

also be designed and developed, to the maximum extent practicable, with a modular open system approach to enable incremental development and enhance competition, innovation, and interoperability.”

Subsec. (b)(1)(A). Pub. L. 116-283, § 804(b)(1)(B)(i)(I), substituted “modular system interfaces between major systems, major system components and modular systems;” for “major system interfaces between a major system platform and a major system component, between major system components, or between major system platforms;”.

Subsec. (b)(1)(B). Pub. L. 116-283, § 804(b)(1)(B)(i)(II), substituted “that relevant modular system interfaces—” for “major system interfaces comply with, if available and suitable, widely supported and consensus-based standards;” and added cls. (i) and (ii).

Subsec. (b)(1)(C). Pub. L. 116-283, § 804(b)(1)(B)(i)(III), inserted “and modular systems” after “severable major system components” in introductory provisions.

Subsec. (b)(3)(A). Pub. L. 116-283, § 804(b)(1)(B)(ii), substituted “modular system interfaces” for “well-defined major system interfaces”.

Subsec. (b)(4). Pub. L. 116-283, § 804(b)(1)(B)(iii), amended par. (4) generally. Prior to amendment, par. (4) defined major system interface.

Subsec. (b)(5) to (9). Pub. L. 116-283, § 804(b)(1)(B)(iv), (v), added par. (5) and redesignated former pars. (5) to (8) as (6) to (9), respectively.

#### EFFECTIVE DATE OF 2021 AMENDMENT

Amendment by section 1851(b)(1) of Pub. L. 116-283 effective Jan. 1, 2022, with additional provisions for delayed implementation and applicability of existing law, see section 1801(d) of Pub. L. 116-283, set out as a note preceding section 3001 of this title.

#### EFFECTIVE DATE

Pub. L. 114-328, div. A, title VIII, § 805(a)(4), Dec. 23, 2016, 130 Stat. 2255, provided that: “Subchapter I of chapter 144B of title 10, United States Code, as added by paragraph (1), shall take effect on January 1, 2017.”

### § 2446b. Requirement to address modular open system approach in program capabilities development and acquisition weapon system design

(a) PROGRAM CAPABILITY DOCUMENT.—A program capability document for a major defense acquisition program shall identify and characterize—

(1) the extent to which requirements for system performance are likely to evolve during the life cycle of the system because of evolving technology, threat, or interoperability needs; and

(2) for requirements that are expected to evolve, the minimum acceptable capability that is necessary for initial operating capability of the major defense acquisition program.

(b) ANALYSIS OF ALTERNATIVES.—The Director of Cost Assessment and Performance Evaluation, in formulating study guidance for analyses of alternatives for major defense acquisition programs and performing such analyses under section 139a(d)(4) of this title, shall ensure that any such analysis for a major defense acquisition program includes consideration of evolutionary acquisition, prototyping, and a modular open system approach.

(c) ACQUISITION STRATEGY.—In the case of a major defense acquisition program that uses a modular open system approach, the acquisition strategy required under section 2431a of this title shall—

(1) clearly describe the modular open system approach to be used for the program;

(2) differentiate between the major system platform and major system components being developed under the program, as well as major system components developed outside the program that will be integrated into the major defense acquisition program;

(3) clearly describe the evolution of major system components that are anticipated to be added, removed, or replaced in subsequent increments;

(4) identify additional major system components that may be added later in the life cycle of the major system platform;

(5) clearly describe how intellectual property and related issues, such as technical data deliverables, that are necessary to support a modular open system approach, will be addressed; and

(6) clearly describe the approach to systems integration and systems-level configuration management to ensure mission and information assurance.

(d) REQUEST FOR PROPOSALS.—The milestone decision authority for a major defense acquisition program that uses a modular open system approach shall ensure that a request for proposals for the development or production phases of the program shall describe the modular open system approach and the minimum set of major system components that must be included in the design of the major defense acquisition program.

(e) MILESTONE B.—A major defense acquisition program may not receive Milestone B approval under section 2366b of this title until the milestone decision authority determines in writing—

(1) in the case of a program that uses a modular open system approach, that—

(A) the program incorporates clearly defined major system interfaces between the major system platform and major system components, between major system components, and between major system platforms;

(B) such major system interfaces are consistent with the widely supported and consensus-based standards that exist at the time of the milestone decision, unless such standards are unavailable or unsuitable for particular major system interfaces; and

(C) the Government has arranged to obtain appropriate and necessary intellectual property rights with respect to such major system interfaces upon completion of the development of the major system platform; or

(2) in the case of a program that does not use a modular open system approach, that the use of a modular open system approach is not practicable.

(f) IMPLEMENTATION GUIDANCE.—The Secretaries of the military departments shall issue guidance to implement the requirements of this section.

(Added Pub. L. 114-328, div. A, title VIII, § 805(a)(1), Dec. 23, 2016, 130 Stat. 2253; amended Pub. L. 115-91, div. A, title X, § 1081(a)(40), Dec. 12, 2017, 131 Stat. 1596; Pub. L. 116-92, div. A, title VIII, § 840(a), Dec. 20, 2019, 133 Stat. 1499.)

## TRANSFER OF SECTION

*Pub. L. 116-283, div. A, title XVIII, §§ 1801(d), 1851(b)(1), Jan. 1, 2021, 134 Stat. 4151, 4272, provided that, effective Jan. 1, 2022, with additional provisions for delayed implementation and applicability of existing law, this section is transferred to chapter 327 of this title, as added by section 1851(a) of Pub. L. 116-283, inserted after section 4401, and redesignated as section 4402 of this title. See Effective Date of 2021 Amendment note below.*

## AMENDMENTS

2019—Subsec. (f). Pub. L. 116-92 added subsec. (f).  
2017—Subsec. (e). Pub. L. 115-91 substituted “in writing—” for “in writing that—” in introductory provisions and inserted “, that” after “open system approach” in introductory provisions of par. (1).

## EFFECTIVE DATE OF 2021 AMENDMENT

Amendment by Pub. L. 116-283 effective Jan. 1, 2022, with additional provisions for delayed implementation and applicability of existing law, see section 1801(d) of Pub. L. 116-283, set out as a note preceding section 3001 of this title.

## EFFECTIVE DATE

Section effective Jan. 1, 2017, see section 805(a)(4) of Pub. L. 114-328, set out as a note under section 2446a of this title.

**§ 2446c. Requirements relating to availability of major system interfaces and support for modular open system approach**

The Secretary of each military department shall—

- (1) coordinate with the other military departments, the defense agencies, defense and other private sector entities, national standards-setting organizations, and, when appropriate, with elements of the intelligence community with respect to the specification, identification, development, and maintenance of major system interfaces and standards for use in major system platforms, where practicable;
- (2) ensure that major system interfaces incorporate commercial standards and other widely supported consensus-based standards that are validated, published, and maintained by recognized standards organizations to the maximum extent practicable;
- (3) ensure that sufficient systems engineering and development expertise and resources are available to support the use of a modular open system approach in requirements development and acquisition program planning;
- (4) ensure that necessary planning, programming, and budgeting resources are provided to specify, identify, develop, and sustain the modular open system approach, associated major system interfaces, systems integration, and any additional program activities necessary to sustain innovation and interoperability;
- (5) ensure that adequate training in the use of a modular open system approach is provided to members of the requirements and acquisition workforce; and
- (6) issue guidance to implement the requirements of this section.

(Added Pub. L. 114-328, div. A, title VIII, § 805(a)(1), Dec. 23, 2016, 130 Stat. 2255; amended

Pub. L. 116-92, div. A, title VIII, § 840(b), Dec. 20, 2019, 133 Stat. 1499.)

## TRANSFER OF SECTION

*Pub. L. 116-283, div. A, title XVIII, §§ 1801(d), 1851(b)(1), Jan. 1, 2021, 134 Stat. 4151, 4272, provided that, effective Jan. 1, 2022, with additional provisions for delayed implementation and applicability of existing law, this section is transferred to chapter 327 of this title, as added by section 1851(a) of Pub. L. 116-283, inserted after section 4402, and redesignated as section 4403 of this title. See Effective Date of 2021 Amendment note below.*

## AMENDMENTS

2019—Par. (6). Pub. L. 116-92 added par. (6).

## EFFECTIVE DATE OF 2021 AMENDMENT

Amendment by Pub. L. 116-283 effective Jan. 1, 2022, with additional provisions for delayed implementation and applicability of existing law, see section 1801(d) of Pub. L. 116-283, set out as a note preceding section 3001 of this title.

## EFFECTIVE DATE

Section effective Jan. 1, 2017, see section 805(a)(4) of Pub. L. 114-328, set out as a note under section 2446a of this title.

**SUBCHAPTER II—DEVELOPMENT, PROTOTYPING, AND DEPLOYMENT OF WEAPON SYSTEM COMPONENTS OR TECHNOLOGY**

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| 2447e. | Definition of weapon system component.   |

## REPEAL OF SUBCHAPTER

*Pub. L. 116-283, div. A, title XVIII, §§ 1801(d), 1851(d)(1), Jan. 1, 2021, 134 Stat. 4151, 4273, provided that, effective Jan. 1, 2022, with additional provisions for delayed implementation and applicability of existing law, chapter 144B of this title, and therefore this subchapter, is repealed. See Effective Date of Repeal note below.*

## EFFECTIVE DATE OF REPEAL

Repeal effective Jan. 1, 2022, with additional provisions for delayed implementation and applicability of existing law, see section 1801(d) of Pub. L. 116-283, set out as an Effective Date of 2021 Amendment note preceding section 3001 of this title.

**§ 2447a. Weapon system component or technology prototype projects: display of budget information**

(a) REQUIREMENTS FOR BUDGET DISPLAY.—In the defense budget materials for any fiscal year, the Secretary of Defense shall, with respect to advanced component development and prototype activities (within the research, development, test, and evaluation budget), set forth the amounts requested for each of the following: