

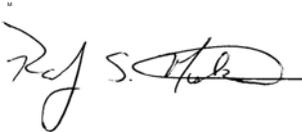
Information Resource Certification and Accreditation (C&A) Process

Handbook AS-805-A

June 2015
Transmittal Letter

- A. Explanation.** As part of the Postal Service's efforts to enhance security across all technology, this handbook establishes the process and guidance for the Postal Service information resource certification and accreditation (C&A) process. The process provides a framework for characterizing an information resource, determining sensitivity and criticality, defining security requirements and controls, testing security solutions, assessing risk, and evaluating the security posture of Postal Service applications to ensure that appropriate, cost-effective information security controls and processes are implemented.
- B. Availability.** This document is available on the Postal Service intranet at <http://blue.usps.gov/cpim>.
- C. Comments.** Submit comments and questions to:
CORPORATE INFORMATION SECURITY OFFICE
UNITED STATES POSTAL SERVICE
4200 WAKE FOREST ROAD
RALEIGH NC 27668-1510

Comments may also be sent by e-mail to information_security@usps.com. Use "AS-805-A" in the subject header.
- D. Effective Date.** This handbook is effective immediately.



(A) Randy Miskanic
Chief Information Officer and Executive Vice President

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1 Introduction

1-1 About This Handbook

This handbook does the following:

- a. Describes the Postal Service™ information resource electronic certification and accreditation (C&A) process.
- b. Identifies the roles and responsibilities in the process.
- c. Identifies the deliverables and templates required to complete each phase of the process in order to:
 - (1) Characterize an information resource.
 - (2) Determine sensitivity and criticality.
 - (3) Define security requirements.
 - (4) Identify controls.
 - (5) Test security solutions.
 - (6) Assess risk.
 - (7) Evaluate the security posture of the information resource.

Certification is the technical analysis that establishes the extent to which an information resource meets specified security requirements. Accreditation is the management analysis that determines, from a business standpoint, whether implemented security controls satisfy specified security requirements and provide an acceptable level of risk.

The information resource C&A process is integrated in the information technology (IT) technical solution life cycle (TSLC) Waterfall and Agile Development Methodologies.

1-2 Purpose of Certification and Accreditation

The C&A is the process the Postal Service uses to evaluate the protection of its information resources so that risks associated with deployment can be appropriately managed throughout the life cycle.

1-2.1 Policy Owner

The policy owner of this handbook is the Corporate Information Security Officer (CISO).

1-2.2 Handbook Questions or Comments

Send questions and comments to information_security@usps.gov.

1-3 Importance of Certification and Accreditation

The C&A process provides Postal Service business owners with a consistent method for making informed decisions on managing security risks related to their information resources. Benefits include the following:

- a. A structured view of the potential risks associated with information resources and the relationships among business partnerships.
- b. Determination of sensitivity which is the degree to which the Postal Service must protect the confidentiality and integrity of information. Levels of sensitivity are sensitive-enhanced, sensitive, and nonsensitive.
- c. Determination of criticality which is the degree to which the Postal Service must provide for continuous availability of information and the protection of the health and safety of personnel. Levels of criticality are critical and noncritical.
- d. Documentation of the information security controls and processes needed to protect the confidentiality, integrity, and availability of Postal Service information resources.
- e. Systematic approach to the initial and periodic test of those controls and processes.
- f. The development of standard operating procedures and training.
- g. Protection of the privacy of employees and customers. Privacy is the protection afforded individuals and customers from the collection, storage, and dissemination of information about themselves and possible compromises resulting from unauthorized release of that information.
- h. Protection of Postal Service assets and brand.
- i. Compliance with the intent of applicable federal laws and regulations.
- j. Current status of each application and deliverable.
- k. Automated archival repository for deliverables and letters.

1-4 Supporting Documentation

ASM 13 Section 86, Information Security Program, and Handbook AS-805, *Information Security*, provide the overarching Postal Service information policy. The following handbooks and management instruction provide implementation policy and guidelines for this handbook:

- a. Handbook AS-805-D, *Information Security Network Connectivity Process*.
- b. Handbook AS-805-H, *Cloud Security*.
- c. Management Instruction FM 640-2011-3, *Payment Card Industry Data Security Standard (PCI DSS)*.

2 Roles and Responsibilities

This chapter defines the roles and responsibilities for the information resource C&A process. (See [Exhibit 2](#), Relationship of C&A Roles.)

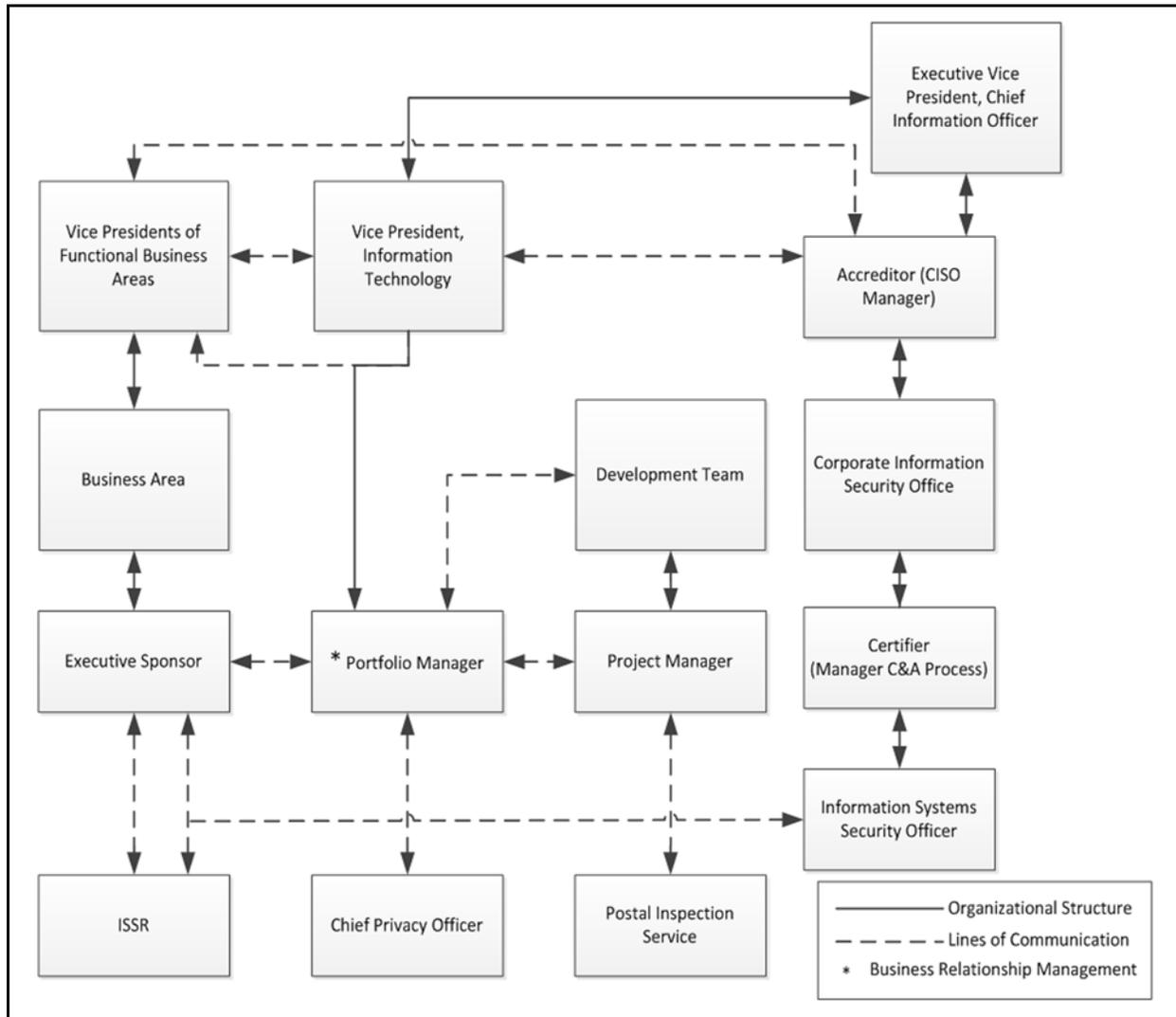
2-1 Chief Inspector

The chief inspector is responsible for the following:

- a. With information systems security officers, conducting site security reviews of facilities containing Postal Service computer and telecommunications equipment to evaluate all aspects of physical, environmental, and personnel security.
- b. Providing technical guidance on physical and environmental security activities that support information security, such as controlled areas, access lists, physical access control systems, and identification badges; providing protection of workstations, portable devices, and media containing sensitive-enhanced, sensitive, or critical information.
- c. Providing security consultation and guidance during system, application, and product development to assure that security concerns are addressed and information and/or evidence that may be needed for an investigation is retained by the information resource.
- d. Investigating reported security violations.
- e. Conducting revenue/financial investigations including theft, embezzlement, or fraudulent activity.
- f. Providing physical protection and containment assistance and investigating information security incidents as appropriate.

Exhibit 2

Relationship of Certification and Accreditation Roles



2-2 Executive Vice President and Chief Information Officer

The executive vice president (VP), and chief information officer (CIO), are responsible for the following:

- a. Acting as the senior IT decision maker and corporate change agent to securely integrate the key components of business transformation: technology, processes, and people.
- b. Providing advice and assistance to senior managers on information security policy and their compliance-based performance.
- c. Promoting the implementation of an information security architecture to mitigate information security-related risk.
- d. Promoting the protection of corporate information resources across Postal Service organizations and business partners.

2-3 Vice President, Information Technology

The VP, IT, is responsible for the following:

- a. Sponsoring information security and business continuity management programs and ensuring that financial, personnel, and physical resources are available for completing security and business continuity tasks.
- b. Ensuring confidentiality, availability, and integrity of information processed by IT applications.
- c. Ensuring compliance with the information security certification and accreditation processes.
- d. Accepting all risks, liabilities, and responsibilities and assuming personal accountability for any damage to the Postal Service (including direct financial losses and any costs resulting from remedial actions in operating the information resource) for authorizing an information resource to enter the production environment prior to completing the information resource C&A process.
- e. Together with the vice president of the functional business area, accepting, in writing, residual risk [1] associated with information resources and [2] requests to host or remove sensitive-enhanced/ sensitive/non-publicly available data from Postal Service premises. The VP IT may delegate this authority to the applicable Business Relationship Management portfolio manager. If this authority is delegated, notice to that effect must be in writing.
- f. Defining and documenting secure coding best practices.

2-4 Manager, Computer Operations

The manager, Computer Operations, is responsible for the following:

- a. Sponsoring information security and business continuity management programs and ensuring that financial, personnel, and physical resources are available for completing security and business continuity tasks.
- b. Ensuring confidentiality, availability, and integrity of information processed at IT sites.
- c. Ensuring the protection and secure implementation of the Postal Service IT infrastructure.
- d. Supporting the information security certification and accreditation processes.
- e. Reviewing and utilizing C&A documentation in the IT Artifacts Library.
- f. Resolving identified vulnerabilities.

2-5 Manager, Corporate Information Security Office

The manager, Corporate Information Security Office (CISO), is responsible for the following:

- a. Developing, guiding, and maintaining the C&A process.
- b. Managing the CISO support for the C&A process.
- c. Appointing information systems security officers (ISSOs) and the certifier (program manager security C&A process).
- d. Reviewing the C&A documentation package and accrediting the information resource.

2-6 Vice Presidents of Functional Business Areas

Vice presidents of functional business areas are responsible for the following:

- a. Funding information security throughout the life cycle of information resources under their purview.
- b. Together with the VP IT, accepting, in writing, residual risks [1] associated with information resources under their control and [2] requests to host or remove sensitive-enhanced/sensitive/non-publicly available data from Postal Service premises. The vice president of the functional business area may delegate this to the applicable executive sponsor. If this authority is delegated, notice to that effect must be in writing.

2-7 Executive Sponsors

The executive sponsors, as representatives of the VPs of the functional business areas, are responsible for ensuring the completion of all security-related tasks throughout the life cycle of an information resource. Some information resources are developed under the direction of one executive sponsor in one organization and transferred to an executive sponsor in another organization for production. Executive sponsors are responsible for the following:

- a. Completing a business impact assessment (BIA) to determine the sensitivity and criticality of information resources under their purview.
- b. Funding the C&A process for information resources under their purview.
- c. Appointing, if desired, an information systems security representative (ISSR) to serve as a development team point of contact to perform security-related activities.
- d. Implementing security controls that satisfy the security requirements defined in the BIA.
- e. Ensuring that all documentation required by the C&A process is submitted to the ISSO.
- f. Maintaining appropriate security during the production phase by controlling access to sensitive-enhanced, sensitive, and critical information.
- g. Ensuring that the C&A documentation package is securely stored and kept current for the information resource life cycle.
- h. If the vice president functional business area delegated this responsibility to the executive sponsor, the executive sponsor will work jointly with the VP IT (or the Business Relationship Management portfolio manager if this responsibility is delegated) to accept, in writing, the residual risk [1] associated with information resources under their control and [2] requests to host or remove sensitive-enhanced/sensitive/non-publicly available data from Postal Service premises.
- i. Re-initiating the C&A process in accordance with the criteria specified in Chapter [6](#).

2-8 Business Relationship Management Portfolio Managers

Business Relationship Management portfolio managers are responsible for the following:

- a. Functioning as the liaison between executive sponsors and the information technology providers.
- b. Ensuring that the information resource is entered in the Enterprise Information Repository (EIR) and the record is updated as required.
- c. Appointing, if desired, an ISSR to serve as a development team point of contact to perform security-related activities.
- d. Reviewing the C&A documentation package and completing a risk mitigation plan for risks identified as High or Medium.
- e. Preparing and signing an acceptance of responsibility letter, if a documented High or Medium vulnerability will not be mitigated.
- f. Ensuring that the information resource is registered in eAccess and updated as required.
- g. Ensuring C&A documentation is stored in the IT Artifacts Library and maintaining the hardcopies and electronic copies for the appropriate retention periods.
- h. Maintaining appropriate security during the production phase by ensuring the installation of software and operating system security patches.
- i. If the VP IT delegated this responsibility to the Business Relationship Management portfolio manager, the Business Relationship Management portfolio manager will work jointly with the vice president of the functional business area (or the executive sponsor if this responsibility is delegated) to accept, in writing, the residual risk [1] associated with information resources, and [2] requests to host or remove sensitive-enhanced/sensitive/non-publicly available data from Postal Service premises.
- j. Notifying the NCRB when the business partner trading agreement ends or when network connectivity is no longer required.
- k. On a semiannual basis, reviewing and validating business partner connectivity to the Postal Service intranet.
- l. Completing along with their staff the annual C&A training.
- m. Resolving identified vulnerabilities.

2-9 Project Managers

Project managers for application development, acquisition, or integration projects are responsible for the following:

- a. Managing day-to-day development and implementation efforts for new information resources, whether developed in-house, outsourced, or acquired.
- b. Incorporating the appropriate security controls in all information resources, whether developed in-house, outsourced, or acquired, to satisfy the security requirements defined in the BIA.
- c. Entering the information resource in the EIR and updating the record as required.
- d. Storing C&A documentation in the IT Artifacts Library and retaining hardcopies and electronic copies for the appropriate retention periods.
- e. Assuming the role of the ISSR if one is not appointed.

2-10 Chief Privacy Officer

The chief privacy officer (CPO) is responsible for the following:

- a. Ensuring compliance with privacy requirements.
- b. Developing policy related to defining information sensitivity.
- c. Consulting with the executive sponsor on determining information sensitivity designations during the completion of the BIA and all equivalent stages of the BIA re-certification procedure; reviewing the BIA after completion; and approving the determination of information sensitivity.
- d. Developing appropriate data record retention, disposal, and release guidelines.
- e. For offsite hosted solutions, acknowledging in a letter of assessment that the information resource appears to conform to Postal Service privacy requirements associated with requests to host or remove sensitive-enhanced/sensitive/non-publicly available data from Postal Service premises.
- f. Acknowledging unmitigated risks associated with sensitive-enhance and sensitive information resources in a risk acceptance letter.

2-11 Certifier

The manager, security C&A process, who is appointed by the manager, CISO, functions as the certifier. The certifier is responsible for the following:

- a. Reviewing the C&A evaluation report and the supporting C&A documentation package.

- b. Escalating security concerns or preparing and signing a certification letter.
- c. Forwarding the certification letter and C&A evaluation report to the accreditor.
- d. Maintaining an inventory of all applications that have completed the C&A process.

2-12 Accreditor

The manager, CISO, functions as the accreditor and is responsible for the following:

- a. Reviewing the risk mitigation plan and supporting C&A documentation package together with business requirements and relevant Postal Service issues.
- b. Escalating security concerns or preparing and signing an accreditation letter that makes one of the following recommendations: accepting the information resource with its existing information security controls, requiring additional security controls with a timeline to implement, or deferring deployment until information security requirements can be met.
- c. Forwarding a full or conditional accreditation letter to the VP IT and the VP functional business area.
- d. Acknowledging unmitigated risks in a risk acceptance letter.
- e. If the requirements of the conditional accreditation letter are not met in the indicated time frame, the accreditor will issue a Failure To Comply Letter to the VP IT and the VP functional business area.
- f. For offsite hosted solutions, acknowledging in a letter of assessment that the information resource appears to conform to Postal Service information security requirements associated with requests to host or remove sensitive-enhanced/sensitive/non-publicly available data from Postal Service premises.

2-13 Information Systems Security Officers

ISSOs are responsible for the following:

- a. Providing information security and C&A guidance.
- b. Facilitating initial briefings and subsequent meetings of the C&A core team.
- c. Coordinating the completion of a BIA for each information resource.
- d. Providing advice and consulting support to executive sponsors and Business Relationship Management portfolio managers during the BIA process regarding the baseline security requirements that apply to all information resources (including nonsensitive and noncritical) and the

- additional security requirements required to protect sensitive-enhanced, sensitive, and critical information resources.
- e. Working with the Privacy Office on privacy-related requirements.
 - f. Recommending security requirements to executive sponsors and Business Relationship Management portfolio managers during the BIA process based on generally accepted industry practices, the operating environment [e.g., hosted in the de-militarized zone (DMZ)], and the risks associated with the information resource.
 - g. Providing guidance on how information resources are vulnerable to threats, what controls and countermeasures may be appropriate, and the C&A process.
 - h. Reviewing and evaluating C&A documentation, including the BIA, risk assessment, security plan, security test and evaluation (ST&E) plan and report, and independent reviews of the information resource.
 - i. Preparing and signing the C&A evaluation report.
 - j. Escalating security concerns or forwarding the C&A evaluation report and supporting C&A documentation package to the certifier.
 - k. Working jointly with the Inspection Service, conducting site security reviews.

2-14 Information Systems Security Representatives

The information systems security representative (ISSR) may be appointed by an executive sponsor or Business Relationship Management portfolio manager to serve as a development point of contact to perform security-related activities on their behalf. The ISSR role is an ad hoc responsibility performed in conjunction with other assigned duties. If an ISSR is not appointed, the project manager assumes the ISSR responsibilities. ISSR responsibilities include the following:

- a. Providing support to the executive sponsor and Business Relationship Management portfolio manager, as required.
- b. Promoting information security awareness on the project team.
- c. Ensuring that security controls and processes are implemented.
- d. Notifying the executive sponsor, Business Relationship Management portfolio manager, and ISSO of any additional security risks or concerns that emerge during development, acquisition, or integration of the information resource.
- e. Developing security-related documents required by the C&A process.
- f. Working with the ISSO to complete C&A artifacts and sending the other required artifacts (e.g., TAD and security specifications for procurements) to the ISSO.

2-15 Contracting Officers and Contracting Officer Representatives

Contracting officers and contracting officer representatives are responsible for the following:

- a. Ensuring that information technology suppliers, contractors, vendors, and business partners are contractually obligated to abide by Postal Service information security policies, requirements, standards, and procedures, including the C&A process.
- b. Thoroughly vetting service providers for PCI services prior to engagement that includes a risk analysis and documentation to reflect due diligence to the PCI assessor.
- c. Updating the PCI Program Management Office (PMO) with status information on service providers for the PCI environment.
- d. Verifying that information technology suppliers, vendors, and business partners responsible for storing, processing, or transmitting Postal Service payment card information complete an annual Letter of Attestation providing an acknowledgement of their responsibility for the security of payment card data, under the current PCI DSS.
- e. Monitoring service provider PCI compliance at least annually.
- f. Verifying all contracts and business agreements requiring access to Postal Service information resources identify sensitive positions, specify the clearance levels required for the work, and address appropriate security requirements.
- g. Verifying contracts and business agreements allow monitoring and auditing of any information resource project.
- h. Verifying the security provisions of the contract and business agreements are met.
- i. Confirming the employment status and clearance of all contractors who request access to information resources.
- j. Verifying all account references, building access, and other privileges are removed for contractor personnel when they are transferred or terminated.
- k. Notifying the CIRT of any security breaches reported to them by the service providers.

2-16 Business Partners

Business partners developing or hosting information resource for the Postal Service are responsible for the following:

- a. Abiding by Postal Service information security policies, regardless of where the information resources are located or who operates them.
- b. Implementing and maintaining security controls to meet assurance level and contractual security requirements.

- c. Making necessary changes to security controls to reduce risk to an acceptable level as defined by Postal Service representatives.
- d. Implementing and complying with privacy requirements.
- e. Reporting information security incidents immediately to the CIRT, the executive sponsor, and the information systems security officer (ISSO) assigned to their project.
- f. Taking action, as directed by the CIRT, to eradicate the incident, recover from it, and document actions regarding the security incident.
- g. Allowing site security reviews by the Postal Inspection Service and CISO.
- h. Allowing audits by the OIG.

2-17 Disaster Recovery Services

Disaster Recovery Services (DRS) is responsible for the following:

- a. Providing consulting support to executive sponsors and Business Relationship Management portfolio managers regarding disaster recovery planning.
- b. Reviewing the contingency planning documents and accepting them as complete or returning it to the executive sponsor for rework.
- c. Storing the accepted contingency planning documents.
- d. Supporting the exercise of contingency plans.

2-18 Functional System Coordinators

A functional system coordinator (FSC) is a customer representative assigned to an information resource who is responsible for the following:

- a. Approving access to the information resource after the requestor's manager has approved the request.
- b. Participating in the eAccess generated semi-annual review to ensure each user/role is correct from a business point of view.

2-19 Functional System Gatekeepers

A functional system gatekeeper (FSG) is designated by the information resource owner to approve the FSCs for a given information resource. eAccess will e-mail the FSG in the event all FSCs are no longer active for a given information resource.

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3 Information Designation and Control

3-1 Elements of the Certification and Accreditation Process

The C&A process is integrated in phases that are conducted with the development and deployment of new information resources using the Waterfall Development Methodology (see [Exhibit 3-1](#)):

- a. Phase 1 — Initiate and Plan.
- b. Phase 2 — Requirements.
- c. Phase 3 — Analysis and Design.
- d. Phase 4 — Build.
- e. Phase 5 — System Integration Testing (SIT).
- f. Phase 6 — Customer Acceptance Testing (CAT).
- g. Phase 7 — Governance Compliance.
- h. Phase 8 — Release Management.
- i. Phase 9 — Retire

The C&A process is also integrated in the phases that are conducted concurrently with the development and deployment of new information resources using the Agile Scrum Development Methodology (see [Exhibit 3-1](#)):

- a. Phase 1 — Initiate and Plan.
- b. Phase 2 — Sprint 0-N.
- c. Phase 4 — System Integration Testing (SIT).
- d. Phase 5 — Customer Acceptance Testing (CAT).
- e. Phase 6 — Governance Compliance.
- f. Phase 7 — Release Management.
- g. Phase 8 — Retire

The C&A process does the following:

- a. Determines the sensitivity and criticality of Postal Service information resources.
- b. Defines information security requirements.
- c. Determines appropriate security controls and processes to satisfy the security requirements.
- d. Tests the effectiveness of implemented security controls and processes.

- e. Evaluates the threats and vulnerabilities associated with the information resources and the risks associated with deployment.
- f. Culminates with certification, risk acceptance, accreditation, and approval to deploy the information resource.

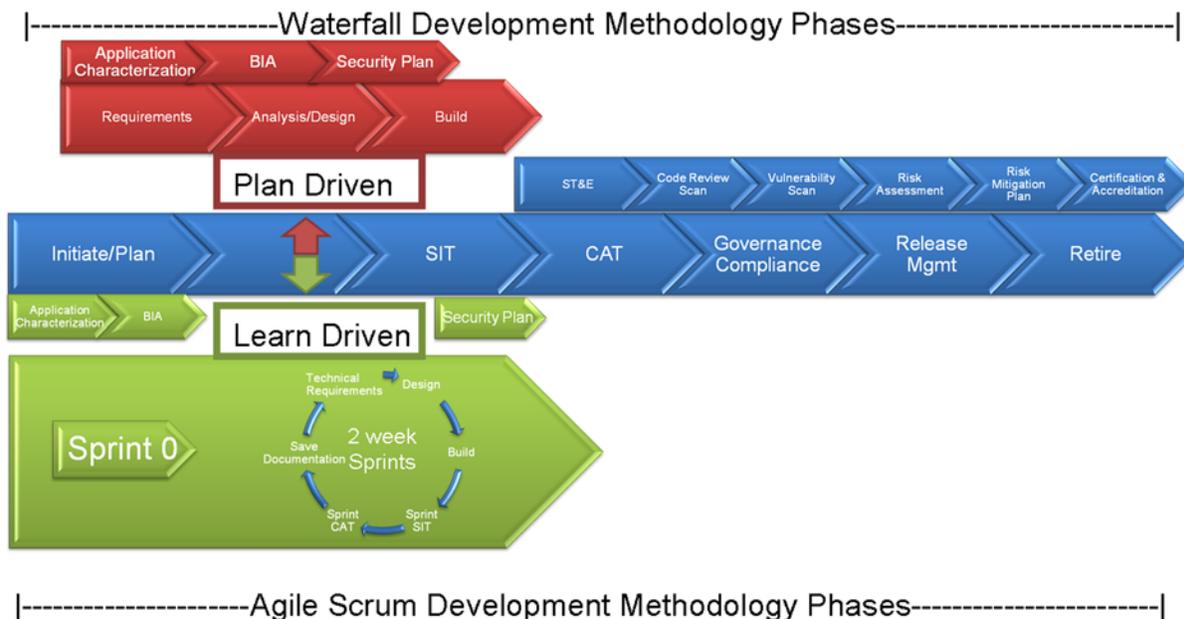
During the release and production phase, the C&A process ensures the information resource is maintained with the appropriate security, residual risk is appropriately managed, and when the information resource is retired equipment is sanitized and sensitive-enhanced and sensitive information is appropriately destroyed.

3-2 What the Certification and Accreditation Process Applies To

The C&A process applies to all information resources (new, small, or field) sponsored by, developed for, or maintained or operated on behalf of the Postal Service, whether or not they are located at a Postal Service facility. The C&A also applies to pilot and proof-of-concept projects.

Consult with the CISO as soon as an information resource is conceived.

Exhibit 3-1
Certification and Accreditation Phases and Major Deliverables



3-2.1 Typical Information Resources

[Exhibit 3-1](#) depicts the TSLC phases and the major activities and deliverables required during each phase for typical information resources.

3-2.2 **Field Information Resources**

Field information resources are not national information resources and are hosted on a server located in the Field Information Systems Server Farm at Eagan, MN. Field information resources are designated as noncritical and can never be critical. Field information resources facilitate the completion of one or more specific tasks, establish a unique session with each user, and allow users to make permanent changes to stored data.

3-3 Frequency of Certification and Accreditation

Re-initiating the information resource C&A process is required every year for payment card industry information resources and every 2 years for sensitive-enhanced, sensitive, and critical information resources, and every 3 years for all other information resources.

Re-initiating the C&A could also be required if the information resource undergoes a significant change, a significant information security incident, a significant audit finding, or at the request of the CIO, VP IT, CISO, the VP of the function business area, or the executive sponsor. A significant change is a change that calls into question the security of an information resource and the accuracy of previous C&A documentation. See Section 6-2, [Criteria Forcing Security Recertification](#), for other examples of a significant change.

3-4 Funding

Funding for the C&A process should be determined before development efforts begin and included as part of the overall development project funding. The scope and funding should be discussed with business partners and contractors before development begins especially when the business partners must conduct some of the tasks associated with the C&A process.

3-5 Certification and Accreditation Core Team

The core team consists of those personnel who are actively involved in and responsible for completing the documentation and activities in the C&A and includes the following personnel or their representatives:

- a. Executive sponsor.
- b. Business Relationship Management portfolio manager.
- c. Project manager.
- d. Information systems security officer.
- e. Information systems security representative.
- f. Disaster Recovery Services representative.
- g. Privacy representative

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4 Certification and Accreditation Process

This chapter describes how each activity in the C&A process aligns with the Waterfall Development Methodology phases. At the end of this chapter, [Exhibit 4-10](#) provides a list of C&A guidelines, templates, and related Web links; [Exhibit 4-11](#) provides a summary of deliverables by phase.

4-1 Phase 1 – Initiate and Plan

Phase 1 applies to information resources sponsored by, developed for, or maintained or operated on behalf of the Postal Service, whether or not they are located at a Postal Service facility. It can be applied to pilot, new, and production information resources and business partner initiatives. The C&A process begins when an executive sponsor or Business Relationship Management portfolio manager sends a letter or email to the manager, CISO, requesting the initiation of the C&A process. (See [Exhibit 4-1](#), Phase 1, Initiate and Plan.)

4-1.1 Objectives

The objectives for this phase are as follows:

- a. Registering the information resources in the EIR.
- b. Initiating the C&A process.

4-1.2 Deliverables

The deliverables for this phase are the following:

- a. EIR registration.
- b. Notification to the manager, CISO, to initiate the C&A process.

4-1.3 Roles and Responsibilities

Roles	Responsibilities
Executive sponsor	Ensures completion of Phase 1 activities.
Business Relationship Management portfolio manager	Provides guidance and assistance.
Project manager	Registers information resources in EIR.
ISSR	Supports executive sponsor and Business Relationship Management portfolio manager as requested.

Roles	Responsibilities
ISSO	Facilitates meetings of the C&A core team.

4-1.4 **Activities**

4-1.4.1 **Register Information Resource in Enterprise Information Repository**

The project manager registers the information resources in EIR.

4-1.4.2 **Hold Certification and Accreditation Meeting**

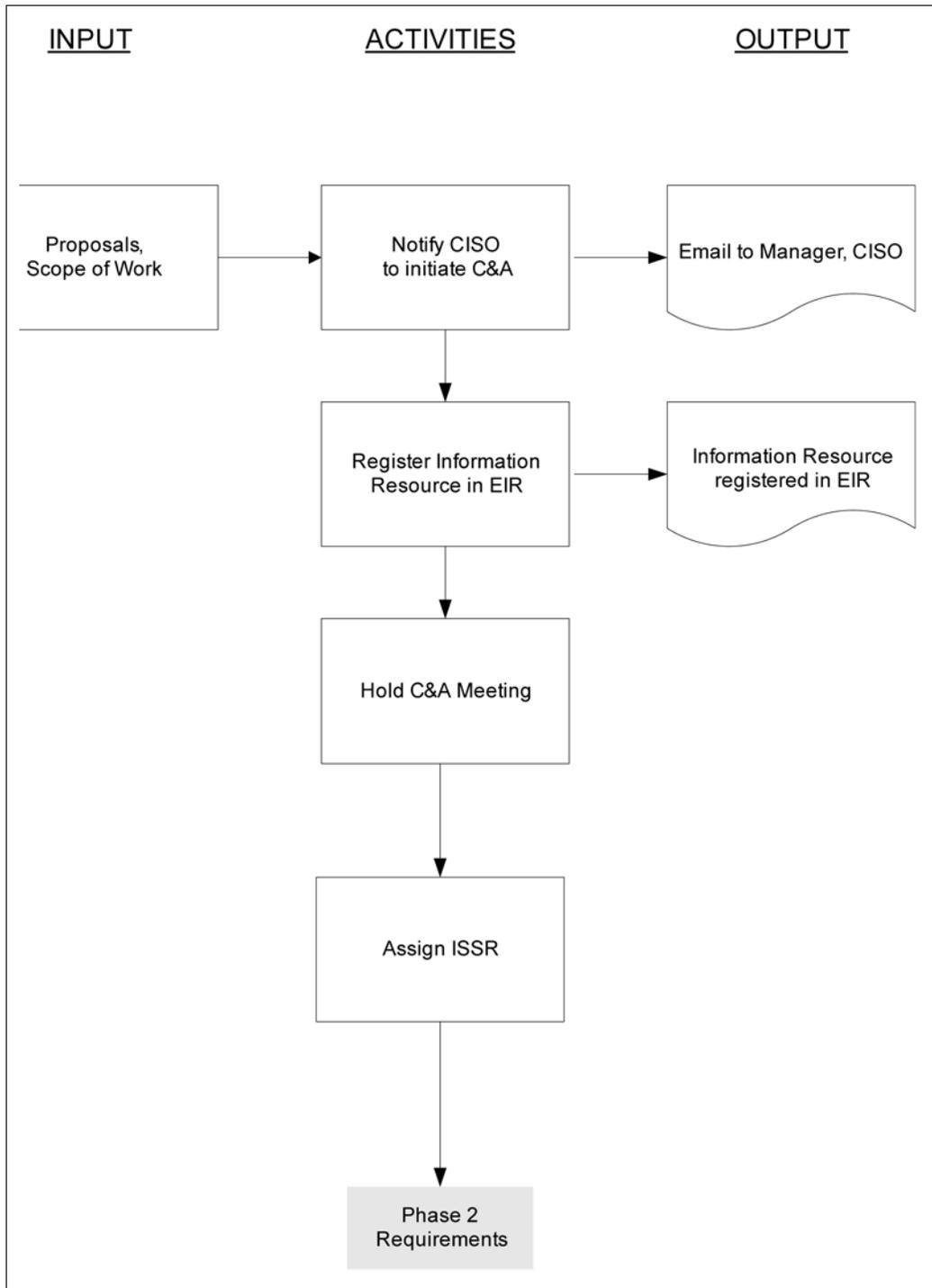
The ISSO assigned to the information resources assembles the C&A core team to discuss the proposed information resources and its business requirements and review the C&A process. The ISSO is encouraged to pursue flexible and cost-effective communication approaches, such as teleconferencing or videoconferencing. The ISSO provides the project team with copies of the templates to be completed.

4-1.4.3 **Assign Information Systems Security Representative**

The executive sponsor or Business Relationship Management portfolio manager may assign, in writing, an ISSR to perform security-related activities. If an ISSR is not appointed, the project manager assumes the ISSR responsibilities.

Exhibit 4-1

Phase 1, Initiate and Plan



4-2 Phase 2 – Requirements

Phase 2 determines the requirements for the information resource or technical solution. (See [Exhibit 4-2](#), Phase 2, Requirements.)

4-2.1 Objectives

The objectives for this phase are as follows:

- a. Documenting application characteristics including the following:
 - (1) Describing the development environment.
 - (2) Describing the testing environments (both SIT and CAT).
 - (3) Describing the production environment.
 - (4) Describing the Non Postal Service environment.
 - (5) Describing the network connectivity characteristics.
 - (6) Documenting the sensitive and sensitive-enhanced data elements.
 - (7) Developing a high-level architectural diagram.
 - (8) Identifying application internal and external dependencies.
- b. Conducting the BIA.
 - (1) Ensuring privacy compliance.
 - (2) Determining the sensitivity and criticality of the information resource.
 - (3) Generating security requirements to mitigate risk based on sensitivity, criticality, and the business needs of the Postal Service.
- c. Updating a Plan of Action and Milestones (POA&M) and EIR. The POA&M is also known as the TSLC Project Plan.

4-2.2 Deliverables

The deliverables for this phase are the following:

- a. Application Characterization.
- b. BIA.
- c. Updated POA&M and EIR.

4-2.3 **Roles and Responsibilities**

Roles	Responsibilities
Executive sponsor	Ensures completion of Phase 2 activities.
Business Relationship Management portfolio manager	Provides guidance and assistance.
ISSR	Supports executive sponsor and Business Relationship Management portfolio manager as requested.
ISSO	Facilitates meetings of the C&A core team. Coordinates completion of BIA. Provides advice and consulting support to executive sponsors and Business Relationship Management portfolio managers regarding the baseline security requirements that apply to all information resources and the additional security requirements required to protect sensitive-enhanced, sensitive, and critical information resources. Coordinates with the Privacy Office on privacy-related requirements. Recommends additional security requirements to executive sponsors and Business Relationship Management portfolio managers based on threats, vulnerabilities, and generally accepted industry practices.
Privacy Office	Reviews Privacy Impact Assessment and approves determination of sensitivity.
Development Team	Completes Application Characterization, BIA, updates POA&M, updates EIR, and keeps C&A core team informed of progress.

4-2.4 **Activities**

4-2.4.1 **Review Documentation**

The C&A core team reviews documentation that they receive. Some of the documentation could include the following:

- a. Original business needs statement, business case, request for proposals, statement of work, and TSLC requirements documentation.
- b. Contracts and POA&M.
- c. Policies, procedures, standards, and any other applicable documentation that may affect the information resource.

4-2.4.2 **Document Application Characteristics**

The Project Manager or ISSR document the application characteristics which includes the following steps:

- a. Answering the development environment section questions.
- b. Answering the testing environments (both SIT and CAT) section questions.
- c. Answering the production environment section questions.
- d. Answering the non Postal Service environment section questions.
- e. Answering the network connectivity characteristics section questions.
- f. Documenting the sensitive and sensitive-enhanced data elements.
- g. Developing a high-level architectural diagram.

- h. Identifying application internal and external dependencies to document how a given application interfaces with the rest of the Postal Service applications and infrastructure. The project manager and ISSR may need to meet with developers, system administrators, network administrators, database administrators, the Business Relationship Management portfolio manager, and customer representatives to complete the internal and external dependencies table. A system is dependent if it CANNOT function without the input or connection to the other system or portal. For example, applications which by themselves are not critical may have a higher designation because they provide data to an application with a higher criticality designation.

4-2.4.3 **Conduct Business Impact Assessment**

The ISSO coordinates the completion of the BIA, which includes the following steps:

- a. Completing the privacy section.
- b. Determining sensitivity (i.e., sensitive-enhanced, sensitive, or nonsensitive).
- c. Determining criticality, (i.e., critical-high, critical-moderate, or noncritical [low]).
- d. Determining security requirements. Security requirements are defined for all information resources to secure the information resources commensurate with the risk. Security requirements include:
 - (1) Baseline security requirements for all information resources.
 - (2) Additional security requirements based upon the sensitivity and criticality of the information resource and industry requirements.
 - (3) Additional conditional requirements based on request by senior management or specific criteria.
 - (4) Additional security requirements recommended by the ISSO based on generally accepted industry practices, the operating environment, and the risks associated with the information resource.
- e. Signing Acceptance of Responsibility and Verification sections of BIA. (The Business Relationship Management portfolio manager or their designee, the executive sponsor or their designee, privacy official, and ISSO sign these sections relevant to their function.)

Note: Some information resources are developed under the direction of one executive sponsor in one organization and transferred to an executive sponsor in another organization for Phase 7 of the C&A process (Release and Production).

4-2.4.4 **Update Plan of Action and Milestones and Enterprise Information Repository**

Once the BIA is completed, the Business Relationship Management portfolio manager ensures that the EIR is updated and amends the POA&M to include integrating information security controls in the information resource and the deliverables associated with the C&A process.

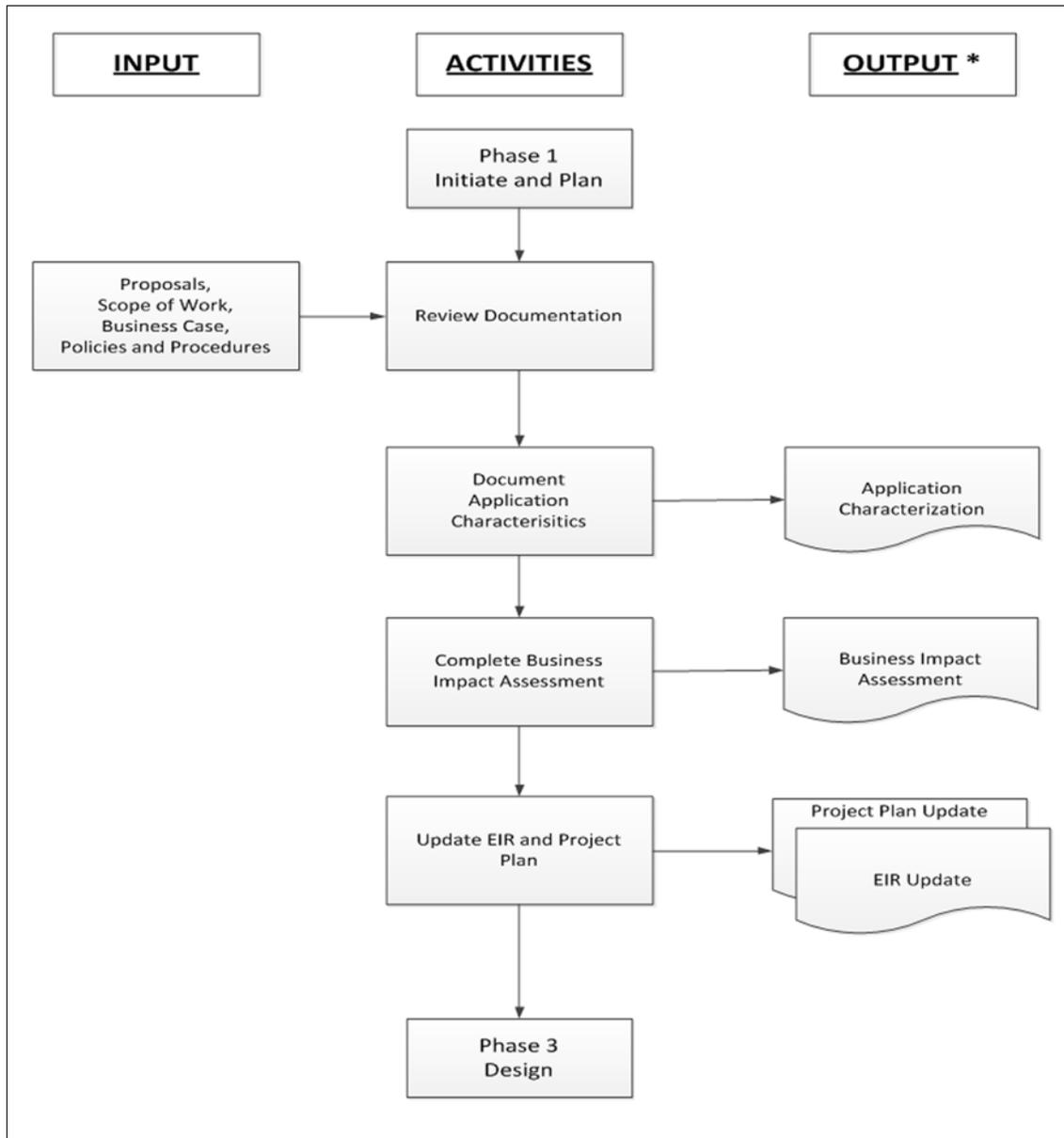
The POA&M, a key document in the security certification and accreditation package, describes actions taken or planned by the executive sponsor to correct deficiencies in the security controls and to address remaining vulnerabilities in the information resource. The POA&M identifies:

- a. Tasks needing to be accomplished to address vulnerabilities.
- b. Resources required to accomplish the elements in the plan.
- c. Milestones in meeting the plan.
- d. Scheduled completion dates for the milestones.

The POA&M is updated throughout the information resource lifecycle for changes to the hardware, software, firmware, and the surrounding computing environment.

Exhibit 4-2

Phase 2, Requirements



4-3 Phase 3 – Design

Phase 3 identifies security controls and processes for the security requirements defined in Phase 2, Requirements. (See [Exhibit 4-3](#), Phase 3, Design.)

4-3.1 Objectives

The objectives for this phase are as follows:

- a. Developing network architecture diagrams.
- b. Documenting the security specifications.
- c. Identifying security controls and processes for security requirements documented in the BIA.
- d. Selecting security controls on their ability to meet security requirements and provide a cost-effective security solution.
- e. Developing a security plan.
- f. Conducting a site security review, if required.

4-3.2 Deliverables

The deliverables for this phase are the following:

- a. Network architecture diagrams.
- b. Security specifications.
- c. Security plan.
- d. Site security review, if required.

4-3.3 Roles and Responsibilities

Roles	Responsibilities
Executive sponsor	Ensures completion of Phase 3 activities.
Business Relationship Management portfolio manager	Provides guidance and assistance.
ISSR	Supports executive sponsor as required and Business Relationship Management portfolio manager.
ISSO	Provides guidance and consulting support for completion of C&A deliverables.
Development Team	Prepares deliverables and keeps C&A core team informed of progress.

4-3.4 Activities

4-3.4.1 Analyze Requirements

Analyze the business and security requirements established for the information resource in the application characterization and the BIA.

4-3.4.2 Develop Network Architecture Diagrams

Develop network architecture diagrams which document physical layer 1 topology including what ports are listening on each device, firewalls, routers,

switches, communication protocols and devices, security devices, and interconnected resources.

The architectural diagram should include (on that diagram or on separate attached diagrams) all connectivity, data flow, business flow, and supporting functions. Data flow descriptions should include the proposed servers, protocols, networks, and projected data repositories. The network component diagram(s) should include, but are not limited to:

- a. End-user workstations and other applicable devices.
- b. Servers, including hardware type, operating system level, and hosted applications.
- c. Firewalls, including details on interfaces, ports, proxies, and protocols.
- d. Routers, including interfaces, access control lists, and configurations.
- e. Switches (VLAN information).
- f. Intrusion detection system (include vendor, release levels, host, or network based).
- g. Network monitoring equipment, include vendor and release levels.
- h. If multiple IDSs and/or firewalls exist and are centrally managed, the location(s) of the management station(s) should be identified.
- i. If data is encrypted at any point in the data flow, identify the type of encryption used. If encryption or a tunnel is used, specify that mechanism and both the encryption and key exchange protocols.
- j. Where data is stored. The data should be identified based on data type, the defined sensitivity and criticality levels of that data, and whether it is encrypted.
- k. If user authentication is required for the use of this application, explain how that is accomplished and where the authentication database resides.

4-3.4.3 **Document Security Specifications**

Security specifications are documented to satisfy the security requirements defined by the BIA. The security specifications will be included in contracts and acquisitions as appropriate.

4-3.4.4 **Identify Potential Security Controls**

Identify potential security controls in light of business and security requirements, Postal Service policies, project schedule, budget, and cost versus benefit of the various control options. Security controls include countermeasures and safeguards. A countermeasure is a control against known threats whereas a safeguard is a control against future unknown threats. Security controls can be characterized as preventive, detective, corrective, deterrent, compensating, continuous, management, and technical.

Security controls will be selected or designed, purchased or built, integrated, and configured to address the security requirements and bring residual risk to an acceptable level by reducing the likelihood that vulnerabilities will be exploited and/or by reducing the amount of harm that could occur if a given vulnerability is exploited.

4-3.4.5 **Select/Design Security Controls**

4-3.4.5.1 **General**

Security controls for the information resource are selected to satisfy the privacy and security requirements identified in the BIA and to mitigate the risks identified in the Risk Assessment.

Security controls include the following:

- a. Management controls:
 - (1) Background screening and clearances.
 - (2) Job descriptions.
 - (3) Performance appraisals.
 - (4) Progressive sanctions.
 - (5) Condition of employment.
 - (6) Separation of duties and responsibilities.
 - (7) Dual control of “critical” processes and keys.
 - (8) Risk management.
 - (9) Configuration/change management.
 - (10) Independent reviews.
- b. Operational controls:
 - (1) Personnel security.
 - (2) Media protection.
 - (3) Physical protection (e.g., badges, controlled areas, visitors, and equipment and media removal).
 - (4) Environmental protection.
 - (5) Contingency planning.
 - (6) Incident response process.
 - (7) Hardware/system software maintenance.
 - (8) Network connectivity review board.
 - (9) Operational security training.
 - (10) Security awareness training.
 - (11) Audit logging.
 - (12) Testing of security controls.
 - (13) Continuous monitoring.
- c. Technical controls:
 - (1) Platform hardening.
 - (2) Identification and authentication.
 - (3) Logical access.
 - (4) Communications.
 - (5) Encryption
 - (6) Integrity checking.
 - (7) Vulnerability scans.
 - (8) Penetration testing.

(9) Hardware and media sanitization.

Multiple information security controls may be needed to satisfy a particular information security requirement, or one control may satisfy more than one information security requirement.

4-3.4.5.2 **Selecting Security Controls**

Information security controls are selected based on their capability to be implemented, their effectiveness in safeguarding the information resource and the information processed, their compatibility with other Postal Service security controls and processes and business needs. Circumstances peculiar to the information resource, the computing environment, changes in technologies, or the discovery of new vulnerabilities in what had been considered “safe” products may lead to additional security controls.

Perform Controls Analysis: An analysis of identified controls is conducted to determine their potential effectiveness to remove, transfer, or otherwise mitigate risk to the information resource. The controls analysis identifies any residual risk to the information resource.

Perform Cost Benefit Analysis: A cost benefit analysis is performed and documented to facilitate the implementation of cost-effective protection for information resources and continuity of business operations.

4-3.4.6 **Develop Security Plan**4-3.4.6.1 **General**

A security plan must be developed for all information resources.

A security plan is a blueprint for protecting the information resource against threats, both internal and external. The security plan covers both the development and production environment. The plan describes all information security controls and processes that have been implemented or planned and delineates responsibilities and expected behavior of all individuals who access the information resource.

The security plan documents the security requirements identified in the BIA and the information security controls that are tailored to the security requirements.

4-3.4.6.2 **Security Plan Roles and Responsibilities**

Roles	Responsibilities
Executive sponsor	Provides personnel and financial resources to supports development of a security plan.
Business Relationship Management portfolio manager	Provides guidance and assistance.
ISSR	Support executive sponsor and Business Relationship Management portfolio manager as requested.
ISSO	Provides guidance and consulting support and coordinates completion of the security plan.
Development team	Defines specific security controls and processes, completes security plan, and keeps C&A core team informed of progress.

4-3.4.7 **Conduct Site Security Review**

All business partner sites connecting to a Postal Service information infrastructure are subject to a site security review performed by the CISO and the Inspection Service. A site security review may be conducted at any time as long as connectivity exists between the business partner and Postal.

A site security review must be conducted if a facility is hosting enhanced sensitive, sensitive, or critical information resources unless the facility has been accredited by a governmental agency.

4-3.4.7.1 **Site Security Review Areas**

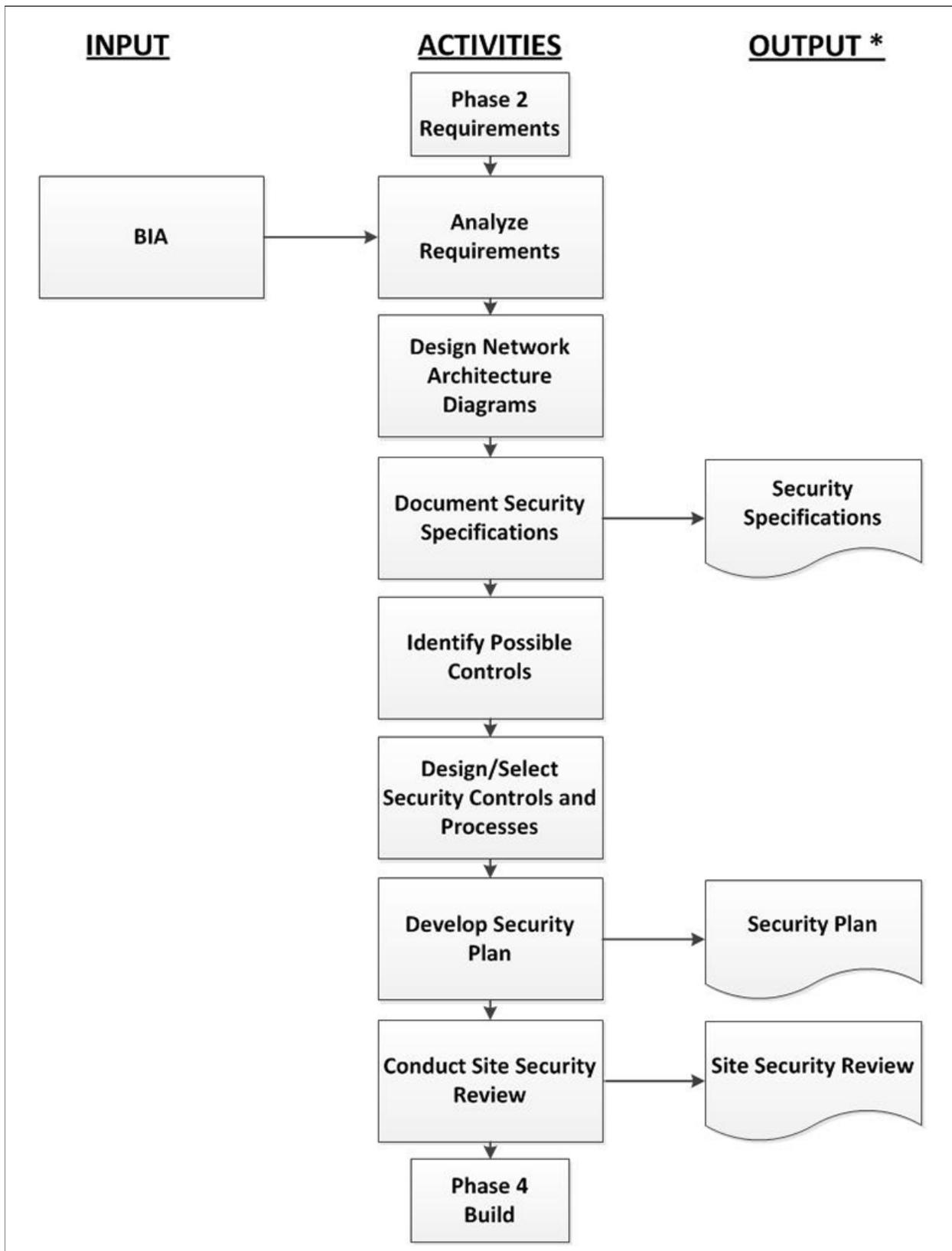
The site security review evaluates risks in the following areas as they relate to the physical security of applications and the information resources hosting them:

- a. Location security.
- b. Facility security.
- c. Personnel security.
- d. Controlled area security.
- e. Environmental security.
- f. Communications security.
- g. Hardware security.
- h. Software security.
- i. Information security.
- j. Administrative security.
- k. Emergency response and contingency planning.
- l. Auditing and monitoring.

4-3.4.7.2 **Site Security Review Roles and Responsibilities**

The Inspection Service and the ISSO complete the site security review.

Exhibit 4-3
Phase 3, Design



4-4 Phase 4 – Build

Phase 4 develops, acquires, and integrates security controls. (See [Exhibit 4-4](#), Phase 4, Build.)

4-4.1 Objectives

The objectives for this phase are as follows:

- a. Developing, acquiring, and integrating security controls.
- b. Hardening servers
- c. Developing standard operating procedures.
- d. Developing operational training materials.
- e. Incorporating security requirements in service level agreement (SLA) and trading partner agreement (TPA), if applicable.
- f. Registering information resource in eAccess.
- g. Initiating contingency recovery planning.
- h. Submitting an NCRB request, if applicable.

4-4.2 Deliverables

The deliverables for this phase are the following:

- a. Standard operating procedures.
- b. Operational training materials.
- c. SLA and TPA, if applicable.
- d. Draft contingency planning documents. (The contingency planning documents are started during this phase.)
- e. NCRB request, if applicable.

4-4.3 Roles and Responsibilities

Roles	Responsibilities
Executive sponsor	Ensures completion of Phase 4 activities.
Business Relationship Management portfolio manager	Provides guidance and assistance.
ISSR	Supports executive sponsor as required and Business Relationship Management portfolio manager.
ISSO	Provides guidance and consulting support for completion of C&A deliverables.
Development team	Completes C&A deliverables and keeps C&A core team informed of progress.
DRS	Consults with executive sponsor as required on the development of contingency planning documents.

4-4.4 **Activities**

4-4.4.1 **Develop, Acquire, and Integrate Information Security Controls**

A member of the C&A core team serves as the liaison between the executive sponsor and the development team on the required information security controls and processes. The development team acquires, builds, and integrates these controls and processes and keeps the C&A core members informed of their progress. The software should be built in accordance with secure coding standards.

4-4.4.2 **Harden Information Resources**

Information resources hosting applications designated as sensitive-enhanced, sensitive, or critical must be hardened to meet or exceed the requirements documented in Postal Service hardening standards. Hardening refers to the process of implementing additional software, hardware, or physical security controls.

4-4.4.3 **Develop Standard Operating Procedures**

Standard operating procedures (SOPs) must be developed for information resources designated as sensitive-enhanced, sensitive, or critical to handle the operating support required for the information resource. These procedures cover such topics as separation of duties, manual processes, computer operations, input and output validation, and report distribution.

4-4.4.4 **Develop Operational Security Training Materials**

Appropriate materials must be developed for training users, system administrators, managers, and other personnel on the correct use of the information resource and its security controls.

4-4.4.5 **Incorporate Security Requirements in Service Level Agreements and Trading Partner Agreements**

Service level agreements (SLAs) are often developed for in-house managed and/or developed information resources. Trading partner agreements (TPAs) are often developed for externally managed and/or developed information resources. If SLAs or TPAs are developed, incorporate information security requirements.

4-4.4.6 **Register Information Resources in eAccess**

The information resource must be registered in eAccess, which is the Postal Service's application for managing the authorization process for personnel needing to access an information resource and the associated information. Registration is also required for the use of managed accounts (i.e., machine accounts, etc.).

4-4.4.7 **Initiate Contingency Planning**

If the BIA determines that contingency planning is required based on the criticality determination, it should be initiated at this stage. Contingency planning continues throughout the life cycle of the information resource.

4-4.4.7.1 **Contingency Planning Roles and Responsibilities**

Roles	Responsibilities
Executive sponsor	Consults with the DRS on the contingency planning documents, the recovery time objective (RTO), and recovery point objective (RPO). Coordinates with other managers in planning contingency planning activities. Fund information resource contingency planning activities.
Business Relationship Management portfolio manager	Provide guidance and assistance.
ISSR	Support executive sponsor and Business Relationship Management portfolio manager as requested.
ISSO	Provide guidance and consulting support.
Development Team	Develop and maintain the contingency planning documents.
DRS	Consult with the executive sponsor on the contingency planning documents and validates the RTO and RPO, based on overall Postal Service resources, to ensure it is realistic and achievable.

4-4.4.7.2 **Develop Contingency Planning Documents**

Contingency planning documents are required for information resources designated as critical (i.e., high or moderate). The development of the contingency planning documents is begun during Phase 4 in coordination with the DRS. Contingency plans are tested and updated in Phase 7. Contingency planning templates are available on the IT Web site. Select Corporate Information Security, select Business Continuity Management page, select Business Continuity Management, and then select Business Continuity Management documents.

The Application Disaster Recovery Plan (ADRP) is a primary component of contingency planning. An ADRP is required for applications designated as critical.

4-4.4.8 **Identify Connectivity Requirements**

Identify connectivity requirements and submit a request to the Network Connectivity Review Board (NCRB). See Section 11-7, Business Partner Connectivity Requirements, in Handbook AS-805, *Information Security*.

Exhibit 4-4

Phase 4, Build, (p. 1 of 2)

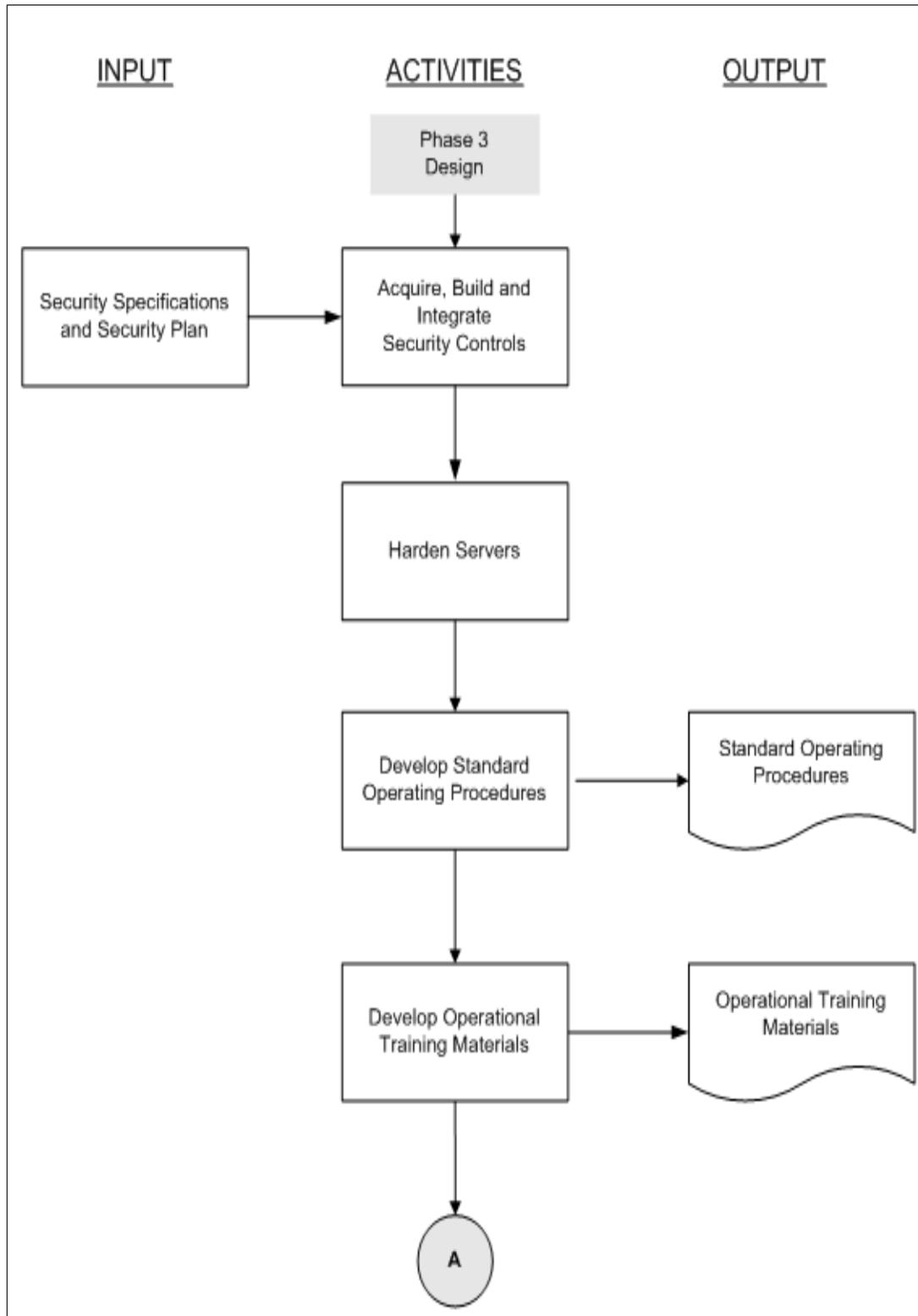
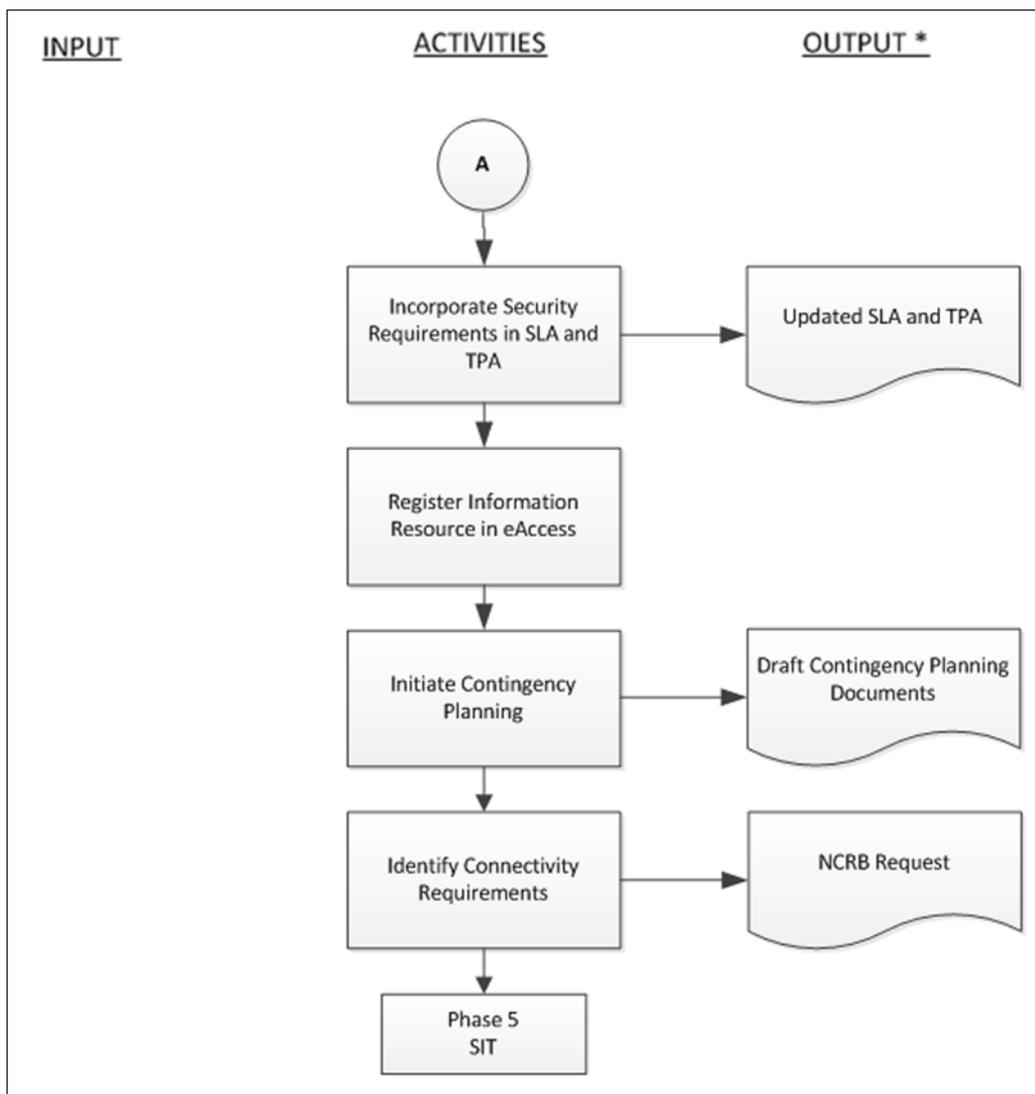


Exhibit 4-4
Phase 4, Build, (p. 2 of 2)



4-5 Phase 5 – System Integration Testing

Phase 5 focuses on testing the security controls and processes acquired, built, and integrated in the Build Phase to determine their effectiveness. (See [Exhibit 4-5](#), Phase 5, System Integration Testing.)

4-5.1 Objectives

The objectives of this phase are as follows:

- a. Developing a security test and evaluation (ST&E) plan.
- b. Conducting operational security training.
- c. Completing the development of contingency plans.

4-5.2 Deliverables

The deliverables in this phase are the following:

- a. ST&E plan.
- b. Documentation indicating operational security training was conducted.
- c. Contingency plans.

4-5.3 Roles and Responsibilities

Roles	Responsibilities
Executive sponsor	Ensures completion of Phase 5 activities.
Business Relationship Management portfolio manager	Provides guidance and assistance.
ISSR	Supports executive sponsor and Business Relationship Management portfolio manager as requested.
ISSO	Provides guidance and consulting support for completion of C&A deliverables.
Development team	Develop ST&E plan, conduct and document operational security training, and develop contingency plan.

Note: If the projected delivery dates of the ST&E plan, operational security training, or contingency plan change, the POA&M must be amended and the ISSO notified of the changes.

4-5.4 Activities

4-5.4.1 Develop Security Test and Evaluation Plan

4-5.4.1.1 General

A ST&E plan must be developed for all information resources.

The ST&E plan defines the security testing to be conducted to determine the extent to which the information resource meets the security requirements for its mission and operational environment. If the ST&E plan is part of an overall system test plan, highlight or flag the security section for ease of review.

Sensitive-enhanced and sensitive test data should be protected throughout the entire testing cycle.

4-5.4.1.2 **Build Security Test and Evaluation Plan**

The development team should build the ST&E plan and include the stakeholders in the process. The Security Test and Evaluation template and instructions are available on the IT Web site. Select TSLC Templates; under System Integration Test, select Security Test and Evaluation Plan. The ST&E plan should do the following:

- a. Address all security controls and processes described in the security plan and the means by which those controls and processes will be tested.
 - (1) Include both the technical and nontechnical security controls.
 - (2) Include controls associated with hardware, operating system, networking and telecommunications, physical security, personnel security, and computer operations, and manual processes.
- b. Define the security functionality (security control feature) to be tested for each security control implemented to satisfy the security requirement.
- c. Describe the actual testing to be performed for each control. For each control, include applicable test scripts, scenarios, performance thresholds, and an indication of what will constitute passing or failing.

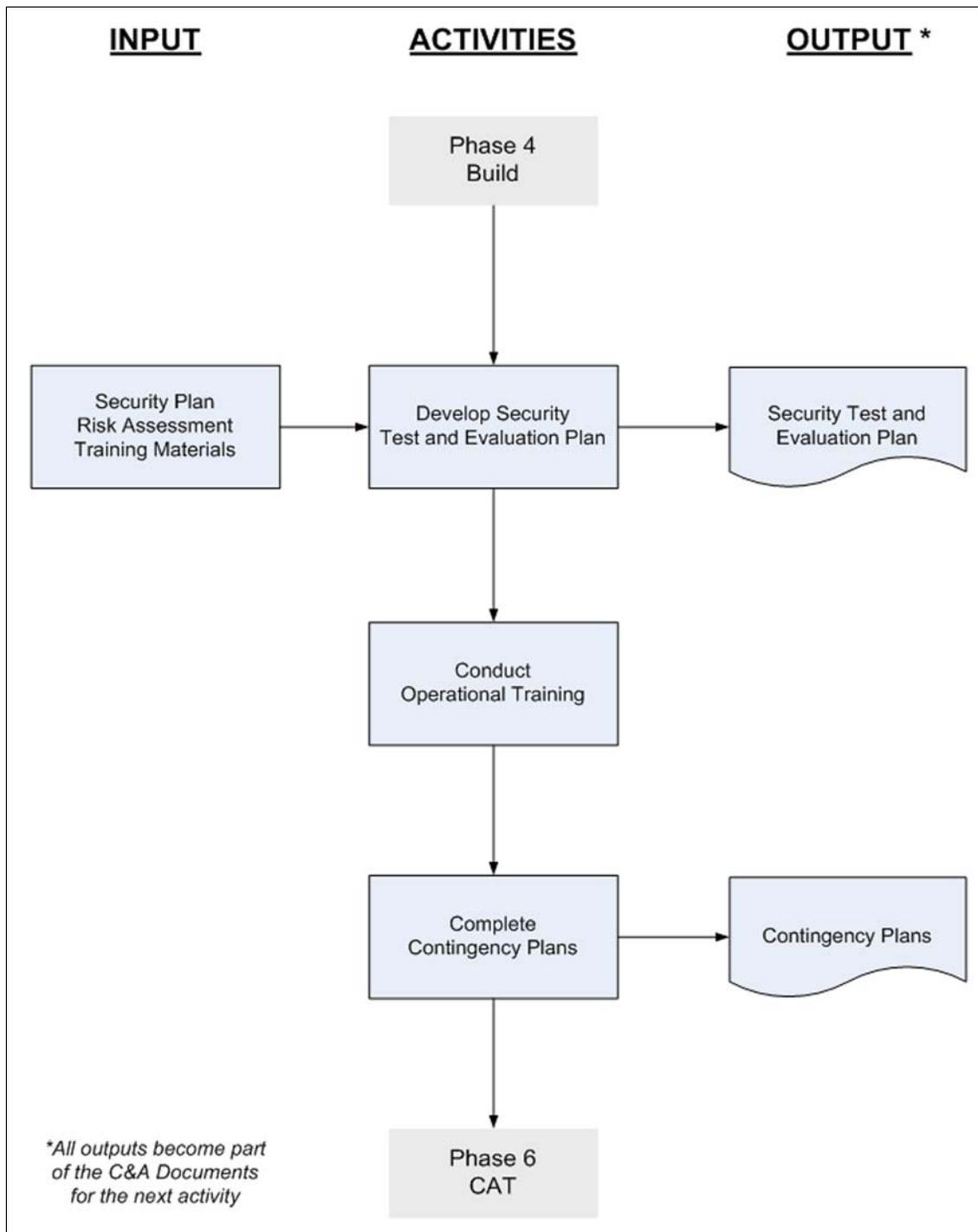
4-5.4.2 **Conduct Operational Security Training**

Using the training materials developed in phase 3, train users, system administrators, management, and other personnel on the correct use of the information resource and its security safeguards.

4-5.4.3 **Complete Contingency Planning**

Contingency planning documents are required for information resources designated as critical. The development of the contingency planning documents is begun during Phase 4 in coordination with the DRS and updated in this phase.

Exhibit 4-5
Phase 5, SIT



4-6 Phase 6 – Customer Acceptance Testing

Phase 6 consists of those activities that culminate in certification, a risk mitigation plan, and accreditation. (See [Exhibit 4-6](#), Phase 6, CAT.)

4-6.1 Objectives

The objectives of this phase are as follows:

- a. Conducting security code review, if applicable.
- b. Conducting security testing and documenting the results.
- c. Conducting vulnerability scans.
- d. Conducting penetration test, if applicable.
- e. Conducting independent reviews, if applicable.
- f. Conducting risk assessment.
- g. Developing a risk mitigation plan.
- h. Completing the certification and accreditation evaluation report.
- i. Certifying the information resource.
- j. Accepting the residual risk.
- k. Accrediting the information resource.

4-6.2 Deliverables

The deliverables of this phase are the following:

- a. Security code review, if applicable.
- b. ST&E report.
- c. Vulnerability scans.
- d. Penetration test, if applicable.
- e. Independent reviews, if applicable.
- f. Risk Assessment.
- g. Risk Mitigation Plan.
- h. Certification and Accreditation Evaluation Report.
- i. Certification Letter.
- j. Risk Acceptance Letter.
- k. Accreditation Letter.

4-6.3 **Roles and Responsibilities**

Roles	Responsibilities
ISSO and development team	Request code review (if applicable); conduct security testing; document security testing; request vulnerability scans; request penetration test (if applicable) request independent reviews (if applicable); conduct risk assessment; and develop a risk mitigation plan addressing high and medium risks and recommending whether the risks should be accepted, transferred, or further mitigated.
ISSO	Evaluates C&A documentation, prepares an C&A evaluation report that details the findings, makes the decision to escalate security concerns to the executive sponsor and Business Relationship Management portfolio manager or signs the C&A evaluation report and forwards the report to the certifier.
Certifier (manager C&A process)	Reviews the C&A evaluation report and C&A documentation package, makes the decision to escalate security concerns to the executive sponsor and Business Relationship Management portfolio manager or certifies the information resource by preparing and signing a certification letter, and forwards the certification letter and C&A evaluation report to the accreditor.
Business Relationship portfolio manager	Provides personnel for correcting deficiencies.
Accreditor (manager, CISO)	Analyzes C&A evaluation report, certification letter, and business documentation, makes the decision to <ul style="list-style-type: none"> a. Escalates security concerns to the VP IT and the VP functional business area and indicates the C&A Phase to return to for rework, or b. Prepares and signs a Full Accreditation Letter, and forwards the Full Accreditation Letter to the VP IT and the VP functional business area, or c. Prepares and signs a Conditional Accreditation Letter with some requirements that need to be met within a certain time frame and forwards the Conditional Accreditation Letter to the VP IT and the VP functional business area. If the requirements are not met in the indicated time frame, the accreditor will issue a Failure To Comply Letter to the VP IT and the VP functional business area.
Chief Privacy Officer and Accreditor	Acknowledge any unmitigated medium or high residual risks associated with the information resource

Roles	Responsibilities
Executive sponsor	Ensures completion of C&A process and provides personnel and financial resources for correcting deficiencies.
ISSR	Supports executive sponsor and Business Relationship Management portfolio manager as requested to correct deficiencies.
Other stakeholders	Participate by responding on outstanding issues or providing advisory support.

Note: If the projected delivery dates of the security code review (if applicable), ST&E testing and report, vulnerability scans, penetration test, independent reviews (if applicable), risk assessment, or risk mitigation plan, the POA&M must be amended and the ISSO notified of the changes.

4-6.4 **Activities**

4-6.4.1 **Conduct Security Code Review**

To protect the infrastructure, a documented security code review is required for:

- a. Any externally facing or DMZ-hosted information resource containing custom programming or scripting, regardless of the designation of sensitivity or criticality.
- b. Information resources designated as sensitive-enhanced, sensitive, and critical that contain dynamic code or COTS custom programming or scripts.
- c. Internally and externally facing PCI applications containing customs code. The code review can be conducted by a knowledgeable independent individual or by a third-party vendor.

The security code review will be (1) based on the Postal Service Information Security Code Review Standards or an acceptable equivalent, and (2) appropriately documented. This security code review will not be required if an independent security code review is conducted. (See [5-1, Independent Security Code Reviews.](#))

4-6.4.2 **Conduct the Security Test and Evaluation**

4-6.4.2.1 **Conduct Security Test Process**

Security testing must be conducted for all information resources.

Security testing is conducted using the approved ST&E plan. Following the ST&E plan reduces the risk of false or faulty test results; yields more consistent, comparable, and repeatable evaluation of security controls; and results in more complete and reliable information for authorizing officials.

The information resource technical control mechanisms and the surrounding administrative controls are evaluated to establish the extent to which the information resource meets the security requirements.

Stakeholders who may participate in the testing include, but are not limited to, the ISSO, ISSR, developers, and contractors.

If a modification to a control is required, the change should be reflected in the security plan and the ST&E plan before the test is re-executed.

4-6.4.2.2 **Develop Security Test and Evaluation Report**

Upon completion of the testing, the development team develops a ST&E report and reviews the findings to determine whether the security controls and processes are adequate to protect the information resource or whether modifications to the security controls and processes are warranted. If modifications are warranted, the security plan and the ST&E plan are amended and testing reinitiated.

4-6.4.3 **Conduct Vulnerability Scans**

Vulnerability scans are recommended for all information resources and are required for the following information resources:

- a. Annually for externally facing information resources.
- b. Quarterly for PCI information resources (i.e., information resources utilizing credit card transactions).

Scanning procedures must ensure adequate scan coverage of at least the Production and Customer Acceptance Test environments for sensitive-enhanced, sensitive, law enforcement, and PCI applications and the Production environment for non-sensitive applications. The list of vulnerabilities must be updated.

4-6.4.4 **Conduct Penetration Test**

A penetration test must be conducted for all externally facing applications and PCI applications and recommended for sensitive-enhance, sensitive, and law enforcement applications. In addition the ISSO may recommend other tests such as network scanning, data loss prevention scanning, or wireless access point mapping where applicable.

4-6.4.5 **Conduct Independent Reviews**

The following independent reviews may be required during Phase 3 to determine the effectiveness of the security controls and processes:

- a. Independent security code reviews.
- b. Independent risk assessments.
- c. Independent penetration testing and vulnerability scans.
- d. Independent security test validations.

These reviews are discussed in Chapter [5, Independent Reviews](#).

4-6.4.6 **Assess Risks**

A risk assessment must be conducted for all information resources to identify security concerns (e.g., threats, vulnerabilities, and control weaknesses), risk ranking, additional controls, and residual risk.

Risk analysis is a continual process throughout this phase; it depends on the configuration of the information resource, the users, and the implementation environment. Risks to information resources and facilities are evaluated with the following processes:

- a. Risk assessment.

- b. Site security review conducted by an ISSO and the Postal Inspection Service. See Section [4-3.4.7, Conduct Site Security Review](#).
- c. External independent information security risk assessment (if requested).

Standard templates that serve as a framework for the risk assessments are incorporated in the risk assessment processes.

4-6.4.7 **Conduct Risk Assessment and Develop Risk Mitigation Plan**

The risk assessment is an ongoing process designed to minimize risk to applications by identifying additional security controls (i.e., beyond those initially established) to be deployed that are commensurate with the relative values of the assets to be protected, the vulnerabilities associated with those assets, and threats to the application. The risk assessment instructions are available on the CISO Web site.

4-6.4.7.1 **Risk Assessment and Mitigation Activities**

A risk assessment will do the following:

- a. Identify general administrative data and assets.
- b. Identify possible threats that could adversely affect the information resource.
- c. Identify security vulnerabilities that could be exploited by threat events affecting the information resource.
- d. Analyze implemented and planned controls against requirements.
- e. Identify the probability that a vulnerability may be exploited.
- f. Identify the adverse impact resulting from a successful exploitation of a vulnerability.
- g. Determine the overall risk to the information resource and document in the Risk Assessment document.
- h. Identify possible additional mitigating controls that, if applied, could be expected to mitigate the risks identified for the information resource.
- i. Document the mitigating controls and the overall risk status of the information resource in a Risk Mitigation Plan.

4-6.4.7.2 **Risk Assessment and Mitigation Roles and Responsibilities**

Roles	Responsibilities
Executive sponsor	Ensures completion of the risk assessment for information resources under their purview. Provides personnel and financial resources to support risk assessment activities.
Business Relationship Management portfolio manager	Supports executive sponsor and development team.
ISSR	Supports executive sponsor and Business Relationship Management portfolio manager as requested.

Roles	Responsibilities
ISSO	Provides guidance on applicability of threats or vulnerabilities and appropriate choice of countermeasures; coordinates completion of risk assessment.
ISSO and Development team	Complete the risk assessment and the risk mitigation plan.
VP IT and VP of functional business area	Accept any unmitigated medium or high residual risks associated with an information resource.
Accreditor	Acknowledge any unmitigated medium or high residual risks associated with an information resource.
Chief Privacy Officer	Acknowledge any unmitigated medium or high residual risks associated with a sensitive-enhanced or sensitive information resource.

4-6.4.7.3 **Risk Mitigation Strategies**

Medium and high risks must follow one of the following strategies:

- a. Risk assumption: VP IT and VP of functional business area assume the risk by preparing and signing an acceptance of risk responsibility letter and then forwards it to the accreditor.
- b. Risk avoidance: The VP IT and VP of functional business area recommend that the portion of the project that is causing the risk exposure should not be implemented as planned or at this time.
- c. Risk limitation: The VP IT and VP of functional business area limit the exposure to the threat (e.g., limit the number of users with privileged access or implement two-factor authentication).
- d. Risk planning: The VP IT and VP of functional business area concede that the Postal Service will have to accept a certain amount of loss in order to take advantage of the increased functionality or income associated with the information resource. Risk planning will define the acceptable amount of loss.
- e. Acknowledgement and research: The VP IT and VP of functional business area acknowledge the risk and task research be conducted to find appropriate cost-effective controls that can be implemented in the future.
- f. Implement additional controls: The VP IT and VP of functional business area approve the implementation of additional controls to further mitigate the risks.
- g. Risk transfer: The VP IT and VP of functional business area transfer the risk to another organization (e.g., business partner).

4-6.4.7.4 **Develop a Risk Mitigation Plan**

For each medium or high vulnerability, adopt of the above risk mitigation strategies and document in the Risk Mitigation Plan (RMP). Assign responsibility for the remediation and identify a remediation completion date (if applicable).

4-6.4.8 ISSO Evaluates C&A Documentation

The ISSO initiates the evaluation of the C&A documentation package early in the C&A process. This enables the C&A core team to be proactive in identifying and addressing information security concerns. The C&A documentation package includes:

- a. Information resource characterization
- b. BIA.
- c. Architecture diagram.
- d. Security specifications.
- e. Security plan.
- f. SOPs.
- g. SLAs or TPAs, if applicable.
- h. ST&E plan.
- i. ST&E report.
- j. POA&M.
- k. Code review, if applicable.
- l. Vulnerability scans, if applicable.
- m. Penetration test, if applicable
- n. Independent reviews, if applicable.
- o. Risk assessment.
- p. Risk mitigation plan.

4-6.4.9 ISSO Prepares C&A Evaluation Report**4-6.4.10 ISSO Escalates Security Concerns or Forwards C&A Package**

Upon completion of the C&A evaluation report, the ISSO escalates security concerns to the executive sponsor and Business Relationship portfolio manager or signs the C&A evaluation report and forwards the report and supporting C&A documentation to the certifier (manager, C&A process) for review.

If the ISSO decides not to proceed with certification, he or she will indicate the C&A Phase to return to for rework.

4-6.4.11 Certifier Escalates Security Concerns or Certifies Information Resource

The certifier (program manager, C&A process) reviews the C&A evaluation report and the supporting C&A documentation package, escalates security concerns to the executive sponsor and Business Relationship portfolio manager or prepares and signs a certification letter, and forwards the certification letter and C&A evaluation report to the accreditor.

If the certifier decides not to certify the information resource, he or she will indicate the C&A Phase to return to for rework.

4-6.4.12 Accreditor Escalates Security Concerns or Accredits Information Resource

The accreditor (manager, CISO) reviews the certification letter, the C&A evaluation report, and risk mitigation plan and takes one of the following actions:

- a. Escalates security concerns to the VP IT and the VP functional business area and indicates the C&A Phase to return to for rework.
- b. Prepares and signs a Full Accreditation Letter, and forwards the Full Accreditation Letter to the VP IT and the VP functional business area.
- c. Prepares and signs a Conditional Accreditation Letter with some requirements that need to be met within a certain time frame and forwards the Conditional Accreditation Letter to the VP IT and the VP functional business area. If the requirements are not met in the indicated time frame, the accreditor will issue a Failure To Comply Letter to the VP IT and the VP functional business area.

4-6.4.13 VP IT and VP Functional Business Area Prepare and Sign Risk Acceptance Letter (if Required)

If a documented vulnerability associated with the medium or high residual risk will not be mitigated, [1] the VP IT and VP functional business area prepare and sign a Risk Acceptance Letter and forward the letter to the accreditor or [2] if the VP IT and VP functional business area decide not to sign a Risk Acceptance Letter, the accreditor will issue a Failure To Comply Letter.

Exhibit 4-6
Phase 6, CAT, (p. 1 of 4)

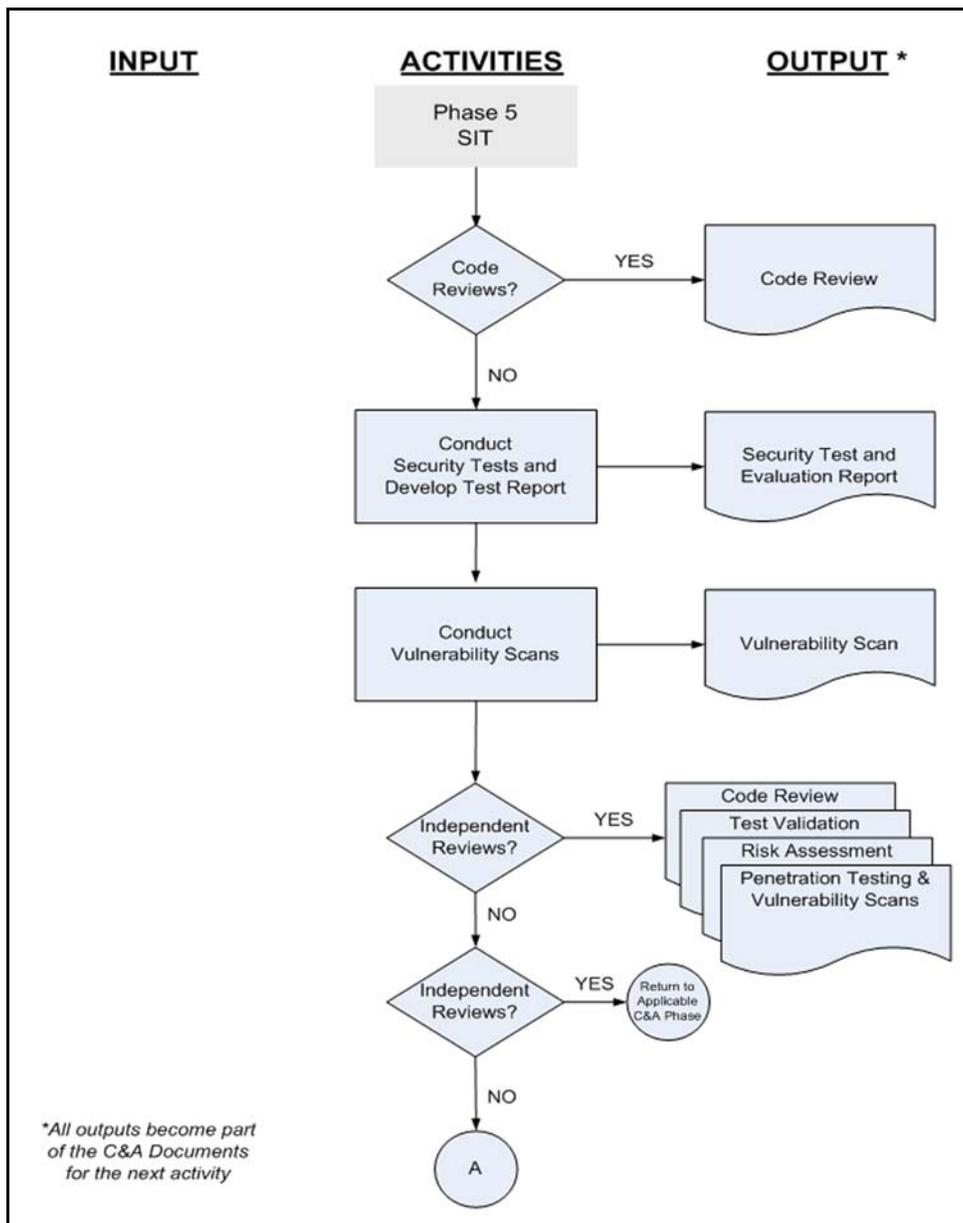


Exhibit 4-6

Phase 6, CAT, (p. 2 of 4)

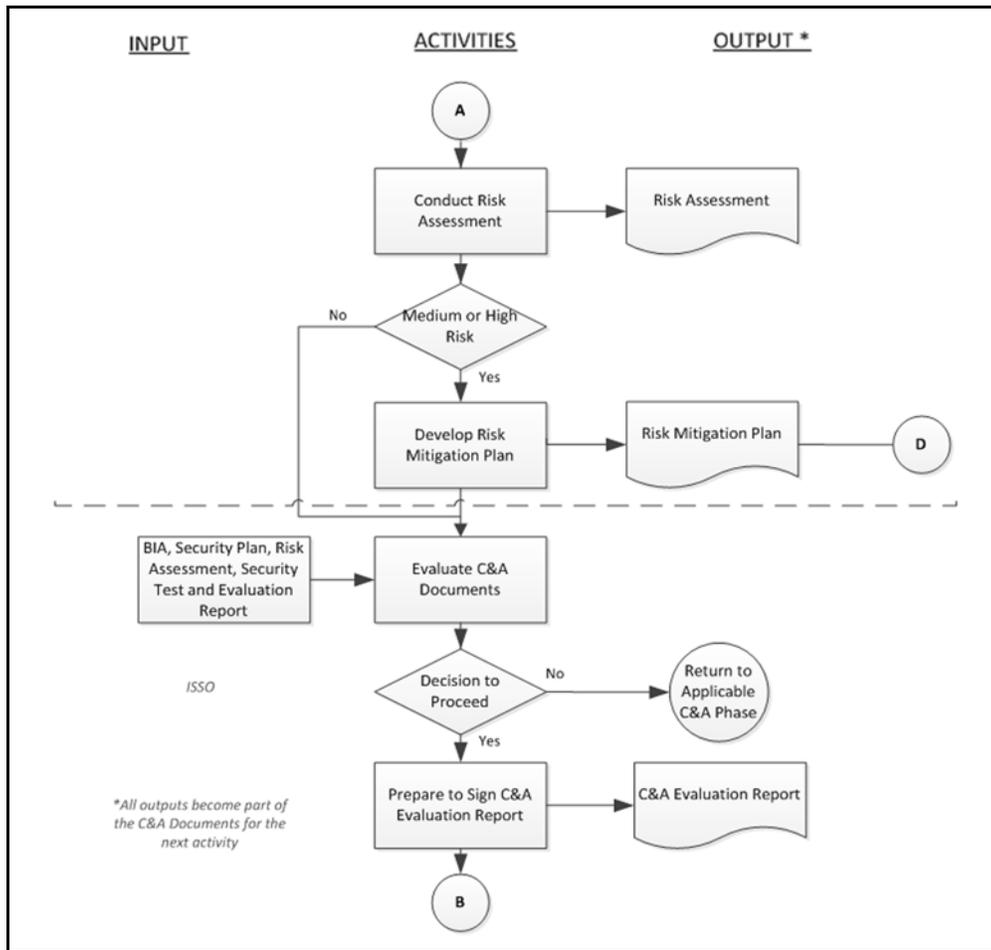


Exhibit 4-6
Phase 6, CAT, (p. 3 of 4)

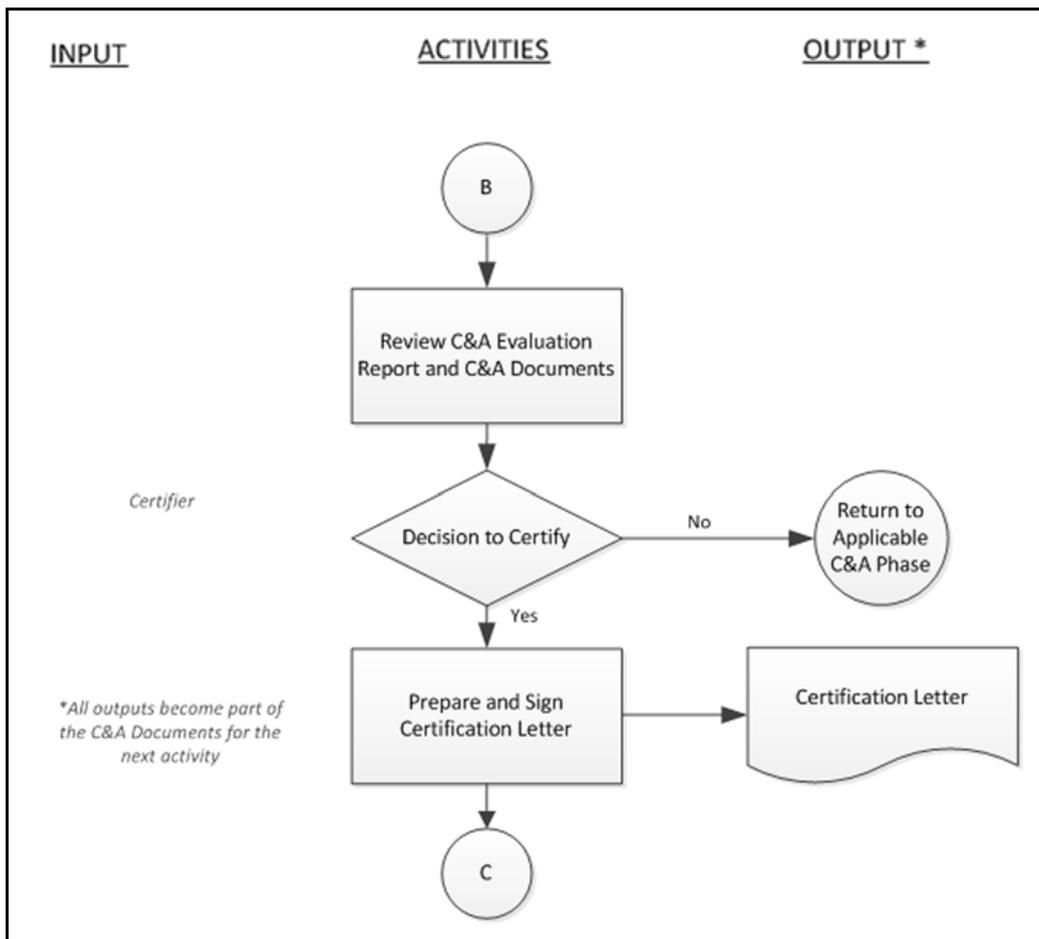
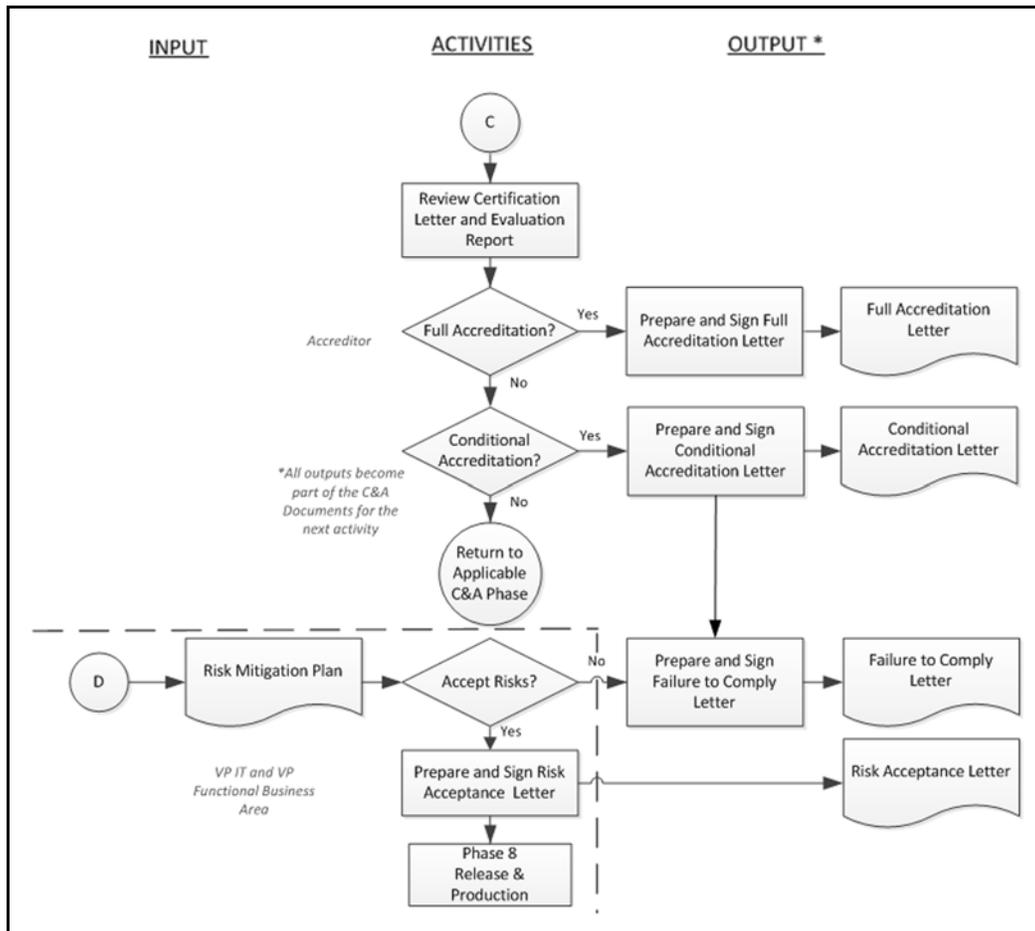


Exhibit 4-6
Phase 6, CAT, (p. 4 of 4)



4-7 Phase 7 – Governance Compliance

The Governance Compliance phase ensures that all deliverables are stored in the TSLC Artifacts Library and that all artifacts meet USPS IT SOX and IT governance requirements and controls, and have been approved by the Product Owner/Customer.

There are no C&A activities or deliverables for this phase.

4-8 Phase 8 – Release and Production

Phase 8 deploys the information resource and encompasses activities that occur after the information resource is deployed to the production environment and continue throughout the remainder of the information resource life cycle. (See [Exhibit 4-8](#), Phase 8, Release and Production.) These activities include operations and maintenance.

4-8.1 Objectives

The objectives of this phase are as follows:

- a. Deploying the information resource.
- b. Testing contingency plans.
- c. Protecting the information resource after deployment and throughout its life cycle.
- d. Reinitiating the C&A Process as required.

4-8.2 Deliverables

The deliverables for this phase are the following:

- a. Revised C&A documentation.
- b. Contingency planning test results and lessons learned.

4-8.3 Roles and Responsibilities

Roles	Responsibilities
Executive sponsor and Business Relationship Management portfolio manager as agents of the VP functional business area and VP IT, respectively	Jointly review C&A and business documentation and make the decision to return the information resource to the applicable C&A phase for rework or to deploy it into the production environment by preparing and signing a deployment letter.

Roles	Responsibilities
Project manager	<p>Deploys the information resource and files the C&A documentation package.</p> <p>With DRS, ensures that the contingency plans are tested periodically and the test results and lessons learned documented.</p> <p>Ensures that the contingency planning documents are updated and maintained current.</p> <p>Ensures that C&A documentation package is kept current.</p> <p>Ensures the secure operations and maintenance of the information resource.</p> <p>Ensures that the existing security controls are periodically reviewed to determine whether they are still sufficient and implements additional security controls or modifies existing security controls as required.</p>
Executive sponsor	Determines whether changes are significant and ensures that the C&A process is reinitiated as required.
Business Relationship Management portfolio manager	Provides guidance and assistance.
ISSR	Supports executive sponsor and Business Relationship Management portfolio manager as requested.
ISSO	Provides guidance and consulting support.
DRS	<p>Reviews contingency planning documents and accepts them as complete or returns them to the executive sponsor for rework.</p> <p>Stores the contingency planning documents.</p> <p>With the project manager, tests the contingency plans.</p>

4-8.4 **Activities**

4-8.4.1 **Data Conversion**

If required, a data conversion plan is defined which incorporates collecting, converting, and verifying data for completeness and integrity and resolving any errors found during conversion. A backup of all data is created prior to conversion, audit trails track the conversion, and there is a fallback and recovery plan in case the conversion fails. The backed up data conforms to the applicable data retention schedule.

4-8.4.2 **Deploy Information Resource**

All three approvals (i.e., certification, accreditation, and risk acceptance) are required before deploying the information resource. The project manager deploys the information resource into production with the security controls documented in the security plan and tested in the ST&E and with any restrictions documented in the approval letters.

4-8.4.3 **Operate Information Resource**

The information resource is operated with the security controls, processes, and procedures in place as documented in the security plan, ensuring that they remain fully functional and unaltered by maintenance procedures.

Note: To use production data in a test environment, you must have prior written approval (see Section 8-3.3, Testing Restrictions, in Handbook AS-805, *Information Security*, for specific requirements).

4-8.4.4 **Test Information Resource Contingency Plans**

The information resource contingency plans are tested and the test results and lessons learned are documented.

4-8.4.5 **Maintain Information Resource**

The information resource is placed under configuration control and all changes are documented.

The tools, techniques, and mechanisms used to maintain information resources must be properly controlled.

4-8.4.6 **Reassess Risks and Upgrade Security Controls**

Risks must be re-assessed any time significant changes are made to the information resource, if a serious security breach occurs, if significant audit findings regarding security are issued, at the request of management, or as part of the re-initiation of the C&A process. See Section [6-2, Criteria Forcing Security Recertification](#), for other examples of a significant change.

4-8.4.7 **Monitor Operations and Enhance Security Posture**

Information resource controls must be continually monitored to:

- a. Ensure the controls are working as intended.
- b. Ensure changes are controlled and documented in the configuration and change management system.
- c. Ensure the operating environment (e.g., physical, electronic, political, legal) has not introduced new vulnerabilities.
- d. Determine whether additional security controls need to be added or existing controls modified to properly secure the information resource in the changing environment.
- e. Ensure the information resource remains in compliance with the security-related plans and Postal Service information security policies.

Facility and platform related controls must also be monitored for compliance with Postal Service policies.

If the information resource security posture or controls change significantly, it is necessary to re-initiate the C&A process.

4-8.4.8 **Periodically Test Security Controls**

A subset of the information resource information security controls must be formally tested annually, the tests documented, and the results submitted to the ISSO. The security controls that are volatile or critical to protecting the information resource must be assessed at least annually. All other controls must be assessed at least once during the information resource's accreditation cycle (e.g., for those information resources on a 2-year cycle test one half of the other controls each year and for those information resources on a 3-year cycle test one third of the other controls each year).

4-8.4.9 **Update Certification and Accreditation Documentation Package**

The C&A documentation package (including the Security Plan and Security Test and Evaluation Plan) must be updated throughout the life cycle process in response to the changing environment, changing technology, reassessed risks or vulnerabilities, and as part of the re-initiation of the C&A process. See [Exhibit 4-10, C&A Templates](#) and [Exhibit 4-11, C&A Requirements for Information Resources](#).

4-8.4.10 **Re-initiate C&A as Required**

Re-initiating the C&A is required based on the information resource classification designation.

Re-initiating the C&A is also required for a significant change to the information resource, including new business requirements or a change to the information resource's level of criticality or sensitivity, a significant audit finding, a significant security incident, or a request by management. See Section [6-2, Criteria Forcing Security Recertification](#), for other examples of a significant change.

Unresolved issues, new business requirements, new threats and vulnerabilities, operating environment changes, audit reports, and incidents must be appropriately addressed throughout the information resource life cycle. Also, certain changes to an information resource or its environment as well as business considerations could affect the security of the information resource and may require a re-initiation of the C&A process.

Exhibit 4-8
Phase 8 Release and Production, (p. 1 of 3)

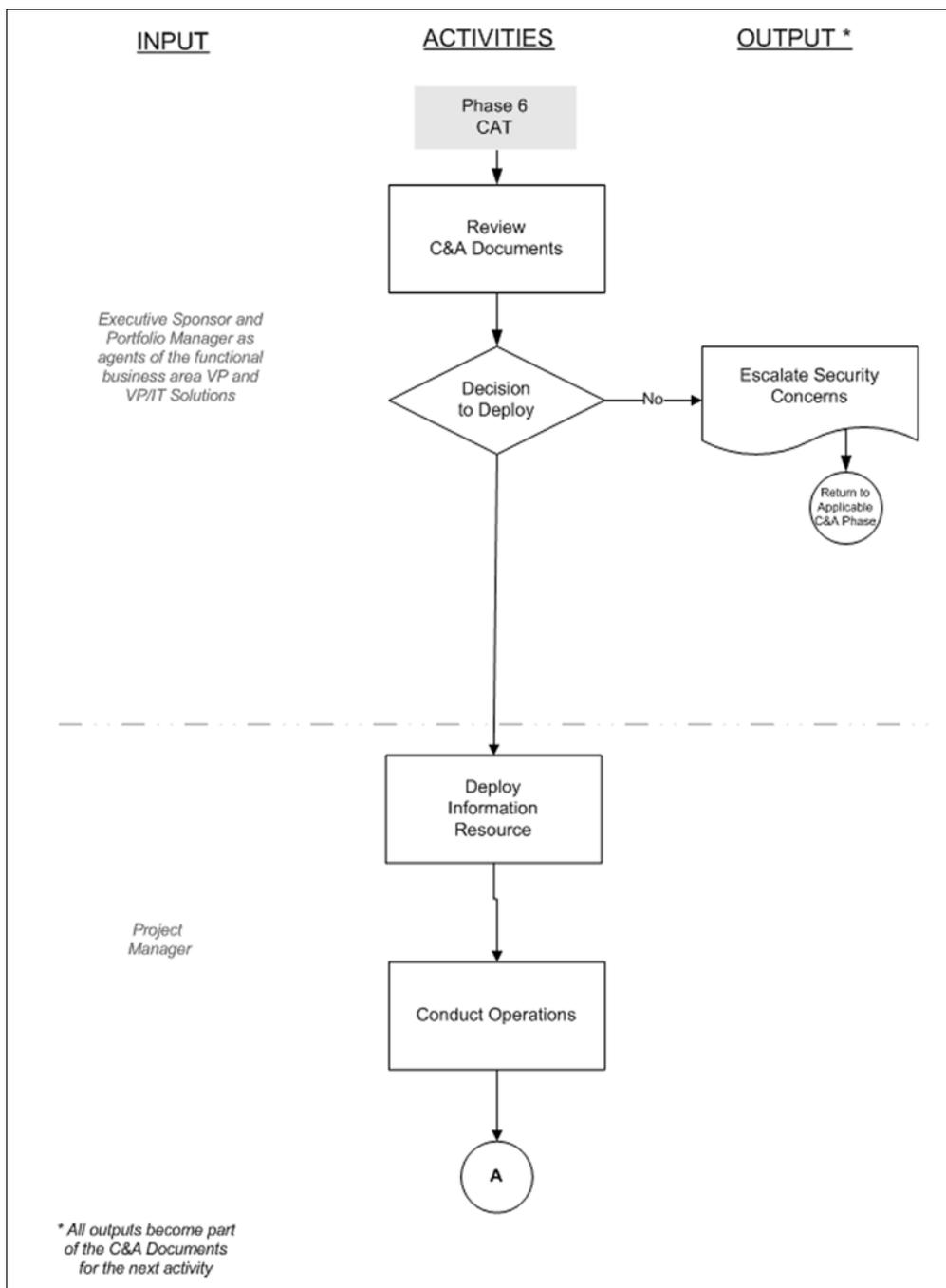


Exhibit 4-8

Phase 8 Release and Production, (p. 2 of 3)

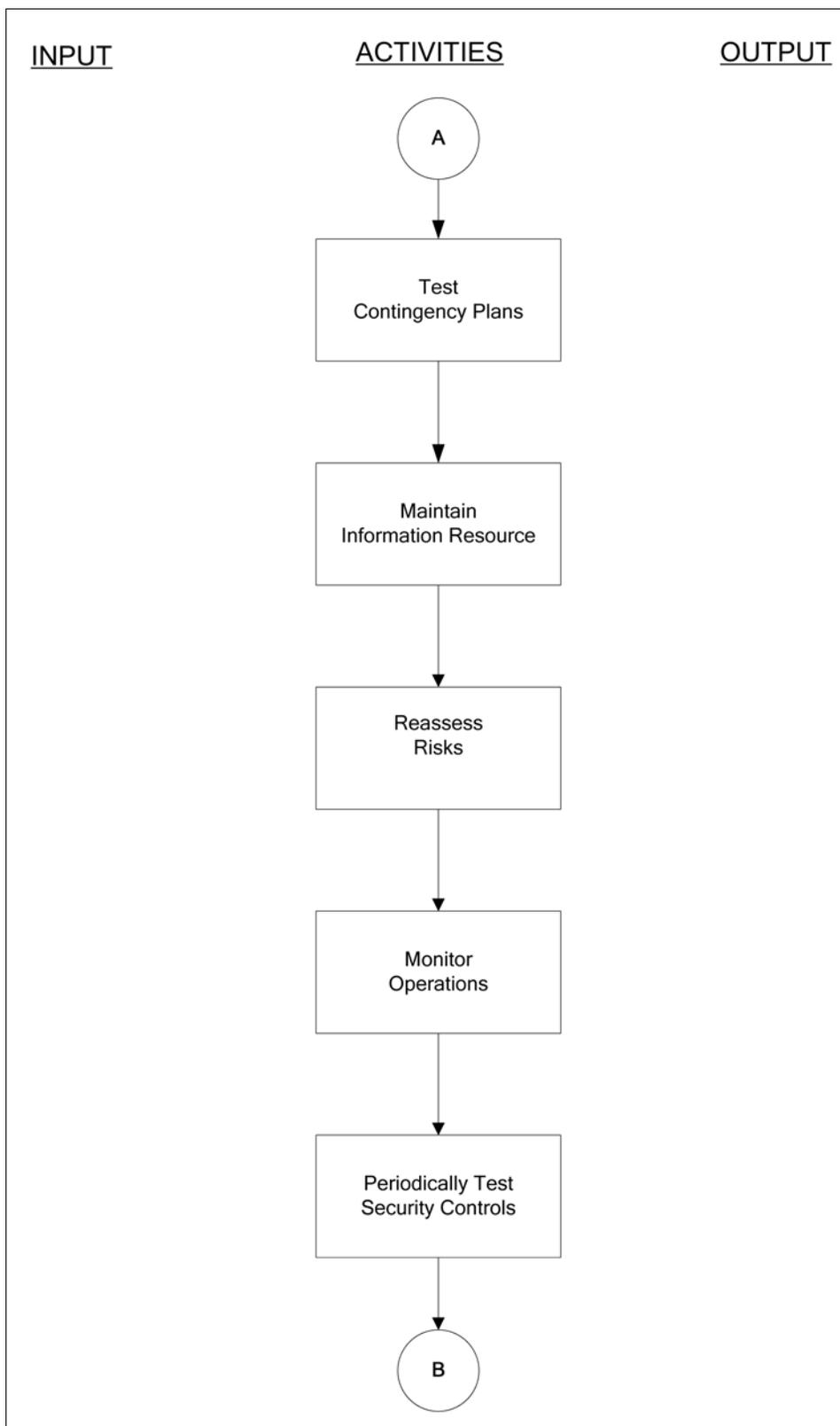
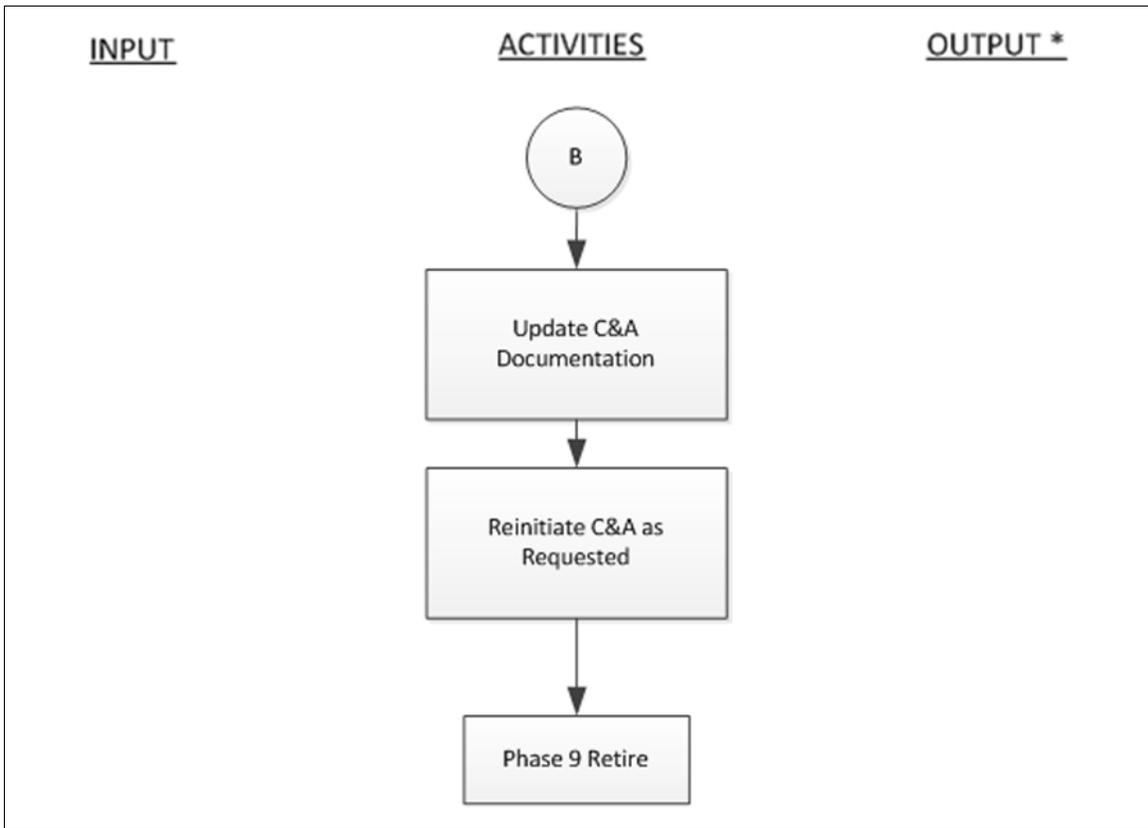


Exhibit 4-8
Phase 8 Release and Production, (p. 3 of 3)



4-9 Phase 9 – Retire

The Retirement phase ensures that appropriate archiving and security measures are taken and documented when decommissioning technology solution or components from the Postal Service Technology Infrastructure. (See [Exhibit 4-9](#), Phase 9, Retire.)

4-9.1 Objectives

The objectives of this phase are as follows:

- a. Depositing of sensitive-enhanced and sensitive data.
- b. Disposing of equipment and associated electronic storage.
- c. Retiring the information resource.

4-9.2 Deliverables

The deliverables of this phase are the following:

- a. System/Application Retirement Request and Certification Form Part A – Request for Approval.
- b. System/Application Retirement Request and Certification Form Part B – Retirement Certification.

4-9.3 Roles and Responsibilities

Roles	Responsibilities
Executive sponsor	Decides when the information resource needs to be retired.
Project manager	Retires the information resource when no longer needed.
ISSR	Supports executive sponsor and Business Relationship Management portfolio manager as requested.
ISSO	Provides guidance and consulting support.

4-9.4 Activities

4-9.4.1 Dispose of Sensitive-Enhanced or Sensitive Data

Postal Service sensitive-enhanced or sensitive information that is no longer needed, whether in electronic or nonelectronic format, must be transferred, archived, or destroyed in accordance with official Postal Service policies and procedures.

4-9.4.2 Dispose of Equipment and Associated Electronic Storage

Postal Service hardware and associated electronic storage containing sensitive-enhanced or sensitive information that is no longer needed must be completely erased (sanitized) or destroyed prior to disposal.

4-9.4.3 Retire Information Resource

Information resources may eventually be retired. Upon determination that an information resource has reached the end of its life cycle, the executive sponsor ensures all data is completely removed from the assets being retired

and retires the information resource in accordance with Handbook AS-805, *Information Security*.

Exhibit 4-9
Retire

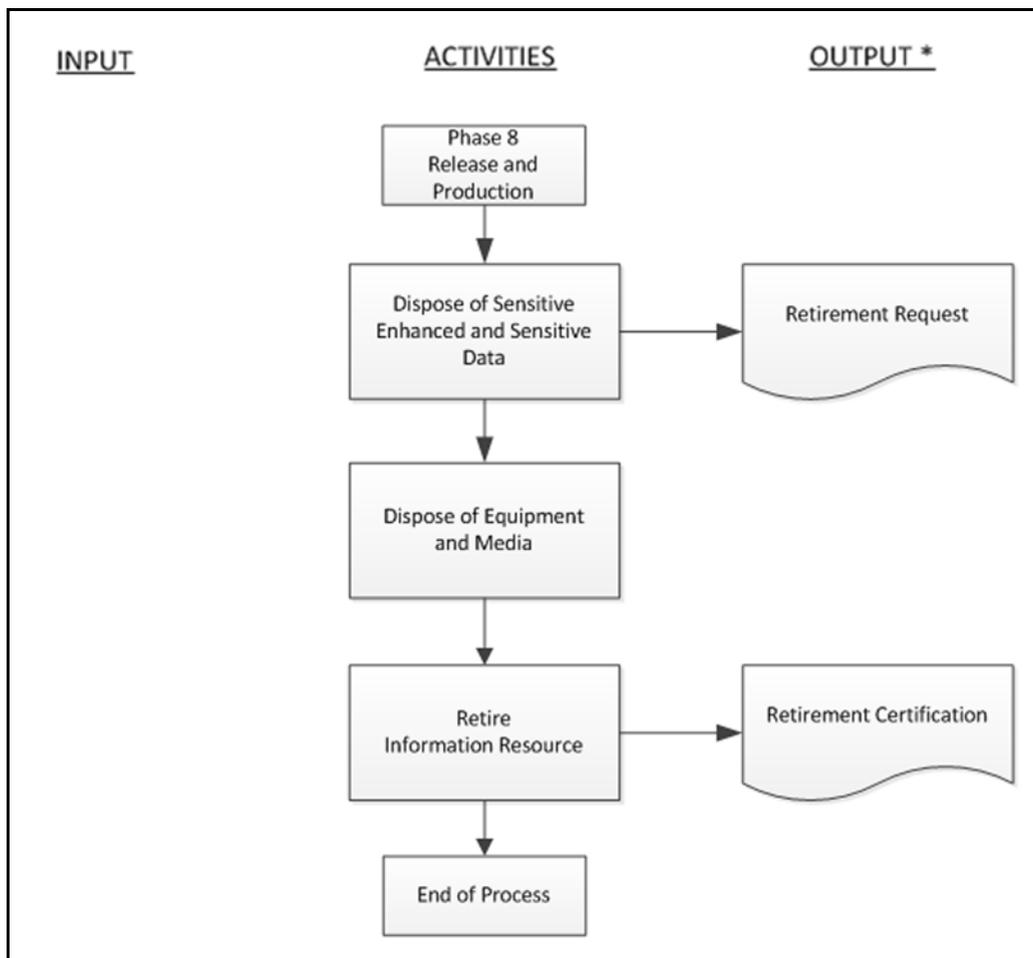


Exhibit 4-10
C&A Templates

Template Name	Applicability	Purpose
Plan of Action and Milestones (POA&M)	For all information resources.	To identify tasks needing to be accomplished with resources required, responsibilities, milestones and completion dates. Also known as the TSLC Project Plan.
Application Characterization	For all information resources.	To provide the background information required to secure the application and Postal Service information.
Business Impact Assessment (BIA)	For all information resources.	To determine level of sensitivity and criticality and the information security requirements.
Security Plan	For all information resources.	To create a blueprint for designing, building, and maintaining an information resource that can be defended against threats and intruders, both internal and external.
Contingency Planning documents	For critical information resources.	To provide cost-effective recovery of an information resource and protection of assets in the event of a significant interruption of computing services.
Security Test and Evaluation (ST&E) Plan	For all information resources.	To evaluate technical/nontechnical security controls/safeguards to establish extent to which an information resource meets security requirements.
Independent Risk Assessment Report	May be recommended if information resource is publicly accessible; developed, hosted, managed primarily by non-Postal Service personnel; highly visible or has high impact. May be required at any time by the CIO; VP IT; Mgr., CISO; or VP of the functional business area.	To provide a standard report format to document results of independent risk assessment; i.e., one conducted by an entity outside the development organization.
Risk Assessment	For all information resources.	To identify assets at risk and their value and weaknesses and vulnerabilities, evaluate threats and vulnerabilities to determine risks, identify additional controls, analyze costs and benefits of the controls, and complete the risk assessment report.
Risk Mitigation Plan	For all information resources where residual risk is "High" or "Medium".	For the project manager to describe the plan to mitigate the "High" or "Medium" residual risks.
C&A Evaluation Report	For all information resources.	To document the ISSO's evaluation of technical and nontechnical security features and other safeguards to establish extent to which an information resource meets security requirements.
Certification Letter	For sensitive-enhanced, sensitive, or critical information resources.	For the certifier to recommend approval for an information resource to be deployed if the "High" and "Medium" residual risks are mitigated.
Accreditation Letter	For sensitive-enhanced, sensitive, or critical information resources.	For the accreditor to recommend approval for an information resource to operate in given operational concept and environment at a documented level of residual risk.
Risk Acceptance Letter for Documented Vulnerability	For all information resources to document a vulnerability that will not be mitigated.	For the VP IT and VP functional business area to accept responsibility for a documented vulnerability that will not be mitigated.

C&A Requirements for Information Resources

Phase	C&A Deliverable	New & Major Information Resource Modifications				Recertifications		Service Based Contracts	
		NS & NC		All Other Information Resources		Deliverables	Responsible	Deliverables	Responsible
		Deliverables	Responsible	Deliverables	Responsible				
2	Information Resource Characterization	Yes	Project Mgr.	Yes	Project Mgr.	Yes	Project Mgr.	Yes	Project Mgr.
2	BIA	Yes	Project Mgr.	Yes	Project Mgr.	Yes	Project Mgr.	Yes	Project Mgr.
3	Security Specs	Yes	Project Mgr.	Yes	Project Mgr.	Yes	Project Mgr.	Yes	Project Mgr.
3	Security Plan	Yes	Project Mgr.	Yes	Project Mgr.	Yes	Project Mgr.	Yes	Project Mgr.
3	Site Security Review			Yes	ISSO & USPIS	If applicable	ISSO & USPIS	Yes	ISSO & USPIS
4	SOPs			If applicable	Project Mgr.	If applicable	Project Mgr.	Yes	Project Mgr.
4	Operation Training Materials			If applicable	Project Mgr.	If applicable	Project Mgr.	Yes	Project Mgr.
4-5	Contingency Plans			Yes	Project Mgr.	If applicable	Project Mgr.	Yes	Project Mgr.
4	NCRB Request	Yes	Project Mgr.	Yes	Project Mgr.	Yes	Project Mgr.	Yes	Project Mgr.
5	ST&E Plan	Yes	Project Mgr.	Yes	Project Mgr.	If applicable	Project Mgr.	Yes	Project Mgr.
6	Security Code Review	Based on Requirements	Project Mgr.	Based on Policy Requirements	Project Mgr.	If applicable	Project Mgr.	Based on Policy Requirements	Project Mgr.
6	ST&E Testing & Report	Yes	Project Mgr.	Yes	Project Mgr.	If applicable	Project Mgr.	Yes	Project Mgr.
6	Vulnerability Scan	Yes	CISO	Yes	CISO	Yes	CISO	Yes for Sensitive	CISO
6	Penetration Test			If applicable	CISO	If applicable	CISO	If applicable	CISO
6	Independent Reviews			If applicable	Project Mgr.	If applicable	Project Mgr.	If applicable	Project Mgr.
6	Risk Assessment	Yes	Project Mgr.	Yes	Project Mgr.	Yes	Project Mgr.	Yes	Project Mgr.
6	Risk Mitigation Plan	Yes for High/Mod Risk	Project Mgr.	Yes for High/Moderate Risk	Project Mgr.	Yes for High/Mod Risk	Project Mgr.	Yes for High/Mod Risk	ISSO
6	Evaluation Report	YES	ISSO	Yes	ISSO	Yes	ISSO		
6	Certification Letter	YES	ISSO Mgr	Yes	Certifier	Yes	Certifier		
6	Accreditation Letter	YES	Mgr CISO	Yes	Accreditor	Yes	Accreditor		

Phase	C&A Deliverable	New & Major Information Resource Modifications				Recertifications		Service Based Contracts	
		NS & NC		All Other Information Resources		Deliverables	Responsible	Deliverables	Responsible
		Deliverables	Responsible	Deliverables	Responsible				
6	Risk Acceptance Letter	Yes for vulnerability that will not be mitigated	VP IT and VP Functional Business Area	Yes for vulnerability that will not be mitigated	VP IT and VP Functional Business Area	Yes for vulnerability that will not be mitigated	VP IT and VP Functional Business Area	Yes for vulnerability that will not be mitigated	VP IT and VP Functional Business Area
8	Contingency Test Results			Yes	Business Relationship Management Portfolio Mgr. & Executive Sponsor	Yes	Business Relationship Management Portfolio Mgr. & Executive Sponsor	Yes	Business Relationship Management Portfolio Mgr. & Executive Sponsor
8	Revised C&A Documents	As needed or every 3 years	ISSO & Project Mgr	As needed or every 2 years; yearly for PCI	ISSO & Project Mgr	As needed or every 2 years; yearly for PCI	ISSO & Project Mgr	As needed or every 2 years	ISSO & Project Mgr
9	Retirement Request	Yes	Project Mgr.	Yes	Project Mgr.	Yes	Project Mgr.	Yes	Project Mgr.
9	Retirement Certification	Yes	Project Mgr.	Yes	Project Mgr.	Yes	Project Mgr.	Yes	Project Mgr.

5 Independent Reviews

Independent reviews are evaluations conducted by personnel, contractors, or vendors, separate and distinct from the executive sponsor and developers of the information resource, for the purpose of applying rigorous evaluation standards to the information resource. These reviews may be conducted in house or by external contractors.

5-1 Independent Security Code Reviews

Custom programs or COTS information resource that contain custom programming or scripts are subject to an independent security code review of the source code and documentation to do the following:

- a. Verify compliance with software design documentation and programming standards.
- b. Verify the absence of malicious code. (See the manager, Corporate Information Security Information Security Services, for a copy of Information Security Code Review Standards).
- c. Evaluate correctness, efficiency, and specific security issues.

These reviews are not substitutes for a standard (rigorously applied) quality assurance process in the development environment.

Note: Unmodified COTS information resources are not subject to an independent security code review.

5-1.1 Criteria for Conducting

An independent security code review is recommended by the ISSO during the BIA process for the following information resources:

- a. Information resource will be publicly accessible.
- b. Information resource transmits information between a Postal Service network and a public or non-Postal Service network, or between a Postal Service demilitarized zone (DMZ) and a public or non-Postal Service network.
- c. Sensitive-enhanced, sensitive, or critical information resource will be developed offsite by non-Postal Service personnel.
- d. Information resources contains COTS programs containing custom programming (HTML, XML, Java, JavaScript, CGI, ActiveX, etc.) scripts.

Note: An independent security code review may be required at any time by the CIO, VP IT; the manager, CISO; or the VP of the functional business area.

5-1.2 **Definition of COTS**

COTS software includes the following types of information resources:

- a. Information resources that are sold, leased, and licensed at advertised or negotiated prices.
- b. Information resources that contain proprietary code that is usually not released to the buyer.
- c. Information resources that are supported and evolved by the vendor, who retains the intellectual property rights.
- d. Information resources that are used without modification of the internal code design (but may have modules that can be modified through custom programming by or for the buyer).

Note: The Enterprise Architecture Committee (EAC) determines the acceptability of COTS products for the Postal Service computing environment.

5-1.3 **Documentation**

The person conducting the independent security code review documents the findings and provides the report to the executive sponsor as soon as possible, to allow any deficiencies to be addressed.

5-2 **Independent Information Security Risk Assessments**

Independent information security risk assessments are risk assessments conducted by an organization, office, or contractor that is separate and distinct from the executive sponsor and developers of the information resource. The assessments evaluate the appropriateness and effectiveness of the security controls and identify the residual risk. If an independent risk assessment is required, the risk assessment described in Phase 3 is not required.

5-2.1 **Criteria for Conducting**

An independent risk assessment may be recommended by the ISSO during the BIA process for the following information resources:

- a. Information resource will be publicly accessible.
- b. Information resource will be developed offsite by non-Postal Service personnel.
- c. Information resource will be hosted at a non-Postal Service site.
- d. Information resource will be managed primarily by non-Postal Service personnel.
- e. Information resource will have high visibility and impact will be high if something negative happens.

Note: An independent risk assessment may be required at any time by the CIO, VP IT; the manager, CISO; or the VP of the functional business area.

5-2.2 Guidelines

Independent risk assessments may be completed by an in-house organization or an external organization. Independent risk assessments conducted in-house are completed using the Risk Assessment process and templates available on the IT Web site; select TSLC Templates; under the Analysis and Design phase, select Risk Assessment.

External independent risk assessments are completed using the External Information Security Independent Risk Assessment process and templates (See the manager, Corporate Information Security Information Security Services, for a copy of External Independent Risk Assessment).

The external independent risk assessment includes the following activities:

- a. Identifying the assets that comprise the information resource.
- b. Analyzing the probability and impact of threats.
- c. Analyzing the vulnerabilities that could increase the probability or impact of threats.
- d. Analyzing the appropriate countermeasures for identified threats and vulnerabilities.
- e. Identifying residual risk after the installation of security controls.
- f. Determining if the risk will be accepted, transferred, or further mitigated.
- g. Summarizing the risk status of the information resource.

5-2.3 Documentation

The person conducting the independent risk assessment documents the findings and provides the report to the executive sponsor as soon as possible, to allow any deficiencies to be addressed.

5-3 Independent Vulnerability Scans

Independent vulnerability scans evaluate the effectiveness of the implemented configuration and security settings. These tests scan information resources for vulnerabilities and compliance with Postal Service information security policies and standards.

5-3.1 Criteria for Conducting

Independent vulnerability scans are required as follows:

- a. New sensitive-enhanced, sensitive, or critical information resources.
- b. Quarterly for internal and external PCI scans.
- c. Annually for publicly accessible (externally facing) information resources.
- d. Information resource with access to or communication through a public or non-Postal Service network.
- e. Information resources developed, hosted, or managed primarily by non-Postal Service personnel.

Note: Independent vulnerability scans may be required at any time by

the CIO, VP IT; manager, CISO; or the VP of the functional business area.

5-3.2 **Documentation**

The person conducting the vulnerability scans documents the findings and provides the report to the executive sponsor as soon as possible, to allow any deficiencies to be addressed.

5-4 Independent Penetration Testing

Independent penetration testing evaluates the effectiveness of the implemented configuration and security settings.

5-4.1 **Criteria for Conducting**

Independent penetration testing may be recommended by the ISSO during the BIA process for the following information resources:

- a. Sensitive-enhanced, sensitive, or critical information resources.
- b. Publicly accessible (externally facing) information resources.
- c. Information resource with access to or communication through a public or non-Postal Service network.
- d. Information resources developed, hosted, or managed primarily by non-Postal Service personnel.

Note: Independent penetration testing may be required at any time by the CIO, VP IT; manager, CISO; or the VP of the functional business area.

5-4.2 **Documentation**

The person conducting the penetration testing documents the findings and provides the report to the executive sponsor as soon as possible, to allow any deficiencies to be addressed.

5-5 Independent Security Test Validation

The independent security test validates the appropriateness and effectiveness of the security controls implemented for information resources and corroborates the previously conducted ST&E test results.

5-5.1 **Scope**

The scope of the independent security test validation depends on the information resource, its environment, and the associated threats and vulnerabilities. The security test validation is usually carried out at the development or test site.

5-5.2 **Criteria for Conducting**

An independent security test validation may be recommended by the ISSO during the BIA process for the following information resources:

- a. Information resource will be publicly accessible.

- b. Information resource transmits information between a Postal Service network and a public or other non-Postal Service network, or between a Postal Service DMZ and a public network or non-Postal Service network.
- c. Information resource will be developed offsite by non-Postal Service personnel.
- d. Information resource will be hosted at a non-Postal Service site.
- e. Information resource will be managed primarily by non-Postal Service personnel.

Note: An independent security test validation may be required at any time by the CIO, VP IT; the manager, CISO; or the VP of the functional business area.

5-5.3 **Process**

The independent security test validation process is generally conducted through the following steps:

- a. At the beginning of Phase 3, the person conducting the validation defines the security test plan criteria for independent testing and may confer with the Business Relationship Management portfolio manager, executive sponsor, project manager, developers, ISSO, and subject-matter experts as required.
- b. During Phase 3, a date is set for the security test validation, providing at least a 1-week lead time to the project manager, developers, contractor, or business partner. The setting of test dates is based on discussions with the executive sponsor and the project manager, developers, contractor, or business partner.
- c. The day before the validation is conducted, the security test validation criteria are provided to the development team. This allows the development team to plan on having the necessary personnel available for conducting the tests.

5-5.4 **Documentation**

After conducting the independent security test validation, the person conducting the validation documents the findings and provides the report to the executive sponsor as soon as possible, to allow any deficiencies to be addressed.

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6 Re-Initiating the Certification and Accreditation

6-1 Purpose

The purpose of re-initiating the C&A (Re-C&A) is to ensure that the following conditions are met:

- a. Existing security controls and processes for the information resource are still in place and functioning correctly.
- b. Changes to the information resource requiring new or modified security controls and processes are properly addressed.
- c. Security controls, processes, and responsibilities are still appropriate based on organizational changes within the Postal Service.
- d. Security controls and processes are still appropriate based on the discovery of new vulnerabilities or how new technologies impact those controls.

6-2 Criteria Forcing Security Recertification

6-2.1 **Scheduled Recertification**

Scheduled recertification is required every 1 year for PCI designated information resources; every 2 years for sensitive-enhanced, sensitive, or critical information resources; and every 3 years for nonsensitive or noncritical information resources.

6-2.2 **Significant Change**

Significant changes are those changes that could impact or affect the security of an application's data environment. The following changes might constitute a significant change:

- a. Changing devices such as firewalls, routers, switches and servers. These changes can potentially introduce new vulnerabilities, network paths, or even errors that would go unknown until the next vulnerability scan and penetration test.
- b. Functional application changes are the most likely changes to affect security. Not only should applications be vulnerability scanned and penetration tested before being put into production, but code review

and/or automated code scanning should be performed as well. If vulnerabilities are found, the vulnerabilities must be corrected or mitigated before the application goes into production.

- c. Upgrades or changes in operating systems. Going from one version of an OS to another may be just as significant as changing the OS.
- d. Network changes. Any change to the network should be considered a significant change regardless of how “minor” the change might appear. Networks can be like puzzles, and the movement of devices or wires can result in unintended paths being opened as a result.
- e. Patching of operating systems or applications. Some patches such as updates to critical services (e.g. .NET or the IP stack) that should be considered significant and vulnerability scanning and penetration testing should be run because of the nature of the patches being applied.

6-2.3 **Other Criteria Forcing Security Recertification**

Recertification is required if the specific information resources changes meet one or more of the following criteria:

- a. Changes to the information resources that alter the information resource's criticality or sensitivity designation.
- b. The addition of new data element(s) that alter the information resource's sensitivity designation.
- c. Rewriting the application or the addition or modification of entry points of an information resource.
- d. Major database version changes (i.e., ORACLE 9 to ORACLE 10.) Minor releases, which are designated by sub number or letter (i.e., ORACLE 9.1 to ORACLE 9.2), do not require Recertification. If a database is certified as an infrastructure, then only the database would need to be recertified and not all the applications using it.
- e. Changing from one database system to another, (i.e., Oracle to MS-SQL.) If the new database is certified as an infrastructure, then the application would not require a recertification.
- f. Changing the hosting location (i.e., Postal Service glass house location to an outsourced/non-Postal Service location or a Postal Service non-glass house location.)
- g. Any code changes to the application code of an outwardly-facing application. Changes to the content of a content driven application will not require a Recertification.
- h. Newly discovered vulnerabilities or threats that alter the risk to an application.
- i. Changing the operating environment in which the application runs on (e.g., Windows XP to UNIX, UNIX to LINUX, Windows NT to Windows XP, Windows XP to Windows Vista). Adding additional hardware (e.g., servers) without making any changes to the application or infrastructure is not considered a change in the operating environment.

- j. An application that has had an information security incident that violates a security/privacy policy and compromised the integrity, availability, or confidentiality of its data (e.g., a critical disruption in service, a monetary loss, the unauthorized modification of sensitive or critical information, the release of sensitive or critical information).
- k. Modifications to an inwardly-facing application that makes it outwardly-facing or moving the application from an enclave or into a DMZ.
- l. An upgrade or modification that would allow access to cardholder data or affect the security of the cardholder data environment.
- m. A request by the CIO or designee; VP IT; the manager, CISO; the VP of the functional business area; or the executive sponsor based upon an audit finding or possibility of a vulnerability whose presence must be dispelled or validated.

6-3 Process

6-3.1 Requesting a Re-C&A

At the appropriate time or other reason documented above, the executive sponsor addresses a letter to the manager, CISO, requesting a Re-C&A. The letter should provide details specific to the information resource and the reason for the Re-C&A.

6-3.2 Conducting a Re-C&A

The security deliverables from each of the Phases of the latest C&A process should be reviewed, updated as required, signed, and dated. The Re-C&A follows the normal C&A process.

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7 Assessment of Offsite Hosted Solutions

7-1 Purpose

The purpose of assessing offsite hosted solutions is to ensure that postal data and USPS brand are protected at all times by evaluating the controls that have been put in place by vendors in facilities off postal premises. Offsite hosted solutions are those in which postal data is not comingled in any way with other data at a remote business partner facility.

This assessment is in addition to and in coordination with site security reviews conducted by the CISO and the Inspection service. For offsite hosted solutions, compliance with handbook AS-805, *Information Security*, Section 3.5.5, Mandatory Requirements and Procedures for Authorized Removal of Postal Service Non-Publicly Available Information from Postal Service or Business Partner Premises, also applies.

7-2 Process

The process of assessing off site hosted solutions involves the same steps as required for in house IT information resources described above in Chapters [1](#) through [6](#) in addition to a Site Security Review. The final accreditation determination however will be in the form of an Letter of Assessment (LOA) indicating whether the solution appears to conform to Postal Service IT resource protection standards or not. The LOA is issued rather than an accreditation determination to ensure that after completing the process the Postal Service brand will not be used as an endorsement for the vendor facility.

- a. Prior to initiating any contract for offsite computing type services as defined above it is important to coordinate with the CISO. Proper planning helps to ensure that an organization derives full benefit from information technology spending. It also helps to ensure that the computing environment is as secure as possible and in compliance with all relevant USPS policies and that data privacy is maintained.
- b. After an EIR entry has been established and an ISSO has been assigned, the ISSO will coordinate a meeting with members of the C&A core team.

- c. CISO will determine if a site security review is necessary and coordinate with the Inspection Service and the vendor to complete the review. This review will assess not only the information technology infrastructure and controls but physical and personnel security issues as well.
- d. A BIA will be completed to establish the sensitivity and criticality of the application.
- e. After completion of the Technical Solution Questionnaire any non-compliance issues will be identified and a risk mitigation plan established.
 - (1) Any residual high or medium risks identified will result in a letter of assessment indicating the offsite hosted solution appears to not conform to postal standards.
 - (2) If there are only low or no risks identified, the letter of assessment will indicate the offsite hosted solution appears to conform to postal standards.