DEPARTMENT OF HOMELAND SECURITY

Office of Inspector General

Targeting of Cargo Containers 2008: Review of CBP's Cargo Enforcement Reporting and Tracking System

OIG-08-65

June 2008

Office of Inspector General

U.S. Department of Homeland Security
Washington, DC 20528

June 11, 2008

MEMORANDUM FOR: W. Ralph Basham
Commissioner
U.S. Customs and Border Protection

FROM: Richard L. Skinner
Inspector General

SUBJECT: *Targeting of Cargo Containers 2008: Review of CBP's Cargo Enforcement Reporting and Tracking System* (OIG-08-65)

As required by Section 809(g) of the Coast Guard and Maritime Transportation Act of 2004 (Public Law 108-293), we conducted an annual audit of the Automated Targeting System (ATS). We performed the audit at CBP Headquarters in Washington, D.C. between April 2007 to June 2007 under the authority of the Inspector General Act of 1978, as amended, and according to generally accepted government audit standards. The objective of our audit was to determine whether U.S. Customs and Border Protection (CBP) is effectively developing and implementing the Cargo Enforcement Reporting and Tracking System (CERTS). CERTS is designed to gather data on cargo examination findings and report on how efficiently examination equipment is being used. Analysis of this information can be used to improve CBP's ability to identify high-risk cargo containers entering the United States and examination methodologies.

Results of Audit

CBP could improve its management and oversight of the development and implementation of CERTS. Specifically, CBP has not updated the CERTS project plan, to include the scope of work, a detail implementation schedule for system design, development, and testing, and cost estimates past Phase 1. In addition, CBP bypassed key Customs Standard Life Cycle reviews designed to ensure end-users have a properly working system and have received management's approval to continue the project. As a result, CERTS project development was delayed and not fully available to end-users as CBP originally planned. CBP concurred with our recommendations and has taken or said it will take prompt steps to develop, implement, and monitor an updated CERTS project plan.

Background

The cornerstone for all of CBP's targeting efforts is ATS, an intranet-based enforcement and decision support tool to help CBP Officers safeguard our borders by identifying cargo and personnel entering the U.S. that need further scrutiny. ATS is comprised of several targeting modules, including ATS4-N, used for targeting inbound cargo. CERTS is a subsystem of the ATS4-N module. CERTS is being developed to provide a user-friendly, single-point-of-entry for CBP Officers to electronically document cargo examination results and provide management with information on how efficiently examination equipment is being used. According to CBP, CERTS will improve CBP's ability to target cargo for inspections.

Information system development projects, such as CERTS, require effective management and oversight to ensure that they are developed on schedule and within budget, and produce the expected results. OMB Circular A-130 requires agencies to use a performance-based management system that provides timely information regarding the agency's progress in developing and implementing information technology (IT) investments. According to Circular A-130, the performance system used by project managers must measure progress towards milestones in an independently verifiable basis, in terms of cost, and capability of the investment to meet specified requirements, timeliness, and quality.

CBP's Systems Development Life Cycle Handbook (Handbook), (CIS HB 5500-07A, dated February 2, 2001 and revised December 9, 2005 and November 9, 2006), establishes CBP's policy on the development of life cycles, processes, and documentation requirements for IT projects. The Handbook requires that a project plan be created and reviewed as early in the life cycle as possible and later modified, revised, reviewed, and re-approved as more detail is developed during the course of the project or as changes are required and corrective actions taken. Documenting changes is a mandatory management support activity that occurs at every stage in the life cycle. According to the Handbook, all IT projects, pilots, and prototypes must follow the Customs Standard Life Cycle (CSLC). The CSLC framework describes the critical activities, reviews, and deliverables organized into stages that must occur during a development life cycle (See Appendix A for an overview of the stages in the CSLC). The Handbook also requires the development of detailed work schedules and estimates that include work products, efforts, and costs.

CBP prepared five iterative versions of the CERTS Project Plan. The first four versions called for all CERTS capabilities to be delivered in one release. CBP originally planned to conduct a pilot program from March to September 2006 and deploy CERTS to all ports by November 2006. However, during system development, CBP experienced technical challenges. In response, the latest, and fifth, version of the CERTS Project Plan (Version 1.5, dated September 6, 2006), introduced a phased implementation strategy. The phased implementation strategy requires that for each phase of the project, CBP define the scope of work and schedule for system design, development, and testing. For Phase 1, CBP selected to implement 40 of the 147 user and functional requirements at 22 major seaports.

Project Plan Not Fully Revised

Although the Project Plan was revised to show a phased implementation, the Plan's scope of work, schedule, and cost estimates for the CERTS design, development, and testing was not updated to coincide with the phased implementation strategy. For the scope of work, CBP did not describe the number of CERTS phases, the user and functional requirements to be included in each phase, the work to be performed in each phase, or the detailed development methods and management strategies as required by the Handbook.

CBP's schedule for CERTS was not revised and updated to provide for the development and implementation of multiple CERTS phases. Consequently, the schedule does not include timeframes for the end of the Phase 1 pilot program and the deployment to all subsequent ports. In addition, the schedule does not include expected dates for the mandatory CSLC milestones for the remaining CERTS phases.

CBP has not revised, updated, and documented the project plan for cost estimates or sources of funding to complete CERTS under the phased implementation strategy. CBP originally estimated the cost of CERTS to be $7.2 million over five years, including operations and maintenance costs. According to the CERTS budget, CBP will have spent approximately $5.66 million for FYs 2005 through 2007 and spend the remaining $1.54 million for FYs 2008 through 2010. This remaining amount does not appear sufficient to complete the CERTS project, based on the additional requirements planned with needed stages of development, construction, testing, piloting, and deployment. CBP officials said they were aware that additional funding will be needed to design, construct, test, pilot, and deploy the remaining phases.

CBP officials said that delays in updating the project plan and schedule were partly the result of technical challenges identified during the pilot program and the need to complete prioritizing the remaining CERTS requirements. These technical challenges included complexities in migrating to a new ATS architecture, significant performance issues identified during the CERTS testing, and problems with developing the software. Updating the project plan will help CBP management track and monitor the project and take timely corrective actions to ensure that CERTS is developed on schedule and within budget, and produces the expected results.

Management Reviews By-Passed

CBP bypassed two significant stages: the Test Readiness Review and the Quality Assurance Reviews for Phase 1 of CERTS. CBP may have mitigated some of the technical challenges encountered with the software during the Phase 1 pilot program had it conducted those reviews at the end of the construction stage. These reviews are designed to present a work product to end-users and receive management's approval for continuing to the next phase.

Test Readiness Review

CBP bypassed the Test Readiness Review at the end of the construction stage and continued to the next stage of development. This review is a formal management meeting intended to ensure the proper operation and integration of equipment and software before continuing with the

project. Unit and integration testing are key activities where testers and senior managers document their concurrence that the system and software are ready to enter the next stage, which is the acceptance stage.

Quality Assurance Review

CBP bypassed the Quality Assurance Review at the end of the construction stage, and proceeded directly into the acceptance stage, where CBP conducted the Phase 1 pilot program. Quality Assurance Reviews ensure that user requirements are met, processes are documented and followed, work products and activities comply with all applicable standards and requirements, and new systems work with existing systems. Quality Assurance teams conduct reviews and provide project staff and senior managers with the results. The Handbook requires that quality assurance occur at each stage of the CSLC and that a formal Quality Assurance Review occur before transition to the acceptance stage. According to CERTS project officials, CBP bypassed the Test Readiness Review and Quality Assurance Review to provide CERTS to the end users more quickly. CBP used the Phase 1 pilot program to identify and correct application, programmatic, functionality, and usability issues.

Recommendations

We recommend that the Commissioner, U.S. Customs and Border Protection:

1. Develop, implement, and monitor an updated CERTS project plan that includes:

    a. Details of the work to be performed in each phase of the project;
    b. Revised schedules for the design, development, testing, and deployment of all CERTS phases; and
    c. Cost estimates and sources of funding to complete all CERTS phases.

2. Utilize the CSLC for all CERTS phases to focus on satisfying user requirements, including mandatory reviews to improve management's oversight of the project.

Management Comments and OIG Analysis

CBP provided formal comments on a draft of our report (see Appendix B). CBP concurred with our recommendations and has taken or will take prompt steps to develop, implement, and monitor an updated CERTS project plan. CBP also said it will use the CSLC for all CERTS phases to focus on satisfying user requirements, including mandatory reviews to improve management's oversight of the project. We agree with the steps CBP has taken, and plans to take, and believe these steps satisfy our report recommendations.

We look forward to learning more about CBP's continued progress in the development and implementation of CERTS. Should you have any questions or concerns, please call me, or your staff may contact Anne L. Richards, Assistant Inspector General for Audits, at 202-254-4100.

Appendix A
Customs Standard Life Cycle – Overview

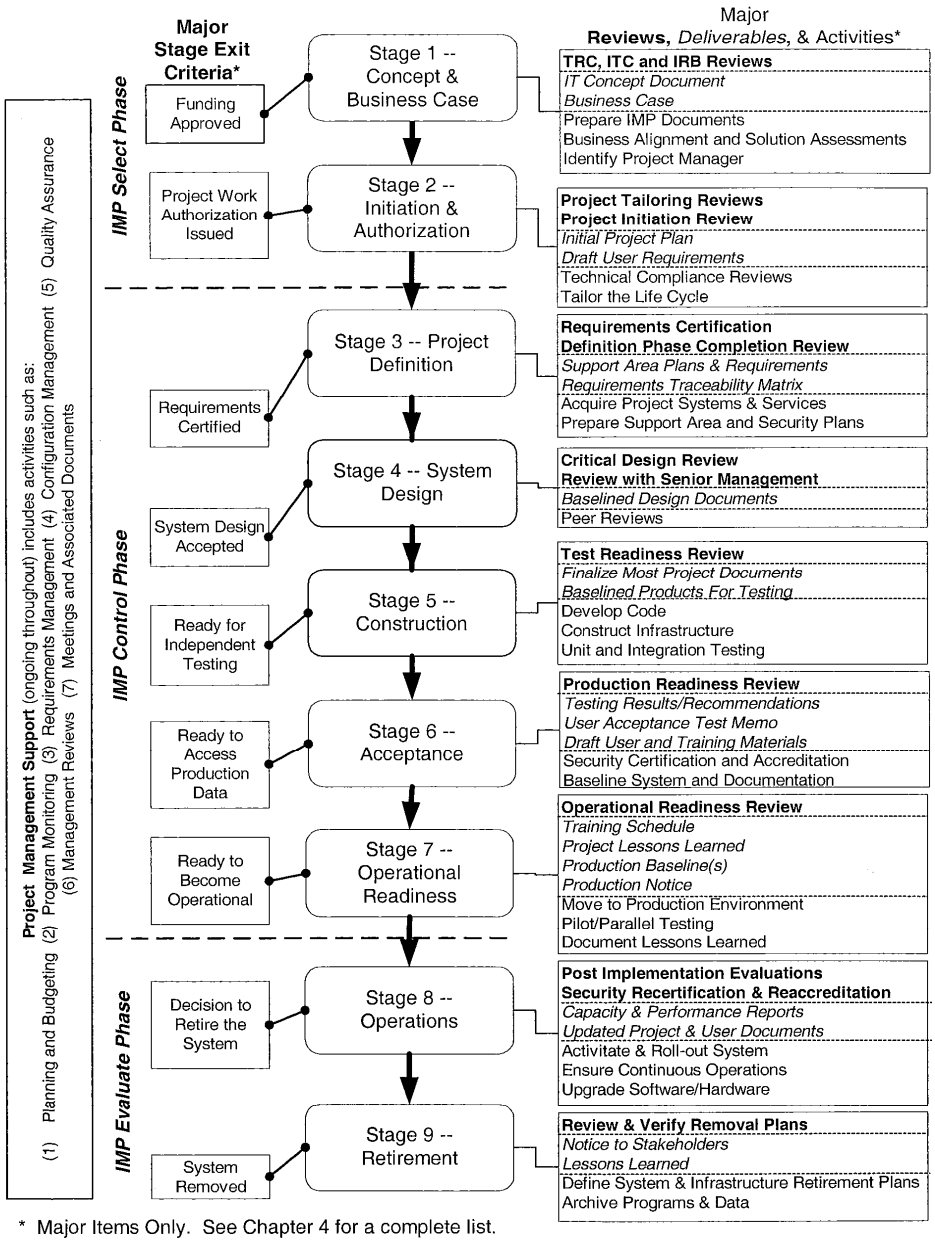

Figure 4.2, Customs Standard Life Cycle – Overview

Appendix A
Customs Standard Life Cycle – Overview

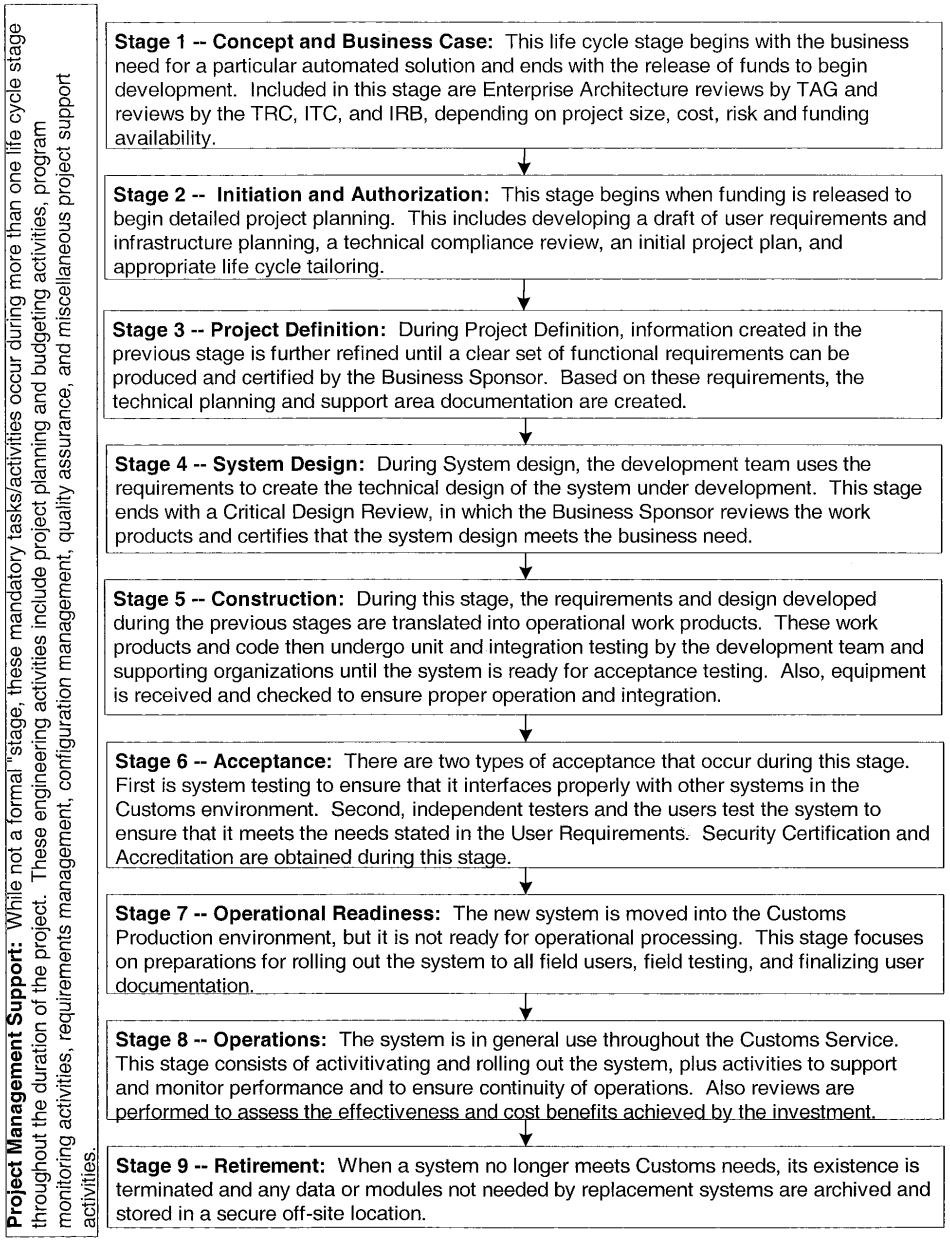

Figure 4.3, Customs Standard Life Cycle – Stage Descriptions

U.S. Department of Homeland Security
Washington, DC 20229

U.S. Customs and Border Protection

March 19, 2008

MEMORANDUM FOR: ANNE RICHARDS
ASSISTANT INSPECTOR GENERAL FOR AUDITS

FROM: Director
Office of Policy and Planning
U.S. Customs and Border Protection

SUBJECT: Responses to the Office of Inspector General's Draft Report entitled "Targeting of Cargo Containers 2008: Review of the Cargo Enforcement Reporting and Tracking System"

Thank you for providing us with a copy of your draft report entitled "Targeting of Cargo Containers 2008: Review of the Cargo Enforcement Reporting Tracking System" and the opportunity to discuss the issues in this report.

The U.S. Customs and Border Protection (CBP) agrees with the Department of Homeland Security (DHS), Office of Inspector General's (OIG's) overall observations that CBP could improve its management and oversight of the development and implementation of the Cargo Enforcement Reporting Tracking System (CERTS).

CBP concurs with the two recommendations and has taken or will take prompt steps to address develop, implement, and monitor an updated CERTS project plan and utilize the Customs Standard Life Cycle (CSLC) for all CERTS phases to focus on satisfying user requirements, including mandatory reviews to improve management's oversight of the project. CBP will continue to improve the management oversight effectiveness to improve customer satisfaction and product quality.

Attached are comments specific to the recommendations that relate to statements that need to be clarified prior to the finalization of this report.

CBP has determined that the information in the audit does not warrant protection and may be disclosed to the public.

If you have any questions regarding this response, please have a member of your staff contact Ms. Arlene Lugo at (202) 344-1218.

Attachments

2

CBP Response to OIG Draft Report Entitled "Targeting of Cargo Containers 2008: Review of the Cargo Enforcement Reporting and Tracking System"

Recommendation	Corrective Action Plan	Completion Date	Comments
1. Develop, implement, and monitor an updated CERTS project plan	Realigned with the CBP CSLC. Update CERTS CSLC documentation. Conducted Test Readiness Review (TRR) (09/13/07), Production Readiness Review (PRR) (09/26/07), Operational Readiness Review (ORR) (12/12/07) Conducted latest Quality Assurance (QA) review (01/11/08)	09/13/2007	On 02/26/2008 a memorandum was issued to the field users mandating the use of CERTS Phase I for the Air/Sea environments effective March 1, 2008.
a. Details of the work to be performed in each phase of the project	Maintain a current Work Breakdown Structure (WBS). Update the Project plan to include the certified prioritized requirements for CERTS Phase II submitted to OIT on 02/22/2008.	02/29/2008	A prioritized list of Phase II requirements has been Identified and approved for Phase II kickoff. Requirements prioritization is ongoing for future development efforts.
b. Revised schedules for the design, development, testing, and deployment of all CERTS phases	Continually Monitor, update and manage project requirements to mitigate risk and provide improved Management Oversight.	Ongoing	CERTS phases are being conducted in an iterative approach. All development products are subjected to stringent Unit testing, System Integration Testing (SIT) and System Acceptance Testing (SAT). Each iterative development drop is evaluated and controlled through OIT's Configuration Control Board (CCB) before implementing to production. As each phase develops, it will be subject to the CBP CSLC to include User Acceptance Testing (UAT), TRR, PRR, ORR milestones and QA reviews. These milestones and detailed work will be monitored via the Targeting & Analysis Systems Program Office (TASPO) project WBS and Worklenz.
c. Cost estimates and sources of funding to complete all CERTS phases.	Secure funding to complete CERTS development. Submit cost estimates when appropriate.	Ongoing	Remaining CERTS funding was re-appropriated by DHS and remains an open issue. Funding sources are under investigation. An unfunded request has been submitted for FY08 funds.
2. Utilize the CSLC for all CERTS phases to focus on satisfying user requirements, including mandatory reviews to improve management's oversight of the project.	Utilize CBP's CLSC Framework to Improve Management Oversight of the project while increasing Customer satisfaction. Conduct User and Project Owner Reviews on a regular schedule.	Ongoing since 12/2007	On 02/26/2008 a memorandum was issued to the field users mandating the nationwide use of CERTS Phase I for the Air/Sea environments effective March 1, 2008. TASPO conducts biweekly production conference calls with stakeholders to review product performance and functionality.

Department of Homeland Security

Secretary
Deputy Secretary
Chief of Staff
Deputy Chief of Staff
General Counsel
Executive Secretary
GAO/OIG Liaison Office
CBP Commissioner
CBP Audit Liaison
Assistant Secretary for Legislative Affairs
Assistant Secretary for Policy
Assistant Secretary for Public Affairs

Office of Management and Budget

Chief, Homeland Security Branch
DHS OIG Budget Examiner

Congress

Congressional Oversight and Appropriations Committees, as appropriate

Additional Information and Copies

To obtain additional copies of this report, call the Office of Inspector General (OIG) at (202) 254-4199, fax your request to (202) 254-4305, or visit the OIG web site at www.dhs.gov/oig.

OIG Hotline

To report alleged fraud, waste, abuse or mismanagement, or any other kind of criminal or noncriminal misconduct relative to department programs or operations:

- **Call our Hotline at 1-800-323-8603;**
- **Fax the complaint directly to us at (202) 254-4292;**
- **Email us at DHSOIGHOTLINE@dhs.gov; or**
- **Write to us at:**
  DHS Office of Inspector General/MAIL STOP 2600, Attention: Office of Investigations - Hotline, 245 Murray Drive, SW, Building 410, Washington, DC 20528.

The OIG seeks to protect the identity of each writer and caller.