TMF – Technologie- und Methodenplattform
für die vernetzte medizinische Forschung e.V.

Pseudonymisation: Applications in Medical Research

ULD - ENISA Workshop: Pseudonymisation and relevant security technologies

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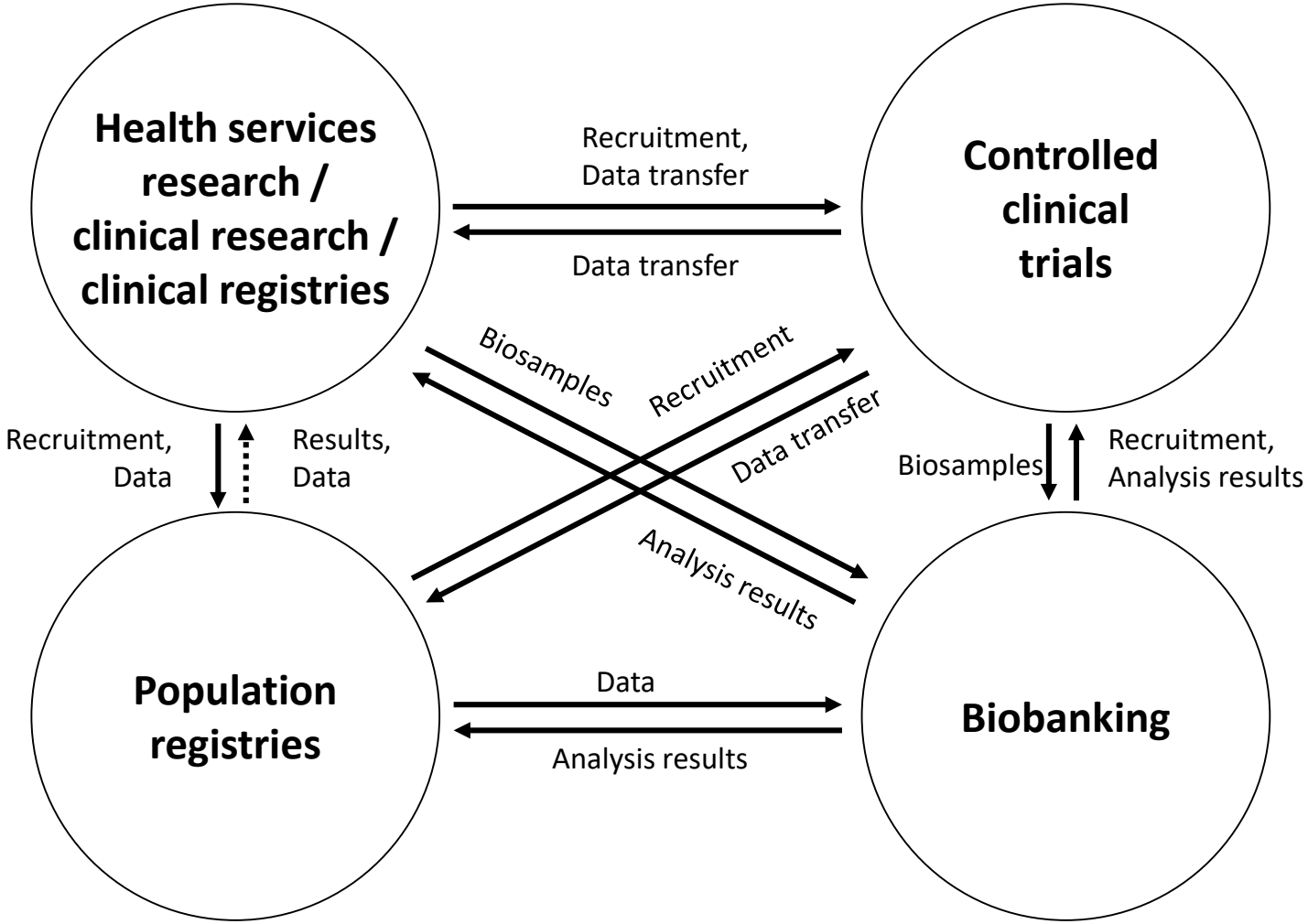
Based on slides from S.C. Semler, J. Drepper, I. Schlünder

Introducing TMF

- Non-profit umbrella organisation for networked medical research in Germany
- 64 members with more than 100 sites
- Funding
  - indirect funding from BMBF, DFG, BMEL, etc.
    - Membership eligible for funding
  - Third-party funding projects

Areas of medical research: overview



Areas of medical research: properties

- Different areas of medical research
  - are subject to different legal frameworks
  - that vary from area to area

- As a consequence, different medical research projects require different data protection concepts

- Often, data must be identifiable
  - necessary for consultative participation (study leaders, experts)
  - for correct assignment of data and quality management

TMF‘s generic data protection concept

- Combines the experience of TMF’s Working Group on Data Protection from over 15 years of consulting medical research projects
- Recommended by the Conference of Federal and State Data Protection Commissioners
- Data pseudonymisation as a core protection measure

TMF data protection concept: approach

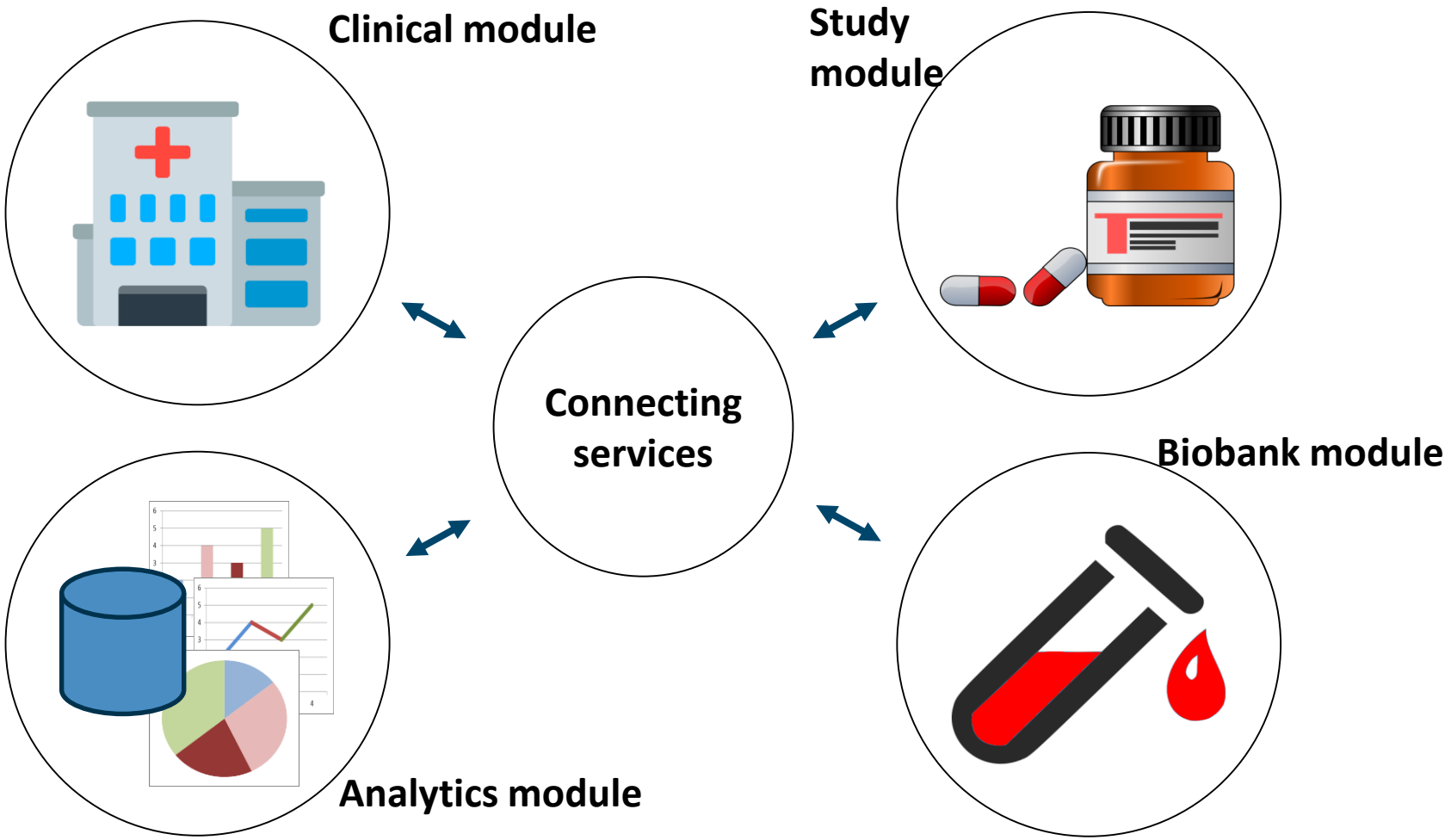
Modular, scalable architecture with the goal of flexibility and ease of implementation

- Pseudonymization and separate storage of directly identifying data and medical data
- Areas with differing legal frameworks covered in corresponding modules
- Modules are connected via central services, e.g. for (de-) pseudonymization

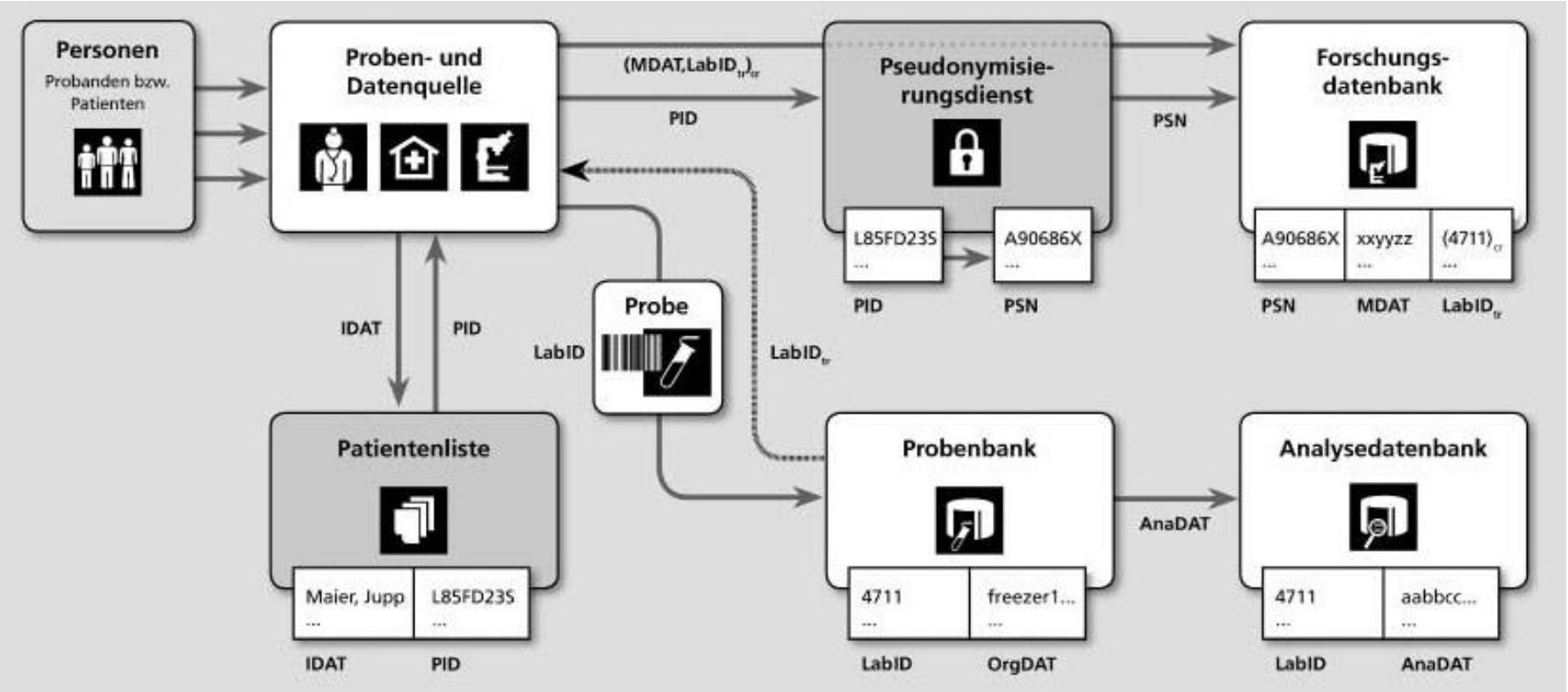
Structure

- Data protection concepts for the individual areas ("modules")
- Data protection concept for the overall architecture ("maximum model")

TMF data protection concept: modules



TMF data protection concept: details



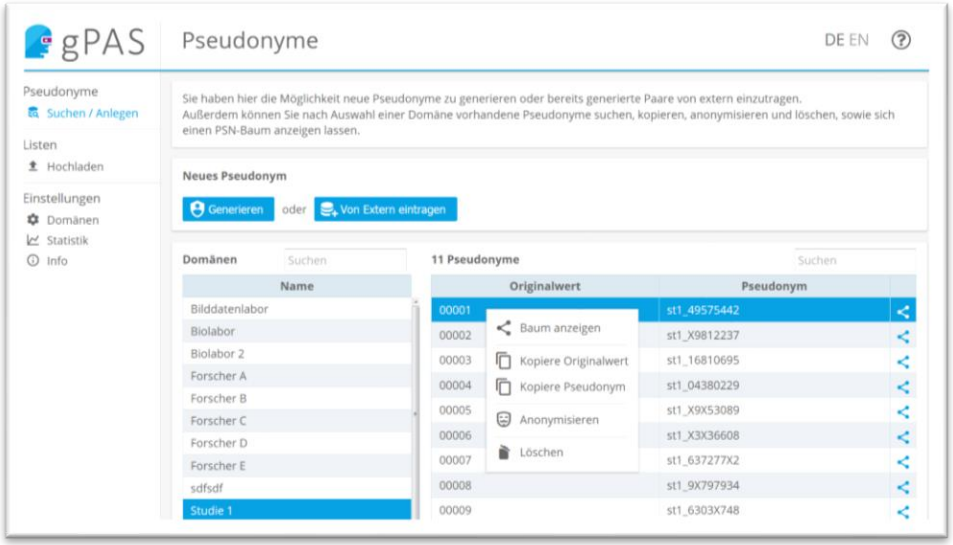
Source: K. Pommerening, “Das Datenschutzkonzept der TMF für Biomaterialbanken”, it - Inf. Technol., vol. 49, no. 6, pp. 352–359, 2007

Connecting services and tools

Provided by the community, developed with third-party funding

Take domain specifics into account, e.g. pseudonyms must be human-readable and are often printed on barcodes

Example:



Source: https://www.ths-greifswald.de/forscher/gpas/

Thank you for your attention!

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