U.S. Department of Homeland Security U.S. Customs and Border Protection



Biometric Entry-Exit Program Mission Needs Statement (MNS) February 1, 2017

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1 Revision Summary

Date	Section	Description
February 1, 2017	All	Initial Version
March 10, 2017	Ail	Updated made in response to CBP and DHS comments

2 Executive Summary

The primary mission for U.S. Customs and Border Protection (CBP) is to safeguard America's borders from dangerous people and materials while enhancing the Nation's global economic competitiveness by enabling lawful international trade and travel. CBP is required by law and Executive Order 13780 to implement measures for verification of identities for all travelers, including United States (U.S.) citizens, upon entry to and exit from the U.S. by fusing biographic and biometric data. Biographic data includes information specific to an individual traveler including name, date of birth, and travel document number and is stored in that traveler's passport, visa, lawful permanent resident card, or other authorized travel document. Biometric data includes information captured from fingerprints, facial images, or other individual characteristics. Biographic data, when used with biometric data, allows CBP to confirm a traveler's identity with greater assurance, match to previous encounters with CBP, and conduct biometric watch list checks. As biometric technology has evolved, the ability to use individual characteristics to confirm identity for all travelers, including U.S. citizens, is now a reality for all travel modes—air, land, sea.

Currently, CBP collects fingerprints and facial images from most foreign visitors entering the U.S. and uses the biometric database operated by the DHS Office of Biometric Identity Management (OBIM) to confirm identity. However, this biometric matching capability is not available to verify identity of all travelers upon departure from the U.S. CBP and OBIM are currently working together to identify requirements and a timeline when this capability would be available. In parallel, CBP is working to identify matching capabilities that could be utilized while OBIM is developing its biometric identity services.

CBP prepared a Capability Analysis Report (CAR) to document the capabilities that are required to meet the challenge of verifying the identities of all travelers through the fusion of biographic and biometric data. Capability needs and current gaps documented in the CAR were identified through CBP's coordination on biometric activities with other DHS components, including the Transportation Security Administration (TSA), Science & Technology (S&T) and OBIM. CBP has also conducted a number of small-scale trials of biometric technologies at air and land ports to field test the integration of biometric technologies in entry and exit operations. From these activities CBP has identified several needed capabilities to enhance the ability to identify travelers including:

- Verify Traveler Identity The ability to capture, review, analyze, search, and match a
 traveler's biometric information to their biometric and biographic records when entering
 and exiting the U.S. for the purposes of verifying their identity.
- Create and Manage Biometric Records The ability to capture, store, and disseminate biometric information and metadata collected from travelers entering and, where required, exiting the U.S.
- Generate Metrics and Reports The ability to measure and report the effectiveness of the biometric entry-exit system.

Based on CBP's operations and the evaluation of a number of biometric field trials conducted at air, land, and sea ports of entry (POE), CBP has identified the following mission needs required to successfully implement a biometric entry-exit approach:

- **Develop Biometric Entry and Exit Operations Policy** Comprehensive traveler entry and exit policies and procedures governing the use of biometric data to determine their legal ability to enter and exit the U.S.
- Establish Biometric System Access Authorities The authorities and pre-approved permissions to access, request, search, discover, and retrieve biometric data.
- **Utilize Existing Entry and Exit Inspection Areas** Points of departure and entry control at each port of entry (POE).
- **Utilize Existing Entry-Exit Physical Infrastructure** Physical facilities and infrastructure to support entry and exit control operations at each POE.
- Build-Out Information Technology Infrastructure Information technology (IT)
 infrastructure to digitally connect CBP POE entry—exit control sites to external law
 enforcement and biometric databases.

As a next step, CBP developed this Mission Needs Statement (MNS), which defines specific DHS and CBP mission needs that will be addressed through biometric entry-exit and includes linkages to the capability gaps identified in the CAR.

3 Mission and Capabilities

Required Mission and Capability Needs

The National Commission on Terrorist Attacks Upon the United States (a.k.a. 9/11 Commission) final report identified capability gaps related to traveler identification and highlighted the need for a biometric entry-exit system as an, "Essential investment in our national security." DHS has invested resources in improving or creating systems that rapidly and efficiently share data that enhances CBP's mission effectiveness while minimizing negative impacts on lawful travel. These changes make it possible to further enhance the traveler entry and exit biometric capability to comply with federal law.

The primary mission for CBP is to safeguard America's borders from dangerous people and materials while enhancing the Nation's global economic competitiveness by enabling legitimate trade and travel. CBP has the ongoing mission to inspect all incoming people and conveyances to determine admissibility to the U.S. and enforce and administer U.S. immigration laws. Every day CBP processes over 1 million travelers as they enter the U.S. at air, land, and sea POEs. By comparison, over 1 million travelers also depart the U.S. daily with approximately 700,000 departing at a land border, 300,000 by an airplane, and 50,000 by a sea vessel. CBP operations in the exit environment is limited to identifying and detaining individuals subject to a law enforcement action or through random inspection of people as they board an airplane or cross a land border.

Under existing laws and Executive Order 13780¹, CBP is required to implement measures that will enable CBP to verify the identities of all travelers at entry to and exit from the U.S., including U.S. citizens, through the fusion of biographic and biometric data and technology. Biographic data includes information specific to an individual traveler including name, date of birth, and travel document number and is stored in that traveler's passport, visa, lawful permanent travel card, or other authorized travel document. Biometric data includes information captured from fingerprints, facial images, or other characteristics that are unique to an individual. Biographic data, when used with biometric data, allows CBP to confirm with greater assurance a traveler's true identity, match to previous encounters with CBP and other government entities, and conduct biometric watchlist checks. As biometric technology has evolved, the ability to use individual characteristics to confirm identity for all travelers, including U.S. citizens, is now a reality for all modes of transportation.

To understand the breadth of the required capability needs to meet this challenge, CBP prepared the Biometric Entry-Exit Capability Analysis Report (CAR), which identified those operational capabilities that will need to be developed to meet the challenge of verifying the identities of all travelers through the fusion of biographic and biometric data. These operational capability needs will comply with the DHS Enterprise Architecture to facilitate data sharing between existing systems, thereby enhancing traveler identify and screening processes.

¹ https://www.federalregister.gov/documents/2017/03/09/2017-04837/protecting-the-nation-from-foreign-terrorist-entry-into-the-united-states

CBP has been actively examining joint requirements for biometric capabilities across DHS since the inception of the Joint Requirements Council (JRC) and has led several initiatives to improve cross-component collaboration. Along with other DHS components, CBP helped to develop a DHS-wide *Biometrics Strategic Framework*² in 2015 and in 2016 the *Biometrics Roadmap Winter Study*³ to guide biometric implementations across the department. CBP performed a number of biometric field trials which identified a series of mission needs that have been aligned to DHS mission areas. Table 1, Alignment to DHS Mission Areas, summarizes the biometric entry/exit mission need alignment to DHS mission areas as identified in the *2014 Quadrennial Homeland Security Review*⁴.

		DHS MISSION AREAS			
		PREVENT TERRORISM AND ENHANCE SECURITY	SECURE AND MANAGE OUR BORDERS	ENFORCE AND ADMINISTER IMMIGRATION LAWS	SAFEGUARD AND SECURE CYBERSPACE
BIOMETRIC ENTRY/EXIT MISSION NEEDS	OPERATIONS POLICY	X	X	Х	
	BIOMETRIC SYSTEM ACCESS AUTHORITIES				X
	ENTRY/EXIT INSPECTION AREAS	x	X	Х	
	PHYSICAL INFRASTRUCTURE		X		
	IT INFRASTRUCTURE		×		х

Table 1-Alignment to DHS Mission Areas

Table 2, Alignment to CBP Mission Areas, summarizes these five biometric entry/exit mission needs and aligns them to CBP mission areas outlined in the CBP Vision and Strategy 2020⁵. This assessment is based on current CBP operations and findings from biometric field trials.

	CBP MISSION AREAS				
	*	COUNTER TERRORISM AND TRANSNATIONAL CRIME	ADVANCE COMPREHENSIVE BORDER SECURITY AND MANAGEMENT	ENABLING LAWFUL TRADE AND TRAVEL	PROMOTE ORGANIZATION, INTEGRATION, INNOVATION, AND AGILITY
BIOMETRIC ENTRY/EXIT MISSION NEEDS	OPERATIONS POLICY	x	х	X	х
	BIOMETRIC SYSTEM ACCESS AUTHORITIES		X		X
	ENTRY/EXIT INSPECTION AREAS	x	X	X	
	PHYSICAL INFRASTRUCTURE		x	X	
	IT INFRASTRUCTURE			X	х

Table 2-Alignment to CBP Mission Areas

² https://www.hsdl.org/?view&did=786880

³ http://dhsconnect.dhs.gov/org/comp/plcy/spar/Winter%20Studies/Biometrics%20Roadmap%20Winter%20Study _Final%20Report April%2015%202016.pdf

⁴ https://www.dhs.gov/sites/default/files/publications/2014-qhsr-final-508.pdf

⁵ https://www.cbp.gov/sites/default/files/documents/CBP-Vision-Strategy-2020.pdf

Authorities

Legal authorities for CBP to collect and utilize biographic and biometric data to confirm identity at the time of arrival to and departure from the United States include:

- Immigration and Nationality Act (INA) § 235 [8 USC 1225], § 287 [8 USC 1357] and § 215 [8 USC 1185]
- 8 CFR 215.8 Requirements for biometric identifiers from aliens on departure from the United States
- 8 CFR 235.1 Scope of examination
 - 8 CFR § 235.1(b) Requirement for US citizen to possess valid U.S. passport for entry to or departure from the U.S. (see also 8 CFR 1185(b))
 - o 8 CFR § 235.1(f) Alien applicants for admission
- 8 USC 1187(i) Visa Waiver Program; Establishment of exit system
- 8 USC 1365b(d)-(h) Biometric entry and exit data system; Collection of biometric exit data;
 Integration and interoperability; Maintaining accuracy and integrity of entry and exit data system; Integrated biometric entry-exit screening system; Entry-exit system goals
- Intelligence Reform and Terrorism Prevention Act of 2004 (IRTPA), Section 7208 and 7209, as amended (P.L. 108-458)
- The Implementing Recommendations of the 9/11 Commission Act of 2007 (P.L. 110-53)
- Uniting and Strengthening America by Providing Appropriate Tools Required to Intercept and Obstruct Terrorism Act of 2001 (USA PATRIOT Act, P.L. 107-56, Sec 414(b))
- Consolidated and Further Continuing Appropriations Act, 2013 (P.L. 113-6)
- Department of Homeland Security Appropriations Act, 2015 (P.L. 114-4)
- January 2004 Interim Final Rule (69 FR 468) on Non-Immigrant Visa Travelers
- Exit pilots established in rule, and updated later in 2004 in 69 FR 46556 and 69 FR 51695.
- August 2004 Interim Final Rule (69 FR 53318) on VWP Travelers and 50 Largest Land Ports
- 50 Largest Land POEs identified in November 2004 (69 FR 64964)
- Remaining Land POEs identified in September 2005 (70 FR 54398)
- December 2008 Final Rule (73 FR 77473) on Additional Alien Categories
- June 2009 Notice (74 FR 26721) on Biometric Air Exit Pilot at Two Airports
- July 2015 Notice (80 FR 44983) BE-Mobile at top 10 airports
- November 2015 Notice (80 FR 70241) Otay Mesa Field Trial
- E.O. 13780 "Protecting the Nation from Foreign Terrorist Entry into the United States" Sec.
 8. Expedited Completion of the Biometric Entry-Exit Tracking System (March 6, 2017)

Capability Gap

Section 5 of the CBP Biometric Entry-Exit CAR documents the necessary capabilities and existing capability gaps that will need to be addressed so that CBP can more effectively achieve its mission of safeguarding America's borders from dangerous people and materials while enabling legitimate trade. These capabilities include:

 Verify Traveler Identity – The ability to capture, review, analyze, search, and match a traveler's biometric information to their biometric and biographic records when entering and exiting the U.S. for the purposes of verifying their identity.

- Create and Manage Biometric Records The ability to capture, store, and disseminate biometric information and metadata collected from travelers entering and, where required, exiting the U.S.
- **Generate Metrics and Reports** The ability to measure and report the effectiveness of the biometric entry-exit system.

Based on CBP's operations and the evaluation of a number of biometric field trials conducted at air, land, and sea POEs, CBP has identified the following mission needs required to successfully implement a biometric entry-exit approach:

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 policies and procedures governing the use of biometric data to determine their legal ability to
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- Utilize Existing Entry and Exit Inspection Areas Points of departure and entry control at each port of entry (POE).
- **Utilize Existing Entry-Exit Physical Infrastructure** Physical facilities and infrastructure to support entry and exit control operations at each POE.
- Build-Out Information Technology Infrastructure Information technology (IT)
 infrastructure to digitally connect CBP POE entry—exit control sites to external law
 enforcement and biometric databases.

CBP began implementing biometric entry in 2004 with the capture of fingerprints from non-immigrant visa holders and returning Visa Waiver Program (VWP) travelers arriving in the U.S. Deploying a biometric exit capability has been much more complicated because U.S. border, transportation, and immigration infrastructure was not built with exit processing in mind. Consequently, U.S. POEs do not have departure control areas designated exclusively for travelers leaving the U.S. Currently, in the airport environment, departing travelers are recorded biographically using outbound passenger manifests provided by commercial and private air carriers. In the land environment, travelers arrive at land POEs via various modes of transportation, including cars, trains, buses, ferries, bicycles, trucks, and by foot. Despite the relatively low number of travelers entering and exiting the U.S. by sea, a biometric exit capability must cover this transportation option to ensure that a new operational gap is not created. As a result, there are major physical infrastructure, technological, and operational hurdles to collecting an individual's biographic and biometric data upon departure. Until all modes of legal entry and exit into and out of the U.S. include the capability to capture biometric data, the ability to biometrically identify traveler departure will not be fully achieved.

As potential solutions are identified to enhance or develop these required capabilities, CBP will assess the suitability, feasibility, and achievability against the following key criteria:

- Does the solution avoid stove-pipes, independent approaches?
- Does the solution use existing physical facilities and infrastructure?
- Does the solution use existing business models and processes?
- Does the solution use current behaviors to minimize new or unexpected steps for travelers?

Does the solution use existing data and IT infrastructure?

CBP envisions that resolving these capability gaps will require IT investment. As such, CBP recommends that biometric entry-exit capability effort fall under the DHS Screening Functional Area (Primary Function: External Credential Management; Functional Capability: Managing External Credentialing; Functional Activities: Determining Person Identity, Verifying Identity) as defined within the DHS Functional Capabilities and Activities Catalog, Version 2.06 dated June 2014. CBP also recommends that the biometric entry-exit capability development effort be aligned to the DHS Screening Portfolio team and the People Screening Segment Architecture (PSSA) as described in the DHS Enterprise Roadmap.

4 Program Justification

Linkage to Strategic Plan

Biometric entry-exit aligns directly with the Department of Homeland Security (DHS) missions and goals as specified in the Quadrennial Homeland Security Review (QHSR) published June 18, 2014. It further aligns with four CBP strategic goals outlined in the CBP Vision and Strategy 2020.

2014 QHSR Missions and Goals; Mission 2 – Secure and Manage Our Borders

- Goal 2.1: Secure U.S. Air, Land, and Sea Borders and Approaches: Prevent the illegal flow of people and goods across U.S. air, land, and sea borders while expediting the safe flow of lawful travel and commerce.
- Goal 2.2: Safeguard and Expedite Lawful Trade and Travel: Ensure security and resilience of global movement systems.

U.S. Customs and Border Protection Strategic Plan Vision and Strategy 2020

- Goal 1: Counter Terrorism and Transnational Crime: Support the President's National Security Strategy and counter-terrorism efforts, promote the national elements of power (to include: diplomatic, information, economic, financial, intelligence, and law enforcement), contribute to and lead a whole-of-government approach to national security, and promote the safety of the American people.
- Goal 2: Advance Comprehensive Border Security and Management: Safeguard and manage our air, land, and maritime borders through the active administration of U.S. laws, to include cross-border criminal activity, screening and scanning at ports, and comprehensive trade enforcement.
- Goal 3: Enhance U.S. Economic Competitiveness by Enabling Lawful Trade and Travel: Advance U.S. economic competitiveness and promoting economic prosperity with our public, private, and international partners.
- **Goal 4:** Promote Organizational Integration, Innovation, and Agility: Advance CBP Mission Effectiveness through Transformative Technologies and Innovative Business Practices.

http://dhsconnect.dhs.gov/org/comp/mgmt/cio/oat/COPD0Cs/functional%20capabilities%20V2%20final.pdf

Compelling Federal Government Interests

In 1996, Congress passed legislation mandating the creation of a biographic entry and exit system. After the 9/11 attacks and the formation of DHS in 2003, Congress added biometrics as a requirement of the entry and exit system. The United States Visitor and Immigrant Status Indicator Technology (US-VISIT) office (today known as OBIM) was created to implement a biometric entry and exit system for non-citizens entering and departing the United States. While the entry system was deployed and utilized, there was little advancement towards an economically feasible biometric entry-exit solution, due to technology and infrastructure limitations.

In 2013, entry-exit policy and operations were transferred from US-VISIT to CBP. Until CBP took ownership in 2013, the government had encountered difficulty in defining and making progress on a reasonable path forward. CBP is required to deploy biometric technology to validate traveler identity and has developed an achievable vision and realistic plan for implementation.

These biometric entry and exit functions address compelling Federal Government interests and CBP Priorities. *CBP's Vision and Strategy 2020* outlines the vision to transform CBP's approach to border security and enforcement, operating as a fully integrated, intelligence-driven agency, using advance information and technology to secure our nation's borders. No other Federal agency bears this singular responsibility and authority to guard and secure our nation's border. Homeland security and border security is one of the most important national policy priorities of current and past administrations, as well as Congress, the American people, and state and local partners.

The private sector alone cannot perform these inspections as these missions are law enforcement in nature and therefore inherently governmental. However, the private sector is a key stakeholder in improving travel processes. State, local and tribal entities cannot perform these missions as the laws and regulations enforced by CBP are Federal in nature, not local or tribal. Other federal government agencies could perform these functions, but the mission would have to be re-designated and there would be considerable learning curve and enormous start-up costs.

Efficiency and Effectiveness

Biometric entry-exit will leverage existing CBP, DHS and other federal agency systems and data as appropriate, utilize enterprise services, existing physical facilities and infrastructure, and biometric data collected from travelers arriving to and exiting from the U.S. CBP's current business processes will need to be updated to segment advanced passenger information based on both outbound and inbound traveler processing (e.g., outbound data by flight and inbound data by airport or terminal). This reorganization will enable the retrieval of selected associated biometrics (e.g., facial photos, fingerprints) from all DHS biometric holdings (e.g., IDENT, U.S. passport, visa database, Global Entry, and Automated Passport Control (APC)) and segregate them into a smaller, more manageable subset for expedited processing. This will enable the fusion of biometric and biographic data and allow for biometric data to serve as the key data to match a traveler entering or exiting the U.S. to data that DHS and CBP maintains.

CBP will measure operational efficiency and effectiveness in terms of measures of effectiveness (MOE) and measures of performance (MOP). Examples of MOEs and MOPs that CBP may utilize include:

Measure of Effectiveness	Measure of Performance		
Capture Required Traveler Data	Compliance Rate for Biographic Data Capture Compliance Rate for Biometric Data Capture		
Match Traveler Data Against DHS Traveler Identity Data	False Positive Identification Rate (FPIR) for live images submitted that meet CBP specifications		
Identify Watchlist Hits and Lookout Hits	False Positive Identification Rate for Watchlist hits False Negative Identification Rate for Watchlist hits		
Record Arrivals and Departures	Percentage of Biometrically Verified Departures		

Table 3—Sample Biometric Entry-Exit MOEs and MOPs

Target thresholds for MOPs will be developed as part of the operational requirements process along with additional MOEs and MOPs to further assess operational effectiveness and efficiency.

Acquisition Goals, Objectives

The primary goal of the biometric entry-exit strategy is to ensure the identity of every traveler and verifying that the traveler has actually departed. Each travel mode offers unique challenges that will require integrated solutions to mitigate any potential impacts to travel and trade. For example, in the air environment a public/private partnership will be required to develop solutions that do not impede the normal travel process and facilitate the flow of travelers boarding the aircraft. Biometric solutions must be thoroughly designed and tested to ensure that they are effective; compatible with expediting travel; integrate into existing infrastructure, systems, and processes; and are not cost prohibitive.

Many stakeholders in the travel continuum have tried to improve travel through projects that address specific areas or processes without making a significant effort towards improving the end-to-end travel experience. CBP's vision provides an opportunity for CBP, travel and transportation stakeholders, and government partners to transform their processes by shifting the key to unlocking a traveler's record from biographic to biometric identifiers. CBP, its stakeholders, and the traveling public all benefit when security is increased and traveler movement is faster and more seamless. The increased use of biometrics breaks the traditional paradigm where security and facilitation come at the expense of one another, and allow both missions to be enhanced simultaneously.

CBP recognizes that biometric technology has multiple uses across DHS. As part of its planning efforts for its biometric entry-exit mission needs, CBP is coordinating functional and technical requirements with OBIM. The goal of this effort is to migrate to OBIM's biometric matching service when CBP's requirements can be fully met. CBP and OBIM will jointly develop a roadmap to utilize OBIM's facial matching capabilities starting with performing joint testing. CBP will transition to fully utilize OBIM's facial image matching services once OBIM can meet the biometric matching requirements for air, land and sea environments.

In addition to coordination with OBIM, CBP is engaging TSA on biometric exit capabilities and the potential use of CBP or DHS backend services to support traveler identity verification at the check point. TSA will include CBP in their "check point of the future" working group in order to collaborate on biometric exit requirements.

CBP foresees biometric entry-exit as a Level 1 investment and will develop a management plan that will include a reporting system to capture key critical program and technical activities and attendance at program reviews with DHS as required. The plan will also address how actual or projected changes to biometric entry-exit impact cost, schedule or performance (e.g., significant changes to requirements, implementation of strategy) will be handled, including criteria to be used to notify DHS and schedule the appropriate review meeting to acquire guidance on issues that merit a review.

Impact of Disapproval

Without approval of this biometric entry-exit MNS, CBP's ability to meet its mission will be in serious jeopardy. In the past year, DHS senior leadership committed to Congress that biometric entry-exit would be operational in Fiscal Year 2018 at select U.S. airports. Further delays or disapproval of the MNS would place DHS and CBP's commitments to that timetable at risk. The successful implementation of biometric entry-exit is also part of the Administration's 100-day plan.

Additionally, if this biometric entry-exit MNS is not approved the following benefits will not be realized:

- Further enhancements to ensuring legal and lawful travel to and from the U.S.
- Ability to satisfy presidential and congressional mandates regarding closing entry and exit gaps for all travelers.
- Enhanced ability to identify those travelers who have overstayed their terms of admission and to verify their departure from the U.S.
- Documenting and providing metrics on number of visa overstays and sharing information with relevant law enforcement authorities.
- Capability to share more extensive border crossing data with key Federal, state, and local authorities.