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**CUSTOMS SERVICE  
MODERNIZATION**

**ACE Poses Risks and  
Challenges**

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Mr. Chairman and Members of the Subcommittee:

I am pleased to be here today to discuss issues related to the U. S. Customs Service systems modernization. My remarks will focus primarily on Customs' efforts to address risks associated with the agency's modernization of its automated systems. We made recommendations to help Customs address these risks in our May 1996 report<sup>1</sup> to this Subcommittee. I will also identify challenges Customs faces as it plans and develops the Automated Commercial Environment or ACE—which is critical because this system is planned to support improvements to Customs' trade compliance (import) process through greater use of information technology.

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## Trade Compliance Process Redesign

One of Customs' primary responsibilities is to assess and collect duties, taxes, and fees on imported merchandise. Today, this is accomplished with a variety of processes for handling, inspecting, and accounting for imports that have grown paper intensive, inefficient, and ineffective. Customs is acutely aware that its ability to process the growing volume of imports while improving compliance with trade laws depends heavily on successfully modernizing its trade compliance process and its supporting automated systems. In recognizing this need to modernize, Customs undertook a major initiative to redesign the trade compliance process. Also, the Congress enacted legislation in 1993 that enabled Customs to streamline trade compliance processing through automation by establishing the National Customs Automation Program (NCAP). The legislation eliminated certain mandated paper requirements and specified critical functions that NCAP must provide, including the ability for members of the trade community to electronically file import entries at remote locations and for Customs to electronically process "drawback" claims, which are refunds of duties and taxes paid on imported goods that are subsequently exported or destroyed.

In 1994, Customs began the ACE project that is planned to replace the Automated Commercial System—Customs' existing automated import system—with an integrated, automated information system for collecting, disseminating, and analyzing import data and ensuring the proper collection and allocation of revenue. The NCAP prototype, intended as the first operational demonstration of ACE, is planned to implement selected features of the NCAP legislation beginning in October 1997. Customs is also

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<sup>1</sup>Customs Service Modernization: Strategic Information Management Must Be Improved for National Automation Program To Succeed (GAO/AIMD-96-57, May 9, 1996).

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undergoing a separate but related project, called Customs Distributed Computing 2000 (CDC-2000), to select an information systems “architecture.” This architecture is essentially a blueprint or framework for guiding the development and evolution of all Customs’ automated information systems, including ACE and, as I will highlight in my testimony today, is a key component in successfully developing automated systems.

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## Follow-Up on GAO Recommendations

The framework for GAO’s 1996 review of Customs’ automation was research we previously conducted across a variety of public and private sector organizations to identify “best practices” that help these organizations consistently apply information technology to improve mission performance. The Paperwork Reduction Act and the Clinger-Cohen Act, which establish responsibilities for effective information technology management, embrace these practices. These important legislative requirements include implementation of an information technology architecture, establishment of a disciplined process to evaluate information technology investments, and measurement of how well information technology supports agency programs.

In our May 1996 report to this Subcommittee, we stated that Customs was ill-prepared to develop ACE because the agency was not effectively applying critical management practices that help organizations mitigate the risks associated with modernizing automated systems and better position themselves to achieve success. Specifically, we found that Customs (1) lacked clear accountability for ensuring successful implementation of NCAP requirements, (2) selected an information systems architecture without first analyzing its business requirements, (3) lacked policies and procedures to manage ACE and other systems as investments, and (4) did not ensure that systems under development adhere to Customs’ own systems development policies. Consequently, efforts to successfully develop ACE were vulnerable to failure. The following is a brief summary of our May 1996 recommendations, each of which Customs agreed with, and the actions the agency has taken in response.

Assigning clear accountability and responsibility for information management decisions and results is an important practice identified by successful organizations. Because we found that clear accountability for meeting NCAP requirements was lacking, we recommended that Customs assign such responsibility. In response, Customs acted quickly by assigning overall, policy-level responsibility for implementing NCAP to the

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Trade Compliance Board of Directors, which is headed by the Assistant Commissioner, Office of Strategic Trade. Day-to-day responsibility for implementing NCAP is assigned to the Assistant Commissioner, Office of Information and Technology, who is also the Chief Information Officer.

The remaining three recommendations each required that Customs take substantive action to develop and implement improved information technology management practices over a long term. Because these recommendations call for significant changes in long-standing management practices, they will require sustained commitment and focus on the part of Customs' leadership. While Customs has initiated a variety of actions and made progress toward addressing each situation, it is too early to determine whether Customs will successfully implement each recommendation.

First, we recommended that Customs identify and analyze how it will conduct its business in the future before selecting the information systems architecture for the whole of Customs and on which ACE will run. Failure to base selection of the architecture on such business requirements could result in the development of systems that do not function well or cannot be readily integrated with other systems. In response, in October 1996 Customs reconsidered its approach to selecting the architecture. Customs changed the CDC-2000 project—which had entailed acquiring hardware, software, and telecommunications for ACE—to emphasize conducting analyses of business requirements prior to selecting an architecture. As part of the refocused CDC-2000 project, Customs hired a contractor in January 1997 that is expected to conduct these analyses and recommend a process for selecting an architecture in June 1997. As of early May 1997, Customs officials stated that the contractor is on schedule to complete its work in mid-June 1997.

Second, we recommended that Customs manage information technology systems as investments. Doing so involves senior management applying a disciplined process for selecting, controlling, and evaluating major information technology projects. As a result, the Customs investment review board (IRB) was designated in February 1996. The Deputy Commissioner is chair of the IRB. Other high-level Customs officials and representatives from other Customs offices and the Department of the Treasury constitute the membership. The IRB meets monthly and has primarily discussed issues related to the purpose, organization, operation, and scope of the board. Customs has not yet established policies and procedures or implemented an investment review process that the IRB will

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implement. In November 1996, Customs hired a contractor to develop a plan to help bring the agency into compliance with the Clinger-Cohen Act. In April 1997, Customs specifically tasked the contractor to assist with the development, implementation, and institutionalization of a complete information technology investment management process. As of early May 1997, Customs officials told us that the contractor's work will be complete and the investment process will be in place in July 1997.

Third, we recommended that Customs ensure that the agency adhere to its own policies for developing information systems. Customs has such policies to provide a standard approach to developing systems and to help ensure the delivery of accurate, effective, and efficient information systems. In October 1996, Customs updated these policies to include new provisions on software project planning and project management. The policy specifies that extensive project planning, including estimating the size of software products and estimating resource needs, should occur in initiating a project of the magnitude of ACE. Also, the policy requires that project plans include top-level management reviews and decisions at various stages and between various phases of development. Such reviews are important because they provide higher management with a basis for deciding whether the expenditure of resources for the next phase is justified.

As of early May 1997, Customs had revised the ACE project plan and Customs officials told us that the revised project plan complies with their system development policies. Also, in January 1997, the Assistant Commissioner, Office of Information and Technology, assigned responsibility for system development policy enforcement to his information resources management division. This division established a schedule for compliance reviews, with ACE scheduled for review in October 1997. These reviews are intended to promote compliance with the software development process and provide management visibility into the development process.

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## ACE Project Poses Many Challenges

The management practices described above, if successfully implemented by Customs, will help reduce the risk inherent in a major information system project such as ACE. However, Customs also faces a number of challenges in planning and implementing the ACE project itself that will require additional effort to resolve. These challenges relate to the cost and schedule for ACE and include, for example:

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- Customs cannot say how much ACE will cost. While Customs estimates ACE will cost \$150 million to develop over a 10-year period, the agency does not have an estimate for the total cost of ACE that includes system operation and maintenance. Customs did not base this estimate for development on the projected size of the system or level of effort expected for development. Instead, it is based on the level of funding Customs has historically obtained for ACE.
  - Customs has not determined when ACE will be completed. Assessing Customs' progress in developing ACE is difficult because the agency lacks an overall schedule for the project. Customs does, however, have a schedule for the first phase of ACE—the NCAP prototype—although the agency has had difficulty adhering to this schedule. Specifically, implementation of the NCAP prototype has slipped from January 1997 to August 1997 and again to a series of four releases beginning in October 1997 with the fourth stage starting in June 1998.

We have discussed these issues with Customs' Assistant Commissioner, Office of Information and Technology, and the Assistant Commissioner, Office of Strategic Trade, and they are receptive to the need to better identify the ACE cost and schedule. Currently, Customs' plan is to produce a comprehensive project plan that includes cost and schedule information in February 1998.

In conclusion, Customs faces some very significant challenges as it develops ACE and attempts to address broader information technology management issues. To ensure that the initial steps succeed in implementing effective information technology management, Customs will have to sustain its commitment and attention through the more difficult phases of the modernization effort which are yet to come. We plan to continue monitoring implementation of our May 1996 recommendations as well as the additional issues I have highlighted today. In this regard, we will review the revised ACE project plan and the results of the contractors that are helping Customs determine its information system architecture and establish an investment review process. Additionally, we have an ongoing review that is designed to help Customs answer basic questions about ACE with regard to cost, schedule, and performance.

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Mr. Chairman, this concludes my statement. I would be pleased to address any questions you or the other members may have.

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