



AI vs. AI: How Identification Technology and AI Strengthen the Security of Authentication

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Agenda

Threat Landscape: AI vs. AI

Trust Architecture

The Polish Model

Practical Applications and Policy
Takeaways

AI vs. AI: The New Identity Battleground

How AI strengthens defense



PAD / liveness



Document authenticity checks



Biometric risk scoring



Anomaly detection



Coordinated fraud response

The issue is no longer whether AI is present, but which side is using it better

AI vs. AI: The New Identity Battleground



Deepfakes



Synthetic identities



Document image fabrication



Account takeover at scale



Personalized phishing attacks

How AI enables fraud

The issue is no longer whether AI is present, but which side is using it better

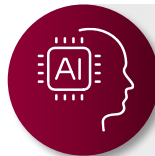
The Threat Landscape Has Shifted from Manual Fraud to AI-Scaled Fraud



Forged eID and ePassport Documents



Challenges in reliable facial matching

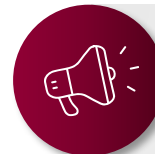


AI enabled identity fraud

- Fabricated document images
- Fabricated images of people (e.g., face, voice)



e-identities taken over by criminals

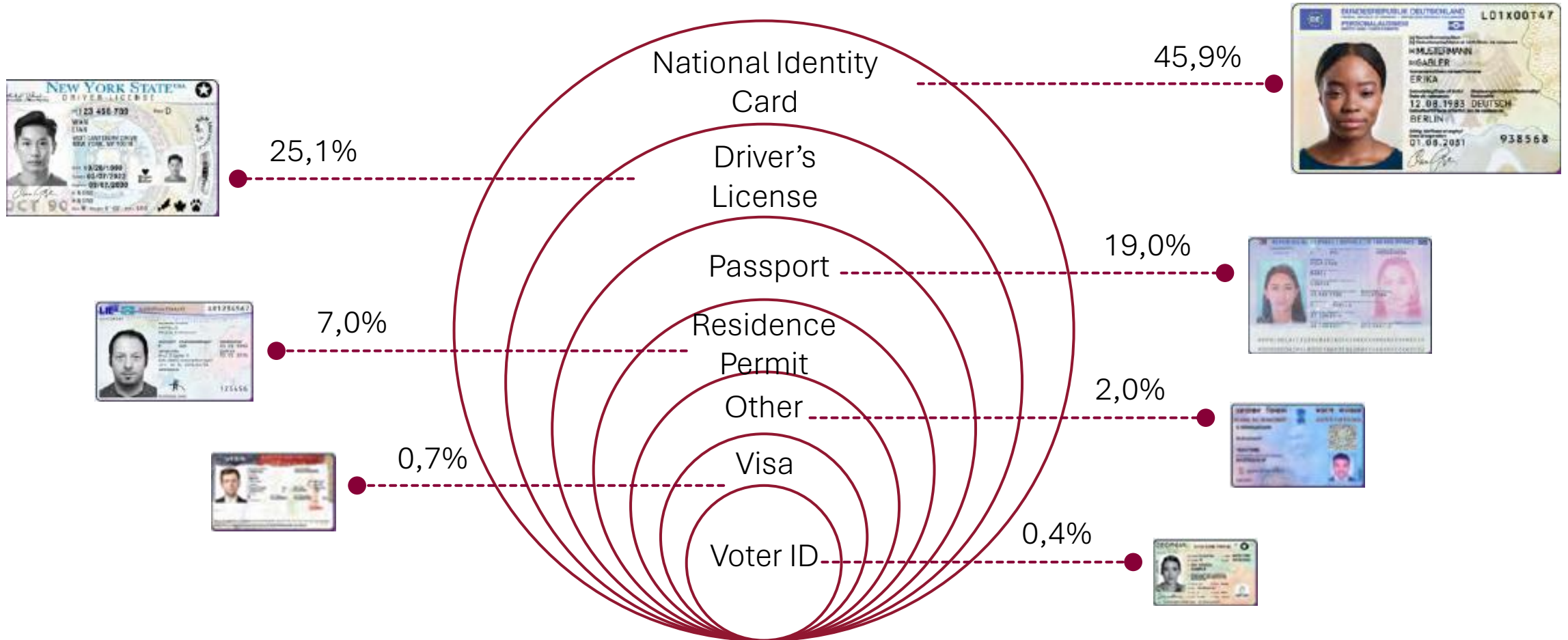


Theft and cracking (credentials /passwords, cyberattacks, phishing, etc.)



High costs for the economy and government

Core Identity Documents Remain a Primary Fraud Target

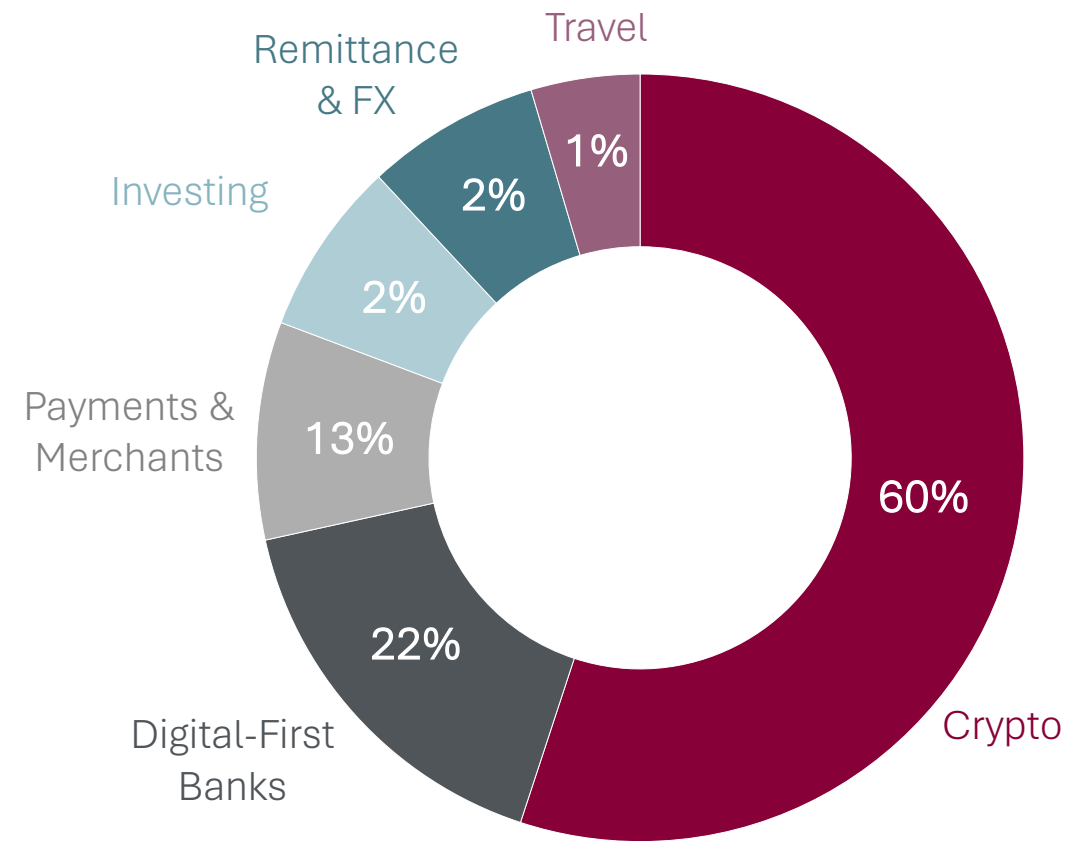


Deepfakes Have Become a Real Fraud Channel

Deepfake attacks are especially prevalent in high-risk financial services:

Fraudsters use a wide range of deepfake methods, including:

- **Synthetic identities:** AI-generated faces that don't correspond to real people
- **Face swaps:** Replacing one person's face with another in recorded or live video
- **Animated selfies:** Taking a static photo and using AI to add movement



Trust Architecture for Mobile & Remote Authentication

Layer 1

Trusted identity source

Government-issued ID document with chip

Layer 2

Document authenticity

chip readout, cryptographic validation, document validity check

Layer 3

Person-to-document binding

face match, biometric verification, liveness / PAD

Layer 4

Device and session trust

mobile app, secure element / trusted device, step-up logic

Layer 5

Risk and operations

fraud monitoring, exceptions, recovery, audit trail



Citizen



Document



Mobile app



Relying party/
service provider

Linking a Trusted Document to a Real Person in Real Time

Identity document
(with a chip)

AI and automatic biometric
verification

Person



Highly trusted source
of identity data



Biometric verification
process plus AI



Verified identity

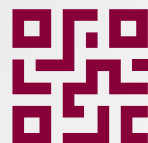
Direct link between identity data and a real person

- in the process of identity verification
- during authentication in the system

The Polish Model: Mobile Authentication Built on a Chip-Based ID



Connect to service
→ User selects "Login with eID"



Scan QR code
→ Secure connection with Mobile App



Read eID (NFC)
→ Data retrieved from electronic layer



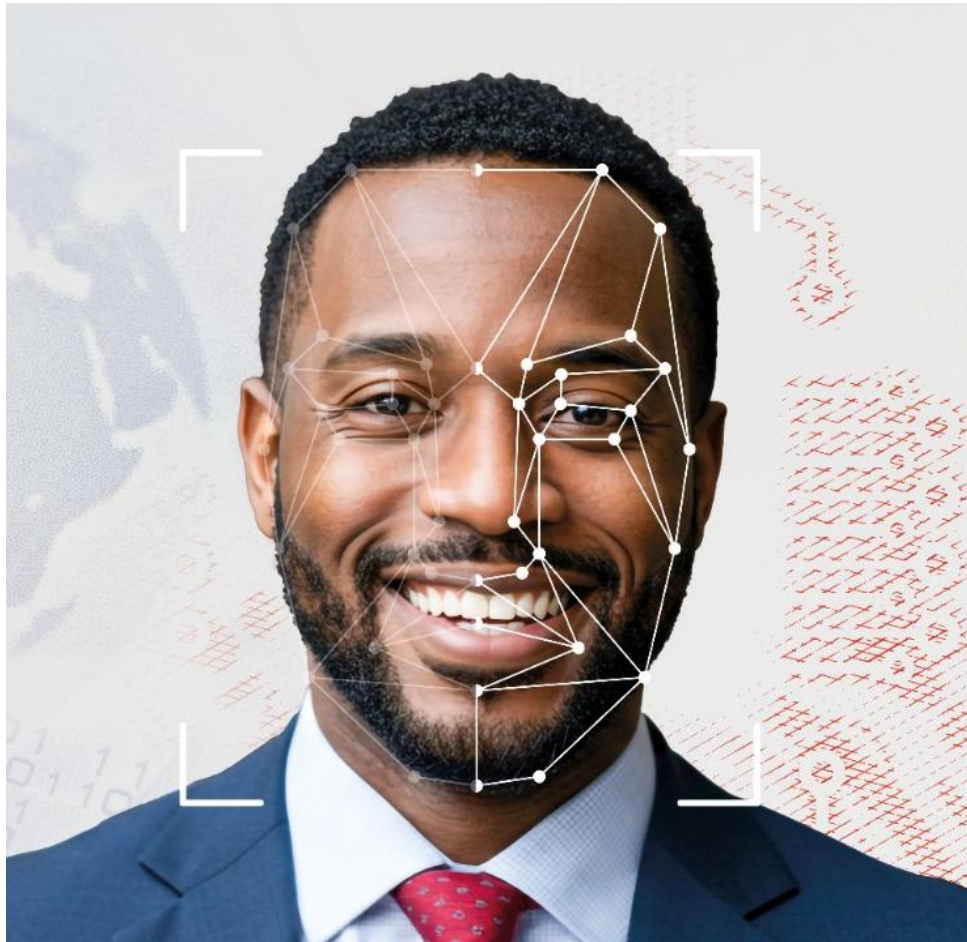
Confirm identity
→ Biometric verification or PIN



Identity confirmed
→ Access granted / account activated



Strong Biometric Verification Without Sacrificing Usability



3D Liveness

Presentation attack protection



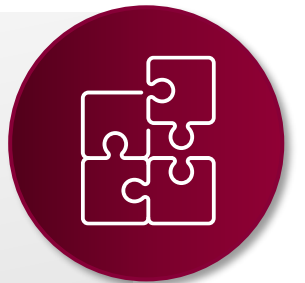
AI matching

Matching accuracy: 99,99995%
for eID and passport



User experience

Simple selfie with face zoom



What Governments Should Require from High-Assurance Remote Authentication



1. Assurance

Trusted identity source + biometric binding



2. Security

PAD, anti-spoofing, resistance to account takeover



3. Governance

Auditability, exception handling, accountability



4. Compliance

Privacy, KYC/AML, lawful processing



5. Inclusion

Usable, scalable, accessible for citizens

Key insight: Trust is not only a technical outcome
— it is also a governance outcome



Over 100 years of experience

Secure printing expertise since 1919

Broad solutions portfolio

IT systems, documents, banknotes, and secure paper

State-owned strategic enterprise

Critical component of national security

Track record in 60+ countries

Proven international delivery experience

10,000+
tons

Secure paper delivered over the past 5 years

3.3
million

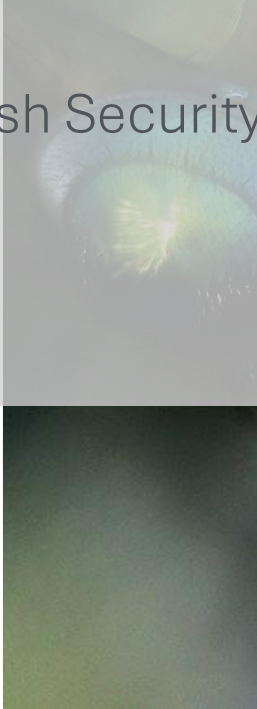
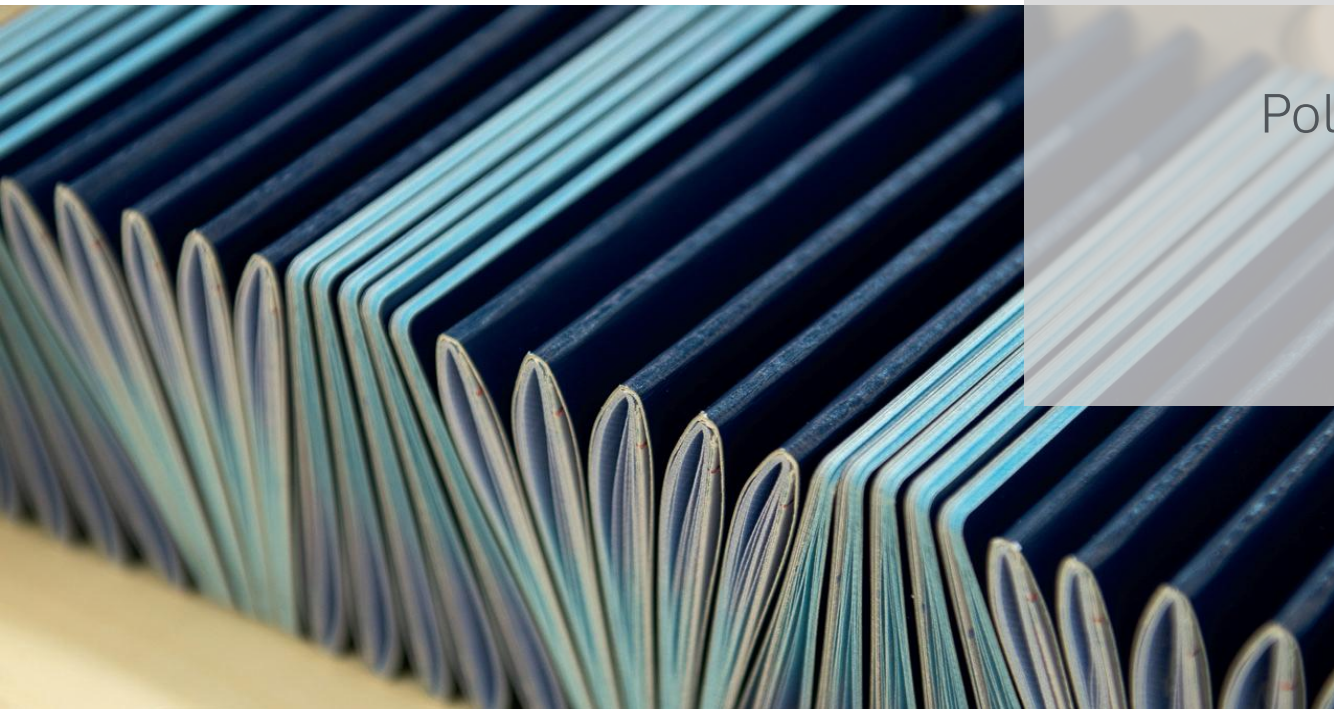
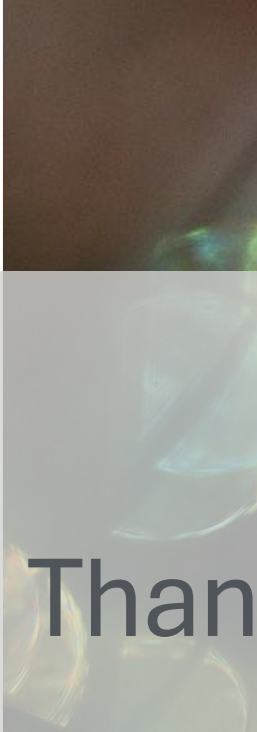
Passports produced annually

4.4
million

ID cards manufactured annually

10.3%
of revenue

Generated from exports in 2024



Thank you

Polish Security Printing Works