

# **Defense Exportability Features Policy Implementation Guidelines**

## **1.0. Defense Exportability Features Overview**

1.1. The enactment of the Defense Exportability Features (DEF) legislation in the National Defense Authorization Act (NDAA) for Fiscal Year 2011 (Public Law 111-383) expanded defense exportability efforts by authorizing the Secretary of Defense to carry out a pilot program to develop and incorporate technology protection features into designated systems during their research and development phases. The DEF Pilot Program's primary objectives are to: (1) demonstrate that program protection costs can be reduced and U.S. products can be made available for foreign sales sooner through the incorporation of technology protection and exportability features in initial designs, and (2) garner lessons learned across Department of Defense (DoD) program experiences to improve the return on investment for future programs. These objectives support DoD's larger goal of enabling foreign sales in order to enhance coalition interoperability, decrease costs to DoD and international partners through economies of scale, and improve international competitiveness of U.S. defense systems.

1.2. In the past, DoD's general practice was to provide for exportability features, anti-tamper features, and exportable capability levels after a product had been designed, tested, and put into production for U.S. customers. Prior to the DEF pilot legislation in the FY 2011 NDAA, DoD generally did not implement DEF early in its acquisition programs because, with certain exceptions, there was no overall authority to spend DoD appropriations to meet "foreign requirements." The DEF pilot legislative authority now allows DoD program management and contractor teams to assess and design DEF into their systems during early program design stages and throughout the acquisition cycle to facilitate export to allies and partners.

1.3. DoD's DEF initiatives, which include the DEF Pilot Program and its associated DEF focus area under the Controlling Cost goal in Better Buying Power 2.0, encourage DoD program management to assess the feasibility of designing and developing technology protection features in systems early in their acquisition life cycle. Technology protection features refer to the technical modifications necessary to protect critical program information (CPI), which includes anti-tamper and other U.S. Government (USG) Technology Security and Foreign Disclosure (TSFD) and export policy-related modifications that must be developed and incorporated into export variants.

## **2.0. DEF Legislation, Policy, and DoD Guidance**

2.1. **DEF Pilot Program Authorization.** The DoD DEF Pilot Program was authorized by Section 243 of the FY 2011 NDAA, "Pilot Program to Include Technology Protection Features During Research and Development of Defense Programs." This legislation authorized DoD to carry out a pilot program for developing and incorporating technology protection features into designated systems during their research and development phase. The FY 2012 NDAA (Public Law 112-81), Section 252, further modified the law to require industry to contribute at least half of the cost of any DEF Pilot Program contractual effort. The FY 2014 NDAA

(Public Law 113-66), Section 264, extended the DEF Pilot Program five additional years to October 1, 2020, to provide more time to determine the actual results and impact of the DEF studies. The DEF Pilot Program legislation was further amended by Section 231 of the FY 2015 NDAA, which changed the industry matching requirement from “at least half” to “half” of the cost of DEF activities and inserted “or such other portion as the Secretary [of Defense] considers appropriate upon showing good cause.” The amended language now reads as follows (see subparagraph 5.1.2 for policy guidelines and Annex D for procedures for requesting an adjusted industry cost share portion (more or less than half)):

*“b. COST SHARING – Any contract for the design or development of a system resulting from activities specified under subsection (a) for the purpose of enhancing or enabling the exportability of the system either (1) for the development of program protection strategies, or (2) for the design and incorporation of exportability features into the system shall include a cost-sharing provision that requires the contractor to bear half of the cost of such activities, or such other portion of such cost as the Secretary considers appropriate upon showing of good cause.”*

**2.2. Better Buying Power (BBP) 2.0/3.0.** The Office of the Under Secretary of Defense for Acquisition, Technology, and Logistics’ (OUSD(AT&L)) BBP 2.0 initiative both capitalized and expanded upon the DEF Pilot Program by including “incorporation of DEF in initial designs” as a focus area under its “Control Costs throughout the Product Life Cycle” goal. BBP 2.0 stressed the importance of all DoD programs assessing and, when possible, incorporating defense exportability features in initial designs early in the acquisition process. The BBP 2.0 DEF initiative is continuing even though it is not explicitly included within BBP 3.0.

**2.3. DoD Instruction (DoDI) 5000.02.** The International Acquisition and Exportability Considerations paragraph in DoDI 5000.02 (Enclosure 2, Paragraph 7.a.) requires program management to integrate international acquisition and exportability considerations into the program’s Acquisition Strategy at each major milestone or decision point. DoDI 5000.02 also provides policy guidance regarding exportability, technology protection, and countermeasures in the paragraphs for Acquisition Strategies (Enclosure 2, subparagraph 6.a.(1)) and Program Protection (Enclosure 3, paragraph 13).

**2.4. Defense Acquisition Guidebook (DAG).** The DAG addresses DEF in the International section in Chapter 11, and also in the Program Protection section in Chapter 13, which provides overarching guidance on the system security engineering discipline and DoD program protection activities, processes, and practices for defense acquisition programs. Program Managers should refer to the program’s Security Classification Guide (SCG), the Anti-Tamper SCG, and any DoD Component-specific TSFD and security policy guidelines for guidance on public disclosure of whether a system or sub-system has incorporated anti-tamper features.

### **3.0. Defining DEF**

**3.1.** The DEF Pilot Program and BBP 2.0 DEF initiatives encourage DoD program management to (1) design, develop, and implement technology protection features that enable export, and/or (2) modify or remove technologies and/or capabilities prohibited for export early in the acquisition life cycle, when possible. Experience has shown that failure to identify the full range

of CPI early in a program's design phase can cause major affordability and schedule problems later when these programs have to "retrofit" program protection measures prior to export.

**3.2. DEF design activities should focus on development and implementation of program protection measures for each system that are identical, or as similar as possible, for DoD and exportable configurations. DEF-related technology protection feasibility and design activities, including cost-benefit analysis and design tradeoffs, should be implemented as part of the program's overall system engineering design effort in accordance with the DoDI 5000.02.**

**3.3. Modifying or removing technologies and/or capabilities prohibited for export, also known as differential capability modifications, modifies or removes specific system capabilities and CPI that the U.S. Government/DoD TSFD decision-making processes have not authorized for export. More specifically, differential capability analysis involves:**

- **Assessing any specific capabilities and associated technologies in a DoD system that must be removed from or modified in the DoD configuration to create one or more exportable configurations to eliminate or reduce the potential risks to CPI.**
- **Assessing and defining unique partner or customer nation capability requirements (if any) that will be incorporated into the exportable versions.**
- **Designing, developing, and testing differential capability modifications employed to incorporate partner/customer desired unique capabilities and remove CPI and/or capabilities from the DoD configuration to create one or more exportable versions of the system.**

**3.3.1. Similar to DEF technology protection measure design efforts, DEF differential capability design activities, including cost-benefit analysis and design tradeoffs, should be implemented as part of the program's overall system engineering design effort. DEF studies influence the TSFD process by producing potential DEF protection and differential capability solutions, which are then briefed to the appropriate DoD TSFD approval authority in order to obtain approval prior to moving forward with more detailed designs (consult DoDD 5111.21 "Arms Transfer and Technology Release Senior Steering Group and Technology Security and Foreign Disclosure Office" for additional information on TSFD approval authorities).**

**4.0. DoD DEF Pilot Program.** OUSD(AT&L) established the DEF Pilot Program in FY 2011, and initial studies began in FY 2012. This Pilot Program, through supplemental funding, requires DoD program management of designated systems to assess, design, and incorporate technology protection and exportability features in their systems and garners lessons learned across a range of DoD programs to improve the return on investment for future DEF efforts. DEF Pilot Program designated systems have the opportunity to receive funding from OUSD(AT&L)/International Cooperation (IC) to perform the initial feasibility study and subsequent design activities associated with implementing DEF, to take advantage of expertise available from OUSD(AT&L)/IC and their respective DoD Component DEF Point of Contact (POC), and to receive the many benefits of an exported system, such as economic order quantity cost-savings on future unit procurements and throughout the remainder of the program lifecycle.

**4.1. Types of AT&L DEF Pilot Program Activities.** The AT&L DEF Pilot Program activities fall into three types:

- Phase 1A DEF feasibility studies that examine the international market, the technical feasibility and cost of designing in exportability, and the potential return on investment (ROI);
- Phase 1B DEF follow-on studies that provide additional feasibility and design analysis; and
- Phase 2 DEF design activities that carry out actual DEF design and development work.

**4.1.1. Phase 1A/1B DEF Feasibility Studies.** These studies are typically conducted by programs for DEF Pilot Program designated systems that are in their pre-MS B acquisition phases (Materiel Solution Analysis or Technology Maturation and Risk Reduction (TMRR) phases), although studies may still be conducted in later phases of programs if they provide value in facilitating exportability. Phase 1B DEF studies are follow-on studies to the Phase 1A DEF initial feasibility studies when a program needs additional DEF analysis to identify exportability features prior to designing in DEF.

**4.1.1.1.** The objective of DEF feasibility studies is to accomplish, at a minimum, the following tasks (although each program for a DEF Pilot Program designated system may tailor its study Statement of Work (SOW) to accomplish additional tasks):

- Assess the international market for potential cooperative programs, foreign sales, or transfers, including the rationale, timing, relative interest in, and projected level of sales;
- Identify the technical feasibility and DEF non-recurring engineering (NRE) efforts and costs projected for completing the design, building test articles, and conducting development tests on the components and software expected to meet projected releasability criteria;
- Perform a business case analysis from a DoD perspective that compares the anticipated DoD and industry DEF investment costs for the design, development, and testing of future export variants to the potential ROI from anticipated international cooperation, foreign sales, or transfers, including an estimate of anticipated DoD average per-unit cost;
- Provide the basis for preparation of applicable TSFD process requests to review the sufficiency of the proposed DEF NRE efforts to meet anticipated TSFD releasability criteria; and
- Recommend whether to continue with a follow-on Phase 1B study or to move on to Phase 2 design activity.

**4.1.1.2.** If a decision is made to conduct a DEF feasibility study for a DEF Pilot Program designated system as part of the system's TMRR or Engineering and Manufacturing Development (EMD) phases before their respective Milestones, the DEF feasibility study requirement should be incorporated into the appropriate TMRR or EMD Request for Proposals (RFP) and subsequent contracts. If the decision to conduct a DEF feasibility study occurs after TMRR or EMD contract award, then the study should be conducted by the program contractors based on available DoD funding and the willingness of the program contractor to enter into DEF cost-sharing arrangements.

**4.1.2. Phase 2 DEF Design and Development Activities.** Phase 2 DEF design and development activities may produce export configuration designs, develop protection or differential capability solutions, and incorporate the DEF solutions into the system, depending on

the cost and available DEF funding. These design and development activities also may influence the technology transfer approval process by enabling both industry and DoD to describe to TSFD approval authorities the critical technologies and built-in exportability features to address releasability concerns. If a program is pre-Milestone B, if government and industry agree that the protection and differential capability solutions determined by the DEF feasibility studies should be designed, and if funding arrangements can be agreed upon in the applicable contracts, then the requirement to develop and design export variants may be incorporated into the EMD RFP and contract.

**4.2. DoD Component Nominations and OSD Selection.** DoD DEF Pilot Program designated systems are eligible to request available DEF funding from OUSD(AT&L)/IC, or use secondary funding, if legally available. This funding will be matched by the program's industry contractors. After nomination and selection to be a DEF Pilot Program designated system, individual programs may receive funding on a one-time basis or across multiple fiscal years, until DEF activities have been completed, and the program has been formally removed from the pilot study. The typical process for the DEF Pilot Program from system nomination through study execution and closeout is provided in Figure 1 below.

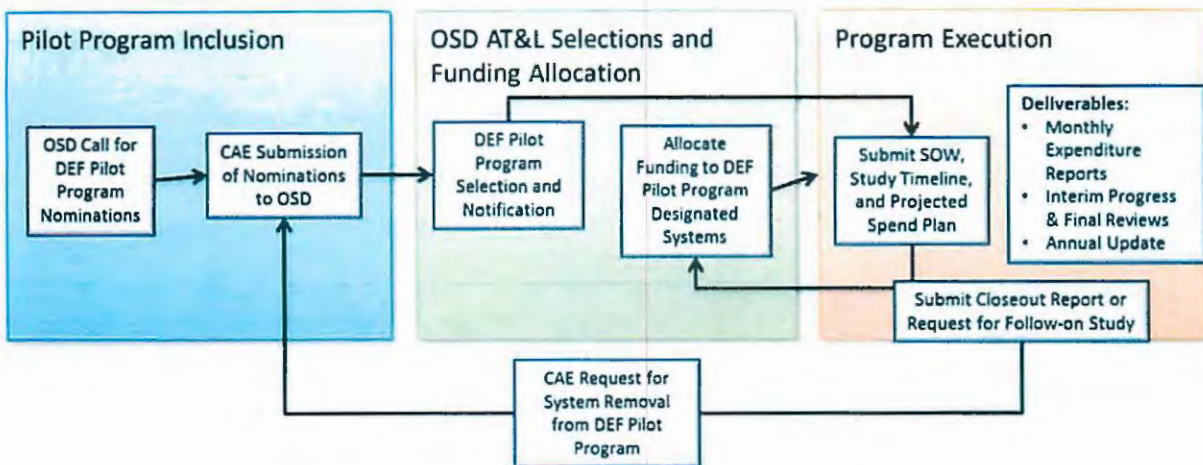


Figure 1: DEF Pilot Program Key Process Flow

Selection for the DoD DEF Pilot Program begins with the submission of nominations from each of the DoD Component Acquisition Executives (CAE) to the Director, OUSD(AT&L)/IC. Calls for nominations will be sent to the DoD CAEs by OUSD(AT&L)/IC in July of each year. DoD CAEs (or their designated SES/Flag-level representative) are requested to submit their annual DEF Pilot Program nominations via formal memorandum to the Director, OUSD(AT&L)/IC, not later than September 1 of each year. CAEs should identify those acquisition programs with strong potential for international cooperation or foreign sales using the OUSD(AT&L) selection criteria below as guidance. CAE nomination memorandums should provide supporting information relative to these selection criteria to make their case for why a program should be selected for the DEF Pilot Program (e.g., USG decision to transfer or release the system to allies and partners, Acquisition Category (ACAT), acquisition phase, Foreign Military Sale (FMS)

potential, interoperability requirements, etc.). Although DEF ROI may be greater when incorporated early in the research and design stages of a system's acquisition cycle (pre-Milestone B), there is still value in selecting programs across the acquisition life cycle. Post-Milestone B and Post-Milestone C activities may further develop and incorporate DEF designs, inform TSFD processes, and/or identify export configurations.

**4.2.1. OUSD (AT&L) Selection Process and Criteria.** After reviewing the CAE formal nomination memos, the Director, OUSD(AT&L)/IC, in coordination with the Assistant Secretary of Defense for Acquisition (ASD(A)), will select the systems that are to be designated as DEF Pilot Program designated systems using one or more of the following selection criteria:

- Systems for which the United States has committed to transferring to allies and partners.
- Systems being developed through ACAT 1D programs (Note: other ACAT 1C or non-ACAT 1 programs may be considered on a case-by-case basis);
- Follow-on systems with reasonable to significant FMS sales potential whose predecessors have a history of FMS;
- Next generation subsystems that will be applicable to current major platforms with existing international programs;
- Systems critical to allied and partner interoperability (to which the United States is politically committed);
- Systems critical to affordability issues driving allied and partner acquisition decisions; and
- System's readiness to commence DEF study/activity (Acquisition phase of the program; whether the program will be ready to commence DEF study/activity within the next fiscal year).

**4.2.2. OUSD (AT&L) Selection Notifications.** The Director, OUSD(AT&L)/IC, will notify the CAEs of their DEF Pilot Program selections via formal memorandum. These memoranda will identify any newly selected DEF Pilot Program designated systems, and will list all previously designated systems for that DoD Component still active in the Pilot Program. Once a system has been selected as a DEF Pilot Program designated system, it remains on the list, and the program for that system is eligible to request AT&L DEF Pilot Program funding, until the system is approved for removal from the DEF Pilot Program by the Director, OUSD(AT&L)/IC, in coordination with ASD(A).

**4.3. Requests to Remove Programs from the DEF Pilot Program.** If a CAE would like to remove a system from DoD's list of DEF Pilot Program designated systems due to completion of its DEF analysis or other considerations (e.g., lack of foreign market; other sources of funding; termination of program, etc.), the CAE (or their designated SES/Flag-level representative) should forward a formal memorandum to OUSD(AT&L)/IC with supporting justification and a lessons learned report (if DEF study/activities were completed) requesting removal from the DEF Pilot Program. OUSD(AT&L)/IC will notify the CAE of AT&L's decision via formal memorandum.

**4.4. Prioritization of AT&L DEF Pilot Program Annual Funding.** OUSD(AT&L)/IC will prioritize its annual allocation of AT&L DEF Pilot Program funding based on the availability of AT&L DEF Pilot Program Research Development Test and Evaluation (RDT&E) Program

Element (PE) funding and CAE and Program Manager (PM) recommendations. If the available AT&L DEF Pilot Program RDT&E PE funding is insufficient to complete a study in a given fiscal year, then the program for that system may receive DEF funding across multiple fiscal years. If requests for DEF Pilot Program funding exceed the available funding for that fiscal year, then OUSD(AT&L)/IC may also seek additional RDT&E funding from other funding sources within DoD. When a DEF Pilot Program designated system is selected to commence a DEF study/activity, Program Managers should refer to the attached DEF Standard Operating Procedures (see Annex A) for details on the process for requesting AT&L DEF Pilot Program study funding.

**4.5. DEF Pilot Program Funding and Reporting Requirements.** The following program funding and reporting deliverables are submitted to OUSD(AT&L)/IC through the DoD Component DEF POCs for oversight and sharing of lessons learned (see Annex A for detailed Standard Operating Procedures and Annex C for DEF POCs):

- Study/Activity SOW
- Study Timeline
- Projected Study Spend Plan
- Monthly Expenditure Reports
- Interim Progress Review Briefings
- Final Briefing and Closeout Lessons Learned Report
- Program Update to the Annual DoD DEF Pilot Program Report to Congress

**5.0. DEF Pilot Program Funding and Contracting Guidance.**

**5.1. DEF Pilot Program Funding Sources.** The following funding guidance applies to any DoD acquisition program that has been selected as a DEF Pilot Program “designated system” and is using AT&L DEF Pilot Program RDT&E and/or DoD Component program RDT&E funding for its share of a DEF Pilot Program cost-sharing contractual arrangement with its industry partner. This guidance is based on the following understanding:

- Use of OUSD(AT&L)/IC DEF Pilot Program RDT&E PE funding must comply with the provisions of the DEF authorizing legislation (Section 243 of the NDAA for FY 2011, as amended) (see paragraph 2.1., above); and
- Overall use of the DEF Pilot Program authorizing legislation is not restricted to efforts funded solely by the OUSD(AT&L)/IC DEF Pilot Program RDT&E PE, but is more expansive.

**5.1.1. Government:** Under the current DEF authorizing legislation, as amended by the FY 2015 NDAA, DoD is responsible for funding half of the cost of DEF Pilot Program contractual efforts, with industry covering the other half of the cost of DEF Pilot Program activities, or such other portion (more or less) of such cost as the Secretary of Defense considers appropriate upon showing of good cause. Government funding sources available for funding the government share for DEF Pilot Program efforts include the following:

- **AT&L DEF Pilot Program RDT&E Program Element (PE)** – The primary DoD source of funding the government share of DEF Pilot Program contractual costs is the AT&L DEF Pilot Program RDT&E PE funding managed by the OUSD(AT&L)/IC.
- **DoD Component Program’s Title 10 RDT&E Funds** – DoD Components may use the program’s Title 10 RDT&E funds as a source of secondary funding, if legally available, in the event that sufficient AT&L DEF Pilot Program RDT&E PE funds are not available to pursue DEF Pilot Program efforts, provided there is legal authority to do so; however, this normally requires an advance DoD request for such authority from the Milestone Decision Authority and for such funding through the DoD budgeting process.

**5.1.2. Industry Cost-Sharing:** Current DEF authorizing legislation, as amended, requires industry to contribute half of the cost of any DEF Pilot Program contractual effort with DoD, or such other portion of such cost as the Secretary of Defense considers appropriate upon showing of good cause. This revised DEF Pilot Program cost-sharing provision is applicable to any DEF Pilot Program cost-sharing contracts signed after the FY 2015 NDAA was enacted in December 2014. Revised Industry DEF Pilot Program cost-sharing guidelines include the following:

- The Secretary of Defense’s authority to determine industry’s appropriate portion of the DEF costs upon showing of good cause is delegated to the USD(AT&L) per DoDD 5134.01.
- Per the DEF authorizing legislation, as amended, the default industry cost share portion is half (50/50).
- The government and the contractors will continue to share the cost of DEF efforts on a 50/50 basis unless the DoD Component Program Manager, the contractor representatives, or both submit a “good cause” justification for, and the USD(AT&L) approves, an adjusted industry cost-sharing portion (more or less than half) using the procedures in Annex D.
- Formal requests for an adjusted industry cost sharing portion (more or less than half) will be forwarded by the PM through the DoD Component acquisition chain-of-command via the program’s CAE to the Director, OUSD(AT&L)/IC, who will review and forward recommendations to the USD(AT&L) for a decision on an appropriate industry DEF cost share using the procedures in Annex D.
- The amended DEF statute allows DoD flexibility in what it considers an “appropriate” cost share and what constitutes “good cause” to determine an appropriate share. The USD(AT&L) will use the following criteria to review any requests for an adjusted industry cost-sharing portion (more or less than half) based on “good cause” justification:
  - **Risk:** The probability of an exportable version of a system achieving actual foreign partnership and/or sales.
  - **Level of Competition:** The probability of a system winning the eventual foreign sales (competitive versus sole-source environment; foreign competition for the system).



- **Return on Investment:** The estimated return on DEF Pilot Program investment by the government/contractor that would be achieved from future foreign partnership and/or sales arrangements of the system.
- **Other Factors:** Industrial base considerations, total cost of the system's USG contract, intellectual property and associated license fee costs, and any other relevant factors offered for consideration by the PM and/or contractor representatives.
- **Programs must gain contractor mutual agreement to fund the "industry share" of a DEF Pilot Program contractual effort between industry and the DoD.** DoD PMs cannot compel a DoD contractor to fund the "industry share" of a DEF Pilot Program unless DEF is a required Contract Line Item Number in a contract or is included in the evaluation criteria of a source selection. If an industry partner does not agree to participate in a proposed DEF Pilot Program effort prior to either an RFP or contract modification, then the program may pursue DEF using secondary funding, if legally available.
- **Companies may not claim previous or ongoing Independent Research and Development (IR&D) investments as part of their cost share under a DEF Pilot Program contractual arrangement.** The Federal Acquisition Regulation defines cost-sharing provisions as those that apply to direct costs that are required in the performance of the contract. IR&D costs are indirect costs that are spread out over several contracts (rather than direct costs applicable to one cost contract). Therefore, IR&D costs cannot be used to fund the contractor's portion of cost sharing under the DEF Pilot Program. Companies may, however, structure their IR&D investments – particularly in any horizontal program protection IR&D efforts across multiple systems they could pursue to benefit all of their systems – to reduce the total cost of a DEF Pilot Program cost-sharing effort under a specific contractual arrangement.

**5.2. DEF Pilot Program Contracting Approaches.** PMs should work with their respective DoD Component DEF POCs (see Annex C) to obtain contracting assistance to incorporate DEF into their Requests for Proposals or contracts, if necessary. DoD Component DEF POCs may also seek assistance from the OUSD (AT&L)/Defense Procurement and Acquisition Policy. An example of a generic DEF Pilot Program Feasibility Study Statement of Work can be found in Annex B.

#### **Annexes**

- A. DEF Pilot Program Standard Operating Procedures
- B. DEF Generic DEF Pilot Program Feasibility Study Statement of Work Example
- C. DEF Points of Contact (OUSD(AT&L), Defense Agencies, DoD Components)
- D. DEF Pilot Program Procedures for Requesting an Adjusted Industry Cost-Sharing Portion from OUSD(AT&L)
- E. AT&L DEF Military Interdepartmental Purchase Request Statement of Work template
- F. AT&L DEF Pilot Program Spend Plan/Monthly Expenditure Report template