Privacy by Design – The case of Automated Border Control

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These projects have received funding from the European Union's Seventh Framework Programme for research, technological development and demonstration under grant agreement no 312583, 610613, 318424.

Overview:

- (Automated) border control;
- Identity management in (Automated) Border Control;
- Function creep;
- Privacy by Design;
- Privacy by Design Applications
    - Automated Erasure
    - Attribute-based credentials
    - Pseudo-identities

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(Automated) Border Control and Function Creep

by Diana Dimitrova

Identity Management

by Jessica Schroers

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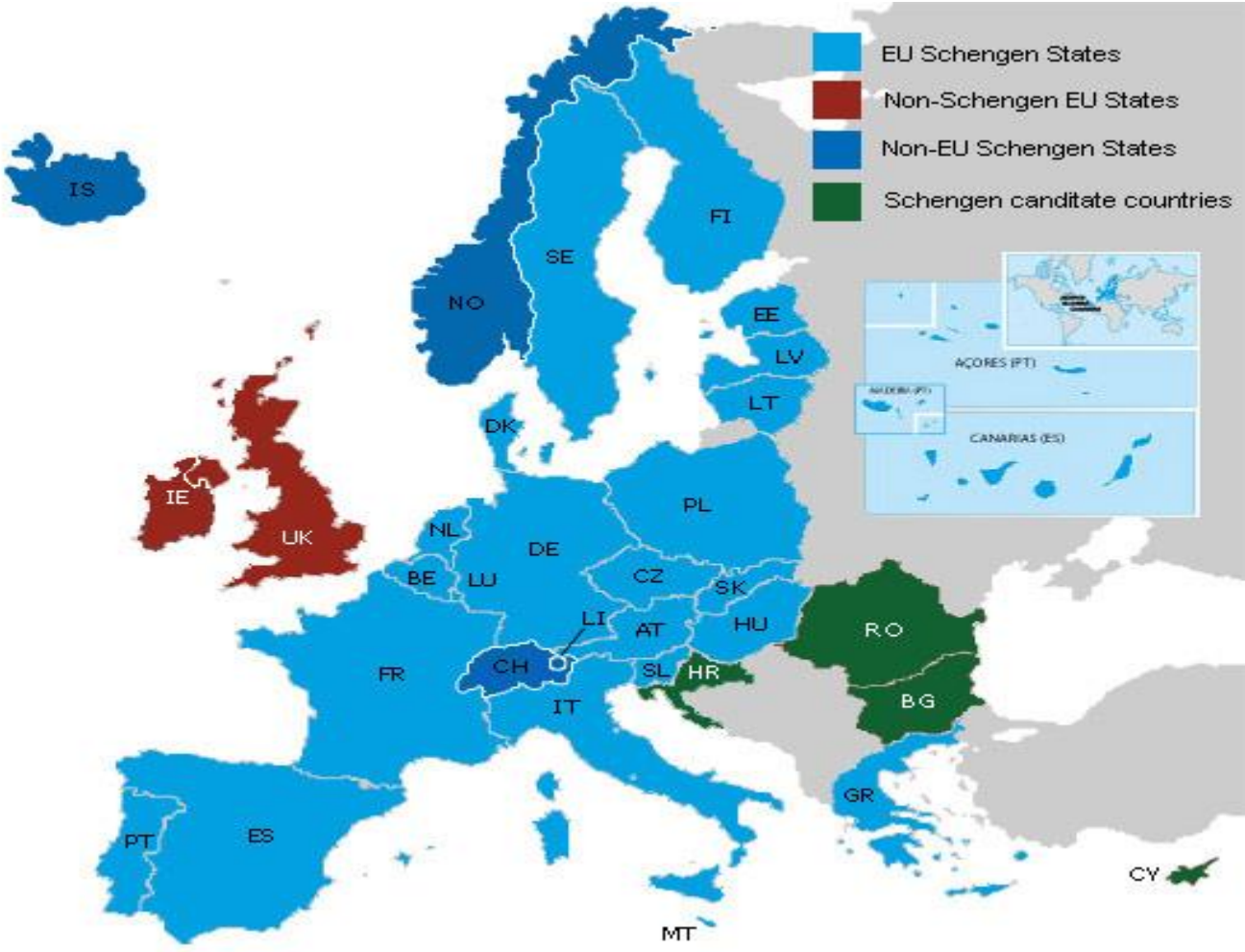
What is Schengen?

Schengen *Acquis* = abolition of checks at internal borders, while tightening controls at external borders.

Schengen Borders Code makes a distinction between Third Country Nationals and EU/EEA/CH.



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Automated Border Control

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Automated Border Control (ABC)

- ✓ No formal definition adopted yet, despite growing number of national ABC programmes (e.g. PRIVIUM, PARAFE, EASYPASS, etc.):

"ABC means a fully automated system which authenticates the travel document, establishes that the traveler is the rightful holder of the document, queries border control records and on this basis automatically verifies the conditions governing entry laid down in Article 5(1)."

(Smart Borders Package, Proposed amendment No. 562/2006 (COM (2013) 96 final))

- ✓ How is it regulated?

The Schengen Borders Code regulates manual border control.
Data protection Directive applicable

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Border check elements for EU/EEA/CH

Schengen Borders Code (Article 7.2) requires a minimum check: establishment of identity on the basis of a travel document :

- Validity – expired?
- Authenticity – forged?
- Lost/stolen/invalidated/misappropriated – search databases on documents (e.g. relevant section in SIS II).

In addition, non-systematic check in databases on persons (e.g. SIS II, national databases).

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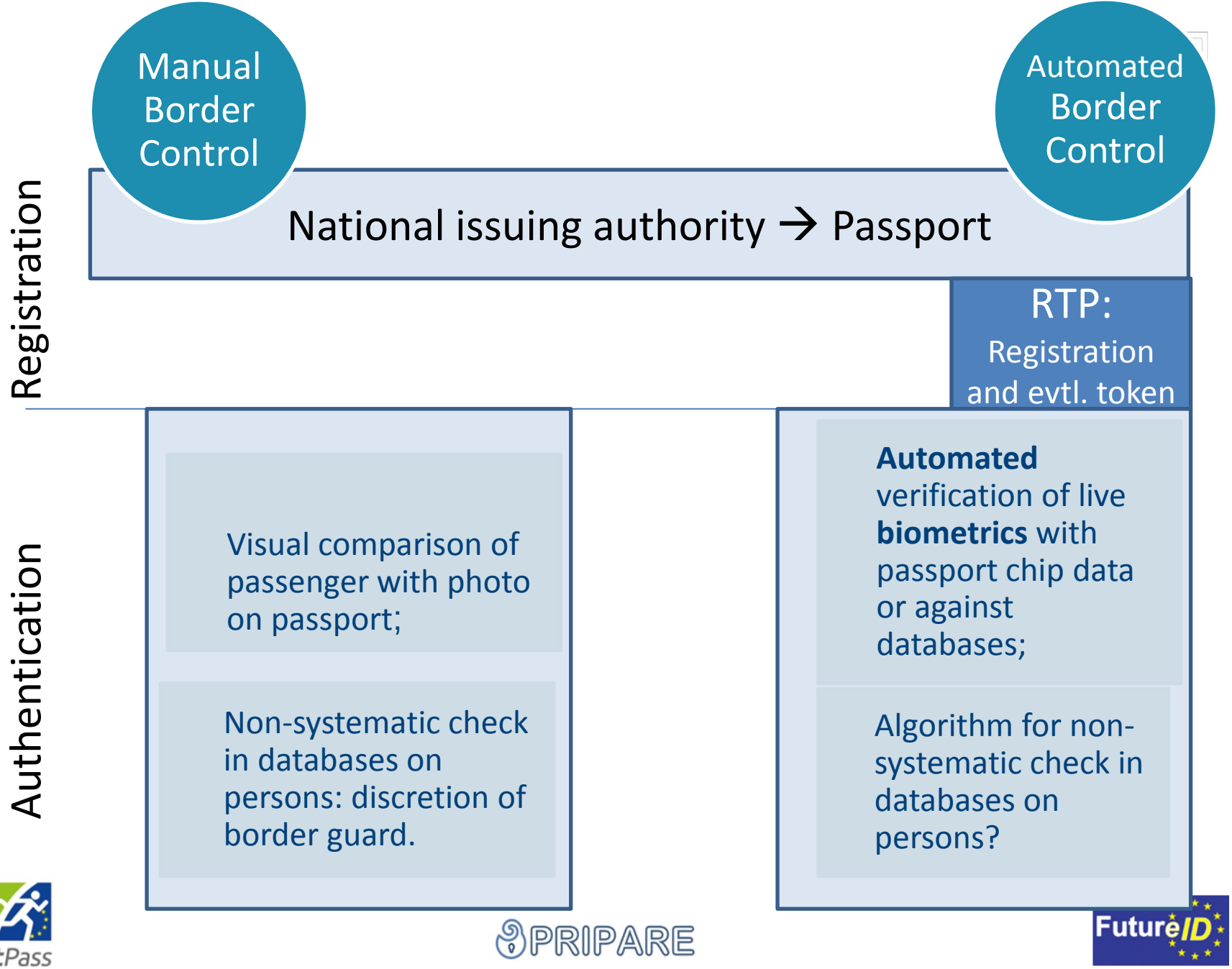

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Big Data and Automated Border Control

Big data:
"… extract new insights
[…] in ways that change
… the relationship
between citizens and
governments."

V. Mayer – Schoenberger & Cukier, 2013

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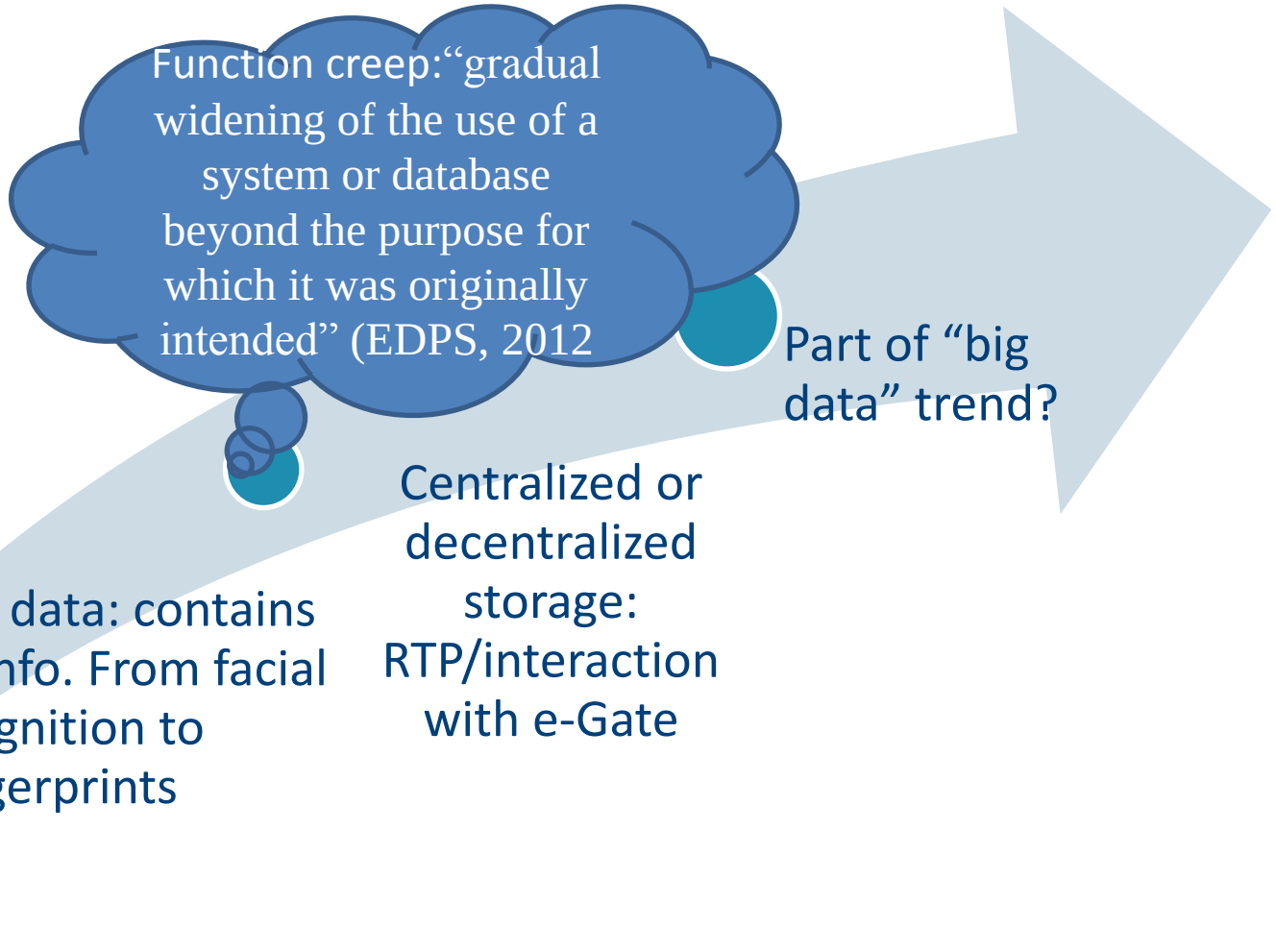
Data Protection Implications: Function creep



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Data Protection Risks?

(Central) Storage

- Biometric data not deleted after crossing the border and creation of some RTP databases.
- Makes data available for re-use and loss of control of travelers over their own data.

Interoperability of databases

- Between databases created in the context of ABC and other (e.g. police) databases.
- Biometrics become universal (interconnection) key.

Law-enforcement access

- Example (here third country nationals) EURODAC : innocent persons under general suspicion. Proposed EES.
- Consequences of mismatches?

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Privacy by Design

The concept

by Pagona Tsormpatzoudi

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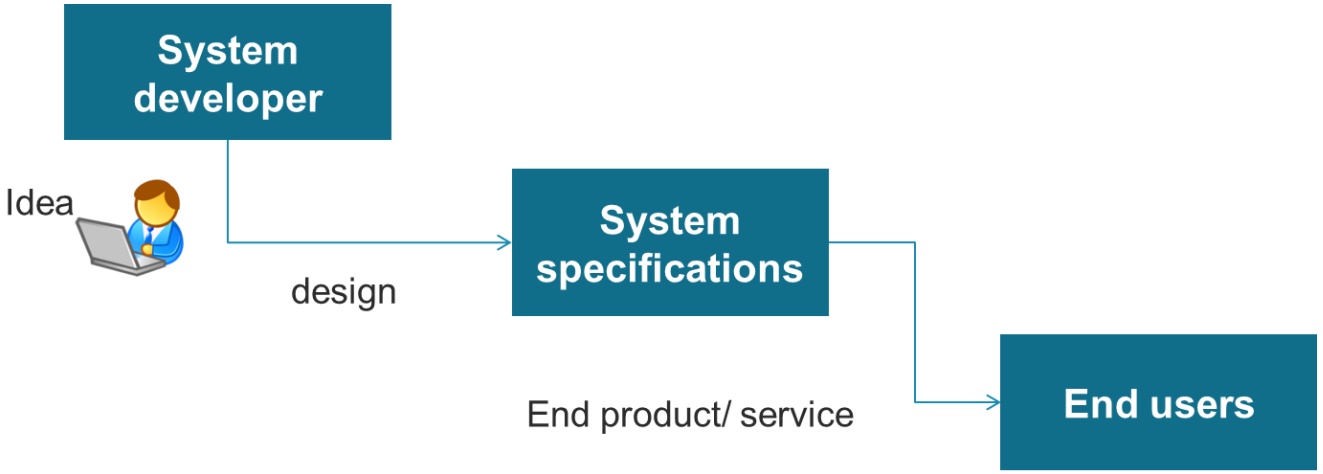
Privacy by Design in the design process



Privacy as a **mindset**

To identify and mitigate privacy risks from the very beginning at **technical** and **organisational** level

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Privacy by Design – concept development

From Directive 95/46/EC…

✓Data minimisation principle (Article 6.1 b & c)
✓Obligation to security (Article 17 & Recital 61)

and the launch of the overall discussion on Privacy Enhancing Technologies ("PETs")

"A coherent system of ICT measures that protects privacy by eliminating or reducing personal data or by preventing unnecessary and/or undesired processing of personal data, all without losing functionality of the information systems (European Commission, 2007)"

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Privacy by Design – concept development

…to the draft general data protection regulation

- ***Preparatory works:*** *"*…in order to efficiently implement Privacy by Design, there is **need** to provide for the principle of "privacy by design" into the data protection legal framework" (EDPS opinion, 2010)

- **Recital 61:** ***"The principle of data protection by Design requires data protection to be embedded within the entire life cycle of the technology, from the very early design, right to its ultimate deployment, use and final disposal".***

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Privacy by Design Applications

Automated Erasure

by Pagona Tsormpatzoudi

Atrribute-based credentials

by Jessica Schroers,
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Pseudo-identities

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Automated Erasure

In Automated Border Control:

Registration:

erasure of original image of biometric data

Authentication:

Erasure of biometric data after the transaction with the e-gate

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Automated Erasure vs. Proportionality

Further uses of data vs. risks to privacy

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Attribute-based credentials

- **Authentication on the basis of certain attributes, no identification**

- **Schengen Borders Code:**

Checks on persons and passports require processing of several categories of personal data

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What attributes?

- For systematic checks:

-EU/EEA/CH national (over 18)
-Expiry date in the future
-Passport number not in a database for lost/stolen documents

- For non-systematic checks? ??

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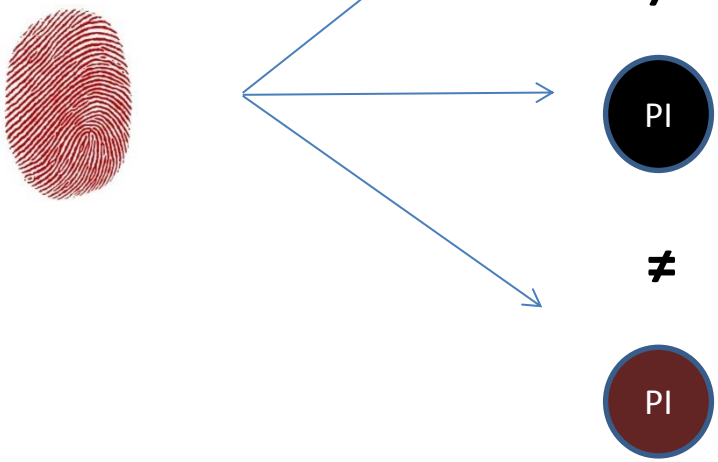
Pseudo-identities



Data minimisation

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Pseudo-identities – advantages

ISO/IEC 24745 requirements:

irreversibility, unlinkability, revocability

- retrieval of the original biometric data only by the enrolled data subject
- Diversifiable
- Revocable
- Adjustable in any architecture for ABC / integration in existing verification methods

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Is Privacy by Design a solution?

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Thank you!

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