

# INF 10 eBORDERS

## Security and Facilitation



Gemalto Government Programs

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# World leader in identity and digital security



WE'RE UNIQUE. **WE'RE GLOBAL.** WE'RE INNOVATIVE

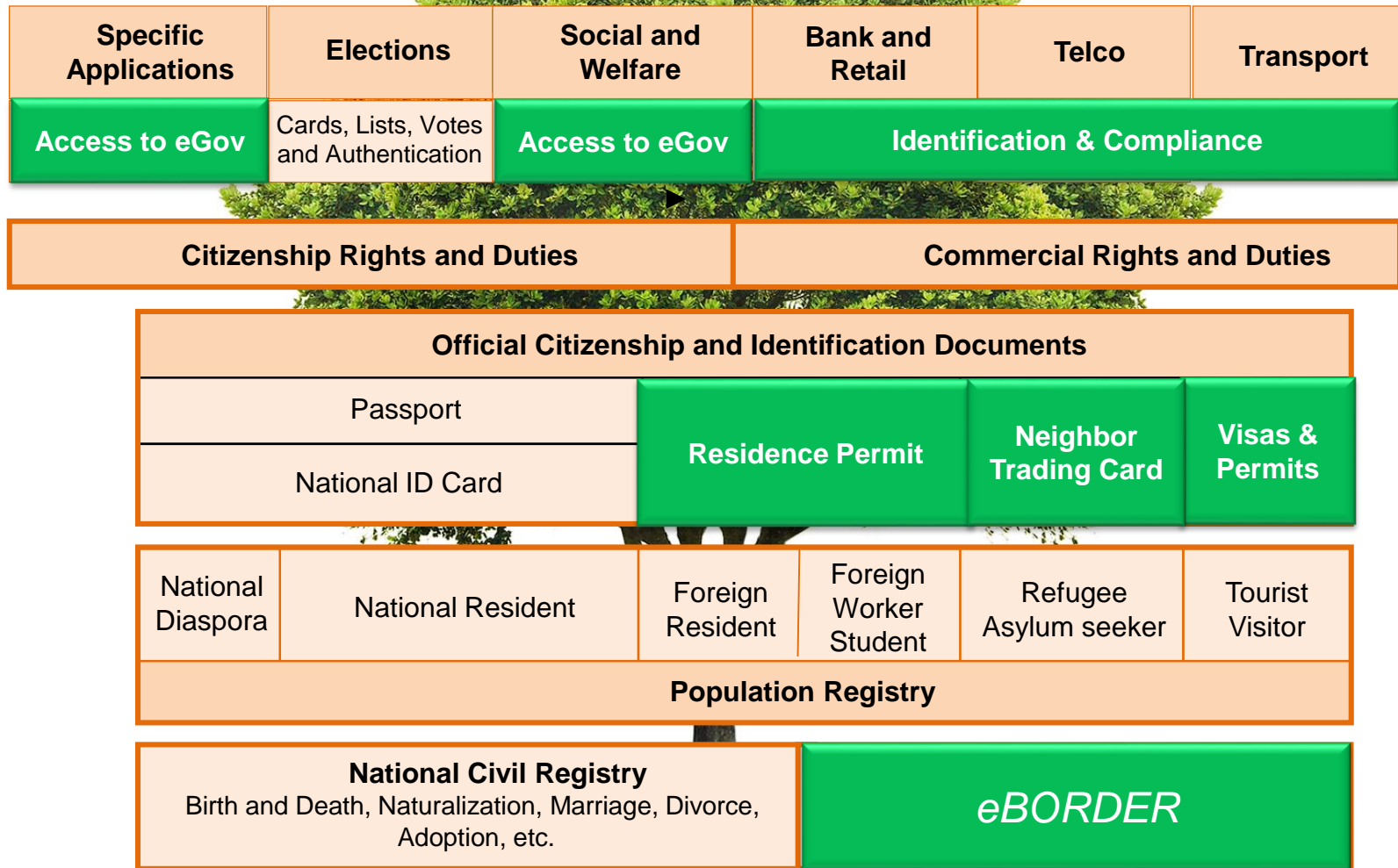
# eBORDERS: Security and Facilitation

- *Security and Facilitation as a BALANCE*
- *Security and Facilitation as part of ID FOUNDATION*
- *Security and Facilitation as key factor for:*
  - *Regional integration and free of movement*
  - *Smart Borders*
  - *Integration with National ID Program (ID4D)*
- *Security and Facilitation: challenges (similar to ID4D)*

eBorder: border and biometrics as part of the ID ecosystem



# eBORDERS at ID Foundation



# Challenges and objectives at modern Borders

- ✧ **1. Enhance security**
- ✧ **2. Passenger Facilitation**
- ✧ **3. Biometric Traveler Registry**

# Challenges and objectives at modern Borders

## ✧ 1. Enhance security

### ✧ 3 border dimensions:

- ✧ before the border: eVisa, ETA, consular, pre-screening, PNR

- ✧ at border: verification, identification, enrolment

- ✧ inside the country: interoperability, control checks, mobility

### ✧ ID Convergence: public and private

### ✧ Integrate sea, land, and air borders, and external ddbb

### ✧ Multi-lateral security collaboration (for regional integration)

# Challenges and objectives at modern Borders

## ✧ 2. Passenger Facilitation

- ✧ Increasing number of travelers
- ✧ Improve travelers experience
- ✧ Leverage ePassport introduction
- ✧ Automated Border Control ABC
- ✧ ETA: Electronic Travel *Application*
- ✧ RTP: Registered Traveler Program



# Challenges and objectives at modern Borders

## ✧ 3. Create a Travelers' Civil Registry

- ✧ Nation: territory + population + “foreign population”
- ✧ Foreign population: rights and duties. Requires Identity!
- ✧ Border, Visa, and Permits as front-end for enrolment
- ✧ Biometrics to secure traveler register (unique ID)
- ✧ Biometrics before border, at border, and inside the country
- ✧ Quality Assurance, Interoperability and System Integration

# Biometric Registration: Challenges

- ✧ **Strong document verification for strong identity validation**
  - ✧ ICAO verifications
  - ✧ Security features verifications under 3 lights
  - ✧ Electronic verification
  - ✧ Certificates handling and distribution
  - ✧ Biometrics QA and matching
- ✧ **Biometrics verification to match traveler with his/her document**
- ✧ **Biometrics capture: Environment and Quality Assurance**
- ✧ **Biometrics for RTP and ABC: controlled environment**
- ✧ **Interoperability (National and International biometric systems)**
- ✧ **System integration with existing biometrics systems**

# Conclusions



# CONCLUSIONS

Technology is a **tool** to support your Government to:

- ✧ Overcome your specific **CHALLENGES**
- ✧ Achieve your planned **GOALS**
- ✧ Cover your current **NEEDS**

Therefore, we propose a “consultancy approach”:

- ✧ Analyze specific country challenges
- ✧ Plan how to achieve your Goals (with KPI metrics)
- ✧ Adapted to the reality of the country and future proof

# CONCLUSIONS

- ✧ **Identify your needs and challenges and define the objectives**
- ✧ **Then, decide and plan how to use biometrics to achieve the objectives**
- ✧ **Security + Passenger Facilitation + Traveler Registry**

# USING BIOMETRICS

- ✧ **Strong document verification for strong identity validation**
- ✧ **Biometrics capture: Environmental conditions and Quality Assurance**
- ✧ **Assure Interoperability (raw images and standard templates)**

# Using Biometrics at Borders: Some examples



o Border Management
PRIMARY INSPECTION ARRIVALS

o

# Border Management

Back
 Forward

Exit
 gemalto  
security to be free

Data page   Chip

Visual

Infrared

Ultraviolet

Chip Portrait

**Personal Details**

Document Type	PASSPORT
Issuing Country	SPAIN
Document Number	BE345234
Document Template	Spain Electronic Passport
Issuing Date	01/10/2008
Date of Expiry	01/10/2018
Gender	MALE
Nationality	SPAIN
Date of Birth	08/03/1977
First Name	ION

- ☒ Chip security
- ☒ Data Format
- ☒ Data Integrity
- ☒ Security Features

**General Summary**   Detailed Info

Results Summary

Total verifications performed	53
Successful	53
With warnings	0
Not executed	0

Last Message: Verifying Document

USER: demo   WORKSTATION: 4SDQMX1   Site: Headquarter   SERVER: localhost:18080   STATUS: Online
VERSION: 1.3.147   11/07/2014   13:09:55

# Strong Document Verification

The screenshot displays the Coesys DV Document Administration software interface. The main window shows a document titled "ICAO New IdCard MRZ Back Side Butterfly" in the "Ultraviolet" view. The document features a butterfly graphic and the word "SPECIMEN". A "Preview" panel on the right shows the document in "Visual", "Ultraviolet", and "Infrared" views. An "Advanced Settings" dialog box is open, showing the "Back - UV Tru/Vison Butterfly" target region. The dialog includes a "Target Region" tab with a preview of the butterfly wing and a "General" tab with configuration settings. The "General" tab shows the "Region" set to "BACK - BACK - Butterfly Wing" and the "Color Band" set to "Red". The "Verifications List" at the bottom shows two verification rules: "Back - IR Mrz Check" and "Back - UV Tru/Vison Butterfly".

Document Administration  
View Tools Document browser Help Page

Coesys DV  
Previous Next Up Expand Collapse Wizard Certificates

Document Browser  
Country: [Utopia]  
ID Card  
ICAO Electronic Id Card  
ICAO Id Card MRZ  
ICAO Id Card no MRZ  
ICAO IdCard MRZ One Side  
ICAO IdCard no MRZ One Side  
ICAO New IdCard MRZ Back Side Butterfly  
Passport  
Visa  
Uzbekistan  
Vanuatu  
Vatican City State (Holy See)  
Venezuela  
Vietnam  
Virgin Islands (British)  
Western Sahara  
Yemen  
Zambia  
Zimbabwe  
Åland Islands  
American Samoa  
Anguilla  
Antarctica  
Aruba  
Bonaire, Saint Eustatius and Saba BES  
Bouvet Island  
British Indian Ocean Territory  
Caribbean Community or one of its member states  
Christmas Island  
Cocos (Keeling) Islands  
Cook Islands

ICAO New IdCard MRZ Back Side Butterfly BACK MRZ  
Ultraviolet  
DPI: 380  
Rotation Angle: 0  
Hotspot Settings  
Name: [ ]  
Content: [ ]  
Hide Anon. Hotspots

Preview  
Visual  
Ultraviolet  
Infrared

Advanced Settings  
Back - UV Tru/Vison Butterfly  
Target Region: Region  
General  
Region: BACK - BACK - Butterfly Wing  
BACK - VIS Less  
BACK - VIS Mrz  
Color Band: Red  
Target Region: BACK - BACK - Butterfly Wing  
BACK - VIS Less  
BACK - VIS Mrz  
General configuration settings

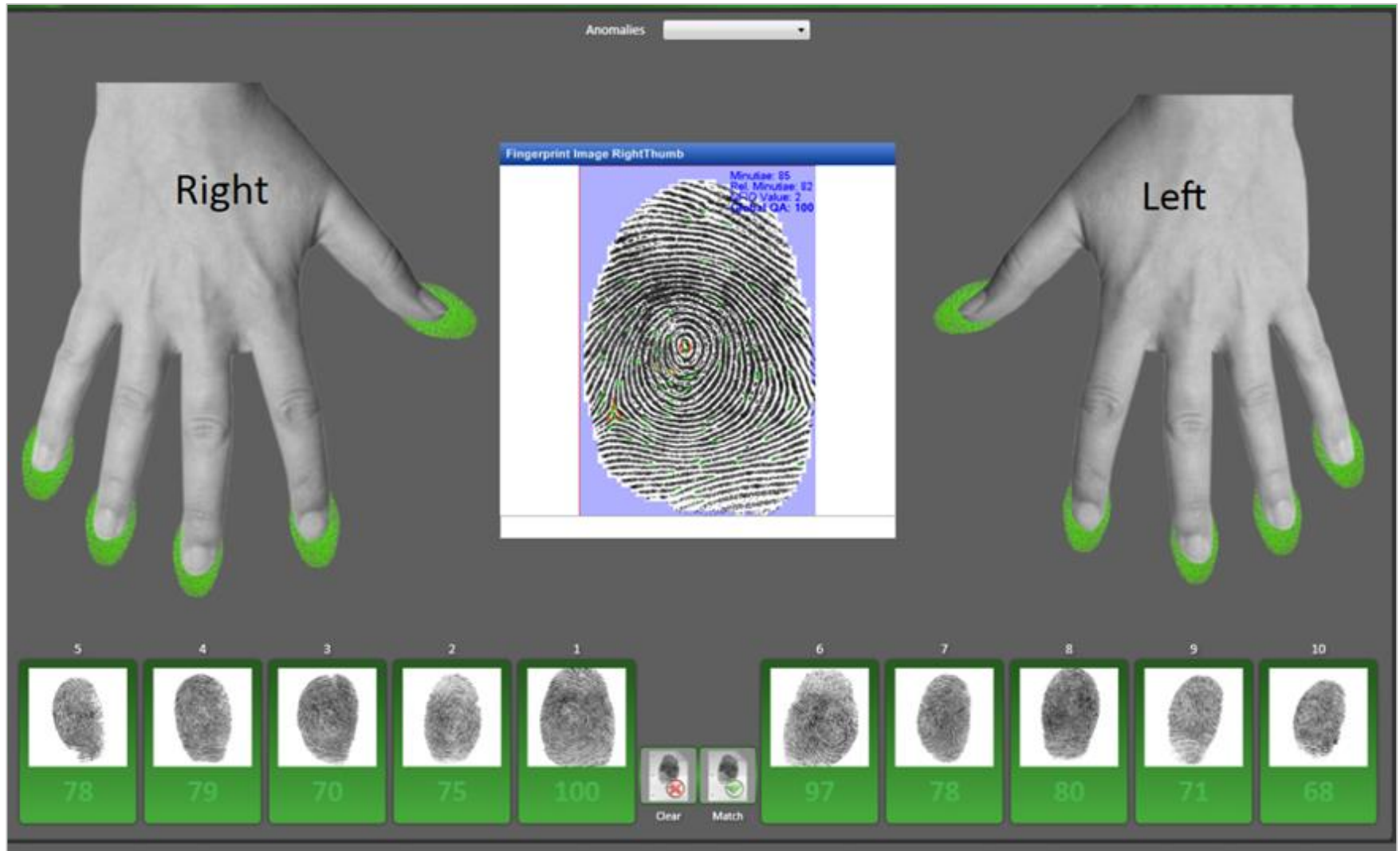
Verifications List  
Verification Name Action Category Threshold Enabled  
Back - IR Mrz Check Match Model Security Features 80 [x]  
Back - UV Tru/Vison Butterfly Match Color Band Security Features 90 [x]

Match Color Band  
Region: BACK - BACK - Butterfly Wing  
BACK - VIS Less  
BACK - VIS Mrz

JSZOMX1 online 16/11/2015 16:45



# Biometrics : Quality Assurance + Interoperability



# Biometrics: Quality Assurance + Interoperability

The interface displays a biometric verification process for a user named RAUL, REDRUM. It includes a live video feed with facial tracking, a still image, a list of quality metrics, and a verification summary table.

**LIVE VIEW**

Is Frontal OK  
Horizontally centered OK  
Vertically centered OK  
Resolution OK

**STILL VIEW**

0.67x

**Geometric**

- ✓ Is frontal
- ✓ Proper Yaw angle
- ✓ Proper Pitch angle
- ✓ Proper Roll angle
- ✓ Horizontally centered
- ✓ Good vertical position
- ✓ Proper width of head
- ✓ Proper length of head
- ✗ Image
- ✓ Only one face visible
- ✗ Is sharp
- ✓ Good resolution
- ✓ Good grayscale profile
- ✓ Proper color depth
- ✓ Proper color space
- ✗ Natural skin color
- ✓ Eyes not red
- ✗ Lighting
- ✗ Uniform lighting

**Overall Quality**

80 % ✓

**Verifications 1-1**

Verifications 1-1	
Total verifications performed	1
Failed	0
Successful	1
With warnings	0
Not executed	0

**RAUL, REDRUM**

Type: Visitors Permit  
Category: Other National  
Subcategory: General  
Status: Payment pending

Lookup  
Travel Document Capture  
Demographics  
Fingerprints  
Document capture  
Photo capture  
Organization Documents  
Print retention slip

Last Message: Camera initialized

USER: enrollment WORKSTATION: G101MX1 Headquarter SERVER: localhost:18080 STATUS: Online

VERSION: 1.0.0.0 17/06/2014 15:25:37

# Flexibility for land and sea borders





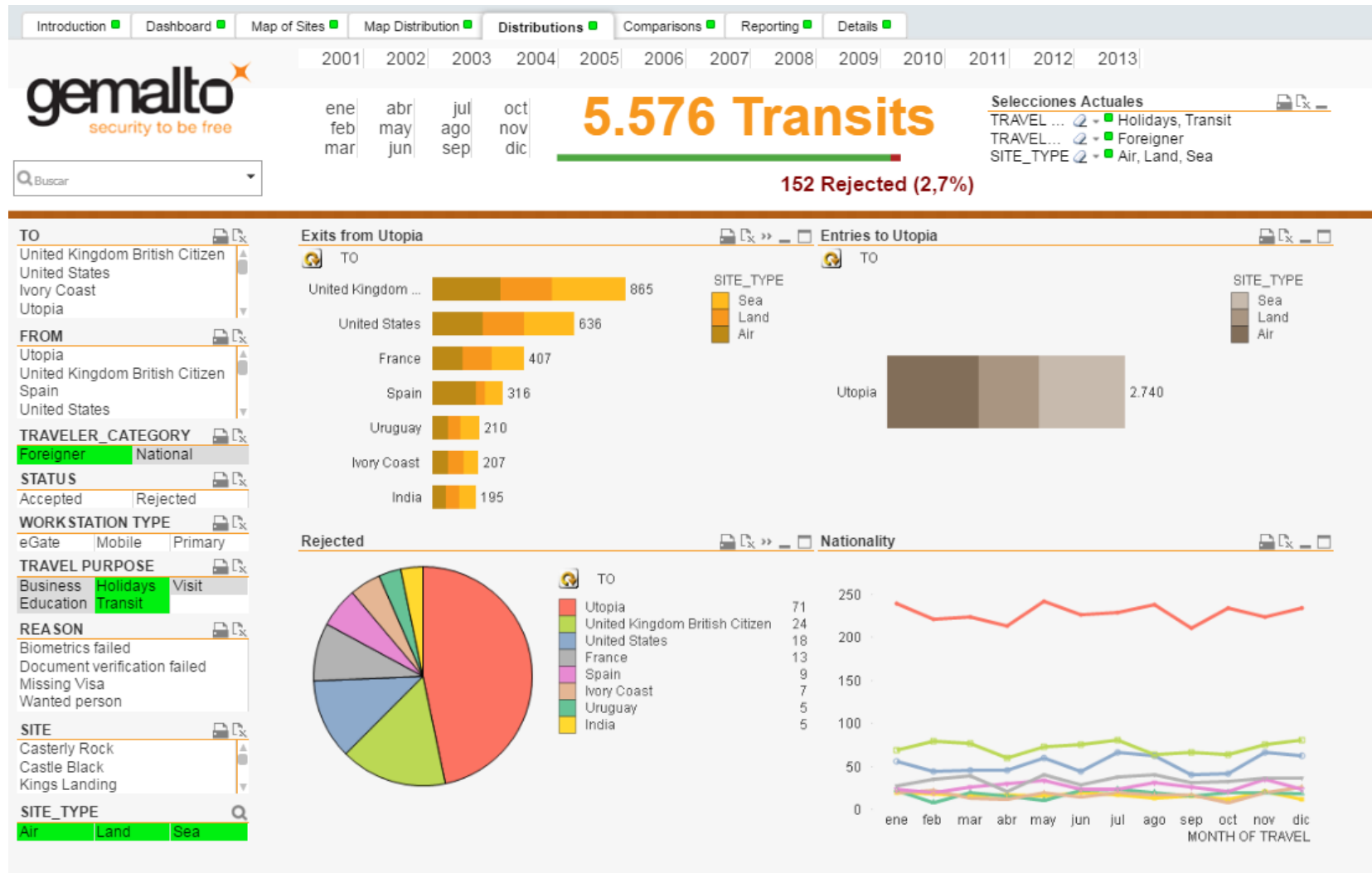
# Flexibility for land, sea and air borders



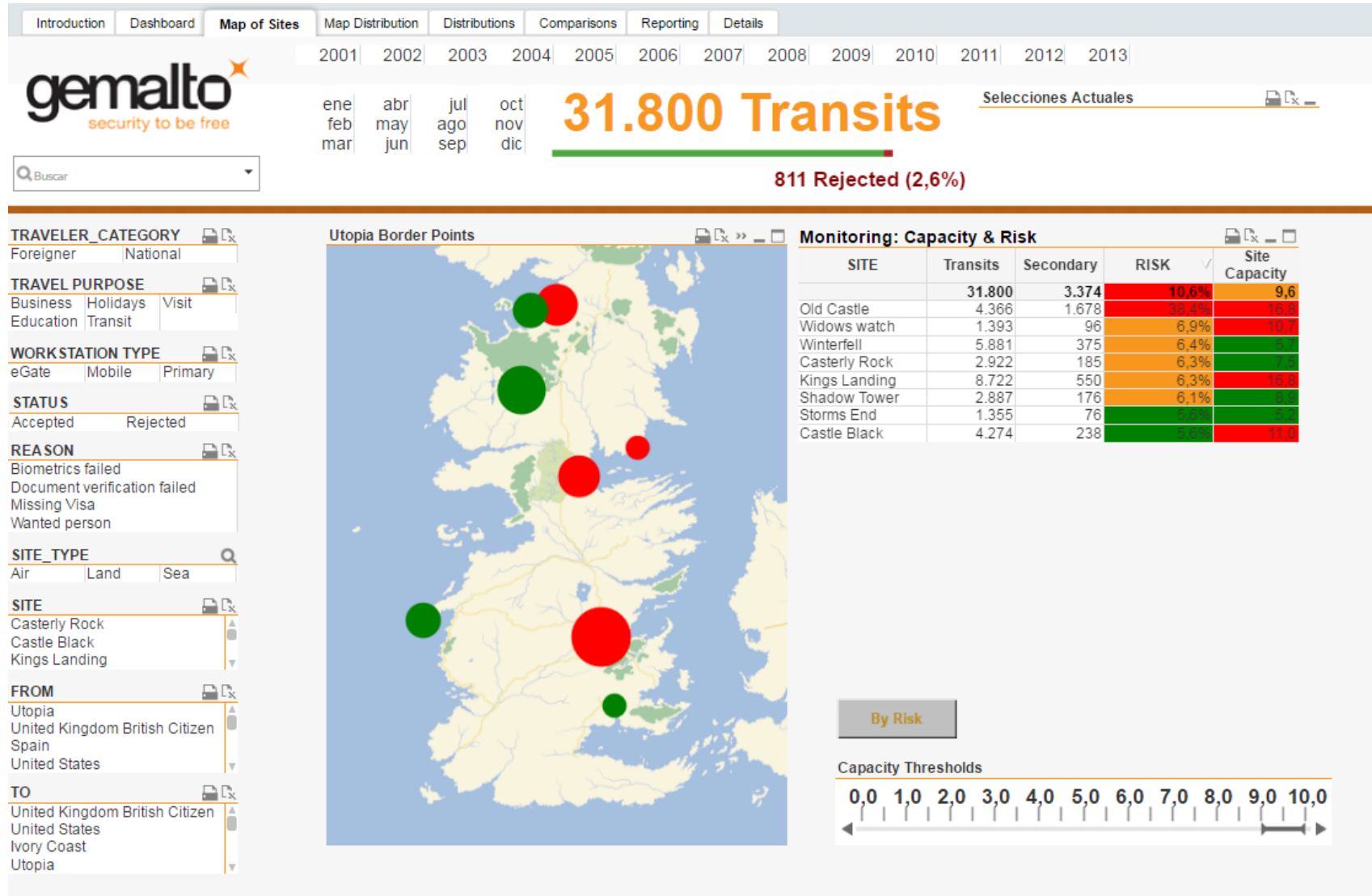
# Facilitation



# Border Intelligence: monitoring and investigation



# Border Intelligence: monitoring and investigation



Thank you!

