

A Terminology in Support of Reasoning about Pseudonymization

ULD – ENISA Workshop:
Pseudonymization and Relevant Security Technologies

Berlin, 12 November 2019

Bud P. Bruegger

Acknowledgements:

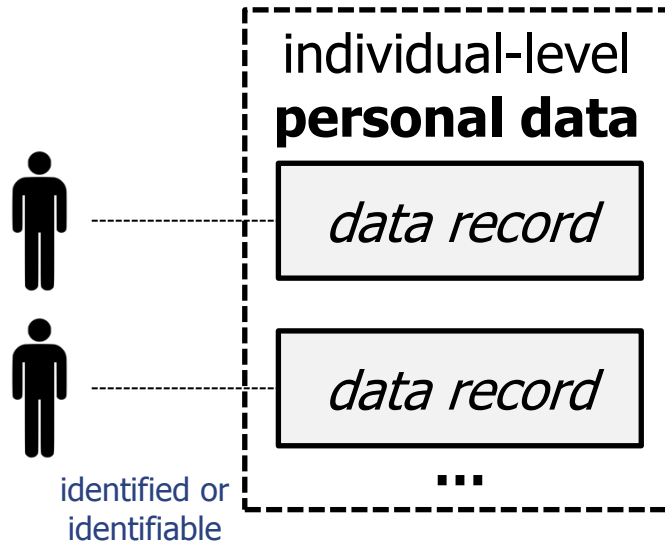


Unabhängiges Landeszentrum für
Datenschutz Schleswig-Holstein

Purpose

- Reasoning about Pseudonymization is difficult:
 - **Lack of accepted terminology**
 - **Lack of consistent set of concepts**
 - Need: **Visualization** of relations of concepts
 - **GDPR and technical literature:**
 - **Same terms** with **different semantics**

Technical Model of Personal Data



- Individual-level personal data consist of ***data records***
 - Each data record relates to an **identified** or **identifiable data subject**

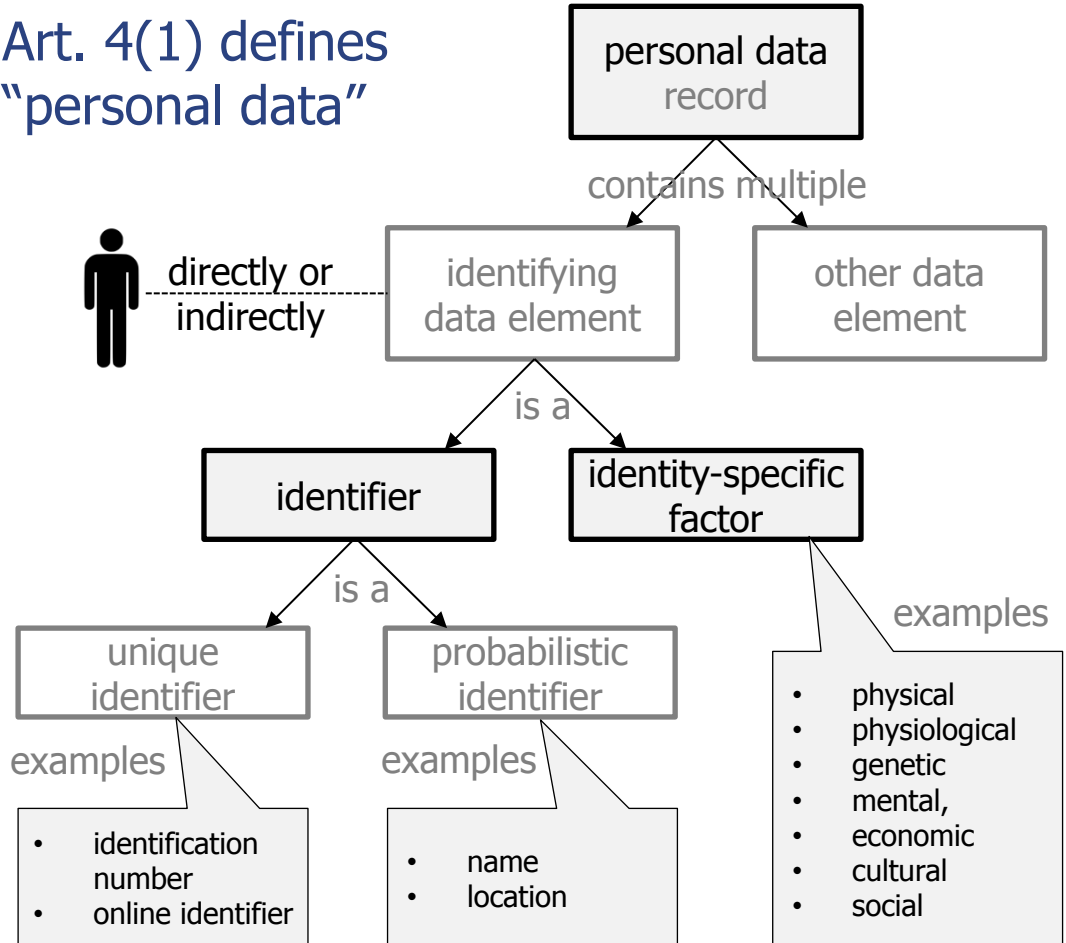
data record



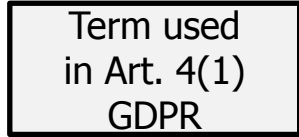
- Each data record consists of multiple ***data elements***

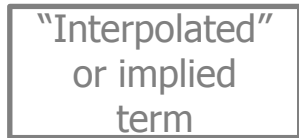
Taxonomy of Data Elements based on Article 4(1) GDPR

Art. 4(1) defines "personal data"



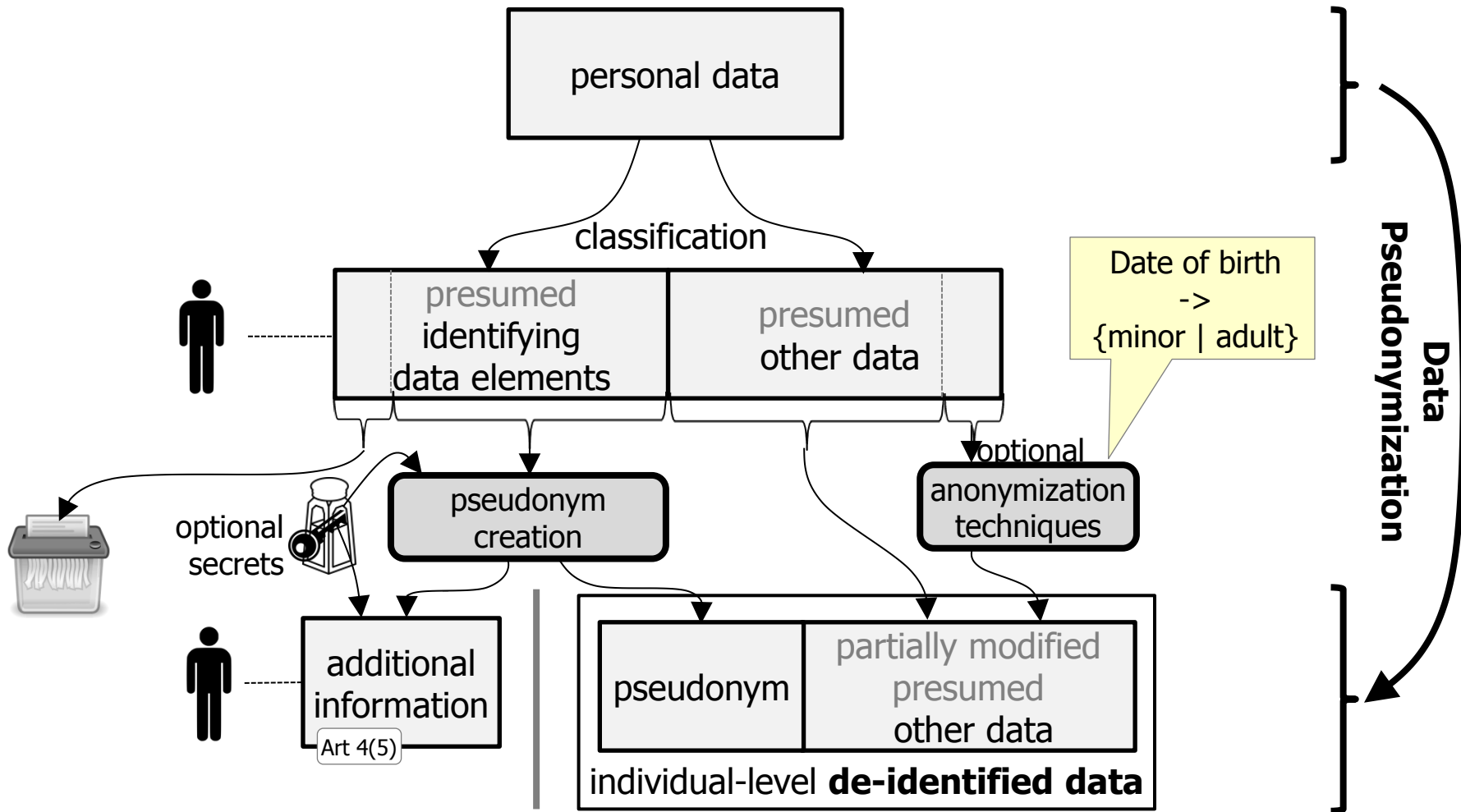
Legend

 Term used in Art. 4(1) GDPR

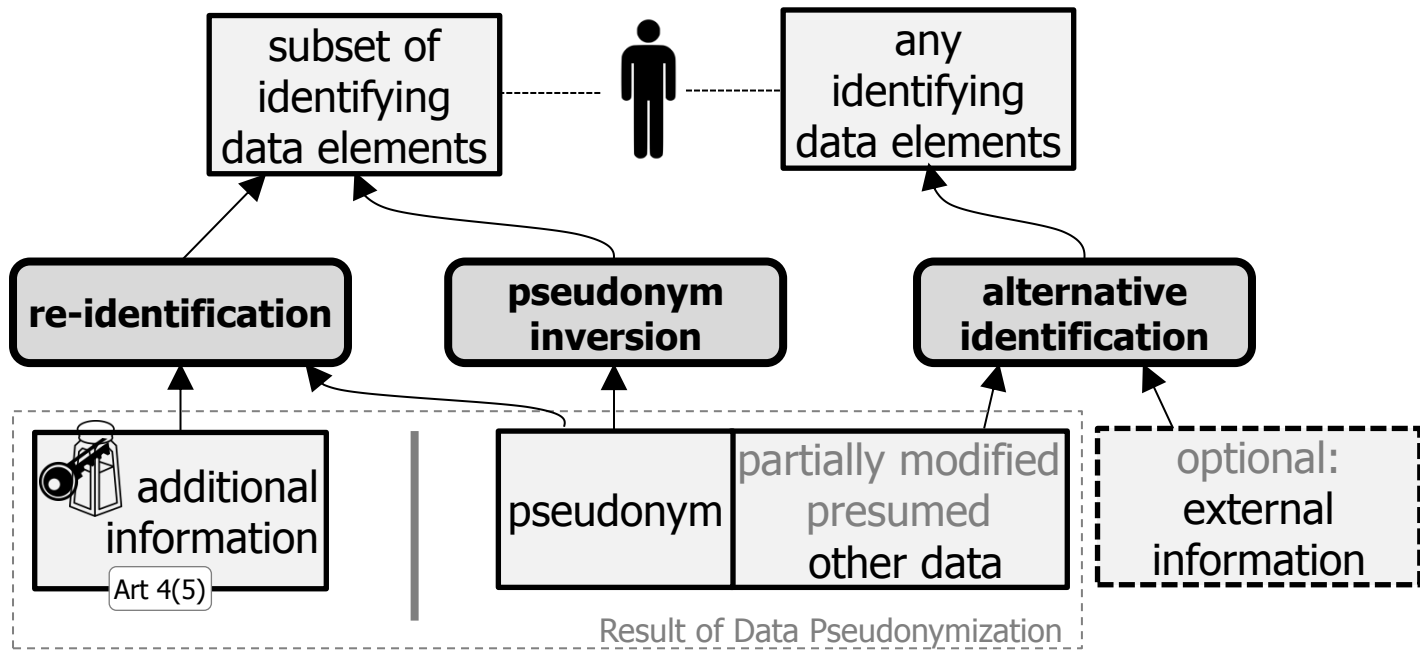
 "Interpolated" or implied term

Data Pseudonymization

(differentiated from GDPR's "Pseudonymization")

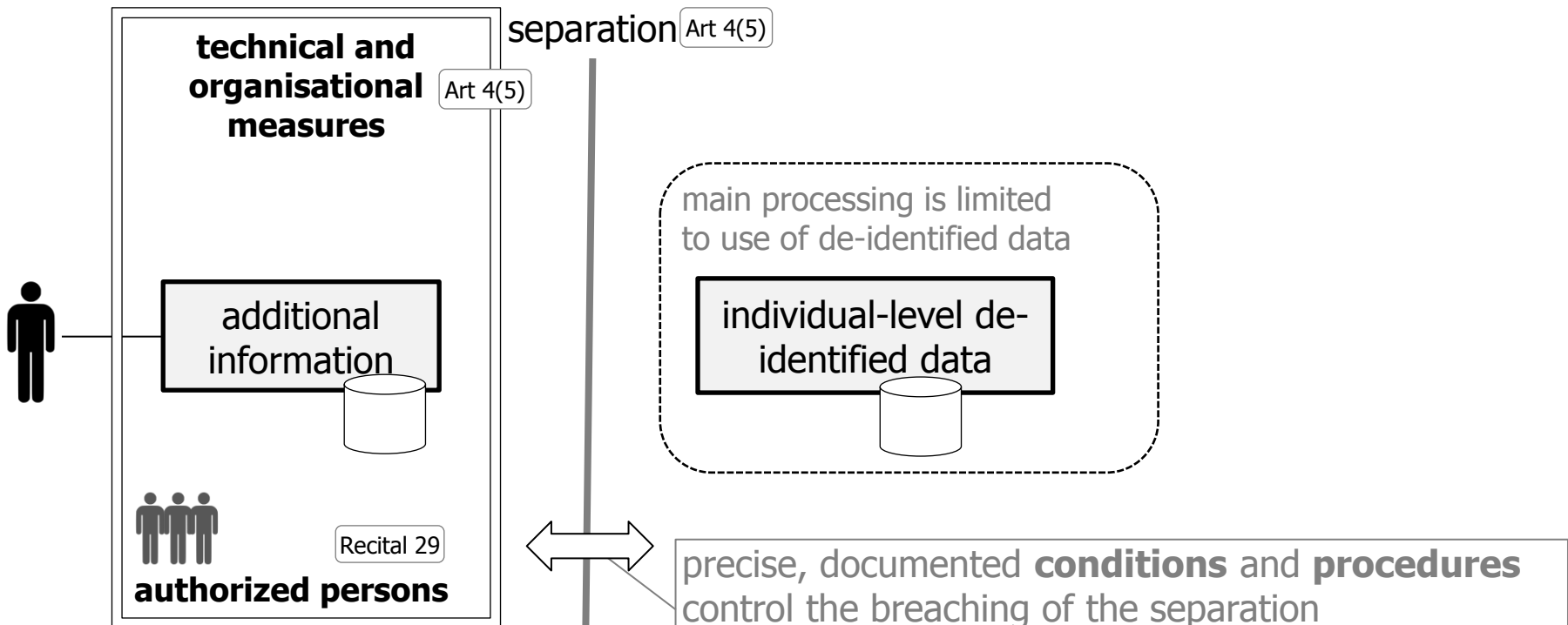


Different Forms of Identification after Data Pseudonymization



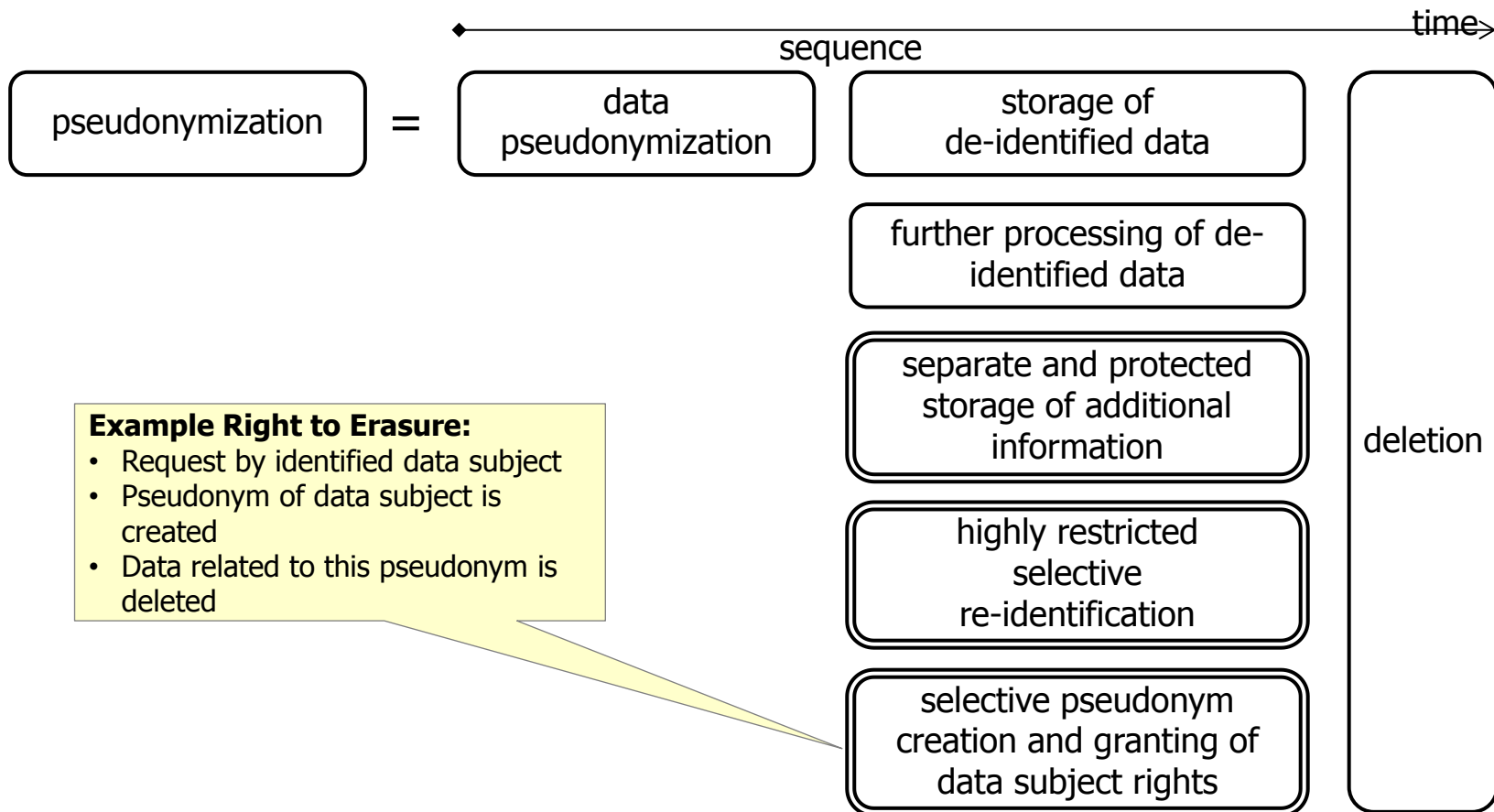
Pseudonymization in Article 4(5) GDPR

pseudonymisation = manner of processing where.. Art 4(5)



Processing during Pseudonymization

pseudonymisation = manner of processing



Important Properties of Pseudonym: Extent of Linkability

- Pseudonyms enable the linking of related data belonging to the same data subject
- The pseudonym creation strategy controls the extent of such linking
- The **extent of linkability** can be described by:

- ***Pseudonym-Person-Relationship:***

- **Single pseudonym per person**
- **Multiple pseudonyms per person**
example: different for each transaction

- ***Pseudonym Domain:***

- Subset of **purposes** within a processing activity
- Single **processing activity**
- All processing activities of **single controller**
- Processing activities of **multiple controllers**

Requires the specification of these purposes

Requires description of the controllers and purposes

Planned Next Steps

- Write as **Paper**
- Collect **Feedback** (all over Europe)
-> **Consensus**
- Establish as **Standard Terminology**
-> Enabler for discussions and further work

Objective

- **We use the same language.**
- **We understand each other.**

Contact, Acknowledgements

- Bud P. Bruegger <uld613@datenschutzzentrum.de>

- **Acknowledgements:**

- Comments and suggestions by **Benjamin Walczak** and **Marit Hansen**



PANELFIT project has received funding under the European Union's [H2020 research and innovation programme](#) under grant agreement No 788039.

