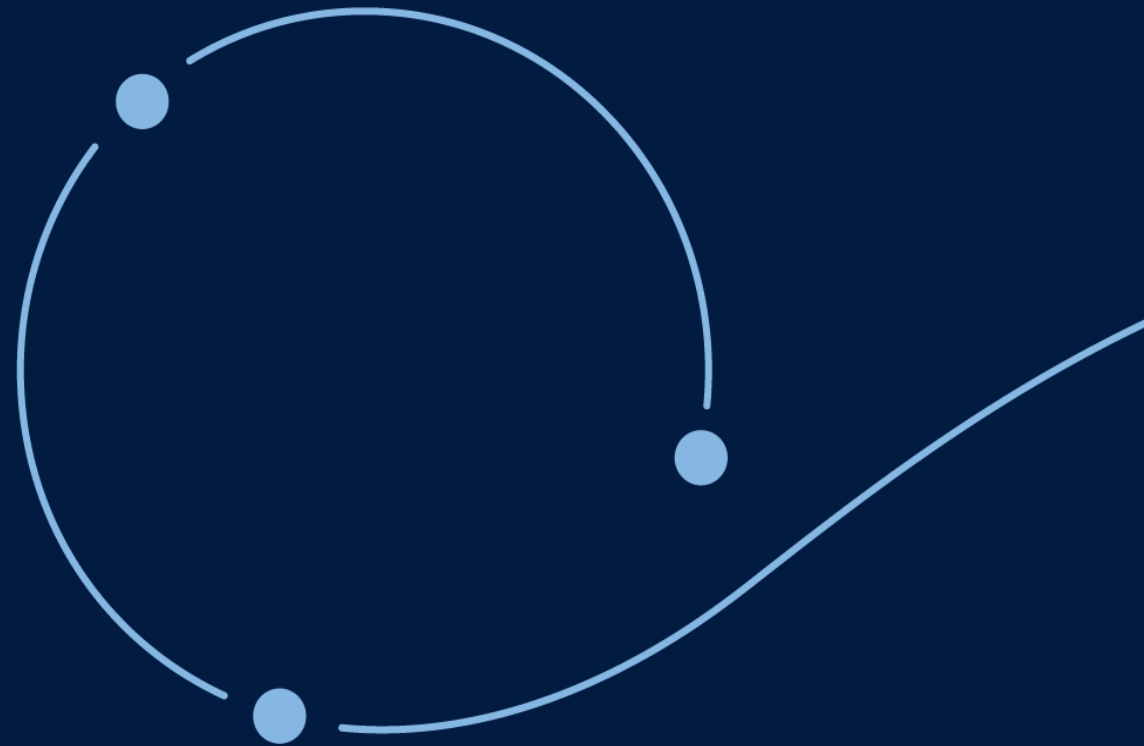


# At-home passenger pre-enrollment and smarter border control



We are an independent provider of biometric solutions for governments and enterprises.

# Building the world of instant trust since 2004

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 1 Billion+ Enrollees

 600+ Large Scale Projects

---

 NIST Top-ranked biometric algorithms

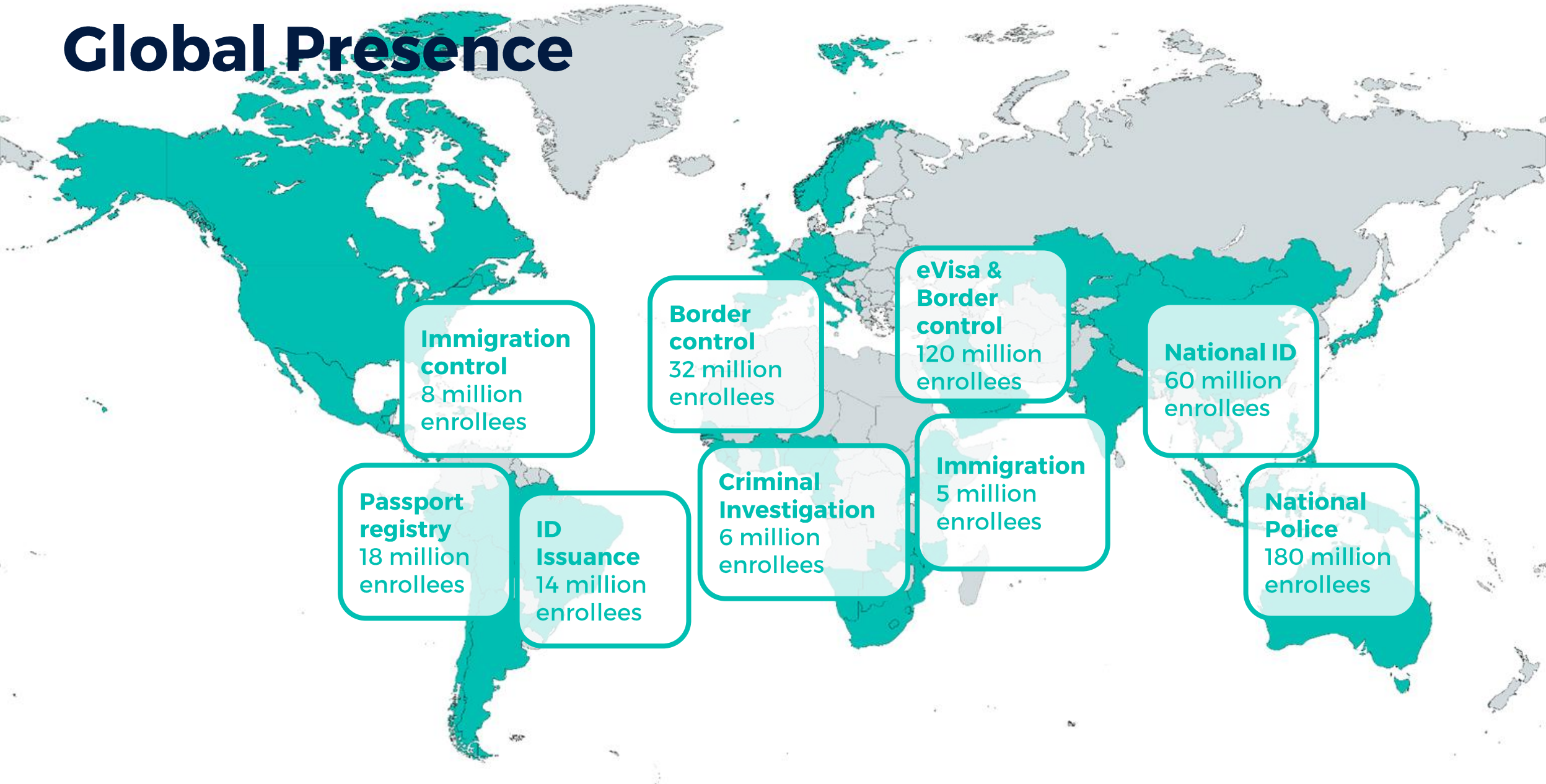
 80+ Countries

---

 15% of resources on R&D

 170 employees

# Global Presence



# Biometrics

Innovatrics' biometric algorithms have consistently been ranked among the best based on NIST benchmarks, and have been implemented in some of the biggest biometric projects in the world.

## Multibiometric expertise

- Face recognition
- Fingerprint recognition
- Iris recognition
- Face liveness

<p>Top performer FRVT</p> <p><b>NIST</b></p>	<p>Top Accuracy PFT III</p> <p><b>NIST</b></p>
<p>Top performer FpVTE</p> <p><b>NIST</b></p>	<p>STQC certification for Aadhaar ecosystem</p> <p><b>STQC</b></p>
<p>iBETA Level 2 Compliance</p> <p><b>iBeta</b></p>	<p>Top performer IREX 10</p> <p><b>NIST</b></p>
<p>DHS Biometric Technology Rally</p> <p><b>Homeland Security</b> Science and Technology</p>	<p>Award Minex III</p> <p><b>NIST</b></p>

# Comprehensive biometric ecosystem



## ABIS

AUTOMATED BIOMETRIC IDENTIFICATION SYSTEM

- Criminal Investigation >
- Border Control >
- Trusted Voter Registration >
- Civil Identification >
- Remote Document Issuance >



## Digital Onboarding

FULL TECHNOLOGY STACK FOR ONLINE IDENTITY VERIFICATION

- eKYC >
- eSIM Subscriber Onboarding >
- Identity Fraud Prevention >
- Service Provider Onboarding >



## SmartFace

FACE RECOGNITION PLATFORM

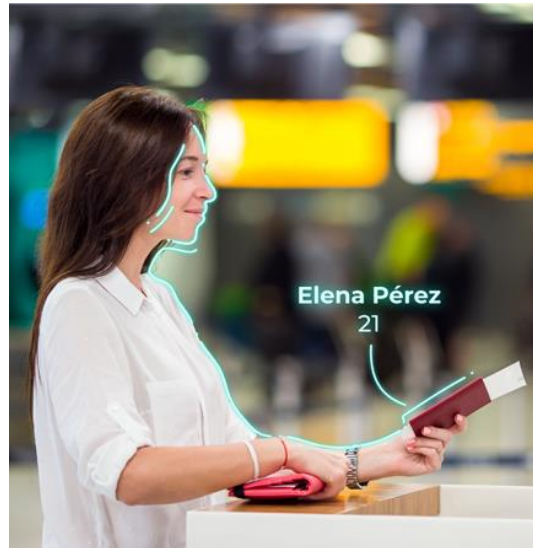
- Seamless Access Control >
- SmartFace for Public Security >



# Secure Borders with Biometrics

## Border Control Middle east

- 120 million records
- 100 000 border crossings a day
- 24/7 onsite support



## Police ABIS Southeast Asia

- 180 million records
- Over 3 000 stations
- 3 modalities



“...Half of those coming to the EU with a Schengen visa consider the visa application burdensome, one-third have to travel long distance to ask for a visa.

It is high time that the EU provides a quick, safe and web-based EU visa application platform for the citizens of the 102 third countries that require short term visa to travel to the EU.”

*Commissioner for Home Affairs, Ylva Johansson*

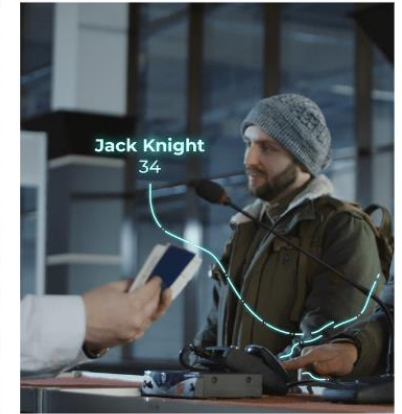
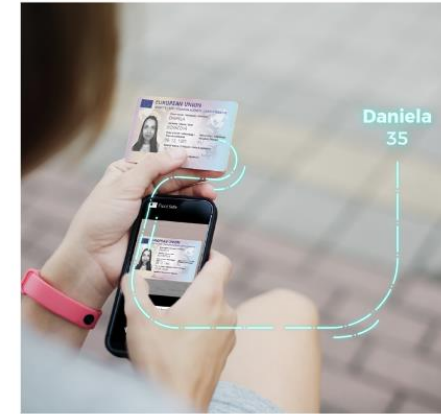


# Humanizing Border Security

## Past



## Future





# Enablers of change

- Smartphone availability
- Facial recognition improvement
- Liveness detection technology
- Desire to improve customer experience





# Document processing

## Data Extraction

- OCR
- MRZ Reader and Parser
- Barcode Reader and Decoder
- NFC for extracting the data from chip IDs such as passports.

## Authenticity

- MRZ versus OCR and/or NFC validation
- Field & picture authenticity
- Color profile authenticity
- Validating expiration date of the ID
- Validating age and gender using biometrics
- Face photo validation



# Proprietary OCR

Automated ID Classifier identifies the document type, edition and issuing country from the captured picture. Neural network models are trained specifically for each document to achieve the highest possible OCR accuracy.

**Our OCR supports the following scripts:**

- Latin
- Cyrillic (Кириллица)
- (بیرع) Arabic
- Bengali (বাংলা)
- Traditional Chinese (中国大陆)
- Thai (เมตง)



# Face Liveness

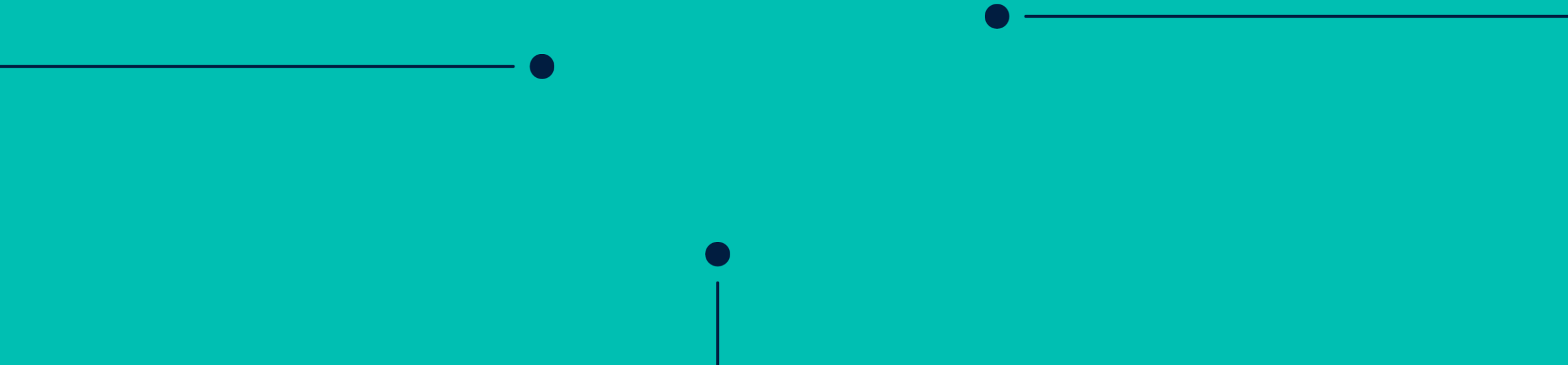
Innovatrics' liveness detection uses deep neural networks to detect a wide range of presentation attacks, making sure that the onboarded person is real and not a spoof.

- **Active**
- **Passive**
- **Smile**



# More comfortable than Visa and more secure than ESTA

A case study from Middle East



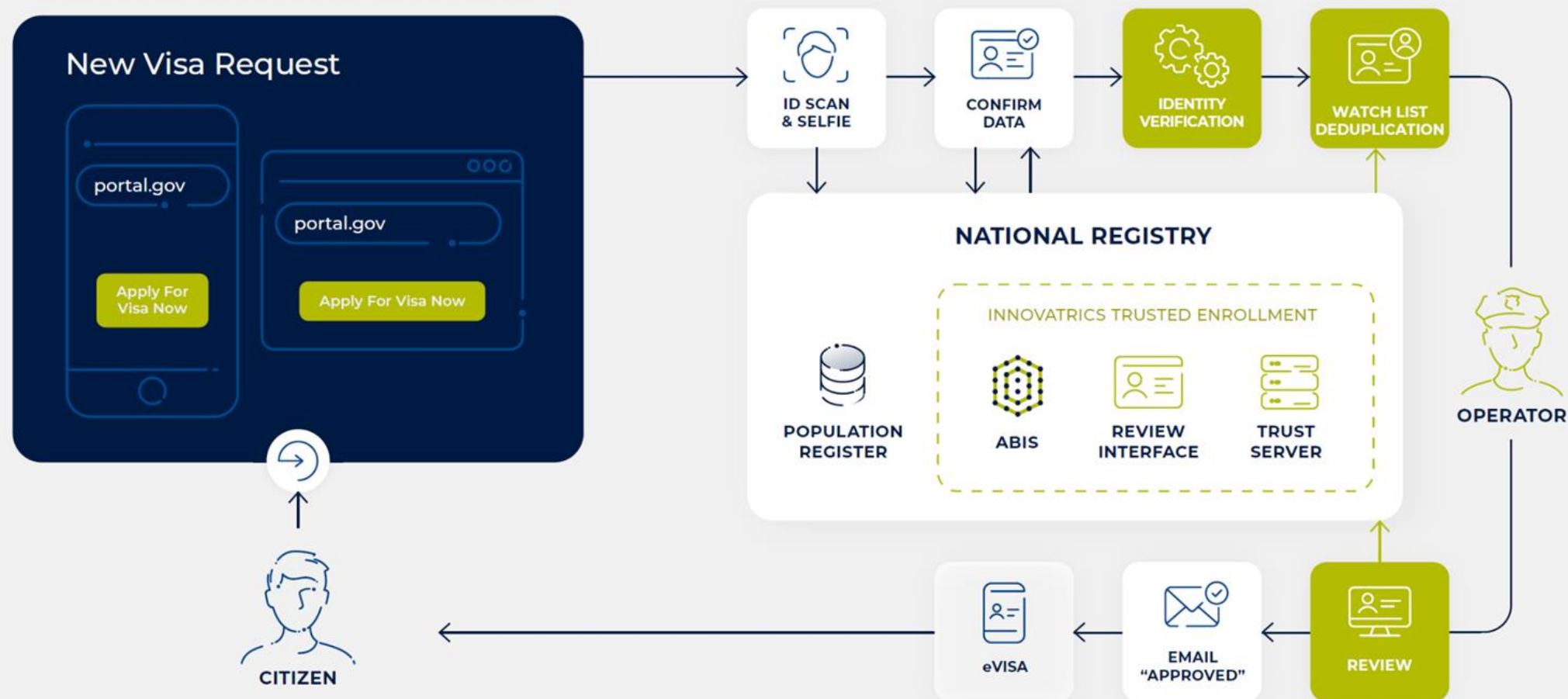


- **Avoid a long and costly visa application process**
- **Minimize health and security risks in the embassy or consulates**
- **Digitize the visa application and processing**

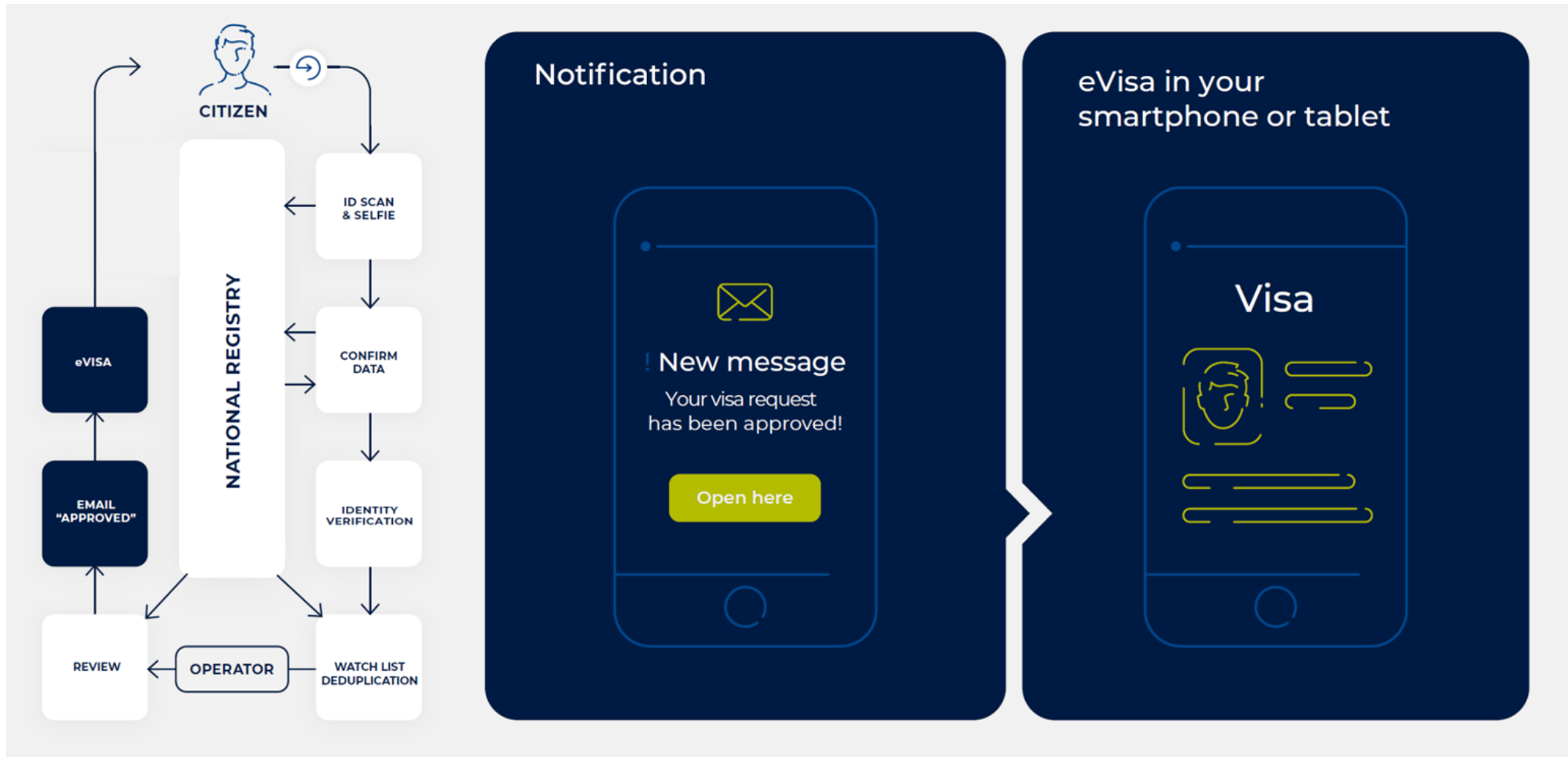




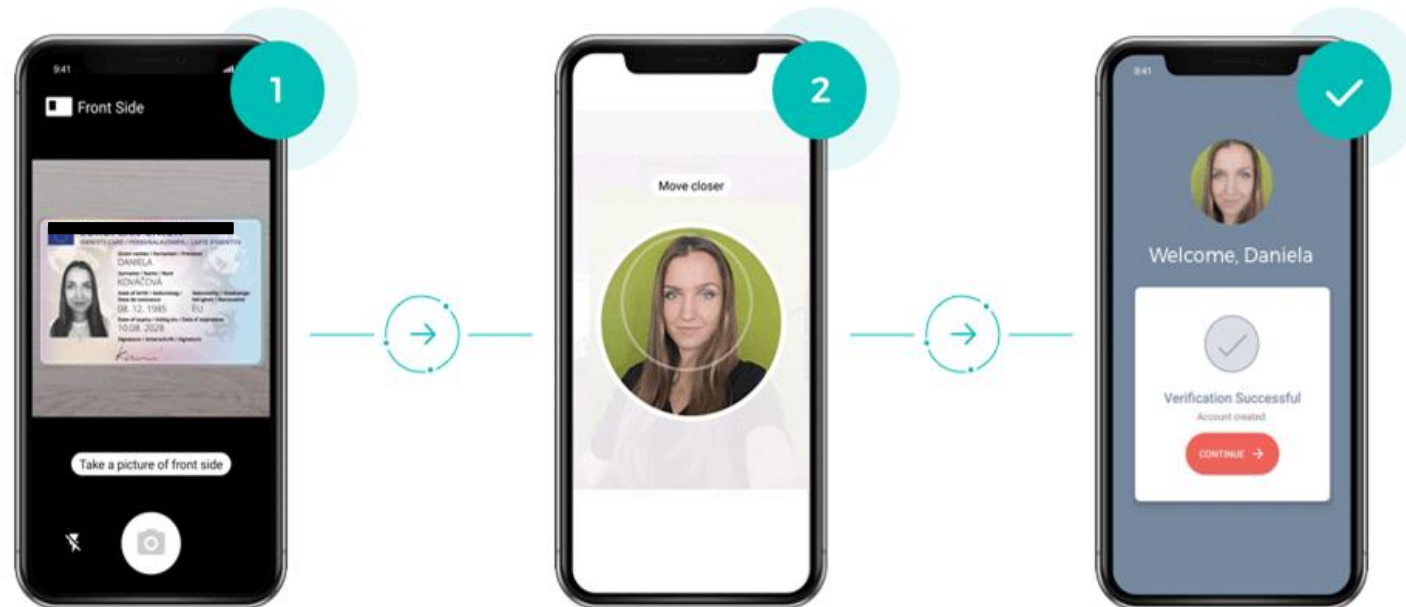
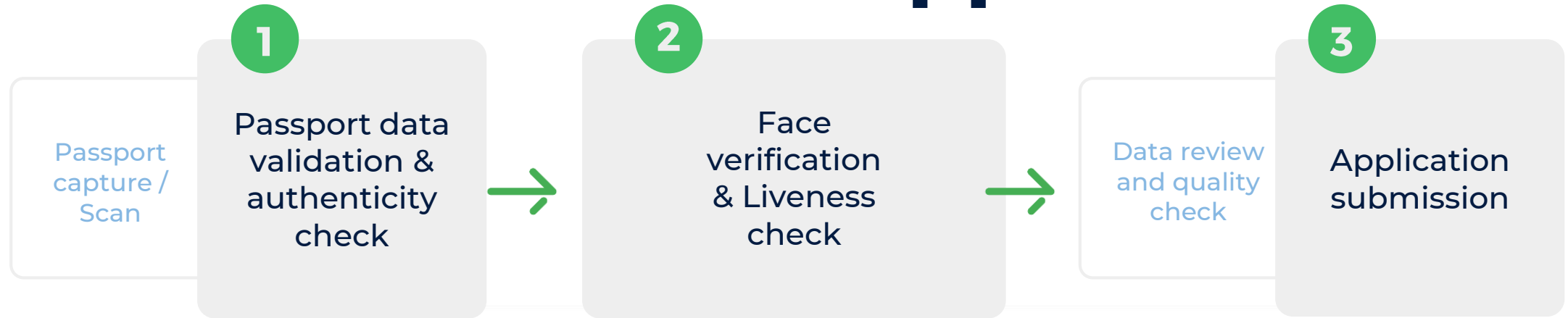
# eVisa / electronic travel authorization application



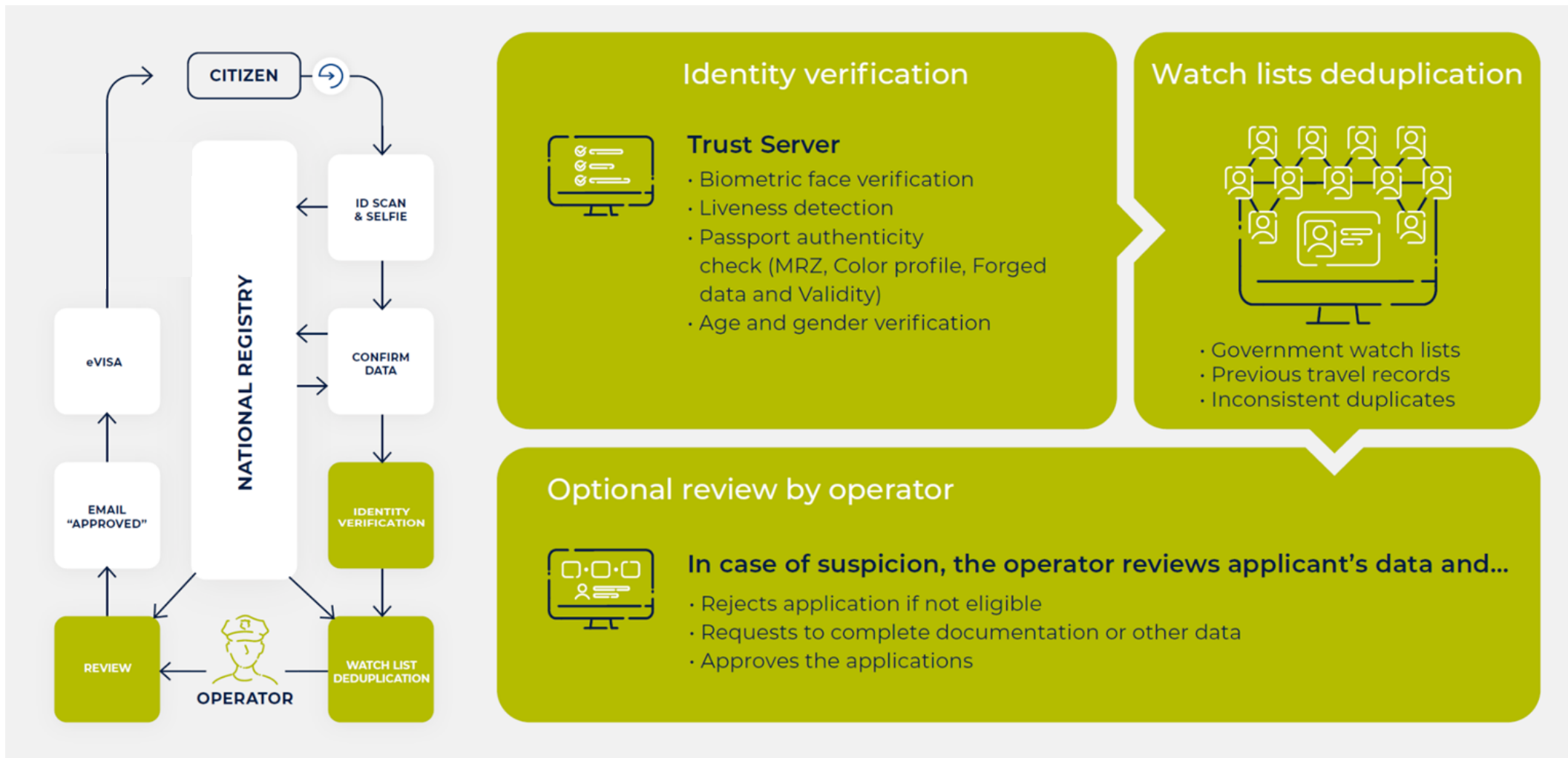
# Application approval and issuance



# Secure passenger self-enrollment from mobile or web app



# Enrollment data collection and review



# Enrollment data collection and review

INNOVATRICS

INVESTIGATION **APPLICANTS** **QUEUES** **ARRESTATION** **LATENT CASES** **ENROLLMENT** **FACE SEARCH** **ADMINISTRATION** **MONITORING**

Kathryn Murphy ▲ 2.230

Review

ACCEPT REJECT DELETE

**Personal data**

- LIST ITEM TITLE  
Secondary text
- LIST ITEM TITLE  
Secondary text
- LIST ITEM TITLE  
Secondary text
- LIST ITEM TITLE  
Secondary text
- LIST ITEM TITLE  
Secondary text
- LIST ITEM TITLE  
Secondary text
- LIST ITEM TITLE  
Secondary text
- LIST ITEM TITLE  
Secondary text

**Document data**

- LIST ITEM TITLE  
Secondary text
- LIST ITEM TITLE  
Secondary text
- LIST ITEM TITLE  
Secondary text
- LIST ITEM TITLE  
Secondary text
- LIST ITEM TITLE  
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Secondary text
- LIST ITEM TITLE  
Secondary text

**Trust evaluation**

FACE MATCH 25

UNIQUENESS 10

PASSIVE LIVENESS 10

ACTIVE LIVENESS 10

DOCUMENT SELFIE PHOTOSHOP 10

AGE VALIDATION 10

GENDER VALIDATION 10

**Document trust evaluation**

DOCUMENT NOT RECOGNIZED 10

EXPIRED 10

MSE CHECKSUM VALID 10

TEXT CONSISTENCY 10

COLOR CHECK 35

SCREENSHOT PHOTO 10

**Face match**

LIVENESS 92

SELFIE 25

DOCUMENT PORTRAIT

Secondary text

Compare with duplicates

SELFIE

SELECTED DUPLICATE

ALL DUPLICATES

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Kathryn Murphy ▲ 2.230

Kathryn Murphy ▲ 2.230

Kathryn Murphy ▲ 2.230

**Slovakia ID**

PAGE 19

SLOVENSKÁ REPUBLIKA SLOVAK REPUBLIC

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Bratislava

31.12.1993

936231/0012

08.01.2024

08.01.2009

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Murphy

MEŇO / GIVEN NAME  
Lathryn

STÁTNY OBYČIANSTVO / NATIONALITY  
SVK

POHLAVIE / SEX  
F

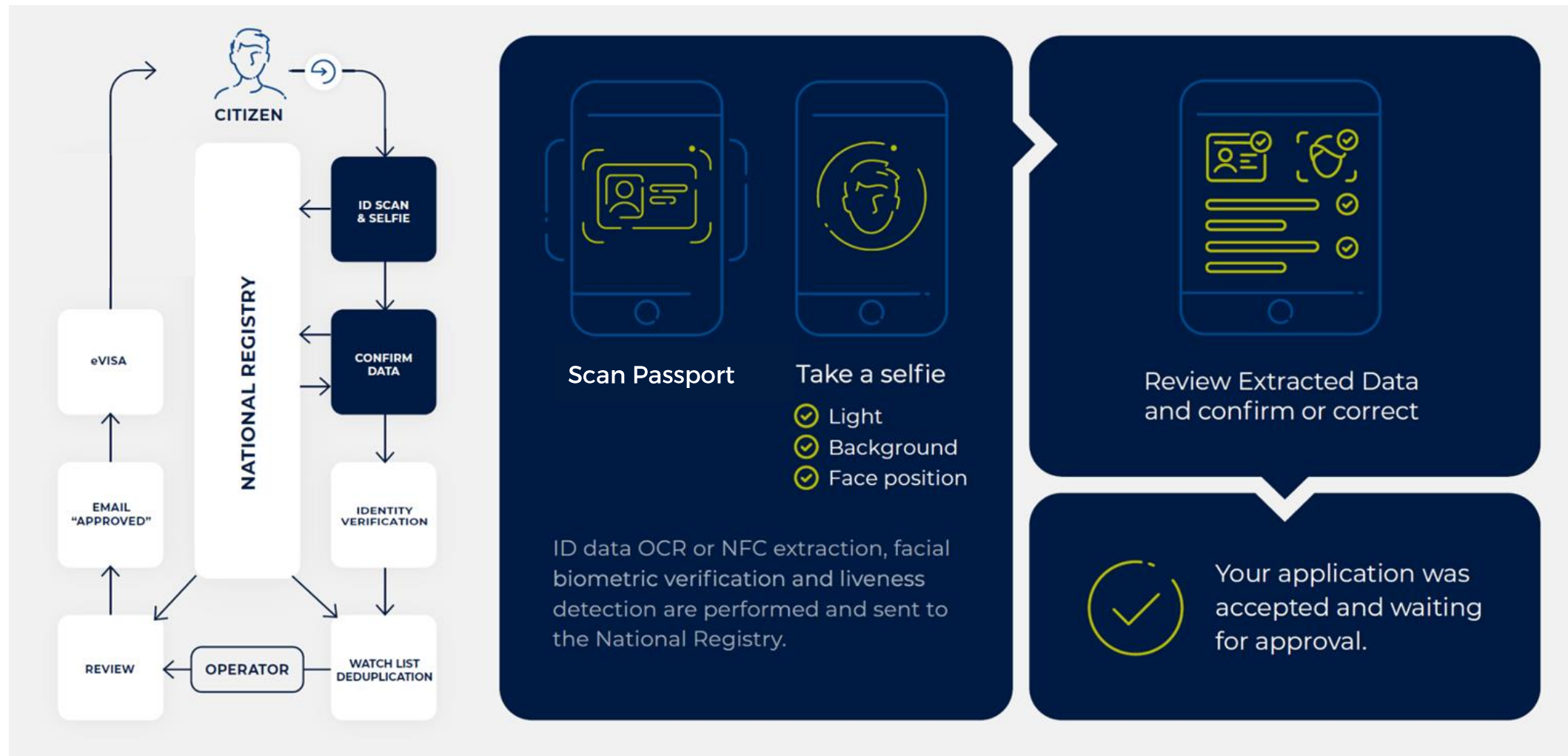
ČÍSLO / NO.  
EA123456

VÝBAL / ISSUED BY  
Bratislava

PODPIS OBYČITEĽA / SIGNATURE

DATE OF BIRTH  
31.12.1993

# Secure passenger self-enrollment from mobile or web app



# Remote biometric self-identification

## Seamless

- No need to visit embassy & prevent health risks
- Increase passenger experience
- Cutting processing time and reducing personnel costs

## Secure

- Know who is entering the country before he appears at the borders
- Background checks against blocklists
- Checks against previous travel records



# Thank you



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