THE BUDGET DOCUMENTS

Budget of the United States Government, Fiscal Year 1998 contains the Budget Message of the President and information on the President's 1998 budget proposals. In addition, the Budget includes a descriptive discussion of Federal programs organized by function, i.e., by the primary purpose of the activity.

Analytical Perspectives, Budget of the United States Government, Fiscal Year 1998 contains analyses that are designed to highlight specified subject areas or provide other significant presentations of budget data that place the budget in perspective.

The Analytical Perspectives volume includes economic and accounting analyses; information on Federal receipts and collections; analyses of Federal spending; detailed information on Federal borrowing and debt; the Budget Enforcement Act preview report; current services estimates; and other technical presentations. It also includes information on the budget system and concepts and a listing of the Federal programs by agency and account.

Historical Tables, Budget of the United States Government, Fiscal Year 1998 provides data on budget receipts, outlays, surpluses or deficits, Federal debt, and Federal employment covering an extended time period—in most cases beginning in fiscal year 1940 or earlier and ending in fiscal year 2002. These are much longer time periods than those covered by similar tables in other budget documents. As much as possible, the data in this volume and all other historical data in the budget documents have been made consistent with the concepts and presentation used in the 1998 Budget, so the data series are comparable over time.

Budget of the United States Government, Fiscal Year 1998—Appendix contains detailed information on the various appropriations and funds that constitute the budget and is designed primarily for the use of the Appropriations Committee. The Appendix contains more detailed financial information on individual programs and appropriation accounts than any of the other budget documents. It includes for each agency: the proposed text of appropriations language, budget schedules for each account, new legislative proposals, explanations of the work to be performed and the funds needed, and proposed general provisions applicable to the appropriations of entire agencies or group of agencies. Supplemental and rescission proposals for the current year are presented separately. Information is also provided on certain activities whose outlays are not part of the budget totals.

A Citizen’s Guide to the Federal Budget, Budget of the United States Government, Fiscal Year 1998 is an Office of Management and Budget (OMB) publication that provides general information about the budget and the budget process for the general public.

Budget System and Concepts, Fiscal Year 1998 contains an explanation of the system and concepts used to formulate the President’s budget proposals.

Principles of Budgeting for Capital Asset Acquisitions presents the principles the Administration plans to use in budgeting for capital projects.

AUTOMATED SOURCES OF BUDGET INFORMATION

The information contained in these documents is available in electronic format from the following sources:

CD-ROM. The CD-ROM contains all of the budget documents and software to support reading, printing, and searching the documents. The CD-ROM also has many of the tables in the budget in spreadsheet format.

Internet. All budget documents, including documents that are released at a future date, will be available for downloading in several formats from the Internet. To access documents through the World Wide Web, use the following address:

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GENERAL NOTE

All years referred to are fiscal years, unless otherwise noted.

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INTRODUCTION

The Clinton Administration has been working for four years to create a Government that lives within its resources and is more selective in how it uses the taxpayers money. One example of how the Government is doing more with less is how it plans and budgets for capital assets.

The Administration has developed the following “Principles of Budgeting for Capital Asset Acquisitions.” The principles stress the importance of better planning, cost benefit analysis, financing, and risk management. A Glossary defines key terms used in the principles.

The principles reinforce the long-standing budget practice that specifies that all agencies request full funding in advance for the entire cost of a capital project to ensure that the full costs are known at the time decisions are made to provide resources. In support of this principle, the FY 1998 Budget requests full funding for new acquisitions and many acquisitions incrementally funded in the past.

The Office of Management and Budget will be working with the Congress, the President’s Management Council, the Chief Financial Officers Council, the Chief Information Officers Council, and individual agencies to help carry out these principles.

Later this year the Administration plans to publish a “Capital Programming Guide” that will assist professionals in the Federal Government in planning, budgeting, acquiring, managing risk, and operating capital assets. A draft of the Guide is currently in circulation.

Capital assets as defined here are buildings, information technology, and a wide variety of other construction and equipment, including defense procurement, owned by the Federal government and used to deliver Federal services. The FY 1998 Budget includes an estimated $59.8 billion in outlays for capital assets for 1998.

The Administration’s efforts to improve the effectiveness of Federal investments in capital assets is discussed more fully in the Analytical Perspectives volume of the FY 1998 Budget, Chapter 6: “Federal Investment Spending and Capital Budgeting.” Capital assets are addressed in Part II of Chapter 6, and an Appendix to Part II also has the “Principles of Budgeting for Capital Asset Acquisitions.”
PRINCIPLES OF BUDGETING FOR CAPITAL ASSET ACQUISITIONS

Introduction and Summary

The Administration plans to use the following principles in budgeting for capital asset acquisitions. These principles address planning, costs and benefits, financing, and risk management requirements that should be satisfied before a proposal for the acquisition of capital assets can be included in the Administration’s budget. A Glossary describes key terms. A “Capital Programming Guide” is being developed that will provide detailed information on future planning and acquisition of capital assets.

The principles are organized in the following four sections:

A. Planning. This section focuses on the need to ensure that capital assets support core/priority missions of the agency; the assets have demonstrated a projected return on investment that is clearly equal to or better than alternative uses of available public resources; the risk associated with the assets is understood and managed at all stages; and the acquisition is implemented in phased, successive segments, unless it can be demonstrated there are significant economies of scale at acceptable risk from funding more than one segment or there are multiple units that need to be acquired at the same time.

B. Costs and Benefits. This section emphasizes that the asset should be justified primarily by benefit-cost analysis, including lifecycle costs; that all costs are understood in advance; and that cost, schedule, and performance goals are identified that can be measured using an earned value management system or similar system.

C. Principles of Financing. This section stresses that useful segments are to be fully funded with regular or advance appropriations or both, enforced by a proposed new Budget Enforcement Act scorekeeping rule; that as a general rule, planning segments should be financed separately from procurement of the asset; and that agencies are encouraged to aggregate assets in capital acquisition accounts and take other steps to accommodate lumpiness or “spikes” in funding for justified acquisitions.

D. Risk Management. This section is to help ensure that risk is analyzed and managed carefully in the acquisition of the asset. Strategies can include separate accounts for capital asset acquisitions, the use of apportionment to encourage sound management, and the selection of efficient types of contracts and pricing mechanisms in order to allocate risk appropriately between the contractor and the Government. In addition, cost, schedule, and performance goals are to be controlled and monitored by using an earned value management system or a similar system; and if progress toward these goals is not met there is a formal review process to evaluate whether the acquisition should continue or be terminated.

A Glossary defines key terms, including capital assets. As defined here, capital assets are land, structures, equipment, and intellectual property (including software) that are used by the Federal Government, including weapon systems. Not included are grants to States or others for their acquisition of capital assets.

A. Planning

Investments in major capital assets proposed for funding in the Administration’s budget should:

1. support core/priority mission functions that need to be performed by the Federal Government;
2. be undertaken by the requesting agency because no alternative private sector or governmental source can support the function more efficiently;
3. support work processes that have been simplified or otherwise redesigned to reduce costs, improve effectiveness, and make maximum use of commercial, off-the-shelf technology;

4. demonstrate a projected return on the investment that is clearly equal to or better than alternative uses of available public resources. Return may include: improved mission performance in accordance with measures developed pursuant to the Government Performance and Results Act; reduced cost; increased quality, speed, or flexibility; and increased customer and employee satisfaction. Return should be adjusted for such risk factors as the project’s technical complexity, the agency’s management capacity, the likelihood of cost overruns, and the consequences of under- or non-performance.

5. for information technology investments, be consistent with Federal, agency, and bureau information architectures which: integrate agency work processes and information flows with technology to achieve the agency’s strategic goals; reflect the agency’s technology vision and year 2000 compliance plan; and specify standards that enable information exchange and resource sharing, while retaining flexibility in the choice of suppliers and in the design of local work processes;

6. reduce risk by: avoiding or isolating custom-designed components to minimize the potential adverse consequences on the overall project; using fully tested pilots, simulations, or prototype implementations when necessary before going to production; establishing clear measures and accountability for project progress; and, securing substantial involvement and buy-in throughout the project from the program officials who will use the system;

7. be implemented in phased, successive segments as narrow in scope and brief in duration as practicable, each of which solves a specific part of an overall mission problem and delivers a measurable net benefit independent of future segments, unless it can be demonstrated that there are significant economies of scale at acceptable risk from funding more than one segment or there are multiple units that need to be acquired at the same time; and

8. employ an acquisition strategy that appropriately allocates risk between the Government and the contractor, effectively uses competition, ties contract payments to accomplishments, and takes maximum advantage of commercial technology.

Prototypes require the same justification as other capital assets.

As a general presumption, OMB will recommend new or continued funding only for those capital asset investments that satisfy these criteria. Funding for those projects will be recommended on a phased basis by segment, unless it can be demonstrated that there are significant economies of scale at acceptable risk from funding more than one segment or there are multiple units that need to be acquired at the same time. (For more information, see the discussion of “economically and programmatically separable segments,” in OMB Circular A-11, Part 3, “Planning, Budgeting and Acquisition of Fixed Assets,” July 1996, and the Glossary entry, “capital project and useful segments of a capital project.”)

OMB recognizes that many agencies are in the middle of ongoing projects, and they may not be able immediately to satisfy the criteria. For those projects that do not satisfy the criteria, OMB will consider requests to use 1997 and 1998 funds to finance additional planning, as necessary, to support the establishment of realistic cost, schedule, and performance goals for the completion of the project. This planning could include: the redesign of work processes, the evaluation of alternative solutions, the development of information system architectures, and, if necessary, the purchase and evaluation of prototypes.
Realistic goals are necessary for agency portfolio analysis to determine the viability of the project, to provide the basis for fully funding the project to completion, and setting the baseline for management accountability to deliver the project within goals.

Because OMB considers this information essential to agencies’ long-term success, OMB will use this information both in preparing the Administration’s budget and, in conjunction with cost, schedule, and performance data, as apportionments are made. Agencies are encouraged to work with their OMB representative to arrive at a mutually satisfactory process, format, and timetable for providing the requested information.

B. Costs and Benefits

The justification of the project should evaluate and discuss the extent to which the project meets the above criteria and should also include:

1. an analysis of the project’s total lifecycle costs and benefits, including the total budget authority required for the asset, consistent with policies described in OMB Circular A-94: “Guidelines and Discount Rates for Benefit-Cost Analysis of Federal Programs” (October 1992);

2. an analysis of the risk of the project including how risks will be isolated, minimized, monitored, and controlled, and, for major programs, an evaluation and estimate by the Chief Financial Officer of the probability of achieving the proposed goals;

3. if, after the planning phase, the procurement is proposed for funding in segments, an analysis showing that the proposed segment is economically and programmatically justified—that is, it is programmatically useful if no further investments are funded, and in this application its benefits exceed its costs; and

4. show cost, schedule, and performance goals for the project (or the useful segment being proposed) that can be measured throughout the acquisition process using an earned value management system or similar system. Earned value is described in OMB Circular A-11, Part 3, “Planning, Budgeting and Acquisition of Fixed Assets,” (July 1996), Appendix 300C.

C. Principles of Financing

Principle 1: Full Funding

Budget authority sufficient to complete a useful segment of a capital project (or the entire capital project, if it is not divisible into useful segments) must be appropriated before any obligations for the useful segment (or project) may be incurred.

Enforcement: This budget proposes a new Budget Enforcement Act scorekeeping rule to enforce this principle. The proposed rule is the following:

“An appropriations act that provides only partial funding for a useful segment of a capital project will be scored for the estimated total budget authority for the useful segment in the fiscal year in which the partial funding is provided, unless the appropriation language clearly prohibits obligations from being incurred until complete funding for the useful segment is provided.

“A useful segment of a capital project is defined as a component of a capital project that provides either:

- information that allows the agency to plan the capital project, develop the design, and assess the benefits, costs, and risks before proceeding to full acquisition of the useful asset (or canceling the acquisition). This information comes from activities, or planning segments, that include but are not limited to market research of available solutions, architectural drawings, geological
studies, engineering and design studies, and prototypes. Because of uncertainty regarding the identification of separate planning segments for research and development activities, the application of full funding concepts to research and development planning will need more study pending preparation of the 1999 budget; or

- a useful asset for which the benefits exceed the costs even if no further funding is appropriated.”

Explanation: Good budgeting requires that appropriations for 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. Full funding with regular appropriations in the budget year also leads to tradeoffs within the budget year with spending for other capital assets and with spending for purposes other than capital assets. Full funding increases the opportunity to use performance-based fixed price contracts, allows for more efficient work planning and management of the capital project, and increases the accountability for the achievement of the baseline goals.

When full funding is not followed and capital projects or useful segments are funded in increments, without certainty if or when future funding will be available, the result is sometimes poor planning, acquisition of assets not fully justified, higher acquisition costs, cancellation of major projects, the loss of sunk costs, or inadequate funding to maintain and operate the assets.

Principle 2: Regular and Advance Appropriations

Regular appropriations for the full funding of a capital project or a useful segment of a capital project in the budget year are preferred. If this results in spikes that, in the judgment of OMB, cannot be accommodated by the agency or the Congress, a combination of regular and advance appropriations that together provide full funding for a capital project or a useful segment should be proposed in the budget.

Explanation: Principle 1 (Full Funding) is met as long as a combination of regular and advance appropriations provide budget authority sufficient to complete the capital project or useful segment. Full funding in the budget year with regular appropriations alone is preferred because it leads to tradeoffs within the budget year with spending for other capital assets and with spending for purposes other than capital assets. In contrast, full funding for a capital project over several years with regular appropriations for the first year and advance appropriations for subsequent years may bias tradeoffs in the budget year in favor of the proposed asset because with advance appropriations the full cost of the asset is not included in the budget year. Advance appropriations, because they are scored in the year they become available for obligation, may constrain the budget authority and outlays available for regular appropriations of that year.

If, however, the lumpiness caused by regular appropriations cannot be accommodated within an agency or Appropriations Subcommittee, advance appropriations can ameliorate that problem while still providing that all of the budget authority is enacted in advance for the capital project or useful segment. The latter helps ensure that agencies develop appropriate plans and budgets and that all costs and benefits are identified prior to providing resources. In addition, amounts of advance appropriations can be matched to funding requirements for completing natural components of the useful segment. Advance appropriations have the same benefits as regular appropriations for improved planning, management, and accountability of the project.

Principle 3: Separate Funding of Planning Segments

As a general rule, planning segments of a capital project should be financed separately from the procurement of a useful asset.

Explanation: The agency must have information that allows it to plan the capital project, develop the design, and assess the benefits, costs, and risks before proceeding to procurement of the useful asset. This is especially important for high risk acquisitions. This information comes from activities, or planning segments, that include but are not limited to market research of available solutions, architectural drawings, geological studies, engineering and design studies, and prototypes. The
construction of a prototype that is a capital asset, because of its cost and risk, should be justified and planned as carefully as the project itself. The process of gathering information for a capital project may consist of one or more planning segments, depending on the nature of the asset. Funding these segments separately will help ensure that the necessary information is available to establish cost, schedule, and performance goals before proceeding to procurement.

If budget authority for planning segments and procurement of the useful asset are enacted together, OMB may wish to apportion budget authority for one or several planning segments separately from procurement of the useful asset.

**Principle 4: Accommodation of Lumpiness or "Spikes" and Separate Capital Acquisition Accounts**

To accommodate lumpiness or "spikes" in funding justified capital acquisitions, agencies, working with OMB, are encouraged to aggregate financing for capital asset acquisitions in one or several separate capital acquisition budget accounts within the agency, to the extent possible within the agency's total budget request.

**Explanation:** Large, temporary, year-to-year increases in budget authority, sometimes called lumps or spikes, may create a bias against the acquisition of justified capital assets. Agencies, working with OMB, should seek ways to avoid this bias and accommodate such spikes for justified acquisitions. Aggregation of capital acquisitions in separate accounts may:

- reduce spikes within an agency or bureau by providing roughly the same level of spending for acquisitions each year;
- help to identify the source of spikes and to explain them. Capital acquisitions are more lumpy than operating expenses; and with a capital acquisition account, it can be seen that an increase in operating expenses is not being hidden and attributed to one-time asset purchases;
- reduce the pressure for capital spikes to crowd out operating expenses; and
- improve justification and make proposals easier to evaluate, since capital acquisitions are generally analyzed in a different manner than operating expenses (e.g., capital acquisitions have a longer time horizon of benefits and life-cycle costs).

**D. Risk Management**

Risk management should be central to the planning, budgeting, and acquisition process. Failure to analyze and manage the inherent risk in all capital asset acquisitions may contribute to cost overruns, schedule shortfalls, and acquisitions that fail to perform as expected. For each major capital project a risk analysis that includes how risks will be isolated, minimized, monitored, and controlled may help prevent these problems.

The project cost, schedule and performance goals established through the planning phase of the project are the basis for approval to procure the asset and the basis for assessing risk. During the procurement phase performance-based management systems (earned value or similar system) must be used to provide contractor and Government management visibility on the achievement of, or deviation from, goals until the asset is accepted and operational. If goals are not being met, performance-based management systems allow for early identification of problems, potential corrective actions, and changes to the original goals needed to complete the project and necessary for agency portfolio analysis decisions. These systems also allow for Administration decisions to recommend meaningful modifications for increased funding to the Congress, or termination of the project, based on its revised expected return on investment in comparison to alternative uses of the funds. Agencies must ensure that the necessary acquisition strategies are implemented to reduce the risk of cost escalation and the risk of failure to achieve schedule and performance goals. These strategies may include:

1. having budget authority appropriated in separate capital asset acquisition accounts;
2. apportioning budget authority for a useful segment;
3. establishing thresholds for cost, schedule, and performance goals of the acquisition, including return on investment, which if not met may result in cancellation of the acquisition;
4. selecting types of contracts and pricing mechanisms that are efficient and that provide incentives to contractors in order to allocate risk appropriately between the contractor and the Government;
5. monitoring cost, schedule, and performance goals for the project (or the useful segment being proposed) using an earned value management system or similar system. Earned value is described in OMB Circular A-11, Part 3, “Planning, Budgeting and Acquisition of Fixed Assets” (July 1996), Appendix 300C; and
6. if progress is not within 90 percent of goals, or if new information is available that would indicate a greater return on investment from alternative uses of funds, institute senior management review of the project through portfolio analysis to determine the continued viability of the project with modifications, or the termination of the project, and the start of exploration for alternative solutions if it is necessary to fill a gap in agency strategic goals and objectives.

E. Glossary

Appropriations

An appropriation provides budget authority that permits Government officials to incur obligations that result in immediate or future outlays of Government funds.

Regular annual appropriations: These appropriations are:
• enacted normally in the current year;
• scored entirely in the budget year; and
• available for obligation in the budget year and subsequent years if specified in the language. (See “Availability,” below.)

Advance appropriations: Advance appropriations may be accompanied by regular annual appropriations to provide funds available for obligation in the budget year as well as subsequent years. Advance appropriations are:
• enacted normally in the current year;
• scored after the budget year (e.g., in each of one, two, or more later years, depending on the language); and
• available for obligation in the year scored and subsequent years if specified in the language. (See “Availability,” below.)

Availability: Appropriations made in appropriations acts are available for obligation only in the budget year unless the language specifies that an appropriation is available for a longer period. If the language specifies that the funds are to remain available until the end of a certain year beyond the budget year, the availability is said to be “multi-year.” If the language specifies that the funds are to remain available until expended, the availability is said to be “no-year.” Appropriations for major procurements and construction projects are typically made available for multiple years or until expended.

Capital Assets

Capital assets are land, structures, equipment, and intellectual property (including software) that are used by the Federal Government and have an estimated useful life of two years or more. Capital assets exclude items acquired for resale in the ordinary course of operations or held for the purpose of physical consumption such as operating materials and supplies. The cost of a capital asset includes both its purchase price and all other costs incurred to bring it to a form and location suitable for its intended use.

Capital assets may be acquired in different ways: through purchase, construction, or manufacture; through a lease-purchase or other capital lease, regardless of whether title has passed to the Federal Government; through an operating lease for an asset with an estimated useful life of two years or more; or through exchange. Capital assets include leasehold improvements and land rights; as-
sets owned by the Federal Government but located in a foreign country or held by others (such as Federal contractors, state and local governments, or colleges and universities); and assets whose ownership is shared by the Federal Government with other entities. Capital assets include not only the assets as initially acquired but also additions; improvements; replacements; rearrangements and reinstallations; and major repairs but not ordinary repairs and maintenance.

Examples of capital assets include the following, but are not limited to them:

- office buildings, hospitals, laboratories, schools, and prisons;
- dams, power plants, and water resources projects;
- furniture, elevators, and printing presses;
- motor vehicles, airplanes, and ships;
- satellites and space exploration equipment;
- information technology hardware and software; and
- Department of Defense weapons systems.

Capital assets may or may not be capitalized (i.e., recorded in an entity's balance sheet) under Federal accounting standards. Examples of capital assets not capitalized are Department of Defense weapons systems, heritage assets, stewardship land, and some software.

Capital assets do not include grants for acquiring capital assets made to state and local governments or other entities (such as National Science Foundation grants to universities or Department of Transportation grants to AMTRAK). Capital assets also do not include intangible assets such as the knowledge resulting from research and development or the human capital resulting from education and training, although capital assets do include land, structures, equipment, and intellectual property (including software) that the Federal Government uses in research and development and education and training.

**Capital Project and Useful Segments of a Capital Project**

The total capital project, or acquisition of a capital asset, includes useful segments that are either planning segments or useful assets.

**Planning segments:** A planning segment of a capital project provides information that allows the agency to develop the design; assess the benefits, costs, and risks; and establish realistic baseline cost, schedule, and performance goals before proceeding to full acquisition of the useful asset (or canceling the acquisition). This information comes from activities, or planning segments, that include but are not limited to market research of available solutions, architectural drawings, geological studies, engineering and design studies, and prototypes. The process of gathering information for a capital project may consist of one or more planning segments, depending on the nature of the asset. If the project includes a prototype that is a capital asset, the prototype may itself be one segment or may be divisible into more than one segment. Because of uncertainty regarding the identification of separate planning segments for research and development activities, the application of full funding concepts to research and development planning will need more study pending preparation of the 1999 budget.

**Useful asset:** A useful asset is an economically and programmatically separate segment of the asset procurement stage of the capital project that provides an asset for which the benefits exceed the costs, even if no further funding is appropriated. The total capital asset procurement may include one or more useful assets, although it may not be possible to divide all procurements in this way. Illustrations follow:

Illustration 1: If the construction of a building meets the justification criteria and has benefits greater than its costs without further investment, then the construction of that building is a “useful segment.” Excavation is not a useful segment because no useful
asset results from the excavation alone if no further funding becomes available. For a campus of several buildings, a useful segment is one complete building if that building has programmatic benefits that exceed its costs regardless of whether the other buildings are constructed, even though that building may not be at its maximum use.

Illustration 2: If the full acquisition is for several items (e.g., aircraft), the useful segment would be the number of complete aircraft required to achieve benefits that exceed costs even if no further funding becomes available. In contrast, some portion of several aircraft (e.g., engines for five aircraft) would not be a useful segment if no further funding is available, nor would one aircraft be a useful segment if two or more are required for benefits to exceed costs.

Illustration 3: For information technology, a module (the information technology equivalent of “useful segment”) is separable if it is useful in itself without subsequent modules. The module should be designed so that it can be enhanced or integrated with subsequent modules if future funding becomes available.

**Earned Value**

Earned value refers to a performance-based management system for establishing baseline cost, schedule, and performance goals for a capital project and measuring progress against the goals. Earned value is described in OMB Circular A-11, Part 3, “Planning, Budgeting and Acquisition of Fixed Assets” (July 1996), Appendix 300C.

**Funding**

**Full funding:** Full funding means that appropriations—regular appropriations or advance appropriations—are enacted that are sufficient in total to complete a useful segment of a capital project before any obligations may be incurred for that segment. Full funding for an entire capital project is required if the project cannot be divided into more than one useful segment. If the asset can be divided into more than one useful segment, full funding for a project may be desirable, but is not required to constitute full funding.

**Incremental (partial) funding:** Incremental (partial) funding means that appropriations—regular appropriations or advance appropriations—are enacted for just part of a useful segment of a capital project, if the project has useful segments, or for part of the capital project as a whole, if it is not divisible into useful segments. Under incremental funding for a capital asset, which is not permitted under these principles, the funds could be obligated to start the segment (or project) despite the fact that they are insufficient to complete a useful segment or project.

**Risk Management**

Risk management is an organized method of identifying and measuring risk and developing, selecting, and managing options for handling these risks. Before beginning any procurement, managers should review and revise as needed the acquisition plan to ensure that risk management techniques considered in the planning phase are still appropriate.

There are three key principles for managing risk when procuring capital assets: (1) avoiding or limiting the amount of development work; (2) making effective use of competition and financial incentives; and (3) establishing a performance-based acquisition management system that provides for accountability for program successes and failures, such as an earned value system or similar system.

There are several types of risk an agency should consider as part of risk management. The types of risk include:

- schedule risk;
- cost risk;
- technical feasibility;
- risk of technical obsolescence;
- dependencies between a new project and other projects or systems (e.g., closed architectures); and
- risk of creating a monopoly for future procurement.
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