COUNTERING TERRORISM

… FROM A BIOMETRIC - TECHNOLOGICAL VIEWPOINT

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CLASSICAL DRIVERS

- Drivers: ***fraud, terrorism, speed, convenience, hygienic issues***

- Largest application fields: ***smartphone industry, border control***

- Increasing fields:

BORDER CONTROL

**CHECKS FOR
SECURITY GUARDS**

REFUGEE IDENTIFICATION

HYGIENIC SENSITIVE AREAS

**ACCESS
CONTROL TERMINAL**

**MOBILE SERVICES
(e.g. PAYMENT)**

3 BASIC-FACTORS OF AUTHENTIFCATION

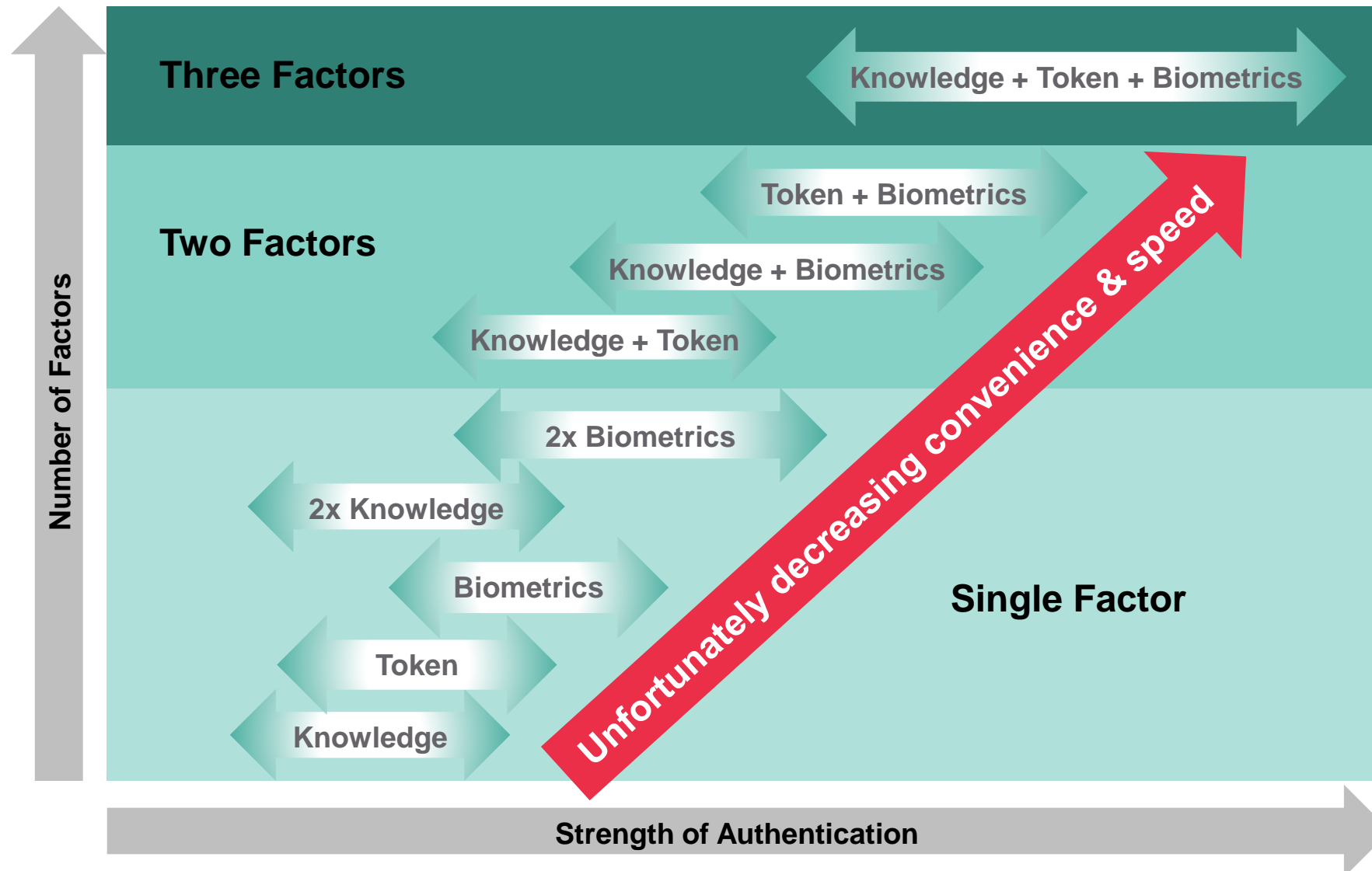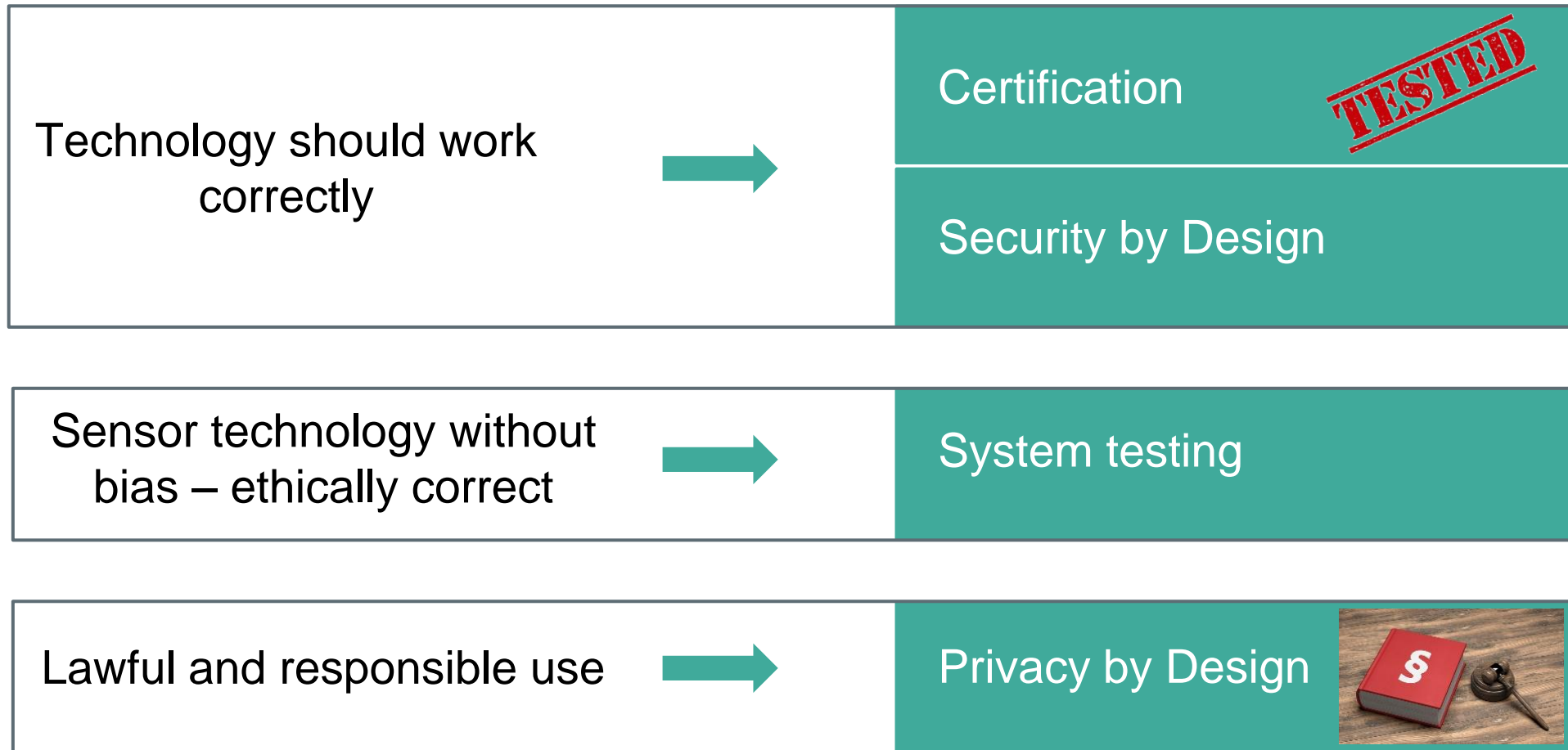| Knowledge (What you know)	Hardware Token (What you have)	Biometrics (What you are)
Password Passphrase PIN Pattern	Key USB Stick Smart Card	Face Fingerprint Iris Voice Signature Gait DNA

MIXTURE OF FACTORS

BIOMETRICS IS *SOMEHOW* A SOLUTION, BUT:

- Biometrics would work perfect with perfect images
  - … unfortunately we don't have those images, we are working with probabilities
- Proof your identity just with what you ARE
  - … unfortunately the capturing mechanisms lack in terms of speed, convenience and security
- Data privacy issues
  - … unfortunately there are hacked servers, presentation attacks, etc.
- For fingerprints: hygienic concerns since COVID
  - … like to put your fingers on a device where 1000s of people have put on their fingers before ?
- Interoperability issues, biometric bias
  - … it is a complex, technical challenging scenario: proprietary solutions are raising

RESPONSIBLE TECHNOLOGY DEVELOPMENT ETHICAL USE OF TECHNOLOGY

Technology should work correctly	→	Certification	TESTED
		Security by Design	

Sensor technology without bias – ethically correct	→	System testing

Lawful and responsible use	→	Privacy by Design

DEMAND

- Faster and contactless solutions
- Liveness detection
- Privacy preserving
- New Standards

Image source: bioID

- **No silver bullet - but multifactor authentication is the way to go**
- **Privacy preserving encryption & matching technologies**

- **Biometrics will enter the mainstream consumer mind**
- **Convenience rules !**

THANK YOU!

Bernhard Strobl, 31th May 2022