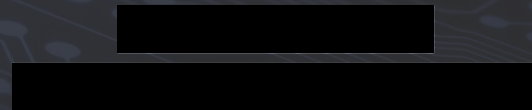
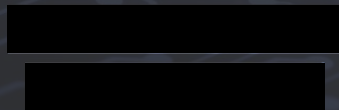


An Industry Perspective

Cutting-edge biometric technologies
facilitating travel and securing borders



T3K is Law Enforcement's Global Partner for AI Solutions

T3K Forensics GmbH

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1030 Wien
Austria

Pestalozzistraße 31
80469 Munich
Germany

T3K Inc
Tampa, Florida
USA

Opposing forces? Security vs Convenience



The diagram features two large, stylized arrows pointing in opposite directions. The left arrow is blue and points right, containing the text 'Securing Borders'. The right arrow is teal and points left, containing the text 'Facilitating Travel'. In the background, there are faint, larger versions of these arrows, creating a sense of tension and opposition between the two concepts.

Securing Borders

Facilitating Travel

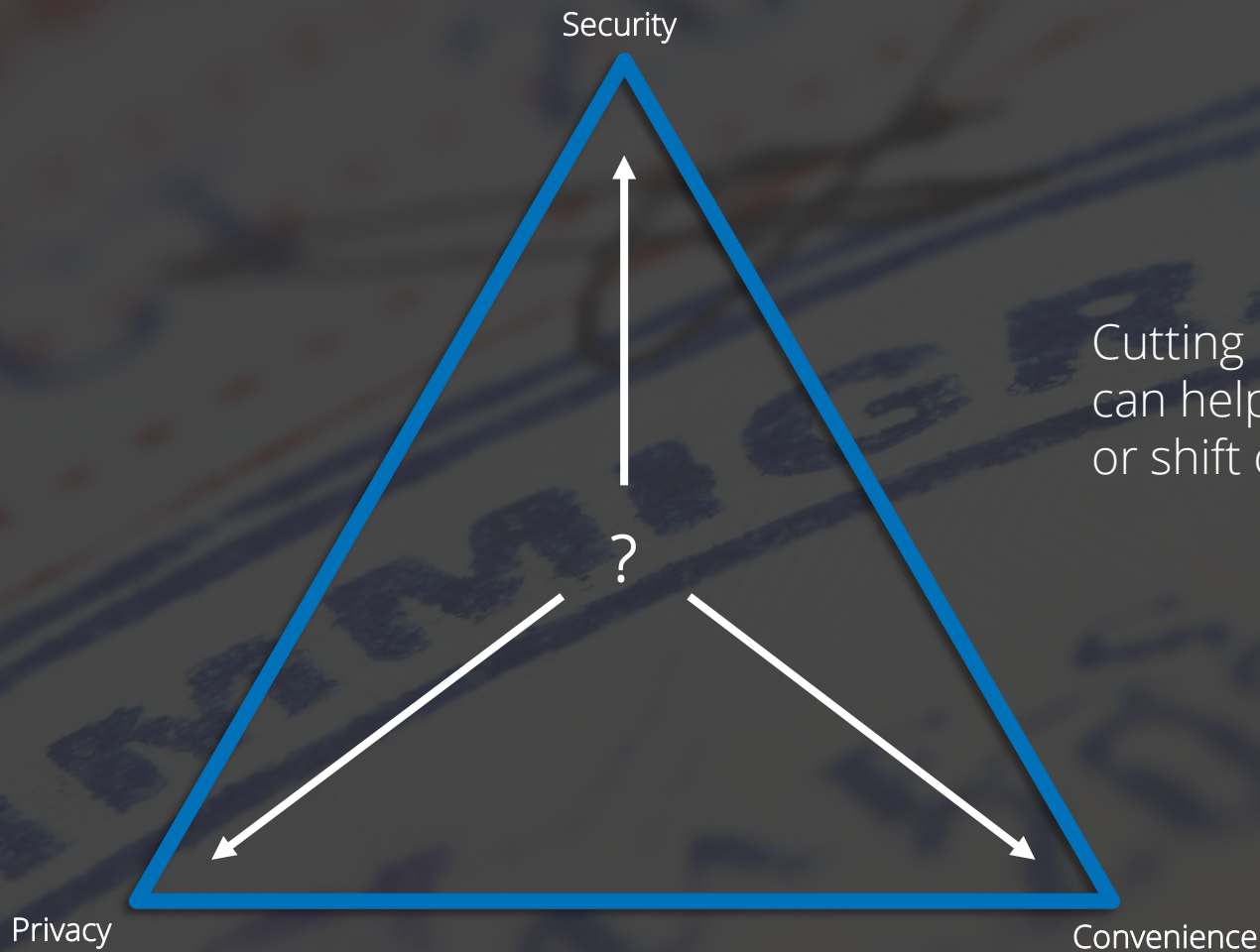
Challenges

- Increased number of checks
- Establishing unique identification
- Document fraud on the rise
- Sophisticated criminals utilizing tech

Expectations

- Free movement
- Frictionless security checks
- Short (no) queues
- Increased security
- Data Protection (GDPR)

The Triple Constraint



Cutting Edge Technology
can help to scale the triangle
or shift constraints

Today's Cutting Edge Biometric Solution Requirements

01

Easy to Use & Fast

- Low training efforts
- Integrated into existing workflow and process
- High quality capturing of biometric features

02

Secure & Integrated

- Applying to standards
- Interoperable
- Affordable

03

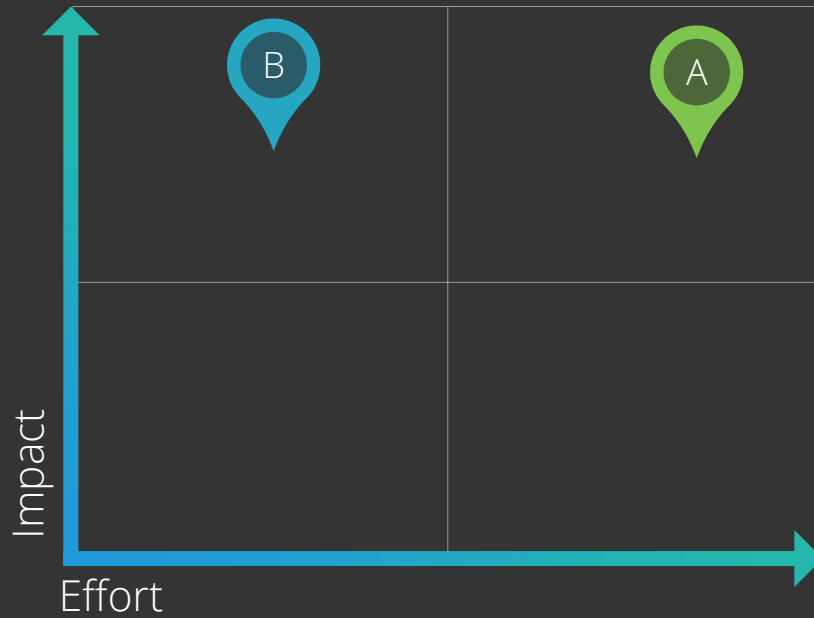
Mobile & Smart

- Utilize improved sensorics and computational power
- Leverage omnipresent smartphones
- Reduces the need for dedicated devices or hardware

The Technology Gap

“Often, technology has been seen as a direct solution to challenges rather than a tool used in processes”

Technology – Effort vs Impact



A High Integration effort,
high impact

B High impact, medium
integration effort

Technology Focus

On the move Biometrics

- Smartphone-based identification
- Including borders
- Intra-Schengen



Improved Authentication

- For attended and unattended systems
- Single and multi-factor



Presentation Attack Detection

- For unattended and attended systems
- Eg through liveness detection



T3K BIOCAPTURE

Mobile Fingerprint Capturing

Features

- Fingerprints captured within seconds
- Utilizes commercial off-the-shelf (COTS) products (Android, iPhone)
- Uses smartphone camera, no dedicated hardware required
- NFIQ quality assessment
- Prototype fulfills ICAO recommendation for biometric systems for verification (97% GAR)

Applications

- LEAs can easily scan fingerprints
- Integration into existing LEA apps
- Passengers provide own fingerprints via their phone



OUR MISSION

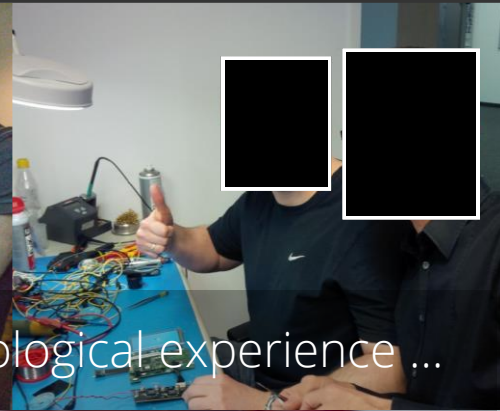
AIT - a partner for protection of critical infrastructure



As the biggest non-universitary research center ...



... with 80 person-years technological experience ...



... we bring science to solutions for ...



... for award winning products & solutions

A DEDICATED MOBILE DEVICE PROTO

Not smartphone based

- MRZ, NFC, Face, Fingerprints
- Build for borderguards with ergonomics in mind (left/right)
- 12h operation (standard accumulators)
- Hardbuttons (gloves), sunlight readable display
- No security concerns about mobile operating systems
- Extensions: 4 Finger contactless, Iris in Infrared



CONTACTLESS 4 FINGERPRINTS

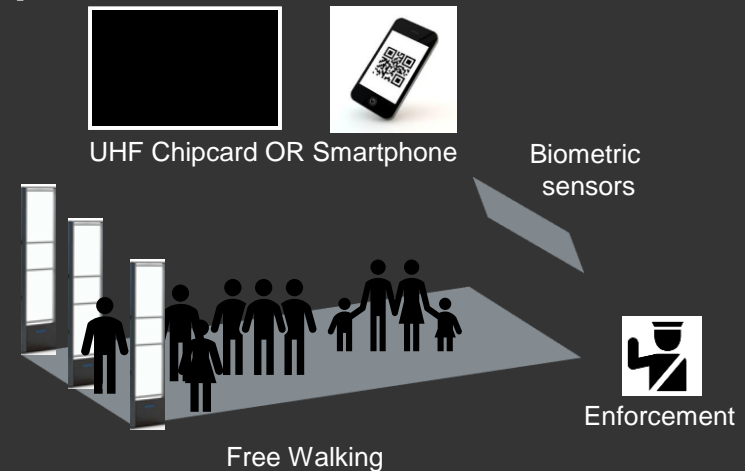
Convenient, fast, secure



VISION: ON-THE-MOVE SOLUTION

E-Gate with 2 factors: Chipcard + Biometrics

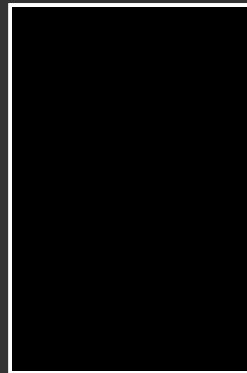
- On the Move
 - Face and Iris at a distance – or a biometric fusion
 - Highly accurate biometric trait with best entropy
 - Very hard to spoof (iris contraction and infrared)
 - QR-code on Chipcard: read at distance (analog to MRZ: open Pass reveals access)
 - Variant: smartphone emulates chipcard
 - UHF transmission: some kilobytes now (sufficient for iris)



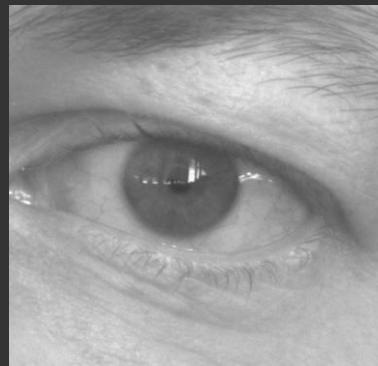
- **Research** novel biometrics solutions (contactless, @ a distance, on-the-move)



Palm Veins



Iris @ a distance



Passport @ a distance

Thank you

