



# EES / ETIAS: Biometrics APIS and Next Generation of Travel Verification Services

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## Passenger Satisfaction at Borders

Top three passenger  
dissatisfaction at  
touchpoints:

**15%**

Immigration & border control

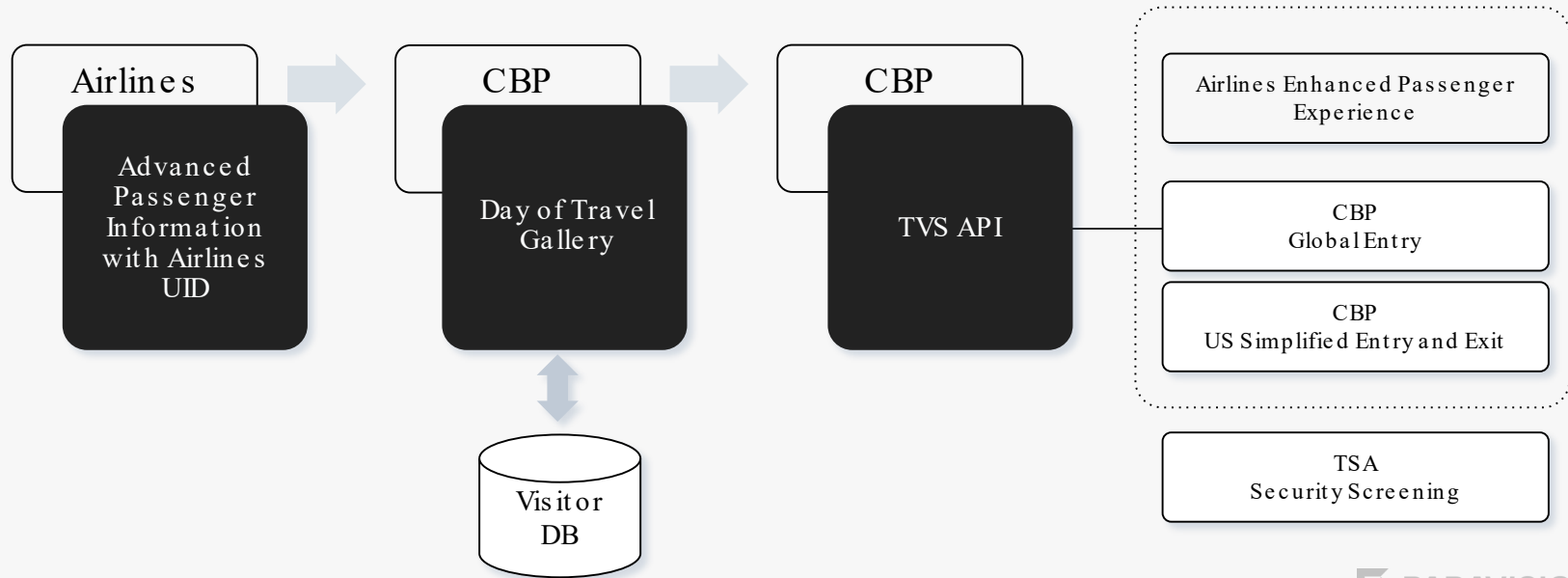
**11%**


Security check

**11%**

Baggage collection

# CPB Travel Verification System



A woman with curly hair, wearing a yellow top, is smiling and looking down at a biometric scanner kiosk. The kiosk has a white top and a blue base with a white comb-like sensor. The background is a blurred airport terminal with large windows and structural elements.

Airlines are innovating  
by integrating with TVS  
for seamless  
experiences curb to  
gate

- Delta Airlines Launched Biometric Terminal in 2018
- Star Alliance Launched Biometrics Platform in 2020

## Airlines Digital ID Initiatives

73%

Interested in using  
biometrics

36%

Have already used  
biometrics\*

\*Source : 2021 IATA Global Passenger Survey  
Highlights

## Airlines and Airport Digital-ID Challenges

Airlines/Airports Digital ID does not always address government security requirements.

→ Majority of passenger dissatisfaction is not addressed.

→ There is no clear ROI without addressing security requirements.

Risk and liabilities associated with passenger data handling should be properly managed.

**56%** Concerned about data breaches\*

**51%** How the data is handled or stored\*

\*Source : 2021 IATA Global Passenger Survey Highlights

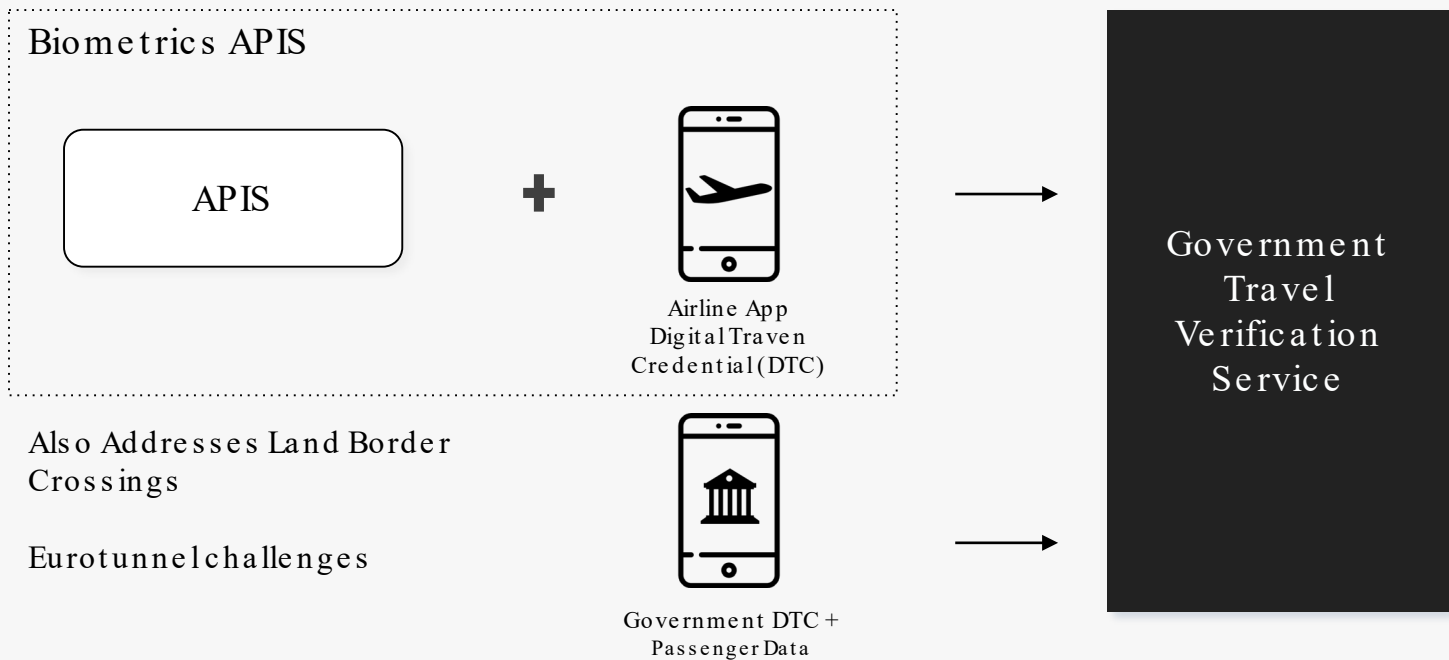
# Challenges with government TVS

Many countries have Advance Passenger Information Systems (APIS):

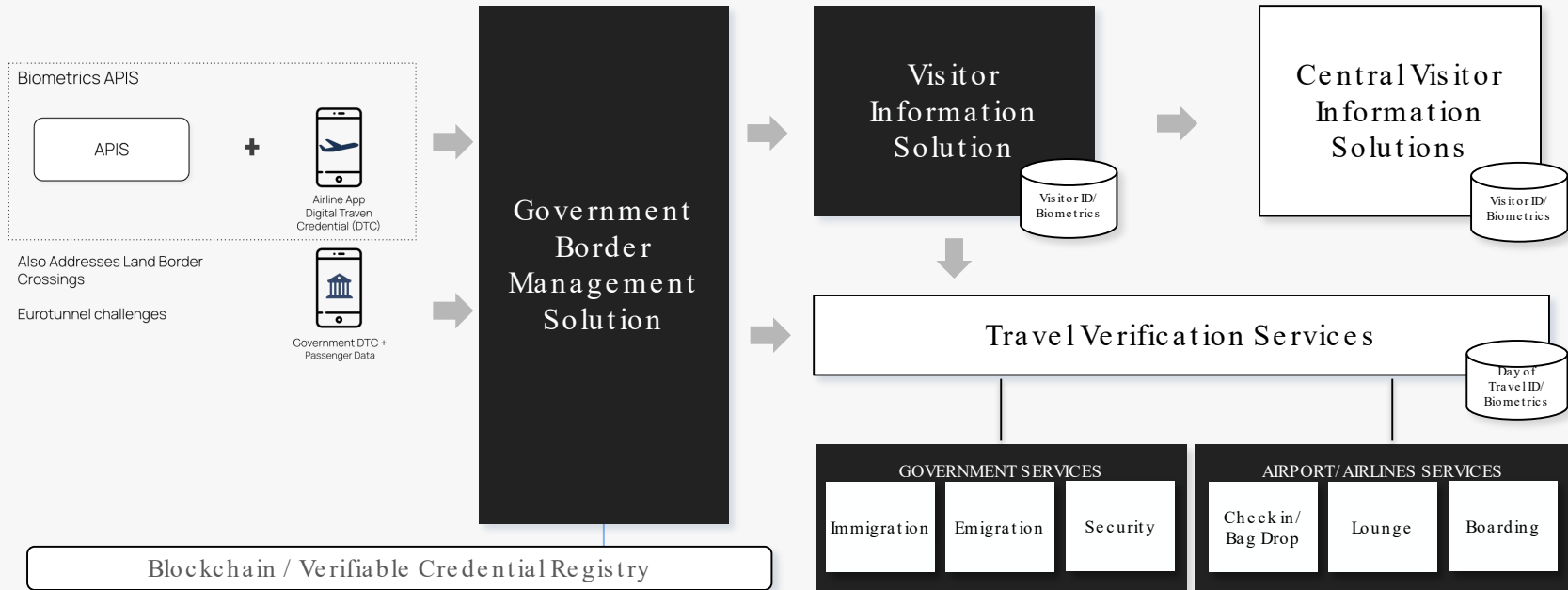
- Not many governments have visitor biometrics database.
- Lack of standards and certification to process Digital Identity.



# Biometric APIs as an enabler Of TVS



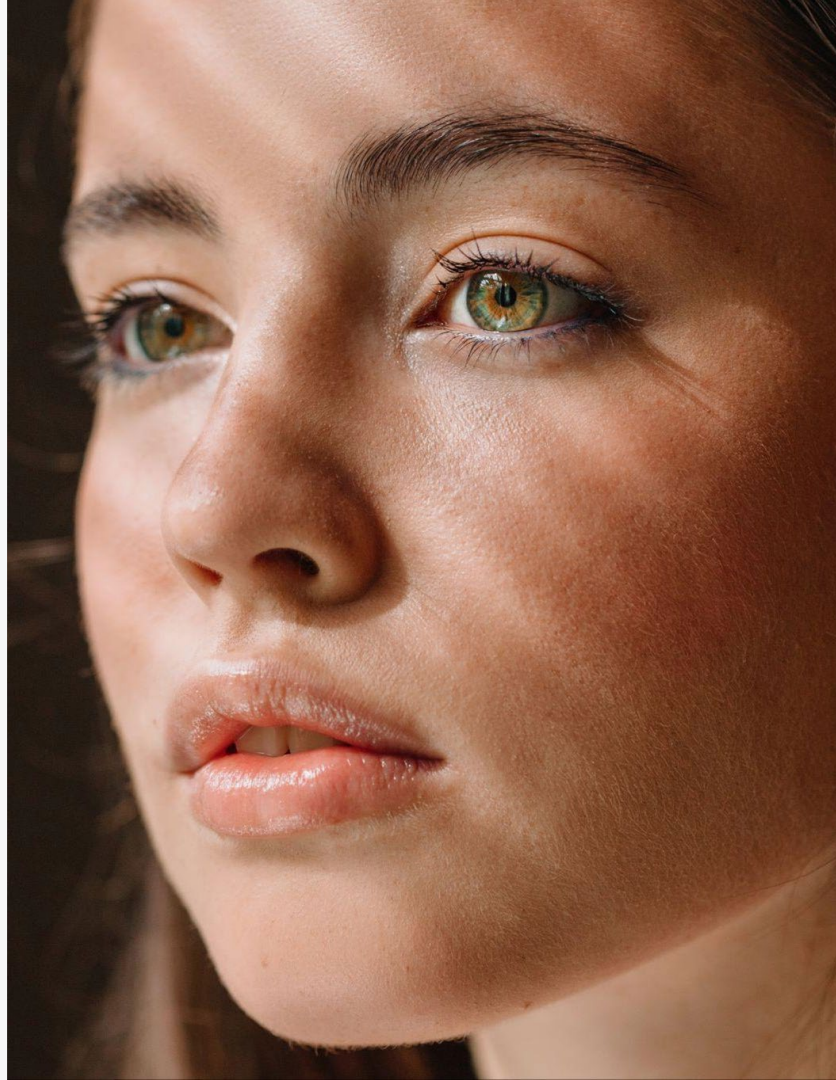
# Ideal TVS Architecture



# Benefits of Biometrics APIS and DTC for TVS

Proposed TVS architecture addresses many challenges:

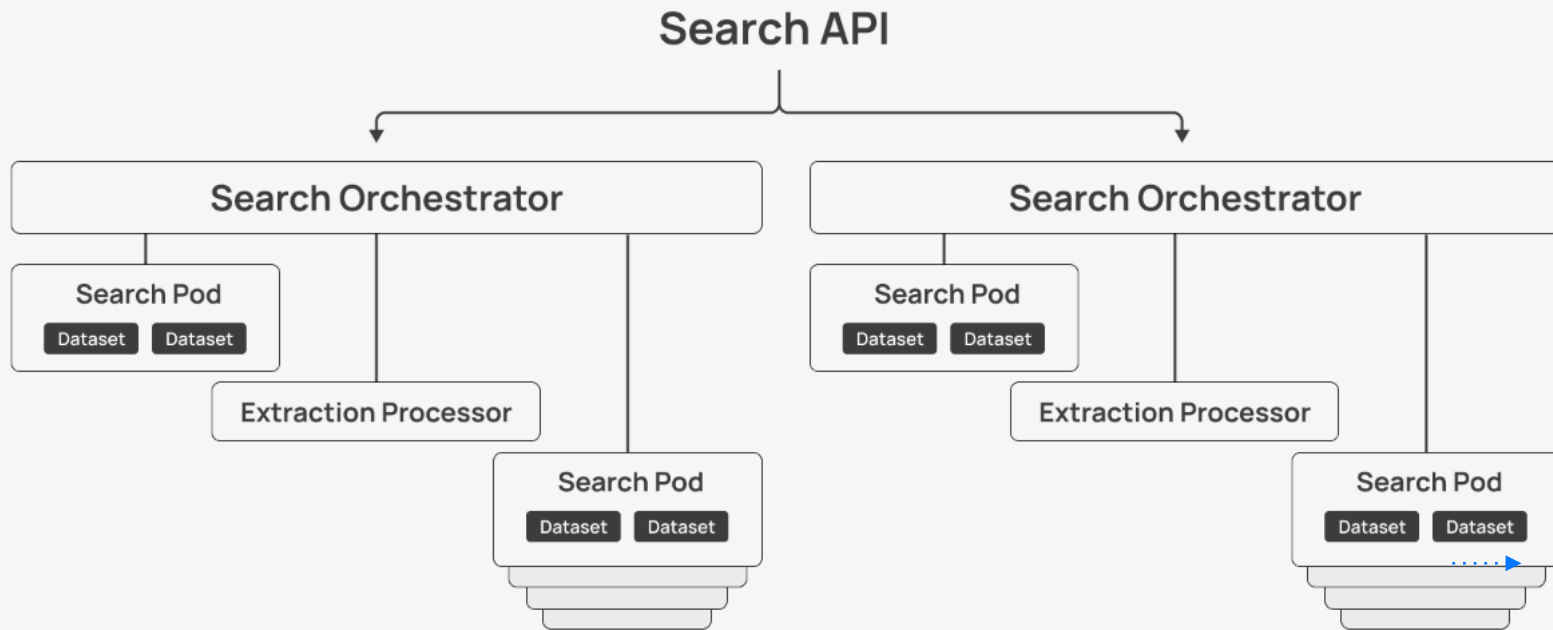
- Meets both government and airline/airport security requirements.
- Better experience throughout passenger journey from curb to gate.
- Airlines and airports can easily adopt TVS without concerns about managing passenger biometrics.
- Onboards government agencies with or without visitor data to provide TVS services.



# Paravision Search for Biometrics Gallery Management

- Uses industry leading algorithms from Paravision
- **Flexible architecture** caters to large scale gallery searches and smaller targeted segmented galleries or datasets
- Extensive API to support multiple applications and use cases
- Smaller **targeted gallery matching** through dataset management APIs
- **Large scale gallery matching** with user defined pre-filtering capabilities
- High performance search capabilities with **dynamic provisioning**
- Automatic or API driven elastic resource allocation using Kubernetes platform
- Support for **multiple agencies/applications galleries**
- **High availability and high concurrency** transaction processing
- **Dynamic data transition** to newer versions of algorithms
- **Configuration management** to meet application SLA

# Paravision Image Search in high availability configuration



# Need for Authentic Identity in TVS

Any new technology will have adversaries willing to challenge the system

## Physical presentation attacks

Paper cutouts, latex or 3D-printed masks, or digital displays

## Digital face manipulations

Can include deepfakes that use AI to replace the likeness of someone.

## Synthetic identities

Presentation attacks with false faces that do not exist in the real world.

Threats to understanding of identity, reality, and truth in digital and physical domains.

## Security, Privacy, Equity and Standards

→ Initiatives to define standards on Biometrics APIS should be considered:

- Security and process for airlines to collect and transmit data.

→ Address privacy by enabling passengers to consent and submit data.

→ Deliver unbiased service to passengers of all ethnicities and special needs

**88%**

Willing to share  
Immigration data  
prior to travel\*

\*Source : 2021 IATA Global Passenger Survey Highlights

# Frictionless borders on the horizon?

→ Well defined solution, good technology, and government TVS leadership can make this happen!





Thank you for your time.

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