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# ADS Chapter 548

## Program-Funded Information Technology (IT) Reviews

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**Functional Series 500 – Management Services  
ADS 548 – Program-Funded Information Technology (IT) Reviews**

*\*This chapter has been reformatted, edited, and modified in its entirety.*

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## ADS Chapter 548 – Program-Funded Information Technology (IT) Reviews

### 548.1 OVERVIEW

Effective Date: 08/15/2006

This chapter provides the authority, policy directives, and required procedures for the mandated [Independent Verification and Validation \(IV&V\)](#) review of [USAID's program-funded IT investments](#) with a threshold of \$100,000 or more over the full IT project life cycle up to five (5) years. Full IT [life cycle costs](#) include all direct and indirect costs for planning, procuring, operating and maintaining, and disposing of the IT components.

#### The Challenge of Development Projects with an IT Component<sup>1</sup>

Information Technology (IT) is increasingly an important factor in international development projects. This fact is reflected in the global IT initiatives at the Agency. As a result, more and more development projects involve an IT component that uses many of the latest technologies available. Subsequently, these projects have become highly visible for the following reasons:

- A focus on the strategic value of IT for international development,
- The number and position of stakeholders involved,
- The potential impact on more than one country,
- The potential impact on more than one sector in a given country, and
- The significant impact on business processes in [host country](#) institutions within the business and political environment.

These development projects present USAID Project Managers with new planning and implementation challenges. In addition to the regular pressures to deliver faster, cheaper, and sustainable development projects, Project Managers at USAID Missions now contend with the following:

- Multi-organizational, geographically dispersed project teams;
- Rapidly evolving technologies; and

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<sup>1</sup> As described on the ADS 548 Web site: <http://inside.usaid.gov/PMO/ads548/>. [Please note that this is a USAID intranet Web site and is only available to authorized users. Please contact [ADS-548Review@usaid.gov](mailto:ADS-548Review@usaid.gov) for further information.]

- Limited technical resources within the Missions to provide an impartial review of proposals submitted by contractors, thereby ensuring the implementation of projects with the most suitable technologies and IT methodology.

This combination of challenges can result in late projects with cost overruns, scaled-down features from the original requirement specifications, and, in the worst case, project failure.

The “ADS 548 IV&V Review” process addresses these challenges by assisting Project Managers in implementing successful, effective, and efficient IT components of the projects to ensure the best return on investment dollars.

## **548.2 PRIMARY RESPONSIBILITIES**

Effective Date: 08/15/2006

**a.** The Bureau for Management, Program Management Office, Business [Enterprise Architecture](#) Division (M/PMO/BEA), acting under the authority of the Chief Information Officer (CIO), provides Independent [Verification & Validation](#) (IV&V) analysis support for the IT components of Agency program-funded activities that have a threshold of \$100,000 or more over the full IT project life cycle up to five (5) years.

**1.** The Program Management Office (PMO) notifies the Bureau for Economic Growth, Agriculture, and Trade (EGAT) of functional IT requirements. EGAT coordinates with Project Managers (or designated representatives) to address IT-related support activities available through EGAT.

**2.** The PMO notifies the Bureau for Policy and Program Coordination (PPC) of functional IT requirements.

**b.** USAID/Washington (USAID/W) and Program Officers, Project Managers or [Cognizant Technical Officers \(CTOs\)](#) (or designated representatives) are responsible for contacting M/PMO/BEA at the earliest possible planning stage to request an IV&V review of the IT components of the program-funded activities.

**c.** The Mission Contracting Officer (CO) oversees the procurement process.

**d.** The Bureau for Management, Information Resource Management Division (M/IRM) and Program Management Office (PMO) is responsible for planning, operating, and maintaining the Agency’s IT infrastructure and policy directives.

## **548.3 POLICY DIRECTIVES AND REQUIRED PROCEDURES**

Effective Date: 08/15/2006

Independent Verification and Validation (IV&V) is a reliable technique to increase the efficiency and effectiveness of the projects’ IT components. IV&V assesses the probability of whether the proposed IT component(s) address all factors required for

successful project management, development, and implementation. These factors include:

- Meeting the stated project requirements,
- Being cost effective,
- Providing a best practices approach to information security,
- Providing a best practices approach to technical and IT implementation,
- Accounting for maintenance, and
- Providing for adequate training and staffing within the proposed project environment.

When performed in parallel with the IT project life cycle, IV&V provides for the early detection and identification of risk elements within a program. The Project Manager is then able to take action to mitigate risks early in the project life cycle.

As the Agency continues to map to the Federal Enterprise Architecture (FEA) framework and the Agency's enterprise architecture matures, IV&V will increasingly be used to identify redundancies, performance shortfalls, and opportunities to share or reuse capabilities. Through this analysis, IT investments, regardless of the funding source, will increasingly demonstrate improved levels of efficiency that eliminate duplicate functions and/or systems.

### **548.3.1 Program-Funded IT Reviews**

Effective Date: 08/15/2006

The [Clinger-Cohen Act \(CCA\) \(also known as 40 U.S.C. 1401\)](#) directs Federal Agencies to establish clear and concise direction regarding investments in major information systems and to enforce that direction through the budget process.

Relevant laws and regulations, as identified in *548.4.1 External Mandatory References* and *548.4.2 Internal Mandatory References*, mandate that Federal Agencies, such as USAID, review and approve program-funded projects that have an IT component in which the full IT life cycle cost of commodities or services (such as, installation, maintenance, and technical assistance) exceeds \$100,000 over the full IT project life cycle up to five (5) years. M/PMO/BEA reviews and approves these projects for USAID.

Missions are responsible for approving Agency-financed assistance on IT components or services as long as the assistance does not exceed \$100,000. Cognizant Technical Officers (CTOs) at Mission or post locations where a trained Systems Manager is assigned may approve larger amounts with written approval from the PMO. In cases where the PMO allows a trained Systems Manager to approve IT projects with larger

funding amounts, the CTO must notify the PMO when the IT review begins and submit the final review for M/PMO/BEA records.

Relative to the specific equipment that USAID is procuring or upgrading, Missions may link program-funded equipment to [Operating Expense \(OE\)](#) - funded Local Area Networks (LANs) if the infrastructure, which the LAN supports, is OE-funded. The CO must determine the equipment funding accounts that could affect a given project.

Where software or hardware is proposed for implementation on USAID's network, the Office of Information Resource Management (IRM) must approve the specified components. In addition, support agreements for the system components must be negotiated with IRM.

Project Managers, CTOs, or designated representatives must submit to M/PMO/BEA information regarding the IT component of each project. They must submit their information to the USAID e-mail address: **ADS-548Review@usaid.gov**. Program Managers, Project Managers, or designated representatives must submit this information before the planning and design stages of their project. Since the Mission COs have oversight authority, they too must receive a copy of this e-mail.

The IV&V process consists of an early review, which is not obligatory, but is strongly recommended, and a full review, which is required.

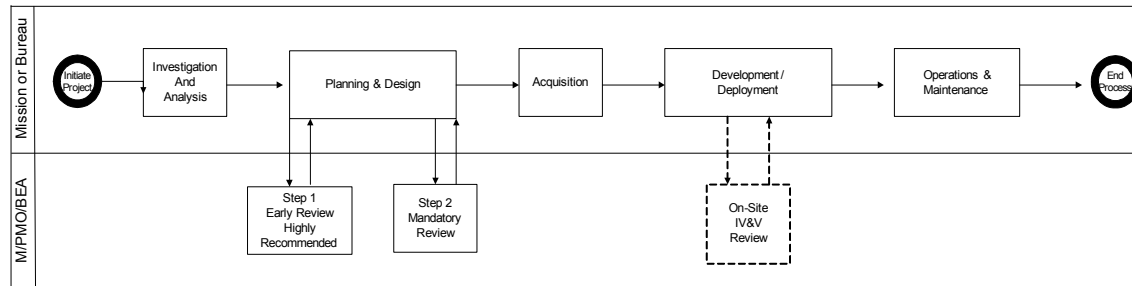
### **548.3.2 The "ADS 548 IV&V Review" Process**

Effective Date: 08/15/2006

M/PMO/BEA has identified the process shown in *Figure 1* as the optimal "ADS 548 IV&V Review" solution. The optimal solution is a two-step review process. The first review, "Early Review in the IT Project Life cycle", which occurs during the early planning stage of a project, allows M/PMO/BEA to provide insight and input from enterprise, technical, and project levels that could potentially save a project time and money in the long-term. The second review, "Full Review and Preparation of IT Requests", is mandatory and ensures that USAID projects adhere to Federal law.

**Figure 1: The “ADS 548 IV&V Review” Process**

The following chart is a visual depiction of the “ADS 548 IV&V Review” which is described below. The “ADS 548 IV&V Review” Process builds upon the IT project life cycle. Step 1 and Step 2 consist of reviews performed by M/PMO/BEA. On-Site Reviews are discussed later in this chapter.



Step 1, per Agency recommendation, the “Early Review” ensures that the IT project life cycle requirements are incorporated into the project from the planning stage. This review allows M/PMO/BEA to provide Missions with valuable project and IT information to incorporate into the project plan and schedule and provide lessons learned from similar projects at other Missions.

Step 2, per Agency mandate, the “ADS 548 IV&V Review” specifies that before any program-funded activity with an IT component of \$100,000 or more over the full IT project life cycle up to five (5) years is implemented, Project Managers or Program Officers or CTOs at USAID Missions must submit the project proposal to M/PMO/BEA for IV&V review and approval.

In both review steps indicated and upon receipt of the project proposal, M/PMO/BEA provides feedback to enable the Project Manager to effectively plan, organize, and control the project to achieve Strategic Objectives (SOs). These SOs should link to the Agency’s Business Enterprise Architecture (BEA) goals and ultimately to the Federal Enterprise Architecture (FEA).

### **548.3.2.1 Early Review in the IT Project Life Cycle (Optional but Strongly Recommended)**

Effective Date: 08/15/2006

Before purchasing any IT equipment, M/PMO/BEA recommends contacting [ADS-548Review@usaid.gov](mailto:ADS-548Review@usaid.gov) to conduct an early review of a project’s planning process for IT procurements.

An early review ensures that the necessary aspects of an IT project are included in the project plan without the possible lag time and/or financial costs associated with changes

during the implementation phase. Early reviews range from reviews of concept papers to multiple project options. Such comprehensive early planning also ensures the smooth and timely processing of the IT procurement.

### **When to Initiate the Early Review**

Contact M/PMO/BEA to communicate the direction and intention of the proposed IT system early in the project planning process, before generating project planning and systems engineering documentation.

### **What We Review**

M/PMO/BEA reviews the following:

- Project management plans,
- The description of the project IT component,
- The goals and objectives of the IT component,
- The summary of the IT needs assessment, and
- The mapping of relevant SOs to the IT component of the project.

### **Our Schedule, Review Process, and Timeframes**

For IT project notifications and concept papers, M/PMO/BEA reviews the documentation and sends a response to the requester within five (5) business days of the date that M/PMO/BEA received the request.

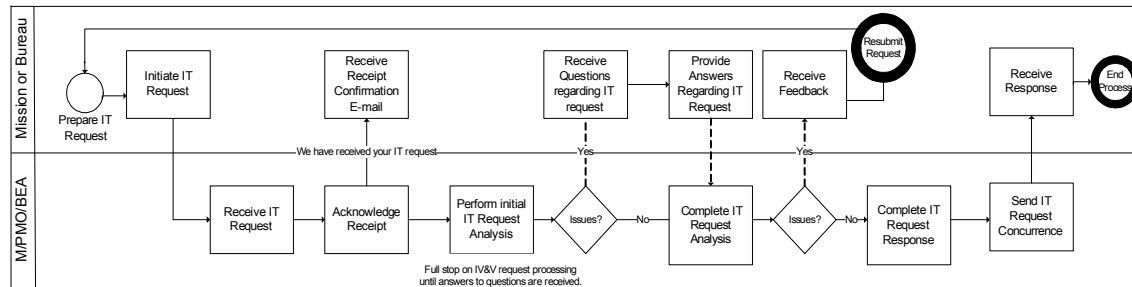
For a complex IT system, M/PMO/BEA reserves the right to take up to ten (10) business days to provide a response to the requester. A complex system is comprised of a multiplicity of interrelated diverse elements which requires systems engineering to define its architecture and development.

*Figure 2, The ADS 548 Early Review Process*, provides a graphical depiction of the ADS 548 Early Review process. Each row in the figure represents one of the primary responsible parties, as identified in section 548.2. Each box in a given row represents an activity performed by the responsible party. The solid lines indicate the standard movement between the activities. The broken lines indicate alternative or additional paths. An M/PMO/BEA analyst will acknowledge receipt of a review request within one business day of receipt in the [ADS-548Review@usaid.gov](mailto:ADS-548Review@usaid.gov) mailbox.



**Figure 2: The ADS 548 Early Review Process**

The following chart is a visual depiction of the “ADS 548 Early Review Process” which is described above.



Participating in an Early Review will benefit an IT project over its life cycle. However, a concurrence provided by the Early Review Process does not obviate the requirement for a Full Review.

### 548.3.2.2 Full Review and Preparation of IT Requests (Mandatory)

Effective Date: 08/15/2006

M/PMO/BEA follows a mature IV&V review process, in which we review and analyze submitted information from Program Officers, Project Managers, and CTOs to ensure that

- A reliable, scalable, and sustainable information system is in place at the end of the project; and
- Strengths and potential weaknesses of the solution are identified.

### What Is Required for the Review

In order to conduct this full IT review before finalizing system specifications and funds are expended, M/PMO/BEA requires that Program Officers, Project Managers, and CTOs include the following information, as applicable, in the mandatory request for IV&V review:

- Description of the project IT component;
- Goals and objectives of the IT component;
- Summary of IT needs assessment;
- Relevant business and functional requirements;
- Mapping of relevant SOs to the IT components of the project;

- Description of the host country institution IT infrastructure;
- Discussion of primary applications, system design concept, and system implementation plan;
- List of IT system specifications, including hardware and software architecture;
- Results of any studies recommending specific IT tools or platforms;
- Maintenance and support plans for the system, including information about host country infrastructure;
- Training and staffing plans for system implementation;
- Information security measures;
- Relevant system cost information, including breakdowns for major components; and
- Measurable success factors or outcome to assess IT transfer objectives.

### **Our Schedule, Review, and Timeframes**

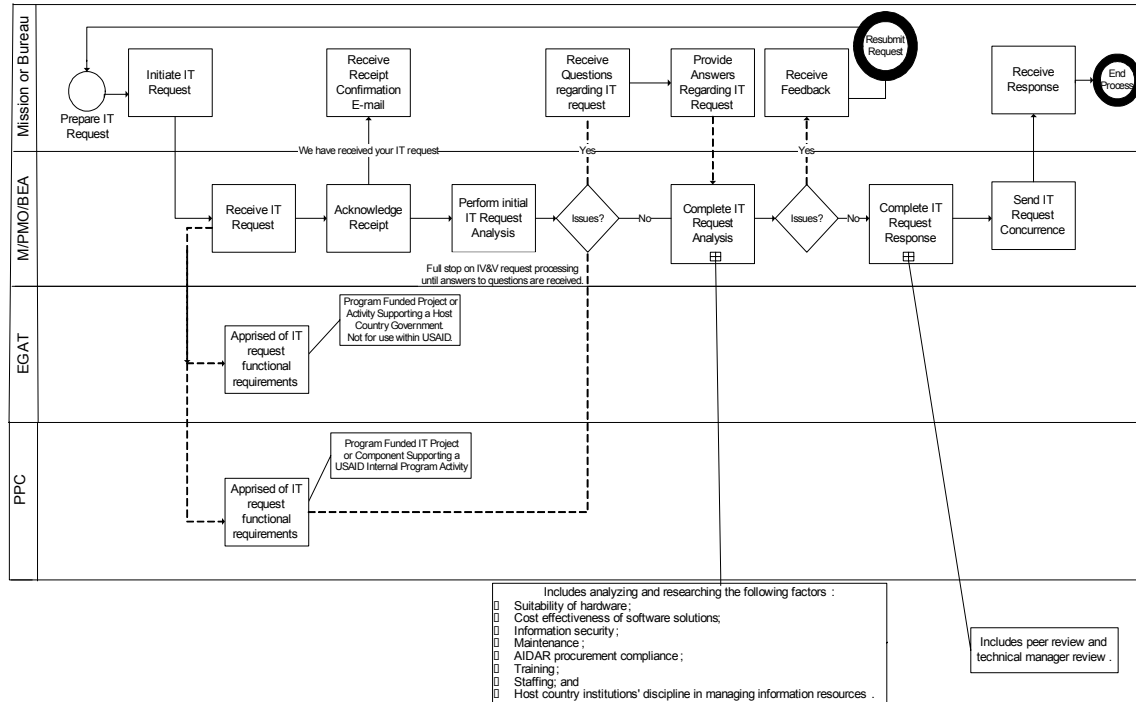
Generally, for a full review, M/PMO/BEA reviews the submitted IT requests within ten (10) business days of the date received. When more complex IT systems or industry-specific applications are involved, M/PMO/BEA reserves the right to take up to fifteen (15) business days to conduct a meaningful review. If the project underwent an early review as recommended, the response times will typically be shorter. The [Standard Operating Procedure \(SOP\) Reference Guide](#) provides specific examples of the IT project information requirements.

*Figure 3, The ADS 548 Full Review Process*, provides a graphical depiction of the ADS 548 full review process. Each row in the figure represents one of the primary responsible parties, as identified in section 548.2. Each box in a given row represents an activity performed by the responsible party. The solid lines indicate the standard movement between the activities. The broken lines indicate alternative or additional paths. An M/PMO/BEA analyst will acknowledge receipt of a review request within one business day of receipt in the [ADS-548Review@usaid.gov](mailto:ADS-548Review@usaid.gov) mailbox.

As depicted in *Figure 3, The ADS 548 Full Review Process*, the PMO must notify either EGAT or PPC regarding program-funded IT components that support either a host country government or USAID/W project. The Bureau/Office or Mission may request a tandem project technical focus review for projects that support host country governments. In instances where a tandem project review has been requested, the response time will be adjusted to allow for coordination between offices.

**Figure 3: The ADS 548 Full Review Process**

The following chart is a visual depiction of the “ADS 548 Full Review Process” which is described above.



**548.3.3 USAID Program-Funded Equipment**

Effective Date: 08/15/2006

Since COs have oversight responsibility for all Mission IT procurements, when a Mission submits requests for IT reviews, COs must be copied in the e-mail. The goal of these reviews is to ensure that program funds are used as efficiently and effectively as possible. Additionally, they are used to accurately map USAID resources to Agency IT goals and objectives and the Agency’s enterprise architecture, where appropriate.

IT systems intended for use on the Agency’s network require prior coordination M/IRM. Bureaus/Offices must initiate this communication, via e-mail to [ADS-548Review@usaid.gov](mailto:ADS-548Review@usaid.gov), in the preliminary stages of project planning, regardless of project life cycle cost.

All IT systems or components for use on USAID’s infrastructure must follow the Agency’s IT project life cycle methodology and undergo M/IRM IT security reviews and change control processes. Financing for the required project evaluation reviews is the responsibility of the requesting organization within USAID. The requesting organization

within USAID should plan for these reviews within their project budget and schedule. Please contact [ADS-548Review@usaid.gov](mailto:ADS-548Review@usaid.gov) for more information and cost estimates.

**548.3.4 How to Contact the IV&V Technical Assistance Services Team**  
Effective Date: 08/15/2006

If technical assistance services are required, send an e-mail request to [ADS-548Review@usaid.gov](mailto:ADS-548Review@usaid.gov). M/PMO/BEA direct-hire and contract analysts will review the specified projects, leveraging industry best practices in IV&V.

**548.3.4.1 Mission and USAID/W Funded On-Site Extensive Reviews**  
Effective Date: 08/15/2006

M/PMO/BEA's core contract analysts are also available for on-site technical assistance. E-mail on-site reviews, requests, and inquiries to [ADS-548Review@usaid.gov](mailto:ADS-548Review@usaid.gov). While providing these on-site technical services, analysts will evaluate appropriate IT use in host country institutional environments and at USAID/W, and provide recommendations for improving IT and project performance. This technical assistance follows, but is not limited to, the following nine IT components:

- IT infrastructure (hardware and software);
- Project plan and project schedule;
- Business and functional requirements specifications;
- Architecture and design specifications;
- Development plan and schedule;
- Test plan, test cases, and schedule;
- Implementation plan and schedule;
- Operations and maintenance plan; and
- Project completion steps/sign-off.

**548.4 MANDATORY REFERENCES**  
Effective Date: 08/15/2006

**548.4.1 External Mandatory References**  
Effective Date: 08/15/2006

- a. [Clinger-Cohen Act \(40 U.S.C. 1401, Information Technology Management\)](#)
- b. [Federal Information Security Management Act \(FISMA\)](#)

- c. [Federal Chief Information Officer \(CIO\) Council, Federal Architecture Working Group, A Practical Guide to Federal Enterprise Architecture, Version 1.0, February, 2001](#)
- d. [GAO Information Technology Investment Management: “A Framework for Assessing and Improving Process Maturity”](#)
- e. [General Accounting Office \(GAO\), Standards for Internal Control in the Federal Government](#)
- f. [Office of Management and Budget \(OMB\), President’s Management Agenda \(PMA\) Initiative – E-Government](#)
- g. [OMB Circular A–130, Management of Federal Information Resources](#)

**548.4.2 Internal Mandatory References**

Effective Date: 08/15/2006

- a. [ADS 545, Information Systems Security](#)
- b. [ADS 577, Information Technology Capital Planning and Investment Control, Table 1, Investment Category Documentation & Review Requirements](#)
- c. [Standard Operating Procedure Reference Guide](#)
- d. **USAID Enterprise Architecture Agency Conceptual Level Overview Volume1: Management Discussion** [Note: This document is only available on the USAID Intranet. Please contact [ads@usaid.gov](mailto:ads@usaid.gov) if you need a copy].
- e. **USAID Enterprise Architecture Agency Concept-level Volume II: Appendices** [Note: This document is only available on the USAID Intranet. Please contact [ads@usaid.gov](mailto:ads@usaid.gov) if you need a copy].

**548.4.3 Mandatory Forms**

Effective Date: 08/15/2006

*There are no mandatory forms for this chapter.*

**548.5 ADDITIONAL HELP**

Effective Date: 08/15/2006

*There are no additional help documents for this chapter.*

**548.5.1 Optional Forms**

Effective Date: 08/15/2006

*There are no optional forms for this chapter.*

**548.6 DEFINITIONS**

Effective Date: 08/15/2006

The terms and definitions listed below have been incorporated into the ADS Glossary. See the [ADS Glossary](#) for all ADS terms and definitions.

**Cognizant Technical Officers (CTOs)**

The individual who performs functions that are designated by the Contracting or Agreement Officer, or is specifically designated by policy or regulation as part of contract or assistance administration. In other parts of the U.S. Government, the synonymous term is usually Contracting Officer's Technical Representative (COTR). (See "Activity Manager" and [ADS Series 300](#)) ([Chapters 200-203](#), [306](#), [548](#), [621](#), [631](#))

**Enterprise Architecture (EA)**

A comprehensive blueprint for the Agency's business processes and IT investments. EA is a basic structure maintaining and providing analysis capacity in relation to all the Agency's functions, modes of delivering services, related information flows, and the technologies that handle them. It provides an encompassing composite of the interrelationships between Agency functions, services, and technology from which focused need areas within the organization can be derived. ([Chapters 548](#), [577](#))

**Host Country**

The country in which a USAID funded activity takes place. ([Chapters 200-203](#), [252](#), [253](#), [301](#), [305](#), [311](#), [322](#), [495](#), [548](#))

**Information Systems Security**

Protection afforded to information and telecommunications systems which process classified national security-related information and/or unclassified sensitive information in order to prevent exploitation through intentional or unintentional disclosure, interception, unauthorized electronic access, or related technical intelligence threats. ([Chapters 548](#), [562](#))

**Information Technology**

(A) The term 'information technology', with respect to an executive agency means any equipment or interconnected system or subsystem of equipment, that is used in the automatic acquisition, storage, manipulation, management, movement, control, display, switching, interchange, transmission, or reception of data or information by the executive agency. For purposes of the preceding sentence, equipment is used by an executive agency if the equipment is used by the executive agency directly or is used by a contractor under a contract with the executive agency which (i) requires the use of such equipment, or (ii) requires the use, to a significant extent, of such equipment in the performance of a service or the furnishing of a product.

(B) The term 'information technology' includes computers, ancillary equipment, software, firmware and similar procedures, services (including support services), and related resources.

(C) Notwithstanding subparagraphs (A) and (B), the term 'information technology' does not include any equipment that is acquired by a Federal contractor incidental to a Federal contract. (Source: Clinger-Cohen Act) ([Chapters 518](#), [541-548](#), [552](#), [577](#))

### **Independent Verification & Validation**

Verification and validation performed by an organization that is technically, managerially and financially independent of the development organization. ([IEEE 610](#))([Chapter 548](#))

### **Life cycle costs**

This includes all direct and indirect costs for planning, procuring, operating and maintaining, as well as disposal of specified IT components. Procurement costs include purchase price and all other costs incurred to bring an IT component to form and location suitable for its intended use. Operations and maintenance would also include costs associated with service contracts. ([Chapter 548](#))

### **Operating Expenses (OE)**

Costs related to personnel, other administration costs, rental, and depreciation of fixed assets. ([Chapters 200-203](#), [548](#))

### **Program-funded property (USAID)**

Property distinct from OE-funded property, which is procured for the achievement of a Strategic Objective with funds of a USAID activity or project. ([Chapter 548](#))

### **Strategic Objective (SO)**

The most ambitious result that a USAID Operating Unit, along with its partners, can materially affect, and for which it is willing to be held accountable. SOs can be designed for an Operating Unit to provide analytic, technical, logistical, or other types of support to the SOs of other Operating Units (whether bilateral, multi-country, or global in nature). ([Chapters 200-203](#), [204](#), [534](#), [548](#))

### **USAID IT investments**

IT initiatives or projects funded at Missions or USAID/W, regardless of funding source, that are owned or leased by USAID and operated by USAID or by contractors for Agency operations. ([Chapter 548](#), [577](#))

### **Verification and Validation**

The process of determining whether the requirements for a product are complete and correct, the work products of each development phase fulfill the requirements or conditions imposed by the previous phase and the final product complies with specified requirements. ([IEEE 610](#)) ([Chapter 548](#))

