Biometrics and Knowing Our Travelers
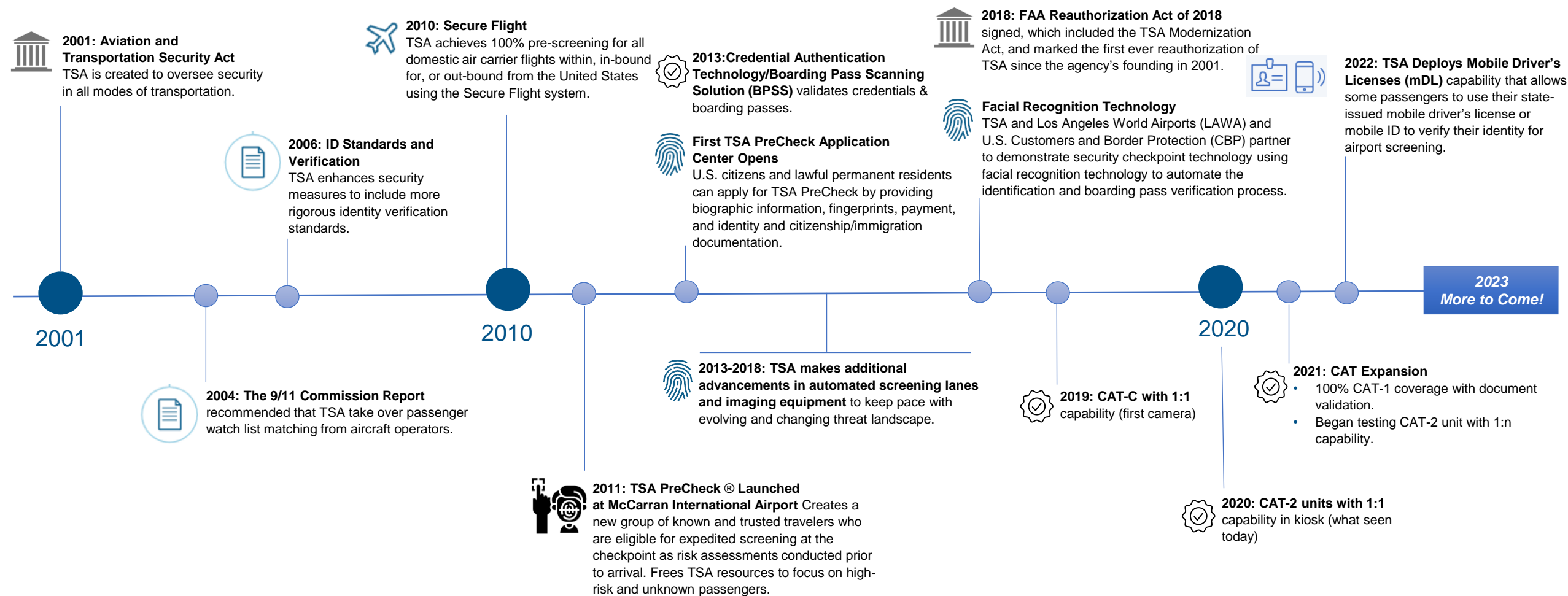
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Enrollment Services and Vetting Programs (ESVP)
Transportation Security Administration (TSA)

TSA's HISTORY IN IDENTITY MANAGEMENT
TSA - The Largest Consumer of Identity

2001: Aviation and Transportation Security Act
TSA is created to oversee security in all modes of transportation.

2006: ID Standards and Verification
TSA enhances security measures to include more rigorous identity verification standards.

2010: Secure Flight
TSA achieves 100% pre-screening for all domestic air carrier flights within, in-bound for, or out-bound from the United States using the Secure Flight system.

2013:Credential Authentication Technology/Boarding Pass Scanning Solution (BPSS) validates credentials & boarding passes.

First TSA PreCheck Application Center Opens
U.S. citizens and lawful permanent residents can apply for TSA PreCheck by providing biographic information, fingerprints, payment, and identity and citizenship/immigration documentation.

2018: FAA Reauthorization Act of 2018
signed, which included the TSA Modernization Act, and marked the first ever reauthorization of TSA since the agency's founding in 2001.

Facial Recognition Technology
TSA and Los Angeles World Airports (LAWA) and U.S. Customers and Border Protection (CBP) partner to demonstrate security checkpoint technology using facial recognition technology to automate the identification and boarding pass verification process.

2022: TSA Deploys Mobile Driver's Licenses (mDL) capability that allows some passengers to use their state-issued mobile driver's license or mobile ID to verify their identity for airport screening.

2001

2010

2020

*2023
More to Come!*

2004: The 9/11 Commission Report
recommended that TSA take over passenger watch list matching from aircraft operators.

2013-2018: TSA makes additional advancements in automated screening lanes and imaging equipment to keep pace with evolving and changing threat landscape.

2011: TSA PreCheck ® Launched at McCarran International Airport Creates a new group of known and trusted travelers who are eligible for expedited screening at the checkpoint as risk assessments conducted prior to arrival. Frees TSA resources to focus on high-risk and unknown passengers.

2019: CAT-C with 1:1 capability (first camera)

2020: CAT-2 units with 1:1 capability in kiosk (what seen today)

2021: CAT Expansion
- 100% CAT-1 coverage with document validation.
- Began testing CAT-2 unit with 1:n capability.

CAT-2 Integration

TSA is developing 1:1 facial matching, digital identity, 1:n facial identification technologies to enhance IDM capabilities at the TSA checkpoint.

Travel Document Checker (TDC)

Prior to physical screening, TSA must perform the following steps at the TDC:

1. Verify **authenticity** of presented form of ID

2. Verify **match** of the passenger and his/her form of ID

3. Validate passenger **flight reservation status**

4. Validate passenger **Secure Flight vetting status**

5. Direct passenger to **appropriate level of screening**

6. Resolve any **non-matches** and **security issues** manually

CAT-2

1:1 Facial Matching
Verifies passenger's identity by locally comparing an authenticated ID (physical or digital) photo against the live image of the passenger

Digital ID Interoperability
Enables secure interoperability with standards-compliant digital identity products such as mobile driver's licenses (mDL)

1:n Facial Identification
TSA will complete IT development to enable CAT-2 to leverage CBP's TVS matcher for Trusted Travelers (i.e., "TSA PreCheck®: Touchless Identity Solution")

TSA collaborated across an ecosystem of vendors and DHS partners to develop these capabilities which will increase transportation security and provide an improved, contactless experience.

CAT-2 Overview

TSA is upgrading Credential Authentication Technology (CAT) machines with biometric, digital identity, and self-service capabilities to enhance security effectiveness, improve operational efficiency, and yield a more streamlined passenger experience.

CAT-2 Objectives

Biometric Identity Verification
Integrates biometric capture to verify an individual's ID (physical or digital) against a live image

Flight Reservation Information
Confirms individual's flight reservation

Pre-Screening Status
Verifies the individual's pre-screening status through TSA Secure Flight in near real time

Self-Service
Reduces unnecessary contact between TSOs and passengers through self-service capabilities

CAT Functionality

- Verifies passenger's physical ID is authentic
- Maintains document libraries of ID templates covering thousands of variations and versions
- Utilizes the Security Technology Integrated Program (STIP) to sync with TSA Secure Flight to update passenger same-day airport departures
- Recognizes and validates REAL ID features

CAT-2 Enhancements

- Verifies passenger's identity by biometrically comparing their face image (via camera capture) against the image on their ID
- Adds a digital identity reader to read and authenticate digital identities
- Incorporates Plexiglass shielding to encourage social distancing
- Instructs passenger using an updated graphical user interface
- Enables passengers to scan their own ID

CAT-2: TSO-facing

CAT-2: Passenger-facing

TSA PreCheck®: Touchless Identity Solution Overview

TSA has partnered with CBP to explore facial identification solutions that will provide Trusted Travelers with a more seamless travel experience.

1
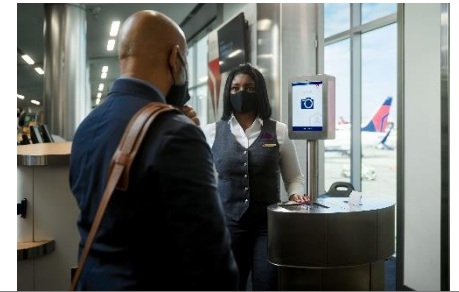A Trusted Traveler checks in with the airline and opts-in

2
The passenger checks their baggage with the airline

3
TSA verifies the passenger's identity at the checkpoint with CAT-2

4
Airline biometrically confirms the passenger's identity at boarding

*Photos taken by Delta Air Lines

Example benefits include:

| Shorter wait times allow for cost and resource saving | Elevated passenger experience across airline touchpoints | Increased incentives for TSA PreCheck® enrollment | Modernized approach to privacy, security, and documentation |

How Does It Work?

The TSA PreCheck®: Touchless Identity Solution leverages airline systems, CBP's biometric Traveler Verification Service (TVS), and TSA vetting programs to enable a seamless curb-to-gate passenger experience for Trusted Travelers using 1:n facial identification technology.

Technology / Solution
TSA compares a live image to a gallery of photos that the passenger previously provided to the government for travel purposes (e.g., U.S. passport).

Identity Verification
If the system makes a match, the confirmation is sent to a monitor used by the TSA officer to verify before directing the passenger to the appropriate screening lane.

Privacy
Participation is optional. Eligible passengers who opt-in have photos in TVS can choose to participate in the pilot.
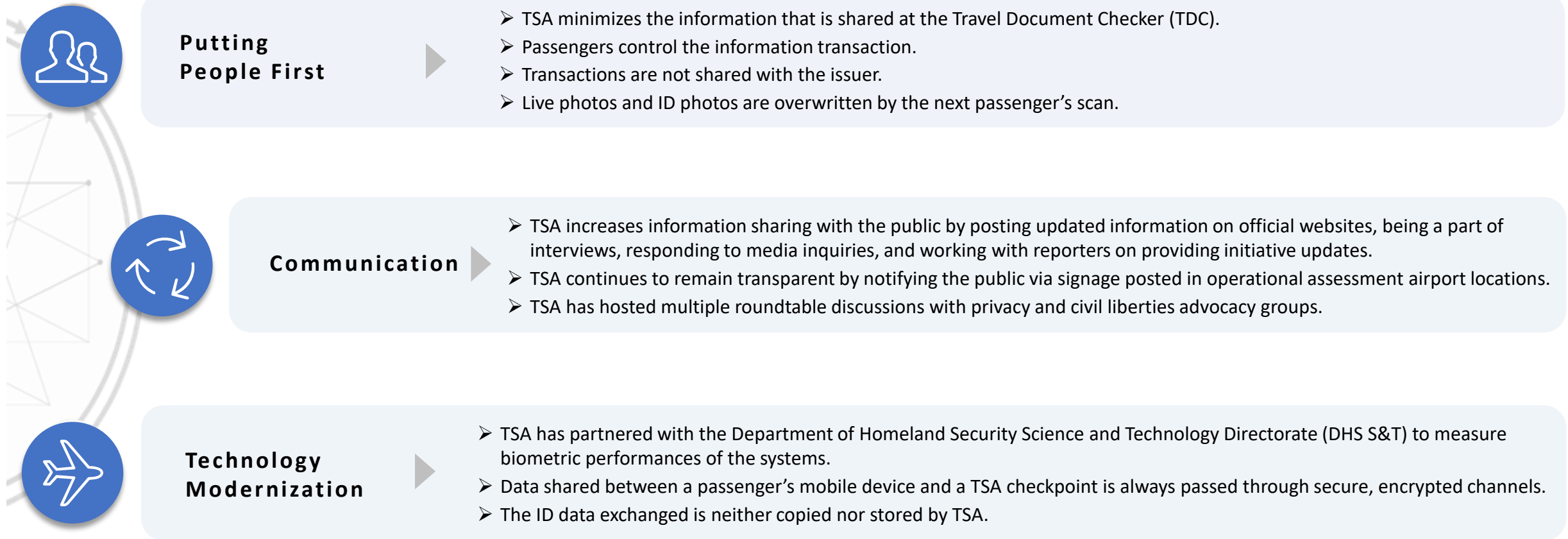
Locations
Detroit Metropolitan Wayne County Airport (DTW)
Hartsfield-Jackson Atlanta International Airport (ATL)

*Photos taken by Delta Air Lines

Educating the Public

TSA is committed to protecting passenger privacy and civil liberties as it implements biometric and digital identity solutions to improve the travel experience.

Putting People First
- TSA minimizes the information that is shared at the Travel Document Checker (TDC).
- Passengers control the information transaction.
- Transactions are not shared with the issuer.
- Live photos and ID photos are overwritten by the next passenger's scan.

Communication
- TSA increases information sharing with the public by posting updated information on official websites, being a part of interviews, responding to media inquiries, and working with reporters on providing initiative updates.
- TSA continues to remain transparent by notifying the public via signage posted in operational assessment airport locations.
- TSA has hosted multiple roundtable discussions with privacy and civil liberties advocacy groups.

Technology Modernization
- TSA has partnered with the Department of Homeland Security Science and Technology Directorate (DHS S&T) to measure biometric performances of the systems.
- Data shared between a passenger's mobile device and a TSA checkpoint is always passed through secure, encrypted channels.
- The ID data exchanged is neither copied nor stored by TSA.

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