United States General Accounting Office

GAO

Report to Congressional Committees

October 2002

UNITED STATES POSTAL SERVICE

Opportunities to Strengthen IT Investment Management Capabilities

GAO-03-3

GAO
Accountability★Integrity★Reliability

Highlights

UNITED STATES POSTAL SERVICE Opportunities to Strengthen IT Investment Management Capabilities

Highlights of GAO-03-3, a report to the Senate Committee on Governmental Affairs and the Subcommittee on International Security, Proliferation, and Federal Services

Why GAO Did This Study

The U.S. Postal Service invests hundreds of millions of dollars in information technology (IT) each year to support its mission of providing prompt, reliable, and efficient mail service to all areas of the country. It must support these operations through the revenues it earns for its services. Growing operating expenses and capital needs in the face of reduced revenues highlight the need for the Postal Service to invest its IT dollars wisely. Accordingly, the Senate Committee on Governmental Affairs and its Subcommittee on International Security, Proliferation, and Federal Services asked GAO to evaluate how well the Postal Service manages its IT investments.

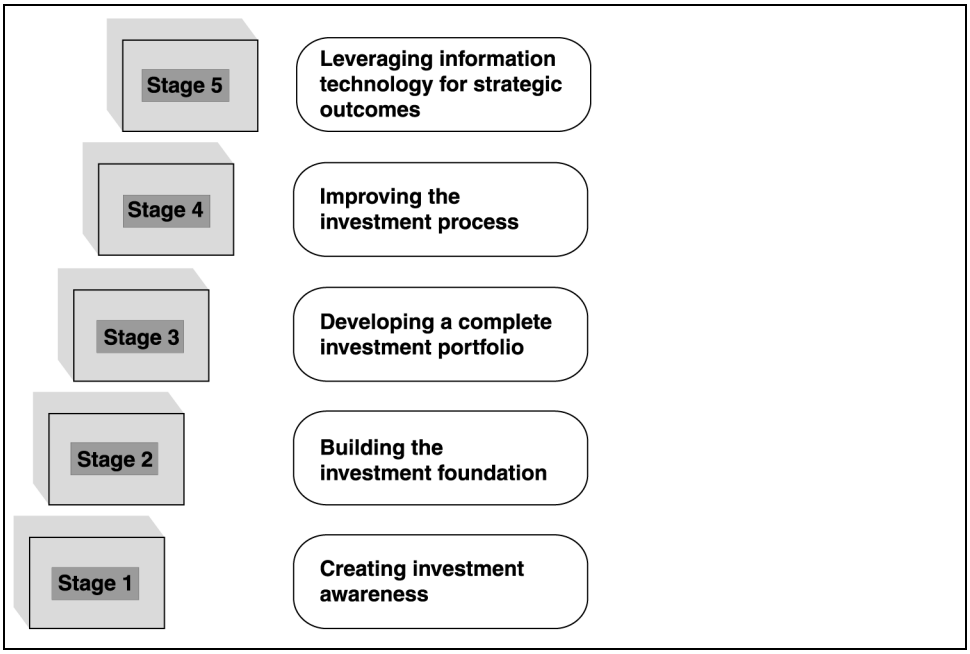
What GAO Found

The Postal Service has in place many of the foundational capabilities required for managing IT investments described in GAO's IT Investment Management framework, illustrated below. Proposed major projects go through established review processes and must be approved at a high level before being implemented. Control processes also are in place.

Although the Postal Service evaluates proposed IT projects before investing in them, it does not fully manage these investments from a portfolio perspective by assessing projects on the basis of indicators that clearly link performance to initial selection criteria. Such a portfolio approach would enable the Postal Service to consider proposed projects along with those that have already been funded and to select the mix of investments that best meets its mission needs.

The Postal Service has not yet attained the key attributes associated with the most capable organizations, such as evaluating the performance of investments as a whole, capturing "lessons learned," and institutionalizing these lessons to benefit the organization. Until it addresses areas such as these, the Postal Service will not be in a position to continually improve its investment process and leverage its IT capabilities for strategic outcomes.

The Five Stages of Maturity within GAO's IT Investment Management Framework



Source: GAO.

What GAO Recommends

GAO recommends that the Postmaster General take several actions, including the following: (1) using a portfolio approach to IT investment management, including establishing explicit cost, benefit, schedule, and risk criteria; and (2) evaluating the performance of investments as a whole in order to capture and institutionalize "lessons learned" to improve the investment process. In written comments on a draft of the report, the Postal Service expressed differing views on a few key points but stated that the report provides an opportunity to consider changes and improvements to its investment management processes.

The full report, including GAO's objectives, scope, methodology, and analysis is available at www.gao.gov/cgi-bin/getrpt?GAO-03-3. For additional information about the report, contact Joel C. Willemssen (202-512-6408), WillemssenJ@gao.gov.

Contents

Figures

Abbreviations

ACDCS	Air Contract Data Collection System
B&FA	Budget and Financial Analysis
BCS	Business Case System
CAPE	Capital and Program Evaluation
CFO	Chief Financial Officer
CIC	Capital Investment Committee
CIO	Chief Information Officer
CPC	Capital Projects Committee
CPS	Corporate Planning System
CTO	Chief Technology Officer
DAR	Decision Analysis Report
EIR	Enterprise Information Repository
ESC	Enhanced Security Capability
IRB	Investment Review Board
IT	information technology
ITIM	information technology investment management
OSS&M	Organization Structure, Staffing and Management
POS ONE	Point of Service ONE
PTRS	Program Tracking and Reporting System
SAMS	Surface-Air Management System

GAO
Accountability * Integrity * Reliability

United States General Accounting Office
Washington, D.C. 20548

October 15, 2002

The Honorable Joseph I. Lieberman
Chairman
The Honorable Fred Thompson
Ranking Minority Member
Committee on Governmental Affairs
United States Senate

The Honorable Daniel K. Akaka
Chairman
The Honorable Thad Cochran
Ranking Minority Member
Subcommittee on International Security,
Proliferation and Federal Services
Committee on Governmental Affairs
United States Senate

In response to your request, this report addresses the Postal Service's capabilities in information technology (IT) investment management. The Postal Service invests hundreds of millions of dollars each year in information technology to provide prompt, reliable, and efficient mail service to all areas of the country. Our evaluation determined that the Postal Service is executing many of the foundational practices necessary for managing these investments, but the Postal Service has additional opportunities to implement more mature and effective processes. We are making recommendations to strengthen the Postal Service's investment management capabilities.

We are sending copies of this report to the Chairman and Ranking Minority Member of the House Committee on Government Reform, the Chairmen and Ranking Minority Members of the House and Senate Committees on Appropriations, the Postal Service's Postmaster General/Chief Executive Officer, and the Postal Service's Chief Financial Officer. We will also make copies available to others on request. In addition, the report will be available at no charge on the GAO Web site at http://www.gao.gov.

Staff acknowledgments are included in appendix IV. If you have any questions about this report, please contact me by telephone at (202) 512-6408 or by E-mail at WillemssenJ@gao.gov.

Joel C. Willemssen
Managing Director, Information Technology Issues

Executive Summary

Purpose

The United States Postal Service invests hundreds of millions of dollars each year in information technology (IT) to provide prompt, reliable, and efficient mail service to all areas of the country. The Postal Service is intended to be self-supporting from postal operations and is mandated to break even over time. Yet the Postal Service is currently facing a financial crisis brought about by declining revenues and growing operating expenses and capital needs. In April 2001, GAO designated the Postal Service's transformational efforts and long-term outlook as High Risk,[1] noting that the Postal Service is at growing risk of not being able to continue its mission of providing the current level of universal service throughout the nation while maintaining reasonable rates and remaining largely self-supporting through postal revenues.

A successful method of helping to improve operational effectiveness and efficiency is to implement a structured process for maximizing the value and minimizing the risk of IT investments. GAO's research into the management practices of leading organizations demonstrates that effective management of investments requires the use of disciplined, structured investment management processes. Given the Postal Service's large expenditures for IT and its deteriorating financial position, the Chairmen and Ranking Minority Members of the Senate Committee on Governmental Affairs and its Subcommittee on International Security, Proliferation, and Federal Services requested that GAO assess the Postal Service's IT investment management capabilities. In addressing this request, GAO used its IT Investment Management Framework[2] and assessed the Postal Service against the different stages of this framework.

Background

With nearly 800,000 career employees, the Postal Service is the second largest U.S. employer compared with U.S. private sector organizations, with a mission that remains vital to the nation's communication and commerce even in an age of overnight delivery services and electronic communications. It maintains an extensive infrastructure, consisting of over 38,000 post offices, branches, and stations and 350 major mail

[1]U.S. General Accounting Office, *Transformation Challenges Present Significant Risks*, GAO-01-598T (Washington, D.C.: Apr. 4, 2001).

[2]U.S. General Accounting Office, *Information Technology Investment Management: A Framework for Assessing and Improving Process Maturity* (Exposure Draft), GAO/AIMD-10.1.23 (Washington, D.C.: May 2000).

processing and distribution facilities. The Postal Service relies heavily on IT throughout its operations and management processes to run the machines that process and sort mail, efficiently assign long-distance transportation of mail to alternative surface and air carriers, support point-of-service terminals, collect and analyze inventory and sales information, process payroll and accounts payable, and perform other activities. Communication networks also play a vital role in linking together various elements of the Postal Service's infrastructure and transmitting information to various locations for storage, processing, and analysis. For fiscal year 2002, the Postal Service approved approximately $583 million for IT, including funds for both capital investments and operating expenses.

The Postal Service has reported that it is providing customers with added value; improving the efficiency of operations; containing costs; fostering a performance-based culture; and improving management of enabling functions, such as financial management, purchasing, and IT.[3] The Postal Service has established the specific goal of obtaining organizationwide connectivity through IT to enable it to enhance security, add valuable product features, and manage its operations in real time.

Based on research into the IT investment management practices of leading private- and public-sector organizations, GAO has developed an information technology investment management maturity (ITIM) framework. This framework identifies critical processes for successful IT investment organized into a framework of five increasingly mature stages. The ITIM is intended to be used both as a management tool for implementing these processes incrementally and as an evaluation tool for determining an organization's current level of maturity. The overriding purpose of the framework is to encourage investment processes that increase business value and mission performance, reduce risk, and increase accountability and transparency in the decision process. This

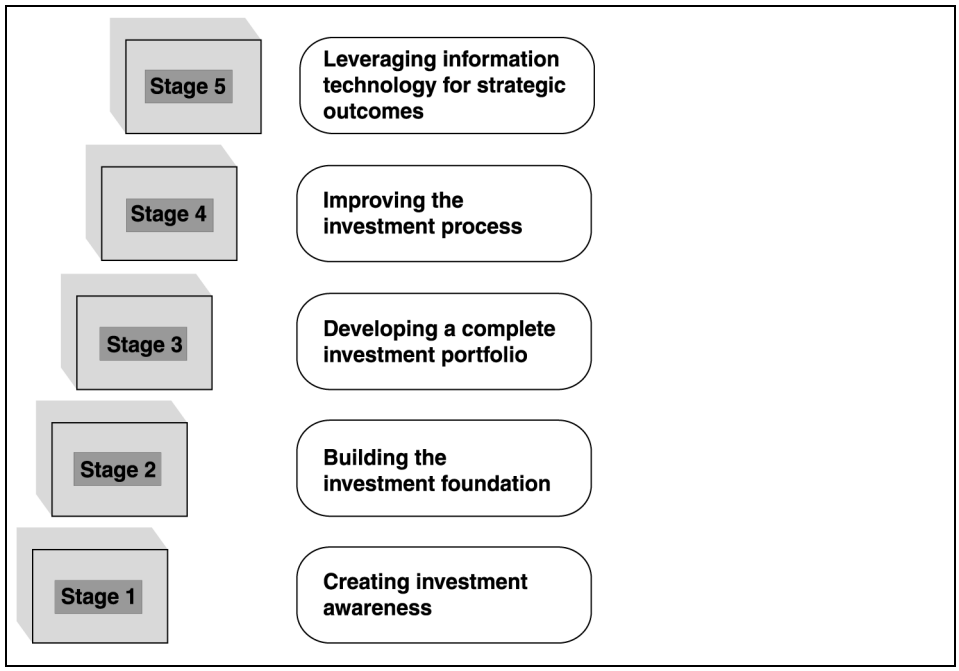
[3]United States Postal Service, *United States Postal Service Transformation Plan.* (Washington, D.C.: Apr. 1, 2002).

framework has been used in several GAO evaluations[4] and has been adopted by a number of agencies.

These agencies have used ITIM for purposes ranging from self-assessment to redesign of their IT investment management processes. The five stages of the framework represent increasing levels of maturity in managing IT investments. Stages two, three, four, and five each build on the preceding one and represent steps toward achieving more stable and effective processes for managing IT investments. With the exception of the first stage—characterized by the general absence of investment management processes—each maturity stage consists of critical processes that must be implemented and institutionalized for the organization to satisfy the requirements of that stage and be able to advance to the next stage. These critical processes are further broken down into key practices—the specific tasks and conditions that must be in place for an organization to effectively implement the necessary critical processes. Figure 1 shows ITIM's five stages of maturity.

[4]U.S. General Accounting Office, *Information Technology: INS Needs to Strengthen Its Investment Management Capability*, GAO-01-146 (Washington, D.C.: Dec. 29, 2000); U.S. General Accounting Office, *Information Technology Management: Coast Guard Practices Can Be Improved*, GAO-01-190 (Washington, D.C.: Dec. 12, 2000); U.S. General Accounting Office, *Information Technology Management: Social Security Administration Practices Can Be Improved*, GAO-01-961 (Washington, D.C.: Aug. 21, 2001); U.S. General Accounting Office, *Information Technology: DLA Needs to Strengthen Its Investment Management Capability*, GAO-02-314 (Washington, D.C.: Mar. 15, 2002).

Figure 1: The Five Stages of Maturity within ITIM



Source: GAO.

Results in Brief

The Postal Service has established significant capabilities for managing its IT investments. It has in place numerous foundational practices for selection and control, such as a detailed review and approval process for new projects, tracking of project cost and schedule data, and identification of its business needs, and it involves users in project development. These stage two processes provide assurance that the projects selected meet the Service's organizational needs and will be completed on time and within budget. However, the Postal Service has yet to develop comprehensive guidance to address all aspects of the investment management process. Such guidance would allow the Service to better coordinate its IT investment management process and ensure that the process is performed consistently throughout the organization.

The Postal Service performs many of the practices that are key to a stage three level of maturity, such as managing a portfolio of IT investments. For example, the Service performs many of the activities for developing a portfolio of investments and overseeing these investments. However, the

processes for annually selecting and overseeing the investment portfolio are not documented. Further, the Postal Service does not analyze, prioritize, or select its portfolio using criteria that adequately address cost, benefit, schedule, and risk. Accordingly, the Postal Service cannot ensure that it is selecting the investments that will maximize returns to the organization, taking into account the appropriate level of risk.

Finally, the Postal Service has a number of steps to take before it has attained the maturity of a stage four or five organization—systematically improving the investment process and using IT to achieve business outcomes. For example, the Postal Service does not either regularly evaluate the performance of completed projects or have a process to evaluate its investment portfolio or to manage the succession of its IT investments. Further, the Service does not have a process to measure itself against other organizations and is not yet in a position to use evaluation techniques to continually improve both the investment portfolio and the investment process to better achieve strategic outcomes.

Principal Findings

Postal Service Executes Most Key Foundational Practices

To develop sound capabilities in investment management, an organization must first be capable of controlling its investments so that they finish predictably within established cost and schedule expectations, and it must have in place basic capabilities for selecting new IT investments. An organization must also have an established investment board that is responsible for managing its investments and investment processes.

The Postal Service has established many basic investment selection and control capabilities. At the enterprise level, it manages all capital investments through a consistent set of management processes. Still, opportunities exist to strengthen aspects of core enterprisewide practices for IT investment management. For example, the Postal Service has not developed organizationwide policies and procedures to guide the different enterprise-level management entities involved in the investment process. Nor has it developed guidance for management oversight of IT projects. As a result, it may not reap the benefits of a consistent and coordinated approach to investment management to be gained by institutionalizing those practices that it is performing.

Postal Service Shows Mixed Progress in Managing Its IT Investments as a Portfolio

Organizations need to create a complete investment portfolio—consisting of projects that are proposed, under development, and in operation—and continuously assess and manage their investments on the basis of expected and actual cost, benefit, schedule, and risk data. Taking such a portfolio perspective enables organizations to assess their investments comprehensively, considering proposals along with previously funded investments and selecting the mix of investments that best meets their mission needs. The perspective of the portfolio enables organizations to rise above selecting and controlling projects that best meet the objectives of narrow program areas to selecting and controlling projects that best meet the organization's overall goals.

The Postal Service performs a number of practices that are key to developing and managing a complete investment portfolio. For example, it provides adequate resources for analyzing investments and developing the portfolio. The Service validates the cost, benefit, schedule, and risk data it uses in analyzing investments. The Service also assigns its IT investments to logical categories and distributes its portfolio selection criteria throughout the organization.

The Postal Service has not established organizationwide policies and procedures for selecting, analyzing, and overseeing its IT portfolio. While the Service selects its annual investment portfolio using established criteria, these criteria do not adequately address cost, benefit, schedule, and risk factors. Senior executives do not receive sufficient information to aid them in selecting and overseeing the portfolio. For example, the quarterly *Investment Highlights* provides information on the status of projects, but it does not include complete information on costs. Further, the Postal Service does not have a defined process for reporting problems in a project's performance to senior executives.

Because the Postal Service lacks established policies and procedures for selecting, analyzing, and overseeing its investment portfolio, and because its selection criteria are inadequate, it risks choosing individual investments in an ad hoc fashion. A portfolio developed in this way may not best meet the Service's needs. In addition, because information they need for oversight is incomplete, senior executives may be unable to determine whether the investment portfolio is performing as expected.

Postal Service Has Yet to Implement Higher Level Processes to Better Meet Strategic Goals

As an organization builds its investment management capabilities, it should begin using evaluation techniques to improve its investment processes and its portfolio while maintaining mature control and selection processes. The post-implementation review is a key tool for comparing the outcome of a completed investment with the expectations described in its business case. Another higher level process is planning for the retirement of systems and their replacements, so that low-value systems are retired to make way for higher-value systems, and the transition between systems is smooth. Finally, an organization that completes the implementation of its selection, control, and evaluation processes should seek to continuously improve its capabilities for using IT investments to support and improve business outcomes.

Within these higher-level processes, the Postal Service has developed guidance and training for performing post-implementation reviews. In addition, the Postal Service prepares an integrated financial plan that includes an estimate of overall return on investment. It has also allocated resources for identifying strategic uses for emerging technologies.

The Postal Service, however, is not regularly performing post-implementation reviews of completed investments to determine whether they have achieved the expected benefits at the estimated cost or to determine if investment management processes should be revised. Nor has the Postal Service evaluated the performance of its investment portfolio beyond determining the return on investment. While the Postal Service has developed guidance for the retirement of systems, it does not have a process for routinely identifying and analyzing investments for succession and planning for their migration to their successors. The Postal Service also lacks a process for benchmarking other organizations' investment management approaches with the intention of improving its own internal processes. Finally, the Postal Service does not have a process for identifying, evaluating, and implementing leading-edge IT products and processes to achieve strategic changes to the business.

Although these weaknesses are associated with high-level maturity processes, performing additional key practices in these areas will help the Postal Service to better evaluate and continuously improve its management processes and its investment and portfolio performance, learn from other organizations, and use breakthrough technologies to improve strategic outcomes.

Recommendations for Executive Action

To strengthen the Postal Service's capabilities for investment management and address the weaknesses discussed in this report, we recommend that the Postmaster General develop a plan that initially focuses on correcting the weaknesses in critical processes associated with maturity stages two and three before addressing the weaknesses at maturity stages four and five, because critical processes at the lower stages provide the foundation for building those at higher maturity stages. The plan should be developed within 6 months. At a minimum, the plan should specify an approach to

- develop comprehensive guidance that defines and describes the complete investment management process, unifies existing processes enterprisewide, and reflects changes in processes as they occur;
- develop additional process guidance, as needed, to completely define the operations and decision-making processes of investment boards and other management entities involved in managing IT investments;
- ensure that cost, benefit, schedule, and risk expectations are set and approved in the original business case for each investment; that accurate and complete actual cost, benefit, schedule, and risk data are tracked against these expectations; and that status information on these four criteria is periodically reported to executive-level investment boards; and
- establish a structured, transparent, and documented portfolio selection process that assesses, prioritizes, selects, and funds investments according to established portfolio selection criteria, including explicit cost, benefit, schedule, and risk criteria.

The Postmaster General should ensure that the plan specifies measurable goals and time frames, prioritizes initiatives, designates a senior manager responsible and accountable for directing and controlling the improvements, and establishes review milestones. After addressing the stage two and three processes, the Postal Service should create processes required for stages four and five that, at a minimum

- ensure that guidance for conducting post-implementation reviews is complete, including criteria for selecting systems for review, and that post-implementation reviews are conducted on all appropriate systems,
- establish a process for evaluating and improving portfolio performance,

- establish a process for managing the succession of systems and technology,
- establish a process to benchmark the investment processes of leading organizations to identify opportunities for improvement, and
- establish a process to employ IT investments strategically to improve business outcomes.

Agency Comments and Our Evaluation

The Postal Service's Chief Financial Officer provided written comments on a draft of this report (reprinted in app. III). In these comments, the Postal Service stated that the report offered an opportunity to consider changes and improvements in its IT investment management processes. The Service added that it would carefully evaluate each of the report's recommendations to determine the necessary actions for adopting and integrating key practices outlined in the GAO ITIM model that are appropriate for the Postal Service.

The Postal Service identified a few key points where it differed from GAO's IT investment management framework. In succession planning, the Postal Service stated that it uses an institutionalized portfolio approach to address the succession of its IT hardware, software, and systems. While this approach may be appropriate as part of a succession management process, our evaluation found that the Postal Service does not have a process for regularly reviewing the performance of existing systems against established criteria.

The Postal Service also provided comments pertaining to post-implementation reviews that describe cost studies, the budget process, and the activities of the Office of Inspector General as satisfying this critical process. We disagree with the Postal Service in this matter. While guidance for cost studies does exist, budget activities and Inspector General evaluations do not satisfactorily address the requirements of this critical process, and the Service provided evidence of only three post-implementation cost studies having been conducted since 1990.

Introduction

Postal Service's Mission and Organization

The Postal Reorganization Act of 1970 (P.L. 91-375) created the United States Postal Service, an independent, self-supporting organization, replacing the former United States Post Office Department. The act charges the Postal Service with binding the nation together through the personal, educational, literary, and business correspondence of the people and providing reliable and efficient mail services to all areas of the country. The Postal Service is intended to be self-supporting from postal operations and is mandated to break even over time. With nearly 800,000 career employees, the Postal Service is the second largest employer compared with U.S. private sector organizations. It has an extensive infrastructure, consisting of more than 38,000 post offices, branches, and stations; 240,000 delivery routes to over 137 million delivery addresses; a fleet of 215,000 vehicles; 350 major processing and distribution facilities; and nearly 800,000 career employees.

The Postal Service is now facing a financial crisis brought about by declining revenues and growing operating expenses and capital needs, including the cost of existing and new investments in information technology (IT). In February 2002, we reported significant declines in the Postal Service's net income from fiscal year 1995 to fiscal year 2001 and a net loss of $1.68 billion in fiscal year 2001 alone, resulting in part from declining mail volumes and from terrorist incidents.[5] In April 2001, we placed the Postal Service's transformational efforts and long-term outlook on our High-Risk list, noting that the Postal Service is at growing risk of not being able to continue its mission of providing the current level of universal service throughout the nation while maintaining reasonable rates and remaining largely self-supporting through postal revenues.

The Postal Service has acknowledged the need for a new business model in light of these events and various trends now shaping the delivery services marketplace, such as consumer interest in new service types and increasing security concerns. Other increases in the cost of doing business, such as the rising costs of retirement and health benefits, heighten the need for action. To conserve cash and limit debt, the Postal Service has continued its freeze on capital spending for most facility projects, and its

[5]U.S. General Accounting Office, *U.S. Postal Service: Deteriorating Financial Outlook Increases Need for Transformation*, GAO-02-355 (Washington, D.C.: Feb. 28, 2002). U.S. General Accounting Office, *U.S. Postal Service: Financial Outlook and Transformation Challenges*, GAO-01-733T (Washington, D.C.: May 15, 2001).

total budgeted capital outlays have declined in fiscal year 2002 for the third consecutive year to $2.2 billion.

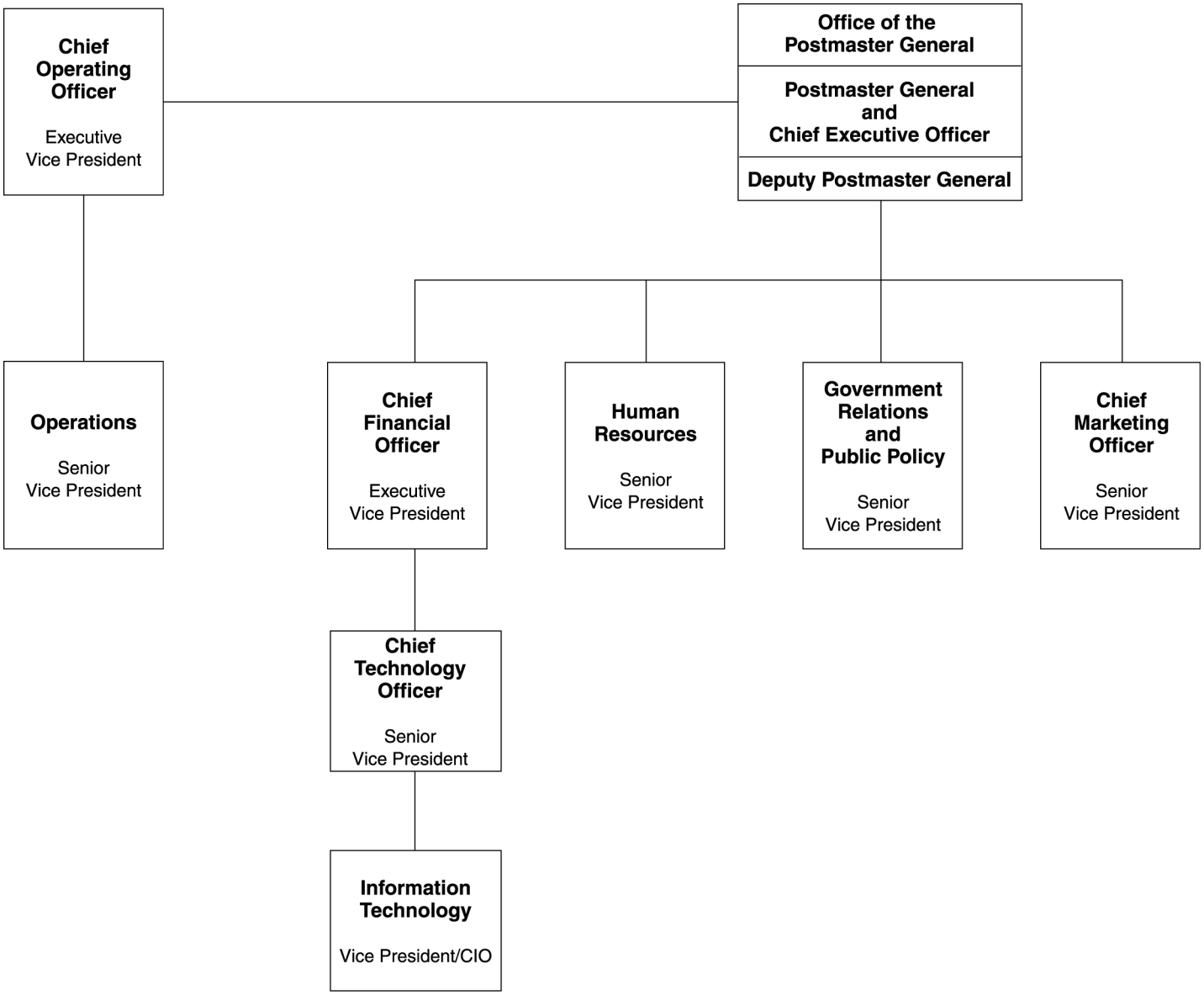
The Postal Service has reported that it plans to respond to these trends by providing customers with added value, improving the efficiency of operations, containing costs, fostering a performance-based culture, and improving its management of enabling functions such as financial management, purchasing, and IT.[6] The Postal Service has established the specific goal of connecting all of its components through IT, to enable it to enhance security, add valuable product features, and manage its operations in real time.

The Postal Service accounts for its expenditures in separate expense and capital accounts, according to Generally Accepted Accounting Principles to which public financial reporting by U.S. corporations must conform. Expenditures categorized as "expense" generally comprise operating costs and are primarily funded through a general operating budget. Expenditures categorized as "capital" are for one-time costs, are project-specific, and are depreciated.

The Postal Reorganization Act vested direction of the Postal Service in an eleven-member Board of Governors, including nine appointed by the President. The nine governors appoint the Postmaster General, who is the Chief Executive Officer, and who, with the nine governors, appoints the Deputy Postmaster General. The Postal Service's executive vice presidents are the Chief Operating Officer and the Chief Financial Officer. The Postal Service has senior vice presidents for Government Relations and Public Policy, Human Resources, Operations, Office of the Chief Marketing Officer, and Office of the Chief Technology Officer. Figure 2 shows an overview of the Postal Service's current organizational structure.

[6]United States Postal Service, *United States Postal Service Transformation Plan* (Washington, D.C.: April 2002).

Figure 2: Overview of the Organizational Structure of the Postal Service



Source: U.S. Postal Service.

Postal Service's Information Technology Environment

The Postal Service has come to rely increasingly on IT. In the early 1980s, it used data centers and mainframe computers to support administrative functions such as personnel, accounting, and payroll processing. In the mid-1980s, the Postal Service began to incorporate IT into its core business activities by interconnecting various components of its mail processing system through telecommunications and automation. Today, the organization relies on IT throughout the full range of its operations and management processes to run the machines that process and sort mail, assign mail efficiently to alternative surface and air carriers, support point-of-service terminals, collect and analyze inventory and sales information, process payroll and other accounts payable, and perform other activities. Communication networks also play a vital role in linking together various elements of the Postal Service's infrastructure and transmitting information to various locations for storage, processing, and analysis. The Postal Service expended approximately $700 million for IT in fiscal year 2002 and plans to spend about $1 billion for IT in fiscal year 2003.

The Postal Service currently manages almost 650 IT systems and applications that operate in support of postal functions. It has 24 IT-related projects in development or recently completed, each estimated to cost at least $10 million. The total investment cost estimated for these projects since 1997 is more than $2 billion, ranging from about $10 million to about $404 million per project. (See app. I for a list of the Postal Service's IT-related projects currently in progress.) Projects with major IT components in development or implementation phases include the following:

- **Point of Service ONE—**A retail point-of-sale information system that is intended to replace outdated retail terminals at postal retail windows and provide more timely and accurate information.

- **Associate Office Infrastructure—**Expected to support a common information system for retail, delivery, and administrative operations in post offices.

- **Delivery Operations Information System—**Scheduled to replace three current information systems and assist delivery unit supervisors in managing office activities, planning street activities, and managing route inspection and adjustment activities.

- **Time and Attendance Collection System—**Expected to replace five existing time and attendance systems and enable labor resources

to be more efficiently allocated by providing supervisors with accurate, real-time labor data by type of work being performed.

- **Advanced Computing Environment—**A major infrastructure modernization initiative that is expected to replace existing workstations and transitions applications to a Web-based environment.

Weaknesses in the Postal Service's Investment Management Process

Given the challenges the Postal Service currently faces, effective management of its existing and new IT investments is crucial if it is to provide the service expected while remaining self-supporting. However, recent reviews, performed by the Postal Service's Office of Inspector General (OIG) and by us, have raised some concerns regarding the Service's investment management. The OIG has identified weaknesses in the management of some investments in recent years. For example, in September 2001, the OIG reported that projects have been proposed to the Board of Governors for approval without adequate documentation and analyses and that other projects may not achieve anticipated performance and financial results.[7] In March 2001, the OIG's review of the Delivery Operations Information System found weaknesses in the methods and assumptions that were used to derive figures on estimated savings and return on investment.[8] In September 1999, the OIG found that Point of Service ONE was not achieving the results outlined in its business case.[9] The Postal Service has made enhancements to its investment policies and procedures to address the issues the OIG raised. In September 2000, we identified a number of issues with the management of the Postal Service's e-commerce program, including inconsistencies in reviewing and approving e-commerce initiatives and deficiencies in the financial data reported. We made several recommendations to the Postal Service that addressed these issues. This program was subsequently scaled back by the

[7]United States Postal Service, Office of Inspector General, *Decision Analysis Report Process*, DA-AR-01-005 (Arlington, VA: Sept. 27, 2001).

[8]United States Postal Service, Office of Inspector General, *Delivery Operations Information System*, DA-AR-01-003 (Arlington, VA: Mar. 29, 2001).

[9]United States Postal Service, Office of Inspector General, *Point of Service ONE*, DA-AR-99-002 (Arlington, VA: Sept. 20, 1999).

Postal Service, as both revenues and customer response fell below expectations.[10]

Postal Service's Approach to Investment Management

Several individuals and oversight boards are involved in managing IT investments, from reviewing and approving a proposed IT project, through the process of budgeting for it and monitoring it once it is implemented, and evaluating it at its conclusion. These individuals and oversight boards and their roles are described below.

- **Board of Governors—**Eleven-member board that governs the Postal Service; comprises the Postmaster General, the Deputy Postmaster General, and nine Presidential appointees; expected to approve any project with capital and "expense investment"[11] costs of $10 million or more.

- **Capital Projects Committee (CPC)—**Three members of the Board of Governors who are to review proposals for any new project with capital and expense investment costs of $10 million or more and make recommendations to the full Board on whether to approve it.

- **Postmaster General—**Chief Executive Officer of the Postal Service and a member of the Board of Governors; expected to approve or review any project with capital and expense investment costs of $7.5 million or more.

- **Establish Team—**Comprises the Deputy Postmaster General, the Chief Financial Officer, the Chief Operating Officer, the Chief Marketing Officer, the Senior Vice Presidents of Operations and Human Resources, the Controller, and a field vice president; is to set financial and nonfinancial goals for the Postal Service at the start of its annual planning and budgeting process and determine funding for existing and proposed IT projects as part of the budget formulation process.

[10]U.S. General Accounting Office, *U.S. Postal Service: Postal Activities and Laws Related to Electronic Commerce*, GAO/GGD-00-188 (Washington, D.C.: Sept. 7, 2000) and U.S. General Accounting Office, *U.S. Postal Service: Update on E-commerce Activities and Privacy Protections*, GAO-02-79 (Washington, D.C.: Dec. 21, 2001).

[11]Expense investments are a special category of expense. They are generally one-time expenditures in support of the development or deployment of a major project. Routine operating expenses are not considered expense investments.

- **Capital Investment Committee (CIC)—**Comprises the Chief Technology Officer (CTO) and other senior executives. Is to review proposals for any project with capital and expense investment costs of $7.5 million or more.

- **Deploy Team—**Comprises several vice presidents; with the Establish Team, is to determine funding for IT projects as part of the Postal Service's annual planning and budgeting process.

- **Vice President of Finance (Controller)—**Is to review and validate proposals for any project with capital and expense investment costs of $5 million or more.

- **Capital and Program Evaluation (CAPE)—**Group within the Finance Department under the Controller. During the review process for new projects, is expected to validate the assumptions and cost, benefit, and schedule estimates; prepare the Postal Service's 5-year Capital Investment Plan (CIP); monitor projects with capital and expense investment costs of $5 million or more; and perform cost studies of selected completed projects.

- **Chief Technology Officer (CTO) Organization—**Comprises the Office of the CTO and the Information Technology Department headed by the Chief Information Officer (CIO). The CTO organization assists other functional units in developing business cases for projects that have an IT component. It is also involved in the project concurrence process, where feedback on a project is given to the sponsoring organization by functional areas and relevant field units. The CTO organization is also responsible for developing systems standards and requirements for organizationwide compliance. At the strategic level, the CTO and CIO recommend and present corporatewide IT projects before the Establish Team during the annual capital planning cycle.

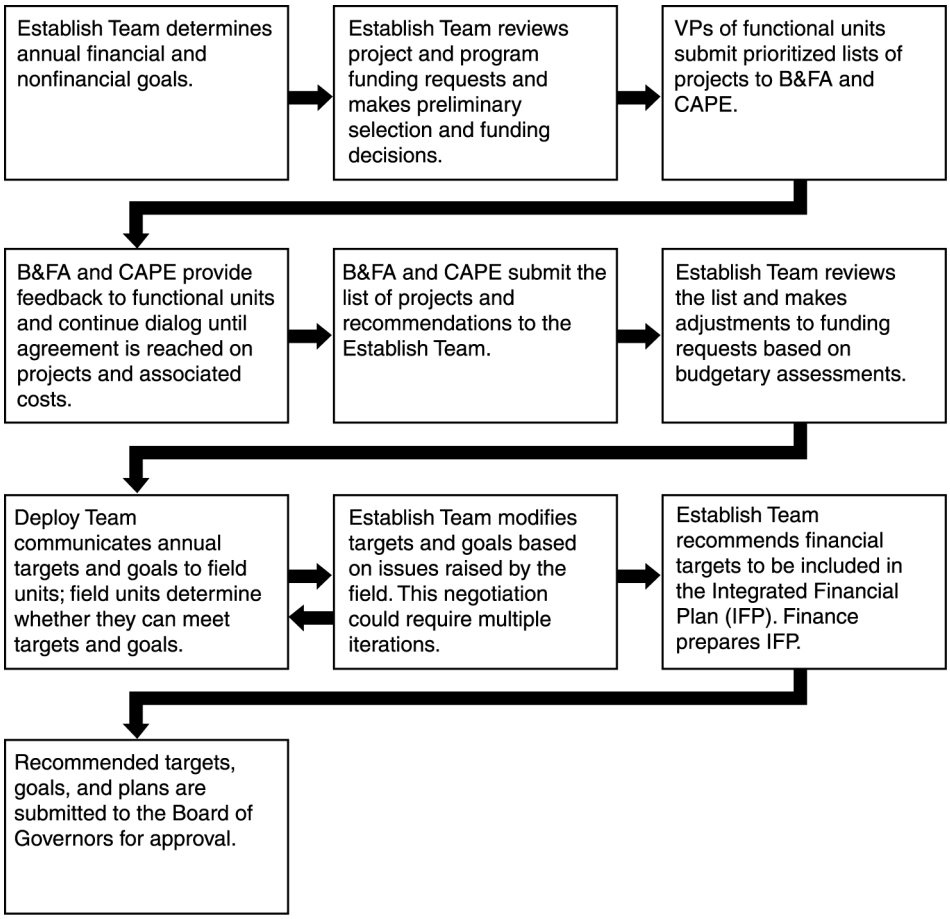
- **CTO Investment Review Board—**Three-member board comprises the CTO, CIO, and Manager of IT Value; is to manage the process of selecting projects within the CTO organization, review the performance of all IT projects in development, and conduct detailed reviews of selected IT projects on a monthly basis.

The Postal Service has established a number of capital planning, investment control, and budgeting processes to manage its IT investments. These include processes for (1) developing the investment portfolio, (2) approving major new projects, and (3) controlling and evaluating projects.

Process for Developing the Investment Portfolio

The Postal Service's annual capital planning and budgeting cycle begins in January with a process called the *CustomerPerfect!* management cycle. The Establish Team and the Deploy Team, composed of Postal Service executives, manage this annual organizationwide direction-setting process, led by Operations and aided by the Budget and Financial Analysis (B&FA) and the Capital and Program Evaluation (CAPE) groups within the Finance Department. The Establish Team is expected to align the organization's targets and goals with its commitment to listen to the three "voices" that represent aspects of its mission: the Voice of the Business (financial benefits), the Voice of the Customer (customer satisfaction), and the Voice of the Employee (employee satisfaction). The Establish Team is to review project and program funding requests and make preliminary selection and funding decisions on the basis of how the requests fit the organization's mission and budget. This process sets the Postal Service's financial and nonfinancial goals for the year. Figure 3 provides detail on the Postal Service's capital planning and budgeting cycle.

Figure 3: Capital Planning and Budgeting Cycle



Source: U.S. Postal Service documents.

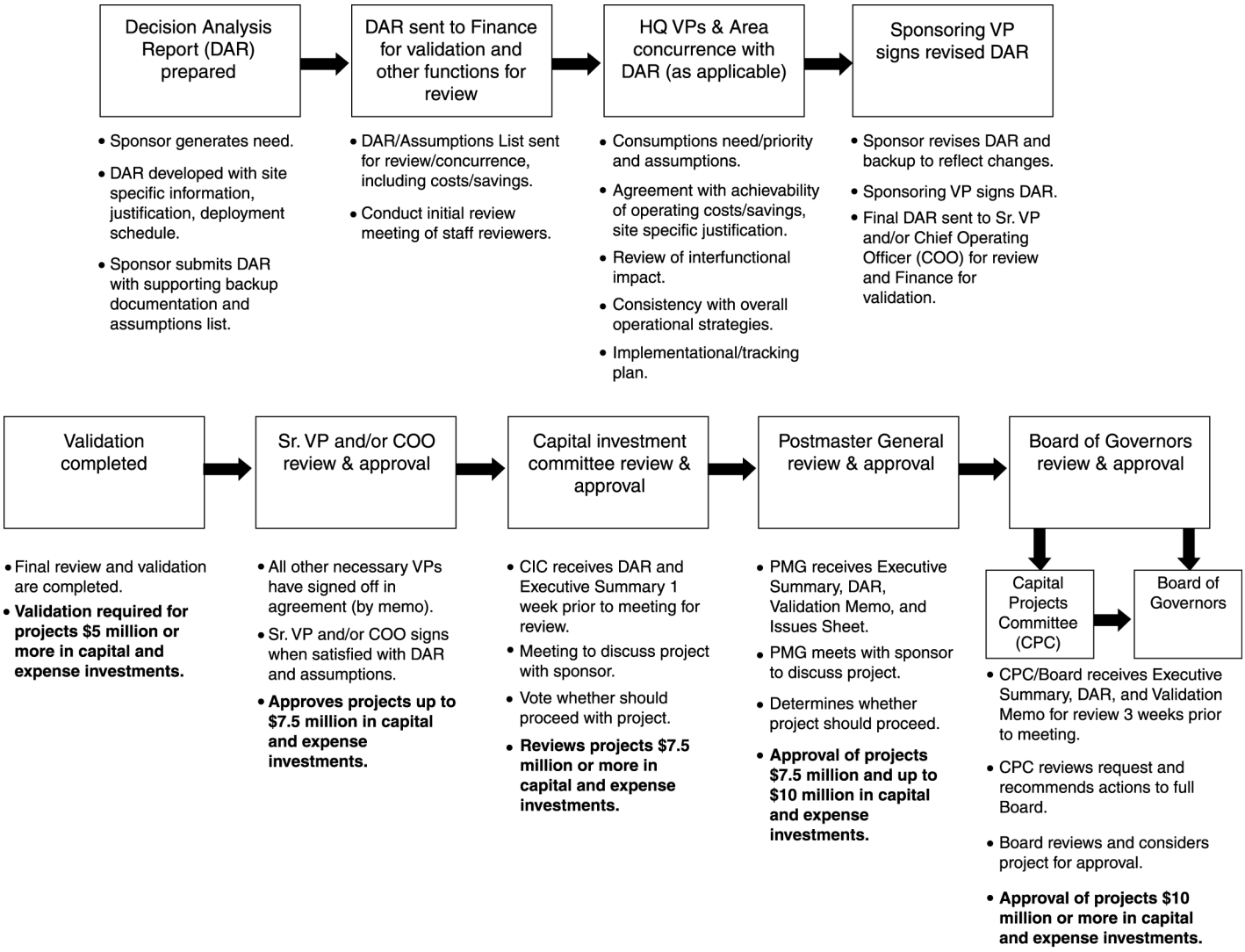
Process for Approving Major New Projects

The process for approving major new IT projects is the same as for any other new projects with capital costs of $5 million or more. These major projects are to proceed through the formal approval process and are monitored by the Finance Department in conjunction with the program sponsors when they are in development and implementation phases.

The process for approving proposed capital investments is defined in the Postal Service's F-66 manual.[12] The process begins with the sponsoring unit preparing a Decision Analysis Report (DAR), which presents the business case for the proposed project. Figure 4 provides detail on the process for approving major new projects.

[12]United States Postal Service, *General Investment Policies and Procedures: Handbook F-66, (*April 1999, revised February 2002).

Figure 4: Process for Approving Major New Projects



Source: US. Postal Service.

Control and Evaluation Process

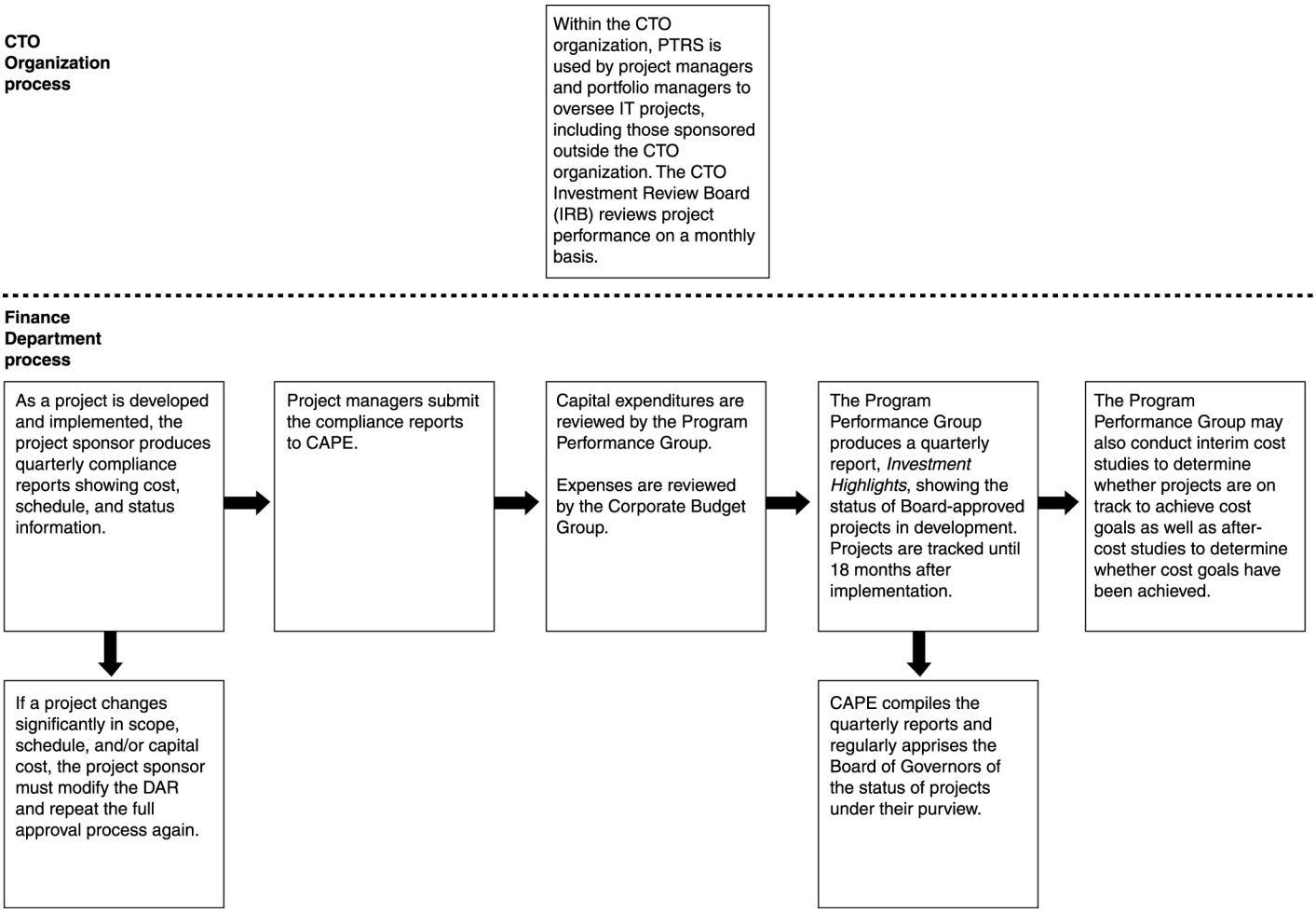
During a capital project's life cycle, control and evaluation are accomplished through two processes. Project sponsors are to produce quarterly compliance reports that summarize the project's status. These reports are to be used by CAPE, along with other financial information, to produce the quarterly *Investment Highlights* that are distributed to the

Board of Governors and others to present the status of Board-approved projects. This project oversight process continues for 18 months beyond a project's initial implementation. The Program Performance Group, part of CAPE, studies selected projects that are still in development to determine whether they remain on track to achieve cost goals. The Program Performance Group may also conduct cost studies, after implementation, to determine whether cost goals have been met. Changes in scope, schedule, or total capital funding needed for a project trigger the requirement for a modified DAR, which must be reviewed and approved through the same process as the original DAR.

At the operational level, the CTO organization's project managers and portfolio managers conduct the day-to-day oversight of IT projects, including those sponsored outside of the CTO organization, by tracking performance of IT projects in the Program Tracking and Reporting System (PTRS) and reporting project status every month to the CTO Investment Review Board. When problems are identified, they are addressed through interaction with the sponsoring organization, which may choose to bring the issue to senior executives if the problem is likely to affect their ability to meet their objectives.

IT investments that are not funded by capital funds are controlled and evaluated through the annual budget process. Executive-level oversight is performed through annual reviews of program descriptions called "program narratives," which provide input to the budget decision. At the operational level, ongoing oversight is performed through routine tracking of system operation. Figure 5 shows the Postal Service's project control and evaluation process.

Figure 5: Project Control and Evaluation Process



Source: U.S. Postal Service.

IT Investment Management Framework

Based on research into the IT investment management practices of leading private- and public-sector organizations, we have developed an information technology investment management maturity (ITIM) framework. This framework identifies critical processes for successful IT investment

organized into a framework of five increasingly mature stages.[13] The ITIM is intended to be used both as a management tool for implementing these processes incrementally and as an evaluation tool for determining an organization's current level of maturity. The overriding purpose of the framework is to encourage investment processes that increase business value and mission performance, reduce risk, and increase accountability and transparency in the decision process. This framework has been used in several GAO evaluations[14] and has been adopted by a number of agencies. These agencies have used ITIM for purposes ranging from self-assessment to redesign of their IT investment management processes.

ITIM is a hierarchical model comprising five "maturity stages." These maturity stages represent steps toward achieving stable and mature processes for managing IT investments. Each stage builds upon the lower stages; the successful achievement of each stage leads to improvement in the organization's ability to manage its investments. With the exception of the first stage, each maturity stage is composed of "critical processes" that must be implemented and institutionalized for the organization to achieve that stage. These critical processes are further broken down into key practices that describe the types of activities an organization should be performing to successfully implement each critical process. An organization may be performing key practices from more than one maturity stage at one time. This is not unusual, but efforts to improve investment management capabilities should focus on becoming compliant with lower stage practices before addressing higher stage practices.

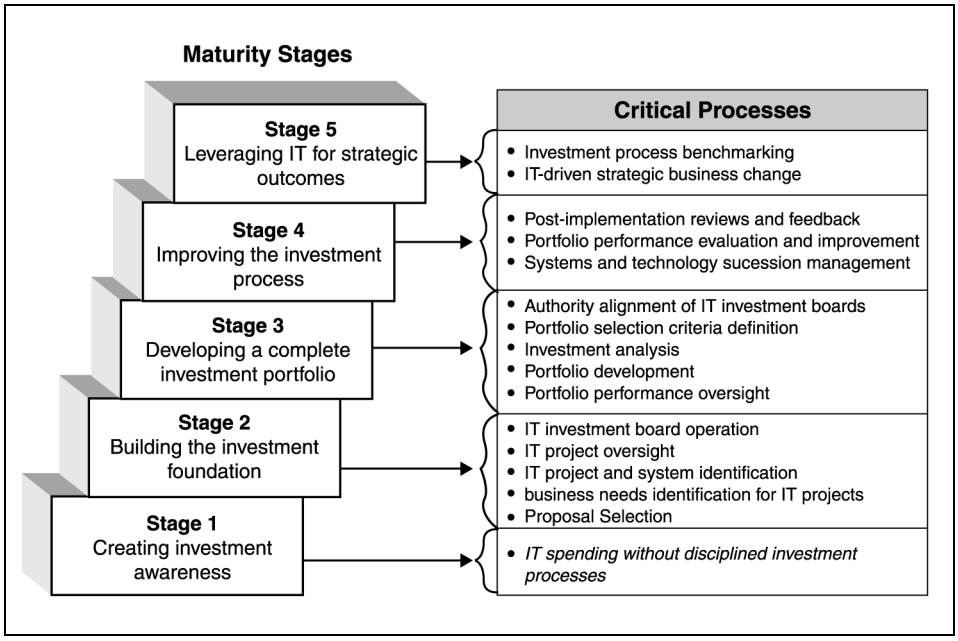
Stage two in the ITIM framework encompasses building a sound investment management process—by developing the capability to control projects so they finish predictably within established cost and schedule expectations—and establishing basic capabilities for selecting new IT projects. Stage three requires that an organization continually assess proposed and ongoing projects as parts of a complete investment portfolio: an integrated and competing set of investment options. This approach enables the organization to consider the relative cost, benefit, and risk of newly proposed investments along with those previously funded and to identify the optimal mix of IT investments to meet its mission, strategies, and goals. Stages four and five require the use of evaluation techniques to

[13]GAO/AIMD-10.1.23.

[14]GAO-01-146; GAO-01-190; GAO-01-961; GAO-02-314.

continuously improve both the investment portfolio and investment processes to better achieve strategic outcomes. Figure 6 shows the five maturity stages and the associated critical processes.

Figure 6: The Five Stages of Maturity with Critical Processes



Source: GAO.

As defined by the model, each critical process consists of "core elements" that indicate whether the implementation and institutionalization of a process can be effective and repeated. Key practices must be executed to fulfill the core elements and implement the critical process. The core elements are as follows:

- **Organizational commitments**—Actions taken by management to ensure that the critical process is established and will endure. Key practices typically involve establishing organizational policies and engaging the sponsorship of senior management.

- **Prerequisites**—Conditions that must exist within an organization to enable it to successfully implement a critical process. Key practices

typically involve allocating resources, establishing organizational structures, and providing training.

- **Activities—**Actions that must be taken to implement a critical process. An activity occurs over time and has recognizable results. Key practices typically involve establishing procedures, performing and tracking work, and taking corrective actions as necessary.

Objective, Scope, and Methodology

The objective of our review was to assess the Postal Service's capabilities for effectively managing its IT investments. To determine these capabilities and the organization's level of maturity in managing its IT investments, we applied our ITIM framework and the associated assessment method. As a part of the ITIM assessment method, we obtained documentary and testimonial evidence and observed demonstrations of several internal systems showing the organization's execution of various key practices. We evaluated the Postal Service against 14 critical processes in maturity stages two, three, four, and five. We did not evaluate the Postal Service on key practices for one critical process in stage three—Authority Alignment of IT Investment Boards—because major IT capital investments are managed by the same oversight entities, and we determined that this critical process was not applicable.

To determine whether the Postal Service had implemented the 14 critical processes we assessed, we first reviewed documentation relating to the organization's IT investment management practices, including written policies, procedures, and guidance that it had developed, and other forms of documentation that provided evidence that these practices had been executed. Documents included the Postal Service's F-66 manual, *Investment Highlights* reports, executive memoranda, program narratives required for the annual budget formulation, DARs, performance indicators, and the minutes from meetings of the CIC, the CPC, and the Board of Governors. We also reviewed a variety of administrative and system documents from the CTO organization, including evidence of its formulation process for IT investment proposals and its oversight process for IT investments.

We interviewed a number of senior officials, including the Chief Financial Officer (CFO), the CTO, and the CIO. Within the Office of the CFO, we also spoke with the Manager of Capital and Program Evaluation and the Manager of Corporate Budget. Within the Office of the CTO, we interviewed the Manager of IT Value and a representative from the

Enterprise Architecture Office. We also spoke with senior officials from the functional units, such as the Manager of Logistics Systems, the Manager for Human Resources Technology Management, and the Manager of Customer Service Operations.

As part of the analysis, we selected four projects, representing a range of functional units, stages of development, and sizes, and examined them to determine the extent to which the Postal Service's policies and procedures for IT investment management were being implemented. The projects we selected for review were (1) Enhanced Security Capability, (2) Organization Structure, Staffing and Management, (3) Point of Service ONE, and (4) Surface-Air Management System. Appendix II contains additional information on each of the projects we reviewed. To perform the project reviews, we reviewed project management documentation such as DARs, project management plans, and PTRS reports. To clarify information in these documents and gain further insight we also interviewed managers in the sponsoring functional units, project managers, and the members of the project management teams. The teams included staff who had been assigned responsibility for project oversight within the Office of the Chief Technology Officer.

We compared the evidence we collected through document reviews and interviews to the detailed requirements for each key practice and critical process that is specified in the ITIM. In accordance with the ITIM assessment method, we considered a key practice to have been "executed" when we determined, by team consensus, that sufficient evidence existed to confirm that the Postal Service was executing the practice in accordance with stated ITIM criteria. When we determined that there were significant weaknesses in the Postal Service's execution of a practice or found insufficient evidence of its execution, we concluded that the practice was not executed. Once the key practices were assessed, we determined which of the 14 critical processes had been implemented. A critical process was determined to be "implemented" when all related key practices were designated as executed. Otherwise, according to the ITIM assessment method, the critical process would not be considered to have been implemented.

We conducted our work at the Postal Service's headquarters offices in Washington, D.C., from October 2001 through July 2002, in accordance with generally accepted government auditing standards.

Postal Service Executes Most Key Foundational Practices

At the stage two level of maturity in the IT investment management framework, an organization has attained repeatable, basic selection and control processes and successful IT investment control processes at the project level. In other words, the organization can select projects that meet established selection criteria and can identify expectation gaps early and take appropriate steps to address them. According to ITIM, critical processes at this stage include (1) defining investment review board operations, (2) developing processes to determine the progress of individual IT projects, (3) creating an inventory of IT investments, (4) identifying IT project and systems business needs, and (5) developing a basic process for selecting new IT proposals. Table 1 shows the purpose of each critical process in stage two.

Table 1: Stage Two—Critical Processes Required for Building the Investment Foundation

Critical process	Description
IT investment board operation	To define and establish the governing board(s) responsible for selecting, controlling, and evaluating investments.
IT project oversight	To regularly determine each IT project's progress toward cost and schedule milestones using established criteria, and take corrective actions when milestones are not achieved.
IT project and system identification	To create and maintain an IT project and system inventory to assist in managerial decision-making.
Business needs identification	To ensure that each IT program and project supports the organization's business needs and meets users' needs.
Proposal selection	To ensure that an established, structured process is used to select new IT proposals.

Source: GAO.

The Postal Service is executing nearly 90 percent of the key practices associated with stage two critical processes. Specifically, the Postal Service is carrying out all of the key practices associated with selecting proposals that meet established criteria, aligning IT projects with the organization's business needs, and maintaining information on IT projects and systems in an inventory.

The Postal Service has yet to execute a few key practices associated with establishing an IT investment management foundation. For example, the Postal Service does not have guidance defining the overall framework for its IT investment management process, and policies and procedures for

project oversight are not documented. When the Postal Service implements the remaining critical processes associated with stage two, it will acquire the additional key controls needed to fully implement basic control processes. For example, with an investment management process guide, the Postal Service will gain assurance that IT investment activities will be performed in a consistent and cost-effective manner.

Table 2 summarizes the status of the Postal Service's critical processes for stage two, showing how many associated key practices it has executed.

Table 2: Summary of Results for Stage Two Critical Processes and Key Practices

Critical process	Key practices executed	Total required by critical process	Percentage of key practices executed
IT investment board operation	4	6	67%
IT project oversight	9	11	82
IT project and system identification	7	7	100
Business needs identification	8	8	100
Proposal selection	6	6	100
Totals	**34**	**38**	**89%**

Source: GAO.

The following discussion provides information on steps the Postal Service has taken to implement each of these critical processes.

Boards Are Established but Operating without a Complete Process Guide

The creation of decision-making bodies or boards is central to the IT investment management process. At the stage two level of maturity, organizations define one or more boards, provide resources to support their operations, and appoint members who have expertise in both operational and technical aspects of proposed investments. Resources provided to support the operations of IT investment boards typically include top management's participation in creating the board(s) and defining their scope and formal evidence acknowledging management's support for board decisions. The boards operate according to a written IT investment process guide tailored to the organization's unique characteristics, thus ensuring that consistent and effective management

practices are implemented across the organization.[15] Once board members are selected, the organization ensures that they are knowledgeable about policies and procedures for managing investments. Organizations at the stage two level of maturity also take steps to ensure that executives and line managers support and carry out the decisions of the IT investment board. According to ITIM, an IT investment management process guide should be a key authoritative document that the organization uses to initiate and manage IT investment processes and should provide a comprehensive foundation for policies and procedures developed for all other related processes.

The Postal Service has executed four of the six key practices for this critical process by establishing investment boards; providing adequate resources for related activities; appointing experienced senior-level executives to the boards; and implementing policies, procedures, and processes to ensure that executives and line managers support and carry out decisions made by the boards.

However, the Postal Service has yet to develop a written, organization-specific process guide to direct the operations of the investment boards. While the F-66 manual provides general guidance on the organization's investment management process, it does not constitute an IT investment process guide because it does not sufficiently define the investment process. Specifically, the manual does not include information on the roles of the Establish Team and the CTO Investment Review Board. In addition, it does not provide detail on the processes followed by other boards involved in the investment management process (e.g., the CIC and CPC). Finally, the manual does not identify the manner in which investment boards' processes are to be coordinated with other key organizational plans and processes (such as the budget formulation process). Without an investment management process guide, the Postal Service lacks the assurance that IT investment activities will be coordinated and performed in a consistent and cost-effective manner.

Table 3 shows the rating for each key practice required to implement the critical process for establishing IT investment board operation at the stage two level of maturity. Each of the "executed" ratings shown below

[15]According to ITIM, a process is a sequence of steps performed for a given purpose, and a process guide is a document that defines the unique manner in which the general IT investment guidance will be implemented within the organization.

represents an instance where, based on the evidence provided by Postal Service officials, we concluded that a specific key practice was currently being executed by the organization.

Table 3: IT Investment Board Operation

Type of practice	Key practice	Rating	Summary of evidence
Organizational commitments	1. An organization-specific IT investment process guide is created to direct each board's operations.	Not executed.	The Postal Service has not developed an investment process guide to direct its board operations. While the F-66 manual provides general guidance on the organization's investment management process, it does not constitute an investment management process guide in that it does not (1) include information on the roles of the Establish Team and the CTO Investment Review Board, which are responsible for selecting IT investments to be funded in the budget formulation process and performing project oversight functions; (2) provide detail on the processes followed by other boards involved in the investment management process (e.g., the CIC and the CPC); or (3) identify the manner in which investment boards' processes are to be coordinated with other key organizational plans and processes (such as the budget formulation process).
	2. Organization executives and line managers support and carry out IT investment board decisions.	Executed.	The Postal Service has several processes in place to ensure that executives and line managers support and carry out decisions made by the oversight boards with investment management responsibility. For example, the Postal Service uses "accountability letters" similar to Senior Executive Service contracts to ensure that the executives and line managers support the decisions of the investment boards.
Prerequisites	1. Adequate resources are provided for operating each IT investment board.	Executed.	Adequate resources, such as supporting staff, are available for investment board operations.
	2. Board members understand the investment board's policies and procedures and exhibit core competencies in using the IT investment approach via training, education, or experience.	Executed.	Members of Postal Service investment boards are senior-level executives who have extensive experience with the organization's operations and IT investment management approach.

(Continued From Previous Page)

Type of practice	Key practice	Rating	Summary of evidence
Activities	1. Each IT investment board is created and defined with board membership integrating both IT and business knowledge.	Executed.	The CPC, CIC, and Establish Team include members who have extensive knowledge and experience of business and IT investment management. The CFO or CTO are members of the boards and contribute IT knowledge and expertise.
	2. Each IT investment board operates according to written policies and procedures in the organization-specific IT investment process guide.	Not executed.	The Postal Service has not developed a written organization-specific process guide for IT investment management. As a result, the Postal Service's enterprise-level investment boards are operating without documented policies and procedures.

Source: GAO.

CTO Organization Oversees IT Investments

Investment boards should effectively oversee IT projects throughout all life-cycle phases (concept, design, testing, implementation, and operations/maintenance). At the stage two level of maturity, investment boards should review each project's progress toward predefined cost and schedule expectations, using established criteria and performance measures, and should take corrective actions to address cost and milestone variances.

According to ITIM, effective project oversight requires, among other things, (1) having written polices and procedures for project management; (2) developing and maintaining an approved management plan for each IT project; (3) making up-to-date cost and schedule data for each project available to the oversight boards; (4) reviewing each project's performance by regularly comparing actual cost and schedule data with expectations; (5) ensuring that corrective actions for each under-performing project are documented, agreed to, implemented, and tracked until the desired outcome is achieved; and (6) having written policies and procedures for oversight of IT projects.

The Postal Service has executed most of the key practices in the area of project oversight. For example, the Postal Service has developed several policies and procedures for project management, including the *Program Management Process Guidelines*, which are high-level project

management guidelines used for all projects; the more-detailed *Software Process Standards and Procedures* used by the Postal Service's business solution centers to develop and maintain systems; and the recently-issued *Integrated Solutions Methodology*, which provides a process for managing a system's development throughout the life-cycle phases. In addition, IT projects have an approved, up-to-date project management plan, in accordance with project management guidelines. Data on a project's actual cost and schedule are provided to the CTO Investment Review Board,[16] which is responsible for overseeing the performance of IT projects, and to other oversight groups as appropriate. Actual cost and schedule data for the four projects we reviewed were provided to (1) the CTO Investment Review Board in the form of PTRS reports, (2) the Board of Governors through quarterly *Investment Highlights* reports featuring capital expenditures and schedule data, and (3) field and headquarters offices through accounting and management reports featuring data on projects' actual capital and expense costs.[17]

Finally, the CTO Investment Review Board regularly oversees the performance of projects by comparing actual cost and schedule data to expectations and performs special reviews of projects that do not meet expectations. When these reviews are performed, corrective actions are defined, documented, agreed to by the program manager and the CTO Investment Review Board, and tracked until the desired outcome is achieved. According to the IT program manager for Organization Structure, Staffing and Management (OSS&M), special meetings were held for this project to address schedule performance issues. Also, officials from the CTO organization stated that the office generates reports listing projects that are not meeting cost, schedule, or customer satisfaction expectations and brings them to management's attention so that "special reviews" can be performed. These reports identify the manager and group responsible for the project, provide a summary of the problem, the status of the resolution, and a target date for resolving the problem. The CTO Investment Review Board tracks action items to resolve the problem until they are completed.

[16]The CTO Investment Review Board (CTO IRB) is comprised of the Postal Service's CTO, Vice President for Information Technology, and Manager for IT Value. According to Postal Service officials, the CTO IRB proposes IT infrastructure investments on the basis of business case analyses and performs regular reviews of these and other investments sponsored by business units to monitor expense and capital expenditures and project plans and schedules, track contributions, and resolve any issues or concerns.

[17]One of the four projects we reviewed, Enhanced Security Capability, is actually a program comprising over 30 different initiatives. See appendix II for information on this program.

Notwithstanding these strengths, the Postal Service has a few weaknesses in its oversight of IT projects. First, while the Postal Service has written policies and procedures addressing how the CTO Investment Review Board is to oversee IT investments, it does not have any that sufficiently define the Establish Team's role in the oversight process. The F-66 manual, for example, notes that senior management is to continually review the performance of capital projects and discusses some mechanisms that could be used for this purpose (e.g., compliance reports). However, it does not provide specifics on the role of the Establish Team or define processes for oversight of projects beyond the initial deployment phase. Without adequate policies and procedures, project oversight may not be performed consistently. In addition, without these policies and procedures, the Postal Service lacks the transparency that is helpful in both communicating and demonstrating how project oversight is performed.

Second, the Postal Service's investment boards do not adequately oversee project performance by comparing actual cost data to expectations. Specifically, while the Establish Team and CTO Investment Review Board each compare actual cost data to annual budget expectations, the Postal Service could not demonstrate that these boards compared the data to original expectations established in the DAR. In addition, while the *Investment Highlights* used by executives to monitor project performance contains schedule information, it does not contain complete information on actual project costs because it does not report operating expenses. Without comparisons of complete actual cost data to original expectations, Postal Service executives may not be able to easily determine whether the projects they have selected are progressing as planned or whether corrective actions are needed.

Table 4 shows the rating for each key practice required to implement the critical process for project oversight at the stage two level of maturity and summarizes the evidence that supports these ratings.

Table 4: IT Project Oversight

Type of practice	Key practice	Rating	Summary of evidence
Organizational commitments	1. The organization has written policies and procedures for project management.	Executed.	The Postal Service has developed written policies and procedures for project management, including *Program Management Process Guidelines*, *Software Process Standards and Procedures*, and an *Integrated Solutions Methodology*.
	2. The organization has written policies and procedures for management oversight of IT projects.	Not executed.	The CTO Investment Review Board has written policies and procedures for overseeing projects. However, there are no written policies and procedures that sufficiently address how the Establish Team is to oversee projects. For example, the F-66 manual does not provide specifics on the role of the Establish Team or on how this team is to oversee capital projects that have been deployed for over 18 months or ongoing infrastructure-type projects.
Prerequisites	1. Adequate resources are provided to assist the board(s) in overseeing IT projects.	Executed.	The Postal Service has adequate resources for performing IT project oversight, including managers and staff assigned responsibility for this activity, and systems that capture information on actual costs, schedule, and risk.
	2. Each IT project has and maintains an approved project management plan that includes cost and schedule controls.	Executed.	The Postal Service's project management procedures require that an approved project management plan be maintained for each IT project. In addition, cost and schedule controls are applied during project reviews. Approved project management plans were maintained for the four projects we reviewed, and cost and schedule controls were applied during project reviews.
	3. An IT investment board is operating.	Executed.	The Postal Service has a number of oversight boards with responsibility for managing IT investments, including the Establish Team, the CIC, the CPC, the Board of Governors, and the CTO Investment Review Board.
	4. Information from the IT project and system inventory is used by the IT investment board as applicable.	Executed.	IT project and system information is used by the CTO Investment Review Board to support executive management's project management responsibilities.
Activities	1. Each project's up-to-date cost and schedule data are provided to the appropriate IT investment board.	Executed.	Projects' up-to-date cost and schedule data are provided to the CTO Investment Review Board, the Establish Team, and other oversight groups as appropriate. Actual cost and schedule data for the four projects we reviewed were provided to (1) the CTO Investment Review Board through the Program Tracking and Reporting System (PTRS), a tool used by the Board to monitor IT project performance, and (2) other oversight groups through quarterly reports featuring capital expenditures and schedule data and monthly financial reports featuring actual capital and expense cost data of projects.

(Continued From Previous Page)

Type of practice	Key practice	Rating	Summary of evidence
	2. Using established criteria, the IT investment board oversees each IT project's performance regularly by comparing actual cost and schedule data to expectations.	Not executed.	The Postal Service's investment boards do not adequately oversee project performance by comparing actual cost data to expectations. Specifically, while the Establish Team and CTO Investment Review Board each compare actual cost data to annual budget expectations, the Postal Service could not demonstrate that these boards compared the data to original expectations established in the DAR. In addition, while the *Investment Highlights* used by executives to monitor project performance contains schedule information, it does not contain complete information on actual project costs in that it does not report operating expenses.
	3. The IT investment board performs special reviews of projects that have not met predetermined performance standards.	Executed.	Special reviews of projects that have not met predetermined standards are performed. According to the IT program manager for OSS&M, special meetings were held for this project to address schedule performance issues.
	4. Appropriate corrective actions for each under-performing project are defined, documented, and agreed to by the IT investment board and the project manager.	Executed.	Appropriate corrective actions for each under-performing project are defined, documented, and agreed to by the oversight board and the project manager.
	5. Corrective actions are implemented and tracked until the desired outcome is achieved.	Executed.	Corrective actions are implemented and tracked to help ensure that an agreed-upon outcome is achieved.

Source: GAO.

IT Project and System Information Is Maintained to Support Project Management

To make good management decisions, an organization must know how funds are being expended toward acquiring, maintaining, and deploying its IT investments. Implementing this critical process requires an organization to identify all projects and systems within the organization and create one or more repositories or inventories of information about them. This information is required to track the organization's IT resources to provide a basis for analyses showing major cost and management factors and trends. An IT project and systems inventory can take many forms and does not have to be centrally located or consolidated. The guiding principles for developing the inventory are that the information maintained should be accessible where it is of the most value to investment decision makers and relevant to the management processes and decisions that are being made.

According to ITIM, organizations at the stage two level of maturity provide adequate resources for tracking IT projects and systems, designate

responsibility for managing the project and system identification process, and develop related written policies and procedures. Resources required for this purpose typically include managerial attention to the process; staff; supporting tools; an inventory database; inventory reporting, updating and query tools; and a method for communicating inventory changes to affected parties. Stage two organizations develop and maintain information on their IT projects and systems in one or more inventories according to written procedures, recording changes in data as required, and maintaining historical records. Access to this information is provided on demand to decision makers and other affected parties.

The Postal Service has executed all of the key practices for this critical process. The Service has established a number of repositories of information on its IT projects and systems in the form of the Enterprise Information Repository (EIR), and automated systems such as PTRS that track actual cost, schedule, benefit, and risk associated with the Postal Service's IT programs and projects. Members of the Postal Service's investment boards have access to the systems used to maintain information on the organization's IT programs and projects. Information is maintained in these databases because they are also used for other purposes. For example, project managers input up-to-date systems and project status information to PTRS; the Corporate Planning System (CPS) and PTRS are updated automatically as financial transactions are processed. Finally, the Postal Service retains records showing changes in the information maintained on each IT investment over time and provides these records to its investment boards.

Table 5 shows the rating for each key practice required to implement the critical process for IT project and system identification at the stage two level of maturity and summarizes the evidence that supports these ratings.

Table 5: IT Project and System Identification

Type of practice	Key practice	Rating	Summary of evidence
Organizational commitments	1. The organization has written policies and procedures for identifying its IT projects and systems and collecting, in an inventory, information about the IT projects and systems which is relevant to the investment management process.	Executed.	The Postal Service has written policies and procedures for the Program Tracking and Reporting System PTRS and EIR. Information captured in these systems is relevant to the investment management process.
	2. An official is assigned responsibility for managing the IT project and system identification process and ensuring the inventory meets the needs of the investment management process.	Executed.	The CTO organization is responsible for maintaining PTRS and EIR.
Prerequisite	1. Adequate resources are provided for identifying IT projects and systems and collecting relevant information into an inventory.	Executed.	Postal Service officials stated that adequate staff support is available to identify programs, projects, and systems, and provided evidence of staffing levels in key units including IT Value and the CTO organization.
Activities	1. The organization's IT projects and systems are identified and specific information about them is collected in an inventory.	Executed.	Information on IT projects and systems is maintained in PTRS and EIR.
	2. Changes to IT projects and systems are identified, and change information is maintained in the inventory.	Executed.	Project managers ensure that systems and project status information is kept up to date in PTRS and that cost amounts captured in financial and corporate planning systems are updated automatically as financial transactions are processed.
	3. Information from the inventory is available on demand to decision makers and other affected parties.	Executed.	IT investment decision makers and other affected parties have access to the various systems used to capture IT project and system information. Although this information is available on demand, a number of systems must be accessed in order to obtain complete information on expected and actual costs, benefits, schedule, and risks.
	4. The IT project and system inventory and its information records are maintained to contribute to future investment selections and assessments.	Executed.	Historical records are maintained for the primary systems that contain IT project and system information, PTRS and EIR. Project managers also input up-to-date systems and project status information to EIR and PTRS, and the CPS and PTRS are updated automatically as financial transactions are processed. Finally, the Postal Service is retaining records that show changes in the information maintained on each IT investment over time and providing these records to its investment boards.

Source: GAO.

Processes Ensure That IT Investments Support Business Needs and Meet User Needs

Defining business needs for IT projects helps ensure that projects support the organization's mission goals and meet users' needs. This critical process creates the link between the organization's business objectives and its IT management strategy. According to ITIM, effectively identifying business needs requires, among other things, (1) developing policies and procedures for identifying business needs and associated users for IT projects, (2) defining the organization's business needs or stated mission goals, (3) defining business needs for projects, and (4) identifying users for projects who will participate in the project's development and implementation.

The Postal Service has executed all of the key practices for this critical process. The Service's business needs are defined in a number of documents, including the organization's strategic plan and recent *Transformation Plan*. Business needs and project users are being identified and defined in accordance with policies and procedures, and users are involved in project management throughout a project's life cycle. For example, the project management team for Point of Service ONE conducts interviews to ensure that the system is providing the information needed for decision making, and staff working in field locations tested Point of Service ONE software to provide input on modifications required to support their needs. The business needs and associated users of the four projects we reviewed were clearly identified and defined in the DARs used to obtain project approval and in other project justification documentation. In addition, users of these projects were involved in project development activities through direct collaboration with CTO staff, user groups, and/or change control groups. Because the Postal Service is executing all the key practices associated with identifying business needs, it has increased confidence that its IT projects will meet both business needs and users' needs.

Table 6 shows the rating for each key practice required to implement the critical process for business needs identification at the stage two level of maturity and summarizes the evidence that supports these ratings.

Table 6: Business Needs Identification

Type of practice	Key practice	Rating	Summary of evidence
Organizational commitment	1. The organization has written policies and procedures for identifying the business needs (and the associated users) of each IT project.	Executed.	The Postal Service has written policies and procedures for identifying business needs (and the associated users) in its F-66 manual, *Program Management Process Guide,* and *Integrated Solutions Methodology.*
Prerequisites	1. Adequate resources are provided for identifying business needs and associated users.	Executed.	According to Postal Service officials, adequate resources are provided for identifying business needs and associated users. Program managers in the CTO organization also have methods and tools for analyzing business needs, identifying users, and converting business needs into statements of technical requirements.
	2. The organization has defined business needs or stated mission goals.	Executed.	Business needs are defined in the Postal Service's strategic plans, integrated financial plan, annual performance plans and reports, and *Postal Service Transformation Plan*.
	3. IT staff are trained in business needs identification.	Executed.	CTO organization staff with assigned project management responsibilities are trained and experienced in the process of identifying business needs and developing technical solutions to meet these needs. In addition, they collaborate with business units in developing solutions to ensure that business needs are met. Business units are directly involved in this process.
	4. IT projects and systems are identified in the IT project and system inventory.	Executed.	Information on IT systems and projects is maintained in a number of systems, including PTRS and EIR.
Activities	1. The business needs for each IT project are clearly identified and defined.	Executed.	Policies and procedures require that the business needs for each IT project be clearly identified and defined. The business needs for the four projects we reviewed were clearly identified and defined.
	2. Specific users are identified for each IT project.	Executed.	Policies and procedures require that the specific users be identified for each IT project. Specific users were identified for the four IT projects we reviewed.

Source: GAO.

Structures Are in Place for Selecting IT Investment Proposals

As a basic step in the direction of implementing mature stage two processes, an organization must develop a sound process for selecting IT proposals and projects. Once adequate resources are provided and an official is designated with responsibility for selecting proposals, stage two organizations establish a structured selection process. Resources required for selecting proposals typically include managerial time and attention, staff, and supporting tools and methodologies. Executives analyze and prioritize the proposals and make related funding decisions according to an established, structured process.

The Postal Service has executed all of the key practices pertaining to selecting IT proposals: executives and managers follow established selection processes, the CFO has been designated with responsibility for the organization's budget formulation process, adequate resources are being provided to support related activities, a structured process is in place for developing new IT proposals, and executives analyze and prioritize the proposals according to established selection criteria.

Postal Service executives and managers follow established processes for selecting IT investments. Specifically, functional units, the Finance Department's CAPE group, the Establish Team, and the organization's enterprise-level investment boards all follow established processes for proposing, prioritizing, and selecting IT investments. Officials reported that the Establish Team operates in accordance with established management cycle processes supported by the organization's CPS and that these processes, although not documented, are generally understood by members of the team. Finally, the CTO organization has developed selection criteria for that unit's proposed IT investments that are incorporated in its new Business Case System (BCS).

Table 7 shows the rating for each key practice required to implement the critical process for proposal selection at the stage two level of maturity and summarizes the evidence that supports these ratings.

Table 7: Proposal Selection

Type of practice	Key practice	Rating	Summary of evidence
Organizational commitments	1. Executives and managers follow an established selection process.	Executed.	Executives and managers follow established processes for selecting IT investments that are embodied in the Service's capital planning and budget formulation processes.
	2. An official is designated to manage the proposal selection process.	Executed.	The Postal Service has formally designated responsibility for the annual budget formulation process to the CFO.
Prerequisite	1. Adequate resources are provided for proposal selection activities.	Executed.	Adequate resources are available to support proposal selection activities in the functional units, the Finance Department, the CTO organization, and the Establish Team.
Activities	1. The organization uses a structured process to develop new IT proposals.	Executed.	Proposals for new investments are developed by the functional units, and the CTO organization has a structured process for supporting the development of IT-related proposals.
	2. Executives analyze and prioritize new IT proposals according to established selection criteria.	Executed.	Vice presidents of the Postal Service's functional units develop and rank proposals for new IT investments, and the Establish Team analyzes and prioritizes the proposals annually, along with existing IT investments, according to established criteria.
	3. Executives make funding decisions for new IT proposals according to an established process.	Executed.	The Establish Team makes funding decisions for new IT proposals according to an established process as part of the Postal Service's budget formulation activities. Team members are executive-level officers.

Source: GAO.

Postal Service Shows Mixed Progress in Managing Its IT Investments as a Portfolio

An IT investment portfolio is an integrated, enterprisewide collection of investments that are assessed and managed collectively based on common criteria. Managing investments within the context of such a portfolio is a conscious, continuous, and proactive approach to expending limited resources on an organization's competing initiatives in light of the relative benefits expected from these investments. Taking an enterprisewide perspective enables an organization to consider its investments comprehensively so that the collective investments optimally address its mission, strategic goals, and objectives. This portfolio approach also allows an organization to determine priorities and make decisions about which projects to fund based on analyses of the relative organizational value and risks of all projects, including projects that are proposed, under development, and in operation.

According to ITIM, critical processes performed by organizations at the stage three level of maturity include (1) defining portfolio selection criteria, (2) engaging in project-level investment analysis, (3) developing a complete portfolio based on the investment analysis, and (4) maintaining oversight over the investment performance of the portfolio. In addition, organizations with more than one board that selects IT projects for funding must align the authority of their IT investment boards. Although authority alignment is a critical process for the stage three level of maturity, we did not assess it in this study, because the Postal Service has a single set of organizationwide investment processes that apply to IT investments. Table 8 shows the purpose of each critical process in stage three.

Table 8: Stage Three—Critical Processes Required for Developing a Complete Investment Portfolio

Critical process	Description
Portfolio selection criteria definition	To ensure that the organization develops and maintains IT portfolio selection criteria that support its mission, organizational strategies, and business priorities.
Investment analysis	To ensure that all IT investments are consistently analyzed and prioritized according to the organization's portfolio selection criteria.
Portfolio development	To ensure that an optimal IT investment portfolio with manageable risks and returns is selected and funded.
Portfolio performance oversight	To ensure that each IT investment portfolio achieves its cost, benefit, schedule, and risk (CBSR) expectations.

Source: GAO

The Postal Service has executed many of the key practices associated with stage three critical processes. For example, the organization's portfolio selection criteria are distributed throughout the organization, and they are reviewed and modified as appropriate. In addition, executives examine the mix of proposals and investments across portfolio categories in making funding selections. However, many key practices still need to be executed before the Postal Service can effectively manage its IT investments from a portfolio perspective. For example, the Postal Service has not defined the policies and procedures for any of the stage three critical processes. In addition, the Service has not developed portfolio selection criteria that adequately address cost, benefit, schedule, and risk. Until the Service fully implements critical processes associated with managing investments as a complete portfolio, it will not have ready access to the data needed to make informed decisions about competing investments.

Table 9 summarizes the status of the Postal Service's stage three critical processes, showing how many associated key practices it has executed.

Table 9: Summary of Results for Stage Three Critical Processes and Key Practices

Critical process	Key practices executed	Total required by critical process	Percentage of key practices executed
Portfolio selection criteria definition	4	6	67%
Investment analysis	2	7	29
Portfolio development	6	9	67
Portfolio performance oversight	6	9	67
Totals	**18**	**31**	**58%**

Source: GAO.

The following discussion provides information on the steps the Postal Service has taken toward implementing each of the critical processes.

Portfolio Selection Criteria Are Defined, but Do Not Adequately Address All Factors

To manage IT investments effectively, an organization needs to establish rules or "selection criteria" for determining how to allocate scarce funding to existing and proposed investments. Thus, the process of developing an IT investment portfolio necessarily involves defining appropriate cost, benefit, schedule, and risk criteria for evaluating individual proposals for investments. To ensure that the organization's strategic goals, objectives, and mission will be satisfied by the investments, the criteria should have an enterprisewide focus that reflects these strategic goals. Further, if an organization's mission or business needs and strategies change, criteria for selecting investments should be reexamined at the portfolio level. Portfolio selection criteria should be disseminated throughout the organization to ensure that decisions concerning investments are made in a consistent manner and that this critical process is institutionalized. To achieve this result, project managers, organizational planners, and other decision makers should receive information on the organization's selection criteria and address the criteria in IT proposals and business cases, project oversight activities, and strategic and business planning processes. Resources required for this critical process typically include the time and attention of executives involved in the process, adequate staff, and supporting tools.

The Postal Service has executed four of the six key practices for this critical process. First, adequate resources are available to conduct portfolio selection criteria definition activities. Second, several working groups, including the Establish Team, are tasked with creating and modifying portfolio selection criteria. Third, portfolio selection criteria in the form of performance indicators and targets and program narratives that are required for budget formulation are distributed throughout the organization. Fourth, the Establish Team performs periodic reviews of the portfolio selection criteria and, in doing so, considers the organization's current strategic goals and objectives, changing the criteria from year to year as required by current circumstances and priorities.

Nonetheless, the Postal Service has yet to develop written guidance establishing procedures to be followed in creating, modifying, and using criteria for selecting a portfolio. Postal Service officials use annual performance plans, performance indicators and targets, and program narrative requirements as portfolio selection criteria. While these criteria are based on the Postal Service's mission, goals, strategies, and priorities, they are not adequate because they do not address cost, benefit, schedule, and risk considerations in a manner that (1) provides sufficient and

meaningful cost, benefit, schedule, and risk information to effectively assess investments and (2) would allow the Service to compare them against one another, prioritize them, and select those that best meet its needs and priorities. For example, program narratives do not include complete cost information. While expected capital costs are reported for the next 6 years, expense is only reported through the end of the current fiscal year. Further, the criteria do not include a weighting schema or other method that would allow the Establish Team to compare the risk-adjusted returns of competing investments. The CTO organization uses such criteria to prioritize investments and assist in making selection decisions. Without portfolio selection criteria that adequately address cost, benefit, schedule, and risk considerations, Postal Service officials have less assurance that they are selecting the mix of investments that best meets the organization's needs and priorities.

Table 10 shows the rating for each key practice required to implement the critical process for defining proposal selection criteria at the stage three level of maturity and summarizes the evidence that supports these ratings.

Table 10: Portfolio Selection Criteria Definition

Type of practice	Key practice	Rating	Summary of evidence
Organizational commitment	1. The organization has written policies and procedures for creating and modifying IT portfolio selection criteria.	Not executed.	The Postal Service does not have written policies and procedures for creating and modifying IT portfolio selection criteria.
Prerequisites	1. Adequate resources are provided for selection criteria definition activities.	Executed.	Adequate resources are available to conduct IT proposal selection criteria definition activities, including the Establish Team, which develops portfolio selection criteria each year as part of the budget formulation process.
	2. A working group is designated to be responsible for creating and modifying the IT portfolio selection criteria.	Executed.	The Establish Team is responsible for creating and modifying the Postal Service's IT portfolio selection criteria.

(Continued From Previous Page)

Type of practice	Key practice	Rating	Summary of evidence
Activities	1. The enterprisewide IT investment board approves the core IT portfolio selection criteria, including cost, benefit, schedule, and risk criteria, based on the organization's mission, goals, strategies, and priorities.	Not executed.	While the Establish Team approves portfolio selection criteria based on the Postal Service's mission, goals, strategies, and priorities, these criteria are not adequate because they do not address CBSR considerations in a manner that (1) provides sufficient and meaningful information to effectively assess investments and (2) would allow the Postal Service to compare investments against one another, prioritize them, and select those that best meet the Service's needs and priorities.
	2. The IT portfolio selection criteria are distributed throughout the organization.	Executed.	The Postal Service distributes portfolio selection criteria in the form of strategic and annual performance plans, performance indicators and targets, and program narrative requirements used for budget formulation.
	3. The IT portfolio selection criteria are reviewed using cumulative experience and event-driven data and modified, as appropriate.	Executed.	The Establish Team reviews the Postal Service's IT portfolio selection criteria each year. In these reviews, the Team considers the organization's strategic goals and objectives, changing the criteria that it uses from year to year as required by current circumstances and priorities.

Source: GAO.

IT Investments Are Not Consistently Analyzed and Prioritized within the Context of a Portfolio

This critical process ensures that all IT investments are consistently analyzed and prioritized according to the organization's portfolio selection criteria, which should include cost, benefit, schedule, and risk considerations. According to ITIM, effective investment analysis requires, among other things, that (1) portfolio selection criteria have been developed; (2) cost, benefit, schedule, and risk data are assessed and validated for each investment; (3) the investment review board compares each investment against the organization's portfolio selection criteria; and (4) the investment review board creates a ranked list of investments using the portfolio selection criteria.

The Postal Service has executed two of the key practices in this area. First, the Postal Service has adequate resources for analyzing investments, including CAPE and other dedicated staff. Second, the Postal Service ensures that cost, benefit, schedule, and risk data concerning IT investments are validated. The Service does this in two particular instances: (1) during the development of the DAR, the document for approving capital projects, there is a validation step in which Finance Department staff independently verify the accuracy and integrity of the data presented and a validation memo is signed by the Controller to

confirm that the data are correct; (2) as part of the annual budget formulation process, the data submitted on the various budget proposals are reviewed, and thus validated, by various levels of management up to the senior vice president of the functional unit sponsoring a proposal.

Nevertheless, the Postal Service has a number of weaknesses in the way it analyzes investments for portfolio management. First, it does not have policies and procedures that sufficiently address this critical process. Its F-66 manual includes some procedures for analyzing proposed investments; however, it does not specify an approach for analyzing existing investments to make portfolio selection decisions. Nor does it describe a process to establish portfolio selection criteria that adequately incorporate cost, benefit, schedule, and risk considerations. In addition, it does not address capital projects that have been deployed for more than 18 months or ongoing infrastructure-type projects.

Second, while investments are analyzed by executives during the approval process, through the review of quarterly status reports, and during the annual budget formulation activities, these investments are not assessed against portfolio selection criteria that adequately consider cost, benefit, schedule, and risk factors. The F-66 manual does not explicitly require the preparation of a risk assessment when the DAR is developed for a new investment. Further, when the Establish Team reviews budget documents as part of the annual budget formulation process, these documents do not provide sufficient information on cost, benefit, and risk to determine whether investments are progressing according to the approved DAR parameters.

Table 11 shows the rating for each key practice required to implement the critical process for analyzing investments at the stage three level of maturity and summarizes the evidence that supports these ratings.

Table 11: Investment Analysis

Type of practice	Key practice	Rating	Summary of evidence
Organizational commitment	1. The organization has written policies and procedures for analyzing IT investments.	Not executed.	The Postal Service does not have policies and procedures that sufficiently address this critical process. The F-66 manual includes procedures for analyzing investments, for example, by validating DAR information. However, these guidelines do not (1) specify how the Establish Team is to analyze investments or use investment analysis data to make portfolio selection decisions; (2) recommend the use of portfolio selection criteria that adequately incorporate CBSR considerations; (3) apply to capital projects that have been deployed more than 18 months or to ongoing infrastructure-type projects; or (4) provide guidance on how projects are to be evaluated against one another (e.g., there are no specific provisions for dealing with projects that are conflicting, overlapping, or redundant).
Prerequisites	1. Adequate resources are provided for investment analysis activities.	Executed.	The Postal Service has adequate resources for analyzing investments, including dedicated staff (e.g., CAPE staff who validate DARs) and tools.
	2. IT investment portfolio selection criteria have been developed.	Not executed.	While the Postal Service has developed portfolio selection criteria, these criteria are not adequate because they do not address CBSR considerations in a manner that (1) provides sufficient and meaningful information to effectively assess investments and (2) would allow the Service to compare investments against one another, prioritize them, and select those that best meet the Service's needs and priorities.
	3. Information from the IT project and system inventory is used by the IT investment board.	Not executed.	The Postal Service's investment boards with management responsibility do not use information from the IT project and system inventory for analyzing investments in the context of portfolio management.
Activities	1. Each IT investment board ensures that the CBSR data and other required data are validated for each investment within its span of control.	Executed.	The Postal Service ensures that CBSR data for IT investments are validated through the DAR process and management's review of CBSR data submitted during the budget formulation cycle.
	2. Each IT investment board assesses each of its IT investments with respect to the IT portfolio selection criteria.	Not executed.	While the Establish Team analyzes all IT investments, it does so with portfolio selection criteria that are not adequate because they do not address CBSR considerations in a manner that (1) provides sufficient and meaningful information to effectively assess investments and (2) would allow the Postal Service to compare investments against one another, prioritize them, and select those that best meet the Service's needs and priorities.
	3. Each IT investment board prioritizes its full portfolio of IT investments using the portfolio selection criteria.	Not executed.	While the Postal Service's Establish Team evaluates and ranks the organization's full portfolio of existing and new IT investments, it does so with criteria that do not adequately address cost, benefit, schedule, and risk.

Source: GAO.

An IT Investment Portfolio Is Developed, but Project Expectations Are Not Routinely Revised

At the stage three level of maturity, organizations design processes for developing an IT portfolio and develop written policies and procedures to ensure that projects are selected that best fit their strategic business direction, needs, and priorities. Each organization has practical limits on funding, the risks it is willing to take, and the length of time for which it will incur costs on a given investment before benefits are realized. To address these limits, stage three organizations group existing and proposed IT investments into predefined logical categories, for example, by cost or by type of investment (i.e., facilities or equipment). Once this is accomplished, organizations can compare investments and proposals within and across the portfolio categories and select the best overall portfolio for funding.

According to ITIM, the portfolio development process cannot be performed well unless certain conditions are first satisfied, including (1) providing adequate resources for a portfolio development process; (2) appointing to IT investment boards people who exhibit core competencies in developing portfolios; (3) analyzing individual IT investments, including validating associated cost, benefit, schedule, and risk data; and (4) defining investment categories. Organizations should also create written policies and procedures for establishing and maintaining the portfolio development process. Assuming that this foundation is in place, the IT investment boards of stage three organizations assign each investment to a portfolio category, examine the mix of existing and proposed investments across these categories, and make selections for funding. Each IT investment board also establishes annual cost, benefit, schedule, and risk expectations for individual IT projects and gathers and validates data on actual performance. A repository of information on developing portfolios is established, updated, and maintained. Resources required for this critical process typically include staff, supporting tools for developing portfolios, and managerial time and attention to portfolio development.

The Postal Service has executed six of the nine key practices for this critical process by providing adequate resources to implement this critical process; assigning competent managers to the board responsible for the portfolio development process; developing common portfolio categories; assigning IT programs and projects to portfolio categories on the basis of established criteria; examining the mix of proposals and investments across the common portfolio categories and making selection decisions for funding; and establishing, updating, and maintaining repositories of portfolio information.

Postal Service officials reported that adequate management time and staff resources are available for this critical process. In addition, several systems are in use that support portfolio development activities, including PTRS, BCS, and CPS. Postal Service officials stated that the organization provides training in the use of these systems. Moreover, members of the Postal Service's enterprise-level investment boards are senior-level executives who have had many years of experience in the organization and in working with the IT investment management process. The Postal Service also has defined common IT investment portfolio categories for the organization. The Postal Service's IT investments are considered to relate either to corporatewide or functional unit activities and are further classified by funding type (capital or expense) and investment type (facilities, equipment, field, or other), as provided for in the organization's F-66 manual and budget instructions.

Postal Service programs and projects are now being assigned to portfolio categories based on the criteria described above. Further, the Establish Team examines the organization's entire portfolio of IT investments annually and then selects programs and projects for funding. The Postal Service collects and stores information relating to the portfolio development process in a variety of forms ranging from IT project and systems inventories and finance/budget and corporate planning systems to manual backup books maintained by the Finance Department.

Even though these important steps in stage three portfolio development have been taken, some weaknesses remain. The Postal Service has yet to develop written policies and procedures for establishing and maintaining portfolio information on its IT investments. The Postal Service has defined investment categories in its F-66 manual[18] but has not developed written policies and procedures for establishing and maintaining portfolio information on IT investments. Moreover, even though the CTO organization monitors data on the performance of IT projects, the Establish Team does not perform complete analyses of the performance of individual

[18]The Postal Service classifies its investments as either capital or expense. Section 1-4 of the F-66 Manual states that capital investments are investments in real property or personal property that are charged to an asset account. Examples of capital investments include real property, leasehold improvements, and personal property investments (equipment or vehicles). Expense investments include lease agreements, research and development projects, new products and services, and major operating expense investments. Expense investments are accounted for as expenses on the balance sheet. Routine operating expenses associated with the day-to-day business of the organization are not considered to be investments.

investments or establish cost, benefit, schedule, and risk expectations for each investment annually.

While the Establish Team reviews investments each year from a strategic planning and funding perspective, neither the analyses it performs nor the *Investment Highlights* reports on the projects provided to the Board of Governors adequately consider actual benefit and risk or contain complete information on cost. For example, the business case for the Surface-Air Management System includes information on over a dozen different types of qualitative benefits expected to be obtained by investing in that project. However, *Investment Highlights* reports provided to the Board of Governors only include information on the number of installations completed to date. In addition, although information on projects' capital costs is included in *Investment Highlights*, information on operating expenses is not. As a result, information on these aspects of project performance is not routinely provided to the Board of Governors. Without complete cost, benefit, schedule, and risk data, Postal Service executives do not have the information needed to analyze and compare all investments and select those that best fit with the strategic business direction, needs, and priorities, of the organization.

Table 12 shows the rating for each key practice required to implement the critical process for portfolio development at the stage three level of maturity and summarizes the evidence that supports these ratings.

Table 12: Portfolio Development

Type of practice	Key practice	Rating	Summary of evidence
Organizational commitment	1. The organization has written policies and procedures for establishing and maintaining the portfolio development process.	Not executed.	The Postal Service has not developed written policies and procedures for establishing and maintaining an IT portfolio development process.
Prerequisites	1. Adequate resources are provided for executing the portfolio development process.	Executed.	Adequate management time, staff resources, and training are available to perform this critical process, and various automated systems capture information on the Postal Service's IT investment portfolio.
	2. Board members exhibit core competencies in portfolio development.	Executed.	Members of the Postal Service's Capital Investment Committee and Establish Team are senior-level executives who have extensive experience with the organization's operations and the IT investment management process.

(Continued From Previous Page)

Type of practice	Key practice	Rating	Summary of evidence
	3. Individual IT investments have been analyzed and their cost, benefit, schedule, and risk data have been validated.	Not executed.	The Postal Service ensures that IT investments' CBSR data are validated. However, the Establish Team analyzes IT investments using portfolio selection criteria that do not adequately address cost, benefit, schedule, and risk.
	4. The organization has defined its common portfolio categories.	Executed.	The Postal Service investment categories in its F-66 manual are based on type of expenditure (capital or expense), type of investment (facilities, equipment, field, other), and expected total cost (under $5 million, $5 million to under $7.5 million, $7.5 million to under $10 million, and $10 million or more).
Activities	1. Each IT investment board assigns investment proposals to a portfolio category.	Executed.	The Postal Service assigns IT programs and projects to portfolio categories on the basis of established criteria contained in its F-66 manual.
	2. Each IT investment board examines the mix of proposals and investments across the common portfolio categories and makes selections for funding.	Executed.	The Establish Team examines portfolios of investments categorized based on total expected capital costs and makes selections for funding.
	3. Each IT investment board approves or modifies the annual CBSR expectations for each of its selected IT investments.	Not executed.	Although, according to Finance Department officials, management may approve or modify project expectations at any time, there is no process for routinely doing so. The Establish Team does not routinely approve or modify cost, benefit, schedule and risk expectations for each existing and new IT investment on an annual basis. However, the CTO Investment Review Board does evaluate CBSR data for all projects with IT components.
	4. A repository of portfolio development information is established, updated, and maintained.	Executed.	The Postal Service collects and stores information relating to the portfolio development process in multiple repositories ranging from IT project and systems inventories and financial and corporate planning systems to project managers' records and manual backup books maintained by the Finance Department for Board of Governors programs and projects.

Source: GAO.

Portfolio Performance Oversight Is Performed, but without Comprehensive Guidance

The purpose of this critical process is to ensure that each IT investment achieves its cost, benefit, schedule, and risk expectations. It builds on the critical process for IT project oversight at stage two by adding elements of benefit measurement and risk management to an organization's investment control capability. Executive-level oversight of project-level risk and benefit management activities provides the organization with increased assurance that each investment will achieve the desired cost, benefit, schedule, and risk expectations.

According to ITIM, effective oversight of portfolio performance requires, among other things, that the investment board (1) has access to up-to-date cost, benefit, schedule, and risk data; (2) monitors the performance of each investment in its portfolio by comparing actual project-level cost, benefit, schedule, and risk data to the predefined expectations for the project; and (3) corrects poorly performing projects.

The Postal Service is executing six of the nine key practices for this critical process by providing adequate resources for monitoring and controlling IT project performance and giving investment boards access to data on actual and expected cost, benefit, schedule, and risk that are maintained in the organization's IT project and system inventory. In addition, the CTO Investment Review Board provides oversight for all IT projects by monitoring these data and providing feedback on performance to sponsoring organizations. These oversight activities include working with IT project management teams to identify and address any development and deployment issues that may arise.

Despite these strengths, however, the Postal Service has yet to develop policies and procedures that address performance oversight from a portfolio perspective. Moreover, while expectations are established in DARs or business cases that include cost, benefit, schedule, and risk, and the CTO organization monitors actual performance results, the Postal Service has not established a mechanism for revising expected benefit and risk expectations after its boards approve the investments or for notifying the Establish Team when an investment has not met cost, benefit, schedule, and risk expectations. Until the Postal Service executes all key practices associated with this critical process, senior executives will be less likely to determine whether the investments they have selected are delivering mission value at the expected cost and risk.

Table 13 shows the rating for each key practice required to implement the critical process for portfolio performance oversight at the stage three level of maturity and summarizes the evidence that supports these ratings.

Table 13: Portfolio Performance Oversight

Type of practice	Key practice	Rating	Summary of evidence
Organizational commitment	1. The organization has written policies and procedures for monitoring and controlling portfolio performance.	Not executed.	The Postal Service does not have policies and procedures that address portfolio performance oversight.
Prerequisites	1. Adequate resources are provided for monitoring and controlling the portfolio's performance.	Executed.	The Postal Service has adequate resources for monitoring and controlling the portfolio's performance. They include the CTO Investment Review Board, portfolio managers, and PTRS.
	2. Annual CBSR expectations are agreed upon for each IT investment.	Not executed.	Cost, benefit, schedule, and risk expectations are established in projects' DARs or business cases. While benefit and risk expectations may be revised through the annual budget process or a DAR modification, they are not reviewed and revised on an annual basis.
	3. The IT investment board has access to up-to-date actual and expected CBSR data in a repository.	Executed.	The Postal Service has systems and reports that capture up-to-date actual and expected cost, benefit, schedule, and risk. They include PTRS, used by the CTO Investment Review Board to monitor program performance; the program narratives developed for budget formulation purposes; and the DARs that define CBSR expectations.
Activities	1. Each IT investment board monitors the performance of each investment in its portfolio by comparing actual CBSR data to expectations.	Executed.	The CTO Investment Review Board monitors each project's performance by regularly comparing actual CBSR data to expectations. The Establish Team also does this through the program review it performs as part of the budget formulation activities.
	2. Using established criteria, the IT investment board identifies its investments that have not met predetermined CBSR performance expectations.	Not executed.	Using established criteria, the CTO Investment Review Board identifies investments that have not met CBSR criteria. However, the Postal Service does not have a defined process for notifying the Establish Team that an investment is not on track.
	3. The IT investment board and the project manager determine the root cause of the poor performance.	Executed.	The CTO Investment Review Board and project manager determine the root cause of poor project performance during project reviews.
	4. The IT investment board and the project manager develop an action plan designed to remedy the identified cause(s) of poor performance.	Executed.	The CTO Investment Review Board and project manager develop an action plan designed to remedy the identified cause(s) of poor performance.
	5. Corrective actions are initiated and outcomes are tracked.	Executed.	The CTO Investment Review Board tracks corrective actions until they are completed.

Source: GAO.

Postal Service Has Yet to Implement Processes to Better Meet Strategic Goals

Organizations that achieve the stage four level of maturity evaluate their IT investment processes and portfolios to identify opportunities for improvement. At the same time, these organizations are able to maintain the mature control and selection processes that are characteristic of stage three in the ITIM model. A key tool for accomplishing this critical process is the post-implementation review, in which outcomes of individual IT investments are compared to the organization's plans and expectations. This review typically results in identifying lessons learned from the investment experience that are used by the organization to improve its understanding of the key variables in the investment's business case. Analyzing a number of post-implementation reviews can also provide insights into the organization's overall IT investment management process. This analysis is facilitated by classifying individual investments into logical categories and using the lessons learned to fine-tune associated processes, as well as aspects of the portfolio. In addition, at stage four maturity, organizations are capable of systematically planning for and implementing decisions to discontinue or deselect obsolete, high-cost, and low-value IT investments and planning for successor investments that better support strategic goals and business needs.

Organizations acquire stage five capabilities when they create opportunities to shape strategic outcomes by learning from other organizations and continuously improving the manner in which they use IT to support and improve business outcomes. Thus, organizations at the stage five level of maturity benchmark their IT investment processes relative to other best-in-class organizations and conduct proactive monitoring for breakthrough information technologies that will allow them to significantly improve business performance. Table 14 shows the purpose of each critical process in stages four and five.

Table 14: Stages Four and Five—Critical Processes Required for Improving the Investment Process and Leveraging IT for Strategic Outcomes

Critical process	Description
Stage 4—Improving the Investment Process	
Post-implementation reviews and feedback	To compare outcomes of recently implemented investments to the expectations for them and develop a set of lessons learned from these reviews.
Portfolio performance evaluation and improvement	To assess and improve overall IT investment portfolio performance and the investment management process.
Systems and technology succession management	To ensure that IT investments in operation are periodically evaluated and determine whether they should be retained, modified, replaced, or otherwise disposed.
*Stage 5—Leveraging Information Technology for Strategic Outcome*s	
Investment process benchmarking	To identify and implement measurable improvements in the IT investment management processes so that the processes meet or exceed those used by best-in-class organizations.
IT-driven strategic business change	To dramatically improve business outcomes by strategically employing IT investments.

Source: GAO.

The Postal Service is executing five of the thirty-four key practices associated with the five critical processes in stages four and five. For example, it has policies and guidance for conducting post-implementation reviews and provides training to individuals involved in these activities. The Postal Service also provides resources for identifying opportunities for IT-driven strategic business change. However, it does not regularly capture lessons learned from post-implementation reviews, the performance of its portfolio, or benchmarking in order to improve its investment processes. In addition, it does not actively manage the succession of its IT systems or investments. Until it implements stage four and five critical processes, the Postal Service will not be positioned to effectively improve its IT investment management processes and successfully leverage IT to improve business outcomes.

Table 15 summarizes the status of the Postal Service's critical processes for stages four and five and shows how many associated key practices it has executed.

Table 15: Summary of Results for Stages Four and Five Critical Processes and Key Practices

Critical process	Key practices executed	Total required by critical process	Percentage of key practices executed
Stage 4—Improving the Investment Process			
Post-implementation reviews & feedback	3	6	50%
Portfolio performance evaluation & improvement	0	6	0
Systems & technology succession management	0	9	0
Totals	**3**	**21**	**14%**
Stage 5—Leveraging Information Technology for Strategic Outcomes			
Investment process benchmarking	0	7	0
IT-driven strategic business change	2	6	33
Totals	**2**	**13**	**15%**

Source: GAO.

The following discussion provides information on steps the Postal Service has taken to implement each of the critical processes.

Policies and Procedures Are Defined, but Post-Implementation Review Process Is Not Institutionalized

Post-implementation reviews are performed (1) to examine differences between estimated and actual investment costs and benefits and possible ramifications for unplanned funding needs in the future and (2) to extract lessons learned about the investment selection and control processes that can be used as the basis for management improvements. Investments that have completed development and those that were terminated before completion should be reviewed promptly to identify potential management and process improvements. According to ITIM, this critical process involves identifying the projects to be reviewed; initiating reviews and developing policies and procedures for conducting the reviews; and ensuring that quantitative and qualitative data are collected, evaluated for reliability, and analyzed during the course of the reviews.

The Postal Service has executed three of the six key practices required to implement the critical process for post-implementation reviews. First, the CTO organization and Finance Department have each developed policies and procedures for performing post-implementation reviews. These

include the CTO organization's *Program Management Process Guidelines* and the Finance Department's *National Cost Study Process.* Second, according to Postal Service officials, the Service has adequate resources to perform review activities. Third, Postal Service staff are trained in conducting post-implementation reviews.

The Postal Service, however, has several weaknesses in this critical process. First, no investment board has been assigned responsibility for (1) identifying projects for which post-implementation reviews are to be conducted and (2) ensuring that post-implementation reviews are initiated. Second, the Postal Service has no institutionalized process for routinely (1) identifying projects for which post-implementation reviews are to be conducted, (2) collecting quantitative and qualitative data while performing post-implementation reviews, and (3) developing lessons learned and improvement recommendations about the investment process and capturing them in a written product or knowledge base. This is evidenced by the fact that, while the Finance Department's Program Performance Group is responsible for conducting post-implementation cost studies, only three of them have been performed since 1990. Until the Postal Service implements an institutionalized process for routinely performing post-implementation reviews, senior executives will lack key information needed to improve the performance of the IT investment portfolio as well as the investment management process.

Table 16 shows the rating for each key practice required to implement the critical process for post-implementation reviews at the stage four level of maturity and summarizes the evidence that supports these ratings.

Table 16: Post-Implementation Reviews and Feedback

Type of practice	Key practice	Rating	Summary of evidence
Organizational commitment	1. The organization has written policies and procedures for conducting post-implementation reviews.	Executed.	The CTO organization and Finance Department have each developed policies and procedures for performing post-implementation reviews. The Postal Service has developed policies and procedures for performing post-implementation reviews. These include the *Software Process Standards and Procedures*, *Integrated Solutions Methodology (ISM), Project Management Process Guidelines,* and the *National Cost Study Process*.
Prerequisites	1. Adequate resources are provided for conducting post-implementation reviews.	Executed.	Postal Service officials stated that adequate resources are available for conducting post-implementation reviews.
	2. Each IT investment board ensures that individuals conducting post-implementation reviews are trained.	Executed.	Postal Service staff have received training in conducting post-implementation reviews.
Activities	1. An IT investment board identifies the projects for which a post-implementation review will be conducted and a post-implementation review is initiated for each designated investment.	Not executed.	The Postal Service has not assigned any investment board with responsibility for identifying the projects for which a post-implementation review will be conducted and ensuring that post-implementation reviews are initiated.
	2. Quantitative and qualitative investment data are collected, evaluated for reliability, and analyzed during the post-implementation reviews.	Not executed.	The Postal Service does not have an institutionalized process for routinely performing post-implementation reviews. Only three post-implementation cost-studies have been performed since 1990.
	3. Lessons learned and improvement recommendations about the investment process and the individual investment are developed, captured in a written product or knowledge base, and distributed to decision makers.	Not executed.	The Postal Service does not have an institutionalized process to develop and capture lessons learned and improvement recommendations about the investment process and individual investments.

Source: GAO.

IT Investments Are Not Evaluated from the Perspective of Portfolio Performance

Stage four evaluations of portfolio performance enable organizations to determine what contribution their collected pools of IT investments are making to mission goals and needs. Evaluations of this sort are similar to post-implementation reviews involving individual projects, but different in that they apply to entire IT investment portfolios. This critical process seeks to determine how well IT investments are helping to achieve the strategic needs of the enterprise, satisfying the needs of individual units and users, and improving business performance through IT. Performance

information for an organization's entire portfolio of investments has to be compiled and analyzed and trends examined. Developing baseline performance data is critical to making this a meaningful exercise. According to ITIM, the process of addressing problems and opportunities for improving the investment process and the investment portfolio usually involves developing written policies and procedures for the investment management process, creating recommendations for the IT investment board, documenting the decision criteria used to measure portfolio performance, deciding whether or not to implement each recommendation, and tracking the progress made. Resources required for this critical process typically include staff support, methods and tools to aid the teams conducting post-implementation reviews, and current and historical portfolio data.

To advance to the stage four level of maturity, an organization must first ensure that all of the prerequisites, commitments, and activities that are characteristic of levels two and three have been put into place. The next step is to develop written policies and procedures for evaluating and improving its IT investment portfolio that include defining requirements for measuring performance data. Cost, benefit, schedule, and risk must all be fully considered to enable an organization to construct a picture of the overall performance of its IT investment portfolio.

The Postal Service is not executing any of the six key practices for this critical process. First, while the Establish Team reviews existing and proposed IT investments each year as a part of the organization's budget formulation process, no evaluations are being done that are designed to identify opportunities for improving portfolio performance. Also lacking are written policies and procedures that define the organization's key measures and the methods used to assess portfolio performance, evaluation methods, reporting requirements, and other applicable policies and procedures. Because the Postal Service has not collected data for this critical process, including baseline performance information on its IT portfolio, it is more difficult to perform evaluations that could result in recommendations for improving its process for selecting a portfolio.

Table 17 shows the rating for each key practice required to implement the critical process for evaluating and improving the performance of the portfolio at the stage four level of maturity and summarizes the evidence that supports these ratings.

Table 17: Portfolio Performance Evaluation and Improvement

Type of practice	Key practice	Rating	Summary of evidence
Organizational commitment	1. The organization has written policies and procedures for evaluating and improving the performance of its portfolio(s).	Not executed.	The Postal Service has not developed enterprise-level written policies and procedures for evaluating and improving the performance of its IT investment portfolios.
Prerequisites	1. Adequate resources are provided for conducting the portfolio performance evaluation and improvement process.	Not executed.	The Postal Service does not perform enterprise-level evaluations of portfolio performance.
	2. Board members who are responsible for evaluating and improving the investment processes and investment portfolio(s) exhibit core competencies in portfolio performance evaluation and improvement.	Not executed.	The Finance Department does not perform enterprise-level activities to evaluate and improve portfolio performance.
Activities	1. Comprehensive IT portfolio performance measurement data are defined and collected using agreed upon methods.	Not executed.	The Postal Service has not developed comprehensive definitions of measurement data for IT portfolio performance or methods for collecting data of this sort. Moreover, data are not collected on actual qualitative benefits, and the risk data captured in Postal Service information repositories are incomplete.
	2. Aggregate performance data and trends are analyzed.	Not executed.	The Postal Service does not collect the aggregate IT portfolio performance data required to perform analyses of this sort.
	3. Investment process and portfolio improvement recommendations are developed and implemented.	Not executed.	The Postal Service has not performed the analyses required to serve as the basis for improving the investment and portfolio selection processes.

Source: GAO.

Process for Managing Succession of Systems and Technology Is Not Established

Managing the succession of systems and technology entails periodically evaluating IT investments to determine whether they should be retained, modified, replaced, or otherwise disposed of. According to ITIM, system and technology succession management includes (1) defining policies and procedures for managing the IT succession process, (2) assigning responsibility for the succession management process, (3) developing criteria for identifying IT investments that may meet succession status, and (4) periodically analyzing IT investments to determine whether they are ready for succession. This critical process enables the organization to recognize low-value or high-cost IT investments and augments the routine replacement of systems at the end of their useful lives. This critical process supports the development of a forward-looking, solution-oriented view of

IT investments that anticipates future resource requirements and allows the organization to plan appropriately.

The Postal Service has not performed any of the nine key practices required to implement this critical process. For example, while the Postal Service's project management guidelines define procedures for retiring investments, they do not describe how to review systems regularly to identify candidates for retirement. According to officials from the CTO organization, decisions on succession management are usually made between business unit managers and CTO office staff (e.g., portfolio managers), but no individual or group has been assigned responsibility for managing the succession process from an enterprise perspective, which would allow the Postal Service to better anticipate future resource requirements. Finally, the Postal Service has neither defined the criteria for identifying investments that may meet succession status nor taken steps to regularly analyze IT investments for possible succession.

According to CTO organization officials, the Postal Service has retired or replaced roughly 250 systems since 1998. However, this was not done within the structure of an institutionalized succession management process. Postal Service officials have stated that IT investments are reviewed, for example, during the annual budget formulation process to analyze them for possible succession. However, without an institutionalized process for succession management, the Postal Service may not be able to identify those IT investments that are eligible for succession in enough time to minimize the effect of the transition on their successors.

Table 18 shows the rating for each key practice required to implement the critical process for managing the succession of systems and technology at the stage four level of maturity and summarizes the evidence that supports these ratings.

Table 18: Systems and Technology Succession Management

Type of practice	Key practice	Rating	Summary of evidence
Organizational commitments	1. The organization has written policies and procedures for managing the IT succession process.	Not executed.	While the Postal Service has procedures in place for system retirements, it lacks written policies and procedures for managing the succession of the organization's IT investments.
	2. An official is designated to manage the IT succession process.	Not executed.	According to officials in the Offices of the CFO and CTO, the Postal Service has not designated responsibility for managing the IT succession process.
Prerequisites	1. Adequate resources are provided for conducting IT succession activities.	Not executed.	The Postal Service has no formal process for conducting IT succession activities.
	2. Investment board members exhibit core competencies in IT succession decisional activities.	Not executed.	According to Postal Service officials, decisions on the management of systems and technology succession are made between business unit managers and CTO organization staff, not by members of an investment board.
	3. Information from the IT project and system inventory is used by the IT investment board.	Not executed.	The Postal Service's enterprise-level investment boards do not use information from the IT project and system inventory for succession management.
Activities	1. The IT investment board develops criteria for identifying IT investments that may meet succession status.	Not executed.	The Postal Service does not have criteria for identifying IT investments that may meet succession status.
	2. IT investments are periodically analyzed for succession and appropriate investments are identified as succession candidates.	Not executed.	The Postal Service does not have a process in place for periodically analyzing IT investments to see if they are eligible for succession. CTO organization officials have told us that the Service instead uses the annual budgeting process and critical events such as the recent Year 2000 computing challenge as opportunities to analyze investments for succession.
	3. The interdependency of each investment with other investments in the IT portfolio is analyzed.	Not executed.	While the Establish Team performs trade-off analyses as a part of the organization's annual budget formulation process, including some consideration of the interdependencies of its IT programs, projects, and systems, the interdependency of each investment with other investments in the IT portfolio is not analyzed in the context of systems and technology succession management.
	4. The IT investment board makes a succession decision for each candidate IT investment.	Not executed.	The Postal Service does not have a formal process for identifying candidates for succession. In addition, no investment board has responsibility for making decisions on succession management.

Source: GAO.

Activities for Benchmarking the Investment Process Are Not Institutionalized

In stages two through four, organizations ensure that sound investments are selected, controlled, and evaluated within the context of the IT investment management process and the enterprisewide portfolio. In the stage five level of maturity, a shift in orientation occurs as organizations evolve toward using information on leading technologies to identify opportunities for business change and to implement changes in their overall business process. Benchmarking the investment process allows organizations to identify opportunities for improvement and to implement measurable improvements in their IT investment management processes so that these processes meet or exceed those used by best-in-class organizations. Improvements can include using innovative investment oversight tools and techniques or improving the feedback mechanisms for lessons learned. According to ITIM, investment process benchmarking includes (1) defining policies and procedures for using benchmarking to improve the IT investment management process, (2) collecting baseline data on the organization's current IT investment management process, (3) identifying and benchmarking external comparable best-in-class processes for IT investment management, and (4) improving the organization's investment management processes.

The Postal Service has not fully executed any of the seven key practices required to implement this critical process. While there have been some efforts to identify best practices from best-in-class organizations and incorporate these practices into the Postal Service's IT investment management processes (such as the CTO organization's use of lessons learned in benchmarking to develop the BCS), the Postal Service has not defined policies and procedures for improving the IT investment management process using benchmarking. It also does not have any institutionalized processes to routinely (1) collect baseline data on the organization's current IT investment management process, (2) identify and benchmark external best-in-class processes for IT investment management in comparable organizations, or (3) actually improve the organization's investment management processes. Without these processes, the Postal Service is less likely to learn from best-in-class organizations, which will hinder any concerted effort to improve its IT investment management processes.

Table 19 shows the rating for each key practice required to implement the critical process for investment process benchmarking at the stage five level of maturity and summarizes the evidence that supports these ratings.

Table 19: Investment Process Benchmarking

Type of practice	Key practice	Rating	Summary of evidence
Organizational commitments	1. The organization has written policies and procedures for improving its IT investment management process using benchmarking.	Not executed.	The Postal Service has not developed written policies and procedures for improving its IT investment process through the use of benchmarking techniques.
	2. A senior official is designated to manage the benchmarking activities.	Not executed.	The Postal Service has not designated a senior official to manage benchmarking activities.
Prerequisites	1. Adequate resources are provided for conducting process benchmarking activities.	Not executed.	Investment process benchmarking is not an institutionalized process at the Postal Service.
	2. Organizational managers and staff with responsibilities in this area are trained in process benchmarking techniques or are experienced in using these techniques.	Not executed.	The Postal Service has not designated responsibility for performing benchmarking activities and has not provided staff with training or experience in this process.
Activities	1. Baseline data are collected for the organization's IT investment management processes.	Not executed.	The Postal Service has not taken steps to measure components of its investment management processes to provide a baseline against which expected and actual process changes may be measured.
	2. External comparable best-in-class IT investment management processes are identified and benchmarked.	Not executed.	External comparable best-in-class processes for IT investment management were identified and benchmarked for some processes, including the CTO organization's business case development process. However, the Postal Service does not have an institutionalized process for benchmarking the investment management process.
	3. Improvements are made to the organization's investment management processes.	Not executed.	Improvements were made to some processes as a result of benchmarking (e.g., the CTO organization's investment management process). However, the Postal Service does not have an institutionalized process for benchmarking the investment management process.

Source: GAO.

Potential Impacts of Leading Technologies Are Not Routinely Considered in Strategic Planning Efforts

Information technologies can provide opportunities for an organization to move dramatically in new directions to meet its goals. Thus, once an organization finds it can competently manage its enterprisewide portfolio of investments, it should actively seek out opportunities to use alternative technologies.

According to ITIM, stage five organizations provide adequate resources for conducting IT-driven activities that can result in strategic business change. These may include developing an advanced IT laboratory, test center, or

library; conducting technical research; employing internal staff and external experts or reviewers; and obtaining supporting tools. Stage five organizations also develop applicable written policies and procedures and designate an official to oversee their implementation. The central focus of these activities is to follow technological events and to identify and evaluate technologies that appear to offer strategic business-changing capabilities. Once a conclusion has been reached that specific technology offers the organization significant opportunities, senior managers plan for and implement changes to the organization's business processes. Organizations at a stage five level of maturity may create an advanced technology group, a cross-departmental group of experts, or technology centers of excellence. Finally, to strengthen management on these types of activities, mature organizations designate responsibility for this key practice to a single senior-level manager.

The Postal Service has executed two of the six key practices required to implement this critical process by designating responsibility to specific organizational units to support activities aimed at IT-driven strategic business change and by providing a range of related resources. However, steps have yet to be taken to execute the remaining key practices, including creating and maintaining a knowledge base of state-of-the-technology IT products and processes; actively identifying technologies with business-changing capabilities; and planning and implementing strategic changes to business processes on the basis of the capabilities of these technologies.

The Postal Service has assigned responsibilities to several units that could leverage IT to implement strategic business change, including its Transformation Plan Office, Office for Strategic Planning, and the CTO organization. Also, within the CTO organization, the Information Technology unit has established the positions of Enterprise Architect and Manager of Technology Standards. To ensure standardization, the Postal Service has also developed the IT Infrastructure Toolkit process and established the Enterprise Architecture Councils and the Management Steering Committee.

The Postal Service is also providing a range of resources that could be used to support the critical process of IT-driven strategic business change. The Service is funding a testing laboratory and has established Integrated Business Solutions Systems Centers and developed an IT Toolkit system and associated processes. The IT Toolkit system serves as a repository of information on technologies and application systems that have been approved for use within the Postal Service.

In addition, the Postal Service's CTO organization is taking several steps to initiate changes to the business process based on currently available state-of-the-practice IT approaches. First, the CTO has developed a plan for a corporate database called the Corporate Data Mart, which could serve as a repository of data from 35 separate Postal Service systems. According to Postal Service officials, the CTO organization is working with each functional unit to determine which legacy systems will transition to the data mart and plans to incorporate future systems in the data mart. This transition may eliminate costly legacy systems or avoid the investment cost to replace them. The CTO organization is sponsoring the Advanced Computing Environment initiative to transition to a less costly distributed computing environment. According to officials, under this approach, activities will be standardized, centralized, and reengineered such that the costs per Postal Service user will be reduced.

These accomplishments can be helpful to the Postal Service, particularly in light of its financial difficulties and the need to identify new, more cost-effective ways of accomplishing its mission. By continuing to foster a more coordinated approach to using IT investments to achieve its business goals, using resources from across the organization, and disseminating information that is gathered more broadly, the Postal Service can more effectively capitalize on opportunities uncovered by efforts already underway.

Table 20 shows the rating for each key practice required to implement the critical process for IT-driven strategic business change at the stage five level of maturity and summarizes the evidence that supports these ratings.

Table 20: IT-Driven Strategic Business Change

Type of practice	Key practice	Rating	Summary of evidence
Organizational commitments	1. The organization has written policies and procedures for conducting IT-driven strategic business change activities.	Not executed.	The Postal Service does not have written policies and procedures for conducting IT-driven strategic business change activities.
	2. An official is designated to manage the activities within this critical process.	Executed.	Responsibility for ensuring IT-driven strategic business change is distributed across several Postal Service units, including the Transformation Plan Office, Office for Strategic Planning, and the CTO organization.
Prerequisite	1. Adequate resources are provided for conducting IT-driven strategic business change activities.	Executed.	The Postal Service is providing a range of resources related to identifying opportunities for IT-driven strategic business change. These include funding a testing laboratory, acquiring expertise from consulting firms, establishing an Enterprise Architect and Integrated Business Solutions Systems Centers, and developing an Information Technology Toolkit system.
Activities	1. The organization creates and maintains a knowledge base of state-of-the-technology IT products and processes.	Not executed.	The Postal Service has not created a knowledge base of state-of-the-technology IT products and processes. However, the CTO organization has created a database of approved IT products called the IT Toolkit.
	2. Information technologies with strategic business-changing capabilities are identified and evaluated.	Not executed.	The Postal Service does not have an institutionalized process for conducting studies of emerging trends, events, and technologies with the potential to strategically change its business processes.
	3. Strategic changes to the business processes are planned and implemented based on the capabilities of identified information technologies.	Not executed.	The Postal Service does not have a process in place to implement business processes based on the capabilities of leading-edge information technologies it has identified. However, decisions on changes to business processes are currently being made in order to incorporate state-of-the-practice IT approaches and technologies such as desktop outsourcing, data warehousing, and data center consolidation.

Source: GAO.

Conclusions, Recommendations, and Agency Comments

Conclusions

Information technology provides key core operational capabilities that the Postal Service must rely on to achieve its mission. Only by effectively and efficiently managing its IT resources can the Postal Service gain opportunities to further leverage its IT investments and make better allocation decisions among many investment alternatives.

The Postal Service has in place most of the foundational practices required to ensure that IT investments are being selected and monitored to support its overall objectives. A comprehensive process guide for investment management and written policies and procedures for management oversight of investments will allow the Postal Service to better coordinate its IT investment activities and ensure that they are performed consistently. Once the Service has fully implemented all the critical processes for stage two, it will have the controls necessary to allow it to effectively manage its IT investments.

The Postal Service shows mixed progress in managing its IT investments as a portfolio. The Service performs many portfolio development and oversight activities. However it lacks policies and procedures for managing its portfolio. It has not defined criteria that allow it to effectively analyze, prioritize, and select its investments from a portfolio perspective. In addition, the Postal Service's reporting of performance data is largely limited to capital projects, which are a smaller portion of its portfolio than are operating expenses. Until the Service fully implements critical processes associated with managing investments as a complete portfolio, it will not have ready access to the data it needs to make informed decisions about competing investments.

The ability of the Postal Service to continue to improve its investment management process is contingent on its ability to learn from its current practices and investments and from other organizations. The Service currently has no institutionalized processes to learn from its own experience and from other organizations. Such processes can contribute to the long-term success of the Postal Service's IT portfolio and support its mission.

Recommendations for Executive Action

To strengthen the Postal Service's capabilities for investment management and address the weaknesses discussed in this report, we recommend that the Postmaster General develop a plan that initially focuses on correcting the weaknesses in critical processes associated with maturity stages two

and three before addressing the weaknesses at maturity stages four and five, because critical processes at the lower stages provide the foundation for building those at higher maturity stages. The plan should be developed within 6 months. At a minimum, the plan should specify an approach to

- develop comprehensive guidance that defines and describes the complete investment management process, unifies existing processes enterprisewide, and reflects changes in processes as they occur;
- develop additional process guidance, as needed, to completely define the operations and decision-making processes of investment boards and other management entities involved in managing IT investments;
- ensure that cost, benefit, schedule, and risk expectations are set and approved in the original business case for each investment; that accurate and complete actual cost, benefit, schedule, and risk data are tracked against these expectations; and that status information on these four criteria is periodically reported to executive-level investment boards; and
- establish a structured, transparent, and documented portfolio selection process that assesses, prioritizes, selects, and funds investments according to established portfolio selection criteria, including explicit cost, benefit, schedule, and risk criteria.

The Postmaster General should ensure that the plan specifies measurable goals and time frames, prioritizes initiatives, designates a senior manager responsible and accountable for directing and controlling the improvements, and establishes review milestones. After addressing the stage two and three processes, the Postal Service should create processes required for stages four and five that, at a minimum

- ensure that guidance for conducting post-implementation reviews is complete, including criteria for selecting systems for review, and that post-implementation reviews are conducted on all appropriate systems;
- establish a process for evaluating and improving portfolio performance;
- establish a process for managing the succession of systems and technology;

- establish a process to benchmark the investment processes of leading organizations to identify opportunities for improvement; and
- establish a process to employ IT investments strategically to improve business outcomes.

Agency Comments and Our Evaluation

The Postal Service's Chief Financial Officer provided written comments on a draft of this report (reprinted in app. III). In these comments, the Postal Service stated that the report offered an opportunity to consider changes and improvements in its IT investment management processes. The Service added that it would carefully evaluate each of the report's recommendations to determine the necessary actions for adopting and integrating key practices outlined in the GAO ITIM model that are appropriate for the Postal Service.

The Postal Service also identified key points where it stated that it differs from GAO's IT investment management framework. The Postal Service also explained that it uses a hierarchy of delegations to select and oversee its investments, from the Board of Governors through the lowest level of management, to ensure that senior management can concentrate on strategic issues and the most significant projects. We did observe this structured approach to the selection and oversight process and have recognized it in our report.

In succession planning, the Postal Service stated that it uses an institutionalized portfolio approach to address the succession of its IT hardware, software, and systems. According to the Postal Service, this approach enables senior management to determine strategically driven solutions based on priorities, lessons learned, available technology, best practices, affordability, risk assessments, and business needs. Our guidance suggests that, while each of these aspects may be appropriate as part of a succession management process, effective succession management entails regularly reviewing the performance of existing systems against established criteria. Such a process allows an organization to identify systems that should be retained, modified, replaced, or otherwise disposed of in a timely manner. However, as we stated in our report, the Postal Service does not have such a process.

The Postal Service provided comments pertaining to post-implementation reviews that describe cost studies, the budget process, and the activities of the Office of Inspector General (OIG) as satisfying this critical process. We

disagree with the Postal Service in this matter. While guidance for cost studies does exist, the Service provided evidence of only three post-implementation cost studies having been conducted since 1990. The Postal Service's budget process does not satisfactorily address this critical process. Specifically, the budget process does not capture lessons learned and disseminate them to other projects and work processes in order to improve them, and this is a major objective of post-implementation reviews. Finally, while OIG does conduct evaluations from which lessons learned may be drawn and used to improve other projects and work processes, OIG evaluations are not part of the regular systems life cycle.

Postal Service Projects with Major IT Components in Development or Deployment

Table 21: Postal Service IT Projects in Development or Deployment

Project name	Approval date	Sponsoring unit	Approving board	Approved capital costs in thousands
Associate Office Infrastructure Phase II Deployment	11/1997	IT	BOG	$207,416
Commitment Management—Integrated Operations Management Pilot	09/1998	EN/IP	BOG	33,921
CONFIRM	10/2000	MK	PMG	9,253
Corporate Call Phase III Deployment	06/1998	MK	BOG	255,761
Delivery Operations Information System Deployment	08/2000	OP/IP	BOG	127,620
Delivery Operations Information System Research and Development	06/1998	OP/IP	BOG	39,987
e-Commerce IT & Virtual Store Modification	02/2000	IP/MK	PMG	9,705
Enhanced Security Capability Program Implementation	11/2000	IT	BOG	43,343
Field Retail Operations Group	01/1999	FI	COO	3,444
Forwarding Control Systems	08/1998	EN	BOG	33,874
Identification Code Sort & CM-IOM	09/1998	EN	BOG	156,500
Integrated Data System—Upgrade	01/2001	EN	BOG	33,787
Letter Recognition Enhancement Program	05/2001	EN	BOG	222,403
Mail Evaluation, Readability & Lookup Instrument—Phase II	10/2001	EN/MK	BOG	141,118
Mail Evaluation, Readability & Lookup Instrument—Phase II Research and Development	07/2000	EN/MK	BOG	45,400
Mail Item Retrieval Systems Modernization—Phase II Research and Development	08/2000	EN	COO	1,713
Net Post—Mailing On-Line System	11/1999	MK	BOG	18,638
Organization Structure, Staffing & Management System	07/2001	FI/HR	PMG	9,000
PARS	04/2002	EN/OP	BOG	307,640
Point of Service ONE—Stage IIB Deployment	04/2000	MK	BOG	403,900
Postal Field Computing Infrastructure	01/2001	IT	BOG	41,562
PostalOne!—Phase I	11/1999	MK	BOG	10,085
PostalOne!—Phase II	05/2002	MK	BOG	54,148
Recognition Improvement Program	06/2000	EN	BOG	131,150
Self-Service Vending Machines Acquisition Post-Deployment	08/1998	MK	BOG	29,938
Shared Services Accounting	04/2002	FI	PMG/COO	9,481
Standard Accounting for Retail—Retail Accounting	01/2001	FI/IP	BOG	34,357
Standard Accounting for Retail—General Ledger	02/2000	FI/IP	COO	5,600
Surface-Air Management System Deployment	07/2000	OP	BOG	38,385
Surface-Air Management System—Alaska	05/2001	OP	COO	7,419
Surface-Air Support System	06/2001	OP	BOG	15,516

(Continued From Previous Page)

Project name	Approval date	Sponsoring unit	Approving board	Approved capital costs in thousands
Time & Attendance Collection System—National	01/2001	FI/IP	BOG	46,673
Time & Attendance Collection System—Pilot	08/2000	FI/IP	COO	4,149

Key:

BOG Board of Governors
COO Chief Operating Officer
EN Engineering
GL General Ledger
FI Finance
HR Human Resources
IP Information Platform
IT Information Technology
MK Marketing
OP Operations
PMG Postmaster General

Source: U.S. Postal Service documents.

Postal Service IT Projects That GAO Reviewed

The ITIM assessment guidance recommends that case studies be conducted of selected IT investment projects to validate organization-level evidence and better understand the organization's IT investment management process.[19] Accordingly, we selected four projects for review from the list shown in appendix I to provide information on IT investments in a cross-section of sponsoring Postal Service organizations. To conduct our review, we interviewed managers responsible for the IT investments and members of the project management teams to obtain information on implementation of ITIM key practices. Table 22 summarizes key information on these investments.

Table 22: Postal Service IT Projects Selected by GAO for Review

Title	Sponsoring unit	Approved capital cost (in millions)	Investment purpose	Date approved & approving entity
Enhanced Security Capability Program (ESC)	CTO/IT	$43.3	To secure Postal Service mail processing, business operations, and electronic communications by providing enhanced security capabilities to networks, systems, and applications.	November 2000 Board of Governors
Organization, Structure Staffing & Management System (OSS&M)	CFO and Human Resources	$9.0	To provide a foundation for the Postal Service's new human resources and payroll systems.	July 2001 Postmaster General
Point of Service ONE (POS ONE)—Stage IIB	Marketing	$403.9	To provide a new platform for service delivery at 13,504 sites, and replace the Postal Service's existing Integrated Retail Terminals.	April 2000 Board of Governors
Surface-Air Management System (SAMS)	Network Operations Management	$38.4	To replace Air Contract Data Collection System (ACDCS) and assign mail to alternative surface and air carriers.	July 2000 Board of Governors

Source: U.S. Postal Service documents.

The sections below provide additional information on the investments we reviewed.

[19]ITIM Exposure Draft, Appendix III, Guidance for Conducting an ITIM Assessment, pages 158-159.

Enhanced Security Capability Program

Enhanced Security Capability (ESC) is a comprehensive program to secure the Postal Service's networks, systems, and applications. Its goals, as defined in the DAR, are threefold:

1. Create an environment that allows Postal Service employees, business partners, suppliers, and customers to conduct business in a secure and user-friendly environment.

2. Eliminate or prevent unauthorized use of and access to Postal Service systems and applications.

3. Deny unauthorized access to Postal Service networks while ensuring access to authorized users.

ESC supports the Postal Service's three "voices" by, among other things, providing the resources to secure the infrastructure and mission critical business applications (Voice of the Business), providing the necessary security to protect customers' private data (Voice of the Customer), and providing additional assurances that employee data are secure (Voice of the Employee). It also supports the *Transformation Plan's* near-term strategy to ensure the safety and security of mail customers and employees.

The DAR for this CTO organization-sponsored program was approved by the Board of Governors on November 13, 2000. It requested capital funds of about $43.3 million to secure the Postal Service's networks, systems, and applications and establish the underlying program management structure. Efforts to implement ESC actually began in March 2000 with $873,000 in seed money. The initiation efforts included updating pertinent policies and procedures and creating a team to respond to security incidents.

In an effort to heighten security in response to the recent terrorist attacks and anthrax incidents, many objectives for the program were reprioritized, and program officials are consequently considering extending the schedule for completing fiscal year 2003 goals into the next fiscal year. According to the most recent status report on the program, additional capital funds would not be needed to accommodate the new schedule, if it is approved.

ESC is not a one-time effort but an ongoing program to secure Postal Service operations. It is managed as a collection of over 30 initiatives, each

one managed separately, with its own project plan, milestones, and schedules.

Organization Structure, Staffing and Management

The purpose of Organization Structure, Staffing and Management (OSS&M) is to allow the Postal Service to easily manage its organizational structure by facilitating access to data and enabling it to model organizational structures and implement new structures quickly. OSS&M is intended to replace the Organization Management Staffing System, a legacy system with limited functionality and usage that does not meet current needs to manage organizational structures. It is being developed using commercial off-the-shelf technology.

While OSS&M can stand alone, it is to serve as the foundational piece for a human resources/payroll enterprise system that will integrate many Postal Service systems into one with the ultimate goal of having a single source for all employee data. The Postal Service currently uses a number of human resource and payroll systems that, according to Postal Service officials, duplicate data, connect through cumbersome interfaces, and operate under different processing cycles. The new human resources/payroll enterprise system will address these weaknesses by streamlining business processes and consolidating all the data about an employee into one central repository. OSS&M supports the *Transformation Plan's* corporate shared services strategy. It is jointly sponsored by Human Resources and Finance.

The DAR for the project was approved by the Postmaster General on July 23, 2001. It requested capital funds of $9 million for the national deployment of the system. Initial funding in the amount of $7 million had also been approved to conduct proof-of-concept and pilot activities and to assess the cost of operating the recommended off-the-shelf software in the Postal Service environment. The results of these activities were used as input to the DAR.

OSS&M was scheduled to be fully deployed in the spring of 2002. It has been delayed because of organizational changes and the additional time required for pilot testing. It is now scheduled to be deployed by December 1, 2002.

Point of Service ONE System

The Point of Service ONE system (POS ONE) is a replacement system for the Postal Service's existing retail terminals; it is approved to provide new terminals, application systems, network connections, and a data warehouse designed to support management decision-making. The Postal Service identified the need to replace its existing terminals in the early 1990s and approved $9.9 million in funding to identify alternative approaches. This work was performed in the mid-1990s, and information obtained from contractor bids was used to develop a DAR for POS ONE—Stage I. The Board of Governors approved that DAR and three others to fund work planned to be performed from June 1996 to September 2001, and a fifth DAR for Stage III is under development for the next increment of work on the system. Dates and dollar amounts for these approved DARs are shown in table 23.

Table 23: POS ONE DARs

DAR No.	Approval date	Capital funding (in millions)
1	June 1996	$274.9
1–additional funding	May 1998	53.7
2A	June 1999	166.5
2B	April 2001	403.9
Total (approved POS ONE capital funding)		**$899.0**

Source: U.S. Postal Service documents.

Surface-Air Management System

The Surface-Air Management System (SAMS) is a replacement system that provides critical transportation-related logistics capabilities by enabling the Postal Service to assign mail electronically to the least-cost available surface and air carrier services. The legacy system that SAMS was designed to replace-—the Air Contract Data Collection System (ACDCS)—was outmoded; it was designed in 1983 and in 1990 the manufacturer of the system informed the Postal Service that it would no longer provide operating system support. SAMS now serves as the Postal Service's mail assignment engine to surface and air transportation services, laying the cornerstone for all future logistics systems. The program plan for SAMS shows that additional functionality expected to be provided using SAMS beyond ACDCS included indexed surface routes, capacity management,

real-time carrier updates via electronic data interchange, automated tender considerations, local change auditing and reporting, electronic manifest tracking, improved maintenance of mail distribution tables, improved data capture capabilities, improved payment processing, stable and scalable infrastructure, and communications benefits. The program plan also shows that SAMS was expected to produce the following measurable benefits: decreased commercial air costs, increased utilization of surface routes, reliability and maintainability of SAMS software, decreased downtime, improved claims processing, decreased network costs, improved data collection capabilities for evaluation of air and surface routes, and decreased capacity overloading.

The Postal Service began conceptual design work on SAMS in October 1999 (Phase I) and detailed design and development work in March 2000 (Phase II). This work formed the basis for the SAMS DAR approved by the Board of Governors on July 11, 2000 for capital funding of $38.4 million.

Comments from the United States Postal Service

RICHARD J. STRASSER, JR.
CHIEF FINANCIAL OFFICER
EXECUTIVE VICE PRESIDENT

UNITED STATES POSTAL SERVICE

October 4, 2002

Mr. Joel C. Willemssen
Managing Director, Information Technology Issues
United States General Accounting Office
Washington, DC 20548-0001

Dear Mr. Willemssen:

Thank you for providing the Postal Service with the opportunity to review and comment on the draft report entitled, U.S. Postal Service: Opportunities to Strengthen IT Investment Management Capabilities.

The report clearly identifies that the Postal service has processes in place to manage its information technology investments. Consistent with the General Accounting Office's information technology investment management (ITIM) model, the Postal Service is not only managing these investments effectively but is also addressing several key practices found at the higher levels of maturity in the model. Based on our reading of reports on other agencies previously evaluated by GAO, we are pleased to find that the Postal Service rates higher than any other department or agency reviewed to date. The Postal Service has a proven success record with our more mature investment portfolios of automation/mechanization equipment and facilities, and has replicated key practices of those systems in its IT portfolio management. This has enabled the cost effective advancement of Postal Service information technology.

Within its current IT management system, the Postal Service actually employs many of the key practices of the GAO ITIM model. Although the GAO ITIM model aims at current practices in the broad universe of federal agencies, we would hope that the final report and model would recognize the current enterprise-wide practices of the Postal Service.

After careful review of the report and discussions with the GAO team, we have identified the following key points in the ITIM model at which the Postal Service takes an approach to its investment management processes that, while differing from the ITIM model, is valid and appropriate for an organization of the Postal Service's size and complexity.

Selection and Oversight
The Postal Service's well-established, enterprise-wide investment processes are used for selection and oversight of all investments, including IT investments. These processes are particularly important in ensuring that investments are affordable and reflect a strategic focus on business needs. To accomplish these objectives, the Postal Service uses a hierarchy of delegations to select and oversee its investments, from the Board of Governors through the lowest level of management, to ensure that senior management can concentrate on strategic issues and the most significant projects. Consonant with these practices, the chief technology officer's (CTO) organization has established well-defined internal methods and criteria to select, integrate, control, and manage IT investments. The CTO organization uses web-enabled tools for their selection and control activities. These postal-developed tools have been shared with several other organizations.

475 L'ENFANT PLAZA SW
WASHINGTON DC 20260-5000
202-268-5272
FAX: 202-268-4364
www.usps.com

Succession Planning
The Postal Service uses an institutionalized portfolio approach to address the succession of its IT hardware, software, and systems. This approach enables senior management to determine strategically driven solutions based upon priorities, lessons learned, available technology, best practices, affordability, risk assessments, and business needs. Software succession is managed through the Enterprise Architecture Councils, while hardware succession takes a more enterprise-wide approach. Systems succession is supported through the portfolio organization aligned to support the business units in their technology needs. The portfolios are also supported by external systems integrators who have met pre-determined standards for best-in-class attributes in these business areas. Structured protocols and practices such as these are specified in the higher levels of the ITIM model.

Post-Implementation Review
The Postal Service continues to employ an enterprise-wide hierarchical approach to decision-making on Investment Management through the post-implementation review process. This allows senior management to focus on making strategic decisions while other, more tactical, decisions are delegated farther down the management chain. The Postal Services uses the budget process to review programs throughout their life, including post-implementation, because it is the least costly, most timely and most visible method. Interim studies or post-implementation cost studies are conducted on major investments. Oversight is conducted by the Office of Inspector General at various points in projects' life cycles. These review processes have been implemented enterprise-wide. Review results are provided to the appropriate management level so that project adjustments can be made quickly and efficiently. These reviews also provide feedback so that we can improve the effectiveness of our investment management processes.

These IT Investment Management processes and practices are but a part of the Postal Service's rigorous system for managing all of its investments and ongoing costs. Successful as they have been in the past, the Postal Service recognizes these as dynamic processes and continually looks to improve them to maximize their effectiveness.

The Postal Service recognizes also that the GAO report offers just such an opportunity to consider changes and improvements in its IT Investment Management and will, therefore, consider the GAO recommendations for these processes.

The Postal Service wishes to work with GAO to identify specific improvements appropriate to its IT Investment Management processes. Because the Postal Service has a mature Investment Management process, we must acknowledge that any changes will need to be integrated thoroughly in the existing Postal Service framework. Accordingly, the Postal Service will carefully evaluate each of the report's recommendations to determine the necessary actions for adopting and integrating key practices outlined in the GAO ITIM model that are appropriate for the Postal Service. Further, the Postal Service will develop an action plan for those GAO recommendations on IT Investment Management that it intends to adopt. Additionally, we will be happy to continue to work with and share our perspectives and experience with your staff as the GAO develops processes for the ITIM model that promote and enhance performance at the highest levels of IT Investment Management.

Should you or your staff wish to discuss any of these comments further, my staff and I are available at your convenience.

Sincerely,

Richard J. Strasser, Jr.

GAO Contact and Staff Acknowledgments

GAO Contact

Lester P. Diamond, (202) 512-7957, DiamondL@gao.gov

Acknowledgments

In addition to the individual named above, John T. Christian, Joanne L. Fiorino, Peggy A. Hegg, Min S. Lee, Thomas F. Noone, Sabine R. Paul, and Margaret R. Sullivan made key contributions to this report.

GAO's Mission

The General Accounting Office, the investigative arm of Congress, exists to support Congress in meeting its constitutional responsibilities and to help improve the performance and accountability of the federal government for the American people. GAO examines the use of public funds; evaluates federal programs and policies; and provides analyses, recommendations, and other assistance to help Congress make informed oversight, policy, and funding decisions. GAO's commitment to good government is reflected in its core values of accountability, integrity, and reliability.

Obtaining Copies of GAO Reports and Testimony

The fastest and easiest way to obtain copies of GAO documents at no cost is through the Internet. GAO's Web site (www.gao.gov) contains abstracts and full-text files of current reports and testimony and an expanding archive of older products. The Web site features a search engine to help you locate documents using key words and phrases. You can print these documents in their entirety, including charts and other graphics.

Each day, GAO issues a list of newly released reports, testimony, and correspondence. GAO posts this list, known as "Today's Reports," on its Web site daily. The list contains links to the full-text document files. To have GAO e-mail this list to you every afternoon, go to www.gao.gov and select "Subscribe to daily E-mail alert for newly released products" under the GAO Reports heading.

Order by Mail or Phone

The first copy of each printed report is free. Additional copies are $2 each. A check or money order should be made out to the Superintendent of Documents. GAO also accepts VISA and Mastercard. Orders for 100 or more copies mailed to a single address are discounted 25 percent. Orders should be sent to:

U.S. General Accounting Office
441 G Street NW, Room LM
Washington, D.C. 20548

To order by Phone: Voice: (202) 512-6000
TDD: (202) 512-2537
Fax: (202) 512-6061

To Report Fraud, Waste, and Abuse in Federal Programs

Contact:

Web site: www.gao.gov/fraudnet/fraudnet.htm
E-mail: fraudnet@gao.gov
Automated answering system: (800) 424-5454 or (202) 512-7470

Public Affairs

Jeff Nelligan, managing director, NelliganJ@gao.gov (202) 512-4800
U.S. General Accounting Office, 441 G Street NW, Room 7149
Washington, D.C. 20548

United States
General Accounting Office
Washington, D.C. 20548-0001

Official Business
Penalty for Private Use $300

Address Service Requested

Presorted Standard
Postage & Fees Paid
GAO
Permit No. GI00