

Shielded from Oversight

***The Disastrous US Approach
to Strategic Missile Defense***

<http://www.ucsusa.org/shieldedfromoversight>

Appendix 4: Acquisitions Oversight

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The normal development of a major defense acquisition program, by statute and regulation, follows three processes, which overlap and inform each other:¹

- 1) Requirements: Identifying a weapon system in response to a needed capability. The Joint Capabilities Integration and Development System (JCIDS) governs this process.
- 2) Planning, programming, budgeting, and execution: Establishing and executing a plan and budget, and allocating resources. This process recurs annually.
- 3) Acquisitions: Developing, testing, producing, and fielding of the system. The Defense Acquisition System governs this process.²

The first step for normal acquisitions, requirements, identifies the needed capabilities. The JCIDS requirements process identifies, assesses, validates, and prioritizes needed capabilities along with their operational performance criteria, that is, the requirements. The process culminates in a recommendation, which can be a materiel (e.g., equipment) or non-materiel (e.g., a change in tactics or an alternative use of existing materiel or human resources) solution. If a weapon system is recommended, the specification of the system will happen via the Defense Acquisition System, under which an Analysis of Alternatives is performed.

Before 2003, weapons were developed to counter specific threats identified via an authoritative threat

assessment, which identified specific perceived threats to the United States.³ In 2003, the threat-based process was replaced by the Joint Capabilities Integration and Development System (JCIDS), which identifies capabilities needed to meet strategic priorities outlined in major strategy documents.⁴ Under JCIDS, the Joint Requirements Oversight Council (JROC) provides recommendations to the Chairman of the Joint Chiefs of Staff, who advises the Secretary of Defense.⁵

Should a weapon system be recommended, a budget and plan are then developed: the operational utility and cost-effectiveness of different options are evaluated by the stakeholders, who in an iterative process create a plan for developing the system within budget constraints.

Development and acquisition are guided by the Pentagon's Defense Acquisition System, elaborated in DOD Directive 5000.01, sometimes referred to as "J5000 oversight," or "DOD5000 oversight."⁶ DOD5000 oversight is designed to ensure, among other things, a "fly before you buy" process. The level of oversight

¹ Much of the information in this appendix is taken from Schwartz, M. 2014. *Defense acquisitions: How DOD acquires weapon systems and recent efforts to reform the process*. RL34026. Washington, DC: Congressional Research Service. May 23. Online at www.fas.org/sgp/crs/natsec/RL34026.pdf. Note: All URLs in footnotes to this appendix were accessed May 17, 2016.

² Acquisition reform has been ongoing, with a comprehensive legislative effort to improve defense acquisitions in 2009. While the legislative effort included some provisions to improve the acquisition process for Major Defense Acquisition Programs, the provisions would not affect ballistic missile defense because of its special status.

³ Schwartz, M. 2014.

⁴ The capabilities needed are guided by strategy documents such as the National Security Strategy and the Quadrennial Defense Review. See Chairman of the Joint Chiefs of Staff. 2012. *Instruction. Joint Capabilities Integration and Development System*. CJCSI 3170.01H. Washington, DC. January 10. Online at www.secnav.navy.mil/rda/Policy/The%20Joint%20Capability%20Integration%20and%20Development%20System%20JCIDS/cjcs%20i317001h201201102.pdf.

⁵ JROC is responsible for validating the capability gap—that between what exists and what is required-- and recommending a weapon system if it is the best solution. The JROC is led by the Vice Chairman of the Joint Chiefs of Staff and includes General Officers or Admirals from the Services and Combatant Commands.

⁶ More detailed instructions are left to the Department of Defense. See Department of Defense. 2015. *Instruction. Operation of the Defense Acquisition System*. DoDI 5000.02. Washington, DC. January 7. Online at <http://www.dtic.mil/whs/directives/corres/pdf/500002p.pdf>. This document is updated continually.

increases as the cost of the program increases. A program with research and development costs in excess of \$480 million or estimated procurement cost greater than \$2.79 billion is defined as a Major Defense Acquisition Program. A system such as the Ballistic Missile Defense System (BMDS) meets the criteria of a Major Defense Acquisition Program, as would some individual parts of the BMDS such as the Ground-based Midcourse Defense (GMD) system, or even a sensor that is part of the GMD, such as the Sea-based X-band Radar (SBX).⁷

Development and Acquisitions: The DOD5000 Process in Brief

An important first step in development and acquisition is that potential competing systems are compared during the Material Solution Analysis phase to determine which one most cost-effectively fulfills JROC-validated requirements. This process, called an Analysis of Alternatives, compares strengths and weaknesses, based on such factors as effectiveness, cost, and risk, including how sensitive the alternatives are to changes in assumptions.

Once an approach is selected, the program moves through a set of milestones, described below, from development to deployment. Approval must be given at each milestone by the Milestone Decision Authority; for major defense programs, that authority is likely to be the Under Secretary of Defense for Acquisition, Technology and Logistics or the head of a defense agency. In the DOD5000 process, the JROC continues its involvement by periodically reviewing requirements, and advising on tradeoffs between cost, schedule, and performance. It also reviews the estimated level of resources needed to

fulfill a requirement to make sure it is consistent with the requirement's relative priority.⁸

The system being developed passes through Milestone A with the approval of the Milestone Decision Authority based on the Analysis of Alternatives, an acquisition strategy, a cost estimate that includes full life-cycle costs, and a commitment for future funding. The system then moves through the Technology Maturation and Risk Reduction phase, in which the relevant technologies and architecture of the system are developed to the point that an informed decision can be made about whether the system can potentially meet the requirements affordably and within required timeframes. Prototypes are developed and a design review is completed.

If the system passes the Milestone B requirements—which requires that independent cost estimates have been performed, requirements have been validated, future years' funding has been committed, and risks have been identified and mitigated—it proceeds to the Engineering and Manufacturing Development Phase. The Office of Developmental Test & Evaluation tests the maturity and adequacy of the system's design, and subsequent operational testing and evaluation determines whether a system is operationally effective and survivable. To move through Milestone C and begin production and deployment, the system must meet stringent criteria including a stable and proven production design, satisfactory developmental and operational tests, and costs that are within the established caps.

At this point, low-rate production of the system can begin in order to establish the manufacturing process for higher rate production and to provide prototype systems for further operational testing. Once the manufacturing process is established to be adequately reliable, and rigorous operational testing and evaluation have been completed, full production can begin. The system can then attain an Initial Operating Capability, and eventually Full Operational Capability and move into operations.

Congress also plays an important oversight role, authorizing budget expenditures and reviewing the progress of the system against the estimates of its costs

⁷ According to the National Academies' 2012 study, the SBX cost \$1.4 billion to develop and procure from 2002 to 2005, with another \$300 million spent on enhancements from 2006–2009 (all in 2010 dollars). A total of \$2.2 billion has been expended on it so far. National Research Council. 2012. *Making sense of ballistic missile defense*. Committee on an Assessment of Concepts and Systems for US Boost-Phase Missile Defense in Comparison to Other Alternatives. Division on Engineering and Physical Sciences. Washington, D.C.: National Academies Press. Online at www.nap.edu/catalog/13189/making-sense-of-ballistic-missile-defense-an-assessment-of-concepts

⁸ Department of Defense. 2015. Manual for the operation of the Joint Capabilities Integration and Development System (JCIDS). February 12. Online at https://dap.dau.mil/policy/Documents/2015/JCIDS_Manual_-_Release_version_20150212.pdf.

and capabilities. Congress has constructed a body of reporting and oversight requirements for major defense programs,⁹ including the Nunn-McCurdy process for holding the Department of Defense (DOD) responsible for cost overruns.

Ballistic Missile Defense Acquisitions: Significantly Reduced Oversight

More than a decade ago the Secretary of Defense exempted missile defense from the well-established oversight, accountability, and financial transparency processes¹⁰ and instead delegated much of the responsibility to the Missile Defense Agency (MDA) itself. As a result, ballistic missile defense would not be subject to the JCIDS requirements process, and the MDA would set its own requirements, review its own performance against these requirements, and consolidate, establish, and cancel programs at will without outside review. The MDA would also be exempted from standard reporting requirements about programs' progress and cost.

The Department of Defense also created a shortcut to the field for missile defense equipment by exempting missile defense programs from the obligation to satisfy standard acquisitions milestones and to complete operational testing before deployment. Instead, the MDA may "use prototype and test assets to provide early capability"¹¹ and the under secretary of defense for acquisition, technology and logistics may recommend to the secretary of defense when research and development assets are available "for emergency or contingency use."¹² This exemption allowed virtually all MDA expenditures

to be classified as research and development (R&D) funds, which are not subject to the same levels of oversight as procurement or construction funds.

These exemptions from the well-established acquisition process has allowed the Pentagon to field untested or poorly tested equipment, which today makes up key parts of the fielded GMD system. The Pentagon also restricted the release of information about targets and decoys used in testing the GMD system, hindering the ability of independent experts to monitor progress.¹³

In 2009 Congress passed legislation meant to improve the Pentagon's overall acquisitions process, the Weapon Systems Acquisition Reform Act of 2009 (Public Law 111-23),¹⁴ which the president subsequently signed. While the 2009 Reform Act did not specifically address the missile defense acquisition process, it established resources that benefit missile defense acquisitions, including a department and director of Cost Assessment and Program Evaluation (CAPE)¹⁵ which is intended to provide unbiased, independent cost estimates of major acquisitions programs and support for Analyses of Alternatives to ensure that costs are properly considered. The 2009 Reform Act also created the Office of the Deputy Assistant Secretary of Defense, Developmental Test & Evaluation (DT&E)¹⁶ which provides oversight and guidance of the developmental testing program.

However, rather than returning missile defense to the normal oversight process at this juncture, the Pentagon reaffirmed and elaborated the Missile Defense Agency's consolidated authority in a 2009 DOD directive, DOD Directive 5134.09 (DODD 5134.09).¹⁷ This Directive

⁹ The US Code (Title 10, Chapter 144) includes requirements on resolving cost overruns, as well as performing independent cost and performance assessments. See US Code. Title 10. Chapter 144. Major defense acquisition programs. Legal Information Institute. Cornell University Law School. Online at www.law.cornell.edu/uscode/text/10/subtitle-A/part-IV/chapter-144.

¹⁰ Rumsfeld, D. 2002. Missile defense program direction. Memorandum to Department of Defense leadership, January 2. Online at <http://fas.org/ssp/bmd/d20020102mda.pdf>.

¹¹ Ibid.

¹² Department of Defense (DOD). 2004. Missile Defense Agency (MDA) directive 5134.09. Washington, DC. October 9. Online at www.usa-federal-forms.com/dod/3-pdf-forms_pubs/www.dtic.mil/whs/directives/corres/pdf/d51349_100904/d51349p.pdf

¹³ Graham, B. 2002. Secrecy on missile defense grows. *The Washington Post*, June 12. A10. Online at www.washingtonpost.com/archive/politics/2002/06/12/secrecy-on-missile-defense-grows/f09acd4e-10ac-4fcd-8142-102efa7866d9/.

¹⁴ US Congress. 2009. *Weapon System Acquisition Reform Act of 2009*. Public Law 111-23. 111th Congress, May 22. Online at www.gpo.gov/fdsys/pkg/PLAW-111publ23/pdf/PLAW-111publ23.pdf.

¹⁵ Department of Defense. 2012. Directive. *Director of Cost Assessment and Program Evaluation (DCAPE)*. DoDD 5015.84. May 11. Online at www.dtic.mil/whs/directives/corres/pdf/510584p.pdf.

¹⁶ Department of Defense. No date. Deputy Assistant Secretary of Defense, Developmental Test & Evaluation (DT&E). Online at www.acq.osd.mil/dte-trmc/DTE_1.html.

¹⁷ Department of Defense. 2009. Directive. *Missile Defense Agency (MDA)*. DoDD 5134.09. September 17. Online at www.dtic.mil/whs/directives/corres/pdf/513409p.pdf.

establishes the Ballistic Missile Defense System Lifecycle Management Process as the missile defense equivalent to the DOD5000 acquisitions process used for other major Pentagon projects. The MDA remains exempt from the Joint Chiefs-led JCIDS requirement process and instead, a Warfighter Involvement Process is led by the United States Strategic Command, which takes the lead in establishing priorities and requirements for missile defense capabilities. The MDA assesses how achievable these capabilities are within time and resource constraints, and the Missile Defense Executive Board (MDEB) reviews the plans and acts in an advisory, oversight, and decision-making capacity.¹⁸

The MDA itself develops a plan to meet the capability requirements and tracks the execution of the plan.¹⁹ In lieu of the milestones needed to progress from development to fielding in the DOD5000 program, missile defense goes through “acquisition phase transitions.”

The MDA director continues to be the acquisition executive up until the system is ready for “initial production,” at which time theoretically it would be brought back under the standard oversight procedures laid out in DOD5000. However, BMDS component programs are not considered independent acquisition programs: the entire Ballistic Missile Defense System—including the GMD system and the shorter-range systems—is treated as a single major defense acquisition program rather than a set of individual programs.²⁰ For this reason, it appears that absent a directive to separate the programs, the *entire* missile defense system—the

¹⁸ The MDEB is primarily made up of DOD personnel and chaired by the Under Secretary of Defense for Acquisition, Technology and Logistics, and includes a representative from the Department of State and advisors from the National Security Staff. Department of Defense. 2010. *Ballistic missile defense review report*. Washington, DC. February. 37, 42. Online at www.defense.gov/Portals/1/features/defenseReviews/BMDR/BMDR_as_of_26JAN10_0630_for_web.pdf.

¹⁹ The Director of the MDA, under the direction and supervision of the USD (AT&L) will “Formulate acquisition strategy; make program commitments and terminations; conduct source selections; award contracts; analyze performance; make affordability trade-offs; document the BMDS program of work; and report progress. Manage all BMDS development, developmental and combined developmental/operational testing, procurement...” (DOD 2009, 6. b. (16))

²⁰ Rumsfeld 2002.

GMD system plus the shorter-range systems—would need to be ready for initial production before it would be brought under normal oversight.

It is not clear that this condition would ever be met; new initiatives get added to the Ballistic Missile Defense System, which does not have a well-defined end state.

Transitioning Ballistic Missile Defense Systems to Deployment

In the DOD5000 process, a Capability Production Document (CPD) is produced in order to move through Milestone C, which moves a system from engineering, manufacturing and development to production and deployment. The CPD provides an authoritative list of the testable capabilities the system should have and reflects the design approved by a Critical Design Review process. In contrast, under the 2009 DOD Directive, a ballistic missile defense program does not have to produce a CPD before moving from development to production, and thus does not have to have proven specific, testable capabilities before being sent to the field. In fact, the CPD does not have to be produced until responsibility for the system is transferred to the Services.

Instead of being certified as meeting the obligations of Milestone C and proceeding to initial production and then transferred to the aegis of the Services, the Under Secretary of Defense for Acquisition, Technology and Logistics (AT&L) may instead recommend to the Secretary of Defense that ballistic missile defense research and development assets are available for emergency or contingency use.²¹ While this shortcut allows for moving equipment more quickly to the field in an emergency, it does not establish a clear path for moving the GMD system back to a more rigorous acquisitions path once a perceived emergency has passed. For years, missile defense equipment has been fielded directly from research and development funds.

Implications

The Director of the Missile Defense Agency has enormous responsibility for the program.²² S/he is the

²¹ DOD 2009, 6. b. (3).

²² Thornton. M. 2015. MDA acquisition overview. Presentation. Washington, DC: Missile Defense Agency. August 13. Online at http://ndiatvc.org/images/downloads/MDA_Small_Business_Co

acquisition executive, and so is the milestone decision authority up to the production decision on the very systems s/he has developed; the head of the agency, and so organizes, directs and manages all staff and resources for the MDA; the head of contracting activity/senior procurement executive, and so manages the contracting activity; and the program manager for the entire Ballistic Missile Defense System, and so manages all the work to design, develop and test the BMDS system.

Ballistic missile defense is one of the costliest defense programs,²³ but is the only major defense program not under DOD5000 oversight. Changes to the MDA's acquisition process have been made since it was set up in 2002, such as tasking the Director of Operational Test & Evaluation to review the test program annually and the creation of a more comprehensive testing plan; creating the MDEB in 2007 to advise the MDA; and in 2008 increasing the role of the Joint Staff and other military departments in advising the MDA. The MDA also has solicited independent technical advice about how to improve reliability.²⁴ However, while these are useful steps, they are not a sufficient substitute for submitting the program to established, rigorous processes under DOD5000. The Government Accountability Office (GAO) has repeatedly reported on the GMD program's continued use of increasingly high-risk acquisition practices to meet fielding deadlines directed by the President and the Secretary of Defense.²⁵

[ference/1_thornton_final_da_acq_overview_brief_to_mda_sb_conference.pdf](#)

²³ While the GAO does not include it in the rankings of the DOD's costliest programs because the lack of oversight makes it difficult to estimate future costs, the Ballistic Missile Defense System's total cost through 2017 puts it in the top three programs for total estimated acquisition cost. Government Accountability Office (GAO). 2013. **Defense acquisitions: Assessments of selected weapon programs**. GAO-13-294SP. Washington, DC. March. 16, Table 5. Online at www.gao.gov/assets/660/653379.pdf

²⁴ The FY15 budget documents refer to an Independent Panel of Experts charged in 2014 with producing a report on improving the reliability of the GMD interceptors.

²⁵ Government Accountability Office (GAO). 2012. **Missile defense: Opportunity exists to strengthen acquisitions by reducing concurrency**. GAO-12-486. Washington, DC. April. Online at <http://gao.gov/assets/600/590277.pdf>. Also Government Accountability Office (GAO). 2013. **Missile defense: Opportunity to refocus on strengthening acquisition management**. GAO-13-432. Washington, DC. April. Online at

Despite overwhelming evidence that the GMD acquisition process is leading to higher costs and less capability, in its 2010 Ballistic Missile Defense Review Report, the Obama administration declined to bring ballistic missile defense back under standard requirements-setting and DOD5000 acquisition processes, stating: "After careful study, DOD has come to the conclusion that it does not see benefit in bringing MDA into the Joint Capabilities Integration Development System (JCIDS) or the full DoD5000 acquisition reporting process at this time."²⁶ However, problems stemming from poor acquisitions practice, such as concurrent development and fielding and fielding untested or under-tested equipment continue. A February 2016 GAO report on ballistic missile defense states that the MDA is still "relying on a highly optimistic, aggressive schedule that overlaps development and testing with production activities, compromises reliability, [and] extends risk to the warfighter."²⁷ Congress continues to add funding for unvetted projects such as the East Coast missile defense site and a study of space-based interceptors.

www.gao.gov/assets/660/654233.pdf. Also, Government Accountability Office (GAO). 2014. **Missile defense: Mixed progress in achieving acquisition goals and improving accountability**. GAO 14-351. Washington, DC. April. Online at www.gao.gov/assets/670/662194.pdf

²⁶ DOD 2010.

²⁷ Government Accountability Office. 2016. **Missile defense: Assessment of DOD's reports on status of efforts and options for improving homeland missile defense**. GAO-16-254R. Washington, DC. February 17. Online at www.gao.gov/assets/680/675263.pdf