OFFICE OF INSPECTOR GENERAL

USCIS Automation of Immigration Benefits Processing Remains Ineffective

DHS OIG Highlights
USCIS Automation of Immigration Benefits Processing Remains Ineffective

March 9, 2016

Why We Did This Audit

We conducted this audit to determine the effectiveness of USCIS' efforts to automate the processing of immigration benefits.

What We Recommended

We recommended USCIS improve stakeholder involvement, implement adequate performance metrics, fully test each system release, and provide technical support to help ensure the effectiveness of its efforts to automate the processing of immigration benefits.

What We Found

Technology is crucial for the United States Citizenship and Immigration Services (USCIS) to accomplish its mission. Since 2005, USCIS has worked to transform its paper-based processes into an integrated and automated immigration benefits processing environment. As we previously reported, past automation attempts have been hampered by ineffective planning, multiple changes in direction, and inconsistent stakeholder involvement.

Current USCIS efforts to automate immigration benefits processing also could be improved. Although USCIS deployed the Electronic Immigration System (ELIS) in May 2012, to date only two of approximately 90 types of immigration benefits and services are available for online customer filing. The current ELIS approach also has not ensured stakeholder involvement, performance metrics, system testing, or user support needed for ELIS to be effective.

As it struggles to address these issues, USCIS now estimates that it will take three more years—over four years longer than estimated—and an additional $1 billion to automate all benefit types as expected. Until USCIS fully implements ELIS with all the needed improvements, the agency will remain unable to achieve its workload processing, customer service, and national security goals.

USCIS Response

USCIS concurred with two of the four recommendations.

March 9, 2016

MEMORANDUM FOR: The Honorable León Rodríguez
                  Director
                  United States Citizenship and Immigration Services

FROM: John Roth
                  Inspector General

SUBJECT: *USCIS Automation of Immigration Benefits Processing
                  Remains Ineffective*

Attached for your information is our final report, *USCIS Automation of
Immigration Benefits Processing Remains Ineffective.* We incorporated the formal
comments from the Director of United States Citizenship and Immigration
Services in the final report.

Consistent with our responsibility under the *Inspector General Act,* we will
provide copies of our report to congressional committees with oversight and
appropriation responsibility over the Department of Homeland Security. We will
post the report on our website for public dissemination.

I would be remiss if I did not take this opportunity to express my
disappointment at the tone and substance of your office's response to the audit
report, as well as audit staff's efforts throughout this project. This is our sixth
review of a deeply troubled program which has, over its life, wasted hundreds
of millions of dollars. In the course of our audit work, and that of the
Government Accountability Office (GAO), USCIS has continually minimized the
shortcomings of the program and resisted independent oversight.

I am perplexed at USCIS' non-concurrence with two of the four
recommendations, given that USCIS is already performing activities in line with
the recommended actions. Non-concurrence of this nature does not appear
rational, is contrary to Department policy on audit resolution contained within
DHS Management Directive 077-01, and suggests continued effort to promote
disagreement for its own sake rather than collaboration towards the shared
goal of promoting effectiveness and efficiency in Department operations.

Your assertions that the report contains inaccuracies, or that our audit team
did not take into account comments from USCIS, are incorrect. This report is
the result of a rigorous process within our office to ensure compliance with the

Government Auditing Standards for quality and independence. We met with over 125 USCIS and DHS personnel (including 35 Transformation Program staff, over 60 users of the Electronic Immigration System (ELIS), and dozens of USCIS and ELIS stakeholders), and also collected more than 350 supporting documents. We went to the field locations where ELIS was being used and literally stood over the users' shoulders and watched them struggle with the system. The information we compiled was a sound and ample basis on which to form our audit conclusions and recommendations. We stand by this report and are confident in its conclusions.

Additionally, USCIS had every opportunity through both its technical and formal written comments to the report to outline its continued improvements and progress since our audit field work ended. The audit staff thoroughly reviewed your feedback, made significant changes throughout the final report, and worked tirelessly until publication to ensure accuracy.

The USCIS staff has pointed to significant progress made since the conclusion of our field work in July 2015. That very well may be the case, and we have included your position in the body of the report in the relevant sections. However, because we cannot validate these assertions, they cannot form a basis for our audit conclusions.

Part of the conflict, I suspect, is the USCIS Transformation Program Office's disagreement with the scope of our audit. We undertook this audit to answer a relatively simple question: after 11 years and considerable expense, what has been the outcome – right now – of USCIS' efforts to automate benefits processing? We focused on benefits processing automation progress and performance outcomes. The answer, unfortunately, is that at the time of our field work, which ended in July 2015, little progress had been made.

While the USCIS Transformation Program Office would have preferred us to focus on its use of the Agile development methodology, we did not do so for a number of sound reasons, including the fact that GAO recently completed work on that topic and was conducting a separate assessment of USCIS' system development practices concurrent with our audit.[1] Additionally, while the USCIS transformation team would have preferred we not evaluate the legacy transformation efforts, our audit staff, in the exercise of their professional judgment, believed it was necessary to consider historic trends and issues from

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[1] It is worth noting that GAO found that USCIS' use of Agile development methodology was hampered by challenges in governance and oversight, and that decisions were being based on unreliable information (*Immigration Benefits System: Better Informed Decision Making Needed on Transformation Program*, GAO-15-415, May 2015). Our own report noted that the estimated schedule for major ELIS software releases, adopted in April 2015, had, by July 2015, already slipped a number of months.

prior audit reports as they relate to deficiencies identified in current program activities under review.

Finally, I reiterate my disappointment in the conduct of the USCIS Transformation Program Chief during the course of the audit, the substance of which I relayed to you in our face-to-face meeting in your office on January 15, 2016.

I hope for improved cooperation and dialogue during future audit engagements as we continue to provide independent assessments of USCIS programs and operations.

Please call me with any questions, or your staff may contact Sondra McCauley, Assistant Inspector General, Office of Information Technology Audits, at (202) 254-4041.

Attachment

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Appendixes

Abbreviations

CIO	Chief Information Officer
CLAIMS	Computer Linked Application Information Management System
DHS	Department of Homeland Security
ELIS	Electronic Immigration System
FY	fiscal year
GAO	Government Accountability Office
IT	information technology
NBC	National Benefits Center
OIG	Office of Inspector General
OMB	Office of Management and Budget
OTC	Office of Transformation Coordination
TSC	Texas Service Center
USCIS	United States Citizenship and Immigration Services

Background

United States Citizenship and Immigration Services (USCIS) is responsible for securing America's promise as a nation of immigrants by providing accurate and useful information to its customers, granting immigration benefits and U.S. citizenship, promoting an awareness and understanding of citizenship, and ensuring the integrity of the immigration system. To carry out this mission, USCIS has 19,000 government employees and contractors working at 223 offices worldwide. USCIS provides its services through its headquarters office in Washington, DC, four service centers, 29 district offices, 136 application support centers, and four regional offices.[1] USCIS asylum offices, the Customer Contact Center, the National Records Center, and the National Benefits Center also provide services to customers. In 2015, USCIS' budget represented 5 percent of the Department of Homeland Security's (DHS) overall $60 billion budget.

USCIS provides approximately 90 different types of immigration benefits and services to its customers, including U.S. citizenship, asylum, lawful permanent residence, employment authorization, and refugee status, among others. On an average day, USCIS employees:

- process 23,000 applications for various immigration benefits;
- issue at least 6,500 permanent resident cards;
- adjudicate nearly 200 refugee applications; and
- naturalize 3,200 new U.S. citizens.

During fiscal year (FY) 2015, USCIS processed more than 7.6 million applications and petitions.

Historically, USCIS has provided nearly all of its services using paper forms. Customers submit paper applications to USCIS facilities for intake and processing, which requires sorting, scanning, and other steps to manually verify the applications for acceptance. Customers submit additional paper documents as needed to confirm identity, such as birth certificates and drivers' licenses. These documents are collected and entered into several systems. The Computer Linked Application Information Management System (CLAIMS) is the primary case management system used to process applications, determine the status of pending applications, and track fees collected. Adjudication officers, responsible for making decisions about benefits, also use multiple USCIS

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[1] The Potomac Service Center opened on July 27, 2015.

systems to perform background checks and schedule interviews to obtain further information from applicants. For example,

- TECS is used to conduct background and security checks.[2]
- The National Appointment Scheduling System is used to schedule appointments for interviews and collect biometric information, such as fingerprints.
- InfoPass on the USCIS website is used by customers to schedule appointments with local immigration offices.

USCIS' paper-based processes require the agency to obtain, ship, process, and store a vast amount of documents. For example, USCIS issues printed benefits documents, such as permanent resident cards, and stores information on application status both electronically and in applicants' hard copy files. USCIS also maintains paper files to provide supporting documentation of individuals' immigration and citizenship status. More than 20 million immigrant files, each file 1 to 6 inches thick, are stored at the National Records Center. The annual cost of shipping, storing, and handling these paper files is over $300 million each year.

USCIS recognizes that its continued dependence on paper files makes it difficult to efficiently process immigration benefits. As such, in November 2005, USCIS embarked on an enterprise-wide Transformation Program to transition from its fragmented, paper-based processing to a centralized, account-based environment using electronic adjudication. This program is a massive undertaking to modernize processing of approximately 90 immigration benefits types. The main component of the Transformation Program is the USCIS Electronic Immigration System (ELIS), intended to provide integrated online case management to support end-to-end automated adjudication of immigration benefits. Once implemented, individuals seeking an immigration benefit should be able to establish online ELIS accounts to file and track their applications, petitions, or requests as they move through the immigration process. Figure 1 lists the planned ELIS capabilities.

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[2] TECS (no longer an acronym) is the updated version of the former Treasury Enforcement Communications System.

Figure 1: Planned ELIS Capabilities

Applicants	USCIS Adjudicators
• Establish an account with USCIS • Submit benefit requests and supporting evidence • Submit electronic payment • Receive online customer service • Track the application or petition as it moves through the process	• Electronic access to applications, petitions, and requests for each case • Access to information linked across USCIS systems, databases, and agencies, such as the Department of Justice and State for data sharing

Source: DHS Office of Inspector General (OIG)-generated from USCIS Transformation Plans

In June 2006, USCIS established a Concept of Operations to guide its modernization efforts. The following year, USCIS developed a multi-year strategy for incrementally creating and implementing new business processes and information technology (IT) systems. It also established a Transformation Program Office, now known as the Office of Transformation Coordination (OTC). USCIS awarded a contract in November 2008 to the International Business Machines Corporation to serve as the system architect for ELIS. This contract called for the architect to provide planning, requirements gathering, design, and system development services. With this approach, USCIS expected to deploy 20 different citizenship-related forms by September 2009 and deploy the remaining benefit types by FY 2013. The OTC spent more than $500 million between FY 2008 and FY 2012 to implement the Transformation Program. The program is entirely funded by premium processing fees paid by individuals filing employment-based applications and petitions.

Since 2005, we have issued five audit reports on multiple USCIS IT modernization attempts that were hampered by repeated delays and scope reductions. Prior Transformation Program milestones and their disposition are provided in table 1.

Table 1: Prior Transformation Program Milestones and Revisions

Dates	Milestones	Status	Reason	Revisions
9/2009	Begin deployment of the first phase of ELIS for Citizenship benefit types	Not Met	USCIS did not have the resources, including funding, or infrastructure to support the proposed solution or to deploy Release A as planned.	-The date for Release A was pushed back to April 2011. -DHS authorized the program to change the order of deployment to start with Non-Immigrant instead of Citizenship lines of business in December 2009.
4/2011	Proposed Release A deployment for core processes to Non-Immigrant benefit types	Not Met	Costs of digitizing existing paper files were defined, showing that original plans were not achievable within associated budget and timeframe.	-The program experienced delays while defining requirements; Release A was pushed back to August 2011, scope was reduced. -USCIS planned to deploy the additional benefit types associated with the Non-Immigrant business line by October 2012.
8/2011	Revised deployment of Release A, to deliver a release that was reduced in scope	Not Met	The program experienced delays in fully defining Release A requirements.	-The date for Release A was pushed back to December 2011. -In January the requirements had not been completed. The scope of the first release was further reduced to one benefit type in order to meet the December 2011 date.
12/2011	Revised deployment of Release A, to deliver core processes to one Non-Immigrant benefit type	Not Met	The lack of sufficiently defined requirements prior to selecting the IT system solution led to a reduction of scope for the first deployment.	-The program was rebaselined in April 2011, Release A1 was not deployed until May 2012.

Source: DHS OIG-generated based on analysis of USCIS Transformation Program planning documents

In our prior reports, we discussed numerous challenges USCIS faced in finalizing its transformation approach and implementing automated processing. Summarily:

- In 2005, we reported that the USCIS IT environment for processing immigration benefits was inefficient, hindering its ability to carry out its mission.[3] We also reported that USCIS faced continuing challenges for modernizing its technology.

- In 2006, we conducted a follow-up audit and found that the agency still had not finalized its transformation approach, managed IT resources, implemented an acquisition approach, completed IT upgrades, and increased stakeholder involvement in the IT modernization efforts.[4]

- In 2009, we reported that USCIS had established Transformation Program governance, but made limited progress achieving automated benefits processing due to ineffective planning, incomplete process reengineering, and inconsistent stakeholder participation.[5]

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[3] *USCIS Faces Challenges in Modernizing Information Technology,* OIG-05-41, September 2005.
[4] *U.S. Citizenship and Immigration Services' Progress in Modernizing Information Technology,* OIG-07-11, November 2006.
[5] *U.S. Citizenship and Immigration Services' Progress in Modernizing Information Technology,* OIG-09-90, July 2009.

- In 2011, we reported that Transformation Program implementation was delayed and USCIS was still relying on paper-based processes to support its mission.[6]

- In 2014, we reported the agency still did not have IT systems in place to fully support mission needs, causing potential delays to benefits processing and application decisions.[7]

Between 2006 and 2015, the Government Accountability Office (GAO) also conducted five audits of USCIS' IT transformation activities. GAO reported that USCIS needed to improve transformation planning activities, program and contractor oversight, performance management, communications, and IT management, among other areas GAO made 13 recommendations for improvement. The status of each OIG and GAO recommendation is listed in appendix C.

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[6] *U.S. Citizenship and Immigration Services' Progress in Transformation,* OIG-12-12, November 2011.
[7] *U.S. Citizenship and Immigration Services Information Technology Management Progress and Challenges*, OIG-14-112, July 2014.

Results of Audit

Technology is crucial for USCIS to accomplish its mission. Since 2005, USCIS has worked to transform its fragmented, paper-based processes into an integrated and automated immigration benefits processing environment. As we previously reported, past automation attempts have been hampered by ineffective planning, multiple changes in direction, and inconsistent stakeholder involvement.

While USCIS has implemented some changes that address our previously reported findings, current USCIS efforts to automate immigration benefits processing still need improvement. Although USCIS deployed ELIS in May 2012, to date only two of approximately 90 types of immigration benefits are available for online customer filing, accounting for less than 10 percent of the agency's total workload. The current ELIS approach also has not ensured stakeholder involvement, performance metrics, system testing, or user support needed for ELIS to be effective.

As its struggles to address these issues, USCIS estimates that it will take three more years—over four years longer than estimated—and an additional $1 billion to automate all benefit types as expected. Until USCIS fully implements ELIS with all the needed improvements, the agency will remain unable to achieve its workload processing, customer service, and national security goals.

ELIS Implementation Has Not Been Effective

Despite years of prior effort and various automation initiatives, the Transformation Program still needs improvement. USCIS has deployed limited automated processing capabilities and ELIS performance to date has been inadequate. Users indicated ELIS lacks critical functionality needed to process applications and numerous technical problems need to be addressed.

Limited Progress Made in Automating Benefits Processing

Currently, two product lines are operational for customers in ELIS: the USCIS Immigrant Fee, which allows customers to submit electronic payment of the $165 processing fee for an immigrant visa packet, and the Application to Replace Permanent Resident Card (Form I-90).[8]

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[8] USCIS issues Permanent Resident Cards, commonly called Green Cards, to individuals granted authorization to live and work in the United States on a permanent basis.

USCIS implemented three product lines between 2012 and 2013 in an earlier version of ELIS, now referred to as "legacy ELIS." Two benefit types and one payment process were previously automated—the Application to Extend/Change Non-immigrant Status (Form I-539), the USCIS Immigrant Fee, and the Immigrant Petition by an Alien Entrepreneur (Form I-526). USCIS expected these to be key steps towards its effort to shift from paper to electronic forms. As of June 2015, Form I-539 and Form I-526 had been disabled because USCIS no longer supported this processing in legacy ELIS. As such, customers were prohibited from submitting any new Form I-539 applications or Form I-526 petitions online. The USCIS Immigrant Fee payment in legacy ELIS was scheduled to transition to the new ELIS architecture in late 2015. Figure 2 illustrates the ELIS capabilities that were operational in July 2015. As depicted, both legacy ELIS and ELIS were in use at the time of our audit field work.

Figure 2: ELIS Capabilities Operational in July 2015

Source: DHS OIG analysis of USCIS Transformation Program Baseline and Schedules

In the new ELIS architecture, the OTC released electronic filing for the Application to Replace Permanent Resident Card (Form I-90) in March 2015.[9] This is one of the most common immigrant benefits filed by USCIS customers,

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[9] The OTC conducted a limited release of the Form I-90 on November 12, 2014, during a 72-hour test to verify that e-filing functionality in ELIS would perform as intended.

with nearly 60,000 applications filed per month. Functionality for the Lockbox to accept paper-filed I-90 applications was deployed in April 2015.[10]

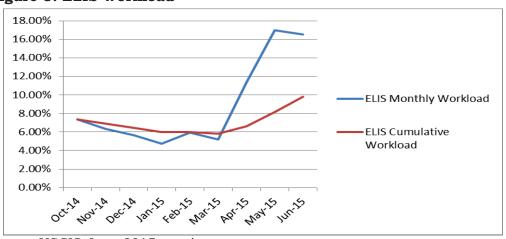With the automation implemented to date, the agency currently is processing less than 10 percent of its entire workload in ELIS.[11] Figure 3 illustrates the monthly and cumulative workloads in ELIS from October 2014 to June 2015.

Figure 3: ELIS Workload

Source: USCIS June 2015 metrics

Limited Deployment to USCIS Facilities

As of July 2015, ELIS was operational at only one of the four USCIS Service Centers—Texas Service Center (TSC)—and the National Benefits Center (NBC) under the Field Operational Directorate.[12] Of the total 19,000 USCIS employees and contractors, only 2,215 had ELIS accounts. Also, ELIS was not operational at any of the remaining 224 USCIS offices, although some offices had view-only access to ELIS case data. Likewise, no other DHS components or Federal agency partners had direct access to ELIS; however, some could view ELIS case data through an existing USCIS system to support immigration information sharing. The OTC plans to increase the number of ELIS users as additional functionality is deployed over time. Figure 4 illustrates the total number of USCIS employees compared to the number using ELIS at the time of our audit field work.

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[10] The Lockbox provides intake services for data and fee payments for most USCIS form types.
[11] ELIS Workload is calculated by dividing the number of ELIS receipts by the total Agency receipts.
[12] The NBC serves as a centralized hub for pre-processing certain applications that require an interview at a USCIS Field Office. The TSC is the primary location for USCIS Immigrant Fees.
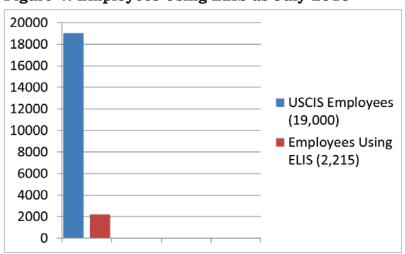
Figure 4: Employees Using ELIS as July 2015

Source: DHS OIG-generated from USCIS' July 2015 metrics

ELIS Functionality Problems

Among the limited number of USCIS employees using ELIS, personnel reported that the system was not user friendly, was missing critical functionality, and had significant performance problems processing benefits cases.

ELIS Was Not User Friendly and Did Not Meet User Needs

ELIS was meant to automate the workflow for processing the USCIS Immigrant Fee payment and the Application to Replace Permanent Resident Card (Form I-90). However, ELIS users said the system was not user friendly and did not include the functionality needed to efficiently process cases. For example, ELIS did not permit users to undo data entry errors or enter comments once a case was processed. Adjudicators stated electronic processing in ELIS was efficient only for cases that were straightforward. For cases that required adjudicators to conduct additional checks and verifications, the efficiencies of electronic processing were lost. Specific user concerns with ELIS are provided in figure 5.

Figure 5: USCIS ELIS User Feedback Reported in June 2015[13]

USCIS ELIS User Feedback on I-90 Processing	
• Need to manually refresh website often to see the most recent information. • Difficulty navigating among multiple screens and web browsers. • Inability to move browser windows to view case data. • Cases getting stuck throughout the process and inability to move to the next step without intervention. • Inability to undo a function or correct a data entry error. • Inability to enter comments on actions taken after a case has been adjudicated.	• Card errors received when "NMN" is entered for applicants with no middle name.* • Failure to produce cards for approved cases. • Inability to process benefits for military or homebound applicants. • Errors in displaying customer date of birth.* • Scheduling applicants to submit biometrics (photo, signature, prints) that are not needed.* • Inability to create a case referral electronically once adjudication is complete.

Source: DHS OIG analysis of USCIS documentation and auditee statements

USCIS personnel at the NBC and TSC also stated there was a lack of reporting capabilities in ELIS. Multiple divisions in USCIS relied on standard reports, such as aging, productivity, and pipeline reports to locate potential problems, track productivity metrics, and allocate work. Also, some departments ran hundreds of ad-hoc reports each month to identify trends or issues. The OTC implemented reporting capabilities in the new ELIS architecture in November 2014 using enterprise data warehouse and analysis reporting tools. This approach was meant to provide day-to-day operational and management reporting capabilities in ELIS. However, each location using ELIS indicated that its ability to run reports or data queries, which were critical capabilities of systems previously used, remained limited. This resulted in lost visibility of operational and production data, which had significant impact on day-to-day operations. For example, contractors working at the TSC used work arounds to demonstrate completion of each step in the process. Since reporting capabilities were limited, contractors had to capture screen shots to prove they had completed key steps, such as applicant verification. In lieu of reports, the contractors had to keep these printouts as part of the already voluminous case files to record verification history.

Both NBC and TSC personnel also indicated that they had to devote additional resources to handle complex benefits processing using ELIS. Because the

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[13] The OTC has since indicated that the issues marked with an asterisk were addressed during the time of our audit.

system was implemented without the entire workflow defined, adjudicators had to employ manual workarounds, such as email, to forward cases from one processing step to the next. For example, staff in the records unit had to email adjudicators when certain cases were ready for adjudication. Personnel also stated the system did not allow cases to be reassigned after adjudication was complete, which was sometimes necessary to refer cases for background or fraud checks.

Finally, adjudicators using ELIS spent longer on each case because of the manual steps required to check multiple systems to ensure that its data were correct. For example, adjudicators had to double-check applicant data such as name and date of birth in other systems because ELIS did not consistently or correctly capture the information. Also, ELIS sometimes displayed names incorrectly, with letters in names out of order or without spaces. As such, personnel had to manually check names against information in USCIS legacy systems. The OTC expected the need to check multiple systems would only continue through August 2015.

Poor System Performance

USCIS personnel at NBC and TSC stated that ELIS had performance problems that negatively impacted productivity in adjudicating cases. Specifically, adjudicators at both service centers intermittently experienced slow processing speeds, as well as frequent system outages. For example, six of nine adjudicators reported that while they worked on cases, ELIS frequently locked up, requiring them to completely close their web browsers. Adjudicators also stated that ELIS occasionally moved open cases to the wrong work queues; some cases became misplaced or "lost" in the system. Personnel also faced data integrity issues, such as information disappearing in the system or errors randomly occurring, thereby displaying customer names, dates of birth, and addresses incorrectly. The OTC worked with both Service Centers to address performance problems that negatively impacted productivity. Several improvements to the system usability, connectivity, and backend functionality were expected throughout 2015.

Significant problems were identified regarding systems that interfaced with ELIS.[14] Eight of nine adjudicators processing Applications to Replace Permanent Resident Card (Form I-90) reported that interfaces did not work correctly, causing significant delays in productivity. Examples of interface problems and their impact on benefits application processing are provided in table 2.

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[14] A complete list of ELIS Interfaces is provided in appendix F.

Table 2: ELIS Interface Problems Reported in June 2015[15]

ELIS Interfaces	Examples of Reported Problems	Impact
Enterprise Correspondence Handling Online	Case documents did not move from the correspondence system into ELIS. The correspondence system also frequently was unable to find ELIS cases.	The adjudicator received a false negative when searching for a case, resulting in the need to set the case aside and rework it when the interface became available.
National Appointment Scheduling System	ELIS did not acknowledge when a second customer appointment was made.	The National Appointment Scheduling System mistakenly indicated that a customer was a "no show."
Person Centric Query Service	Connectivity with the Person Centric Query Service was slow, causing data to not load in ELIS. Also, the query system indicated some case numbers were invalid, or yielded no results when searches were conducted from ELIS.	Adjudicators did not trust the accuracy of ELIS data. For each case, adjudicators had to check multiple systems to verify the data.
Pay.gov	Payments were processed multiple times and duplicate accounts were established.	Customers were charged multiple times for benefits or received benefits without paying fees.
Central Index System	Case information did not load into ELIS, causing data discrepancies between the Central Index System and ELIS.	Adjudicators could not determine an applicant's status or received incorrect data from the Central Index System.
Lockbox	There were significant delays getting cases that were filed at the Lockbox accepted into ELIS. Also, some cases imported from the Lockbox had address errors.	Case processing was delayed and address errors caused undeliverable mail.
Customer Profile Management System	Biometrics in the Customer Profile Management System did not load in ELIS.	The status of approved cases was incorrectly shown as "Ready for Adjudication."

Source: DHS OIG analysis of USCIS documentation and auditee statements

Finally, the performance metric for ELIS interoperability has not been met. According to OTC guidance, "ELIS shall successfully support data transmission to/from the internal USCIS systems and external agency systems." The objective of this metric was that ELIS would support data transmission between internal and external USCIS systems 99 percent of the time for each line of business. However, in May and July 2015 ELIS achieved only 83 percent and 84 percent, respectively. The OTC expects to meet this goal when the Immigrant line of business is completed in FY 2017.

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[15] The OTC has since worked to improve ELIS interfaces with other systems and services to streamline the I-90 process.

Stakeholder Input, Testing, and User Support Need Improvement

The limited ELIS deployment and current system performance problems may be attributed to some of the same deficiencies we reported regarding previous USCIS IT transformation attempts. To date, the OTC has not ensured sufficient stakeholder involvement in ELIS implementation activities and decisions for meeting field operational needs. Testing has not been conducted adequately to ensure end-to-end functionality prior to each ELIS release. Further, the OTC still has not provided adequate post-implementation technical support for end-users, an issue that has been ongoing since the first ELIS release in 2012.

Inadequate Stakeholder Communication and Involvement in ELIS Decisions

Participation in ELIS implementation efforts has largely been confined to selected team members within the OTC, and communication with ELIS end users about each ELIS release has been limited. Also, ELIS stakeholders have not had adequate opportunity to provide input or weigh in on decisions that may impact day-to-day benefits processing operations.

In prior audits, we reported that stakeholder involvement and communication regarding ELIS implementation were inadequate. For example, in 2005 we reported that system development activities did not include user input, resulting in the deployment of a system that did not reflect the correct business process.[16] In 2006, we similarly reported that Transformation Program efforts did not include adequate user input, causing employees to create their own IT applications.[17] Further, in 2009 we reported that stakeholder participation had fluctuated, resulting in inconsistent business and IT involvement.[18] In response to those reports, USCIS recognized the challenges it faced to increasing stakeholder awareness and involvement in transformation activities.

However, opportunities for ELIS users to be involved in system implementation activities remained limited. The development process for ELIS included subject matter experts from field operations who provided specific system and functionality requirements. However, these same subject matter experts were not always involved during system implementation efforts. The OTC also

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[16] *USCIS Faces Challenges in Modernizing Information Technology,* OIG-05-41, September 2005.
[17] *U.S. Citizenship and Immigration Services' Progress in Modernizing Information Technology,* OIG-07-11, November 2006.
[18] *U.S. Citizenship and Immigration Services' Progress in Modernizing Information Technology,* OIG-09-90, July 2009.

historically selected a product owner from the Field Operations Directorate to assist in development and early testing of each system release. However in 2015, the OTC removed the product owner role from field operations and replaced it with a product owner from the OTC. Once a release was deployed, the OTC did not advise users of its decisions for future system enhancements or other plans. This lack of user input contributed to the implementation of solutions that did not perform effectively, adversely affecting day-to-day operations at USCIS field sites.

Personnel at the NBC and TSC also discussed the limited opportunities they had to provide input into critical system fixes and enhancements. The OTC had a formal change process in place for users to submit system enhancement requests online or through field representatives. These requests were governed by an Enhancement Change Advisory Board, with responsibility for reviewing and prioritizing ELIS enhancements. The Board included representatives from the OTC, as well as stakeholders from various USCIS offices, such as the Field Operations Directorate and the Service Center Operations Directorate. However, service center and field operations personnel stated that the representatives on this board assessed and approved or disapproved each enhancement request based on business value rather than system functionality. Both TSC and NBC personnel expressed concern that this process was flawed, given that needed system fixes and enhancement requests were generated by ELIS users who were not always represented as voters on the advisory board.

Inadequate Testing of Each ELIS Release

Testing prior to each ELIS release was not adequate to ensure that the system had the automated functionality needed to be more efficient than the existing paper process. The OTC stated that each release of ELIS would be developed as a minimally viable solution, meant to replace paper processing and ease the impact on the workforce of using multiple systems. As such, testing the core functionality and capabilities of each release was a critical step to ensure the system would meet user needs and improve end-to-end workflow.

The OTC followed an Agile development methodology to ensure each system feature was tested prior to deployment. Typically, using this methodology, every release or enhancement undergoes testing, with end-user testing conducted throughout the development process as functionality is completed. However, NBC and TSC personnel told us that the user testing conducted prior to each ELIS release was not sufficient to ensure the end-to-end workflow would work optimally. Instead, users were only provided an opportunity to test specific functions, or user stories, while development was underway. System test activities historically were conducted in this manner, with a focus on executing modular test sessions that did not cover the entire end-to-end process. For

example, users were instructed to test the system's payment and data entry features, but users were not provided the opportunity to test the full automated process or the biometrics entry capability before going live. Also, users had no opportunity to test incremental system enhancements that were put in place prior to the final release of the electronic Form I-90 in March 2015.[19]

Similarly, TSC officials shared longstanding concerns about a lack of robust, end-to-end testing of the USCIS Immigrant Fee process. The OTC reported that it conducted end-user testing to verify system functionality and usability on scenarios resembling how the application would be employed by personnel in the field. However, NBC and TSC personnel reported that testing was done incrementally, limited to short segments meant only to check specific features or small portions of the work flow. To address these concerns, TSC requested additional testing in a live testing environment when the OTC began preparing for the newly-developed, online USCIS Immigrant Fee process in June 2015. However, TSC personnel were told that testing activities were restricted due to the time it would take to get the data set up for additional test scenarios.

Insufficient Technical Support for ELIS End Users

The OTC deployed ELIS between 2012 and 2015 without an adequate plan for providing proactive technical support to end users. TSC personnel stated that when ELIS was first released to their service center, there was no process for requesting technical assistance with routine system issues or specific problems with electronic case files. After several months, personnel were advised to start submitting help desk tickets. However, there was no procedure in place for users to receive updates on the resolution of their tickets. To address this shortfall, the TSC created a spreadsheet listing all the specific issues that had been reported to the help desk, along with the ticket numbers and priority ratings. In 2013, the service center identified approximately 70 issues reported since the initial deployment of ELIS. Although the TSC's spreadsheet was shared with the OTC in January 2014, by June 2015, the total number of issues had increased to nearly 500.

Post-implementation technical support remained inadequate with the release of ELIS version 5.01 in March 2015. The OTC still had not established a proactive approach for providing support for ELIS users. Instead, personnel were instructed to submit help desk tickets for any and all system-related problems. While the OTC had a process in place to monitor the status of help desk tickets through its system called Remedy, the NBC did not have access and therefore

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[19] The OTC conducted a limited release of the Form I-90 in November 2014 to assess system operations for 72 hours and identify any fixes or enhancements needed.

created its own spreadsheet for tracking. By June 2015, the service center had nearly 1,000 open tickets dating back to the initial ELIS release in November 2014. Both NBC and TSC personnel stated there was limited communication from the OTC as to when issues would be addressed. Personnel routinely escalated serious issues to their local management for faster resolution.

During our audit field work in June 2015, the OTC was actively working to address the growing number of help desk tickets and improve USCIS Service Desk response. As of July 2015, over 80 percent of the help desk tickets for the I-90 had been closed. The OTC also was working to increase staffing and streamline the identification and tracking of each system incident. The OTC began using an improved incident resolution process to prioritize, track, remediate, and report ELIS issues. This included creation of an ELIS incident tracking list posted on the USCIS SharePoint website for reference by ELIS users. The tracking list was to be updated daily with the real-time status of each open case. Service center personnel believed that this process was more effective than the previous method for resolving ELIS incidents.

ELIS Program Goals Not Met

As it struggles to address these system issues, USCIS now estimates that it will take three more years—over four years longer than estimated—and an additional $1 billion to automate all benefit types as expected. Until USCIS fully implements ELIS with all the needed improvements, the agency will remain unable to achieve its workload processing, customer service, and national security goals.

Schedule Not Met

In 2011, USCIS established a plan to implement ELIS agency-wide by 2014. However, USCIS was not able to carry out this plan and the schedule was delayed by four years causing a program breach. An updated baseline schedule for the Transformation Program was approved in April 2015; however, USCIS also shifted and delayed these release dates.

Schedule Delays

USCIS has not met its schedule for agency-wide transformation. USCIS planned to roll out electronic processing of all immigration benefit types agency-wide by 2014. This schedule was part of the 2011 Transformation Program Baseline and received formal DHS Acquisition Review Board approval in April 2011. The 2011 baseline included a specific timeline for developing and implementing ELIS system functionality across all lines of business to achieve

full operational capability by the third quarter of FY 2014. As shown in table 3, the plan included five major releases over a 3-year period of time.

Table 3: 2011 Acquisition Program Baseline

	2011 Baseline Schedule for ELIS Releases		
Release	**USCIS Line of Business**	**Threshold**	**Objective**
Release A & B	Non-Immigrant (25 benefit types)	4Qtr FY 2012	4Qtr FY 2012
Release C	Immigrant (28 benefit types)	2Qtr FY 2013	2Qtr FY 2013
Release D	Humanitarian (24 benefit types)	4Qtr FY 2013	4Qtr FY 2013
Release E	Citizenship (10 benefit types)	2Qtr FY 2014	2Qtr FY 2014
	Full operational capability (90 benefits and services)[20]	3Qtr FY 2014	3Qtr FY 2014
	Total Lifecycle Cost	$2.1 billion	$1.7 billion

Source: DHS OIG analysis of 2011 USCIS Transformation Program Acquisition Program Baseline and other related documentation

USCIS did not meet its 2011 Acquisition Program Baseline to deploy ELIS by 2014. Specifically, the program missed the first ELIS release by 5 months and continued to experience additional delays throughout 2012 and 2013. As such, about this time, the DHS Chief Information Officer (CIO) rated the program as a moderately high-risk investment. Similarly, in January 2012, the DHS Program Accountability and Risk Management office reported that the Transformation Program was in breach of the approved 2011 Acquisition Program Baseline and needed to be re-baselined due to schedule, cost, and performance concerns since 2012.

However, in March 2012, before the re-baselining occurred, the Office of Management and Budget (OMB), along with the DHS Office of the CIO conducted an in-depth review of the program's status. OMB expressed significant concerns regarding the continued schedule delays and escalating project costs. According to OMB, factors that hindered the OTC from meeting the 2011 baseline schedule included:

- a system architecture that was overly complex,
- an acquisition strategy that relied on a single contractor, and
- a traditional development methodology (i.e., Waterfall) that did not allow the government to foresee problems early enough in the process to take corrective actions.

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[20] There are 87 types of benefits and services within USCIS' four lines of business, as well as three additional benefit types that span all, or other, lines of business.

The OMB review resulted in four action items that USCIS needed to address from June to December 2012:

- reduce the complexity of the architecture,
- implement a new acquisition strategy,
- deploy capabilities more frequently every 4 to 6 months, and
- update the 2011 project milestones and plans.

The OTC took steps to fully address each of OMB's recommendations. Its actions resulted in complete redesign of the ELIS architecture and adoption of the Agile development approach to enable a more iterative and incremental development process. USCIS also changed its acquisition strategy to include multiple contractors providing a range of services. OMB and USCIS expected these changes to constitute a more solid approach to automating all benefit types. (The OTC's actions to address OMB's recommendations are included in appendix E.)

Ultimately, in response to a February 2014 Acquisition Decision Memorandum from the Under Secretary for Management, USCIS returned to the DHS Acquisition Review Board to re-baseline the Transformation Program. On April 1, 2015, the Acquisition Review Board approved the new baseline, which indicated that full operational capability of ELIS would be completed by the end of the second quarter of FY 2019. Table 4 provides the revised baseline schedule for ELIS releases.

Table 4: 2015 Acquisition Program Baseline [21]

Revised ELIS Release Dates		
USCIS Line of Business	**Threshold**	**Objective**
Immigrant	2Q FY 2017	4Qtr FY 2016
Citizenship	4Q FY 2017	2Qtr FY 2017
Non-Immigrant	2Q FY 2018	1Qtr FY 2018
Humanitarian	2Q FY 2019	4Qtr FY 2018
Full Operational Capability	2Q FY 2019	1Qtr FY 2019

Source: USCIS Transformation Program Acquisition Program Baseline, approved April 1, 2015

With this revised schedule, the program planned to incrementally deploy 11 major releases from FY 2015 through FY 2018. Full operational capability will

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[21] On June 21, 2015, the USCIS Deputy Under Secretary for Management approved a sequence change to the Citizenship and Immigrant lines of business. This change was incorporated in the USCIS Transformation Program Acquisition Program Baseline dated July 31, 2015.

be achieved when ELIS effectively supports the work associated with all four USCIS lines of business.[22]

ELIS 2015 Release Dates Revised

The Transformation Program has been unable to meet the milestones established in its revised 2015 schedule. The program follows an Agile delivery methodology that permits schedule changes within each release, as long as it meets the established threshold dates for each line of business. As such, the OTC made a number of schedule adjustments to its April 1, 2015, estimates. As of July 2015, the program had completed two of the six planned ELIS releases. The remaining six releases scheduled for deployment in 2015 were rescheduled. Table 5 compares the April 2015 estimates with the revised ELIS releases dates.

Table 5: Comparison of April to July 2015 Schedule Estimates

Major ELIS Releases	April 2015 Estimate	July 2015 Estimate
Release 5.01- Application to Replace Permanent Resident Card, Form I-90	February 2015	March 2015 (Completed)
Release 5.02- Lockbox Integration	March 2015	April 2015 (Completed)
Release 5.1- USCIS Immigrant Fee Rebuild	July 2015	August 2015
Release 6.1- Deferred Action for Childhood Arrivals	September 2015	December 2015
Release 6.2- Temporary Protected Status	September 2015	February 2016
Release 7- Application for Naturalization, Form N-400	December 2015	March 2016

Source: DHS OIG-generated from USCIS 2015 plans

OTC officials attributed the changes in the release schedules to external factors, such as ELIS interface dependencies with third parties. For example, Releases 6.1 and 6.2 were rescheduled, in part because the Lockbox service provider has not been able to complete the infrastructure upgrades necessary to manage additional benefit types using ELIS. As previously discussed, the Lockbox provides intake services for data received from the Lockbox service provider and delivers the data to USCIS. USCIS now requires that certain petitions and applications be sent to designated Lockbox facilities.[23] After these facilities perform initial document reviews, contractors scan and convert the

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[22] Appendix D provides a complete list of the major ELIS releases.
[23] USCIS Lockbox facilities are located in Chicago, Illinois; Phoenix, Arizona; and Dallas, Texas, and are operated by a Financial Agent of the U.S. Department of Treasury.

data into electronic case files that can be easily accessed via ELIS and other USCIS systems for further processing and adjudication.

Similarly, Release 7 was postponed by more than 3 months due to a lack of resources to develop and deploy the National Appointment Scheduling System—a USCIS system for scheduling interviews with customers regarding naturalization applications that also must interface with ELIS. The USCIS CIO and the Transformation Program Chief both expressed concerns over such interface dependencies and the impact on their ability to deliver each ELIS release as planned. OTC officials stated they were working to assess the impact of these issues; they did not anticipate these issues would impact the long-term schedule.

Further, DHS Program Accountability and Risk Management officials expressed concern that the Transformation Program schedule could be further delayed if other activities, such as needed form changes, are not completed in advance. The process to change a form type can take 7 to 12 months as it requires OMB review and public comment resolution before final approval. Recognizing this as a major risk to the program schedule, the OTC has begun communicating its schedule to those involved in the process and will raise concerns any time a form change is delayed.

ELIS Cost Overruns

Transformation Program cost estimates have increased over 480 percent since 2007 when USCIS initially estimated that the total program would cost $536 million. With the first baseline revision in 2011, the program cost nearly quadrupled—increasing to approximately $2.1 billion in order to deploy full ELIS capability by 2014. As of April 2015, the OTC estimated a total of $1.2 billion in sunk costs, of which $476 million covered the investment in the legacy architecture that would not be reused. The OTC also expended additional resources to include the use of enterprise cloud-based services that allow for greater flexibility and scalability in the new architecture.

Given the 2015 schedule change, USCIS now plans to spend an estimated $3.1 billion—an increase of more than $1 billion as compared to the 2011 baseline—to complete benefits processing automation via ELIS.[24] The $3.1 billion estimate will cover all costs from FY 2006 to 2033, including operations and maintenance costs for up to 15 years after full system deployment. The

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[24] The additional $1 billion is primarily attributed to extending the life cycle cost estimate from 17 years (FY 2006–2022) to 28 years (FY 2006–2033), with an additional 11 years covering sustainment of the system, totaling $725 million.

program is entirely funded by premium processing fees paid by applicants for immigration benefits. Figure 6 shows increases in the estimated costs for the Transformation Program from 2007 to 2015.
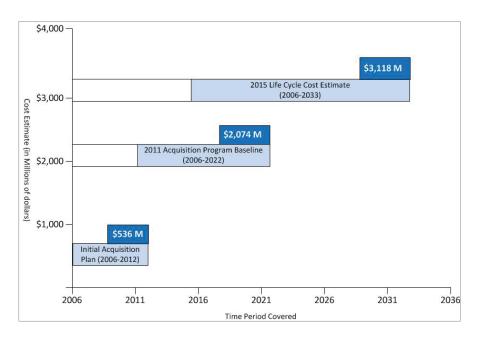
Figure 6: Transformation Program Cost Increases from 2007 to 2015

Source: USCIS Transformation Program Acquisition Baseline documents

Strategic Goals Remain Unmet

USCIS established three strategic goals to ensure successful transition to electronic processing. However, USCIS has not yet met its goal to deliver a complete and efficient account-based system that will process and manage all applications. Also, customer service has not improved, and national security and system integrity cannot be guaranteed. Until USCIS fully implements ELIS, the agency will not be in a position to effectively and efficiently manage existing workloads, or adapt to changes in legislation that may increase workloads.

Transformation Goals Not Met

In April 2007, USCIS established goals to ensure successful transition towards an account-based system that would process and manage all customer applications electronically. The three strategic goals for the Transformation Program are provided in table 6.

Table 6: Transformation Program Strategic Goals

Transformation Strategic Goals	
Operational Efficiency	Provide the tools to enable USCIS to be an innovative, flexible, and accountable organization that invests in its people and infrastructure to ensure cost effectiveness and consistent results.
Customer Service	Provide the tools to facilitate communications between stakeholders and USCIS and the timely, equitable, and accurate adjudication of benefits.
National Security and System Integrity	Create a system that is efficient, consistent, and accurate to help secure the nation by ensuring that ineligible individuals are not granted immigration or citizenship benefits, while protecting the privacy rights of individuals.

Source: USCIS Transformation Program Strategic Plan, April 18, 2007

Operational Efficiencies in Workload Processing Not Achieved

USCIS has not yet met its goal to deliver a complete and efficient account-based system that will allow for direct e-filing of immigration forms by customers and improve operational efficiency for USCIS Immigration Service Officers. On the contrary, during our audit we found that ELIS had slowed work processes and created inefficiencies due to missing functionality and a high number of performance problems.

According to agency-wide performance metrics, benefits processing in ELIS was to take less than 65 days. However, we found that as of May 2015, processing was taking an average of 112 days, almost twice that amount of time. Previous results reported for this metric also were high: 104 days in November 2014, 95 days in February 2015, and 112 days in May 2015. By slowing down the work of adjudicators, ELIS was resulting in lost efficiency and productivity in processing benefits.

To illustrate, the time required to process the USCIS Immigrant Fee in ELIS at TSC exceeded that of the legacy CLAIMS 3. Processing time per case had increased from 3 days in CLAIMS 3 to more than 10 days using ELIS. As a result, applicants were delayed in receiving their Green Cards. Also, while TSC's metric for issuing Green Cards in CLAIMS 3 was 30 days or less, the timeframe for Green Card processing in ELIS had increased to well beyond that target.

Given the inefficiencies created by ELIS, a backlog of over 12,000 Green Card applications was waiting to be processed as of 2014. TSC management stated that this continual backlog since ELIS deployment had caused an increase in
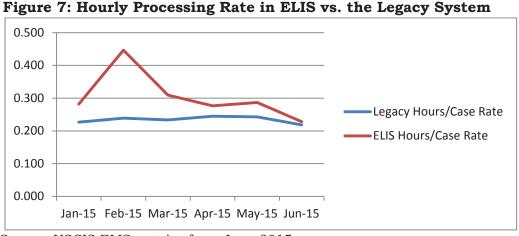
the number of customer complaints and congressional inquiries. The service center Deputy Director had to request a waiver from OTC for authorization to revert to CLAIMS 3 to process cases that were at least six months old. By reverting to CLAIMS 3, the backlog was reduced from approximately 20,000 cases to 12,000 cases from 2013 to 2014. As of July 2015, the service center was still working to processes cases that were nearly two years old.

TSC personnel attributed some operational inefficiencies in ELIS to user interfaces that required navigation across multiple screens, with delays between each screen. Personnel explained that working across multiple screens to process each case took a lot of time, as did refreshing the screens to generate real-time data in ELIS. These challenges led to user frustration and reluctance to adapt to ELIS processing. TSC managers stated that these challenges also had a significant negative impact on productivity because the previous system (CLAIMS 3) had included all needed functions on one screen. Managers were also concerned about the negative effect that ELIS had on contractor performance. When using CLAIMS 3, contractor staff had to meet well-defined timeliness and productivity levels. However, when ELIS was not functioning properly, contractor staff could not be held accountable for the same level of productivity. For instance, contractors cannot be faulted for low productivity levels if a system is down or is generating errors that must be dealt with before moving on to the next case. OTC personnel anticipated that some of these ELIS inefficiencies would be addressed in moving the USCIS Immigrant Fee processing to the new ELIS architecture in late 2015.

The NBC reported that ELIS had a negative impact on processing Application to Replace Permanent Resident Card (I-90) cases as well. For the first 2 months following ELIS deployment in March 2015, the NBC required nearly twice the time to process these cases in ELIS than on paper. Specifically, some adjudicators we spoke with said they could process more cases per hour on paper than in ELIS. Further, adjudicators were required to submit help desk tickets as each system problem occurred, which took additional time away from processing cases. Some adjudicators said they had to rework a single case several times to check for resolution of the system issues that had hampered processing. However, data captured by the USCIS Planning and Program Analysis Branch, pictured in figure 7, indicated that the hourly processing rate quickly improved from the March deployment to June 2015 as ELIS enhancements were made. This data from June 2015 indicated that the ELIS processing rate per hour was nearly equivalent to that of legacy processing.

Figure 7: Hourly Processing Rate in ELIS vs. the Legacy System

Source: USCIS ELIS metrics from June 2015

USCIS' struggles to improve efficiency through automated benefits processing are longstanding. In 2005, when USCIS transformation efforts first began, we reported that USCIS immigration benefits processes were manual and labor-intensive, resulting in additional time, expense, and effort to adjudicate cases.[25] In 2014, we reported that although ELIS capabilities had been implemented, the anticipated efficiencies still had not been achieved. In fact, we reported in 2014 that adjudicating benefits on paper was faster than adjudicating them in ELIS.[26] This remains unchanged to date. Until USCIS addresses the major problems identified with ELIS design and functionality, granting immigration benefits to customers may be delayed.

Ensuring progress in operational efficiency was hampered by the fact that USCIS lacked an adequate methodology for assessing ELIS' impact on time and accuracy in benefits processing. Beyond obtaining feedback from personnel and customers using the system, the OTC could not effectively gauge whether cases were being adjudicated more efficiently or accurately in ELIS. The OTC had eight key performance parameters for measuring and tracking cumulative progress toward establishing electronic benefit processing capabilities via ELIS. However, these metrics did not take into account the impact ELIS had on day-to-day processing and workflow at each location using the system. For example, the OTC reported metrics on ELIS reliability, availability, and maintainability on a monthly basis. However, these metrics did not provide adequate insight into the quality or timeliness of each case adjudicated in the system. Until adequate performance metrics are established, USCIS will lack awareness of ELIS' impact on agency mission operations, such as whether ELIS

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[25] *USCIS Faces Challenges in Modernizing Information Technology,* OIG-05-41, September 2005.
[26] *U.S. Citizenship and Immigration Services Information Technology Management Progress and Challenges,* OIG-14-112, July 2014.

is more efficient than manual processing or has decreased the need for adjudicators to use multiple legacy systems. See appendix G for ELIS performance measures and results as of July 2015.

Customer Service Not Improved

The Transformation Program had not met its goals of improving communications and providing timely and accurate immigration benefits and information services to customers. As of July 2015, USCIS had nearly 400,000 online ELIS applicants. According to survey results from April and May of 2015, customer satisfaction with the Application to Replace Permanent Resident Card (I-90) benefit type was generally positive. Average customer satisfaction with the electronic form was above 85 percent in April 2015 and at 93 percent in May 2015. Customers indicated it was easy to file applications and ELIS saved them postage and time.

However, there were a number of challenges for USCIS to address to improve customer filing of immigration benefit applications in ELIS. For example, ELIS uses the Department of Treasury's Pay.gov website to process electronic payments.[27] In their survey comments, customers discussed issues concerning electronic payments. At times, customers received duplicate ELIS receipts for their applications or received benefits without paying at all. In other instances, customers found that duplicate ELIS accounts had been established in their names, or accounts were not created at all as electronically requested. USCIS Field Operations Directorate escalated these issues in April once the number of pending cases had grown to 500. The OTC subsequently addressed these issues with code fixes in June 2015. However, field operations managers stated the issues should have been addressed before customers were impacted.

ELIS has also had a negative impact on customer service at multiple U.S. ports of entry where customers were detained for up to a day while waiting for verification of their permanent residence status. This problem increased as more customers filed electronic Applications to Replace Permanent Resident Card (I-90) in ELIS because U.S. Customs and Border Protection officers at U.S. ports of entry lacked direct access to ELIS to validate ELIS receipt numbers. The officers needed system access to verify the status of applicants before allowing them to enter the United States. Without direct system access, the officials had to call USCIS field offices and have them check each application in ELIS. This was a significant problem, causing customers to be detained for hours. Customers could elect to file duplicate applications, but this resulted in them having to pay additional application fees unnecessarily.

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[27] Pay.gov sends electronic payments and receipt of payment clearance verification.

National Security and System Integrity Not Ensured

The Transformation Program has not met its national security and system integrity goal, intended to ensure that ineligible individuals are not granted immigration or citizenship benefits. Although a large number of immigration benefits are highly dependent on USCIS having the correct customer addresses, there have been numerous problems with documents printed with incorrect names or mailed to the wrong addresses. This has created potential security concerns about documents that cannot be accounted for or that may have fallen into the wrong hands.

For example, the number of Green Cards sent to the wrong address has increased since ELIS was deployed in 2012. Personnel reported this was due to a system limitation that prevented adjudicators from changing addresses after the field initially was populated in the system. Even in cases where customers requested address changes, adjudicators were unable to update the system. Further, the system did not always accurately display address information, often eliminating or cutting off critical elements such as apartment numbers. The OTC indicated that these security measures were in place to comply with Federal requirements for remote identify verification of the person requesting the address change. The OTC is working to address this issue by adding remote capabilities that will allow address changes in ELIS.

TSC personnel stated that there was no accurate means of identifying the exact number of potentially hundreds of cards sent to incorrect addresses for cases processed in ELIS. They said their only option for addressing the problem of incorrect addresses was to manually send out notices with instructions on how to mail the cards back, but this was not effective. Efforts to change addresses and re-mail returned cards also required additional time, significantly increasing the TSC workload. After switching to ELIS, the TSC had to increase its staff from one to three workers dedicated solely to this task, which took 15 additional steps and 4 minutes per case in ELIS as compared with CLAIMS 3.

USCIS recognized the potential national security vulnerability of sending USCIS documents to unauthorized individuals who might sell or use them fraudulently for profit. The Associate Director of Field Operations acknowledged that USCIS products should go out accurately 100 percent of the time, stating that it was damaging to the public's perception of the agency when it made this kind of mistake. This issue was especially critical because of the large volume of Immigrant Visas processed—typically approximately 500,000 each year.

The background check process posed an additional national security concern. Specifically, after the Application to Replace Permanent Resident Card (I-90)

was released in ELIS, the Background Check Unit no longer had a reliable method to track and monitor the history of each case. Due to limitations in the system, adjudicators had to email to the Background Check Unit any cases that warranted further background checks. However, performing this step outside of ELIS bypassed system functionality and case history recording in the system. Until this functionality is added to ELIS, USCIS personnel have no automated means of ensuring that background checks have been completed for each I-90 case processed.

Recommendations

We recommend that the USCIS Director:

Recommendation 1: Ensure adequate communications and stakeholder involvement throughout system development and deployment so that each ELIS release provides needed functionality.

Recommendation 2: Develop and implement performance metrics to measure operational efficiencies achieved via automation of each benefit type in ELIS.

Recommendation 3: Develop and implement a plan for end-user involvement in end-to-end testing to ensure each ELIS release functions as required prior to deployment.

Recommendation 4: Develop and implement a plan to provide adequate support for addressing system issues and assisting end-users following deployment of each ELIS release.

OIG Analysis of USCIS Comments

Management Comments and OIG Analysis

We obtained written comments on a draft of this report from the Director of USCIS. We have included a copy of the comments in their entirety in Appendix B.

In the comments, the Director stated that USCIS agrees with our assessment that technology is crucial for USCIS to accomplish its mission. However, the Director did not concur with all of our findings and recommendations. The Director provided specific comments regarding each of his concerns. We have reviewed the Director's comments, as well as the technical comments previously submitted under separate cover, and made changes to the report as appropriate. Following is our evaluation of the USCIS Director's general

comments, as well as his response to each recommendation in the draft report provided for agency review and comment.

OIG Response to General Comments:

- The Director stated that the report did not appropriately recognize the full extent of USCIS efforts to implement new technology to support its mission. We disagree with this assertion. In our report, we recognize all of USCIS' efforts since 2005 to implement new technology and transform its paper-based processes into an integrated and automated processing environment. We did so, despite USCIS' repeated efforts to constrain our audit scope by insisting that we not consider historic trends and issues from prior audit reports as they relate to deficiencies currently identified with the automation initiative and operational performance. The OIG has issued five audit reports on multiple USCIS IT modernization attempts over the past 11 years. The objective of this current audit was to determine the effectiveness of USCIS' efforts to automate the processing of immigration benefits, regardless of the system name, version, or development methodology. As this audit unfolded, we believed it important to present a holistic and contextual picture of USCIS' iterative efforts to transform benefits processing operations over time.

- The Director expressed concerns regarding three of the report recommendations, which he stated "for the most part are based on anecdotal statements unsupported by documentary evidence." We do not understand the basis for this statement. USCIS has not seen our audit work papers. Also, given the audit team's ongoing dialogue and coordination with the USCIS audit liaisons throughout the project, USCIS should have been fully aware of the extent of audit field work and contacts with agency personnel. We initially explained the extent of our planned audit fieldwork to the Office of Transformation Coordination (OTC) at the entrance conference in April 2015; we concluded the audit by providing details on the breadth of work conducted at the exit meeting in January 2016. Our project scope included meetings with over 125 USCIS and DHS personnel (including 35 OTC program staff, over 60 ELIS users, and dozens of USCIS and ELIS stakeholders), as well as compilation of more than 350 documents to accomplish our audit objectives. In cases where statements were corroborated across multiple ELIS end-users and stakeholders, anecdotal information is not only a valid form of evidence per government auditing standards, but should be considered invaluable feedback for agency program managers to address as they move forward with transformation activities. We believe the range of audit information compiled was a sound and ample basis on which to form our audit conclusions and recommendations.

- The Director stated that "USCIS provided extensive documentation to the OIG through the technical comments process to address accuracy and context concerns with the draft report. However, it does not appear that the report will be modified as appropriate." This is an incorrect assumption regarding the OIG's assessment of USCIS' technical comments and the changes made to the final report. Specifically, on January 29, 2015, USCIS provided the OIG with 126 technical comments comprising 61 pages. A total of 64 documents were embedded in the technical comments and were complemented by 32 additional documents that USCIS emailed to the OIG on January 29, 2016, as added support. The audit team fully evaluated all of the comments and the materials provided. Upon concluding this evaluation, the OIG provided a spreadsheet to USCIS on February 9, 2016, indicating that it would incorporate, to varying degrees, 92 of the 126 comments (over 70 percent). As promised, our final audit report includes these modifications.

- The Director speculated that three report areas would not be modified as requested: (1) stakeholder involvement, (2) system testing, and (3) technical support. Again, this is an incorrect assumption given the fact that the spreadsheet that the OIG provided on February 9, 2016, fully disclosed that we would wholly or in part make the suggested changes to our final report in these areas. Following are details on how we addressed the Director's concerns in the three areas identified.

  1. Stakeholder Involvement: The Director took umbrage with a report statement that ELIS stakeholders lacked the opportunity to provide input on decisions that impacted their operations. Specifically, the Director remarked, "Although the stakeholders interviewed by the OIG may not have had a direct role, the USCIS OTC did have substantial direct stakeholder input when developing ELIS to support I-90 and immigrant processing." However, it should be noted that the OIG never indicated that there was no stakeholder input to ELIS development and implementation efforts. Rather, we indicated how stakeholder input could be improved based on our interviews with USCIS personnel with key roles in transformation efforts. To illustrate, audit staff conducted site visits to all three locations using ELIS and interviewed over 60 ELIS stakeholders, including transformation liaisons, ELIS product owners, and service center and field operations managers. Based on these interviews, we concluded in our report that "the development process for ELIS included subject matter experts from field operations who provided specific system and functionality requirements. However, these same subject matter experts were not always involved during system implementation efforts."

To support the assertion that stakeholder input was not lacking, the Director stated that the "OTC had a product owner from the Field Operations Directorate's NBC working with developers on I-90 functionality." This statement does not reflect current reality. The Field Operations Directorate stakeholder was the product owner for the I-90 several years ago, dating back to September 2013. However, in early 2015, the OTC removed this role from the Field Operations Directorate and replaced it with a product owner from the OTC reporting directly to the OTC Program Chief. Removing field personnel from the product owner role evoked significant concern in both headquarters and the field among stakeholders who believed that opportunities to provide input and make decisions had been diminished.

The Director added that the OTC had direct business input from the Texas Service Center (TSC) stakeholders, comprised of system users, who played roles in user story development, user story acceptance, sprint reviews, and demonstrations. Again, our report does not assert that TSC stakeholders were not involved in the system development process. In fact, we met with six stakeholders involved in the immigrant processing development and testing efforts at the TSC to learn about their roles in the requirements development process.

2. <u>System Testing:</u> The Director concluded that "the report's section on testing refers to statements from NBC and TSC staff inconsistent with available documentation." Specifically, the Director understood our report to say that testing was not sufficient, that users were not provided the opportunity to test before functionality was implemented, and that staff were told testing activities were scaled down due to OTC schedule and resource limitations. However, the Director's statements mischaracterize the points we made in the report on system testing.

To illustrate, our report does not claim that users were not provided the opportunity to test before functionality was implemented. Rather, we reported that testing prior to each ELIS release was not sufficient to ensure the end-to-end workflow would work optimally prior to each deployment. The audit team confirmed that tests were conducted in small, modular sessions to validate portions of functionality, rather than testing in a live test environment of the end-to-end work flow. The lack of robust testing was an overwhelming concern raised by Transformation stakeholders at USCIS headquarters, as well as by ELIS users at every location we visited. Users said they always were only given pieces to test and were never allowed to test the full functionality of the system. They also complained that ELIS testing

activities lacked the complexity necessary to fully assess the new work processes being deployed.

To ensure clarity, we revised in our final report our discussion regarding testing activities. Our report now states that "testing activities were restricted due to the time it would take to get the data set up for additional test scenarios." As a basis for this statement, TSC management consistently expressed concerns to us that the OTC did not want to invest additional time conducting tests for Release 5.1 in efforts to meet program schedule release dates. We also obtained documentation that TSC management appealed to the OTC for additional system testing, but the OTC responded that to do so would entail additional time.

3. Technical Support: The Director raised concerns about our report statements regarding insufficient technical support for, and communication with, ELIS end users. Specifically, the Director said, "After the November 2014 ELIS release supporting processing of the I-90, OTC established weekly incident prioritization meetings with the NBC and other stakeholders, during which the process for resolving each incident was discussed." The Director added that after each major release, OTC sent people onsite to assist and talk with users.

We acknowledge in our report USCIS' efforts to support end-users during ELIS releases. For example, we are aware of the overarching incident response process that the OTC had in place when ELIS I-90 was deployed. But we are equally aware of concerns raised by end-users and stakeholders at each location that this support was inadequate; our report highlights these concerns. National Benefits Center officials, for instance, repeatedly cited a lack of communication and transparency as a major concern throughout the release of the I-90.

With regard to the Director's statement that the OTC sent people onsite to assist and talk with users, we found that this also was not fully effective. Personnel we interviewed lacked understanding of when system enhancements would be made, or how they would be prioritized. Personnel also lacked clarity as to when or if help desk tickets would be resolved. As a result, and as USCIS acknowledged in technical comments on our draft report, National Benefits Center officials documented and tracked help desk tickets on their own in attempts to maintain visibility of all system errors and processing issues. As we discuss in our report, the OTC subsequently added an incident tracking sheet to its SharePoint site so that users would have almost real-time visibility into the status of each open ticket. However,

OTC's tracking mechanism was not put in place until June 2015, which was 2 months after the March 30, 2015, deployment of automated I-90 processing.

The Director asserted that by June 2015 the OTC resolved 100 percent of the l-90 processing-related issues reported to the USCIS Help Desk. However, we find this assertion inconsistent with USCIS' technical comments on our draft report indicating that 84 percent of the I-90 tickets were closed by the end of July 2015. Similarly, the Director stated that for the incidents reported by the TSC from May 2013 through June 2015, a total of 69 percent were resolved by the end of July 2015. However, the supporting data that USCIS provided in its technical comments did not include sufficient information for us to validate this claim.

- The Director asserted that facts were inaccurately presented in five areas of our report pertaining to (1) national security, (2) ELIS architecture, (3) corrective actions that occurred after our audit, (4) data entry standards, and (5) the need for manual checks in the system. Following is our evaluation of the five areas with alleged inaccuracies.

  1. <u>National Security Goals</u>: The Director did not understand our "report's assertion that national security was impacted based on address changes by applicants." This is a mischaracterization of the narrative discussion in our report. To clarify, our report discusses incorrect or out-of-date applicant addresses that could not be changed in ELIS. As a result, potentially hundreds of Green Cards were sent to the incorrect recipients. It is intuitive that sending official USCIS credentials to unauthorized individuals poses potential national security risks.

     The Director further stated that our "report does not take into account that USCIS is in the process of implementing a remote identity verification process that will legally allow address changes to occur in ELIS. This process will improve security and ensure compliance with Federal legal requirements related to system assurance levels." In response, we have revised our report to include this additional information.

     The Director stated that the report does not note that while this remote identity verification process is being developed, users require a manual identity verification process before a Permanent Resident Card can be routed to an address other than the one provided by the immigrant. We do not find this point relevant to our report discussion regarding the use of ELIS to process Green Cards. Nonetheless, it should be noted that the inability to update applicant addresses in ELIS required extra work and

the dedication of additional service center personnel to manually send out notices with instructions for incorrect recipients to mail the cards back. We have no knowledge whether the service center has been able to retrieve the cards sent out in error.

2. ELIS Architecture: The Director said, "The report does not differentiate issues with the initial version of ELIS and ELIS in the new architecture, yet this is a very important area given the improvements with the new architecture. The report notes problems the TSC had in processing new immigrants in ELIS, but does not recognize that these problems occurred in the initial version of ELIS and were one of the reasons for moving to the new architecture. The new version launched in August 2015 for processing new immigrants was the result of many meetings with users, and greatly improves on the older version."

   Again, we emphasize that this audit was not focused on examining the improvements USCIS made in progressing from one version of the automated benefits processing system to the next. Rather, our audit objective was to more broadly determine the performance outcomes of USCIS' efforts to automate the processing of immigration benefits, regardless of system name, version, or iteration. It would have been inappropriate to discuss any single iteration of the system out of context, since this would have lost sight of the overarching goal of improving USCIS mission operations. Also, both legacy ELIS and ELIS were operational and in use during our audit. The new version of ELIS for processing immigrants was, as the Director stated, launched in August 2015, which was after the conclusion of our audit field work.

3. Corrective Actions that Occurred After our Audit: The Director stated, "The report identified incidents shared by the staff during the time of the audit field work. However, USCIS understands that additional information provided to document OTC's knowledge of each incident and actions already taken to correct them will not be acknowledged in the final report because the corrections occurred after the audit field visit was completed in July 2015."

   Based on USCIS' technical comments, we made numerous edits to our draft report to give the OTC credit for corrective actions, despite the fact that these actions occurred after the conclusion of our audit field work in July 2015 and we had no opportunity to independently verify the improvements. To illustrate, we included several statements throughout our final report to indicate that improvements could be expected beyond the date of our audit as the OTC continued to take corrective actions to address the deficiencies identified.

4. <u>Data Entry Standards:</u> The Director raised concerns about a phrase in our report regarding a "lack of data entry standards." However, we never pursued a lack of data entry standards as an issue in our report. We merely listed this as one example of repeated user feedback regarding the functionality of I-90 processing in ELIS. We neither confirmed nor denied this as a valid end-user complaint. To the extent that the end-users' perspectives regarding data entry standards is incorrect, it is incumbent upon the OTC to communicate and address this issue with the end-users as appropriate. Nevertheless, to satisfy the Director's concern, we have removed the phrase "lack of data entry standards" from our final report.

5. <u>Manual Check of Systems:</u> The Director cited our report statement that "adjudication is slow because the adjudicators have to manually check a number of systems." The Director raised concerns that we did not explain that the system slowness was due to adjudicators manually checking systems as part of a test to ensure ELIS was displaying the right information pulled in from other systems. He said that once these tests were clearly successful, the manual process was halted. Although this information about concurrent testing was not disclosed during our audit field work, we edited our report to indicate that the need to check multiple systems would not continue beyond August 2015.

- The Director's assertion that we did not give USCIS credit for transformation program improvements since 2012 is incorrect. A discussion of the Transformation Program's progression has always been in the report for the purpose of providing historic context for the reader. In addition, appendix E of the report is dedicated to describing progress and substantial changes to the program over time.

- We disagree with the Director's statement that the report does not clearly relate that two different systems were reviewed or provide context around the findings presented. As previously stated, the objective of our audit was to determine the effectiveness of USCIS' efforts to automate the processing of immigration benefits. We focused on system performance and mission outcomes, regardless of the current system name, version, or development methodology. To ensure clarity, we have edited the initial pages of our report findings, as well as our scope and methodology appendix, to indicate that we reviewed the performance of both legacy ELIS and ELIS that were both operational through the conclusion of our audit field work.

Further, we explained in our report that USCIS was planning to decommission the legacy system. Specifically, the report states, "As of June 2015, Form I-539 and Form I-526 had been disabled because USCIS no longer supported this processing in legacy ELIS." According to the report, "the USCIS Immigrant Fee payment in legacy ELIS was scheduled to

transition to the new ELIS architecture in late 2015." Finally, figure 2 in our report provides details and dates for capabilities available in each version of the system.

- The Director stated that "the deployment of any new system will include problems that arise and that need addressing. Incidents shared anecdotally by staff with the OIG were addressed, which demonstrates that the processes in place to address end user issues are working and that USCIS is committed to supporting the internal users of ELIS."

  Contrary to the Director's suggestion, we did not rely solely on anecdotal information to accomplish our audit. We based our findings on audit work at USCIS headquarters and site visits to every field location that was using ELIS as of July 2015. The site visits entailed meetings with OTC personnel, system stakeholders, and over 60 ELIS end-users, as well as compilation of voluminous supporting documentation. While some issues we reported were based on anecdotal information from interviews with end-users, we also spent hours witnessing system demonstrations or observing personnel responsible for records checks, benefits adjudication, and immigrant fee processing as they used the system to accomplish their work. Throughout the report, we discuss instances where USCIS had efforts ongoing to address system incidents. Moreover, we have added several statements in our final report to indicate where system improvements had been made or could be expected beyond the date of our audit as the OTC continued to take corrective actions to address the deficiencies identified.

- We have no basis on which to validate the Director's claim that "the USCIS Transformation program is widely considered a model for bringing private sector best practices into government programs. The practices used to create ELIS are the same as those used by leading technology companies like Netflix, Amazon, and Google. Other government agencies regularly visit Transformation to learn about these contemporary best practices. In addition, I received a letter from the Executive Director of the DHS Digital Service team regarding this report and the Transformation effort at USCIS, which I have attached for your information."

  While we recognize throughout our report that the Transformation Program has adopted the Agile methodology to develop ELIS, it was not within the scope of our review to assess this methodology or any other leading edge technologies USCIS may have adopted. Again, our audit purpose was to assess the outcomes or efficiencies gained by efforts to automate immigration benefits processing. The Government Accountability Office (GAO) was conducting a separate assessment of USCIS' system development practices concurrent with our audit and should be contacted in this regard.

- We appreciate the opportunity to review the letter from the Executive Director of DHS Digital Service team regarding our report. However, much of the letter is not pertinent to our audit scope and objective. As we have stated several times, our audit did not include an assessment of USCIS' program management or Agile system development practices. Our audit objective was to determine the effectiveness of USCIS' benefits processing automation efforts.

  However, we take umbrage with the fact that the letter falsely states we based our work on input from just nine users. This is a significant mischaracterization of our work. As previously stated, the audit team visited every USCIS location that was using ELIS to process immigration benefits and services as of July 2015 and met with over 60 ELIS end-users. Given OIG staff's ongoing dialogue and coordination with the USCIS audit liaisons throughout our project, USCIS should have been fully aware of the extent of our field work and contacts with agency personnel. We initially explained the extent of our planned audit fieldwork to the Office of Transformation Coordination (OTC) at our entrance conference in April 2015; we concluded the audit by providing details on the breadth of work conducted at the exit meeting in January 2016.

  Finally, it should be pointed out that Digital Services concluded its letter by validating our report recommendations, stating that our recommendations are valuable areas for any software project to focus on. Further, according to the letter, "they are in fact some of the areas my team has been working with the Program on for the last 18 months."

Response to Report Recommendations:

In the formal written comments, the Director concurred with recommendations 2 and 3, but did not concur with recommendations 1 and 4. We are perplexed at USCIS' non-concurrences, given Digital Services' letter validating our report recommendations, as well as the Director's claims that USCIS is already taking steps to implement some of the actions recommended. Typically, when agencies assert they are already working in line with OIG recommendations, they concur and provide evidence of the corrective actions taken and progress made so the recommendations might be closed. Following is a summary of USCIS management's response to each recommendation and the OIG's analysis.

Recommendation 1: Ensure adequate communications and stakeholder involvement throughout system development and deployment so that each ELIS release provides needed functionality.

Management Comments

The USCIS Director did not concur with recommendation 1, stating the report inaccurately suggests that the OTC was working in a vacuum and did not ensure stakeholder involvement in ELIS development and implementation. He described an arrangement in which USCIS Field Operations and Service Center Operations had product ownership and were directly responsible for oversight, development, and implementation of business requirements until February 2014 when the product owner role transitioned to the OTC, with the operational units providing business advisors. Given these actions, the Director requested that the OIG consider this recommendation resolved and closed.

OIG Analysis

We never concluded in our report that "the OTC was working in a vacuum" or that there was no stakeholder input to ELIS development and implementation efforts. Rather, we indicated how stakeholder input could be improved based on our interviews with USCIS personnel with key roles in transformation efforts. Specifically, our report stated, "Participation in ELIS implementation efforts has largely been confined to selected team members within the OTC, and communication with ELIS end users about each ELIS release has been limited. Also, ELIS stakeholders have not had adequate opportunity to provide input or weigh in on decisions that may impact day-to-day benefits processing operations."

Further, we discuss in our report the product owner position and its role to assist in development and testing of each system release. However, according to stakeholders at both headquarters and in the field, having product owners that reside within the Transformation Program office versus in field operations where capabilities are used does not ensure a sound nexus to users. Stakeholders believed this approach limited their ability to provide input and assist with decision-making. Because the USCIS Director does not agree with the need for improved stakeholder involvement, this recommendation remains open and unresolved.

Recommendation 2: Develop and implement performance metrics to measure operational efficiencies achieved via automation of each benefit type in ELIS.

Management Comments

The Director concurred with recommendation 2, indicating the OTC has been measuring adjudications per hour for the I-90 since January 2015 and will continue to use this measure for all benefit requests as each new form type and capability is added to ELIS. Further, he said the OTC will identify additional productivity measures for the non-adjudicative work associated with processing new immigrants as well as pre-adjudication processing associated with immigration benefit requests. The Director estimated that these actions will be completed by September 30, 2016.

OIG Analysis

The described actions satisfy the intent of the recommendation. This recommendation will remain open and resolved until USCIS provides evidence it has implemented the metrics needed to measure operational efficiencies achieved via automation of each benefit type in ELIS.

Recommendation 3: **Develop and implement a plan for end-user involvement in end-to-end testing to ensure each ELIS release functions as required prior to deployment.**

Management Comments
The Director concurred with recommendation 3. The Director indicated that USCIS' draft of a new end-user testing strategy was in place in May 2015 and finalized in November 2015. USCIS provided a copy of the testing strategy document to the OIG under a separate cover.

OIG Analysis

The described actions satisfy the intent of the recommendation. This recommendation will remain open and resolved until USCIS provides evidence it is implementing the end-user testing strategy to ensure each ELIS release functions as required prior to deployment.

Recommendation 4: Develop and implement a plan to provide adequate support for addressing system issues and assisting end-users following deployment of each ELIS release.

Management Comments

The Director non-concurred with recommendation 4. The Director stated that after each deployment, the OTC sends a team to the relevant field office or service center to address questions and observe processing within the system. The OTC also establishes a point-of-contact to help ensure problems are quickly reported at each site. The Director said meetings are held to assess progress in processing and the OTC will send a team back multiple times for ongoing feedback. Further, the Director discussed a strong remote monitoring capability that supports system performance assessment, dashboards to help identify problems, and OTC actions on help desk tickets submitted by users. Given these actions, the USCIS Director requested that the OIG consider this recommendation resolved and closed.

OIG Analysis

Although the Director claims the existence of longstanding processes that address this recommendation, our audit work disclosed that the processes were not fully effective in ensuring support for end-users after each ELIS release. Specifically, we stated in our report that the OTC deployed ELIS between 2012 and 2015 without an adequate plan for providing proactive technical support to end users. Our visits to each location using ELIS confirmed numerous shortcomings for both the I-90 and USCIS Immigrant Fee ELIS releases. Problems included ELIS frequently locking up, requiring users to close their web browsers and restart the system. When asked how such issues were being resolved, users stated they were instructed to submit help desk tickets for any and all system-related problems. However, this resulted in approximately 1,000 open tickets dating back to the initial release in November 2014. Especially disturbing was the lack of visibility or communication from the OTC on how and when issues were going to be resolved, which had a significant impact on users' day-to-day operations. Because the USCIS Director does not agree with the need for improved end-user support, this recommendation remains open and unresolved.

Appendix A
Objective, Scope, and Methodology

As part of our ongoing responsibilities to assess the efficiency, effectiveness, and economy of departmental programs and operations, we audited USCIS' plans and the effectiveness of its efforts to automate processing of immigration benefits. Specifically, we measured the extent to which USCIS achieved its goals and objectives for automated processing of immigration benefits, determined whether systems used to conduct online processing have improved operational efficiency, and assessed USCIS' ability to handle an expected increase in the volume of benefits processing based on potential immigration reform.

We researched and reviewed Federal laws, Department management directives, agency directives, and plans and strategies related to IT systems, management, and governance. We obtained published reports, documents, testimony, and news articles regarding USCIS' automated processing. Additionally, we reviewed published GAO and DHS OIG reports to identify prior findings and recommendations. We used this information to establish a data collection approach that consisted of interviews with relevant stakeholders, focused information gathering, documentation analysis, site visits, and system demonstrations to accomplish our audit objectives. We observed processing in legacy ELIS and ELIS, which were both still in use through the end of our audit field work.

We held meetings and participated in teleconferences with USCIS staff at headquarters and at field offices to learn about IT functions, processes, and capabilities. At headquarters, we met with representatives of the Office of Transformation Coordination, Office of Information Technology, Office of Performance and Quality, Customer Service and Public Engagement Directorate, Field Operations Directorate, and Service Center Operations Directorate. We interviewed USCIS OTC officials including the Chief, Division Chiefs, and Branch Chiefs to discuss their roles and responsibilities related to USCIS' automated processing.

We visited USCIS field locations in June 2015, including the National Records Center, the National Benefits Center, and USCIS Service Centers in Texas and Vermont. During our field visits, we met with executive personnel, Section Chiefs, Immigration Services Officers, Fraud Detection Unit staff, Background Check Unit staff, Records Unit staff, and ELIS end-users to understand user requirements and system use in the field. We discussed USCIS' IT environment, local IT development practices, user involvement, and communication with headquarters. We collected supporting documents about the USCIS IT environment, IT management functions, and system challenges.

We conducted this performance audit between April and July 2015 pursuant to the *Inspector General Act of 1978*, as amended, and according to generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based upon our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based upon our audit objectives.

Appendix B
USCIS Comments to the Draft Report

U.S. Department of Homeland Security
U.S. Citizenship and Immigration Services
Office of the Director MS-2000
Washington, DC 20529-2000

U.S. Citizenship
and Immigration
Services

FEB **1 9** 2016

MEMORANDUM FOR: John Roth
Inspector General

FROM: León Rodríguez
Director
U.S. Citizenship and Immigration Services

SUBJECT: U.S. Citizenship and Immigration Services' Response to the
Draft Report "USCIS Automation of Immigration Benefits
Processing Remains Ineffective" (Project No. 15-085-ITA-
USCIS)

Thank you for the opportunity to review and comment on this draft report. U.S.
Citizenship and Immigration Services (USCIS) appreciates the work that the Office of
Inspector General (OIG) does, which has previously been helpful in improving our
Information Technology (IT) modernization programs. We agree with OIG's assessment
that "Technology is crucial for USCIS to accomplish its mission." However, we cannot
concur with all of your findings and recommendations in this draft report because it does
not appropriately recognize the full extent of USCIS efforts to implement new technology
to support our mission of overseeing lawful immigration to the United States.

More specifically, the report contains three recommendations that for the most part are
based on anecdotal statements unsupported by documentary evidence. USCIS provided
extensive documentation to the OIG through the technical comments process to address
accuracy and context concerns with the draft report. However, it does not appear that the
report will be modified as appropriate. For example:

- The report states that Electronic Immigration System (ELIS) stakeholders lacked
the opportunity to provide input on decisions that impacted their operations.
Although the stakeholders interviewed by the OIG may not have had a direct role,

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Ineffective"
Page 2

the USCIS Office of Transformation Coordination (OTC) did have substantial
direct stakeholder input when developing ELIS to support I-90 and immigrant
processing. OTC had a product owner from the Field Operations Directorate's
National Benefits Center (NBC) working with developers on I-90 functionality.
OTC also had direct business input from the Texas Service Center (TSC) team,
which was comprised of system users, while re-building the immigrant processing
functionality within the new architecture. These stakeholders played roles in user
story development (a plain language statement to describe to developers exactly
what is needed by the business in terms of system functionality), user story
acceptance, sprint reviews, and demonstrations.

- The report's section on testing refers to statements from NBC and TSC staff
  inconsistent with available documentation. The report states that testing was not
  sufficient; that users were not provided the opportunity to test before functionality
  was implemented; and that staff were told testing activities were scaled down due
  to OTC schedule and resource limitations.

  The ELIS deployment process follows an agile methodology which does not allow
  deployments unless functionality is fully tested. These include unit, integration,
  Rehabilitation Act compliance, static and dynamic security testing, exploratory,
  live interface, user interface-level, end-to-end smoke, performance, and end-user
  testing. USCIS's Independent Verification and Validation team assesses the
  quality of the test processes. End-user testing is conducted throughout the
  development process as functionality is completed. User testing is an incremental
  process, with several testers in different testing sessions throughout the process.
  OIG was not involved with each of the end-user testing sessions. In addition,
  before deploying major capabilities the USCIS Chief Information Officer reviews
  and assesses test results. OTC has never scaled down testing due to schedule or
  resource constraints.

- The report states that there was insufficient technical support for ELIS end-users,
  citing statements from NBC and TSC staff that there was limited communication
  with OTC as to when issues would be addressed. After the November 2014 ELIS
  release supporting processing of the I-90, OTC established weekly incident
  prioritization meetings with NBC and other stakeholders, during which the process
  for resolving each incident was discussed. Furthermore, after each major release,
  OTC sent people on-site to assist and talk with users. In fact, during the time of the
  OIG team's on-site visit to the NBC, OTC also had a team at the NBC. OTC
  resolved 100 percent of I-90 processing related issues reported to the USCIS Help
  Desk from November 2014 through June 2015. As for the incidents reported by the
  TSC from May 2013 through June 2015, 69 percent were resolved by the end of
  July 2015.

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In addition, several facts in the report are inaccurately presented. For example:

- The report states that OTC has not met its national security goals. The scope of security checks completed through ELIS are the same as those completed through legacy systems and processes. USCIS does not understand the report's assertion that national security was impacted based on address changes by applicants. The report does not take into account that USCIS is in the process of implementing a remote identity verification process that will legally allow address changes to occur in ELIS. This process will improve security and ensure compliance with Federal legal requirements related to system assurance levels. Further, the report does not note that, while this remote identity verification process is being developed, USCIS requires a manual identity verification process before a Permanent Resident Card can be routed to an address other than the one provided by the immigrant to the Department of State at his or her consular interview or upon inspection and admission by a U.S. Customs and Border Protection officer at a U.S. port of entry.

- The report does not differentiate issues with the initial version of ELIS and ELIS in the new architecture, yet this is a very important area given the improvements with the new architecture. The report notes problems the TSC had in processing new immigrants in ELIS, but does not recognize that these problems occurred in the initial version of ELIS and were one of the reasons for moving to the new architecture. The new version launched in August 2015 for processing new immigrants was the result of many meetings with users, and greatly improves on the older version.

- The report identified incidents shared by the staff during the time of the audit fieldwork. However, USCIS understands that additional information provided to document OTC's knowledge of each incident and actions already taken to correct them will not be acknowledged in the final report because the corrections occurred after the audit field visit was completed in July 2015.

- The report states that ELIS does not provide the ability to make changes to data and that there is a "lack of data entry standards." The inability of end users to make data changes is not a problem. Data integrity and consistency is a key legal and system security requirement. ELIS deliberately limits the ability to overwrite data in order to ensure data quality and consistency and to ensure that the agency can properly document in litigation what information was provided by the applicant and demonstrate that any after-filing changes were limited to data that does not affect the legal requirements or substantive decision on the request for the immigration

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Ineffective"
Page 4

benefit. Every change made in the system, in the original ELIS and in the new
architecture, is tracked and logged, and no information is deleted.

Some previous USCIS systems allowed such changes by end users, but that ability
to change data led to poor data quality and inconsistencies. USCIS recognizes that
adjudicators who are not used to systems that control for data integrity might very
well feel constrained when using the new system, especially when shifting from a
paper-based to electronic adjudications environment. That does not mean,
however, that the ability to make data changes should be re-instituted. Further, the
report states there is the lack of data entry standards when, in fact, the opposite is
true: ELIS applies many standards. The one example provided by the OIG
concerned a name that exceeded the character maximum. This issue, once
identified, was quickly fixed. A single example provided to the OIG does not
imply a "lack of data entry standards."

- The report states that adjudication is slow because the adjudicators have to
  manually check a number of systems. The report does not explain that at the time
  of the OIG's fieldwork, adjudicators were manually checking those systems as part
  of a test to make sure ELIS was reporting the right information that was being
  pulled in from other systems. Once these tests were clearly successful, the manual
  process was halted.

USCIS acknowledges the Transformation program has had challenges in the past. In
2012, USCIS made substantial changes to improve the program, including changes to the
contracting strategy, the architecture of the system, the development process (moving to a
best-practices agile approach), the infrastructure (moving to the cloud), and the
governance process. These changes have substantially improved the program, yet the
report does not provide a context or recognize these improvements.

We understand the report was intended to be a snapshot of how the system is performing
in production. However, the report does not clearly relate that two different systems were
reviewed. The report also lacks much needed context around the findings. For example,
at the time the OIG was on site at the NBC looking at the new system, about 100,000 I-90
applications were in the system for processing. By the end of the audit fieldwork in July
2015, more than 220,000 applications were being processed. The deployment of any new
system will include problems that arise and that need addressing. Incidents shared
anecdotally by staff with the OIG were addressed, which demonstrates that the processes
in place to address end user issues are working and that USCIS is committed to supporting
the internal users of ELIS.

The report also does not reflect that the USCIS Transformation program is widely
considered a model for bringing private sector best practices into government programs.

The practices used to create ELIS are the same as those used by leading technology companies like Netflix, Amazon, and Google. Other government agencies regularly visit Transformation to learn about these contemporary best practices. In addition, I received a letter from the Executive Director of the DHS Digital Service team regarding this report and the Transformation effort at USCIS, which I have attached for your information.

The draft report contains four recommendations. USCIS concurs with two of the recommendations and non-concurs with two others. Specifically, OIG recommended that the USCIS Director:

Recommendation 1: Ensure adequate communications and stakeholder involvement throughout system development and deployment so that each ELIS release provides needed functionality.

Response: Non-concur. The information in the report inaccurately suggests that the USCIS OTC was working in a vacuum. For the releases supporting the Form I-539, I-526, and immigrant fee processing in legacy ELIS and processing of the I-90 in the new system, initially the operational units - Field Operations Directorate and Service Center Operations Directorate – had product ownership and were directly responsible for oversight, development, and implementation of business requirements. This model was ineffective and in February 2014 a new model was shared with the Transformation Executive Steering Committee that had the Product Owner role reside with OTC, with the operational units providing Business Advisors. Given these actions, USCIS requests that OIG consider this recommendation resolved and closed.

Recommendation 2: Develop and implement performance metrics to measure operational efficiencies achieved via automation of each benefit type in ELIS.

Response: Concur. OTC has been measuring adjudications per hour for the I-90 since January 2015 and will continue to use this measure for all benefit requests as each new form type and capability is added to ELIS. OTC will identify additional productivity measures for the non-adjudicative work associated with processing new immigrants as well as pre-adjudication processing associated with immigration benefit requests. Estimated Completion Date: September 30, 2016.

Recommendation 3: Develop and implement a plan for end-user involvement in end-to-end testing to ensure each ELIS release functions as required prior to deployment.

Response: Concur. USCIS' draft of a new end user testing strategy was in place in May 2015 and was finalized in November 2015. This document is continually reviewed as we obtain additional feedback from our end user testers. We have provided a copy of the

final end user testing strategy document to the OIG under a separate cover and request that the OIG consider this recommendation resolved and closed.

Recommendation 4: Develop and implement a plan to provide adequate support for addressing system issues and assisting end-users following deployment of each ELIS release.

Response: Non-concur. Long-standing processes already exist addressing this recommendation. After each deployment, OTC sends a team to the relevant field office(s)/Service Centers to address questions and to observe processing within the system. OTC also establishes a point-of-contact for each site to work with to ensure problems are quickly reported. Ongoing meetings are held to assess progress in processing, and OTC will send a team back multiple times for ongoing feedback. Further, OTC has a strong monitoring capability that allows a remote team to assess system performance, and OTC has established dashboards which can help identify problems. Finally, OTC takes action on help desk tickets submitted by users. Given these actions, USCIS requests that OIG consider this recommendation resolved and closed.

USCIS is committed to ensuring the completion and success of electronic processing of immigration benefits. Again, thank you for the opportunity to review and comment on this draft report. Technical comments were previously provided under a separate cover. Please feel free to contact me if you have any questions. We look forward to working with you in the future.

Attachment

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

Homeland Security

February 8, 2016

The Honorable León Rodríguez
Director, U.S. Citizenship and Immigration Services
20 Massachusetts Ave. NW, Suite 5110
Washington, DC 20529

Dear Director Rodríguez,

I am writing regarding the Department of Homeland Security (DHS) Office of the Inspector General's Draft Report "USCIS Automation of Immigration Benefits Processing Remains Ineffective." I strongly support the innovative and effective information technology efforts underway at U.S. Citizenship and Immigration Services (USCIS), which serve as a model for other DHS Components and Federal agencies.

In August 2014 President Obama created the U.S. Digital Service (USDS) to transform the Federal government's most critical services through technology by pairing top software engineering, product management, and design talent from the private sector with innovators inside government. One of USDS's first assignments was to conduct an independent assessment of the USCIS Transformation Program. This work began in the USDS headquarters unit located inside the Office of Management and Budget (OMB) and eventually transitioned to the DHS Digital Service when it was founded in September 2015.

Our initial assessment reviewed the Program's troubled history. It began in 2006 with a traditional "waterfall" approach to software development, which aimed to gather thousands of requirements up front and deliver major releases that worked perfectly from the start. The project was also dependent on a single prime contractor. This approach in 2006 had been discredited in the private sector, but was still standard practice in government. It led to the delivery of an initial version of the USCIS Electronic Immigration System (ELIS) that was over cost, over budget, and failed to meet agency needs.

Understanding these challenges, USDS then reviewed USCIS's 2012 decision to reboot the program around the latest industry best practices. USDS concluded that this decision was the right one, and that the new approach showed enormous promise towards meeting agency goals to digitize processing and make it more efficient and customer-friendly. We remain today deeply

impressed with the Program's effective leadership by Office of Transformation Coordination (OTC) Chief Kath Stanley and Chief Information Officer (CIO) Mark Schwartz.

The rebooted Program closely follows the U.S. Digital Services Playbook[1], which was released by the Office of Management and Budget as a compilation of successful best practices in building effective digital services. Examples where Transformation follows these plays include:

- *Play 4: Build the service using agile and iterative practices.* For the rebooted program, your teams chose two high-volume benefits and rapidly digitized them, launching Form I-90 to replace a Permanent Resident Card in November 2014 and Immigrant Fee Payment in August 2015. These products were rolled out in an incremental manner and teams continue to deliver bug fixes and enhancements on a weekly basis. The teams collect feedback from end users and engage in regular usability testing to identify opportunities to improve efficiency and inform development of future product lines.
- *Play 5: Structure budgets and contracts to support delivery.* Your CIO spearheaded an innovative new contracting approach, which replaced a single large vendor with multiple contractors working together and competing for business. Each contractor provides cross-functional agile teams that work with Federal Product Owners and Project Managers, and are evaluated based on their ability to rapidly deliver functionality.
- *Play 6: Assign one leader and hold that person accountable.* OTC is directed by a single Business Owner who has identified a single Product Owner for each product line. Those Product Owners are empowered and responsible for the successful digitization of their benefits. They coordinate and communicate with development teams, operations, and end-users to ensure successful product launches and continuous improvement.
- *Play 8: Choose a modern technology stack.* The rebooted ELIS system has a foundation of open source components, which provide functionality with no licensing costs or dependencies on specific vendors. These technical choices have improved the stability of the system and enabled greater vendor competition by providing access to the large numbers of software developers trained to work in such an environment.

Following our assessment, USDS assembled a team that has worked onsite with the USCIS Offices of Transformation Coordination and Information Technology for the past 18 months to share private sector best practices and advance this critical effort. Our team currently includes:

- A Software Engineering Manager who previously worked at Yahoo;
- The Lead Developer of WordPress, software which powers 25% of all websites;
- A longtime Software Engineer who previously worked at Google and who trained hundreds of other engineers;
- A Senior Product Manager previously who previously worked at Oracle; and
- A world-regarded expert in the design of usable government software systems.

Our close partnership with your teams over the past 18 months has left us even more convinced that the new approach to the Transformation Program is working. So far:

- Over 500,000 filings are being processed electronically in the rebuilt system, representing 16% of all immigration processing.

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[1] U.S. Digital Services Playbook, Office of Management and Budget, https://playbook.cio.gov/

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- Your teams are on track to add new forms that will increase that total to over 40% of all immigration processing by the end of 2016.
- 92% of people who've filed using the new system say they're satisfied with it.

Transformation's new approach has been so successful that the Program hosts a frequent stream of visitors from other DHS Components and Federal agencies seeking to model their own programs after it. Transformation is an example of how failed technology projects can be rebooted and rapidly deliver value for their organizations and the American people.

After reviewing the OIG Draft Report, I wish to emphasize several additional considerations. First, as discussed above the newly-rebooted ELIS system has significant advantages over the initial effort, the latter of which appears to be a focus of much of the report. Second, the Report's analysis of ELIS functionality and performance issues appears to rely heavily upon user reports from just nine USCIS adjudicators. It is commonly accepted practice in software development that issue reports from individual users must be researched and validated before being accepted as system defects. Third, with regard to the functionality of the Form I-90 processing, agile development focuses on releasing a Minimum Viable Product (MVP) that solves a core user need as soon as possible, and rapidly improving on the product once it is released. Form I-90 processing should therefore be analyzed not by the number of issues found at any given time, but by the velocity at which an MVP and iterative developments are developed and released. Indeed, the vast majority of issues with I-90 processing were resolved within weeks of their discovery.

Nevertheless, there is no question that the Report's recommendations, which cover stakeholder engagement, performance metrics, system testing, and fixing issues, are valuable areas for any software project to focus on. They are in fact some of the areas my team has been working with the Program on for the past 18 months. Transformation's practices at the time of the Report's observations already addressed many of these recommendations, and the Program has made significant progress in each of these areas in the six months since. While these efforts should be recognized, these are not topics in which any software project should consider themselves "done," but rather vital focus areas which should be subject to a process of continuous evaluation and improvement.

Ultimately, while I am disappointed by the failure to recognize the successes of your teams in turning around this failed project, there is value in any opportunity to learn and improve. I look forward to continuing to work with USCIS and the Inspector General on this and other critical efforts.

Sincerely,

Eric Hysen
Executive Director
DHS Digital Service

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Appendix C
Status of OIG and GAO Prior Recommendations

OIG Reports

Report	Recommendation	Current status
OIG-05-41[28]	1. Develop a modernization strategy that includes short- and long-term goals, funding plans, and performance measures to guide USCIS entities in accomplishing their citizenship and immigration services missions.	Closed
	2. Complete implementation of plans to centralize IT by placing all USCIS IT employees, budgets, and systems under the CIO's authority and control.	Closed
	3. Ensure that the centralized CIO operation and its IT transformation plans and systems initiatives are linked to and effectively support the consolidated USCIS strategy.	Closed
	4. Review, analyze, and reengineer benefits adjudication activities to help eliminate duplication, transition from paper-based processes, better integrate systems, and provide systems access to the users who need it.	Closed
	5. Finalize and implement plans to upgrade and standardize IT hardware and software systems to support reengineered processes and systems integration and access improvement initiatives.	Closed
	6. Ensure representation and participation of users from across USCIS in all process reengineering and IT transformation activities.	Closed
OIG-07-11[29]	1. Develop a modernization strategy that includes short- and long-term goals, funding plans, and performance measures to guide USCIS entities in accomplishing their citizenship and immigration services missions.	Closed
	2. Complete implementation of plans to centralize IT by placing all USCIS IT employees, budgets, and systems under the CIO's authority and control.	Closed
	3. Ensure that the centralized CIO operation and its IT transformation plans and systems initiatives are linked to and effectively support the consolidated USCIS strategy.	Closed
	4. Review, analyze, and reengineer benefits adjudication activities to help eliminate duplication, transition from paper-based processes, better integrate systems, and provide systems access to the users who need it.	Closed
	5. Finalize and implement plans to upgrade and standardize IT hardware and software systems to support reengineered processes and systems integration and access improvement initiatives.	Closed
	6. Ensure representation and participation of users from across USCIS in all process reengineering and IT transformation activities.	Closed
OIG-09-90[30]	1. Develop an updated transformation approach, strategy, or plan to communicate end-state business processes and IT solutions to stakeholders.	Closed

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[28] *USCIS Faces Challenges in Modernizing Information Technology*, OIG-05-41, September 2005.
[29] *U.S. Citizenship and Immigration Services' Progress in Modernizing Information Technology*, OIG-07-11, November 2006.
[30] *U.S. Citizenship and Immigration Services' Progress in Modernizing Information Technology*, OIG-09-90, July 2009.

	2.	Develop and implement a plan to achieve sufficient and consistent stakeholder participation in process reengineering and requirements definition activities.	Closed
	3.	Complete evaluations to document the results and lessons learned from the pilot and proof-of-concept programs.	Closed
	4.	Develop a USCIS Office of Information Technology staffing plan that includes specific actions and milestones for recruiting and retaining fulltime employees.	Closed
	5.	Communicate guidelines and procedures for acquiring, developing, and managing IT solutions, as defined by the DHS and USCIS CIOs, to stakeholders.	Closed
	6.	Provide the CIO agency-wide budget and investment review authority for all USCIS IT initiatives and system development efforts.	Closed
OIG-12-12[31]	1.	Complete business and technology process documentation to provide the detail necessary to implement the transformation program effectively.	Closed
	2.	Revise its current governance structure to enable more streamlined program decision making.	Closed
	3.	Ensure that transformation program staff possesses the necessary skills to implement the transformation program.	Closed
OIG-14-112[32]	1.	Finalize and communicate USCIS' IT Strategic Plan to ensure that IT supports the mission of USCIS and the Department.	Resolved and Open
	2.	Develop and implement a plan of action and milestones to address senior level staffing vacancies including Chief of Staff, Chief Technology Officer, and Chief, Strategic Vendor Management.	Closed
	3.	Coordinate with the owners of ELIS and the Electronic Document Management System to ensure users are provided with adequate training.	Closed
	4.	Develop and communicate a plan of action and milestones to refresh outdated IT infrastructure, including computers, printers, and software.	Closed

GAO Reports

Report	Recommendation		Current status
GAO-06-375[33]	1.	Ensure that the key elements to successful organizational and business transformation cited in this report are employed.	Closed
	2.	Ensure that both a program management plan and a pilot evaluation plan are expeditiously developed and approved for Integrated Digitization Document Management Program, along with a reliable estimate of funding requirements.	Closed
GAO-07-1013R[34]	1.	Document specific performance measures and targets for the pilots, increments, and the transformed organization that are outcome-oriented, objective, reliable, balanced, limited to the vital-few, measurable, and aligned with organizational goals.	Closed

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[31] *U.S. Citizenship and Immigration Services' Progress in Transformation*, OIG-12-12, November 2011.

[32] *U.S. Citizenship and Immigration Services Information Technology Management Progress and Challenges*, OIG-14-112, July 2014.

[33] I*nformation Technology: Near-Term Effort to Automate Paper-Based Immigration Files Needs Planning Improvements*, GAO-06-375, March 31, 2006.

[34] *USCIS Transformation: Improvements to Performance, Human Capital, and Information Technology Management Needed as Modernization Proceeds*, GAO-07-1013R, July 17, 2007.

	2.	Increase USCIS' focus on strategic human capital management for the transformation.	Closed
	3.	Complete a comprehensive communication strategy that involves communicating early and often to build trust, ensuring consistency of message, and encouraging two-way communication.	Closed
	4.	Continue to develop an enterprise architecture that sufficiently guides and constrains the transformation plans, as DHS works to address limitations in its own enterprise architecture and alignment processes.	Closed
GAO-12-66[35]	1.	Ensure program schedules are consistent with the nine estimating best practices.	Open
	2.	Develop and maintain an Integrated Master Schedule consistent with these same best practices for the Transformation Program.	Open
	3.	Ensure that the life-cycle cost estimate is informed by milestones and associated tasks from reliable schedules that are developed in accordance with the nine best practices we identified.	Open
GAO-15-415[36]	1.	To help ensure that progress made by the Transformation Program can be monitored against established and approved parameters, GAO recommended that the Secretary of DHS direct the department's Under Secretary for Management to re-baseline cost, schedule, and performance expectations for the remainder of the Transformation Program.	Closed
	2.	To improve Transformation Program governance, GAO recommended that the Secretary of DHS direct the Under Secretary for Management to ensure that the Acquisition Review Board is effectively monitoring the Transformation Program's performance and progress toward a predefined cost and schedule; ensuring that corrective actions are tracked until the desired outcomes are achieved; and relying on complete and accurate program data to review the performance of the Transformation Program against stated expectations.	Open
	3.	To improve Transformation Program governance, GAO further recommended that the Secretary of DHS direct the DHS Under Secretary for Management, in coordination with the Director of USCIS, to ensure that the Executive Steering Committee is effectively monitoring the Transformation Program's performance and progress toward a predefined cost and schedule and relying on complete and accurate program data to review the performance of the Transformation Program against stated expectations.	Open
	4.	To help ensure that assessments prepared by the Office of the Chief Information Officer in support of the department's updates to the Federal IT Dashboard more fully reflect the current status of the Transformation Program, the GAO recommended that the Secretary of DHS direct the department's Chief Information Officer to use accurate and reliable information, such as operational assessments of the new architecture and cost and schedule parameters approved by the Under Secretary of Management.	Open

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[35] *Immigration Benefits: Consistent Adherence to DHS's Acquisition Policy Could Help Improve Transformation Program Outcomes*, GAO-12-66, November 22, 2011.
[36] *Immigration Benefits System: Better Informed Decision Making Needed on Transformation Program*, GAO-15-415, May 2015.

Appendix D
Major ELIS Releases

Major USCIS Benefit Types Deployed in ELIS	Description	Release Date
Release A2.1 Form I-539, *Application to Extend/Change Nonimmigrant Status*	The I-539 enables visa-holders to apply online to extend the duration of their visit to the United States. *The I-539 has been decommissioned in ELIS.*	5/2012
Release A2.3 Benefit Type *USCIS Immigrant Fee*	Electronic acceptance of the $165 USCIS Immigrant Fee as payment for a Permanent Residence Card (Green Card). *This benefit is expected to be replaced in 2015 by the new ELIS architecture.*	5/2013
Release A2.4 Form I-526, *Immigrant Petition by Alien Entrepreneur*	The I-526 is an application for an alien entrepreneur to immigrate to the United States. *The I-526 has been decommissioned in ELIS*	7/2013
Release 5.01 Form I-90, *Application to Replace Permanent Resident Card*	The I-90 is an application to renew or replace a Green card.	3/2015
Release 5.02 Lockbox Integration	The Lockbox accepts paper applications and evidence for the I-90.	4/2015
Release 5.1 USCIS Immigrant Fee	Electronic acceptance of the $165 USCIS Immigrant Fee, paid if someone is immigrating to the United States as a lawful permanent resident.	8/2015
Release 6.1 Deferred Action for Childhood Arrivals	Deferred Action for Childhood Arrivals is an application for discretion to defer removal for children who entered the United States.	12/2015
Release 6.2 Temporary Protected Status	Temporary Protected Status is a temporary benefit that designates individuals may not be removed from the United States.	2/2016
Release 7 Form N-400, *Application for Naturalization*	The N-400 is an application for U.S. citizenship.	3/2016

Appendix E
Program Design, Acquisition Approach, and Development Improvements

1. <u>Architecture Complexity:</u> USCIS recognized that the ELIS system architecture was not scalable, sustainable, or flexible and did not meet departmental requirements. We have reported in the past that USCIS struggled with the first iteration of the system architecture, due to the overly complex design, which required integration of 29 different commercial-off-the-shelf software products.[37] To address these problems, the program began efforts to design and build a more modern ELIS architecture in September 2012. USCIS completed deployment of the Form I-90 in the new architecture in November 2014. The new architecture was simplified by using fewer commercial products and including open source software. It also included the use of enterprise services that can be reused across USCIS. The OTC expected this new solution to allow for easier scalability to accommodate surges in the benefits processing by using cloud services.

2. <u>Acquisition Strategy:</u> The Transformation Program began efforts to change its acquisition approach in July 2013 to transition from a primary contractor to a series of multiple contractors providing various needed services. The original acquisition strategy relied on a single contractor to serve as a solution architect to design, develop, test, deploy, and sustain the program. The OTC attributed part of the 2012 breach to the challenges that resulted from giving a single contractor too much responsibility for the program's execution, weak contractor performance, and adopting a development methodology that did not allow DHS to see problems early in the process. This new acquisition strategy was completed in September 2014 and utilized multiple contractors to handle software development; each on 6-month contracts that can be renewed based on performance of the contractor.

3. <u>Development Approach</u>: The program transitioned from a traditional Waterfall to an Agile approach in May 2012 in order to be more consistent with industry best practices and allow for easier incorporation of emerging requirements or shifting priorities.[38] Under the previous Waterfall approach, the initial requirements process took almost 2 years and development for the first release required an additional 14 months. The Agile software

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[37] *U.S. Citizenship and Immigration Services Information Technology Management Progress and Challenges*, OIG-14-112, July 2014.
[38] A Waterfall development approach calls for typically long, sequential phases, resulting in product delivery years after the program starts.
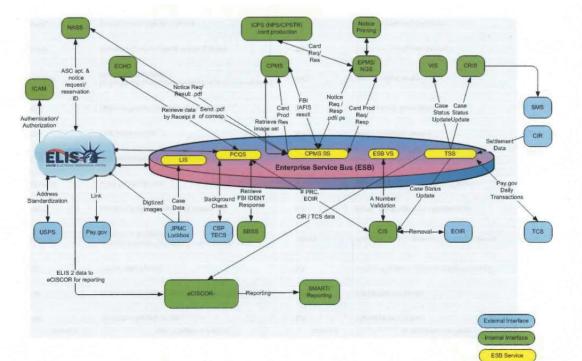
development approach is based on iterative and incremental development activities, which will enable the OTC to produce major releases in cycles of 4–6 months and minor functionality to be delivered on a continual basis.

4. <u>Update the 2011 Project Milestones and Plans:</u> When the Transformation Program did not meet its 2011 schedule baseline, the USCIS Under Secretary for Management required the program to return to the DHS Acquisition Review Board by the end of FY 2014 to re-baseline the program. The program received approval on April 1, 2015, for its new program baseline.

Appendix F
USCIS ELIS Interfaces as of March 2015

USCIS ELIS I-90 Interface Diagram

1. CBP TECS- Customs & Border Protection Traveler Enforcement Compliance System
2. CIR- Collection Information Repository
3. CIS- Central Index System
4. CPMS- Customer Profile Management System
5. CPMS SS- Customer Profile Management Support Service
6. CPSTR- Card Personalization System Technical Refresh
7. CSU- Case Status Update
8. CRIS- Customer Relationship Interface System
9. eCISCOR- Enterprise Citizenship & Immigration Services Centralized Operational Repository
10. ECHO- Enterprise Correspondence Handling Online
11. EPMS- Enterprise Print Manager Service
12. ESB- Enterprise Service Bus
13. ESB VS- Enterprise Service Bus Verification Service
14. ICAM- Identity Credential Access Management
15. ICPS PS- Integrated Card Production System- Print Service
16. JPMC- JP Morgan / Chase (Lockbox-intake channel)
17. LIS- Lockbox Intake Service
18. NASS- National Appointment Scheduling Service
19. NPS- National Print Service
20. NGS- Notice Generation Service
21. PCQS- Person Centric Query Service
22. SMS- Short Message Service
23. TSS- Transformation Support Service
24. USPS- United States Postal Service
25. VIS- Verification Information System

Appendix G
ELIS Performance Measures and Results as of July 2015

	Key Performance Parameters	Threshold	Objective	Actual
1	**Account Accuracy** ELIS shall establish only one account per identical set of key biographic and biometric data when applicable.	99.97%	100%	100% Exceeds Objective
2	**Interoperability** ELIS shall successfully support data transmission to/from the internal USCIS systems and external agency systems in accordance with interface.	90.03%	99.97%	84% Below Threshold
3	**ELIS Reliability** ELIS shall provide service to end-users and successfully respond to interfaces without interruption.	641 hours	712 hours	720 hours Exceeds Objective
4	**ELIS System Availability** ELIS shall allow for high System Availability covering operations 24/7 for external and internal customers.	97.63 %	98.88%	100% Exceeds Objective
5	**ELIS Maintainability** ELIS shall promptly restore services due to unexpected outage.	No more than 10 hours	No more than 8 hours	0 hours Exceeds Objective
6	**ELIS Scalability** ELIS shall have the ability to support future growth to meet rising demand.	7 million transactions per year	20 million transactions per year	Too early to meet the Threshold
7	**Manage Case Disposition** ELIS shall support processing and adjudication of USCIS Lines of Business.	95%	100%	Too early to meet the Threshold
8	**Support Workload and Operational Performance** ELIS shall gather and submit information to USCIS enterprise data warehouse that supports decisions on workload allocations and performance.	95%	100%	100% Exceeds Objective

Appendix H
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Appendix I
Report Distribution

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