



July 2015

FACILITIES MODERNIZATION

DOD Guidance and Processes Reflect Leading Practices for Capital Planning

Why GAO Did This Study

DOD maintains a global real-property portfolio of over 561,000 facilities, which DOD modernizes to help support its mission and workforce.

Modernization includes altering or replacing a facility to implement a new mission or higher life and safety standards. Several years ago, OSD began an effort to develop more accurate methods for estimating installation-support funding needs, including modernization.

House Report 113-446, accompanying H.R. 4435, a proposed bill for the National Defense Authorization Act for Fiscal Year 2015, included a provision for GAO to review OSD's model. This report provides (1) an overview of OSD's development of the model and reasons for not implementing it, and in the absence of the model, (2) an assessment of the extent to which DOD guidance and processes related to capital-investment decisions, including modernization, reflect leading practices for capital planning.

GAO reviewed documentation and interviewed OSD officials involved in the model's development and the decision not to implement it. GAO also compared relevant DOD guidance—including directives, policy memorandums, and processes, such as the Planning, Programming, Budgeting, and Execution process—to key leading practices for capital planning. GAO did not evaluate DOD's implementation of its guidance.

GAO is not making recommendations in this report. DOD provided written technical comments, which were incorporated into the report as appropriate.

View [GAO-15-489](#). For more information, contact Johana Ayers at (202) 512-5741 or ayersj@gao.gov.

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What GAO Found

In 2005, the Office of the Secretary of Defense (OSD) developed the Facilities Modernization Model (the model) to estimate the Department of Defense's (DOD) annual-funding requirements for modernization. However, OSD officials stated that they decided in 2009 not to implement the model and identified two primary reasons for their decision. First, OSD senior leadership determined the model was based in part on a key assumption about the expected service life of DOD facilities that officials did not believe reflected the difficulty in predicting new technologies and mission changes that would affect modernization of DOD facilities. Second, OSD officials determined that the model's output—the estimate of total annual funding for modernization requirements—did not accurately account for the cyclical nature of facility modernization, in which the costs could be higher in one year and lower in the next. Therefore, the officials stated that OSD determined that the model was not a reliable forecasting tool for the modernization funding requirements as part of DOD's budget submission. Without the model, DOD makes its capital-investment decisions, including those related to facilities modernization, using a mix of projections and project-by-project estimates.

GAO found that DOD reflects leading practices for capital planning in its guidance and processes related to the development of modernization funding requirements. Key leading practices for using information to make capital-investment decisions, based primarily on a GAO guide and Office of Management and Budget guidance, are shown in the figure below.

Key Leading Practices for Using Information to Make Capital-Investment Decisions



Source: Office of Management and Budget (OMB) and GAO. | GAO-15-489

For example, DOD guidance establishes processes for determining funding requirements—including modernization need—and reviewing and approving budget requests by taking into consideration the costs of proposed assets, the levels of risk involved in modernizing assets, and their importance to DOD's mission. The guidance also requires the military services to prioritize projects. Further, DOD guidance establishes an annual budget process for identifying and allocating resources for capital investments, including modernization, to achieve DOD's goals and objectives as aligned with its strategic plans. In addition, DOD guidance calls for a long-term capital plan that displays resources needed for both operation and maintenance and for military construction, including facilities modernization.

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Abbreviations

DOD	Department of Defense
OMB	Office of Management and Budget
OSD	Office of the Secretary of Defense
PPBE	Planning, Programming, Budgeting, and Execution Process
RPI	Real Property Inventory

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July 27, 2015

Congressional Committees

The Department of Defense (DOD) maintains a global real-property portfolio of over 561,000 facilities that DOD has estimated to be valued at about \$879 billion.¹ DOD modernizes these facilities to help support its mission and workforce. Modernization refers to the alteration or replacement of facilities solely to implement new or higher standards, to accommodate new functions, or to replace building components that typically last more than 50 years, such as the framework or foundation.² For example, a facility may be modernized to support a new mission, such as an installation assigned to support the new F-35 aircraft, or to implement new life and safety standards, such as modifications for new fire-protection systems. DOD funds modernization together with sustainment and restoration as a way to invest in its capital assets.³ Accurate and consistent estimates of modernization funding requirements can enable DOD to make informed decisions and efficiently allocate resources as it makes capital investments in its facilities.

Several years ago, the Office of the Assistant Secretary of Defense for Energy, Installations, and Environment, under the Office of the Secretary of Defense (OSD), began an effort to develop more accurate methods for

¹According to the *Department of Defense Base Structure Report Fiscal Year 2015 Baseline, A Summary of Real-Property Inventory*, as of September 30, 2014, these were the most recent data available at the time of our review. DOD facilities can be buildings, structures, or linear structures. Buildings are roofed and floored facilities enclosed by exterior walls and consisting of one or more levels that are suitable for single or multiple functions. Structures are facilities other than a building or linear structure constructed on or in the land (e.g., tower, storage tank, wharf, and pier). Linear structures are facilities whose function requires that they traverse land (e.g., runway, road, rail line, pipeline, fence, pavement, and electrical distribution line).

²See DOD Financial Management Regulation 7000.14-R, Volume 2B, Chapter 8: *Facilities Sustainment and Restoration/Modernization* (June 2013).

³Capital assets are investments in real-property (i.e., land, and structures such as facilities) and equipment which meet certain criteria, such as exceeding certain cost thresholds. Sustainment is maintenance and repair necessary to keep facilities in good working order. Restoration is a one-time repair or replacement work to restore facilities damaged by inadequate sustainment, excessive age, natural disaster, fire, accident, or other causes.

estimating installation-support funding needs, including modernization.⁴ Specifically, in 2005, the Office of the Assistant Secretary of Defense for Energy, Installations, and Environment developed a Facilities Modernization Model (the model). According to DOD officials from the Assistant Secretary of Defense for Energy, Installations, and Environment, the model would estimate annual-funding requirements for modernization of each military department's facilities.

House Report 113-446, accompanying H.R. 4435, a proposed bill for the National Defense Authorization Act for Fiscal Year 2015, included a provision for us to review OSD's Facilities Modernization Model.⁵ In our initial meeting with officials from the Office of the Assistant Secretary of Defense for Energy, Installations, and Environment, they explained that they decided in 2009 not to implement the model and not to provide guidance to the military departments to use it. Because congressional committees have expressed ongoing interest in facilities modernization, in absence of the model, this report provides (1) an overview of OSD's development of the model and reasons for not implementing it and (2) an assessment of the extent to which DOD guidance and processes related to capital-investment decisions, including modernization, reflect leading practices for capital planning.⁶

To describe OSD's development of the model and reasons for not implementing it, we interviewed officials from the Office of the Assistant Secretary of Defense for Energy, Installations, and Environment, who

⁴The Office of the Assistant Secretary of Defense for Energy, Installations, and Environment was created by the Carl Levin and Howard P. "Buck" McKeon National Defense Authorization Act for Fiscal Year 2015, Pub. L. No. 113-291, § 901(f) (2014), which merged the functions of the Office of the Assistant Secretary of Defense for Operational Energy, Plans, and Programs with the Office of the Deputy Under Secretary of Defense for Installations and Environment. According to an official with the former Office of the Deputy Under Secretary of Defense for Installations and Environment, DOD's directives, memorandums, instructions, and the Financial Management Regulation have not yet been updated to reflect the name change. For the purposes of this report, we will refer to the office by its current title: the Office of the Assistant Secretary of Defense for Energy, Installations, and Environment.

⁵H.R. Rep. No. 113-446 at 339 (May 13, 2014).

⁶Capital planning is part of the capital-asset life cycle linking budgeting, managing, and long-range planning of the capital-asset portfolio to meet the goals and objectives in the strategic and annual plan. See Office of Management and Budget Circular No. A-11, *Preparation, Submission, and Execution of the Budget* and its supplement entitled *Capital Programming Guide*, July 2014 (revised November 2014).

were involved in the model's development and the decision not to implement it. We also identified any assessments by this office of the model's strengths and limitations by reviewing documentation, including meeting minutes and summaries of discussions. We also interviewed officials from the Under Secretary of Defense (Comptroller), OSD's Cost Assessment and Program Evaluation office, and the headquarter offices of the military departments.

To assess the extent to which DOD's guidance and processes related to capital-investment decisions, including modernization, reflect leading practices for capital planning, we reviewed DOD guidance—directives, memorandums, instructions, and the financial management regulation—pertaining to the management of and funding for real-property, including modernization of facilities. We also discussed DOD guidance and processes with officials from the Office of the Assistant Secretary of Defense for Energy, Installations, and Environment and the Office of the Under Secretary of Defense (Comptroller) to understand how these relevant documents and processes related to modernization of DOD facilities. We applied key leading practices for using information to make capital-investment decisions that were developed and identified by GAO in 2007 and most recently updated for use in our 2013 report on Federal Aviation Administration facilities.⁷ GAO primarily developed these practices to highlight guidance from GAO's Executive Guide⁸ and Office of Management and Budget's (OMB) *Capital Programming Guide*⁹ as well as from leading capital-investment practices identified by the National

⁷GAO, *Federal Capital: Three Entities' Implementation of Capital Planning Principles Is Mixed*, [GAO-07-274](#) (Washington, D.C.: Feb. 23, 2007) and *FAA Facilities: Improved Condition Assessment Methods Could Better Inform Maintenance Decisions and Capital-Planning Efforts*, [GAO-13-757](#) (Washington, D.C.: Sept. 10, 2013).

⁸GAO, *Executive Guide: Leading Practices in Capital Decision-Making*, [GAO/AIMD-99-32](#) (Washington, D.C.: December 1998). In developing this guide, we identified organizations recognized for their outstanding capital decision-making practices. Through interviews and documentation obtained from site visits at these organizations, we then compared practices across the organizations and identified innovative practices used by individual organizations as well as approaches and elements common across organizations. See [GAO/AIMD-99-32](#) for additional details.

⁹OMB supplement to Circular No. A-11.

Research Council.¹⁰ We determined that these practices were still current and relevant for the purposes of this report. We compared DOD's guidance and processes to the key leading practices for capital planning: (1) needs assessment, (2) review and approval of framework with established criteria for selecting capital investments, (3) project prioritization, (4) strategic linkage, and (5) long-term capital plan. Based on the extent to which the leading practices for capital planning were reflected in DOD's guidance and processes related to capital-investment decisions including modernization funding requirements, we assigned one of three possible ratings. According to our methodology, we assigned a rating of "incorporates to a large extent" when the elements of each leading practice for capital planning were reflected in DOD's guidance and processes as sufficient, specific, and detailed support for developing DOD's investment needs and funding for facilities modernization. If DOD's guidance and processes addressed some of the elements of leading practices for capital planning—but not completely addressed all elements—we assigned a rating of "incorporates to some extent." If the evidence showed that elements of leading practices were not included or were included only a little, we assigned a rating of "incorporates to little or no extent." In addition, we discussed our ratings with the Assistant Secretary of Defense for Energy, Installations, and Environment and military department officials regarding leading capital-planning practices, to seek explanations for any differences between leading practices and DOD's guidance and processes. We did not evaluate DOD's implementation of its guidance, directives, and policy memorandums and processes, such as the Planning, Programming, Budgeting, and Execution process.

We conducted this performance audit from August 2014 to July 2015 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that

¹⁰The National Research Council, *Predicting Outcomes of Investments in Maintenance and Repair of Federal Facilities* (2012). The National Research Council is a nonprofit institution that provides studies, reports, and workshops to improve government decision making and public policy, increase public understanding, and promote the acquisition and dissemination of knowledge in matters involving science, engineering, technology, and health.

the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Background

Budgeting for Facilities Modernization

Within DOD, capital-investment decisions, including those related to facilities modernization, are part of the annual planning, programming, budget, and execution process. The budgeting portion of DOD's process requires DOD components to develop and execute the programs and budgets needed to achieve national objectives. Each component's budget request is reviewed by OSD and then is included as part of DOD's budget, which is included in the President's annual budget submission to Congress. DOD's budget materials include funding requests for modernization, which are aggregated with operation and maintenance funding for restoration funding or included as military construction projects. However, the amount of funding specifically requested for modernization is not readily identifiable within DOD's budget materials.

Funding for modernization is typically requested and provided through either operation and maintenance or military construction appropriations based on the type of work to be done and the cost of the project.¹¹ Each military service as well as other DOD components has its own operation and maintenance appropriation. Operation and maintenance appropriations are typically available for one year and fund expenses such as civilian salaries, minor construction projects, training and education, depot maintenance, and base-operations support, among other things. DOD develops its operation and maintenance budget requests in part by using projections based on the average amount of resources needed in the past and on anticipated needs. DOD's fiscal year

¹¹Work on facilities, including modernization, can be classified as a maintenance and repair project (such as preserving, restoring, or replacing components of facilities) or a construction project (such as addition, conversion, or new construction of a facility). There is no cost limit on maintenance and repair projects funded through operation and maintenance appropriations, but construction projects typically may only be funded with operation and maintenance appropriations if they cost less than \$1 million. See 10 U.S.C. § 2805. Operation and maintenance appropriations fund a wide variety of DOD activities, and typically are not broken out by project. Construction projects that cost more than \$1 million generally must be funded through the military construction appropriations, which generally are approved and authorized on a project-by-project basis.

2015 budget request for all DOD components' operation and maintenance appropriations totaled about \$199.2 billion, and for fiscal year 2016, the request was approximately \$210.0 billion.¹²

The military construction appropriations typically are available for 5 years and fund major projects such as bases, schools, and maintenance facilities, among other things. DOD develops the majority of its budget requests for military construction on a project-by-project basis. According to OSD officials, the budget request for military construction consists of projects that meet the definition of modernization, but also projects for restoration work and new construction. The military departments' budget estimates for the military construction appropriations for fiscal years 2015 and 2016 were approximately \$5.4 billion and \$7.0 billion, respectively.¹³

Guidance for Capital Investment

A range of guidance—such as directives, memorandums, instructions, and DOD's *Financial Management Regulation*—govern how DOD manages, plans, and budgets for capital investments in its facilities. The DOD directives and memorandums we reviewed establish processes for planning, funding, and managing real-property in general but do not create processes specific to facilities modernization. The DOD instructions we reviewed provide more specific guidance regarding facilities modernization. DOD's *Financial Management Regulation* provides the definition of modernization and provides general guidance on determining whether a modernization project is appropriately requested as part of requests for operation and maintenance or military construction appropriations. OSD has issued guidance—a selection of which is discussed below—to manage the military departments' investments in their facilities. Appendix I describes key DOD guidance and includes excerpts that relate to DOD's development of its modernization funding requirements for its facilities.

¹²The dollar amount is DOD's base-budget request and does not include overseas contingency operations.

¹³The dollar amount is DOD's base-budget request and does not include overseas contingency operations.

DOD guidance has specific requirements for managing DOD's real-property. For example,

- DOD Instruction 4165.70 assigns real-property management responsibilities to the Office of the Assistant Secretary of Defense for Energy, Installations, and Environment and the heads of DOD components, which include the secretaries of the military departments.¹⁴
- DOD Directive 4165.06 notes that it is DOD policy that DOD real-property shall be managed to promote the most efficient and economic use of DOD real-property assets, and assigns overall responsibility and oversight to the Under Secretary of Defense for Acquisition, Technology and Logistics.¹⁵
- DOD Instruction 4165.14 requires the Under Secretary of Defense for Acquisition, Technology, and Logistics to establish policy and develop guidance regarding maintaining a complete and accurate real-property inventory. Also, the instruction requires the secretaries of the military departments to establish the appropriate policies, programs, and procedures to implement the policy in DOD's guidance.¹⁶ For example, DOD Directive 4165.06 requires that the secretaries of the military departments implement policies and programs to ensure that their department establishes and maintains an accurate inventory for all DOD-owned, leased, licensed, and permitted properties and easements to account for the real-property under its management responsibility as well as budget and financially manage to meet the real-property requirements applicable to their departments, among other things.

In addition, the Under Secretary of Defense for Acquisition, Technology, and Logistics issued memorandums in 2013 and 2014 to establish a policy to standardize facility condition assessments across the military departments and to establish a facility policy that manages the department's support of its facilities through consistent long-term

¹⁴Department of Defense Instruction 4165.70, *Real Property Management* (Apr. 6, 2005).

¹⁵Department of Defense Directive 4165.06, *Real Property* (Oct. 13, 2004, certified current Nov. 18, 2008).

¹⁶Department of Defense Instruction 4165.14, *Real Property Inventory (RPI) and Forecasting* (Jan. 17, 2014).

investment to keep its facilities' inventory in good working order and mission capable.¹⁷

Further, DOD has provided general guidance on financial management for DOD's real-property, including developing the modernization funding requirements for its facilities. For example, DOD 7000.14-R, *Financial Management Regulation*, provides general guidance on the formulation and submission of DOD budget requests and the presentation and justification of the budget requests to Congress.¹⁸ In addition, OMB Circular A-11 outlines a full-funding policy for capital assets, under which requests for acquisition of capital assets generally must propose the full costs of the project or a useful segment of a project consistent with policy stated in OMB's Capital Programming Guide.¹⁹ OMB's *Capital Programming Guide* notes that good budgeting requires the full costs of asset acquisition be enacted in advance to help ensure that all costs and benefits are fully taken into account at the time decisions are made to provide resources for an agency. The OMB guide further states that planning and funding the full costs of capital-assets or projects allow more efficient work planning and the management of the capital project (or investment) at an agency, and they increase accountability for the achievement of the baseline goals.

¹⁷The Under Secretary of Defense for Acquisition, Technology and Logistics Memorandum, *Standardizing Facility Condition Assessments* (Sept. 10, 2013), and the Under Secretary of Defense for Acquisition, Technology and Logistics Memorandum, *Facility Sustainment and Recapitalization Policy*, (Apr. 29, 2014).

¹⁸DOD 7000.14-R.

¹⁹OMB, supplement to Circular No. A-11.

OSD Identified Two Primary Reasons for Not Implementing Its Facilities Modernization Model

OSD, with contractor support, developed the model in 2005 as part of a larger effort to develop models to estimate facility funding requirements.²⁰ According to officials from the Office of the Assistant Secretary of Defense for Energy, Installations, and Environment, the model would have helped develop modernization funding requirements for DOD facilities. Specifically, the model was to calculate the theoretical aggregate annual-funding requirement for future modernization of DOD's official facilities inventory. Officials explained that the model's cost factors and assumptions were theoretical and not intended to be accurate for a specific facility, and the resulting annual-funding requirement for facilities was not meant to be tied to specific facility projects. The computer-based model used an algorithm that calculated the annual requirement for modernization funding based on the following cost factors and assumptions:

- Plant-replacement value—the calculated cost to replace the facilities using construction costs for labor and materials under current standards,
- Useful service life—an estimate of the period of time over which a facility performs its intended purpose, considering factors such as usage, physical wear and tear, and technological change,
- Residual value of the facility—the amount that would be expected to be obtained at the end of its useful life, such as recycling or salvaging materials and any equipment that are permitted to be retained and used by DOD, and
- Estimated depreciation rate—the systematic and rational allocation of the acquisition cost of an asset, less its estimated residual value, over its estimated useful life.

In 2005, OSD formed the Facilities Modernization Model Configuration Support Panel (the working group) to review, collaborate, and agree on the model's cost factors and assumptions. Membership included representatives from OSD, the Army, the Navy, the Marine Corps, the Air Force, and Defense Logistics Agency, among others. From fiscal years 2005 through 2008, the working group regularly met and discussed the cost factors and assumptions of the model.

²⁰For information on other models to estimate facility funding requirements, see GAO, *Defense Infrastructure: Continued Management Attention Is Needed to Support Installation Facilities and Operations*, [GAO-08-502](#) (Washington, D.C.: Apr. 24, 2008).

Officials from the Office of the Assistant Secretary of Defense for Energy, Installations, and Environment explained that they decided in 2009 not to implement the model and not to provide guidance to the military departments to use it. Two primary reasons were identified for not implementing the model.

- First, there was disagreement among OSD senior leadership about the model's assumption for the expected service life of DOD's facilities—one of the key factors in the model. An OSD official explained that the model's developers calculated estimates of expected service life for each of over 400 types of facilities in DOD's inventory. The model then produced an aggregate annual-funding requirement for modernization, distributing the cost of future modernization over the expected life of the facilities. However, OSD senior leadership noted that a facility's actual service life depends in part on the need for new technologies or mission changes. Because new technologies and mission changes may not be readily predicted and may affect individual facilities, not types of facilities, the OSD official told us that the model could not be adjusted to resolve the disagreement over the expected service-life estimates. As a result, OSD senior leadership did not have confidence that the model's estimates of useful service life reflected the actual service life of DOD facilities.
- Second, OSD officials determined that the model's output—the theoretical aggregate annual-funding requirement for modernization—did not accurately account for the cyclical nature of facility modernization. An official with the Office of the Assistant Secretary of Defense for Energy, Installations, and Environment explained that modernization needs are difficult to predict. The actual modernization funding requirement could be higher in one year and lower in the next based on the projects developed by the military services to modernize facilities. However, the model produced an annual-funding requirement that distributed the cost of estimated modernization over the life of the facilities, and thus the output of the model was a continuous average amount needed for modernization. Therefore, the official stated that OSD determined that the model was not a reliable forecasting tool for the modernization funding requirements as part of DOD's budget submission for either operation and maintenance or military construction appropriations.

DOD Guidance and Processes Related to Facilities Modernization Reflects Leading Practices for Capital Planning

We found that DOD's guidance and processes related to capital-investment decisions, including modernization funding requirements, reflects key leading practices for capital planning. These key leading practices for using information to make capital-investment decisions were identified primarily from our Executive Guide²¹ and OMB's Capital Programming Guide.²² In assessing DOD's guidance against key leading practices, we found that the guidance to a large extent incorporated the leading practices for capital planning in the context of modernization, as summarized in table 1.

²¹GAO/AIMD-99-32.

²²OMB, supplement to Circular No. A-11.

Table 1: Elements of Leading Practices for Capital Planning and GAO’s Assessment of Department of Defense (DOD) Guidance and Processes

Elements of leading practices for capital planning	GAO’s assessment of DOD guidance and processes
Needs assessment	
<ul style="list-style-type: none"> • Identify resources needed based on agency’s mission • Consider the capability of existing resources • Make use of an accurate and up-to-date inventory of capital assets and facilities, as well as current information on asset condition • Use the information to make decisions about where to invest in facilities 	●
Review and approval of framework with established criteria for selecting capital investments	
<ul style="list-style-type: none"> • Establish a formal process for senior management to review and approve proposed capital assets • Consider the cost of a proposed asset, the level of risk involved in acquiring the asset, and its importance to achieving the agency mission when defining criteria for executive review • Have processes that determine the level of review and analysis based on the size, complexity, and cost of a proposed investment or its organization-wide impact 	●
Project prioritization	
<ul style="list-style-type: none"> • Have processes in which proposed capital investments should be compared to one another to create a portfolio of major assets ranked in priority order 	●
Strategic linkage	
<ul style="list-style-type: none"> • Is an integral part of an agency’s strategic-planning process • Provide a long-range plan for the capital-asset portfolio to meet the goals and objectives in the agency’s strategic and annual performance plans • Identify capital assets and define how they will help the agency achieve its goals and objectives • Identify strategic planning, which guides decision making for all spending 	●
Long-term capital plan	
<ul style="list-style-type: none"> • Should be the final and principal product resulting from the agency’s capital-planning process • Should cover 5 years or more, reflect decision makers’ priorities for the future, and be updated either annually or biennially • Include certain elements, including a statement of the agency’s mission, strategic goals and objectives; a description of the agency’s planning process; baseline assessments and identification of performance gaps; and a risk-management plan; staff requirements; timing issues, if involved in a multiagency acquisition; and plans for proposed capital assets once in use 	●

Legend:

● Solid circle means ‘incorporates to a large extent’ and notes when DOD’s guidance and processes reflected that leading practices were sufficient, specific, and detailed support for developing DOD’s estimates for investing in facilities modernization

Source: Office of Management and Budget (OMB), Circular No. A-11, *Preparation, Submission, and Execution of the Budget and its Capital Programming Guide*, July 2014 (Revised November 2014) and GAO, *Executive Guide: Leading Practices in Capital Decision-Making*, [GAO/AMD-99-32](#) (Washington, D.C.: December 1998). | GAO-15-489

Notes: GAO analyzed DOD’s guidance and processes against leading practices for capital planning that are found in OMB guidance and the GAO guide.

The following sections describe our assessment of how DOD's guidance and processes reflect the elements of each of the five leading practices for capital planning.

Needs Assessment

The first leading practice for capital planning is for an agency to assess its investment needs. Based on our analysis, we found that DOD's guidance establishes processes for determining DOD's funding requirements, including modernization needs. For example, DOD's guidance—including DOD Directive 7045.14, DOD Instructions 4165.14 and 4165.70, and DOD 7000.14-R²³—generally establish the processes used to identify the resources needed (e.g. personnel, equipment, infrastructure, and funding) to fulfill both immediate and anticipated future needs based on DOD's mission. Specifically, DOD Directive 7045.14 establishes a structured process that defines resource needs and sets details of defense strategy and proposed plans, programs and budgets. This structured process starts by translating national security objectives into defense strategy during the planning phase. This phase in turn drives the programming and budgeting phases during which, among other things, the military departments assess capital and other investment needs to meet those objectives. In addition, these policies direct the DOD components to maintain an accurate and up-to-date inventory of real-property and consider existing resources when making decisions about investment needs and funding for real-property, which includes the modernization of its facilities.

Officials with the Office of the Under Secretary of Defense (Comptroller) told us that they rely on the military departments to assess and develop their modernization funding requirements.

- For the Army's modernization projects, which are funded by operation and maintenance and military construction appropriations, officials stated that the Army identifies and develops its modernization funding requirement based primarily on its backlog of identified modernization projects.

²³DOD, Directive 7045.14, *The Planning, Programming, Budgeting, and Execution (PPBE) Process*, Jan. 25, 2013; Instruction 4165.14, *Real Property Inventory (RPI) and Forecasting* (Jan. 17, 2014); Instruction 4165.70, *Real Property Management* (Apr. 6, 2005); and DOD 7000.14-R, *Financial Management Regulation* (June 2011);

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- Navy and Marine Corps officials told us that they have a process to assess facilities' condition, capacity, and other factors to develop modernization funding estimates for both their aggregate operation and maintenance budget submission and to identify individual projects to submit for their military construction budget requests.
 - An official from the Air Force explained that the Air Force assesses and develops its modernization funding requirement for operation and maintenance by calculating 2 percent of the plant-replacement value of its existing facilities. The Air Force official stated that the Air Force identifies and assesses individual construction projects at its installations to develop its military construction budget request.²⁴

Further, OSD has memorandums in place to improve its needs-assessment processes, specifically by improving information on asset condition. OSD's September 2013 memorandum stated that DOD components use different methodologies and schedules to assess facility conditions that resulted in facility-condition index data that lacked credibility as a measure of the quality of DOD's facilities.²⁵ Thus, there was a gap in DOD's ability to use current information on the condition of its facilities because of differences in data collection across DOD components or because of inaccurate data. The memorandum directs the adoption of a standardized process to assess the condition of each facility on DOD installations by September 2018. A subsequent policy memorandum published in April 2014 established a facility sustainment and recapitalization policy for the DOD components.²⁶ The April 2014 memorandum set a goal for DOD to collect standardized condition data for 80 percent of its facilities starting in fiscal year 2016. As stated in the

²⁴Plant-replacement value represents the calculated cost to replace the current physical plant (facilities and supporting infrastructure) using current construction costs (for labor and materials) and current standards (methodologies and codes).

²⁵Under Secretary of Defense for Acquisition, Technology and Logistics Memorandum, *Standardizing Facility Condition Assessments*, (Sept. 10, 2013). The facility-condition index represents a measure of an asset's physical condition and is expressed as a percentage 0 (failed) to 100 (perfect condition).

²⁶Under Secretary of Defense for Acquisition, Technology and Logistics Memorandum, *Facility Sustainment and Recapitalization Policy* (Apr. 29, 2014). Recapitalization is the major renovation or reconstruction activities (including facility replacements) needed to keep existing facilities modern and relevant in an environment of changing standards and missions. Recapitalization extends the service life of facilities or restores lost service life. Recapitalization can include modernization.

2014 policy, it is essential that the DOD components track the overall condition of their facility inventory to make informed investment decisions today and to prepare for the reinvestment necessary to address the growing maintenance and repair backlog. Although these memorandums are not yet fully implemented, they represent a step toward improving DOD's needs-assessment process, thereby providing better information that can be used to make decisions about where to invest in facilities and their modernization.

Review and Approval of a Framework with Established Criteria for Selecting Capital Investments

Our analysis found that an OSD directive provides for processes that incorporate the elements of the second leading practice by creating a decision-making framework for selecting capital investments, including modernization. Specifically, DOD Directive 7045.14 establishes a process for senior DOD management to review and approve DOD's annual budget requests in general, which includes proposed funding for facilities modernization. This directive also directs the Under Secretary of Defense (Comptroller) to conduct and coordinate the budget review, among other things. Further, OSD's Director, Cost Assessment and Program Evaluation is to conduct and coordinate DOD's program review and provide independent analysis and advice concerning plans, programs, budgets, and capabilities in relation to U.S. defense objectives, projected threats, estimated costs, and resource constraints. To fulfill this responsibility, OSD Comptroller officials told us that the Cost Assessment and Program Evaluation staff lead the Installations Study Group that consists of a representative from the Joint Chiefs of Staff and OSD offices—such as Policy; Acquisition, Technology and Logistics; and Comptroller, among others—to address resourcing issues within DOD's annual budget submission. According to these same officials, this group considers the costs of proposed assets, the level of risk involved in acquiring or modernizing capital assets, and its importance to achieving DOD's mission. According to those officials, based on this assessment, the group directs any changes to the military departments and approves DOD's budget submission, which is then forwarded to OMB for inclusion in the President's budget submission.

Project Prioritization

We found that DOD guidance and processes allow decision makers to prioritize and select DOD capital investments, including modernization projects. For example, in developing the military departments' budget submissions for the operation and maintenance and military construction appropriations, the installations develop *Integrated Priority Lists*, in part, in response to direction in DOD Instruction 4165.70 requiring that the

installations develop a specific, annual listing of all major repair and sustainment projects, as well as restoration and modernization projects needed within the time period covered by a military installation's master plan.²⁷ According to DOD officials, the *Integrated Priority Lists* contain the funding requirements identified for each operation and maintenance and military construction project. According to these officials, these *Integrated Priority Lists* are scrutinized within the military departments' chain-of-command in preparation of the military departments' budget submissions to OSD. Furthermore, OSD Comptroller officials told us that senior DOD management officials review the department's overall budget request for consistency with the law and with DOD guidance, and to ensure that projects are executable. If OSD makes changes to the military departments' budget requests, according to an OSD Comptroller official, OSD relies on the military departments to reprioritize their *Integrated Priority Lists*.

Strategic Linkage

The fourth leading practice stresses the importance of linking capital-asset investments to an organization's overall mission and long-term strategic goals. We found that DOD guidance and processes for making investment decisions, including modernization, incorporate elements of this leading practice. For example, we found that DOD Directive 7045.14 and DOD 7000.14-R establish an annual programming and budgeting process for identifying and allocating resources for capital investments, including modernization, to achieve DOD's goals and objectives as aligned with its strategic plans. DOD Directive 7045.14 references the *Quadrennial Defense Review*, the department's major statement of defense strategy and business policy, as one of DOD's principal guides used in the budget process. DOD 7000.14-R notes that the *Quadrennial Defense Review* will continue to be the single link throughout DOD that integrates and influences all internal decision processes. The *Quadrennial Defense Review 2014*, which is the most recent review, specifically points to an initiative for defense investments in part to make needed facilities improvements that include modernization. Directive 7045.14 establishes an annual process for DOD's resource allocation within a quadrennial planning cycle. The directive indicates that this process facilitates the alignment of resources to prioritized capabilities based on overarching strategy, and provides mechanisms for DOD to

²⁷DOD officials use the term *Integrated Priority Lists* as a generic business term during the planning and programming for their estimated budget requests.

make, and implement fiscally sound decisions in support of the national security strategy and national defense strategy. Further, DOD 7000.14-R requires that the department develop its budget using strategic guidance,²⁸ which provides guidance for the development and submission of the three military departments' budget submissions to OSD, including estimates of funding needed for the modernization of DOD's facilities.

Long-Term Capital Plan

Based on our analysis, DOD guidance and processes reflect the elements of the fifth leading practice of a long-term capital plan to guide modernization investments. According to leading practices for capital planning, a long-term capital-investment plan is important to guide the implementation of organizational goals and objectives and to help decision makers establish priorities over time.

An official from the Office of the Assistant Secretary of Defense for Energy, Installations, and Environment told us that DOD's Future Years Defense Program, as well as other DOD processes, constitutes its long-term capital plan. This official noted that the Future Years Defense Program is a summary of DOD's major force programs that spans five years. The Future Years Defense Program is the program and financial plan for the DOD as approved by the Secretary of Defense. The Future Years Defense Program arrays 5 years of cost data, manpower, and force structure (and shows an additional 3 years of data about force structure), portraying this data by major force structure program for DOD internal review for the program and budget review submission. It is also provided to the Congress annually in conjunction with the President's budget. For example, projected resource needs for operation and maintenance and for military construction, including facilities modernization, are arrayed in DOD's Future Years Defense Program.

²⁸DOD 7000.14-R, entitled *Financial Management Regulation*, refers to *Strategic Planning Guidance*, *Joint Programming Guidance*, Program Objective Memorandum, and Budget Estimate Submission. According to an official from the Office of the Under Secretary of Defense for Policy, some of these strategic guidance documents have been replaced by the *Defense Planning Guidance*. According to this official, the purpose of the *Defense Planning Guidance* is to translate the defense strategy and the priorities of the Secretary of Defense into DOD direction for force planning and programming. In addition, it informs the Planning, Programming, Budgeting, and Execution (PPBE) Process as well as other force development and acquisition processes to ensure that the programmed force is able to manage risk across the range of defense missions.

However, resources specifically needed for modernization are not separately identified within the Future Years Defense Program.

Further, we analyzed DOD guidance and processes and compared them to the elements of a long-term capital plan. Based on our analysis, DOD Directive 7045.14 calls for

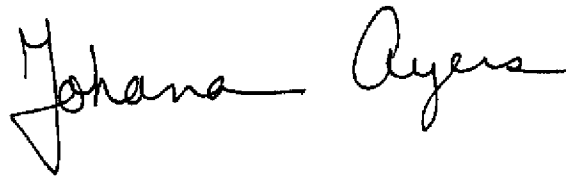
- strategy documents and assessments of the actual execution performance based on goals and strategic objectives;
- the Under Secretary of Defense for Policy to review defense planning scenarios and national plans to determine the demands that might be placed on DOD, and to identify shortfalls and allocate resources based on strategic analysis when appropriate;
- justification of DOD's spending on proposed new capital assets, which would include modernization of its facilities. Also, the directive calls for a planning process focusing on, among other things, defining the policy framework needed to manage DOD resources, including priorities, affordability, balanced risk, sustainability, feasibility, and effectiveness;
- a planning process focusing on, among other things, defining the national defense strategy necessary to help maintain national security and to support U.S. foreign policy and the integrated and balanced military forces necessary to accomplish that strategy, among other things;
- DOD components to develop and submit detailed budget estimates for their current programs in accordance with fiscal and joint programming guidelines and DOD 7000.14-R; and
- decisions associated with all phases of the Planning Programming Budget Execution Process are to be reflected in the Future Year Defense Program.

Agency Comments

We are not making any recommendations in this report. We provided a draft of this report to DOD for official review and comment. DOD provided written technical comments that were incorporated into the report, as appropriate.

We are sending copies of this report to the appropriate congressional committees as well as the Secretaries of Defense, the Army, the Navy, and the Air Force, and the Commandant of the Marine Corps. In addition, the report is available at no charge on the GAO website at <http://www.gao.gov>.

If you or your staff have any questions about this report, please contact me at (202) 512-5741 or AyersJ@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff who made key contributions to this report are listed in appendix II.

A handwritten signature in black ink that reads "Johana Ayers". The signature is written in a cursive style with a large initial "J" and "A".

Johana R. Ayers
Director
Defense Capabilities and Management

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Appendix I: Relevant Defense Guidance for Planning for Investment in Certain Capital Assets

The Department of Defense (DOD) has multiple guidance documents that provide direction concerning management and budgeting for its real-property needs, including modernization of its facilities.¹ DOD's real-property management is governed by statute and DOD directives, memorandums, instructions, and its financial management regulation.² DOD guidance includes directives, memorandums, instructions, and the Financial Management Regulation. Table 2 identifies some of the relevant DOD guidance and includes excerpts of the related requirements to manage, budget, and invest in DOD's real-property.

Table 2: Relevant Department of Defense (DOD) Guidance for Planning for Investments in Certain Capital Assets and Excerpts of the Requirements

DOD guidance title (date)	Excerpts from guidance
DOD Directive 4165.06, <i>Real-property</i> (Oct. 13, 2004, certified current Nov. 18, 2008)	States that it is DOD policy that, in accordance with Executive Order 13327, ^a DOD real-property shall be managed to promote the most efficient and economic use of DOD real-property assets and to ensure management accountability for implementing federal real-property reforms. Assigns overall responsibility and oversight to the Under Secretary of Defense for Acquisition, Technology and Logistics of DOD real-property and requires the Under Secretary to establish overarching guidance and procedures for the acquisition, management, and disposal of DOD real-property. Requires the Secretaries of the military departments to implement policies and programs to acquire, manage, and dispose of real-property in accordance with this directive. Those policies and programs shall ensure that their military departments establish and maintain an accurate inventory to account for the real-property under the departments' management and budget and financially manage to meet the real-property requirements applicable to their departments.
DOD Directive 7045.14, <i>The Planning, Programming, Budgeting, and Execution (PPBE) Process</i> (Jan. 25, 2013)	Serves as the annual resource allocation process for DOD within a quadrennial planning cycle. The Quadrennial Defense Review, force development guidance, program guidance, and budget guidance are the principal guides used in this process. Programs and budgets shall be formulated annually. The budget shall cover 1 year, and the program shall encompass an additional 4 years. Assigns responsibilities to, among others, the Under Secretary of Defense (Comptroller), Under Secretary of Defense for Policy, the Director, Cost Assessment and Program Evaluation, Under Secretary of Defense for Acquisition, Technology and Logistics, and the heads of DOD components, including the military departments. ^b

¹Capital assets consist of land, structures, and equipment, among others that have an estimated useful life of 2 years or more.

²Section 2721 of Title 10 of the United States Code directs the Secretary of Defense to prescribe regulations to, among other things, have the records of fixed property of the military departments maintained on a quantitative and monetary basis, to the extent practicable.

**Appendix I: Relevant Defense Guidance for
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Assets**

DOD guidance title (date)	Excerpts from guidance
<p>Under Secretary of Defense for Acquisition, Technology and Logistics Memorandum, <i>Standardizing Facility Condition Assessments</i> (Sept. 10, 2013)</p>	<p>Requires a standardized process for facility condition assessments to ensure consistent and reliable data necessary for sound strategic investment decisions in managing the department's built environment.</p> <p>States that establishing a DOD-wide facility condition assessment process will contribute to a more credible DOD asset management program and will support better buying power by allowing department leadership to better target fiscal resources to those facilities most in need of investment.</p> <p>Requires that defense components adopt a common process that incorporates the Sustainment Management System.</p> <p>Indicates that the military departments and Washington Headquarters Service should ensure that a facility-condition index^c for each asset on their installations is properly recorded in their respective real-property databases, with inspections using the Sustainment Management System standard process completed for all facilities and facility components within 5 years of the date of this policy document.</p>
<p>Under Secretary of Defense for Acquisition, Technology and Logistics Memorandum, <i>Facility Sustainment and Recapitalization Policy</i> (Apr. 29, 2014)</p>	<p>Establishes a facility sustainment and recapitalization policy consisting of three elements:</p> <ul style="list-style-type: none"> • DOD's goal to fund sustainment programs at 90 percent or higher of the Facility Sustainment Model requirement; • The goal of 80 percent of a component's facility inventory they manage beginning in fiscal year 2016 must have a facility-condition index; and Beginning with fiscal year 2016 program budget review, DOD components must develop mitigation plans for those facilities with a facility-condition index below 60 percent as reported in the latest annual submission to the department's Real Property Asset Database. The plans will provide the recommended mitigation action—repair, replace, mothball, or demolish—and estimate the cost of the action, and a notional fiscal year for funding the mitigation. The DOD components shall submit these plans annually to the Deputy Under Secretary of Defense for Installations and Environment in conjunction with their Program Objective Memorandum submissions.
<p>DOD Instruction 4165.14, <i>Real Property Inventory (RPI) and Forecasting</i> (Jan. 17, 2014)</p>	<p>Provides general procedures for reporting the required information during the acquisition, management, and disposal of a real-property asset to maintain a complete and accurate real-property inventory, and the Real Property Information Model data that must be verified in the physical inventory process.</p> <p>Requires the military departments and the Washington Headquarters Services, among other things, to report changes observed since the prior physical inventories, which are to occur every 5 years for most property assets, or, for those real-property assets designated as historic, every 3 years.</p>
<p>DOD Instruction 4165.70, <i>Real Property Management</i> (Apr. 6, 2005)</p>	<p>Assigns responsibility to the Deputy Under Secretary of Defense for Installations and Environment for providing additional guidance and procedures, as required, for implementing real-property management policy.</p> <p>Requires the Secretaries of the military departments to establish programs and procedures to manage real-property in accordance with applicable law and certain policies, procedures, and guidance. They are also required to accurately inventory and account for the real-property under their accountability, and maintain a program monitoring the use of real-property to ensure that all real-property holdings under their control are being used to the maximum extent possible consistent with both peacetime and mobilization requirements.</p> <p>Assigns responsibility to real-property administrators within the military departments for maintaining a current inventory and up-to-date information regarding the cost, functional use, status, condition, utilization, present value, maintenance and management of each individual real-property unit in their real-property inventory, among other things.</p> <p>Requires DOD components (including military departments) to periodically review their real-property holdings, both land and facilities, to identify unneeded and underused property.</p>

**Appendix I: Relevant Defense Guidance for
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Assets**

DOD guidance title (date)	Excerpts from guidance
DOD 7000.14-R, <i>Financial Management Regulation</i> , (June 2011)	Provides financial management requirements, systems, and functions for all appropriated and nonappropriated, working capital, revolving, and trust-fund activities. Provides general guidance on the formulation and submission of the budget requests program and budget review submission and the presentation and justification of budget requests to the Congress.

Source: GAO's analysis of DOD guidance documents. | GAO-15-489

^aThe order states that it is the policy of the United States to promote the efficient and economical use of America's real-property assets. Executive Order 13327, Federal Real-property Asset Management (Feb. 4, 2004).

^bThe Office of the Secretary of Defense, the military departments (including their reserve components), the Office of the Chairman of the Joint Chiefs of Staff and the Joint Staff, the Combatant Commands, the Office of the Inspector General of DOD, the defense agencies, the DOD field activities, and all other organizational entities in DOD (referred to collectively in DOD Directive 7045.14 as the "DOD Components").

^cThe facility-condition index represents a measure of an asset's physical condition and is expressed as a percentage 0 (failed) to 100 (perfect condition).

Appendix II: GAO Contact and Staff Acknowledgments

GAO Contact

Johana R. Ayers, (202) 512-5741 or ayersj@gao.gov

Staff Acknowledgments

In addition to the contact named above, Gina Hoffman (Assistant Director), Pat Bohan, Carol Petersen, Richard Powelson, Charles (Todd) Schartung, Jeff Tessin, and Michael Willems made key contributions to this report.

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