



Comprehensive Plan for Immigration Data Improvement

July 26, 2018

Fiscal Year 2017 Report to Congress



**Homeland
Security**

U.S. Immigration and Customs Enforcement

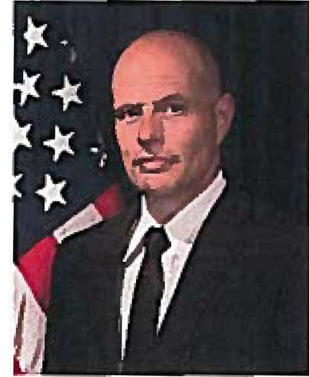
Message from the Acting Director

July 26, 2018

I am pleased to present the following report, “Comprehensive Plan for Immigration Data Improvement,” which has been prepared by U.S. Immigration and Customs Enforcement (ICE).

This report was compiled pursuant to requirements in the Fiscal Year (FY) 2017 Department of Homeland Security (DHS) Appropriations Act (P.L. 115-31) and its accompanying Joint Explanatory Statement and Senate Report 114-264.

Pursuant to congressional guidelines, this report is being provided to the following Members of Congress:



The Honorable Kevin Yoder
Chairman, House Appropriations Subcommittee on Homeland Security

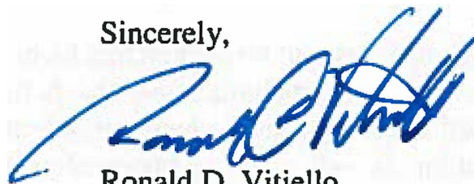
The Honorable Lucille Roybal-Allard
Ranking Member, House Appropriations Subcommittee on Homeland Security

The Honorable Shelley Moore Capito
Chairman, Senate Appropriations Subcommittee on Homeland Security

The Honorable Jon Tester
Ranking Member, Senate Appropriations Subcommittee on Homeland Security

Inquiries related to this report may be directed to me at (202) 732-3000.

Sincerely,

A handwritten signature in blue ink, appearing to read "Ronald D. Vitiello". The signature is stylized and fluid.

Ronald D. Vitiello
Acting Director
U.S. Immigration and Customs Enforcement

Executive Summary

The ICE mission is to protect America from the crossborder crime and illegal immigration that threaten national security and public safety. This mission is executed through the enforcement of more than 400 federal statutes and focuses on smart immigration enforcement, preventing terrorism, and combating the illegal movement of people and goods.

In response to the congressional concerns as outlined in Senate Report 114-264, which accompanies the FY 2017 DHS Appropriations Act (P.L. 115-31), ICE presents this Comprehensive Plan for Immigration Data Improvement (hereafter referenced to as the Plan). The Plan builds on activities already underway in FY 2016 and takes a multifaceted approach that involves: 1) creating an agency-level information governance organization, 2) modernizing critical immigration information technology (IT) systems, and 3) engaging with federal partners in the immigration data domain.

By identifying both short- and long-term actions, ICE believes that the Plan addresses the concerns of the committees and shows a clear strategy to achieving success. To improve ICE immigration data, all of the following offices at ICE will contribute to the execution of the Plan: Enforcement and Removal Operations, Homeland Security Investigations, Information Governance and Privacy, the Office of the Chief Information Officer, and the Office of the Principal Legal Advisor. ICE also will coordinate its efforts for improvements with the DHS Office of Immigration Statistics (OIS) across all facets of the Plan.

In developing the Plan, ICE formed an Integrated Project Team representing key program offices to document progress to date and necessary next steps to validate the Homeland Security Systems Engineering and Development Institute's Immigration Data Modernization Strategy recommendations submitted to the U.S. Senate and U.S. House of Representatives Committees on Appropriations, Subcommittee on Homeland Security in FY 2016.

Over the next 12 months, pilot data projects will be created that focus on data collection standards, data quality practices, and common reporting methodologies that pertain to gang affiliation, prosecutorial discretion, and a unified person-centric view of immigration history. These pilots will improve both frontline operations as well as immigration enforcement decision-making. The first step of the piloting activities will be to perform data profiling on key immigration enforcement and benefit data sets. This is an integral task to create a baseline understanding of the data environment and to validate that information is being collected accurately. Piloting is a critical activity prior to data modernization efforts, and will inform the development of a longer-term strategy for modernizing critical immigration data operations at ICE.

The Plan provides an outline of ICE's current strategy that began in FY 2016 and will continue (by the projected completion of FY 2023) as input is received by immigration partners and the committees. ICE immediately began to implement actions outlined below, and will present any significant changes or modifications to the plan quarterly or as requested by the committees. All projected milestones and completion dates outlined in this report were constructed in the third quarter of FY 2017 and represent ICE's anticipated progress as of June 2017.



Comprehensive Plan for Immigration Data Improvement

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I. Legislative Requirement

This document has been compiled in response to language in the Fiscal Year (FY) 2017 Department of Homeland Security (DHS) Appropriations Act (P.L. 115-31) and its accompanying Joint Explanatory Statement and Senate Report 114-264.

P.L. 115-31 includes the following provision:

Provided further, That of the funds provided under this heading, \$25,000,000 shall be withheld from obligation until the comprehensive plan for immigration data improvement is submitted as required in section 212 of this Act.

Additionally, P.L. 115-31 states:

SEC. 212. (a) Not later than 90 days after the date of enactment of this Act, the Director of U.S. Immigration and Customs Enforcement shall submit to the Committees on Appropriations of the Senate and the House of Representatives a comprehensive plan for immigration data improvement.

(b) The plan required in subsection (a) shall include—

(1) an action plan detailing necessary engagement with Federal partners, major milestones, and an estimated timeline for each of the major milestones leading to completion of the plan;

(2) a staffing plan, detailing the positions and titles for both Federal and contract staff necessary to execute the plan; and

(3) an estimate of the funding necessary to implement the plan.

The Joint Explanatory Statement includes the following provision:

To ensure high-level engagement in support of [immigration data improvement], the Act withholds \$25,000,000 from obligation under ICE's Operations and Support account until the Director submits a comprehensive plan [for immigration data improvement] to the Committees.

The Joint Explanatory Statement also includes the following:

Section 212. A provision proposed by the Senate is included requiring the Secretary to submit a plan for immigration data improvement not later than 90 days after the date of enactment of this Act. The House proposed no similar provision.

Senate Report 114-264 states:

Pilot results shall be presented to the Committee upon completion and inform the development of a longer-term strategy for modernizing critical immigration data operations at ICE. The bill includes a provision withholding \$100,000,000 from ICE's Salaries and Expenses account until the Director submits a comprehensive

plan for immigration data improvement, and the Committee directs the plan to detail requirements necessary to report on gang membership as required in Senate Report 114-68. The plan should prioritize steps necessary to get the best possible information into the hands of the frontline officers, while also collecting details on immigration enforcement decision-making, including details on the use of prosecutorial discretion.

Further, Senate Report 114-68 states:

The Committee remains concerned about increasing gang violence and criminal activity in many parts of our Nation and directs ICE to continually track gang membership amongst fugitives, as well as the detained and non-detained populations. The Committee directs ICE, not later than 180 days after the date of enactment of this act, to submit a report to the Committee regarding the detention and removal of gang members. This report should include: (1) a State by State breakdown of the number of gang members detained, removed, or both detained and removed; and (2) the number of gang members detained, removed, or both detained and removed in the 10 largest metropolitan areas in the United States. The Committee will continue directing ICE to produce this report until data systems and procedures are capable of readily providing gang-related information and other key attributes of aliens to Congress upon request.

II. U.S. Immigration and Customs Enforcement Immigration Data History and Current State

Following the creation of DHS, the previously independent functions of immigration and customs enforcement were aligned to a single agency, U.S. Immigration and Customs Enforcement (ICE). The business processes, data, and information technology (IT) that previously were associated with two agencies were repurposed largely to support this new operating model. This significant change left the corresponding data and IT infrastructure with inefficiencies and capability gaps. Since forming, ICE also has undergone a number of notable policy changes that have altered its operational procedures, data, and IT needs significantly over the past two Presidential Administrations. In each instance, ICE drastically has had to alter operations, data collection, and reporting to meet the requirements of these policy changes. In many cases, data standards and informational reporting needs have not been supported adequately by data governance or the IT infrastructure that has been in place.

ICE Enforcement and Removal Operations (ERO) relies on multiple information systems, databases, spreadsheets, and paper-based solutions to pass information within and across ERO's five operational phases (i.e., identify, arrest, manage custody, process case, and remove) and two support phases (i.e., track and manage). Although some ERO information systems interface with partner systems in the immigration enterprise (such as systems used by U.S. Customs and Border Protection (CBP) and U.S. Citizenship and Immigration Services (USCIS)), ICE Deportation Officers routinely are required to re-enter information over the course of the immigration enforcement lifecycle. Redundant data entry introduces process inefficiencies and tends to degrade data quality, exacerbating operational challenges and reporting inaccuracies. Further, ERO Officers must query multiple immigration data systems to identify an individual and his or her immigration status properly.

Immigration enforcement activities rely on several shared IT systems owned and maintained by ICE, which includes a central database called the Enforcement Integrated Database (EID). In 2005, the EID replaced the Deportable Alien Control System, which had been the primary system used by the former Immigration and Naturalization Service since 1982. EID and its supporting applications still serve as the central repositories for enforcement activity, capturing data on aliens who are arrested, detained, and removed from the United States. EID is a centralized database intended for use by multiple stakeholders (including CBP and USCIS) that all serve different missions across the immigration domain. Built at different times and by various technical teams, EID has been a patchwork of data and technology changes struggling to keep pace with the changing needs of immigration enforcement personnel. Because of age, growing operational demands, and increased data complexity, it has become more challenging to update and maintain the system.

Creation of ICE Chief Data Officer Position

In FY 2017, ICE created a new Information Governance organization within the newly formed Office of Information Governance and Privacy (IGP). IGP is a data-focused organization within ICE's Management and Administration Directorate that oversees the management, sharing,

protection, access, and transparency of ICE data, and ensures that the information that ICE maintains meets legal and policy requirements. ICE hired a chief data officer in late 2016 to lead the IGP Information Governance Division (IG Division). The chief data officer is responsible for creating and executing an enterprise data strategy and optimizing the use of data across functional areas, including the immigration domain.

The chief data officer will serve a key role in overseeing and executing certain elements of the Comprehensive Plan for Immigration Data Improvement (hereafter referenced to as the Plan) and, in so doing, will establish a Data Governance Framework (DGF) for the immigration domain that eventually will be deployed across the agency.

Immigration Data Modernization Strategy

In FY 2015, ICE engaged the Homeland Security Systems Engineering and Development Institute (HSSEDI)¹ to perform a study of the Immigration Data Ecosystem². The study was broken into three distinct phases: (1) create the baseline inventory of the ICE immigration ecosystem, (2) construct the current “as-is” and conceptual future “to-be” data architecture, and (3) recommend an ICE data management framework through a gap analysis and transition plan. The study produced the Immigration Data Modernization Strategy (IDMStrat), which laid the groundwork for some short-term improvements as well as a long-term vision for ICE immigration reporting, docket management, and performance optimization. IDMStrat provided overarching themes and areas to target for improvement within ICE’s data domain; however, ICE since has supplemented IDMStrat with internal analysis that seeks to identify additional areas for improvement. The conclusions from both IDMStrat and ICE’s internal analysis are reflected in this Plan and provide a comprehensive perspective on the immigration data challenges that ICE faces today.

Recommendations from IDMStrat were categorized into short-, mid-, and long-term actions. ICE immediately responded by creating an ERO-led Immigration Data Modernization (IDM) Initiative management team and initiating the IDMStrat MITRE study. ICE also reviewed and reprioritized specific recommendations on the basis of several factors, including mission impact, level of effort, risk, and external dependencies requirements.

In FY 2016, ICE received funding of \$7 million to operationalize various improvements as identified in the recommendations from the study. As of the third quarter of FY 2017, seven IDMStrat recommendations have been completed with several initiatives still underway in FY 2017. Some of the highlighted completed recommendations include: improving existing ICE data documentation, continuing to build out the information exchanges ecosystem map, updating the ICE ERO data reporting technologies, and implementing physical changes to the EID. IDMStrat recommendations also have been included within the scope of a broader IDM initiative. The Plan’s goal is to use the pilots to inform IDM design and requirements as well as any existing systems and databases.

¹ HSSEDI is a DHS-established federally funded research and development center (FFRDC) intended to provide independent analysis of homeland security issues, or to carry out other responsibilities under the Homeland Security Act. The MITRE Corporation operates the HSSEDI FFRDC. DHS established HSSEDI to serve as its primary systems engineering resource and to meet DHS-wide demand for rapid access to deep technical expertise. Source: www.dhs.gov/science-and-technology/hssedi

² Appendix E: Immigration Data Modernization Ecosystem Diagram

III. Utilization Plan for FY 2017 Appropriations to ICE

In accordance with the requirements set forth in Senate Report 114-264 and the FY 2017 DHS Appropriations Act (P.L. 115-31), ICE will utilize the FY 2017 appropriations to address additional HSEDI IDMStrat recommendations directly and to pilot incremental improvements to better inform the long-term IDM initiative currently underway. These pilot activities are called Project Mosaic, and are facilitated jointly by IGP and the Office of the Chief Information Officer (OCIO).

ICE will work with the DHS Digital Services team to develop an innovative approach to resolving identified challenges with immigration data and technology. One of the primary Mosaic activities will be to perform data profiling on key gang data sets. As outlined in Senate Report 114-68, accurately assessing and tracking gang membership for fugitives and detained and nondetained populations is critical to the Committees, and initial pilots will focus on reporting on these data sets (by state and city) and set periods of time. This is an integral task to baseline the understanding of the criminal alien lifecycle data environment and to validate that data are being collected accurately. Coordination between ERO and Homeland Security Investigations (HSI) is imperative for determining the ways in which certain critical data elements, such as gang affiliation, are collected or flagged. The two program offices use different IT systems with varying data elements to document gang affiliation, so unification of data standards and reporting methodologies is one anticipated outcome from these activities.

In parallel to the primary Mosaic activities, ICE will identify and address additional problematic reports, such as unifying common definition and reporting methodologies with the DHS Office of Immigration Statistics (OIS). For each of the reports, ICE will trace the information flow from field collection to headquarters aggregation and external information sharing. Figure 1 highlights anticipated outcomes, which will include new approaches for rapid prototyping of technology, validation of pilot test results from subject matter experts, and prioritization of results, either for improvements in current operations and maintenance activities, or for inclusion in the IDM program increments for FY 2019 and beyond.

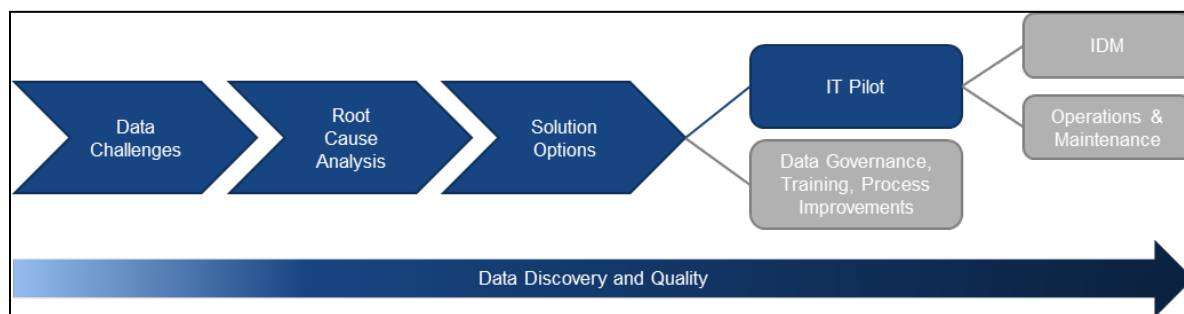


Figure 1. Immigration Data Improvement Pilot Framework

To ensure tangible improvements, all Mosaic activities will be compared to current state (“as-is”) operations and baseline key performance parameters so that improvements can be measured for the estimated time and resources required to integrate into the future state (“to-be”). Each pilot will perform root-cause analysis to better identify the challenges across the immigration

enforcement lifecycle, and inform the IDM program long-term strategy for modernizing critical operational data systems.

Piloting efforts will consist of key stakeholders from ERO, OCIO, and IGP with senior leadership oversight through an executive council with ICE, DHS OIS, and DHS Digital Services. IT development and delivery will be managed by OCIO. The management of IT development and delivery will be conducted on the basis of agreed-upon priorities vetted through the council and finalized plan. Risks and issues will be managed actively and reviewed biweekly with escalation paths identified.

The FY 2017 ICE appropriations of \$6 million (detailed in Table 1 below) will provide resources to perform Mosaic activities, including associated IT costs, management support, and data improvements.

Table 1. FY 2017 Utilization Plan

Category of Activity	Use of FY 2017 Funds	Amount
Data Management		
Data Governance	Expand the scope of current ICE data governance activities; dedicate support staff for DHS OIS coordination	\$966,154
Data Analysis & Reporting	Discover and document common ICE/OIS reporting methodologies; create an analytic measures registry (AMR) for transparency into ICE reporting methodologies	\$990,000
Piloting Team	Pilot data and technology improvement for HSSEDI recommendations and IDM priorities	\$1,500,000
IT		
Software/Hardware/Cloud	Pilot data and technology improvement for HSSEDI recommendations and IDM priorities	\$750,000
DHS Data Governance Software (Collibra)	Purchase of data profiling and governance software to support data governance and stewardship activities at ICE in FY 2018	\$50,000
Management Support		
IDM Planning Support	New contract to support OCIO planning activities; ERO serves as business owner and IGP provides oversight for data governance issues	\$1,743,846
Total		\$6,000,000

Table 2 details the milestones and timelines associated with these piloting efforts.

Table 2. Project Mosaic Milestones and Timelines

Milestone	Projected Completion Date
Establish Piloting Team Resources	FY 2017 Q4
Identify Data Challenges	FY 2018 Q1
Setup Piloting Environment	FY 2018 Q1
Initial Data Discovery/Root-Cause Analysis	FY 2018 Q2
Identify Solution Options	FY 2018 Q2
Pilot Solution Option (1)	FY 2018 Q3
Pilot Validation & Promotion	FY 2018 Q3
Demonstrate Pilot to Committees/Feedback	FY 2018 Q3
Pilot Solution Option (2)	FY 2018 Q4
Pilot Validation & Promotion	FY 2018 Q4
Demonstrate Pilot to Committees/Feedback	FY 2018 Q4
Pilot Activities Summary & Recommendations	FY 2018 Q4

IV. Action Plan for Immigration Data Improvements

As mentioned in the executive summary, this Plan takes a multifaceted and agile approach to achieving improvements in immigration data. This involves: 1) creating an information governance organization within ICE, 2) modernizing critical ICE immigration IT systems, and 3) engaging with federal partners in the immigration data domain for collaboration around shared datasets. ICE established both short-term and long-term milestones for each to ensure that ICE will deliver iterative improvements while lowering the risk normally associated with large and complex projects.

Congressional Direction and Alignment to Strategic Goals

The immigration data improvement efforts described in this Plan directly align with and support missions, goals, and objectives outlined in the *U.S. Immigration and Customs Enforcement Strategic Plan 2016–2020* and the *Department of Homeland Security’s Fiscal Years 2014–2018 Strategic Plan*, as described in Table 3 below:

Table 3. Strategic Goal Alignment

DHS Strategic Missions & Goals (Applicable Subset)	ICE Strategic Goals & Objectives (Applicable Subset)	Immigration Data Improvement Goals
Mission 1: Prevent Terrorism and Enhance Security <ul style="list-style-type: none">• Goal 1.1: Prevent Terrorist Attacks	Goal 1 - Counter Terrorism and Protect the Borders <ul style="list-style-type: none">• Objective B - Counter Terrorist Entry into the United States and Support Terrorism Investigations	<ul style="list-style-type: none">• Provide accurate data to support immigration-related enforcement, benefit adjudication, and policy decisions• Ensure the integrity of individual identities throughout the immigration lifecycle
Mission 2: Secure and Manage Our Borders <ul style="list-style-type: none">• Goal 2.1: Secure U.S. Air, Land, and Sea Borders and Approaches• Goal 2.2: Safeguard and Expedite Lawful Trade and Travel• Goal 2.3: Disrupt and Dismantle Transnational Criminal Organizations and Other Illicit Actors	Goal 2 - Protect the Borders Through Efficient Immigration Environment <ul style="list-style-type: none">• Objective A - Detain and Remove Priority Aliens• Objective B - Create a Culture of Employer Compliance• Objective C - Strengthen Partnerships with State and Local Law Enforcement	<ul style="list-style-type: none">• Provide readily accessible capability for complex reporting using vetted, integrated data

DHS Strategic Missions & Goals (Applicable Subset)	ICE Strategic Goals & Objectives (Applicable Subset)	Immigration Data Improvement Goals
Mission 3: Enforce and Administer Our Immigration Laws <ul style="list-style-type: none"> • Goal 3.1: Strengthen and Effectively Administer the Immigration System • Goal 3.2: Prevent Unlawful Immigration 	<ul style="list-style-type: none"> • Objective D - Prosecute and Remove Criminals and Gang Members • Objective E - Protect the Integrity of the Immigration System • Objective F - Enhance Efficiency in the Removal Process • Objective G - Improve the Detention System 	
Mission 4: Strengthen the Security and Resilience of Cyberspace and Critical Infrastructure <ul style="list-style-type: none"> • Goal 4.1: Partner to Reduce Cyber and Physical Risk to Critical Infrastructure • Goal 4.2: Secure the Federal Civilian Government IT Enterprise • Goal 4.3: Advance Law Enforcement, Incident Response, and Reporting Capabilities • Goal 4.4: Strengthen the Ecosystem 	Goal 3: Operate an Efficient, Effective Agency <ul style="list-style-type: none"> • Objective E - Transform IT, Strengthen IT Security by Defending Systems and Networks Essential to Mission Success, and Achieve Data Integration 	<ul style="list-style-type: none"> • Provide a streamlined, end-to-end capability to manage cases that is readily adaptable to mission needs • Decrease the level of effort required to perform person-centric, event-centric, and attribute-centric reporting and research • Increase the utility value of immigration data holdings via improved data harmonization and integration • Improve data capture mechanisms • Close communication gaps between systems • Improve data sharing among intra-agency immigration partners
Mature and Strengthen (M&S) the Department <ul style="list-style-type: none"> • M&S 1: Integrate Intelligence, Information Sharing, and Operations • M&S 2: Enhance Partnerships and Outreach 		

V. Establish Information Governance at ICE

ICE created and filled the position of chief data officer in early FY 2017. The chief data officer leads the IG Division within the ICE Office of Information Governance and Privacy. The IG Division is responsible for 1) installing enterprisewide data governance for ICE, 2) promoting the effective use of ICE data for statistical and analytic reporting, and 3) working with immigration partners to improve interagency coordination and reporting.

Through an internal reallocation of ICE resources in FY 2017, the IG Division currently has three permanent full-time government positions, including the chief data officer, and the support of a small contracting team. Although the division's mission is to establish effective data governance at an enterprise level, the early focus of most of its work will be on immigration data governance pilots and supporting the IDM initiative and a corresponding immigration data initiative run by DHS OIS, called the Immigration Data Integration Initiative (IDII).

The IG Division established several goals for FY 2017, including:

- Initiating data governance activities as pilots in the IDM program and several other programs within ICE, with the goal of developing a proven DGF that reliably can be deployed to each of ICE's internal stakeholder offices,
- Establishing an ICE Analytics Community of Practice (ACP), supporting personnel who are engaged in data management and analytics, and
- Planning for the creation of an AMR, which will standardize use of common operational measures and research/analytic methods across ICE.

Short-Term: ICE Will Pilot a Data Governance Framework

ICE is creating an initial DGF based on the IDMStrat recommendations, which outlined the need for ICE to adopt a formal approach to data management to transition successfully from the current state data architecture to the future concept state. The HSSEDI IDMStrat team evaluated industry best practices in the area of data management, such as the Federal Enterprise Architecture Data Reference Model (FEA-DRM) and the Data Management Association's (DAMA) Data Management Body of Knowledge (DMBOK). This informed the creation of a lean approach for ICE that focused on three critical best practices found in all data management frameworks. Table 4 describes each best practice and the data management frameworks from which it is derived.

Table 4. IDMStrat Data Management Framework Recommendations

Data Management Best Practices	Data Management Frameworks				
	The Open Group Architecture Framework - Phase C	FEA-DRM	Capability Maturity Model Integration-Decision-Making Model	DAMA DMBOK	Method for an Integrated Knowledge Environment 2.0
Define roles and responsibilities for data stakeholders (data providers, data consumers, data owners/custodians)	✓	✓	✓	✓	✓
Implement data quality procedures at all stages of the data management process	✓	✓	✓	✓	✓
Document metadata and practices surrounding the management and maintenance of datasets – including data standards	✓	✓	✓	✓	✓

ICE is committed to implementing these best practices in its DGF and expects that they will provide ICE with better insight and control of its data, allow ICE to better prioritize improvements, promote information-sharing best practices, and increase data interoperability across DHS and with other federal immigration stakeholders.

To establish the DGF, the IG Division has engaged with several ICE internal stakeholders that are interested in pursuing a formal information governance process to support their program and IT activities. The division is working closely with them to educate and support their implementation of the data governance best practices listed in Table 4, as small information governance pilots throughout ICE. These programs are at different stages of information governance maturity, but all are highly motivated to begin managing their data in a more advanced way. With this organic, bottom-up approach, the IG Division expects to mature the framework into a repeatable practice that can be implemented across ICE, while identifying the challenges individual programs may face in executing governance and adjusting accordingly.

This work will position ICE to operate data governance successfully at the agency-level via an ICE Data Governance Board (IDGB). Lessons learned from these pilots will act as the baseline for the formal creation of the IDGB with anticipated operations modeled in Figure 2 below.

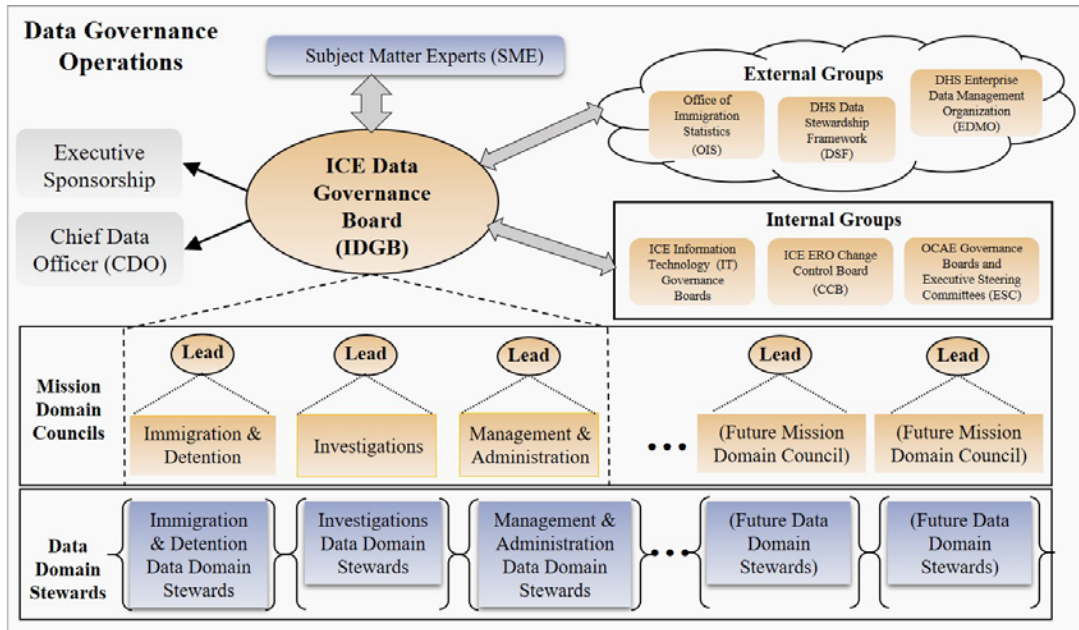


Figure 2. ICE Data Governance Board Example

In conjunction with data governance operations described above, ICE is adopting the DHS Data Stewardship Framework³ principles and assigning operational experts to be responsible and accountable for changes made to ICE immigration data sets. This will improve internal transparency around data-quality issues and enhance ICE's contribution into the larger ecosystem of immigration data used by other parts of DHS and other federal immigration stakeholders. As the offices that are stewards of ICE immigration data, HSI, ERO, and the Office of the Principal Legal Advisor (OPLA) will be critical to this exercise. Their participation and support will be necessary to ensure that ICE receives and shares key information connecting enforcement activities to litigation and removal.

The IG Division established a performance goal to pilot the DGF in FY 2018. The pilot will finalize one problematic immigration data set that affects not only ICE, but its federal immigration partners in the larger immigration data ecosystem. ICE is on track to complete the pilot by the end of FY 2017.

Long-Term: ICE Will Improve Reporting and Establish an Information Sharing Inventory

Improving Reporting via an Analytics Community of Practice

As discussed previously, the IG Division is establishing an ACP to support ICE personnel across different operational and administrative program offices who are engaged in data management

³ The DHS Data Stewardship Framework is a formal organizational structure that enables Components to appoint individuals as data stewards and provide roles and responsibilities to clarify task objectives and set clear expectations. Data stewards manage and mature all aspects of the data assets in the collective best interest of the enterprise.

and analytics. The ACP will identify, agree upon, and share common reporting methodologies and definitions across the internal ICE operational areas, including the immigration domain.

In support of the immigration data improvement goals articulated in this Plan, the ACP brings together personnel from ERO, HSI, and Management and Administration Directorate offices who report on various parts of the immigration lifecycle, including arrests, removals, most serious criminal convictions, and costs associated with enforcement activities. These data practitioners, agents, and officers will gain an understanding of each others' work and share best practices around critical ICE immigration reports.

The ACP is expected to improve the consistency of how immigration data are defined and reported across ICE over time and address new immigration reference data, terms, and measures. This work also directly will support the goal of the OIS IDII to define common immigration reporting methodologies across DHS to improve DHS's reporting capabilities and the integrity of its data.

ICE's Analytics Measures Registry Will Improve Reporting

The IG Division will create the AMR by the second quarter of FY 2018 to store and track reporting methodologies across the immigration program offices. The AMR will serve as the dictionary for ICE's reporting protocols. Using an appropriate technology platform or commercial-off-the-shelf tool, ICE will share the AMR with the OIS IDII team and pertinent immigration partners as appropriate.

Once established, the AMR will promote appropriate visibility of ICE's immigration enforcement measures, which today sometimes are obscured by ICE program offices' use of isolated reporting technologies. It also will aid in the removal of reporting caveats for ICE's enforcement statistics.

Information Sharing Agreement Inventory

In FY 2018, IGP will coordinate with the HSI Law Enforcement Information Sharing Initiative (LEISI) Program Management Office (PMO) in conducting an inventory of information-sharing agreements with its federal immigration partners aimed at updating or creating new agreements that pertain to the immigration domain. These activities also will align directly with the OIS IDII to identify what information can be shared with the Department and what gaps in data sharing policies need to be addressed through the DHS Information Sharing and Safeguarding Governance Board. Some legacy information-sharing agreements predate DHS's creation or are missing altogether. It is imperative that ICE identify, update, and revalidate as many of these agreements as possible to ensure that they reflect the current data sets being shared with immigration partners. This will include both enforcement and benefit-related data sets concerning individuals entering into the immigration ecosystem through different pathways.

The inventory will help to organize and categorize memoranda of understanding, memoranda of agreement, information-sharing agreements, and interface control documents that exist in the immigration domain with DHS partners as well as with external entities. In the long term, this

will help in creating a standard operating procedure to provide more direct, active management of ICE’s immigration information-sharing agreements for timely data sharing.

Key Milestones and Associated Timelines

The IG Division established both organizational development and operationally focused milestones to maximize what it can achieve in the short and medium terms. Through the construction of a 180-day fast-track schedule and the creation of the division’s fiscal year goals for FY 2017 and FY 2018, these milestones focus heavily on data governance activities in the short-term (i.e., next 6 months), and then gradually progress into developing analytics competence and executing information-sharing inventory activities over the medium term (i.e., the next 12–18 months). Initial DGF activities also will help to inform the long-term strategy for the IDM initiative. Table 5 below outlines the specific milestones and projected completion by fiscal year and quarter.

Table 5. IG Division Milestones and Timelines

Milestone	Projected Completion Date
Create IG Division Organization and Service Areas; Define FY 2018 Goals	Completed FY 2017 Q2
Submit IGD FY 2019–2023 Program Decision Option	Completed FY 2017 Q3
Complete FY 2017 Data Governance Pilot with IDM	FY 2017 Q4
Draft the ICE DGF	FY 2018 Q1
Execute Data Governance & Analytics Contract	FY 2018 Q1
Final Draft and Approval for ICE DGF	FY 2018 Q2
Assemble and Execute ICE Data Governance Board	FY 2018 Q3
Deploy ICE AMR and Define Six Critical Measures	FY 2018 Q3
Create Strategic Plan for Information Governance Training	FY 2018 Q4
ICE Programs Appoint ICE Immigration Data Stewards	FY 2018 Q4
Complete ICE Information-Sharing Inventory	FY 2018 Q4
Create ICE Information-Sharing Standard Operating Procedure	FY 2019 Q1

VI. Immigration Data Modernization Initiative

Defining the Need and Gaps

In January 2016, ERO took the lead on developing the IDM Initiative, which utilized the HSSEDI study to formulate an acquisitions strategy to integrate data through governance, modernize system capabilities, and streamline the user interface. IDM will enhance the capture, collection, sharing, and governance of immigration data through modernized IT solutions to meet officer needs, performance management, and oversight requirements. This will support transaction processing, repeatable statistical reporting, and data analytics effectively and efficiently while promoting accurate, timely, and consistent data sharing and cross-agency data exchange.

The IG Division and chief data officer will support IDM's principal objective of strengthening ICE ERO deportation officers', analysts', and management's ability to collect and process immigration data in accordance with congressional and DHS-level data management and reporting goals. Further, the IG Division will work with IDM to identify, apply, and elaborate on the insertion and application of structured data governance in support of the IDM objectives and three core capabilities. These capabilities include *integrated data through governance*, which will provide functionalities to collect, store, cleanse, share, analyze, and report on various forms of immigration data; *modernized system capabilities*, which will provide readily adaptable IT (hardware and software) capabilities that improve data collection, integration, reporting, strategic planning, and decision-making; and a *streamlined user interface*, which will provide integrated functionality that supports all major user roles across the immigration enforcement lifecycle.

By focusing on these core capabilities, the IDM initiative will enhance the ability of ICE officers to identify individuals accurately and rapidly; integrate immigration enforcement lifecycle data; identify potential risk factors; and generate detail and summary reports about individuals, cases, and known attributes for operational reporting needs. Figure 3 illustrates IDM focus areas in addition to the core capabilities/crosscutting objectives.

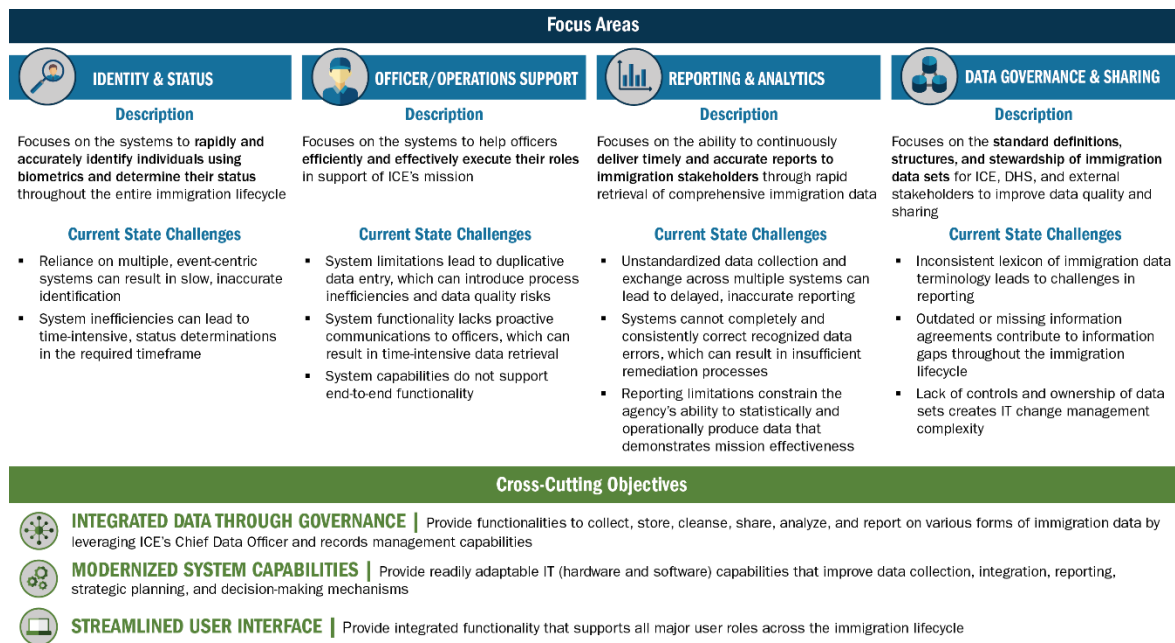


Figure 3. IDM Focus Areas and Objectives

IDM Program and Incremental Approach

Because of the overall size, scope, and complexity of the IDM focus areas and objectives, the program will be broken out into several solution increments, defined through distinct rolling acquisition phases. IDM increment 1 will focus on some the following functional and foundational capabilities that are informed through piloting activities in FY 2017 seen in Table 6.

Table 6. IDM Increment 1 Focus Areas

Functional Capabilities	Foundational Capabilities
Person Identification	Workflow Technologies
Person Background History	Business Rules Technologies
Docket Management	Application Integration
Business Analytics	Scalable Preproduction Environment
Data Integration	Computing, Communications, and Storage Infrastructure

The motivation for the initial allocation of functional capability to increment 1 is to provide benefits and value to ICE deportation officers earlier versus waiting for full IDM capabilities; establish the foundational infrastructure for future IDM increments; utilize agile development methodology to decode complexity, increase adaptability, and promote a quality, value-driven implementation; and close mission capability gaps identified in the IDM Mission Needs Statement.

As the specifics surrounding increment 1 are defined further through piloting activities, the IDM initiative will continue to progress toward Acquisition Decision Event (ADE) 1 (to be approved by the DHS Undersecretary for Management) and aims to request approval for ADE-2A in

December 2017. ADE-2A signifies approval of the program and prepares the initiative to develop and evaluate capabilities for supporting projects/contracts (at ADE-2B), in accordance with DHS Directive 102-01, Acquisition Management; Directive 107-01, Joint Requirements Integration and Management System; and Directive 071-02, Joint Requirements Council Guidelines and Procedures. IDM also will leverage associated guidelines and procedures to facilitate consistent requirements verification, capability validation, portfolio management, timely and cost-effective development of solution approaches, and acquisition execution.

Finally, in support of IDM, ERO reallocated personnel to fulfill initial management support duties, which include building and maintaining an integrated master schedule, drafting the IDM Charter and Communications Plan, working with IGP to establish the governance framework for management, and coordinating with the OIS IDII. As the program expands and matures, a fully staffed PMO will be necessary to fulfill management and oversight duties for the IDM initiative. The PMO will provide a centralized management structure to ensure programwide standardization of practices with regard to staffing, scheduling, and all communications for the program. The PMO also will be necessary to provide technical oversight to IDM once the increments are defined and development is underway. All of these responsibilities will be executed with the intent of ensuring that all program goals and objectives are being met and that the program is being managed in accordance with appropriate oversight.

Key Milestones and Associated Timelines

The IDM initiative completed a mission needs statement, capability analysis study plan, capability analysis report, and concept of operations, and will continue acquisition documentation for an alternatives analysis (AA) and capability development plan, in accordance with appropriate DHS acquisition guidelines. These include the acquisition program baseline, the program management plan, and the risk management plan.

The initiative currently is reviewing potential functional capabilities for inclusion in increment 1 to reach ADE-2A in the second quarter of FY 2018. Following this milestone (further details in Table 7), a timeline for delivery of increment 1, along with planning for the follow-on increment will be established.

Table 7. IDM Milestones and Timelines⁴

Milestone	Projected Completion Date
Acquisition Lifecycle Events	
Capability Analysis Study Plan & Report	Completed FY 2017 Q1
Finalize IDM Program Charter and Communications Plan	FY 2017 Q4
Finalize IDM Subject Matter Expert Work Plan	FY 2017 Q4
ADE-1 (Validate Needs & Authorize IDM Program)	FY 2017 Q4
ADE-2 (Approve Acquisition for IDM Increment 1)	FY 2018 Q2
Deliver Program Management Plan and Risk Management Plan	FY 2018 Q2
Research and Outreach Activities	
DHS Stakeholder Engagement Sessions	Completed FY 2016 Q3

⁴ Refer to Appendix B for a detailed breakdown of all documents corresponding to the respective ADEs.

VII. Engagement with Federal Partners

DHS Office of Immigration Statistics

As set forth in the recommendations included in Senate Report 114-264, which accompanies the FY 2017 DHS Appropriations Act (P.L. 115-31), ICE took action to work closely with DHS OIS on a new initiative called the IDII, chartered and approved by the Secretary for DHS. Led by DHS OIS, the IDII aims to ensure uniform Department-wide immigration data standards, to give the Department's data stakeholders real- or near real-time access to relevant data from across the Department, and to ensure that immigration records are fully linkable across DHS data systems. ICE and OIS believe that the partnership is critical to the success of improving access to immigration data from an enforcement perspective to assist frontline officers as well as decision-makers. As OIS constructs requirements for establishing uniform data standards, drafting data policies, and linking existing data systems to build future-state IT infrastructure, ICE IG Division, OCIO, and IDM are engaged in developing the IDII enforcement requirements to ensure that there is integration of both data and technology. ICE IDM and the OIS IDII are unique yet complementary programs primarily focused on first-line operations and Department-wide reporting, respectively. The programs will remain in synchronization and IDM will certify that any common data requirements be considered for the future IDII environment.

In addition to daily interactions with the IDII team members, ICE leadership is represented in the initiative by supplying representation and engagement in the initiative's Executive Steering Committee⁵ (ESC) and representing the agency as subchair in the initiative's Policy & Oversight Project.

DHS Data Community and Beyond

ICE's participation in the larger federal data community is an essential part of the immigration data improvement plan. Starting in FY 2017, the ICE IG Division has made it a priority to participate actively in a series of working groups and organizations both internally at DHS and at the broader federal agencies. Going forward, ICE will dedicate permanent staff to play a critical role in defining data governance and best practices in the immigration domain as outlined in some of the following critical data communities: DHS Data Stewardship Tactical Working Group, Master Reference Data Working Group, Data Management Working Group, and the Department of Commerce Data Cabinet.⁶

IDM Initiative Stakeholders and Communications Plan

To further the goals and objectives of the IDM initiative, a communications plan was developed to serve as a guide for the IDM management team to manage ongoing, recurring communications and engagement within ICE, DHS, and other stakeholders throughout the immigration enterprise.

⁵ Appendix F: DHS Office of Immigration Statistics' Immigration Data Integration Initiative Executive Steering Committee (ESC) Membership

⁶ Appendix C: Data Community Working Groups

This document is intended to provide a pathway to develop communication and engagement strategies and tactics that effectively speak to IDM audiences. As each solution increment is decided upon, the IDM initiative will engage the appropriate stakeholders to ensure concurrence and continuous progress.

While the IDM management team is responsible for managing the acquisition process and day-to-day activities, the IDM management team operates under the guidance of the IDM Core Team. The IDM Core Team is composed of members representing ERO, IGP, OCIO, and Office of the Component Acquisition Executive (OCAE) leadership. The IDM Core Team guides the program as the group responsible for the strategic direction and development of IDM. This group meets regularly to discuss the program status and to make decisions to move the program forward. During the incremental acquisition phases, the IDM Core Team provides guidance and reviews the acquisition draft documents prior to submission for signatures. In addition, the IDM Core Team ensures that ICE's mission is carried out in accordance with all applicable ICE and DHS directives.

The IDM management team identified stakeholders on the basis of their role in immigration enterprise as well as their reliance on immigration data. Stakeholders then were segmented into three groups on the basis of their interests and respective roles in helping to guide IDM to a successful implementation. Each group of stakeholders is distinguished by its level of influence over the development of the IDM initiative. IDM will engage with identified stakeholders that are involved directly in the IDM initiative (i.e., key stakeholders), those within ICE who have a vested interest in IDM and who will be affected by IDM (i.e., influential stakeholders), and those outside of ICE who have an interest in IDM but are not directly affected by changes currently envisioned (i.e., external stakeholders). Engagement strategies for each stakeholder group are tailored to relay effectively the need for the IDM initiative and the initiative's progress and goals.

Table 8. IDM Initiative Stakeholders

Key Stakeholders	Influential Stakeholders
<ul style="list-style-type: none"> • IDM Management Team • OCIO • IGP • OCAE • ERO Leadership • ICE Leadership • Component Requirements Executive, Office of Policy 	<ul style="list-style-type: none"> • Alternatives to Detention • Criminal Alien Division • ERO 2.0 • ERO Field Office Directors • HSI • IDM Subject Matter Experts • ERO Law Enforcement Systems and Analysis • OPLA • HSI LEISI

Key Stakeholders	Influential Stakeholders
External Stakeholders	
<ul style="list-style-type: none"> • CBP Office of Field Operations • DHS OCIO • Department of Justice (DOJ) Criminal Justice Information Services • DOJ Executive Office for Immigration Review • Department of State • Office of Biometric Identity Management 	<ul style="list-style-type: none"> • OIS • U.S. Border Patrol • USCIS Asylum • USCIS Biometrics • USCIS Fraud Detection and National Security Directorate • USCIS Records • DHS Office of Intelligence and Analysis

VIII. Staffing Plan for Immigration Data Improvements

The IG Division currently has three permanent full-time government positions, including the chief data officer, and the support of a small contracting team. These staffing resources have been reallocated from existing positions and contracts within ICE. Table 9 outlines the future-state staffing footprint that the IG Division requires to stabilize and expand high-priority activities for immigration data improvement as well as for long-term development in other key ICE operational domains. The requested federal staff will manage and prioritize IG Division data governance and analytic initiatives, and direct daily contractor activities. The contractor staff will perform hands-on analysis of identified data priorities requiring specialized skill sets such as data lifecycle analysis, data integrity issues and recommended remedies, and construction of analytical measures across various mission areas. Contractor support can be scaled easily on existing contract vehicles and task orders with minimal acquisition risk, and a preliminary acquisition strategy is underway.

Table 9. Information Governance Division Staffing Plan

Position/Title	Grade/Series	Status
Chief Data Officer	(1) GS-15-0301	Onboard
Deputy Chief Data Officer	(1) GS-15-0301	Onboard
Sr. Advisor	(1) GS-15-0301	Onboard
Sr. Information Governance Analyst	(1) GS-15-0301	Unfunded Request
Information Governance Analyst	(2) GS-13/14-0301	Unfunded Request
Operations Research Analyst	(2) GS-13/14-1515	Unfunded Request
Sr. Data Governance Analyst	(2) Contractor Full-Time Employee (FTE)	(1) Onboard (1) Planned FY 2018 Q1 ⁷
Intermediate Data Governance Analyst	(2) Contractor FTE	(1) Onboard (1) Planned FY 2018 Q1 ⁷
Sr. Data Analyst	(2) Contractor FTE	(2) Planned FY 2018 Q1 ⁷
Intermediate Data Analyst	(2) Contractor FTE	(2) Planned FY 2018 Q1 ⁷
Information Sharing Support	(4) Contractor FTE	Unfunded Request

The IDM initiative currently is composed of a management support team with six permanent staffing resources, along with contractor support staff (as shown in Table 10) providing solutions engineering, acquisition, governance, and strategic communications support.

⁷ Staff resources will be acquired as part of the \$6 million FY 2017 appropriation for ICE.

Table 10. IDM Management Support Team Members

Position/Title	Grade/Series	Status
IDM Executive Sponsor	(1) SES-1801	Onboard
IDM Program Manager	(1) GS-15-1801	Onboard
IDM Deputy Program Manager	(1) GS-14/15-0343	Onboard
IDM OCIO Lead	(1) GS-15-2210	Onboard
IDM OCIO Deputy Lead	(1) GS-14-2210	Onboard
IGP Sr. Information Governance Analyst	(1) GS-15-0301	Onboard (part-time)
IDM Systems Engineering & Acquisition Planning Team	(8) HSSEDI FTEs	Onboard
IDM PM Support Team	(5) Contractor FTEs	Onboard

As the program continues to progress toward ADE-2A, both the business and technical solution components of the program will expand and mature. This will require additional staffing resources to oversee and manage all facets of the program adequately. This augmentation will include a larger PMO to oversee all elements of the program's progress toward milestones and objectives. This body will be critical to the program's success. In addition, staffing resources (both government and contractor) will be re-evaluated for each solution increment to ensure that appropriate staffing resources are allocated to match the scope and scale of each increment.

IX. Funding for Immigration Data Improvements

The IG Division and IDM initiative reallocated resources in FY 2017 to begin initial activities, and currently are constructing funding requirements for FY 2018, FY 2019, and outyear support.

IG Division

Although ICE reallocated existing resources to sponsor IG Division activities immediately, it is important that a line of funding supports the chief data officer's role as a champion of improvement in ICE's data management and the trustworthiness of ICE's data as a whole. Funding will ensure the appropriate growth and sustainment of the IG Division so that it can focus on continued improvements in immigration data and reporting, and can expand its work into improving management of enterprise data. With accelerated growth of enforcement activities and reporting requirements (as mandated through executive orders), as well as the agency's data activities with the Department, ICE projects that the IG Division will face increasing demands for its leadership, assistance, and support over the next few years. The IG Division's ability to support these needs will be limited significantly without dedicated resources and funding.

IDM Initiative

To date, IDM has been addressing immigration data challenges with its own systems and has established a management team to oversee progress on the initiative. Funding IDM beyond acquisition planning will enable ICE to comply with congressional direction and to administer its immigration enforcement mission effectively. Funding the establishment of IDM as a large-scale modernization program will provide support to:

- Establish a formalized PMO;
- Work on requirements, design, development, testing, training, and data migration; and
- Procure for IT support including software, hardware, and infrastructure.

Appendices

Appendix A. Traceability Matrix

Referencing Document	Congressional Request Language	Section Addressed	Page
Senate Report 114-264	The Committee recommends an additional \$6,000,000 for a comprehensive plan for immigration data improvement.	Executive Summary	1
Senate Report 114-68	Directs ICE to continually track gang membership amongst fugitives, as well as the detained and nondetained populations. The Committee directs ICE, not later than 180 days after the date of enactment of this act, to submit a report to the Committee regarding the detention and removal of gang members.	Legislative Requirement	2
Senate Report 114-264	...and directs ICE to dedicate permanent staffing resources for its enterprise data management efforts and improve Component-wide information governance practices in conjunction with the DHS Office of Immigration Statistics, and all Federal agencies with roles in the immigration enforcement lifecycle.	Staffing Plan	17
Senate Report 114-264	Execute the recommendations made by HSSEDI	Utilization Plan for FY 2017 Appropriations to ICE	4
Senate Report 114-264	Work with the Department's Digital Services staff to develop several pilots to more rapidly improve ... data collection standards, data quality practices, and common reporting methodologies.	Utilization Plan for FY 2017 Appropriations to ICE	4
Senate Report 114-264	Pilot results shall be presented to the Committee upon completion	Utilization Plan for FY 2017 Appropriations to ICE	6
Senate Report 114-264	The head of this effort should be a Chief Data Officer and report to the Deputy Director of ICE, at least until immigration data management efforts have reached maturity.	Action Plan - Establish Information Governance at ICE	7
Senate Report 114-264	...with resources coordinated as necessary with Enforcement and Removal Office [ERO] as well as the Chief Information Officer.	Staffing Plan	17
Senate Report 114-264	The plan to detail requirements necessary to report on gang membership as required by Senate Report 114-68	Utilization Plan for FY 2017 Appropriations to ICE	4
Senate Report 114-264	Prioritize steps necessary to get the best possible information into the hands of the frontline officers	Action Plan - Engagement with Federal Partners	15

Referencing Document	Congressional Request Language	Section Addressed	Page
Senate Report 114-264	Collecting details on immigration enforcement decision-making	Action Plan - Engagement with Federal Partners	15
Senate Report 114-264	Including details on the use of prosecutorial discretion	Utilization Plan for FY 2017 Appropriations to ICE	4
Fiscal Year (FY) 2017 Department of Homeland Security (DHS) Appropriations Act (P.L. 115-31)	Sec. 212. (a) Not later than 90 days after the date of enactment of this Act, the Director of U.S. Immigration and Customs Enforcement shall submit to the Committees on Appropriations of the Senate and the House of Representatives a comprehensive plan for immigration data improvement. (b) The plan required in subsection (a) shall include--	Executive Summary	1
FY 2017 DHS Appropriations Act (P.L. 115-31)	(1) an action plan detailing necessary engagement with Federal partners, major milestones, and an estimated timeline for each of the major milestones leading to completion of the plan;	Action Plan - Engagement with Federal Partners	6
FY 2017 DHS Appropriations Act (P.L. 115-31)	(2) a staffing plan, detailing the positions and titles for both Federal and contract staff necessary to execute the plan; and	Staffing Plan	17
FY 2017 DHS Appropriations Act (P.L. 115-31)	(3) an estimate of the funding necessary to implement the plan.	Funding	19

Appendix B. Actions, Key Activities, and Milestones to ADE-2A for IDM

Acquisition Lifecycle	Actions, Milestones, & Work Products	Target Date	Milestone, Event, and/or Review ^{8 9 10 11}	Coordination, Validations, Approvals, Required ^{12 13 14}
Capability Analysis (Formal Gaps and Needs Analysis)	Capability Analysis Study Plan	Completed	Joint Requirements Council (JRC)	Reviewed by JRC: November 2016
	Capability Analysis Report	Completed	JRC	Validated by JRC: 2/23/2017
Need (Validate the Needs)	Mission Needs Statement	Completed	JRC, Acquisition Decision Event (ADE)-1, Study Plan Review (SPR)	Validated by Deputy Secretary's Management Action Group (DMAG): 2/23/2017 Final Approval by DHS Acquisition Decision Authority (ADA): 4/14/2017
	Capability Development Plan	FY 2017 Q4	ADE-1	Coordination: Office of Program Accountability and Risk Management (PARM) Review & Sign: ICE Component Acquisition Executive (CAE) Final Approval: DHS ADA
ADE-1	Validate Needs Program Authorization	FY 2017 Q4		Final Approval: DHS ADA

⁸ DHS Instruction Manual 107-01-001-01.

⁹ DHS Instruction Manual 102-01-001 R01, Table 6. Acquisition Documentation Requirements by ADE

¹⁰ DHS Guidebook, 102-01-103-01, Systems Engineering Life Cycle Guidebook, approval date: April 18, 2016 [DG 102-01-103-01], Figure 1-1 SELC Framework (with Acquisition Lifecycle Framework and Enterprise Architecture Decisions)

¹¹ DHS Technical Review Guide, version 2.0, dated December 2015, Appendix B Specific Technical Review Guidelines

¹² DHS Instruction Manual 102-01-001 R01, Table 4 Acquisition Documentation Requirements – ADA Approval

¹³ DHS Instruction Manual 102-01-001 R01, Table 5 Acquisition Documentation Requirements – non-ADA Approval

¹⁴ IDM is considered a DMAG program.

Acquisition Lifecycle	Actions, Milestones, & Work Products	Target Date	Milestone, Event, and/or Review ^{8 9 10 11}	Coordination, Validations, Approvals, Required ^{12 13 14}
Analyze/Select (Approve the Acquisition)	Concept of Operations	FY 2017 Q4	JRC, SPR, Solution Engineering Review (SER), ADE-2A	(In JRC Review: 6/8/2017) Validation: DMAG Review & Sign: ICE CAE Review & Sign: Lead Business Authority (LBA)
	Alternatives Analysis (AA) Study Plan	FY 2017 Q4	SPR	Coordination: Office of the Chief Information Officer, PARM Review & Sign: ICE CAE Final Approval: DHS Chief Financial Officer and PARM ¹⁵
	Systems Engineering Life Cycle (SELC)/SPR or equivalent	FY 2017 Q4		Final Approval: ICE Chief Information Officer (CIO)
	Request for Information or Vendor/Industry Day	FY 2017 Q4, as applicable		Contracting Officer
	Operational Requirements Document	FY 2018 Q1	JRC, SER, ADE-2A	Review & Sign: ICE CAE Validation: DMAG Final Approval: DHS ADA
	Report (AA)	FY 2018 Q1	SER, ADE-2A	Final Approval: ICE CAE
	Cost Estimating Baseline Document	FY 2018 Q1	SER, ADE-2A	Final Approval: ICE CAE
	Acquisition Plan	FY 2018 Q1	SER, ADE-2A	Review & Sign: DHS CIO Final Approval: DHS Chief Procurement Officer

¹⁵ AA Study Plan is jointly approved by PARM and the CFO Program Analysis and Evaluation with input from the JRC.

Acquisition Lifecycle	Actions, Milestones, & Work Products	Target Date	Milestone, Event, and/or Review ^{8 9 10 11}	Coordination, Validations, Approvals, Required
Analyze/Select (Approve the Acquisition)	Preliminary Integrated Logistics Support Plan	FY 2018 Q1	SER, ADE-2A	Final Approval: ICE CAE
	Life Cycle Cost Estimates	FY 2018 Q1	SER, ADE-2A	Review & Sign: ICE Senior Financial Official (SFO), ICE CAE Final Approval: DHS CFO
	Acquisition Program Baseline	FY 2018 Q1	SER, ADE-2A	Review & Sign: ICE CAE Final Approval: DHS ADA
	SELC/SER or equivalent	FY 2018 Q1		Final Approval: DHS CIO
	DHS Science and Technology (S&T) Technical Assessment or equivalent	FY 2018 Q1		Final Approval: Undersecretary for S&T
	CIO IT Assessment	FY 2018 Q1	ADE-2A	Review & Sign: DHS CIO
	Integrated Master Schedule	FY 2018 Q1	Project Planning Review (PPR), ADE-2A, ADE-2B	Approval: PM, Lead Technical Authority (LTA), and LBA
	Program Management Plan	FY 2018 Q1	PPR, ADE-2A, ADE-2B	Approval: PM, LTA, and LBA
	Risk Management Plan	FY 2018 Q1	PPR, ADE-2A, ADE-2B	Approval: PM, LTA, and LBA
	Certification of Funds Memo	FY 2018 Q1	ADE-2A, ADE-2B	Approval: ICE SFO
	SELC/PPR or equivalent	FY 2018 Q1		Approval: PM, LTA, and LBA
ADE-2A	Approve IDM Acquisition	FY 2018 Q2		Final Approval: DHS ADA

Appendix C. Data Community Working Groups

DHS Data Stewardship Tactical Working Group (DSTWG): This initiative addresses specific domain data issues at the operational level and currently is dedicated to immigration data sets across the Department. The DSTWG currently is a data community that consists of more than 460 members across DHS and agency partners and is a biweekly forum. The DSTWG is committed to data quality within and across the Department and its stakeholders by identifying and establishing effective governance. The tools and services developed by the DSTWG facilitators serve the data quality lifecycle across the immigration domain enterprise. Both the DSTWG and its services are listed in the DHS FY 2017–2023 DHS Enterprise Data Strategy.

DHS Master Reference Data Working Group (MRDWG): The primary goal of the DHS MRDWG is to develop and facilitate repeatable processes for harmonizing common sets of reference data deployed throughout DHS Components and the DHS Enterprise. Participants focus on developing, recommending, and promoting the implementation and reuse of standard processes, tools, and sets of code or lookup data tables across multiple systems in order to develop master reference data listing. The MRDWG adheres to the guidance for Enterprise Data Management as specified in DHS Directive Number 103-01. The MRDWG has decision authority over the management of enterprise reference data and the resolution of data issues that may arise within any phase of the reference data lifecycle, including policy setting, data definition, collection, organization, storage, assimilation, use, retirement, destruction, and archiving.

Department of Commerce Data Cabinet: Sponsored by the Executive Office of the President, it serves as the principal community of practice for data professionals from across the Federal Government to share proven practices among agencies and critical insights into what is working on the frontline, advancing data-driven management, and maximizing the use of the data, and enhancing problem-solving throughout Federal Government.

DHS Data Management Working Group (DMWG): A collaborative working group that defines, promotes, and monitors Enterprise Data Management best practices as outlined in the DHS Enterprise Data Management Concept of Operations and the Enterprise Data Management Policy Directive 103-01. Established by the Enterprise Data Management Office, the DMWG is composed of representatives and voting members from DHS Components. The DMWG serves as the authoritative body for the development and implementation of enterprise data management guidance, policies, and standards to support the governance of information assets and data management activities within DHS.

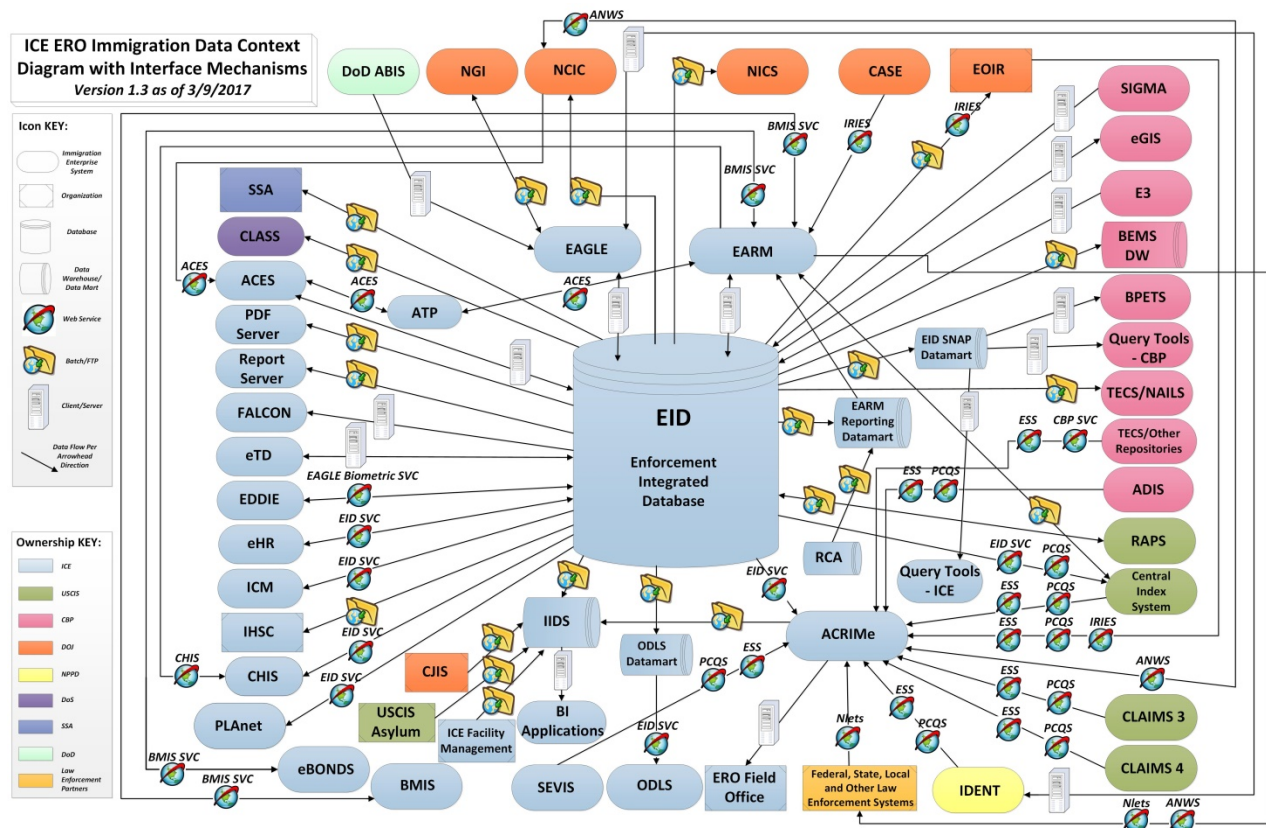
Appendix D. HSSEDI Recommendations Status Report

Completed Recommendation		Recommendation Description
O-7	Populate U.S. Citizenship and Immigration Services (USCIS) Central Index System with Fingerprint Identification Numbers (FIN) from Automated Biometric Identification System (IDENT)	Upload the FIN from IDENT to USCIS's Central Index System with historical FINs for the 24.4 million cases (as of December 2014) that have only one A# associated with a single FIN. EAGLE currently is populating the Central Index System with the FIN for new additions going forward.
D-3	Current Data Architecture Artifact Documentation	Update and maintain current documentation of the ICE Enforcement and Removal Operations (ERO) systems, according to the ICE System Lifecycle Methodology to include the Enforcement Integrated Database (EID) Data Management Plan, EID data model (as well as its subcomponents such as the online detainee locator system, EID Snapshot, ICE Integrated Decision Support (IIDS), ENFORCE Alien Removal Module's Data Mart), Enterprise Conceptual Data Model, and Enterprise Data Dictionary.
D-4	Centralized and Managed Data Architecture Repository	Create a managed repository of data architecture documentation including: <ul style="list-style-type: none"> - Current DHS Interface Control Agreements - Data Dictionary and Data Model Documentation - Mission Area Data Definitions - Use Case Data Flow Documentation
D-10	Data Management Maturity Assessments	Perform periodic Data Management Maturity Model Assessments in Data Architecture and other data management disciplines using, for example, Capability Maturity Model Integration, the Data Management Association's Data Management Book of Knowledge, Enterprise Data Management Office, or other standards.
E-1	EID Review and Evaluation	Perform a review and evaluation of the EID data model and database. Use this information to inform current documentation, a path to integrated data architecture and a data archiving strategy.
X-1	Existing EID Environment Efficiency and Performance	Capture all EID Data Sources. Design and implement a process to capture EID data sources more effectively. <i>Approach</i> 1) Eliminate "ENFORCE" as the default source application value shown in the EID database. 2) Maintain the list of values in APPLICATION_CODES.APPL_CD and implement a

		<p>requirement for all applications to apply an application code from that list.</p> <p>3) Consider expanding capture of application code in other key tables.</p>
X-2	Existing EID Environment Efficiency and Performance	<p>Remove Obsolete Objects</p> <p><i>Approach</i></p> <p>1) Eliminate the DISCOVERER schema from EID SNAP Data Mart. Remove all access to this schema to test whether schema is used. After 6 months, if not used, save legacy data offline, if desired, and drop all tables in this schema.</p> <p>2) Evaluate and resolve potential duplicate and deletion candidates, and remove obsolete objects.</p> <p>3) Move away from retaining temporary tables used for preproduction functions in the EID production database after completion of the release.</p> <p>4) Evaluate how quickly data need to be available and how current those data need to be.</p>

In Progress Recommendation		Recommendation Description
E-2	Operational Data Store for Data Sharing and Transfer	Replicate ERO current transaction data to an operational data store (ODS) to facilitate data movement to other repositories and support near-real time reporting.
E-4	Search and Analysis Environment	Incorporate structured data from ODS and/or Data Warehouse as well as structured, semistructured, and unstructured data from other environments in an analytics environment to integrate traditional data environments with a future big data environment.
X-5	Existing EID Environment Efficiency and Performance	<p>Optimize IIDS Model for Reporting</p> <p><i>Approach</i></p> <p>1) Examine dimension tables to identify candidates for transformation to conformed dimensions.</p> <p>2) Evaluate EID-to-IIDS Extraction, Transformation, and Loading (ETL) process to determine if the “change data capture” approach has been implemented.</p> <p>3) Optimize database for performance and integrity to provide flexible, dynamic querying and analysis of enterprise data for more advanced analytic reporting.</p> <p><i>Benefits</i></p> <p>1) Improves performance for existing queries.</p> <p>2) Support additional dynamic query capability and expanded advanced analytic reporting and predictive analytics, if needed.</p> <p>3) Reduces maintenance windows on the basis of shortened ETL processing.</p>

Appendix E. Immigration Data Modernization Ecosystem Diagram



Appendix F. DHS Office of Immigration Statistics' Immigration Data Integration Initiative Executive Steering Committee Members

Executive Steering Committee (ESC) Co-Chairs

Deputy Assistant Secretary
Border, Immigration, and Trade Policy/Office of Immigration Statistics
Office of Policy
Department of Homeland Security

Chief Information Officer
Office of the Chief Information Officer
Management Directorate
Department of Homeland Security

ESC Members

Voting Members

In addition to the specified co-chairs, each ESC voting member shall include the following individuals or their designated representatives:

Deputy Director, U.S. Citizenship and Immigration Services
Deputy Commissioner, U.S. Customs and Border Protection
Deputy Director, U.S. Immigration and Customs Enforcement
Vice Commandant, United States Coast Guard
Director, National Protection & Programs Directorate/Office of Biometric Identity Management
Under Secretary, Office of Intelligence & Analysis
DHS Deputy General Counsel, or designated representative
DHS Chief Privacy Officer
DHS Officer for Civil Rights and Civil Liberties
DHS Assistant Secretary for Policy

Interagency Participants/Observers

Director, Department of Health and Human Services, Office of Refugee Resettlement
Director, Department of Justice, Executive Office of Immigration Reform
Assistant Secretary of State for Consular Affairs, Department of State,
Bureau of Consular Affairs
Assistant Secretary, Department of Labor, Employment and Training Administration

Appendix G. Abbreviations

Abbreviation	Definition
AA	Alternatives Analysis
ACP	Analytics Community of Practice
ADA	Acquisition Decision Authority
ADE	Acquisition Decision Event
AMR	Analytics Measures Registry
CAE	Component Acquisition Executive
CBP	Customs and Border Protection
CIO	Chief Information Officer
DAMA	Data Management Association
DGF	Data Governance Framework
DHS	Department of Homeland Security
DMAG	Deputy Secretary's Management Action Group
DMBOK	Data Management Body of Knowledge
DOJ	Department of Justice
DMWG	Data Management Working Group
DSTWG	Data Stewardship Tactical Working Group
EID	Enforcement Integrated Database
ERO	Enforcement and Removal Operations
ESC	Executive Steering Committee
ETL	Extraction, Transformation, and Loading
FEA-DRM	Federal Enterprise Architecture Data Reference Model
FIN	Fingerprint Identification Number
FFRDC	Federally Funded Research and Development Center
FTE	Full-time Equivalent
FY	Fiscal Year
HSI	Homeland Security Investigations
HSSEDI	Homeland Security Systems Engineering and Development Institute
ICE	Immigration and Customs Enforcement
IDENT	Automated Biometric Identification System
IDGB	ICE Data Governance Board
IDII	Immigration Data Integration Initiative
IDM	Immigration Data Modernization
IDMStrat	Immigration Data Modernization Strategy
IG Division	Information Governance Division
IGP	Information Governance and Privacy
IIDS	ICE Integrated Decision Support
IT	Information Technology
JRC	Joint Requirements Council
LBA	Lead Business Authority
LEISI	Law Enforcement Information Sharing Initiative
LTA	Lead Technical Authority
M&S	Mature and Strengthen

Abbreviation	Definition
MRDWG	Master Reference Data Working Group
OCAE	Office of the Component Acquisition Executive
OCIO	Office of the Chief Information Officer
ODS	Operational Data Store
OIS	Office of Immigration Statistics
OPLA	Office of the Principal Legal Advisor
PARM	Program Accountability and Risk Management
PMO	Program Management Office
PPR	Project Planning Review
S&T	Science & Technology
SELC	Systems Engineering Life Cycle
SFO	Senior Financial Official
SPR	Study Plan Review
USCIS	U.S. Citizenship and Immigration Services