

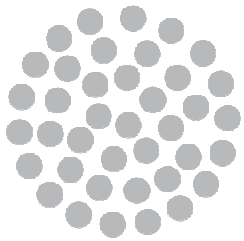


Global approach and Biometrics on the move. Experiences in the ABC4EU Project

FRONTEX - Biometrics on the move

Warsaw, May 23rd 2017





indra

www.indracompany.com

Indra is a Spanish multinational
and a global technology company

with headquarters at Madrid



€2.709M
Sales 2016



Complete offering for
all industries



34,000
Employees



R&D 5-8% of sales
+200 deals with research
centres and universities



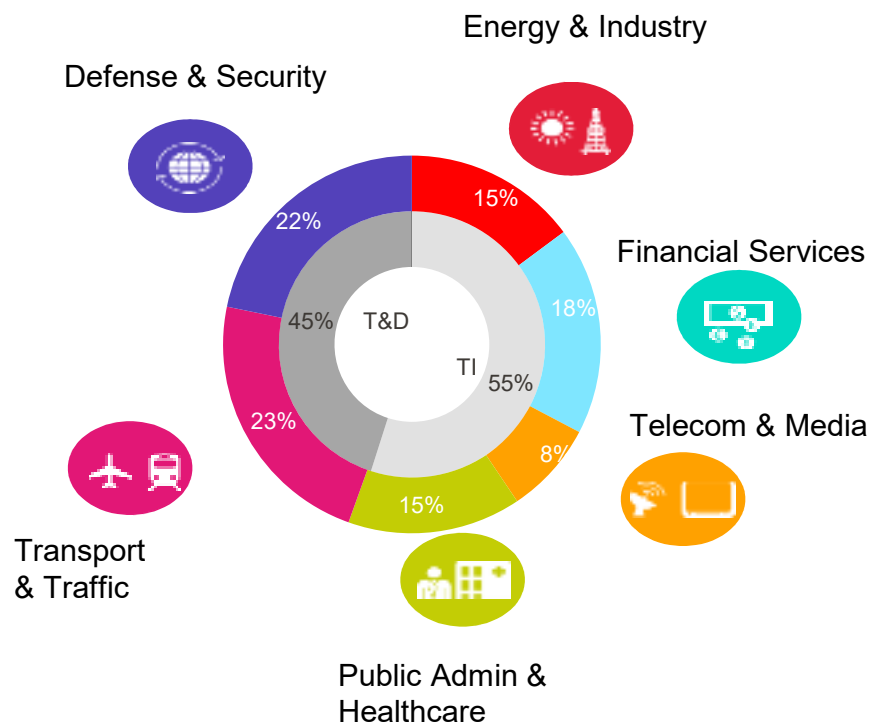
Sales operations
+140 countries



Leading clients
in key geographies
and industries



We deliver core business operations technology for our clients



All over the world



minsait
by Indra

Minsait brings Indra's information technology experience and expertise under one roof and reinforces the company's leadership

What we do

Everything we do is a pure reflection of who we are.
Our activities are designed to reinvent the status quo.



Foresee

Foresee new disruptive
models



Engage

Engage customers
& citizens



Empower

Empower operations
& technologies



Protect

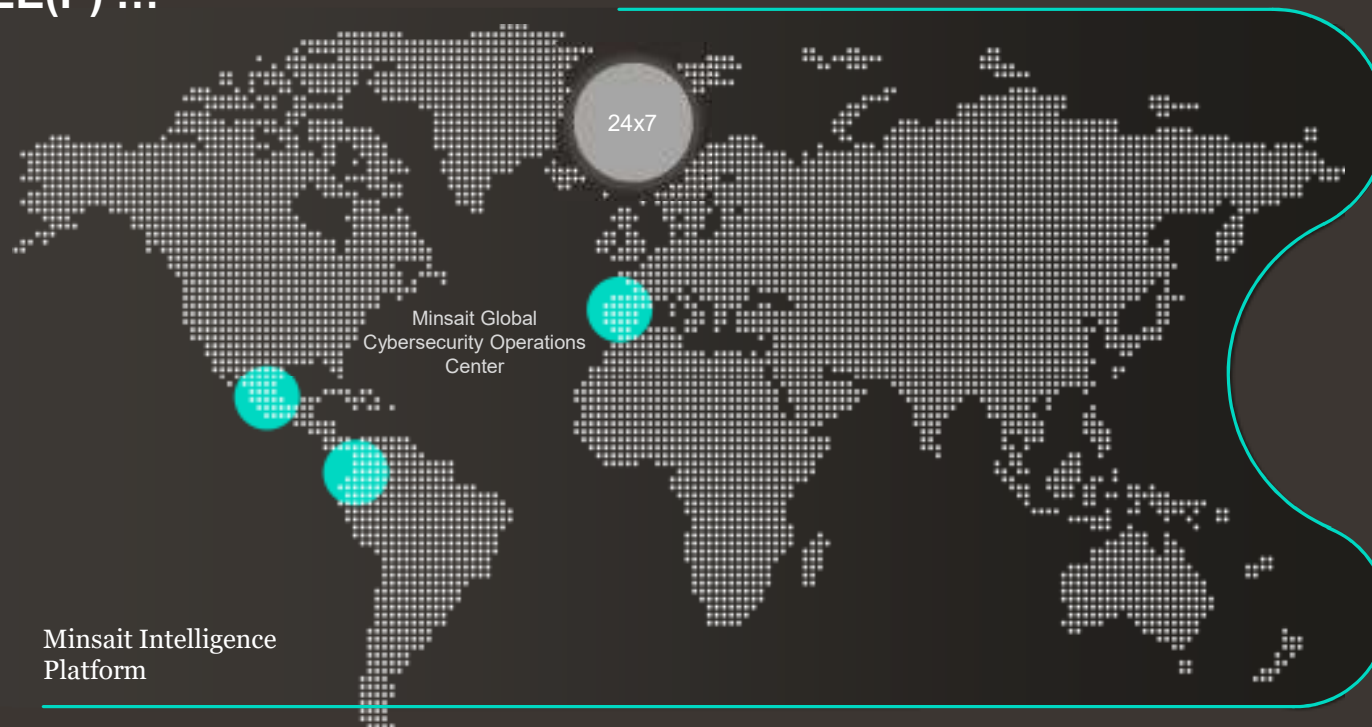
Protect the digital
footprint

**Minsait unit
provides a
response to the
challenges of
digital
transformation.**

MINSAIT CIBERSECURITY PRODUCTS AND SOLUTIONS

Security as a Service Suite

FEE(P) ...



EndPoint Intelligence
Analytics, hunting & forensics
sobre end-point



DNS Defense
DNS Firewall Cloud &
Threat Intelligence



Mail Defense
Anti SPAM, AV &
AntiAPT Cloud



Web Defense
Anti DDoS & WAF
Cloud



VMaaS
Servicio de Gestión
de vulnerabilidades



Shadow IT / CASB
Descubrimiento / Protección
frente a de aplicaciones no
corporativas



Browse Defense
Protección de la
navegación a través
de proxy cloud.

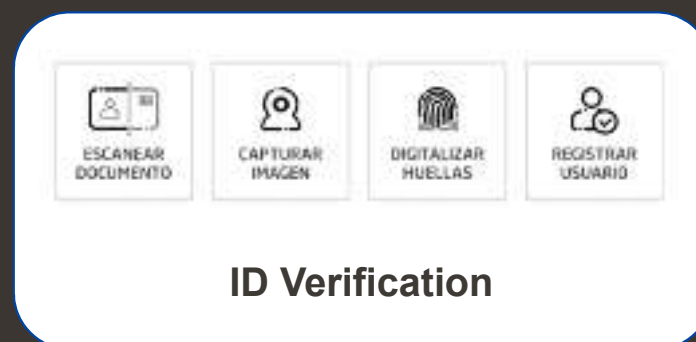
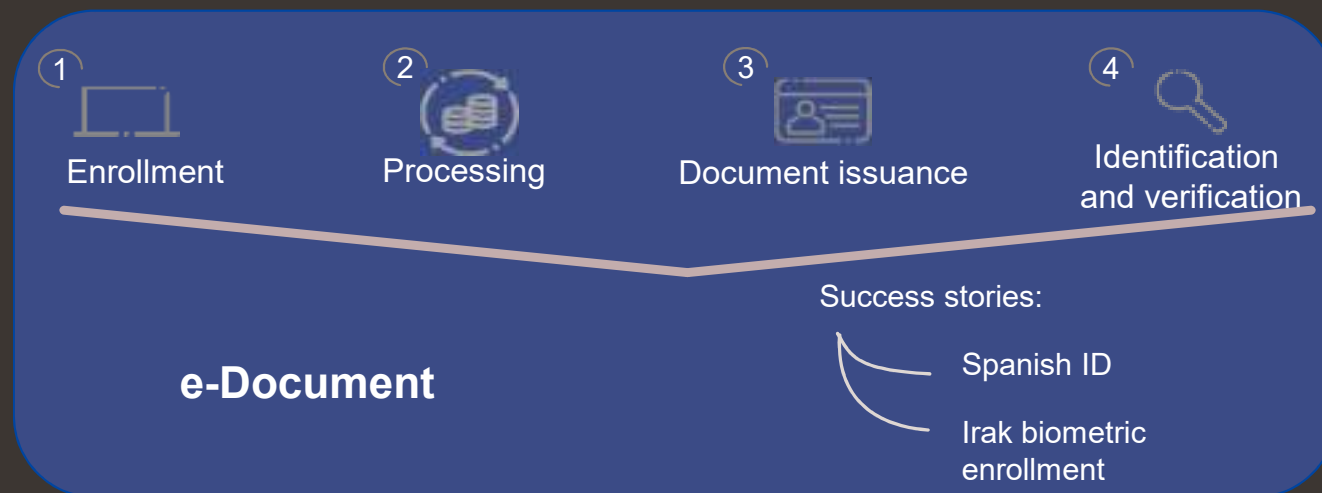


Threat Assessment
Análisis permanente del
performance de los
controles de seguridad

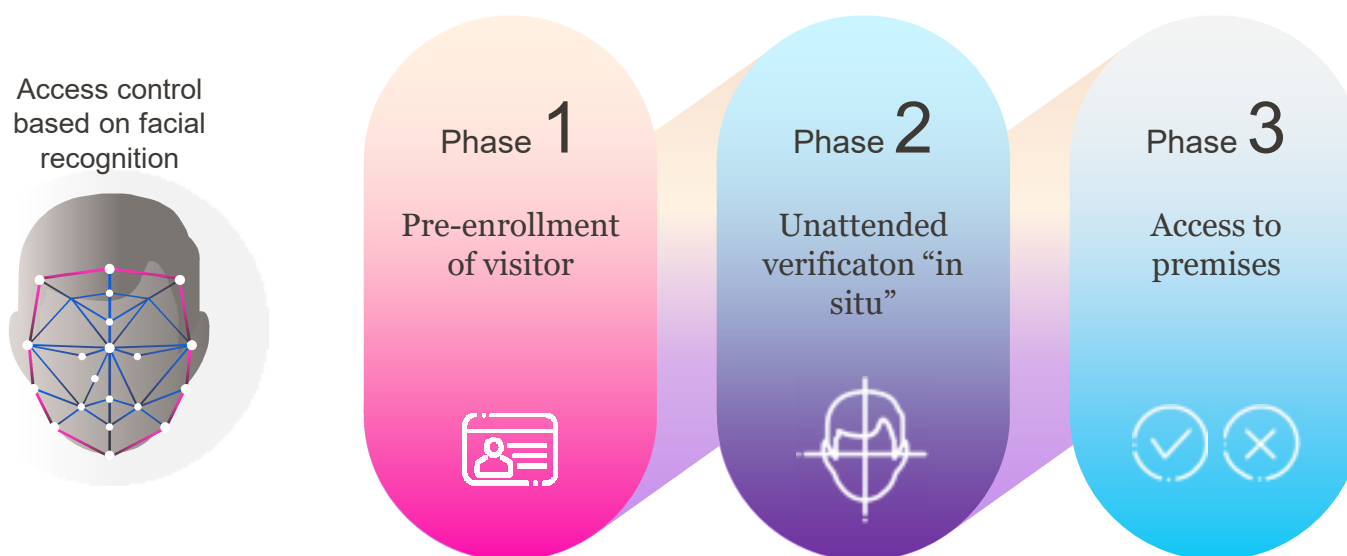
Products using biometry

FEE(P) ...

DIGITAL ONBOARDING



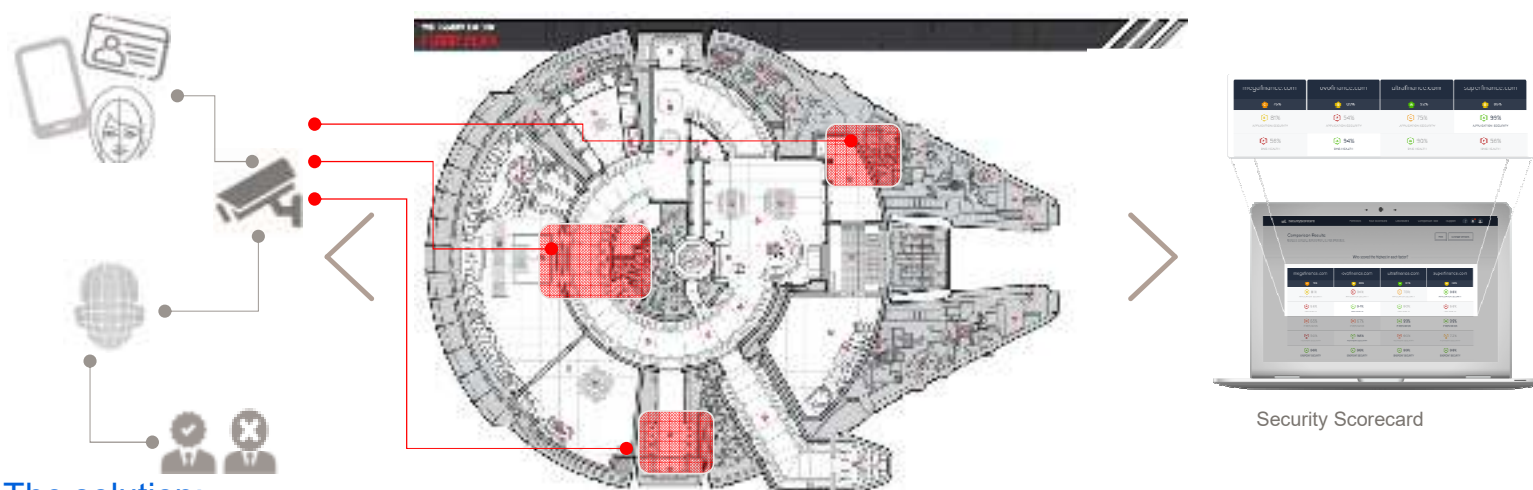
FEE(P) nTrance: enrollment, verification and unattended entry to controlled premises



An easy solution that enables **control, security, agility, and trazability** when accesing controlled premises

FEE(P) iHawk – Protection of restricted areas

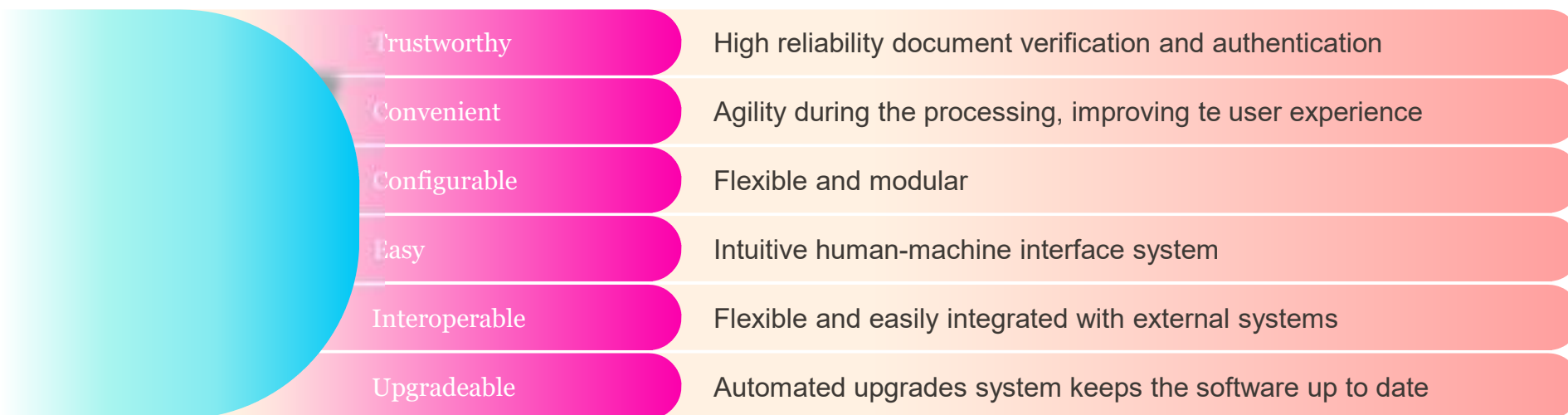
The challenge: Presence control of employees and external workers in the most sensible areas



The solution:

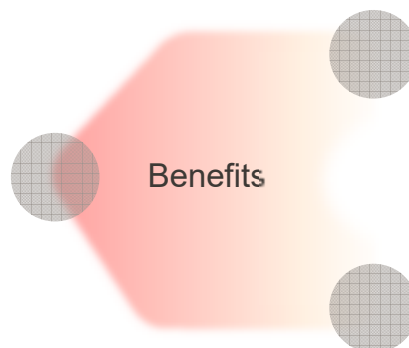
	<ul style="list-style-type: none"> • Definition of attack zones, and categorization of existing fraud profiles • Definition of monitoring indicators • Pre-enrollment of employees and access permissions 	<ul style="list-style-type: none"> • Monitoring of movements and access permissions near critical areas • Open-field facial recognition 	<ul style="list-style-type: none"> • Querying planned interventions, roles and permissions assignment • Identification of deviations from normal behavior 	<ul style="list-style-type: none"> • Raising alarms • Control panel with recommended actions 	<ul style="list-style-type: none"> • Processing of fraud information • Assessment of employees and providers according to the level of security incidents detected • Reviewing / updating the control metrics
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FEE(P) eGates intelligent automated border control systems



Border authorities

- ICAO and BSI international standards compliance for travel document verification (eMRTD)
- Traveller biometric identity verification (facial, fingerprint and multimodal)
- Border guard operative processes enhancement



Travellers

- Balance between optimal security and usability to enhance the user experience
- Border crossing time minimization
- Flexible and adaptable to the border *footprint*

Operators

- Boarding time speedup

Indra's ABC System installations in Spain



Segregated two-steps process



One step process

SEGREGATED TWO-STEPS TOPOLOGY

Features



The border crossing is done in two steps at two different locations:

- 1) Verification kiosk: the traveller is subject to automated verifications (document, biometry and background checks).
- 2) E-gate: the traveller uses a token for effectively crossing the border



It is crucial that the person that has used the kiosk is the same as the one that uses the e-gate.

Indra current solution uses the fingerprint as the token for linking the two steps.

Indra supports it as a very useful solution for reduced spaces and for saving hardware costs.

Drawbacks of fingerprint approach

- 1) Capturing fingerprints is **more difficult** (fingerprints can be dry, the readers need to be cleaned up, ...)
- 2) It can be **hard for some users** to understand that they must place the same fingerprint again or to correctly place the finger on the sensor.
- 3) Using the fingerprint **takes more time**, as the traveller has to stop for a moment in front of the gate.

Indra is working on **replacing the fingerprint using facial recognition** as the token for linking the two steps.

A prototype is being developed in ABC4EU project.



ABC Gates for Europe



Topic FP7-SEC-2012.3.4-6

Enhancing the workflow and functionalities of Automated Border Control (ABC) gates

Integrated Project

Main objectives:

- ABC for Third Country Nationals
- Entry/Exit system
- National Facilitation Programme
- Improved biometric algorithms
- Harmonization of ABC systems across Europe



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Universidad
Rey Juan Carlos



This project has received funding from the European Union's Seventh Framework Programme for research, technological development and demonstration under grant agreement no 312797

Advantages of facial token



- 1) It is absolutely guaranteed that the person crossing the e-gate is **the same** as the one identified at the kiosk.
- 2) The traveller **doesn't have to stop**; he just looks and walks.
- 3) The process is **more convenient and faster** for the traveller. He doesn't have to touch a potentially dirty surface.
- 4) **Less intrusive** than capturing the fingerprints.
- 5) The number of cases that must be solved manually is **reduced**.

The facial recognition with a few number of candidates provides FAR and FRR similar to fingerprints.

The matching thresholds can be set higher because the live facial image is compared with a very fresh capture (in contrast to the image in the passport, which can be 10 years old, or even more)

Challenges for facial token



- Fast and reliable facial recognition from a video stream **as the traveller walks**, possibly not looking straight to the camera.
- Facial **anti-spoofing** measures:
 - Flat faces (on paper, tablets, shirts) must be rejected.
 - Persons using 3D masks are detected using micro texture and temperature analysis algorithms.
- Tailgating** detection:
 - An unauthorized person crosses along with the authorised one.
 - An unauthorized person crosses instead of the authorized one.
 - Backpacks and hand luggage must not be wrongly detected as tailgating.
 - Detecting additional persons sufficiently far away in the background should not prevent that the e-gate opens.
 - Persons in front of adjacent e-gates must be ignored.

The door will automatically open only if all the following conditions are met:

- 1) The face of a person with a pending authorized crossing is detected close to the e-gate.
- 2) It is a live face.
- 3) There is no other person near the e-gate (possibly looking aside).

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impact to go

Presentación:



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