



Resource Optimization at the Ports of Entry

September 12, 2017

Fiscal Year 2017 Report to Congress



Homeland
Security

U.S. Customs and Border Protection

Message from the Acting Deputy Commissioner of CBP

September 12, 2017

I am pleased to present the following report, “Resource Optimization at the Ports of Entry,” which has been prepared by U.S. Customs and Border Protection (CBP).

This report is provided as required by the language included in the Joint Explanatory Statement, House Report 114-668, and Senate Report 114-264, which accompany the Fiscal Year (FY) 2017 Department of Homeland Security Appropriations Act (P.L. 115-31).

The report highlights CBP’s culture of innovation and details the progress of the implementation of CBP’s Resource Optimization Strategy (ROS), including updates on business transformation efforts and their impact on staffing requirements. The report discusses the FY 2017 Workload Staffing Model’s (WSM) CBP officer (CBPO) staffing and the FY 2017 Agriculture Resource Allocation Model (AgRAM) CBP agriculture specialist staffing projections. The WSM and AgRAM projections encompass staffing requirements through FY 2018 and are accompanied by CBP’s ongoing efforts to implement funding strategies.

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

The Honorable John R. Carter
Chairman, House Appropriations Subcommittee on Homeland Security

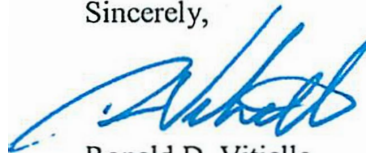
The Honorable Lucille Roybal-Allard
Ranking Member, House Appropriations Subcommittee on Homeland Security

The Honorable John Boozman
Chairman, Senate Appropriations Subcommittee on Homeland Security

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

Inquiries relating to this report may be directed to me at (202) 344-2001 or to the Department’s Chief Financial Officer (Acting), Stacy Marcott, at (202) 447-5751.

Sincerely,



Ronald D. Vitiello
Acting Deputy Commissioner
U.S. Customs and Border Protection



Executive Summary

The Office of Field Operations (OFO) is the law enforcement component within CBP responsible for carrying out CBP's complex and demanding border security mission at all ports of entry (POE). OFO manages the lawful access of people and goods to our Nation by securing and expediting international trade and travel. Continued growth in international trade and travel, expanding mission requirements, and new facility demands continue to strain CBP resources and CBP efforts to secure the homeland.

This report outlines CBP's progress on the implementation of its ROS, which is CBP's robust, integrated, long-term strategy for improving port operations. The ROS has three components: optimize current business processes; utilize the WSM to identify staffing requirements; and implement alternative funding strategies to improve the adequacy of user fees to support operations more effectively. Within this report, CBP provides updates on its Business Transformation Initiatives (BTI), the BTI's impact on staffing requirements, the updated WSM staffing projections, and CBP's ongoing efforts to implement funding strategies that complement the sum appropriated in the FY 2014 DHS Appropriations Act (P.L. 113-76) to hire, equip, and train an additional 2,000 CBPOs at the POEs.

While business process improvements and increasing the number of CBPOs have been successful, the updated WSM results continue to show a need for additional capability in order to meet fully the standards set by statute, regulation, and CBP policies, assuming maintenance of current processes, procedures, technology, and facilities and anticipated growth in travel and trade volumes. The most recent results—factoring in the additional 2,000 CBPOs funded by the FY 2014 DHS Appropriations Act—show a need for 2,516 additional CBPOs (23,969 funded in FY 2016) through FY 2018, while the AgRAM shows a need for an additional 721 CBP agriculture specialists (2,421 funded in FY 2016) through FY 2018.

The FY 2018 President's Budget addresses the staffing needs identified in the ROS by supporting a combination of increases to user fee rates and furthering CBP's BTIs, which have saved more than 1 million inspectional hours through FY 2016 and are estimated to save more than 500,000 inspectional hours through FY 2018.

CBP is committed to ensuring the security of our Nation's borders, while continuing to facilitate legitimate travel and trade. CBP's partnerships with Congress, local governments, business groups, and the trade and travel industries have resulted in significant progress in ensuring sufficient staffing at the Nation's POEs.

Figure 1: Executive Summary of Resource Optimization Strategy



KEY ACCOMPLISHMENTS IN FY 2016



Automated Passport Control (APC) and Mobile Passport Control (MPC) create savings for CBP and for travelers

APC and MPC permit passengers to enter personal information needed for the primary inspection process while waiting in line. This enables CBP to vet the traveler in real time and eliminate a processing step for the inspecting officer. In FY 2016, more than 55 million travelers used the APC kiosks. Over 150 million passengers have been processed by kiosks since the beginning of FY 2014. MPC was deployed at 15 additional US airports in FY 2016 and is now operational at 20 airports.



CBP Mobile Program decreases cargo release times from 4 – 6 hours to 5 minutes and 50% primary inspection time for travelers on the land border.

The use of the tablet to conduct agricultural releases of cargo creates a 98 percent time savings within the release process. Specifically, the average release time drops from 4-6 hours to five minutes. CBP also implemented a pilot in Douglas, AZ to use tablets to refer vehicles for secondary and reduce referral times on the primary line by 50% (from 3 minutes to 1.5 minutes).





Trusted Traveler Programs continue to result in significant savings for travelers and CBP.

SENTRI travelers waited an average of 24 minutes less (78 percent), NEXUS an average of 4 minutes less (60 percent) and Global Entry (GE) an average of 105 seconds than in the general lanes. In total, 15.3 million SENTRI travelers waited 15.1 million fewer hours, 3.9 million NEXUS travelers waited 700,000 fewer hours and GE travelers waited 2.1 million fewer hours than if their entry were processed by traditional means.

Business Transformation Initiatives through 2018

- Automated Passport Control
- Mobile Passport Control
- National Targeting Center
- CBP Mobile Program
- Ready Lanes
- Trusted Traveler Programs
- Transform New Immigrant Visa Process
- Preclearance
- FIS of the Future
- Automate Land Border I-94 Form
- Revenue Modernization
- Biometric Exit Mobile (BE-Mobile)
- 1-to-1 Facial Comparison Project
- Pedestrian Field Test
- Biometric Pathway Port
- Vehicle Driver Imaging Simulation
- Sea Container Intelligence Screening

TOP ESTIMATED BTI SAVINGS THROUGH FY 2018

	 Inspectional Hours Saved	 Equivalent CBPOs
Automate I-94 on Land Border	53,190	45
Sea Container Intelligence Screening	140,658	119
Transform New Immigrant Process	130,020	110





Resource Optimization at the Ports of Entry

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I. Legislative Language

This document was compiled pursuant to the legislative language set forth in the Joint Explanatory Statement, House Report 114-668, and Senate Report 114-264, which accompany the Fiscal Year (FY) 2017 Department of Homeland Security (DHS) Appropriations Act (P.L. 115-31).

The Joint Explanatory Statement includes the following provision:

Within 180 days of the date of enactment of this Act, CBP shall provide an updated resource allocation model for the Office of Field Operations detailing specific staffing, overtime, hours of operation, and funding for and implementation of planned enforcement initiatives, delineated by field office.

House Report 114-668 states:

While CBP's resource allocation model has greatly improved its ability to make informed staffing decisions, the Committee understands that CBP must routinely update the model to account for new trade and travel data and to address any newly identified gaps, including airport expansions. Any modifications to the model shall be described in the fiscal year 2018 budget. To avoid law enforcement and security sensitivities, CBP is encouraged to provide staffing requirements at the Field Office level and to continue to work with expanding airports on options to alleviate wait times.

Senate Report 114-264 states:

The Committee directs CBP to submit an updated resource allocation model with the fiscal year 2018 budget detailing specific staffing, funding for, and implementation of planned border enforcement initiatives by POE.

This report provides an update to the U.S. Customs and Border Protection (CBP) Resource Optimization Strategy (ROS) for operations at all land, air, and sea ports of entry (POE), as well as details on the Workload Staffing Model (WSM) and the Agriculture Resource Allocation Model (AgRAM), CBP's analytical frameworks for informing staffing decisions at its POEs. Also provided are updates on the Office of Field Operations (OFO) Business Transformation Initiatives (BTI), their impact on staffing requirements, and CBP's overall funding strategy for staffing.

CBP submits separate annual reports to Congress that provide onboard staffing numbers, overtime, and hours of operation by POE.

II. Background

CBP's OFO is the law enforcement component responsible for carrying out CBP's complex and demanding border security mission at 328 POEs. OFO's employees protect the people and economy of the United States by preventing the entry of terrorists and instruments of terror, while welcoming travelers and facilitating the flow of goods essential to our economy 24 hours per day, 7 days per week, 365 days per year. OFO personnel are the face at the border for all cargo and visitors entering the United States.

At POEs, CBP supports the antiterrorism mission, enforces import and export laws and regulations of the U.S. Federal Government, and implements immigration policy and programs. CBP employees protect the United States from foreign animal and plant pests or diseases and invasive species that could cause serious damage to U.S. crops, livestock, pets, and the environment. At each of the Nation's POEs, CBP provides statutorily required immigration, customs, and agricultural inspection services that are imperative to enforcing our laws and expediting legitimate trade and travel.

CBP officers (CBPO) fulfill a statutory authority to stop, search, and examine all vehicles or persons seeking entry into the United States. On a typical day, CBP processes more than 1 million passengers and pedestrians; 500,000 aliens; 300,000 incoming international air passengers; 70,000 truck, rail, and sea containers; 89,000 shipments of goods approved for entry; and 100 million in fees, duties, and tariffs at U.S. POEs by land, sea, and air. In addition, on a typical day, CBPOs: arrest more than 50 people; seize more than 1,008 kilograms of drugs, 100 shipments, 4,600 prohibited plant materials and/or animal products, 400 agricultural pests and diseases, and \$17,000 in unreported currency; and refuse entry to more than 750 aliens.

Staffing challenges at the POEs continue to increase as CBP takes on additional mission requirements, POE infrastructures expand, and trade and traveler volumes continue to grow. The ROS was introduced in the *FY 2013 Resource Optimization Strategy at Ports of Entry* with three pillars: identify staffing requirements accurately, reduce those staffing requirements by transforming business processes, and develop strategies to fund the required staff. The subsequent reports issued in FYs 2014–2016 can be found at <https://www.cbp.gov/border-security/ports-entry/resource-opt-strategy>.

In FY 2016, CBP received funding for 23,969 CBPOs and 2,421 CBP agriculture specialists. The CBPO staffing level includes 2,000 CBPOs to be hired pursuant to a funding increase enacted in the FY 2014 DHS Appropriations Act (P.L. 113-76), and CBP continued to make progress hiring, equipping, and training those personnel. Of the 2,000 new CBPOs, 1,035 were on board as of June 10, 2017. CBP has encountered challenges with obtaining a sufficient number of quality candidates. CBP is working actively to recruit and hire the remaining 965 CBPOs. CBP is pursuing quality candidates aggressively, as well as taking steps to reduce attrition rates in an effort to meet the target by the end of FY 2018. The 2,000 CBPOs will go a long way toward addressing the current challenges and supporting additional requests for services.

Additionally in FY 2016, CBP continued to implement transformation efforts by focusing on faster processing in the air, pedestrian, vehicle, and cargo environments. CBP made a concerted effort to implement the newest and most advanced technologies at the Nation's POEs to create efficiencies. Along with technological advancements, CBP deployed biometrics and processing enhancements and expanded Trusted Traveler Programs. These transformative initiatives and technological advancements provide the platform from which CBP can achieve operational success in the face of increased border and air traffic, budget constraints, and demand for new and expanded services at existing and proposed POEs.

To support increased staffing needs, CBP continues implementation of alternative funding strategies to increase revenue sources. CBP continues to support the Donations Acceptance Program established under the authority of Section 559 of the FY 2014 DHS Appropriations Act, as well as the CBP Reimbursable Services Agreement program established under the authorities provided in the FY 2013 DHS Appropriations Act (P.L. 113-6), the FY 2014 DHS Appropriations Act, the FY 2016 DHS Appropriations Act (P.L. 114-113), and the recently enacted Cross-Border Trade Enhancement Act of 2016 (P.L. 114-279).

III. Economic Impact of CBP Staffing and Transformation

CBP continues to be cognizant of its critical role in the prosperity of the U.S. economy. Success in facilitating trade and travel while ensuring the safety and security of the traveling public is paramount as travel and trade revenues increase. In FY 2013, CBP introduced a study by the Center for Risk and Economic Analysis of Terrorism Events (CREATE) titled, “The Impact on the U.S. Economy of Changes in Wait Times at Ports of Entry.” The study found that an increase or decrease in staffing at the POEs has an impact on wait times and, therefore, on the U.S. economy.

Figure 2: Independent Analysis Results



In FY 2016, and while continuing to assess the economic impact of its staffing levels, CBP requested an independent analysis of the economic benefits that CBP Agriculture Specialists (CBPAS) provide to the U.S. economy. CBPASs play a vital role as they target, detect, intercept, and safeguard potential threats hidden in cargo that could harm the U.S. agriculture industry and the larger economy.

To demonstrate the impact of CBPASs to the U.S. economy, the report analyzed the effect that time has on trade and the direct costs associated with wait time during the secondary inspection process. The study focused on the reduction in wait time associated with adding additional CBPASs, which would facilitate the faster processing of trade. The study applied economic theory on the impact of time on trade to empirical trade data in order to demonstrate the potential economic benefits of reducing wait times. The study also quantified the direct costs of wait times at secondary inspection for

agricultural imports. Finally, the report incorporates analysis from the CREATE study to determine the potential increase in U.S. Gross Domestic Product (GDP) associated with the decreased agriculture inspection wait times.

The analysis indicates that a reduction in wait times at secondary inspection could lead to substantial gains for the U.S. economy. By decreasing secondary inspection wait time by 5 minutes across each POE with authorized staffing, CBPASs could contribute \$23.1 million in increased trade and reduced costs to the U.S. economy annually. These cost savings would have further downstream benefits to the economy, contributing as much as \$3.1 million annually in additional benefits to the GDP, as shown in Figure 3. To determine the per-CBPAS economic benefit, the total potential economic benefit is distributed across the top 25 percent of ports, which represent more than 95 percent of the agriculture workload. This analysis found that the

addition of one CBPAS at each of these top 25 percent of ports would result in \$254,000 per CBPAS in economic benefit to the United States per year.

Figure 3: Potential Economic Impact of Additional CBPASs to the Economy



Ensuring sufficient staffing for CBP also facilitates a significant increase in spending by international travelers. In the air environment, traveler volume continues to increase with more than 119 million travelers in FY 2016, an increase of 6 percent more travelers in FY 2016 than in FY 2015 and 36 percent more in the last 8 years (since 2009). According to the U.S. Travel Association in a “U.S. Travel Answer Sheet” published in January 2016,¹ international travel spending directly supported approximately 1.1 million jobs and \$29.2 billion in wages in 2014. Also, on the basis of their analysis, the increase in international air travelers in FY 2016 from FY 2015 (6.7 million more travelers) would contribute up to an additional \$13 billion in spending assuming \$4,400 average spending and 46.6 percent of additional arriving travelers were overseas visitors. In the land environment, the overall number of travelers has remained flat (an increase of less than 0.4 percent); however, the number of travelers crossing the Southern Border is on the rise by almost 3 percent with more than 190 million total travelers. CBP anticipates that the trend for air travel and Southern Border crossings will continue to increase.

In previous reports, CBP shared the success of its commitment to innovation, partnerships, and the full implementation of the ROS. These successes were demonstrated by significant increases in automation and decreases in wait times. For example, in a comparison of FY 2013 to FY 2015, air passenger volume was up by 10 percent, the share of passengers processed by automated means (Global Entry, Automated Passport Control, and Mobile Passport Control) increased from 2.5 percent to 32.8 percent, and booth staffing was up by 12.3 percent, resulting in a national average wait-time decrease of 15 percent. During the same time period, land border volume increased by 4.6 percent, and the share of vehicles facilitated by automation (Dedicated Commuter Lanes and Ready Lanes) increased from 32.2 percent to 38 percent, while the average wait time decreased from 21.4 minutes to 18.4 minutes, a decrease of 14.3 percent.

Unfortunately, the impact of increasing the volume of travelers in the air environment and the challenges of hiring the additional CBPOs on the land border have begun to result in an increase in wait times. Although not yet significant in the air environment (the national average wait time increased by 2.26 percent (30 seconds)), it is more significant on the land border where the national average wait time for privately owned vehicles (POV) increased 15 percent (3 minutes), commercially owned vehicles (COV) decreased 0.8 percent (6 seconds), and pedestrians decreased 1.1 percent (12 seconds). The impact was minimized in the air environment by additional staff and the increase in Trusted Traveler Programs and BTIs, though the increasing passenger volume eventually will outpace the efficiencies gained.

¹ https://www.ustravel.org/sites/default/files/Media%20Root/Document/US_Travel_AnswerSheet_Jan2016.pdf

**Table 1: Volume and Wait Time Comparisons for Air and Land Travel Modes
FY 2013 to FY 2015 and FY 2015 to FY 2016**

Time Frame	Mode of Transport	Volume Percent Change	National Wait Time Average Percent Change
FY 2013 – FY 2015	Air	+10.1	-15.9
FY 2015 – FY 2016	Air	+6.0	+2.26
FY 2013 – FY 2015	POV	+4.63	-14.3
FY 2015 – FY 2016	POV	+0.03	+15
FY 2013 – FY 2015	COV	+4.71	-.8
FY 2015 – FY 2016	COV	+3.08	-0.4
FY 2013 – FY 2015	Pedestrian	+0.27	-30.3
FY 2015 – FY 2016	Pedestrian	+2.96	-1.1





CBP recognizes this trend and understands the impetus to ensure the facilitation of trade and travel to continue to support the increases in volumes and traveler spending for the United States. CBP asserts that the commitment to business process improvement, technology, and partnering with its stakeholders continues to be the best strategy to meet its travel and tourism goal of being “Best in Class.”

IV. Business Transformation Initiatives

CBP continues to develop BTIs in support of the ROS. These initiatives are an important pillar of the ROS because these initiatives allow CBP to realign officer and agriculture specialist resources to priority initiatives. They also reduce required inspection hours, resulting in a decrease in overall workload requirements and equivalent staffing that creates a cost avoidance of CBPO and CBPAS salaries and expenses. Initiatives such as Automated Passport Control (APC), Mobile Passport Control (MPC), National Targeting Center, Vehicle and Pedestrian Ready Lanes, Trusted Traveler Programs, CBP Mobile, and Transforming the New Immigrant Visa Process continue to result in significant actual and estimated savings. The following table summarizes CBP's estimate on how the implementation of BTIs avoids more than 500,000 inspectional hours, 400 CBPOs, and \$52 million in salaries and expenses through FY 2018. Specific information on the current status of these programs and their savings to both CBP and stakeholders can be found in Appendix A.

Table 2:

ESTIMATED BUSINESS TRANSFORMATION INITIATIVES SAVINGS THROUGH FY 2018

CBPO BTIs	 FY 2017 Inspectional Hours Saved	 FY 2017 Equivalent CBPOs saved	 FY 2018 Inspectional Hours Saved	 FY 2018 Equivalent CBPOs saved
Automated Passport Control	28,368	24	27,186	23
Mobile Passport Control	4,728	4	4,728	4
National Targeting Center	7,092	6	9,456	8
Sea Container Intelligence Screening	126,474	107	14,184	12
ESTA	11,820	10	3,546	3
Ready Lanes	13,002	9	13,002	9
Pedestrian Ready Lanes	3,546	3	4,728	4
Trusted Traveler Programs				
NEXUS	0	0	0	0
SENTRI	5,910	5	7,092	6
Global Entry	10,638	9	10,638	9
CBP Mobile	8,274	7	9,456	8
Transform New Immigrant Process	55,554	47	74,466	63
Automate I-94 on Land Border	26,004	22	27,186	23
	299K	253	203K	172

In addition to the success of the BTIs mentioned in the preceding table and in Appendix A, in FY 2016 CBP developed an OFO Innovation Strategy, which leverages the recurring BTIs,

supports the new BTIs, and envisions future directions. The goal of the strategy is a unified CBP process that utilizes the latest technology to enhance frontline risk assessment capabilities, streamline processes, and augment operational efficiency while maintaining or enhancing security. In order to achieve this goal, CBP identified a vision for the future and four objectives: advance automated processing, advance paperless solutions, build mobility into CBP operations and functions, and integrate biometric technologies.

A. CBP's Vision for the Future – Air Ports of Entry

To realize the national goal of a “best-in-class” arrival experience, CBP's *Future Vision* includes pursuing a substantial transformation of CBP's business processes. While today's process conceptualizes a “Technology First” kiosk-based process upon arrival in the United States, this plan utilizes travel document and biometric information at different points in the travel process and replaces the need for automated kiosks upon arrival with a more streamlined approach that both enhances security and supports travel facilitation.

Beginning with the first collection of Advance Passenger Information System (APIS) biographic data from a travel document prior to departure, this approach standardizes the use of Document Validation. When passengers check in with an airline, the airline also inputs travel document information to obtain a traveler's accurate APIS information and transmits it to CBP for predeparture analysis. This process enhances security by allowing CBP to verify the accuracy and authenticity of the APIS information provided prior to an individual being issued a boarding pass. Upon transmission and query of APIS, CBP will provide airlines with a response advising the carrier of a traveler's authorization to board or other status. This process increases security through predeparture risk analysis and identification of potential threats, in addition to increasing facilitation through advance risk segmentation.

Between departure and arrival, APIS data collected through Document Validation will be used to pull and create a corresponding “biometric manifest.” This manifest will comprise an Automated Biometric Identification System (referred to as IDENT) subset, pulled from matches between APIS and IDENT; it also will be used to identify travelers with no biometrics on record. Upon arrival and through a biometric scan, passengers will be identified for appropriate processing.

Upon arrival in the United States, travelers will encounter a unified and modernized CBP process beginning with “Baggage First.” The new facility concept of “Baggage First” presents both security and facilitation benefits for CBP and travelers by allowing CBP to streamline its footprint and allocate resources more efficiently. In advance of primary and in the baggage claim area, rovers—both CBPOs and CBPAS canine components—will be able to assess, identify, and triage issues, enhancing security through early identification of agricultural and other law enforcement issues and facilitating legitimate travelers through such risk segmentation. With a streamlined footprint, CBP gains greater flexibility to allocate resources between roving, primary, and secondary operations. In addition, a consolidated footprint allows for enhanced coordination for CBP and a streamlined experience for the traveler.

Once a traveler has collected his or her baggage and reaches CBP primary, CBP will capture the same facial biometric to reconnect with the APIS information and facial biometric collected predeparture through the Document Validation process. This process confirms identity and retrieves associated passport, visa, and other relevant information—removing the need for CBP to handle travel documents and other paper.

The use of biometric technology in the CBP arrivals area is key to modernizing air passenger processing and meets multiple objectives of OFO's Innovation Strategy. Biometrics enhance OFO's security posture; facilitate going paperless; and advance automated processing, progressing from a kiosk-based process and opening up facility space. In addition, biometric confirmation at entry also may be used to confirm exit with integrated biometric technologies on outbound. This plan does acknowledge, however, that there may continue to be a need for limited traditional processing in situations where biometric entry is not possible; accordingly, facilities will incorporate a limited number of CBPO and CBPAS stations in both primary and secondary, equipped for the traditional process.

OFO also will use biometric identification and matching to record departures from the United States. This will both enhance OFO's operational control of the exit environment and allow DHS to comply with congressional mandates.

Creating the CBP Arrivals Area of the Future on the basis of the *Future Vision* described on the preceding page requires significant expansion of CBPO use of mobile technology and a consolidation of all CBP operations in one location of the Federal Inspection Services (FIS) area. In addition to deploying more than 1,500 mobile tablets, CBP is piloting its use of biometric identity validation technologies at select locations. This technology assists CBP in the validation of travel documents presented by passengers for inspection.

CBP also is working diligently to publish the next iteration of the Airport Technical Design Standard (ATDS), which incorporates many of the *Future Vision's* design requirements, by December 2017. Because the ATDS applies to only *new* facilities, a major challenge at many current locations is facility capacity, including sufficient space for the passenger queue and enough distance between booths or podiums to accommodate travelers with baggage. Significant baggage delivery delays may cause bottlenecks that affect overall passenger processing.

Over the next few years, CBP will continue to develop, test, and implement its *Future Vision* aggressively; expand its BTIs such as APC, MPC, and Global Entry; and establish partnerships with willing private-sector partners at Seattle, Orlando, and Fort Lauderdale to incorporate new concepts into their new facility designs.

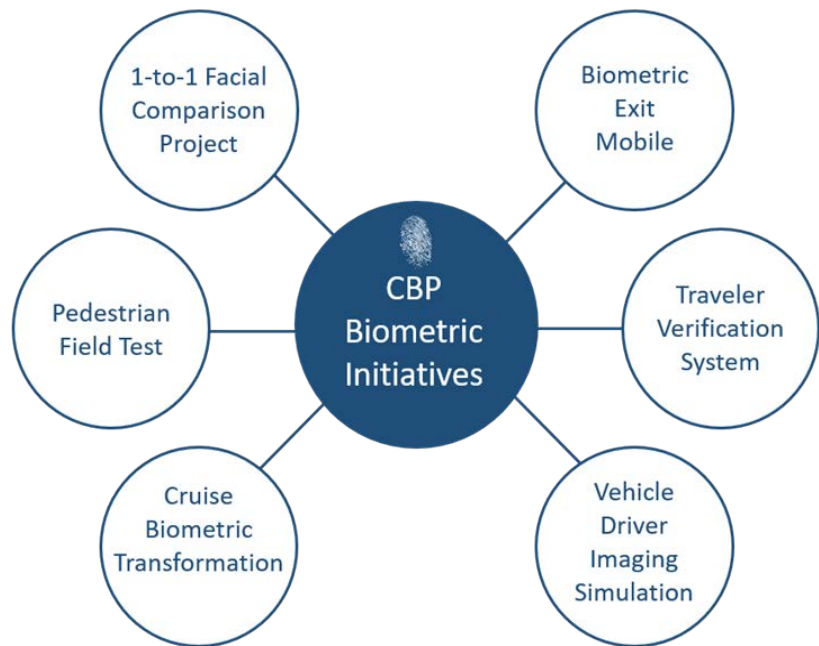
B. Integrate Biometric Technologies

The integration of biometrics is integral to CBP's ROS and OFO Innovation Strategy. In addition to the use of biometrics outlined in the preceding section, CBP continues to pursue the following initiatives to advance its biometric strategy.

1. Biometric Exit Mobile (BE-Mobile) – BE-Mobile has provided data critical to the planning and execution of a successful biometric exit program. The statistically valid data that resulted has proven essential in formulating concepts of operation for a biometric exit system. At airports, outbound inspection teams now are using new handheld mobile devices to collect biometric information—fingerprints—on specific foreign travelers departing the United States. These devices allow CBP both to record the traveler’s departure from the United

States biometrically and to run the fingerprints against the IDENT biometric database, which provides the CBPO with watchlist hits. These devices currently are being used at the 10 largest airports, with more airports in the planning stages. They have decreased significantly the effort required to process outbound travelers at the gate. BE-Mobile will be the CBP platform for future mobile processing by officers for biometric exit as well as a more cost-effective solution for locations where limited international departures and sufficient officer staffing make it an operationally feasible biometric exit solution.

Figure 4: CBP Biometric Initiatives



2. 1-to-1 Facial Comparison Project – Through the success of the 1:1 project, CBP was able to determine that facial comparison offered a valuable and operationally feasible solution for helping officers to confirm identity biometrically with confidence. The collected biometric data also will be the key to the biometric services used throughout the entirety of the travel process that CBP and its stakeholders can leverage to the maximum benefit of travelers. At Washington Dulles International Airport and John F. Kennedy International Airport, CBP is using facial comparison technology to assist CBPOs in confirming the identity of specific travelers entering the United States. When the technology is used, it compares a photo taken at the booth to the photo stored in the ePassport to verify that the person presenting the document is its true owner.

3. Traveler Verification System – As of June 2017, CBP is utilizing facial comparison technology called the Departure Information System Test (DIST) at limited departure gates at Hartsfield-Jackson Atlanta International Airport, Washington Dulles International, and George Bush Intercontinental Airport to verify the identity of travelers departing the United States. By comparing a picture taken at the gate with photographs of the specific traveler previously captured by DHS and/or the U.S. Department of State, CBP is able to verify the identity of the traveler biometrically as they board the plane. Currently in the testing phase, CBP has operationalized this effort by adding real-time matching response and confirmation that the

traveler has departed the United States. CBP will continue to implement biometric exit at five additional airports over the course of the next several months. Under this approach, CBP will learn best practices for operations and integration into existing airline boarding processes as these processes vary from airport to airport.

4. Pedestrian Field Test – At the Otay Mesa POE, CBP tested new technologies to collect biographic and biometric (face and iris) data on pedestrians entering and departing the United States on foot. In addition to testing a concept of operation for the land border, the Pedestrian Field Test provided valuable information to CBP’s test of the DIST in Atlanta on biometric capture rates for different concepts such as on-the-fly and stop-and-pause. It also provided CBP valuable data about the ability to match facial photographs to varying size galleries as opposed to the 1:1 comparison tested previously. Additionally, because of their real-time operational nature, BE-Mobile and the Traveler Verification System have allowed CBP to apply varying concepts of a biometric exit system and resolve impacts to the current travel processes.

5. Vehicle Driver Imaging Simulation – CBP is testing technologies, in collaboration with the Oak Ridge National Laboratory, that capture a driver’s image while inside of a vehicle departing the United States at driving speed. The simulation will determine how often, and under what circumstances, a facial recognition quality image can be captured under these conditions.

6. Cruise Biometric Transformation – CBP and a major cruise line are discussing high-level business transformation opportunities surrounding the use of facial recognition in the embarking and debarking processes for cruise passengers. With this technology, both CBP and the cruise line are looking to facilitate travelers’ arrival while enhancing security.

C. CBP’s Vision for the Future – Land and Sea Ports of Entry

Land Border Reengineering (LBR) is a business transformation effort aimed at fundamentally transforming operations at land border POEs across the country by identifying pressing issues and brainstorming and implementing mission-focused innovative solutions. More important, LBR is a field-driven initiative that empowers CBPOs—the day-to-day operators—to brainstorm efficiency recommendations and to help to implement new solutions in the field. The goals of LBR are to advance land border port security, enhance officer safety at land ports, improve the traveler experience, and optimize passenger inspection processing.

One of the ongoing initiatives is the automation of the CBP Form I-94 on the Land Border. In May 2013, CBP automated Arrival-Departure Record Form I-94 in the air and sea environment. The automation allows for the CBPO to utilize information provided in passenger manifests to create a Form I-94 electronically, eliminating the need for paper forms and manual data entry. CBP has reported more than 86,000 inspectional hours avoided by the automation of the I-94 in the air and sea environment since FY 2013.

The current land border I-94 process, to include the I-94W (for visa waivers travelers), unfortunately remains labor-intensive for CBPOs. The WSM estimates that 887 CBPOs are dedicated to the processing of this form in FY 2017. As part of an ongoing effort to streamline the issuance of I-94s at land POEs, CBP redesigned the existing I-94 web portal to include

additional functionality that allows a traveler to submit information to CBP and to pay the required fee for an I-94 prior to arrival at a land POE. Specifically, as of September 28, 2016, travelers who intend to enter the United States via a land border POE now may submit their biographic, document, and address information to CBP prior to arrival, along with the \$6 processing fee that CBPOs currently collect manually. Once the submission is accepted, the traveler has 7 days to appear at a POE to complete the inspection, which includes an interview and biometric collection.

As of June 22, 2017, more than 38,000 travelers have used the new online system. It is estimated that the new process will reduce the I-94 process time by almost 50 percent. CBP estimates savings equivalent to 45 CBPOs with a cost avoidance of more than \$5 million in CBPO salaries and expenses through FY 2018. The new web portal is user-friendly, and the site conforms to fit mobile devices. The enhanced web portal improves the traveler experience and better facilitates the issuance of Form I-94 at land border POEs.

In addition to the expansion of this initiative, CBP will pilot the following initiatives:

- Improving the I-94 process: CBP will expand the automation of the I-94 pilot to include the capture of biometrics for prevetting to increase POE efficiency.
- Improving Inspection Quality: Create a new, customizable, and mobile Vehicle Primary Client (VPC) system to empower officers to rely on law enforcement techniques rather than antiquated and administrative-focused technology to complete inspections.
- Redesigning Traffic Lane Management: Segregate crossing by traveler type [i.e., Trusted Traveler Programs (TTP)/READY or General] to reduce lane confusion between travelers at any one port and to use facial recognition to verify TTP identities to speed processing and quality of inspection.
- Educating Travelers and Creating Traveler Incentives: Create an “I’m Ready” mobile application that allows travelers to presubmit their information and expected travel times for expedited processing once they arrive at a POE; this also provides CBPOs with insights into traveler volumes and trends in advance of traveler arrival.
- Phasing Out the Combined Automated Operations System (CAOS): Eliminate the duplicative CAOS randomized enforcement operation function by leveraging random compliance program capabilities for randomized audits; and ultimately phase out the use of the CAOS lane manipulation function by using the upgraded VPC system.

CBP plans to pilot these initiatives through FY 2018 and continue to source new innovative ideas from the field. Expected benefits from pilot implementation include reduced processing time, improved customer experience, and increased ability to detect law enforcement violations.

In addition to reengineering effort at the land border, CBP has embarked on BTIs at the seaports as well. First is the Revenue Modernization Initiative. CBP collects approximately \$45 billion annually in duties, taxes, and fees. This revenue is used throughout the Federal Government to support critical programs and promotes U.S. trade and travel.

Although CBP collects the majority of revenue electronically, more than \$2.5 billion is collected through checks and cash, of which \$1.5 billion (approximately 62.5 percent) is collected at CBP

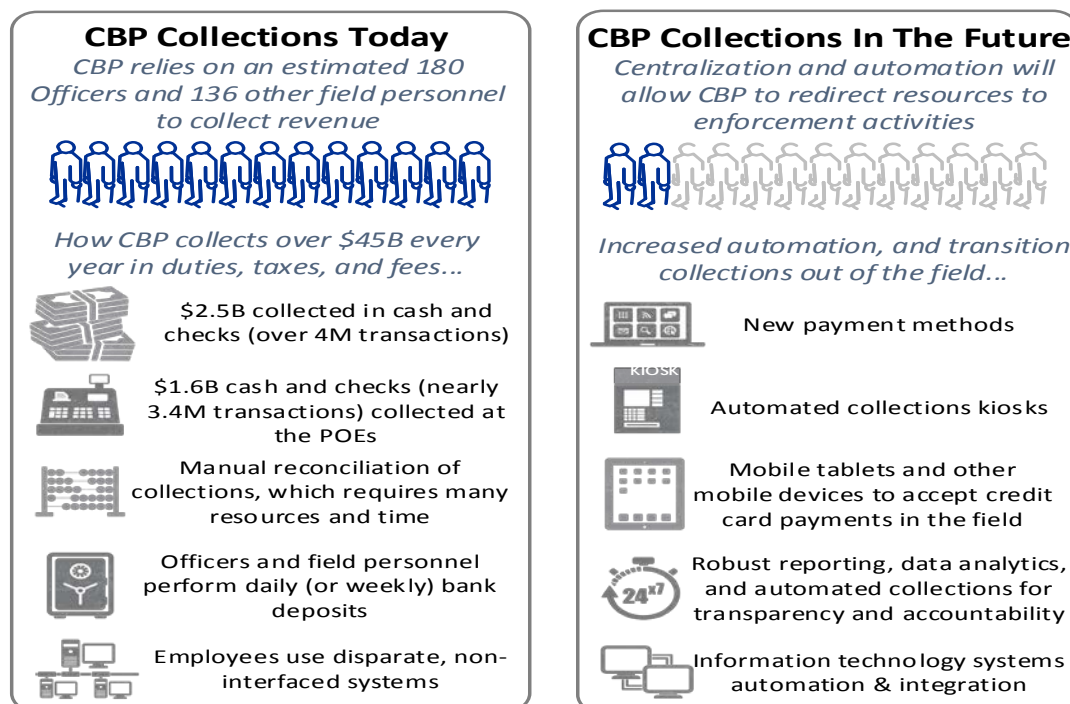
POEs. The manual collection at the POEs equates to approximately 3.4 million time-intensive cash and check transactions by CBPOs and mission support staff. The manual process creates inefficiencies at the ports, delays cargo and traveler movement, and keeps CBPOs from focusing on critical security and compliance activities.

CBP's Revenue Modernization is a multiyear initiative with the goal of automating and centralizing revenue collections. This initiative focuses on a combination of business process and information technology solutions:

- Automated → Greater options for paying duties, taxes, and fees by leveraging technology
- Streamlined → Fewer people and processes involved for paying and collecting duties, taxes, and fees
- Centralized → Transition collections from POEs in order for CBPOs and field support personnel to focus on security, compliance, and facilitation activities

One of the initiatives is to develop a mobile application to automate the process to collect duties owed by international travelers for purchases that exceeded their personal exemption and for the payments of tonnage tax, commercial vessel fees and barge/bulk carrier fees, and user fees that are collected manually. A pilot currently is being conducted in Long Beach, California, and New Orleans, Louisiana, seaports with implementation in late FY 2017.

Figure 5: Future Vision for Revenue Modification (as of May 2017)



CBP is also responsible for safeguarding against national security threats in the sea cargo container environment at U.S. sea POEs. In an ongoing effort to modernize, CBP has updated its decade-old security intelligence approach for targeting nuclear and other national security threats

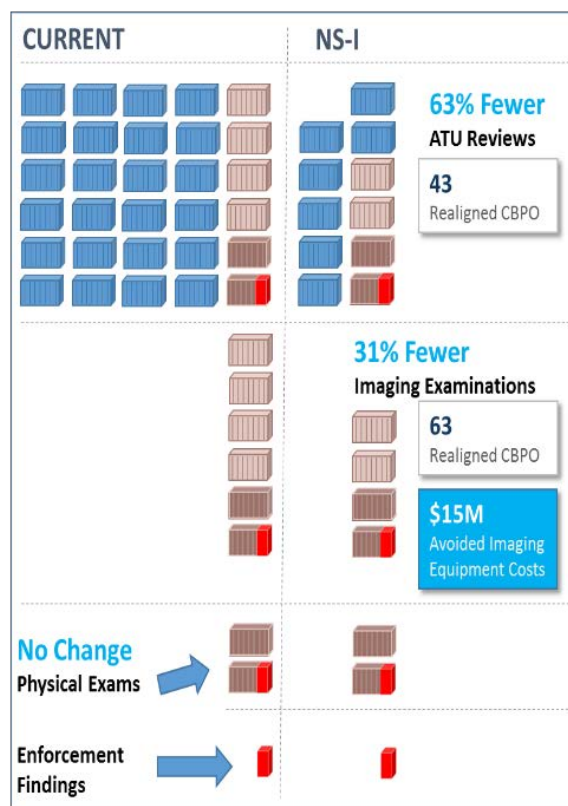
at the seaports. The new approach, National Security - Inbound (NS-I) Maritime, matures CBP's risk management and optimizes CBP's resources to ensure agile and efficient operations. NS-I means better enforcement and fewer containers delayed at ports awaiting labor and time-intensive inspections. The end result improves screening agility and adaptability. CBP conducted an analysis to quantify NS-I efficiencies to demonstrate the benefits of working smarter through improved intelligence.

The NS-I approach streamlines nonvalue work through the entire container-arrival to container-release process. A 2-month evaluation period showed that if the NS-I rules were in place, the time spent on nonvalue-added activities could have been realigned significantly. As estimated, the streamlining of these activities (63 percent fewer shipment reviews and 31 percent fewer nonintrusive inspection exams) can enable the realignment of more than an additional 100 CBPOs.

CBP currently spends more than an estimated \$118 million at the 13 largest sea POEs to conduct mandatory shipment reviews and container imaging examinations. With NS-I, CBP instead would spend just \$90 million in salaries and expenses on these activities—a realignment of approximately \$28 million annually. Compared to the relatively small 1-year investment (\$1.6 million), NS-I results in a 17:1 return on investment (return on investment = 1,677 percent).

Despite fewer shipment reviews and imaging examinations, the same number of physical examinations and enforcement findings should result. NS-I achieves its primary objective to provide higher-quality national security targets. However, in addition to working smarter and achieving national security results, NS-I provides the added benefit of reducing costs for trade, as depicted in Figure 6. With fewer containers delayed at the ports for examination, shippers and receivers avoid costly examination, container transport, and container storage fees. Fewer delayed containers also should improve “time to market” and reduce inventory loss caused by delays. Reduced sea container shipping costs should bolster the sea container business, increase volume, and improve the U.S. economy as a result.

Figure 6: NS-I Estimated Benefits



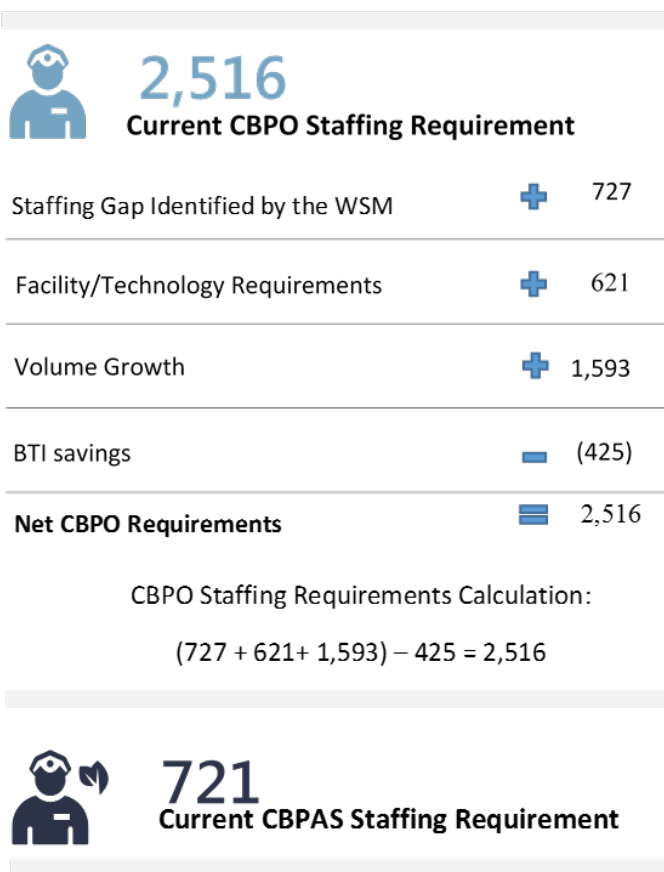
V. CBP Staffing Requirements through FY 2018

A. CBP's FY 2016 Integrated Staffing Model Results

While business process improvements and increasing the number of CBPOs have been successful, updated WSM results continue to show a need for additional capability to meet fully the standards set by statute, regulation, and CBP policies, assuming maintenance of current processes, procedures, technology, and facilities and anticipated growth in travel and trade volumes. The most recent results show a need for 2,516 additional CBPOs, while the AgRAM shows a need for an additional 721 CBPASs through FY 2018. These personnel levels are funded fully in the FY 2018 President's Budget.

This is an increase of 409 CBPOs over the FY 2016 WSM results, which is primarily due to an increase in travel volume. The facilities and technology needs (621 CBPOs vs. 655 in FY 2016) and estimated growth through FY 2018 (1,593 vs 1,629 in FY 2016) are consistent with previous models.

Figure 7: OFO CBPO and CBPAS Staffing Requirements through FY 2018



OFO's staffing requirement approach identifies the WSM baseline results, requirements for facility enhancements, and technology deployments through FY 2018 and requirements for conservatively projected growth through FY 2018 (3 percent). These additional factors are not added to the AgRAM baseline staffing requirements because infrastructure and technology do not affect CBPAS staffing requirements directly and the AgRAM baseline results incorporate volume growth. Finally, in calculating the CBPO staffing requirements, CBP subtracts the expected savings of the BTIs from the CBPO requirements to arrive at a total net requirement. The graphic on the left captures these total net requirements for CBPO and CBPAS staffing with facility and technology requirements, growth, and BTI savings included.

The "Staffing Gap Identified by the WSM" is calculated by subtracting

from the WSM model results (27,072) the sum of the FY 2016 Funded CBPO staffing resources (23,969) and the projected core overtime equivalent for CBPOs (2,376) to get a total current staffing gap identified by the WSM of 727. This calculation is $27,072 - (23,969 + 2,376) = 727$. Please note that in addition to CBPOs funded within OFO's budget plan, an additional 178 CBPOs are funded through other CBP offices, such as the Office of Training and Development. Also, the number of CBPOs for facility and technology requirements does not include CBPOs that will be funded through user fee, preclearance, or other reimbursable agreements.

The CBPAS results are calculated by subtracting the AgGRAM model results (3,142) from the FY 2016-funded CBPAS staffing resources (2,421).

B. Northern Border Staffing Strategy

The various work activities performed by the CBPOs and CBPASs stationed at the CBP POEs along the northern border are captured, processed, and then analyzed by the WSM and AgGRAM modeling programs. Their projections are utilized by CBP management in determining how to allocate staffing resources while maximizing cost efficiencies in conjunction with ensuring that resources are aligned within the existing threat environments.

The Northern Border POEs were allocated 250 of the 2,000 additional CBPOs funded through the FY 2014 DHS Appropriations Act. However, hiring of CBPOs for the Northern Border, as with the Southern Border, continues to be a challenge. As of May 27, 2017, approximately 49 percent (122 out of the 250) of the additional personnel were on board. However, the top five Northern Border POEs by volume that received the majority of the allocation (180 of the 250) have hired 52 percent of those CBPOs. Staff for smaller remote POEs is more difficult to recruit and hire; however, CBP is implementing incentive programs to address this challenge. Overall Northern Border POEs have 95 percent of their funded staffing on board. Even when CBP successfully hires all the funded officers to the Northern Border field offices, there will be an additional need for more than 300 CBPOs through FY 2018. The FY 2018 President's Budget addresses these needs through proposed adjustments to user fee rates.

Irrespective of the hiring challenges, a 7-percent decrease in volume in FY 2016 as compared to FY 2015 on the Northern Border and CBP's multifaceted ROS leveraging transformation and public-private partnerships have affected wait times positively. Overall across all Northern Border POEs, wait times for POVs in FY 2016 have decreased by 14 percent compared to FY 2015 (approximately 1 minute). The wait times for COVs have remained flat for the same time period.

CBP will continue to recruit aggressively and hire CBPOs at POEs that have not reached their authorized level of staffing and to enhance the ROS at the Northern Border POEs to continue this positive trend.

VI. Comprehensive Funding Strategy - Alternative Sources of Funding

The third prong of CBP's ROS is seeking alternative sources of funding to augment current resources and provide increased services or resources to support CBP's enforcement mission to ensure the Nation's safety and responsibility to facilitate trade and travel in support of the Nation's economic prosperity. In FY 2018, CBP continues to seek an increase in user fees and to expand upon its public-private partnership authority to fund enhanced CBP services and implement new funding streams for current programs.

A. Increase CBP User Fees

CBP intends to submit legislative proposals for consideration by the relevant House and Senate authorizing committees to raise the Immigration User Fee (IUF) and Consolidated Omnibus Budget Reconciliation Act (COBRA) fees to decrease the shortfall between the costs of CBP's customs and immigration inspection activities and the collections received. If enacted, this also would allow CBP to hire up to 2,070 additional CBPOs, which will result in improved customs and immigration inspection services provided to those who pay this fee when traveling to the United States.

The strategy includes a proposal to increase the fees statutorily set under COBRA and the Express Consignment Courier Facilities. This proposal would increase the COBRA inspection fees by \$2 and increase other COBRA fees by a proportional amount. The Express Consignment Carrier Facilities fee was created to reimburse CBP for inspection costs related to express consignments, and would be increased by \$0.36. The legislative proposal also will include authority to increase fees annually, as needed, to adjust for inflation.

CBP's proposal to the relevant congressional authorizing committees also would increase the IUF by \$2. The current fees are \$7 for air and commercial vessel passengers and \$3 for partially exempted commercial vessel passengers whose trips originate in Canada, Mexico, the U.S. territories, and any adjacent island. This fee is paid by passengers and is used to recover some of the costs related to determining the admissibility of passengers entering the United States. Specifically, the fees collected support the cost of immigration inspections (including personnel performing such inspections), the maintenance and updating of systems that track criminal and illegal aliens in areas with high apprehensions, asylum proceedings, and the repair and maintenance of equipment, among other purposes.

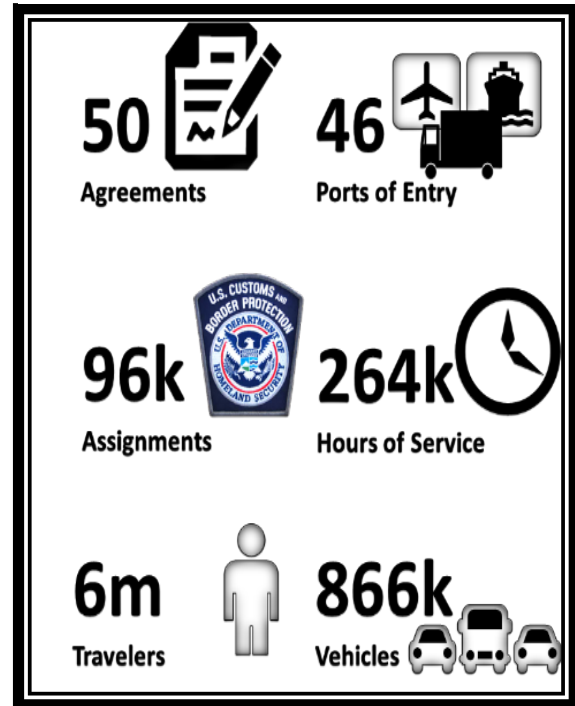
In addition, CBP proposes to lift the exemption for sea passengers traveling from the United States, Canada, Mexico, and adjacent islands (\$3) so that the same fee will be applied to all sea passengers. As noted above, sea passengers arriving in the United States currently are charged a \$7 fee if their trip does not originate in Canada, Mexico, the U.S. territories, or any adjacent island.

B. Reimbursable Services Program

CBP plans to continue expanding the Reimbursable Services Program. CBP's Reimbursable Services Program currently has agreements with 50 stakeholders at 46 POEs. Since the program began in December 2013, CBP has provided nearly 264,000 hours of service at the request of its partners—accounting for the processing of more than 6 million travelers and 866,000 personal and commercial vehicles.

The program continues to expand as new agreements are signed every year. The Cross-Border Trade Enhancement Act of 2016 amends Title IV of the Homeland Security Act of 2002 by adding, “Section 481 – Fee Agreements for Certain Services at Ports of Entry” and associated language. This new statute removed restrictions on the number of air agreements that can be signed each year and made the Reimbursable Services Program permanent.

Figure 8: Reimbursable Services Program Statistics



CBP has signed 50 reimbursable services agreements covering 46 POEs in 17 field offices. Since the program began in December 2013, CBP has provided approximately 264,000 additional processing hours at the request of its partners, accounting for the processing of more than 5.6 million travelers.

C. Donation Acceptance Program

The Donation Acceptance Program (DAP) enables CBP and the General Services Administration (GSA) to accept certain donations from private- and public-sector entities. These donations will address critical infrastructure and technology needs at U.S. POEs. The DAP was established in FY 2015 to help address CBP's growing backlog of unfunded and underfunded infrastructure and technology needs and since has channeled an estimated \$50 million successfully in planned public and private-sector investment in U.S. POEs. Specifically, the DAP permits CBP and GSA to accept donations of real property, personal property (including monetary donations), and nonpersonal services for POE construction, alterations, and operations and maintenance purposes.

A submission period for large-scale proposals closed on November 11, 2016. CBP approved all four proposals in April 2017, which will result in an aggregate \$115 million in planned public- and private-sector investment in U.S. POEs.

The DAP also has implemented a new small-scale donation proposal process that border stakeholders may use to invest in and expedite high-impact POE improvements valued at \$3 million or less (e.g., small land donations, minor facility enhancements and lane expansions, equipment, and technologies). Proposals that qualify as small-scale may be submitted year-round and, in turn, evaluated 60 to 70 percent faster than proposals submitted during the program's large-scale submission period as referenced above. In August 2016, the DAP approved its first small-scale proposal from the Greater Nogales Santa Cruz County Port Authority seeking to upgrade existing air-conditioned dock space at the Nogales West POE to fully refrigerated dock space.

VII. Conclusion

CBP is committed to ensuring the security of our Nation's borders, while continuing to facilitate legitimate travel and trade. With the support of Congress, CBP strives to allocate its resources as efficiently as possible to best enable mission success at the POEs. Where staffing gaps have been identified, additional resources have been requested through the FY 2018 President's Budget. CBP also continues to partner with Congress, local governments, business groups, and the trade and travel industry to ensure that the Nation's POEs are sufficiently staffed.

These accomplishments were considered in developing the FY 2018 staffing requirements, because CBP recognizes that there is still a need to increase workforce capabilities. CBP will continue to implement its multipronged approach to address frontline personnel needs by: (1) maximizing the use of current resources through overtime and optimal scheduling practices; (2) pursuing alternative sources of financing through legislative proposals supporting reimbursement authority and, as appropriate, adjusting user fees; and (3) continuing to implement BTIs to reduce costs and mitigate staffing requirements.

Taken together, this multipronged strategy will allow CBP to increase workforce capability while enhancing operations. Innovative transformation efforts and public-private partnerships also will help to inform the long-term frontline personnel requirements as the WSM and AgRAM are adjusted and improved annually. CBP looks forward to working with Congress on the identified initiatives, as well as on long-term efforts to address the findings of the model. CBP welcomes input from legislators, state and local partners, and private-sector stakeholders as it works to refine operations and plans strategically for future personnel requirements.

VIII. Appendices

Appendix A. Details on current Business Transformation Initiatives (BTI) Included in Previous Reports

1. Advance Automated Processing – Air and Sea Ports of Entry (POE)

Travelers continue to embrace automation in the air environment as the share of passengers processed by automated means—Automated Passport Control (APC), Mobile Passport Control (MPC), and Global Entry (GE)—increased by 26 percent in FY 2016 from FY 2015.

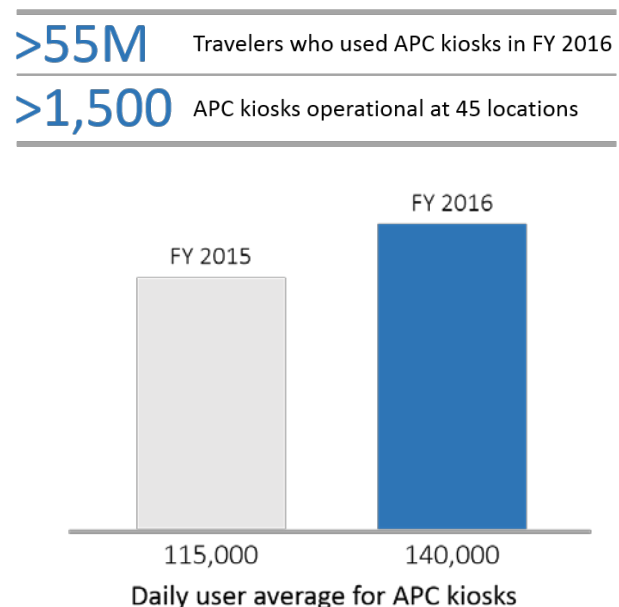
a) APC Kiosks – The APC kiosk allows a traveler to provide information voluntarily prior to the primary inspection process. U.S. Customs and Border Protection (CBP) systems query the traveler in real time and provide a response that is printed on a receipt that the traveler presents to the CBP officer (CBPO). Travelers still are inspected by an officer to verify the purpose and intent of travel; however, the self-service kiosk removes the administrative responsibility resulting in shorter processing times and allowing the officer to focus on core law enforcement functions.

In FY 2016, more than 55 million travelers used the APC kiosks. More than 150 million passengers have been processed by kiosks since the beginning of FY 2014.

In FY 2015, the average number of passengers using an APC kiosk daily was 115,000, more than doubling the FY 2014 usage. In FY 2016, the daily average increased to 140,000.

More than 1,500 APC kiosks are currently operational at 45 locations: Abu Dhabi, Aruba, Atlanta, Austin, Baltimore, Boston, Charlotte, Chicago Midway, Chicago O’Hare, Dallas, Denver, Detroit, Dublin, Edmonton, Fort Lauderdale, Guam, Halifax, Honolulu, Houston, Houston (Hobby), Las Vegas, Los Angeles (Terminals 2, 5, 7 and TBIT), Miami, Minneapolis, Montreal, Nassau, JFK (Terminals 1, 4, 5 and 8), Newark (Terminal C), Oakland, Orlando, Philadelphia, Phoenix, Pittsburgh, Portland, Reno, Salt Lake City, San Diego, San Francisco, San Jose, Seattle, Tampa, Toronto, Vancouver, Washington Dulles, and Winnipeg. Future sites for APC kiosks include: Guam, Ottawa, Calgary, and Southwest Florida International Airport.

Figure 9: APC Statistics for FY 2016



APC kiosks initially handled travelers who did not require a visa; however, APCs with enhanced capabilities to process nonimmigrant visitors traveling on business (B-1 visa) or pleasure (B-2 visa) and foreign arriving aircrew (D1 visa) have been implemented in multiple locations.

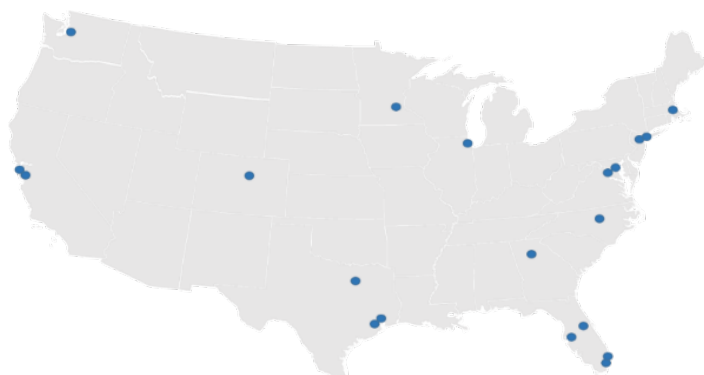
Additionally, APCs currently are being piloted at Port Everglades for cruise ship travelers. This pilot of the first-ever APC kiosks in the U.S. seaport environment began on June 4, 2016. Initial processing is being tested on “closed loop” cruises (cruises that start and end in the United States and travel to near and contiguous islands), and results have been successful. Processing will be expanded to include all cruises and to increase the number of kiosks.

b) Mobile Passport Control – MPC is a business transformation initiative developed in partnership with industry resulting in a mobile application that enables travelers equipped with a smart phone to answer CBP inspection-related questions and provide biographic information to CBP prior to inspection. MPC was deployed at 15 additional U.S. airports in FY 2016 and is now operational at 20 airports: Atlanta, Miami, Seattle, Chicago, San Francisco, Fort Lauderdale, Dallas-Fort Worth, Newark, JFK, Orlando, Denver, San Jose, Minneapolis, Dulles, Raleigh-Durham, Tampa, Boston, Baltimore-Washington, Houston-Bush, and Houston-Hobby.

Figure 10: Comparison of MPC in FY 2015 vs. FY 2016

Fiscal Year 2015		Fiscal Year 2016	
5	Locations that offer MPC	20	Locations that offer MPC
2,700	Downloads per week	25,000	Downloads per week
123,000	Total passengers processed through MPC	607,000	Total passengers processed through MPC
\$1,200,000	Estimated Value of Wait Time Reduction	\$2,000,000	Estimated Value of Wait Time Reduction
4,750	Approximate uses per week	11,668	Approximate uses per week

Figure 11: Map of Locations with MPC



MPC is one of the most promising technologies to continue the facilitation of travelers in the future. In order to invest in this technology, CBP provided technical capability to use the MPC application in the cruise environment, is working with a vendor to explore integrating MPC with modified kiosks that collect biometrics to expand usage to Visa Waiver Program (VWP) travelers, and met with two preclearance locations to discuss expansion to those locations.

c) Global Entry – The GE Program continues to expedite the entry of low-risk travelers, while helping CBP redirect resources to enforcement and the inspection of other high-risk, unknown travelers. To participate in the GE Program, travelers submit an application that includes a fee, an in-person interview, or background check and fingerprinting. Approved applicants receive a 5-year membership. GE membership is more than 3.4 million, and there are currently 67 airports with GE kiosks.

During FY 2016, GE travelers waited an average of 24.5 minutes less

(88 percent) than nonparticipants. In total, 5.5 million GE travelers waited 2.1 million fewer hours (value to the traveler: \$25.9 million) than if entry were processed by traditional means. The average GE crossing is 104.6 seconds faster than traditional processing and saved (in total) 162.1 thousand CBPO hours (valued at \$16.9 million).

Table 3: Global Entry Savings Since Inception

Traveler Crossings:		5.3 million
Traffic Share:		6.1%
Traveling Public	Per Traveler Wait Time Savings (minutes):	24.5 (88%)
	Total Reduced Traveler Wait (Hours):	2.1 million
	Value of Traveler Time Savings:	\$25.9 million
CBP Efficiency	Per Inspection Time Savings (seconds):	104.6 (100%)
	CBPO Hours Saved:	162 thousand
	Value of CBPO Hours:	\$16.9 million

d) National Targeting Center – CBP’s National Targeting Center (NTC), the Immigration Advisory Program (IAP), and the Regional Carrier Liaison Group (RCLG) led CBP efforts in FY 2016 to identify and prevent the boarding of 14,293 high-risk travelers on flights destined for the United States. IAP employs CBPOs at foreign airports where they review passenger information and/or assess the passenger documentation prior to their U.S.-bound flights. IAP officers make “no board” recommendations to carriers and host governments regarding passengers bound for the United States. The RCLGs, located in Honolulu, Miami, and New York, expand the Nation’s zone of security beyond physical U.S. borders by working with commercial carriers to prevent the boarding of passengers who may pose a security threat, have fraudulent documents, or are otherwise inadmissible. The prevention of 14,293 travelers is an increase of 22 percent and the equivalent of five CBPOs over FY 2015. The program also resulted in the cost avoidance of more than \$35 million in monetary costs to the airlines.

In addition to the predeparture efforts for travel, NTC led CBP efforts in the identification of inadmissible individuals in various application programs. Prior to travel to the United States, most foreign nationals intent on seeking admission as a visitor must obtain Electronic System for Travel Authorization (ESTA), if eligible to travel under the VWP, or a nonimmigrant visa, adjudicated by the U.S. Department of State (DOS) and issued by a U.S. embassy or consulate.

NTC conducts continuous vetting of nonimmigrant visa and ESTA status to ensure that changes in a traveler’s eligibility are identified in near real time. This allows CBP immediately to provide a “no board” recommendation to a carrier in imminent travel situations, to recommend that DOS revoke the visa, to deny an ESTA, or to provide additional notification for individuals

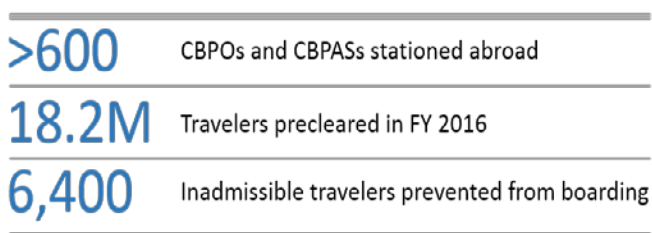
determined to be present in the United States. In FY 2016, NTC coordinated with DOS to revoke 2,833 visas and referred 8,188 individuals to Homeland Security Investigations for further review.

e) Electronic System for Travel Authorization – ESTA was implemented in 2008 to secure the VWP by conducting preliminary vetting of nonvisa holders prior to departure for the United States. The Visa Waiver Program Improvement and Terrorist Travel Prevention Act of 2015, enacted on December 18, 2015, as part of the FY 2016 Consolidated Appropriations Act (P.L. 114-113), established new travel and dual nationality restrictions for VWP travel, and mandated the use of electronic passports by VWP travelers. In response to the new law, CBP began implementing the dual nationality restrictions through the online ESTA application. CBP designated the countries of Somalia, Yemen, and Libya as additional countries of concern with respect to the travel restrictions; implemented new questions regarding prior presence in Iran, Iraq, Sudan, and Syria; reprogrammed the system with passport validation rules designed to reject non-ePassports; and added new questions pertaining to applicants' past travel to Libya, Somalia, and Yemen.

f) Transform New Immigrant Visa – CBP and the DOS Visa Office have been engaged in an ongoing effort with U.S. Citizenship and Immigration Services (USCIS) to transition to a paperless Immigrant Visa (IV) packet and an automated Form I-89. The current IV process is predominantly paper-driven and based on the collection, transportation, and storage of hardcopy documents that are transferred between USCIS, CBP, and DOS. The current process fails to leverage current technology advances, biometric collection platforms, and interfaces already shared by federal agencies, including the DOS Consolidated Consular Database, Arrival Departure Information System, and the Automated Biometric Identification System (referred to as IDENT). The anticipated date of a fully automated process within USCIS is late 2017. CBP is estimating that this initiative will avoid the equivalent of more than 100 CBPOs through FY 2018.

g) Preclearance Expansion – Preclearance operations in the air environment is the strategic stationing of CBP law enforcement personnel overseas to inspect travelers prior to boarding U.S.-bound flights. Through preclearance, CBPOs can conduct the same immigration, customs, and agriculture inspections of international air travelers typically performed upon arrival in the United States before departure from foreign airports. By moving inspections abroad, CBP can disrupt and deter terrorist threats before they reach U.S. borders and enhance travel facilitation, further reducing wait times at the Nation's busiest POEs.

Figure 12: Preclearance Statistics for FY 2016



The aviation security benefits of preclearance are substantial because a uniformed, U.S. law enforcement officer interviews the precleared passenger before he or she boards the plane. This added security layer provides an additional opportunity to detect and stop threats as early in the process as possible. In addition to

enhancing security, preclearance has the potential to increase capacity and growth opportunities for airports and air carriers in the United States and abroad, while improving the passenger experience. Preclearance generates the potential for significant economic benefits for the United States and its international partners through reducing wait times at domestic gateways, creating an overall increase in clearance capacity, facilitating quicker connections to U.S. domestic flights, and maximizing aircraft and gate utilization. Travelers also have realized a reduced wait time on average when traveling through preclearance locations. As an example, passengers who fly through Dublin would face nearly 50 percent less time in queue than they would when being processed through domestic POEs.

Today, CBP has more than 600 law enforcement officers and agriculture specialists stationed at 15 air preclearance locations in 6 countries: Dublin and Shannon in Ireland; Aruba; Freeport and Nassau in the Bahamas; Bermuda; Abu Dhabi, United Arab Emirates; and Calgary, Toronto, Edmonton, Halifax, Montreal, Ottawa, Vancouver, and Winnipeg in Canada.

In FY 2016, CBP personnel stationed abroad precleared 18.2 million travelers, which was 15 percent of all commercial air travelers. Of those processed at preclearance locations in FY 2016, CBP was able to prevent 6,400 inadmissible travelers from boarding U.S.-bound flights.

Figure 13: Depiction of Current Preclearance Locations



CBP currently is negotiating with several of the countries prioritized during the first round of expansion, with planned location openings at Punta Cana in the Dominican Republic in FY 2017 and Stockholm in Sweden in FY 2018. In November 2016, CBP announced another 11 foreign airports in 9 countries that have been approved to start negotiations in FY 2017.

2. Advance Automated Processing – Land Ports of Entry

As previously mentioned, the wait times on the land border decreased in FY 2016. The rapid growth of Radio Frequency Identification (RFID)-enabled documents has stabilized: 66 percent of crossers used RFID-enabled documents to cross in 2016 compared to 65 percent last year. In order to address this trend, CBP continues to implement the ROS to automate processing at the U.S. land POEs to expedite trusted or low-risk traffic and to focus on those arriving travelers that are unknown.

a) Ready Lanes – Ready Lane traffic share (not including NEXUS and (SENTRI) traffic) has increased 2 percent from a year ago. Ports with Ready Lanes have taken measures (such as

traffic segmentation, improved signage, and more responsive active lane management) to increase Ready Lane benefits for participating travelers. In FY 2016, Ready Lane waits averaged 5 percent shorter than waits in the general lanes.

While Ready Lanes provide a wait time benefit to travelers, they also assist CBP. Because Ready Lanes are more efficient than general lanes, they process more vehicles (about 23 more) per hour than general lanes. This efficiency benefits CBP managers who are constrained by available booths (facilities) and staff (labor). In 2016, the average Ready Lane processed 62 vehicles per hour, per booth, compared to 39 vehicles in the general lanes.

b) Pedestrian Ready Lanes – On the land border, pedestrian Ready Lanes allow any traveler carrying an approved document with RFID technology to use the lane for a faster border crossing. Pedestrian Ready Lanes process travelers 34 percent faster than general lanes.



Although pedestrian traveler volume has increased by 2 percent (up from 42 million in 2015 to 43.4 million in 2016), its share of traffic has declined from 38 percent to 35 percent over the same period. With 7 out of every 10 pedestrians eligible for Ready Lane participation, CBP will endeavor to operate more Ready Lanes and maximize efficiency and traveler experience.

Pedestrian Ready Lanes first opened at the Paso Del Norte crossing in El Paso, Texas in November 2011 and since have expanded to San Ysidro, Otay Mesa, Calexico West, San Luis, Hidalgo, Gateway, Bridge of the Americas (BOTA), Columbus, Convent Street (Br 2), Deconcini, Del Rio, and Ysleta.

Travelers in pedestrian Ready Lanes wait an average of 12.8 minutes compared to 13.5 for travelers in general lanes. Pedestrian Ready Lanes allow for a reduction in both cycle time and booth hours. Pedestrian Ready Lane cycle time is 26.4 seconds compared to 40.1 seconds in the general lanes. The average Ready Lane processes more than 100 pedestrians an hour, compared to just 60 for general lanes.

Although not all locations with pedestrian kiosks operate Pedestrian Ready Lanes, as of September 30, 2016, kiosks are deployed along the Southern Border at: Brownsville (Gateway Bridge and B&M Bridge), Pharr, Convent Street, Progreso, El Paso (PDN Bridge, BOTA, and Ysleta), Columbus, Douglas, Nogales (Deconcini and Mariposa), San Luis, Andrade, Calexico (East and West), Tecate, Otay Mesa, and San Ysidro.

Figure 14: Pedestrian Ready Lanes FY 2016

	 General Lanes	 Pedestrian Ready Lanes
Cycle Time	40.1 seconds	26.4 seconds
Pedestrian Throughput	60/hr	>100/hr

c) SENTRI and NEXUS – SENTRI and NEXUS programs continue to expedite low-risk vetted international travelers while enabling CBP to focus on those unknown or high-risk travelers. All Trusted Traveler participants undergo a rigorous background check and personal interview before enrollment. SENTRI travelers in FY 2016 waited an average of 24 minutes less (78 percent) than in the General Lane. In total, 15.3 million SENTRI travelers waited

15.1 million fewer hours (value to the traveler: \$189.5 million) than if entry were processed by traditional means. The average SENTRI crossing is 41 seconds faster than traditional processing and saved just over 174,000 CBPO hours, valued at \$19.3 million.

NEXUS travelers in FY 2016 waited an average of 4 minutes less (60 percent) than in the General Lane. In total, 3.9 million NEXUS travelers waited 700,000 fewer hours (value to the traveler: \$8.7 million) than if entry were processed by traditional means. The average NEXUS crossing is 34 seconds faster than traditional processing and saved just over 37 thousand CBPO hours, valued at \$4.1 million. However, the number of vehicles crossing under the NEXUS program decreased by a little more than 7 percent (approximately 300,000 crossings) in FY 2016. This trend is commensurate with a 7-percent decrease in POV traffic at the Northern Border.

Table 4: Comparison of SENTRI and NEXUS

	SENTRI	NEXUS
Number of users	15.3M	3.9M
Time saved over General Lanes	78%	60%
Hours saved (by travelers)	15.1M	700,000
Hours saved (by CBPOs)	174,000	37,000
Monetary equivalent of CBPO savings	\$19.3M	\$4.1M

d) Expansion of Automated User Fees for Commercial Vehicles – A preinspection pilot operation at the Port of Buffalo in FY 2014 saw a reduction in processing time of 20–25 seconds per truck, which was partially attributable to the absence of manual user fee collections. By capturing best practices from the preinspection pilot, CBP identified and developed business requirements for automating the commercial truck user fee payment and collection process for single crossers (i.e., pay-as-you-go) with the end-goal of eliminating cash payments in truck primary. As of 2015, approximately 11 percent of commercial vehicles paid cash on primary. On June 2, 2016, CBP began piloting an automated payment option for single crossings at the ports of Buffalo, Detroit, and El Paso. The primary goal of the automated payment initiative for CBP is to reduce primary processing time and to alleviate CBPOs of administrative functions pertaining to the collection, accounting, and transmittal of user fees.

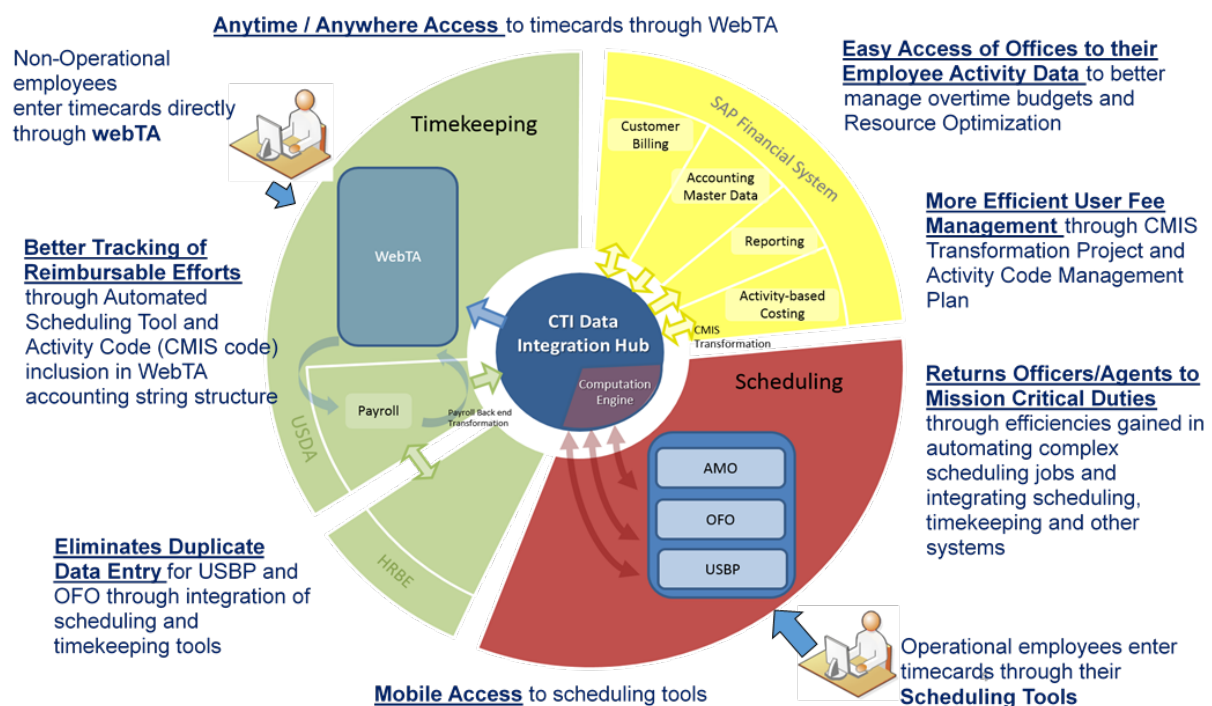
On November 28, 2016, CBP implemented the availability of the automated payment solution at the national level that will enable commercial truck carriers to pay the single crossing fee for any commercial crossing. Carriers or their agents can pay the single crossing user fee online via the enhanced Decal/Transponder Online Procurement System prior to arriving at the port, thereby reducing wait times, fuel consumption, and vehicle emissions associated with border delays. Removing cash and credit card collections from primary will enable port management to optimize resources in order to facilitate trade and to ensure the security and safety of international travelers further. As of December 2016, there have been more than 10,500 payments made using the new single-crossing payment option.

e) Automated Scheduling Tool Deployment/Expansion – In FY 2014, CBP initiated the Automated Scheduling Tool (AST) experimental program designed to automate the current manual personnel scheduling process. The goal was to reduce the estimated 400,000 hours spent

yearly to support scheduling and overtime management, therefore freeing up significant resources from administrative duties and allowing those resources to be redeployed in mission critical operational capacities. The initial experimental program conducted within the San Diego Field Office provided a strong baseline for future business system requirements (process, organization, technology) to institute standardized practices for personnel scheduling and overtime management in all Office of Field Operations (OFO) operational environments including land, sea, and air POEs.

Building on the success of the initial experiment, in FY 2016 the AST project expanded to an enterprisewide program. In FY 2017, the AST program will be implemented throughout all ports in the Miami, Buffalo, New Orleans, El Paso, and San Francisco Field Offices. By the end of the fiscal year, more than 10,000 CBP employees will be utilizing the new scheduling system with the remaining field offices scheduled for implementation in FY 2018. CBP is currently unable to develop an estimated CBPO savings for this program because it is in its infancy and currently is being operated parallel to the manual scheduling method.

Figure 15: Depiction of Benefits of Automated Scheduling Tool



3. Advance Paperless Solutions

Electronic Visa Update System – In November 2014, the Governments of the United States and the People’s Republic of China (PRC) entered into an agreement on a reciprocal basis, to issue visitor and business travel visas (B1/B2, B1 and B2) with 10-year validity. That same agreement recognized that travelers would be required periodically to complete an online form updating their biographical information. CBP developed the Electronic Visa Update System (EVUS) to

meet this requirement. EVUS is designed to accommodate the designation of new countries into the program easily.

EVUS provides an online mechanism wherein citizens of the PRC, or any designated country, can update biographic, passport, travel, and eligibility information. The updated information is referred to as an enrollment and is valid for 2 years or until passport and/or visa expiration, whichever comes first. The information collected in EVUS will enhance the screening and verification process prior to travel. Although the system is focused on citizens of PRC at this time, it was designed to adapt easily and to include additional designated countries.

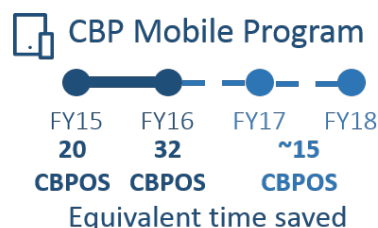
EVUS officially launched on November 29, 2016. With this launch, a successful EVUS enrollment for affected travelers became an entry requirement at all modes of entry. Air and sea commercial carriers will be required to verify EVUS enrollment process prior to embarkation. CBP will verify enrollment prior to admittance on a land border POE.

4. Build Mobility into CBP Operations and Functions

CBP Mobile Program – During FY 2016, CBP Mobile was able to deploy a significant number of devices to support day-to-day operations, augmented operations, and special events. More than 1,750 ruggedized tablets, smart phones, biometric scanning peripherals, and jump kits were shipped to the field in support of OFO inspection processing; U.S. Border Patrol enforcement operations; cargo examinations (for testing and development); and Air and Marine Operations' efforts.

Smart phones and fingerprint capture peripherals were deployed in support of expanding the Biometric Exit Mobile Air operations to six additional airports paving the way for further expansion in FY 2017. Ruggedized tablets were deployed in support of security efforts for Super Bowl 50. CBP Mobile also provided full traveler processing jump kits containing laptops, fingerprint scanners, machine readable zone document readers, and cameras, in support of special operations, including Southwest Border increased Haitian and Cuban inspection processing; at Laredo and San Ysidro during construction as part of wait time reduction efforts; train and cruise ship operations across the Northern Border; and increased security and general aviation inspections during the Democratic National Convention. The CBP Mobile Program saved the equivalent of 32 CBPOs in FY 2016, which is 12 more CBPOs than in FY 2015 and is estimated to save an additional 15 through FY 2018.

Figure 16: CBP Mobile Savings



Ruggedized tablets were deployed in support of the MobileRefer – Streamlining Secondary Pilot at Douglas POE. The goal of the pilot was to provide a technical solution that would improve the effectiveness and efficiency of the primary to secondary process flow and reduce the overall secondary inspection process time. To date, this goal is being accomplished successfully because it has:

- Reduced time for a primary officer to refer a vehicle to secondary;


- Decreased wait times as a result of being able to keep primary lanes open because the booth officers no longer have to provide most secondary escorts;
- Eliminated the requirement for officers to enter Vehicle Primary Client to input referrals and then draft handwritten paper referral slips to affix to vehicles; and
- Enhanced officer safety by minimizing distraction and expediting the referral process, allowing the officer to remain focused on the suspect and to decrease the port runner possibility.

Prior to the MobileRefer pilot, it would take an officer approximately 2 to 3 minutes to refer a vehicle to secondary. Since deploying MobileRefer, the referral process times have been cut by 50 percent. It is expected that this result will improve over time with the implementation of proposed application enhancements and the completion of TECS modernization. Planning is underway for pilot expansion in FY 2017 with an eye toward nationwide deployment by the end of FY 2018.

Figure 17: CBP Agricultural Specialist Mobile Release Savings

analysis at Port Everglades where mobile tablet technology initially was deployed. The study found that the use of the tablet to conduct agricultural releases of cargo as opposed to the use of a systems release for cargo release creates a 98-percent time savings within the release process. Specifically, the average release time drops from 4 to 6 hours to 5 minutes. For example, according to trade community interviews, the use of the tablet for the 21,000 tailgate inspections last year at Port Everglades resulted in approximately \$20 million savings in additional landed

costs (reduction of overtime for equipment and local warehouse personnel, late gate fees, truck-related costs, and other non-CBP costs that commonly occur in 20 percent of agriculture shipments). When compared to the initial investment of \$226,000, OFO has

	98% less time when using tablets to release agricultural cargo
Initial investment	\$226,000
Savings at one location	~\$20,000,000

delivered a significant return for its initial investment at just a single POE and continues to expand these capabilities nationwide.

Appendix B. List of Abbreviations/Acronyms

Abbreviation/Acronym	Definition
AgRAM	Agriculture Resource Allocation Model
APC	Automated Passport Control
APIS	Advance Passenger Information System
AST	Automated Scheduling Tool
ATDS	Airport Technical Design Standards
BE	Biometric Exit
BTI	Business Transformation Initiative
CAOS	Combined Automated Operations System
CBP	U.S. Customs and Border Protection
CBPAS	U.S. Customs and Border Protection Agriculture Specialist
CBPO	U.S. Customs and Border Protection Officer (GS-1895)
COBRA	Consolidated Omnibus Budget Reconciliation Act of 1985
COV	Commercially Owned Vehicle
CREATE	Center for Risk and Economic Analysis of Terrorism Events
DAP	Donation Acceptance Program
DHS	U.S. Department of Homeland Security
DIST	Departure Information System Test
DOS	U.S. Department of State
ESTA	Electronic System for Travel Authorization
EVUS	Electronic Visa Update System
FIS	Federal Inspection Services
FY	Fiscal Year
GDP	Gross Domestic Product
GE	Global Entry
GSA	General Services Administration
IAP	Immigration Advisory Program
IDENT	Automated Biometric Identification System
IUF	Immigration User Fee
IV	Immigrant Visa
JFK	John F. Kennedy International Airport
LBR	Land Border Reengineering
MPC	Mobile Passport Control
NS-I	National Security - Inbound
NTC	National Targeting Center
OFO	Office of Field Operations
POE	Port of Entry
POV	Privately Owned Vehicle
PRC	People's Republic of China
RCLG	Regional Carrier Liaison Group
RFID	Radio Frequency Identification

Abbreviation/Acronym	Definition
ROS	Resource Optimization Strategy
SENTRI	Secure Electronic Network for Traveler's Rapid Inspection
TTP	Trusted Traveler Program
USCIS	U.S. Citizenship and Immigration Services
VPC	Vehicle Primary Client
VWP	Visa Waiver Program
WSM	Workload Staffing Model