions for software-intensive  
9 warfighting capability; and

10 (4) that, in conducting activities under the pilot  
11 program established under this program, the De-  
12 partment should use the Software pathway under  
13 the new Adaptive Acquisition Framework.

14 (c) IN GENERAL.—Subject to the availability of ap-  
15 propriations, the Secretary of Defense is authorized to es-  
16 tablish a pilot program to explore the use of consump-  
17 tion-based solutions to address software-intensive warfighting  
18 capability.

19 (d) SELECTION OF INITIATIVES.—The Secretary of  
20 each military department and the commander of each  
21 combatant command with acquisition authority shall pro-  
22 pose for selection by the Secretary of Defense for the pilot  
23 program at least one and not more than three initiatives  
24 that are well-suited to explore consumption-based solu-  
25 tions to address software-intensive warfighting capability.

1 The initiatives may be new or existing programs of record  
2 and shall focus on software-defined or machine-enabled  
3 warfighting applications, and may include applications  
4 that—

5 (1) rapidly analyze sensor data;

6 (2) secure warfighter networks, including multi-  
7 level security;

8 (3) swiftly transport information across various  
9 networks and network modalities; or

10 (4) otherwise enable joint all-domain oper-  
11 ational concepts, including in a contested environ-  
12 ment.

13 (e) CONTRACT REQUIREMENTS.—Contracts for con-  
14 sumption-based solutions entered into pursuant to the  
15 pilot program shall provide for—

16 (1) the solution to be measurable on a frequent  
17 interval customary for the type of solution;

18 (2) the contractor to notify the government  
19 when consumption reaches 75 percent and 90 per-  
20 cent of the contract funded amount; and

21 (3) discretion for the contracting officer to add  
22 new features or capabilities without additional com-  
23 petition for the contract, provided that the amount  
24 of the new features or capabilities does not exceed  
25 25 percent of the total contract value.

1 (f) DURATION OF INITIATIVES.—Each initiative car-  
2 ried out under the pilot program shall be carried out dur-  
3 ing the three-year period following selection of the initia-  
4 tive.

5 (g) MONITORING AND EVALUATION OF PILOT PRO-  
6 GRAM.—The Director of the Office of Cost Assessment  
7 and Program Evaluation shall establish continuous moni-  
8 toring to evaluate the pilot program established under sub-  
9 section (c), including collecting data on cost, schedule, and  
10 performance from the program office, the user community,  
11 and the contractors.

12 (h) REPORTS.—

13 (1) INITIAL REPORT.—Not later than January  
14 31, 2021, the Secretary of Defense shall submit to  
15 the congressional defense committees a report on ini-  
16 tiatives selected for the pilot program, roles and re-  
17 sponsibilities for implementing the pilot program,  
18 and the monitoring and evaluation approach for the  
19 pilot.

20 (2) PROGRESS REPORT.—Not later than April  
21 15, 2021, the Secretary of Defense shall submit to  
22 the congressional defense committees a report on the  
23 progress of the initiatives.

24 (3) FINAL REPORT.—Not later than 3 years  
25 after the date of the enactment of this Act, the Sec-

1       retary of Defense shall submit to the congressional  
2       defense committees a report on the cost, schedule,  
3       and performance outcomes of the initiatives. The re-  
4       port shall also include lessons learned about the use  
5       of consumption-based solutions for software-inten-  
6       sive capabilities and any recommendations for statu-  
7       tory or regulatory changes to facilitate their use.

8       (i) DEFINITIONS.—In this section:

9               (1) CONGRESSIONAL DEFENSE COMMITTEES.—  
10       The term “congressional defense committees” has  
11       the meaning given the term in section 101(a)(16) of  
12       title 10, United States Code.

13              (2) CONSUMPTION-BASED SOLUTION.—The  
14       term “consumption-based solution” means any com-  
15       bination of software, hardware or equipment, and  
16       labor or services that provides a seamless capability  
17       that is metered and billed based on actual usage and  
18       predetermined pricing per resource unit, and in-  
19       cludes the ability to rapidly scale capacity up or  
20       down.

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