Delta Biometrics:
Overview for Port of Seattle
September 10, 2019
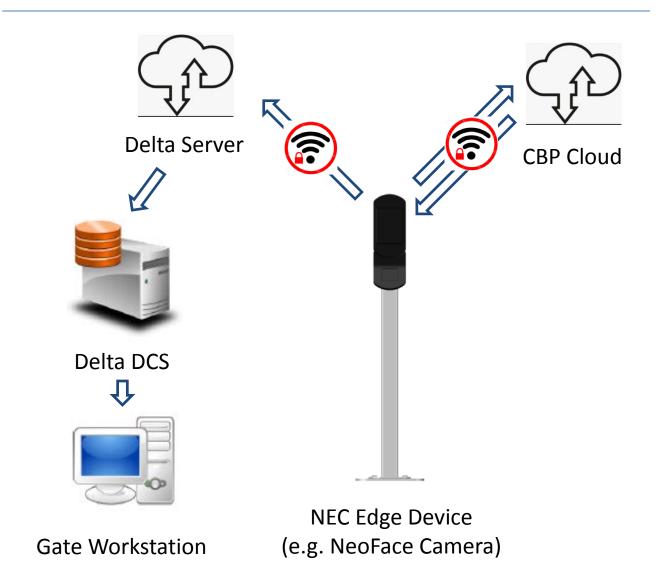
Strategic Objectives

Secure and Accurate Identity Validation	Quick and Convenient Process	Enhanced Quality of Agent Interactions

DELTA BIOMETRICS

Solution Scope

Self-Service Kiosks	Full-Service Counters/ Bag Drop	TSA Checkpoint	Boarding Gates
Customers can choose "Look" to retrieve their reservation	*Customer record retrieval and ID check in one step*	*A faster and more accurate way to validate identity*	*"One look and you're on" integrated boarding process*

Solution Topography

Delta Server

CBP Cloud

Delta DCS

Gate Workstation

NEC Edge Device
(e.g. NeoFace Camera)

Basic Workflow

1. Image captured by NEC edge device, transmitted to CBP Cloud
2. CBP responds to NEC with UID number or "no match"
3. NEC passes to Delta Server which translates UID into PNR
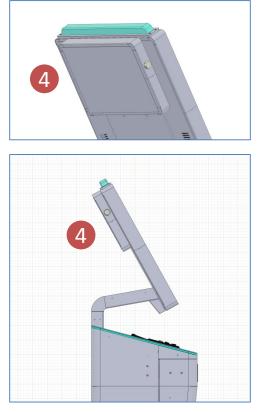4. Delta DCS uses PNR to process transactions
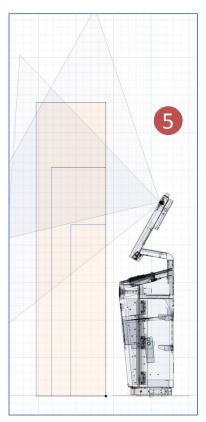
Protecting Privacy

- Participation in biometrics is completely optional, with no disadvantage to not participating
- Customer awareness is supported by pre-travel e-mail, airport signage, and PA announcements
- Customer consent is confirmed at each touchpoint:
    - Kiosk: Customer accepts privacy policy to activate camera
    - Counter: Camera is on pause until agent receives verbal acceptance from customer
    - Gate: Cameras are turned perpendicular to direction of boarding, allowing customers to interact with the agent without being in view of the camera
- Biometric sample that is captured is an anonymous photo; no matching is performed locally
- The anonymous photo is transmitted from the edge device over a hidden SSID dedicated to biometrics
- All matching is performed within CBP TVS using existing reference images:
    - US document holders (e.g. US passports and visas): Reference image is the document photo
    - International visitors: Photo captured on entry to the US
- CBP TVS responds in terms of "no match" or UID
- UID is a unique identifier for sharing customer information between air carriers and CBP that pre-dates CBP TVS
- UID data is returned without biometric data appended
- Agent ultimately decides if identity is validated
- Sample photos are discarded shortly after the transaction is complete

U.S. Customs and Border Protection

Self-Service Kiosk

1 Custom attachment to standard Embross v1 kiosk houses camera units.

2 Attract screen UI adds facial recognition look-up channel. Camera is not activated until customer accepts privacy policy.
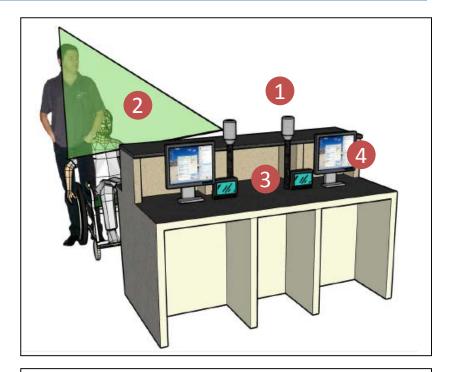
3 Pedestal is not modified during biometric upgrade, avoiding need for construction work.

4 NEC processor housed inside locked enclosure attached to backside of screen housing. This design reduces risk of device tampering. NEC hardware detects and defeats third party access

5 Dual cameras provide a wide field of vision from fixed positions. No ADA requirement exists for biometrics at this time, so using standard kiosk guidelines for range of customer height that we can accommodate.
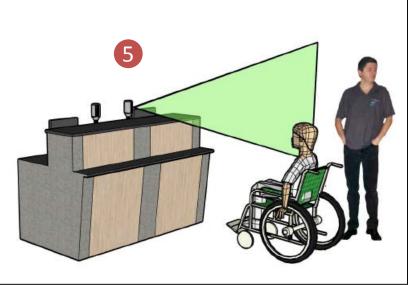
Full-Service Counter / Bag Drop

1 Small form factor camera unit with flexible mounting options.

2 Field of vision set wide and tall to cover diversity of customer heights, but with a very shallow focus to prevent capturing background images. Local processing by an NEC processor under the top cover.

3 Small auxiliary screen provides agent with reference image, match status, Delta sync status, PNR and flight number. Touchscreen controls to retrieve previous customers.

4 Camera captures image and if match is returned from CBP, the record is brought to the top of Delta DCS "SNAPP" (i.e. same as boarding pass scan.) In case of multiple customers, the next customer will automatically follow completion of the first transaction. A flag indicates "ID verified" in SNAPP if match is returned. Timatic pop-up if secondary doc check needed.

5 There is no UI display on the customer side. The experience is improved by not having to handle boarding pass and ID at the same time as baggage. If no match is found, agent reverts to traditional BP/ID process. Delta's SOP is to have cameras on pause until customer gives verbal consent to use biometrics
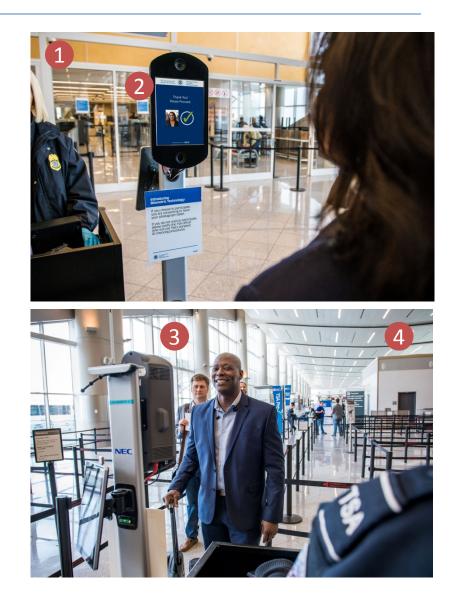
TSA Checkpoint

1　TSA Document Check (TDC) solution in ATL is same as LAX pilot test.

2　Hardware is same NEC NeoFace X2 device as Delta boarding gate, running custom TSA software and interfacing with TSA laptop workstation.
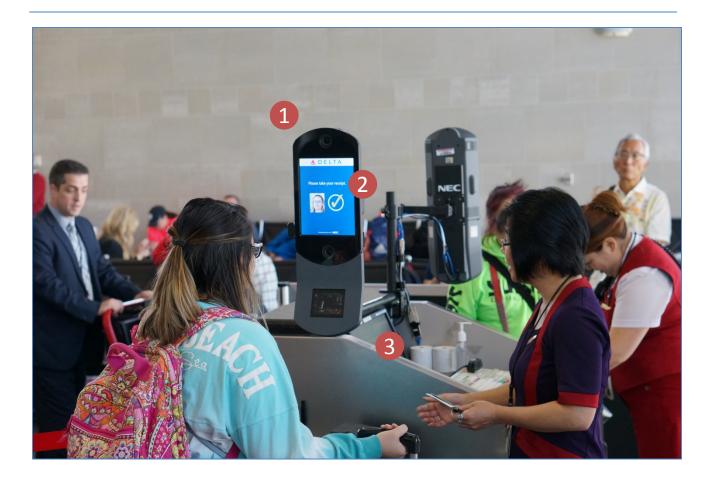
3　CBP match takes the place of ID check for customers traveling to international destinations. BP scan required until TSA completes Secure Flight integration.

4　TSA devices connected to airport-provided wireless network. Delta networks cannot carry other carriers' customer data.

TSA has expressed intent to deploy a new checkpoint solution for facial recognition in 2019-2020. Delta is endeavoring to be the first carrier to pilot the new TSA checkpoint solution.

Boarding Gate

1 NEC NeoFace X2 devices with Mimo agent-facing touchscreens. Flexible mounting options use clamps to avoid modification of millwork. High and low cameras capture wide range of customer heights without adjustment. Local processing defeats tampering and hacking.
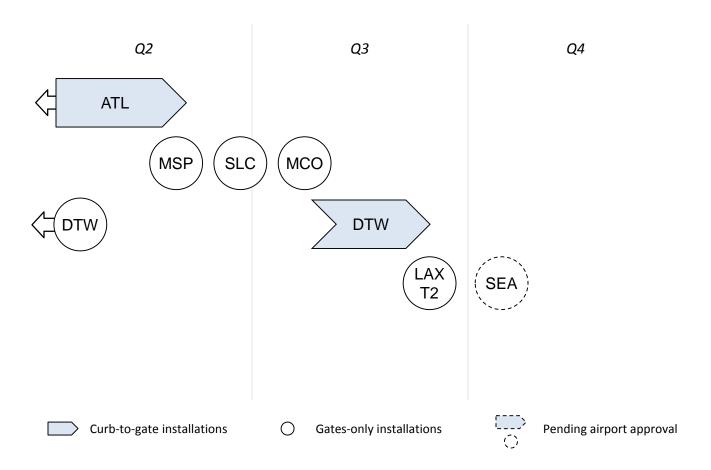
2 Cameras paired 1:1 with workstations, but transfer data wirelessly to centralized Delta server to increase security and simplify field IT management. Local messaging between workstation and camera to automatically power on, check system status, and sync paired workstation.

3 Agent UI on auxiliary touchscreen includes flight and customer info (e.g. departure countdown/boarding curve, customers on/left by cabin, Desko messages) and commonly used functionality (e.g. print bag tag, BCN re-hook.)

2019 Deployment Roadmap

	Q2	Q3	Q4

Diagram elements:
- ATL — Curb-to-gate installations (Q2)
- DTW — Gates-only (Q2)
- MSP, SLC — Gates-only (Q2)
- MCO — Gates-only (Q3)
- DTW — Curb-to-gate installations (Q3)
- LAX T2 — Gates-only (Q3)
- SEA — Pending airport approval (Q4)

Legend:
- Curb-to-gate installations
- Gates-only installations
- Pending airport approval

Delta Partners Included in Scope

	Aeroméxico	AF	KLM	Korean Air	Virgin
ATL	✓	✓	✓	✓	✓
DTW	✓	✓			✓
MSP		✓	✓		
SLC	✓		✓		
MCO					
LAX T2					✓
SEA	✓			✓	✓