

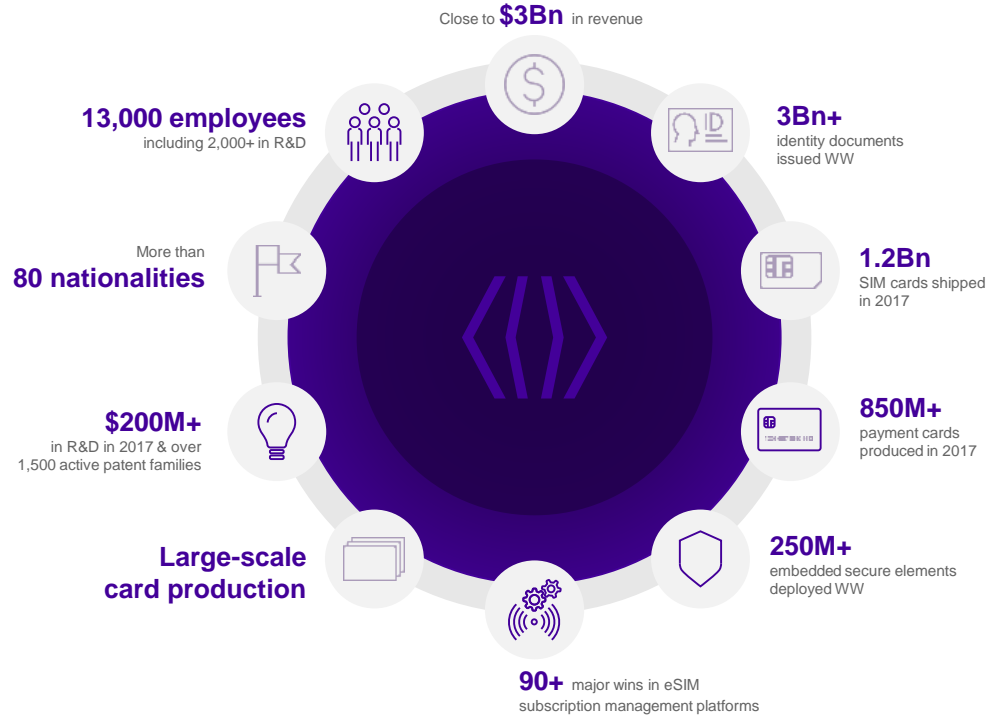
FRONTEX ICBB 2019

Application of biometric technologies at our borders

An industry perspective



IDEMIA: Leading Augmented Identity for an increasingly digital world



Well positioned in our markets

#1 in police biometric systems

Trusted by **1,800** financial institutions

#1 in civil identity solutions

Trusted by **500+** mobile operators

Trusted by **major** industrial OEMs

#1 in US driver's license issuance



IDEMIA: partner for full border control programs



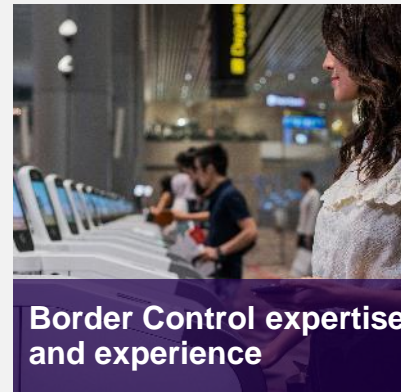
End-to-end ID management specialist

- As an ID management specialist, IDEMIA is present in the complete ID chain.
- From applicant enrollment through manufacturing and issuance of a secured document (i.e. passport, visa) to traveler identity verification.



Mastering the key technologies

- Continuous in-house development of algorithms, Biometrics Identification Systems and data analytics for API-PNR Data
- In-house development of biometric sensors and devices to capture and control travelers
- Strong R&D investment to keep the lead on these mission-critical technologies
- IDEMIA is consistently ranked top tier across many modalities and multi-biometric solutions (NIST)



Border Control expertise and experience

- With decades of experience in border control with programs deployed worldwide, IDEMIA has gained a deep understanding of immigration agencies' needs as well as passengers flows
- This expertise allows us to actively support international organizations dealing with border control
- In order to stick with international regulations and citizens' concerns, our solution relies on Privacy by Design principles, and encapsulates data protection



System integration and services

- Besides the key technologies and solutions developed internally, IDEMIA has strong system integration and services capabilities to manage and deploy programs tailored to the specific needs of our customers.



IDEMIA selected biometric references

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❑ EUROPEAN UNION: eu-LISA

- Visa Information System (VIS) - BMS
 - Stores Schengen Visa applications for 26 Schengen countries
 - Upgrade to 85 million records, up to 13 million applications/year (1:N)
 - **Real-time** visa verification at the border via fingerprints (1:1)
- Schengen Information System (SIS) - AFIS
 - AFIS system for Law Enforcement applications by Schengen MS

❑ INDIA: Multi-biometric ABIS / very large scale Identity Management

- Aadhaar project:
 - ABIS for all Indian people (1,2 billion)
 - Face, 2 irises, 10 fingers of each Indian person
 - Capture, enrolment and matching

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Opportunities



Challenges

The way borders are managed today is **probably not sustainable**

Striking a **balance** between **security** and **facilitation** might **not be enough**

Cannot continue simply **checking identities** against a passport and compliance to a **check list of criteria** (valid travel doc, not watch-listed, nationality, EES, etc.).

Continuous repeat actions at each Border Crossing Point take **too much time**, causing **congestion**

Needs a change of **paradigm**

Governments will not be able or will **not need to physically control** everyone, but will need to **better understand what's happening** at their borders

Need for **more intelligence** and **less, more focused, control**

Make **enlightened decisions** and take **adequate actions**

Not just at one specific border, for one specific crossing

But **centered on a person** and its continuous interaction with the government



And then there was the Entry Exit System...





BORDER GUARDS PERSPECTIVE

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Security

Facilitation

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TRAVELER / AIRPORT PERSPECTIVE

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Security

Facilitation

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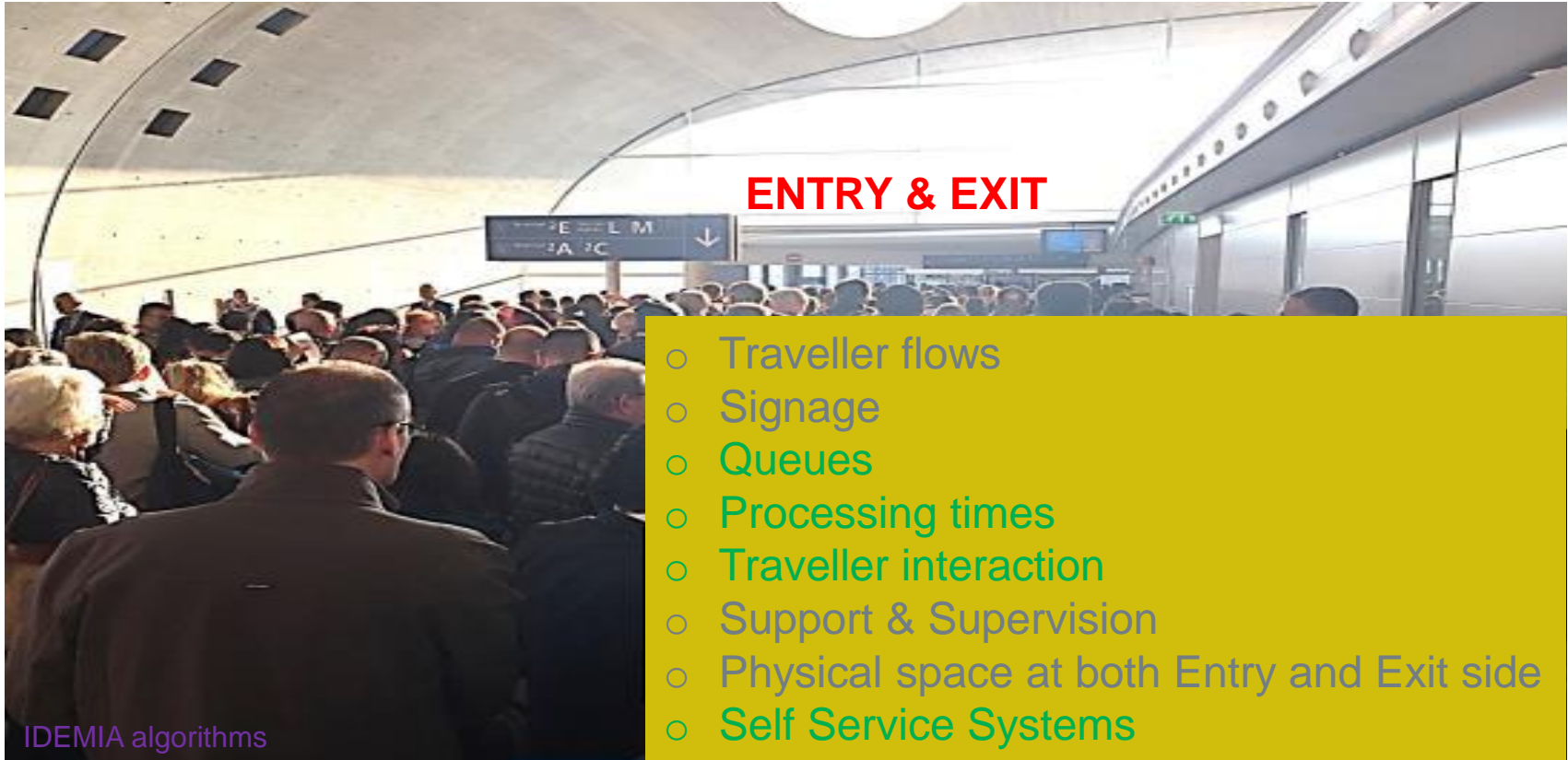


ENTRY EXIT SYSTEM OPERATIONAL IMPACT AREAS

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EES OPERATIONAL CORNER STONES

- ❑ BIOMETRIC PERFORMANCE
- ❑ UNDERSTANDING TRAVELER BEHAVIOUR
- ❑ UNDERSTANDING TRAVELER FLOWS
- ❑ TAILOR-MADE SOLUTIONS, INTEGRATED IN NATIONAL BC SYSTEMS
- ❑ IDENTITY MANAGEMENT
- ❑ GDPR COMPLIANCE



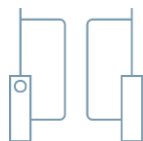
EES LANES/FLOWS AS PER REGULATIONS

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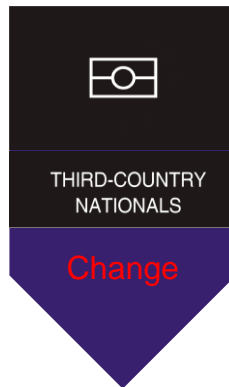
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Automated
and/or manual
counters



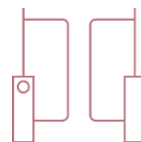
ABC-gate



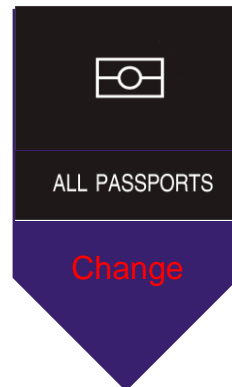
Self-service/
Automated
lanes for VE/VH
And/or manual
counters



kiosk



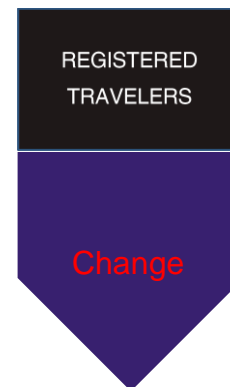
E-gate



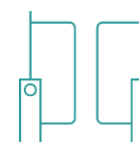
Manual
Counters



counter



New



TBD

IDEMIA algorithms



EES BIOMETRICS

- ❑ ABC-gates (EU, EEA, CH, ++)
 - face
- ❑ Self-service kiosks (TCN, VE/VH)
 - Face, 4 fingers
 - Demo at our booth
- ❑ Manual Counters (all)
 - Face, 4 fingers
- ❑ E-gates (TCN, VE/VH)
 - Minimum 1 biometric
- ❑ Registered Travelers (MS national facilitation program)
 - TBD: Face, fingers, iris, multimodal
- ❑ Identity Management System



BIOMETRICS

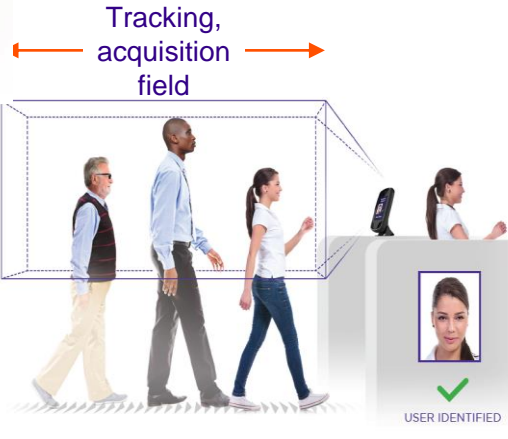
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- ☐ **NOT a commodity,**
- ☐ **Determine PERFORMANCE,**
- ☐ **Have EVOLVED,**
- ☐ **Can be RE-USED,**
- ☐ **Superior ALGORITHMS are key,**
- ☐ **SAFE, SECURE, GDPR compliant.**

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MFACE: facial recognition



- ☐ Low & small profile,
- ☐ No moving parts,
- ☐ No additional light required
 - ✓ using ambient light
- ☐ No height adjustment required
 - ✓ Height capture range 1m – 2.1m
- ☐ Liveness detection
- ☐ Highly configurable
 - ✓ Capture time
 - ✓ FAR/FRR
 - ✓ Capturing volume
 - ✓ GUI, beacon



MFACE at Singapore Changi Airport (and Avinor Oslo Airport)

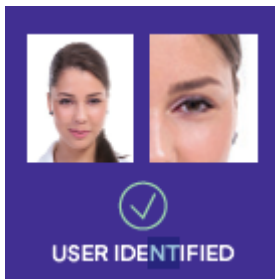
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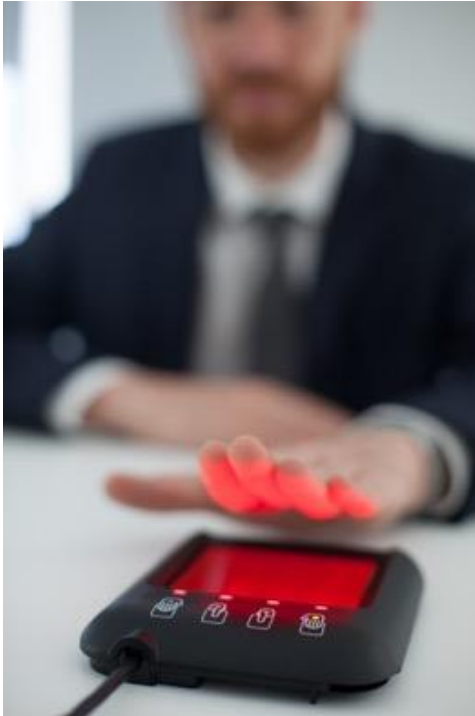
ONELOOK: facial and iris recognition



- ❑ Face and 2 irises together in one capture
- ❑ No height adjustment required
 - ✓ Height capture range: 1m to 2.1m
- ❑ No additional light required
 - ✓ Ambient light for face capture
 - ✓ IR light integrated for iris capture
- ❑ Face and/or Iris matching configurable
- ❑ Average capture time for both biometrics: < 3 seconds
- ❑ Dual biometrics supports token-less processes
 - ✓ RTP



MTOP Slim: fingerprints



- ❑ Very thin
- ❑ Fake-finger detection
- ❑ High matching accuracy:
 - ✓ IDEMIA's embedded deep learning technologies
 - ✓ Chosen for the largest and most demanding deployments in the world:
 - Aadhaar
 - Interpol
 - FBI
 - EU visa information system
- ❑ FBI IAFIS IQS Appendix F Certification



MWAVE: fingerprints

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☐ Fast

- ✓ High throughput
- ✓ One single wave of the hand
- ✓ Simultaneous acquisition of 4 fingerprints
- ✓ < 1 second

☐ Contactless

- ✓ Mitigates cultural and hygienic concerns
- ✓ No ghost images left
- ✓ Meets the challenge of dry and wet fingers

☐ High image quality

- ✓ FBI PIV IQS certified

☐ Use case

- ✓ Identification 1:N
- ✓ Authentication 1:1



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MFACE: facial recognition

Royal Caribbean Cruise Ltd. & US Customs and Border Protection



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IDEMIA algorithms



Royal Caribbean Cruise Ltd. Cruise solution

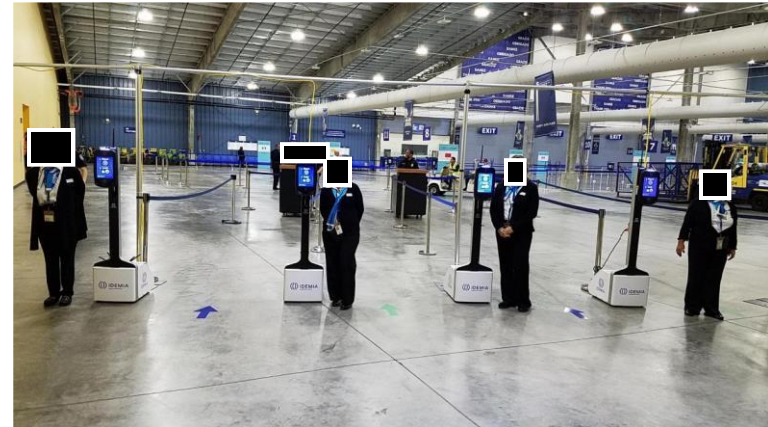
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Flagship solution: Sea Re-entry Program

- **An ocean going version** of CBP's Biometric Exit Program
- **Use of facial biometrics** to verify that individuals (dis)embarking RCCL ships are the same ticketed passengers who boarded at the start of a cruise

The latest facial capture technology MFACE to **validate** passenger's identity for entry & re-entry of cruise ships & to **further secure** and **expedite** passenger processing at U.S. sea-ports of entry

the success of the pilot resulted in the agreement to make the process operational, the first in the cruise line market space. The solution is now deployed in 3 sea-ports



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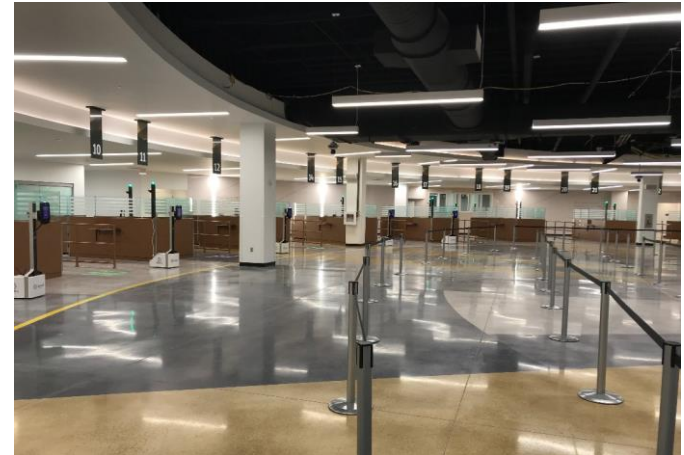
Sea Re-entry program – IDEMIA, RCCL & CBP

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Key facts

- ✓ 35 MFACE across 3 sea-ports
- ✓ High quality/high speed facial matching 1:N
- ✓ Fast & simple feedback
- ✓ Easy identification of a large population of passengers
- ✓ Better manpower allocation: CBP staff are realigned to focus on more targeted enforcement activities
- ✓ Total lane rate at maximum performance: 720 PAX/hour
- ✓ Total passenger time (walkup, processing, walk out times): decreased from 16.24 to 5.35 seconds

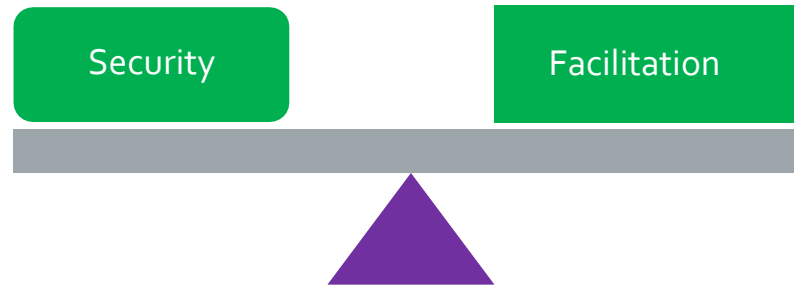




IN SUMMARY

❑ USER CENTRIC BIOMETRICS ARE KEY TO BORDER PROCESSES

- ✓ Superior algorithms provide faster capture and enhanced matching
- ✓ Intuitive use
- ✓ Ergonomically correct designs
- ✓ Faster processing
- ✓ Secure borders





Q & A

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Thank you for your attention,

Lunch or questions?

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