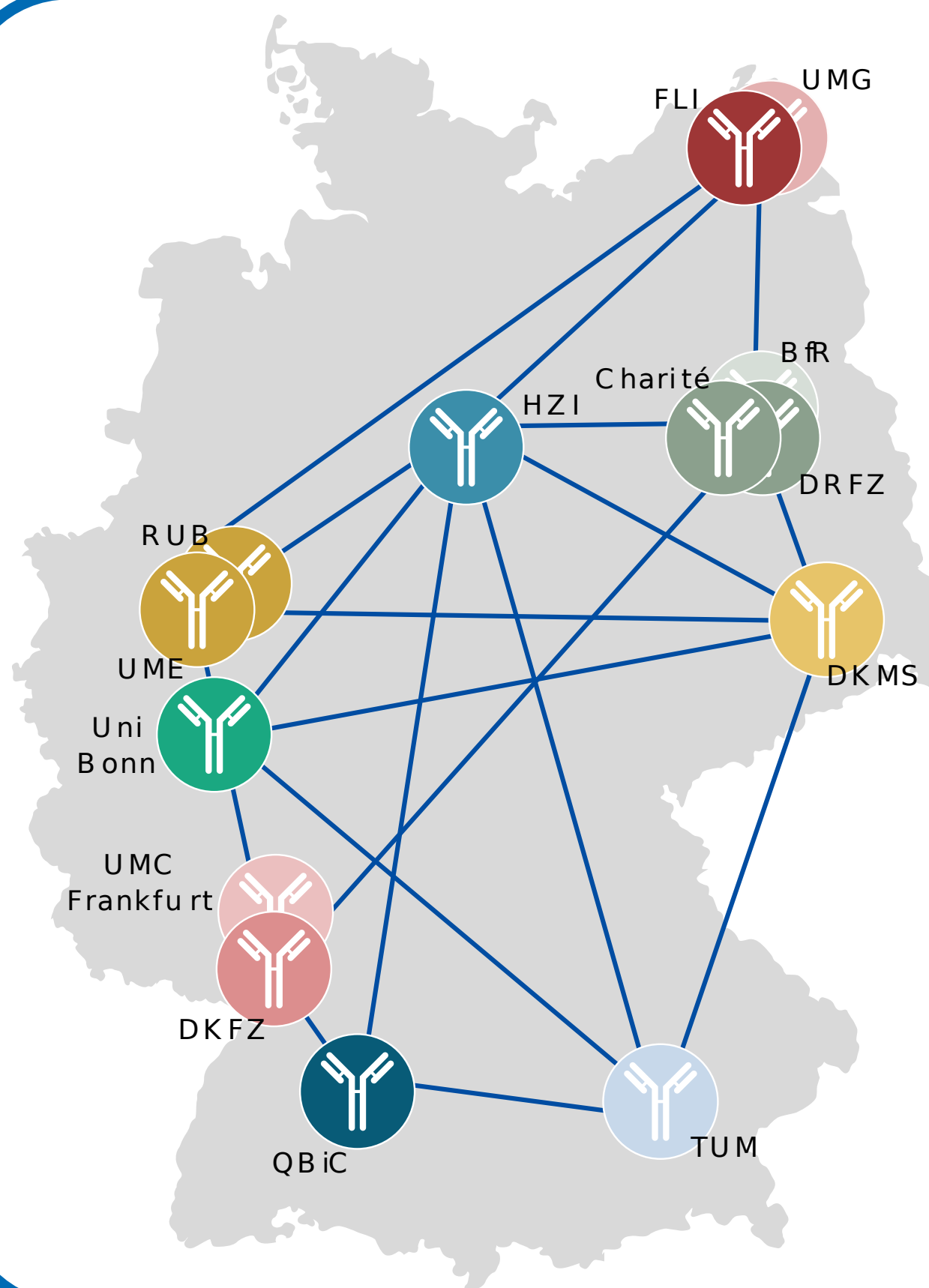


Motivation

As single-cell characterization techniques such as flow cytometry, mass cytometry, and immune repertoire sequencing become more accessible and throughput grows, the generated data sets are only growing larger and more complex. This, in turn, complicates the sharing of data between labs, even within the same institution. Finally, as computational analysis tools become more powerful, researchers need to be cautious with the quality of the data under analysis as small errors can more easily propagate and/or skew the end results. However, if we can improve data harmonization between groups and allow for larger diverse datasets of reasonable quality, we can rapidly generate deeper insights without collecting significantly more data.

Consortia and Partners



- Applicant**
 DKFZ, Heidelberg
- Co-Applicants**
 FLI, Greifswald - Insel Riems | DRFZ, Berlin | Charité, Berlin | HZI, Braunschweig | University of Münster | RUB, Bochum | UME, Essen | DKMS, Dresden | QBIC, Tübingen
- Participants**
 UMG, Greifswald | BfR, Berlin | University of Bonn | UMC Frankfurt | TUM, München
- Collaborating NFDI Consortia**
 GHGA | NFDI4Health | NFDI4Microbiota | NFDI4BIOIMAGE
- International Partners**
 IUIS | AIRR Community | ISAC

FAIR Principles

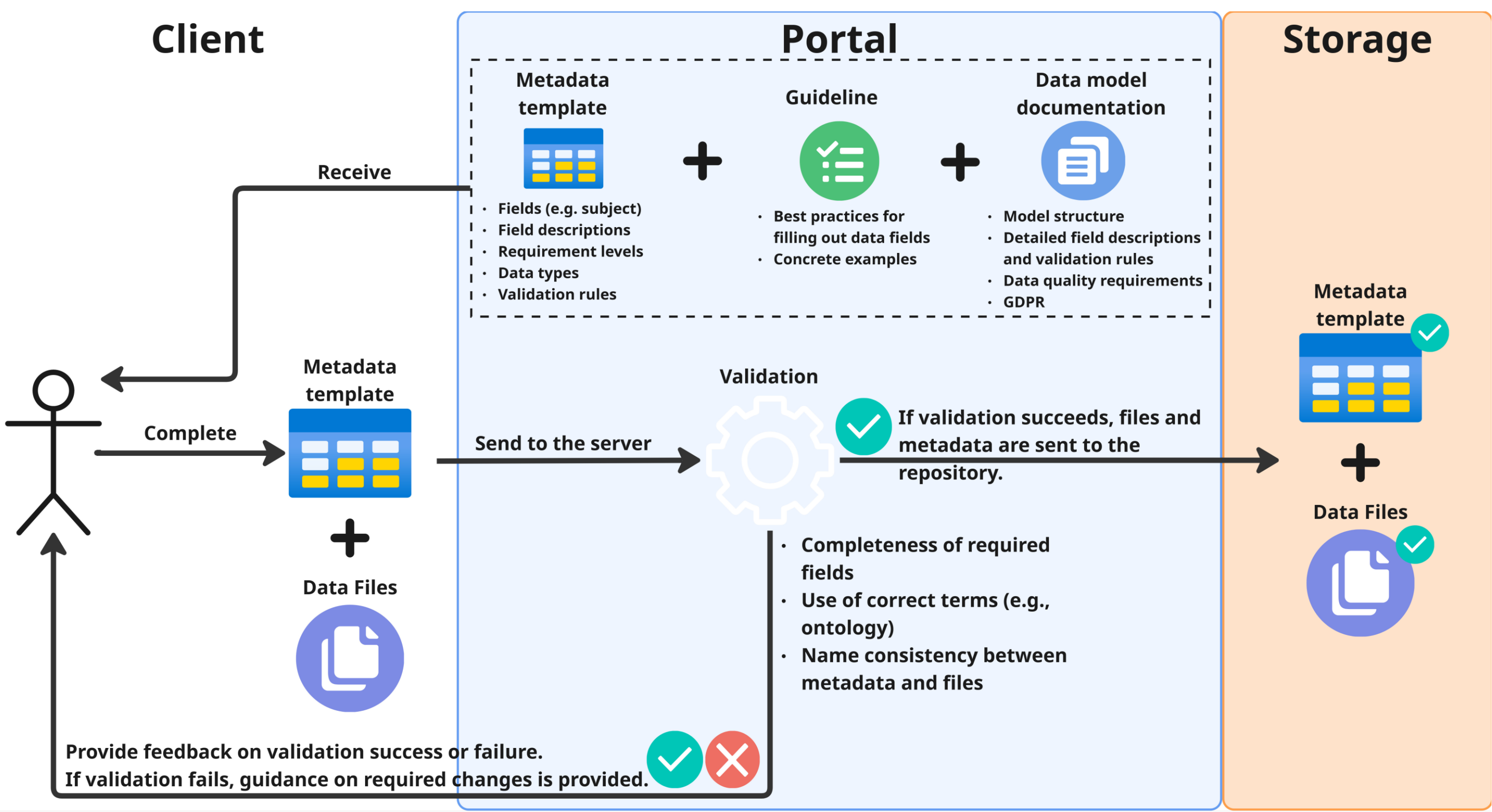
- 
F **Findability** by a rich metadata set.
- 
A **Accessibility** through established and open protocols to query and retrieve data from its repositories.
- 
I **Interoperability** ensured by data present in open and commonly used formats.
- 
R **Reusability** and data privacy will be maintained by understanding data generation through rich metadata.

Value of Detailed Metadata

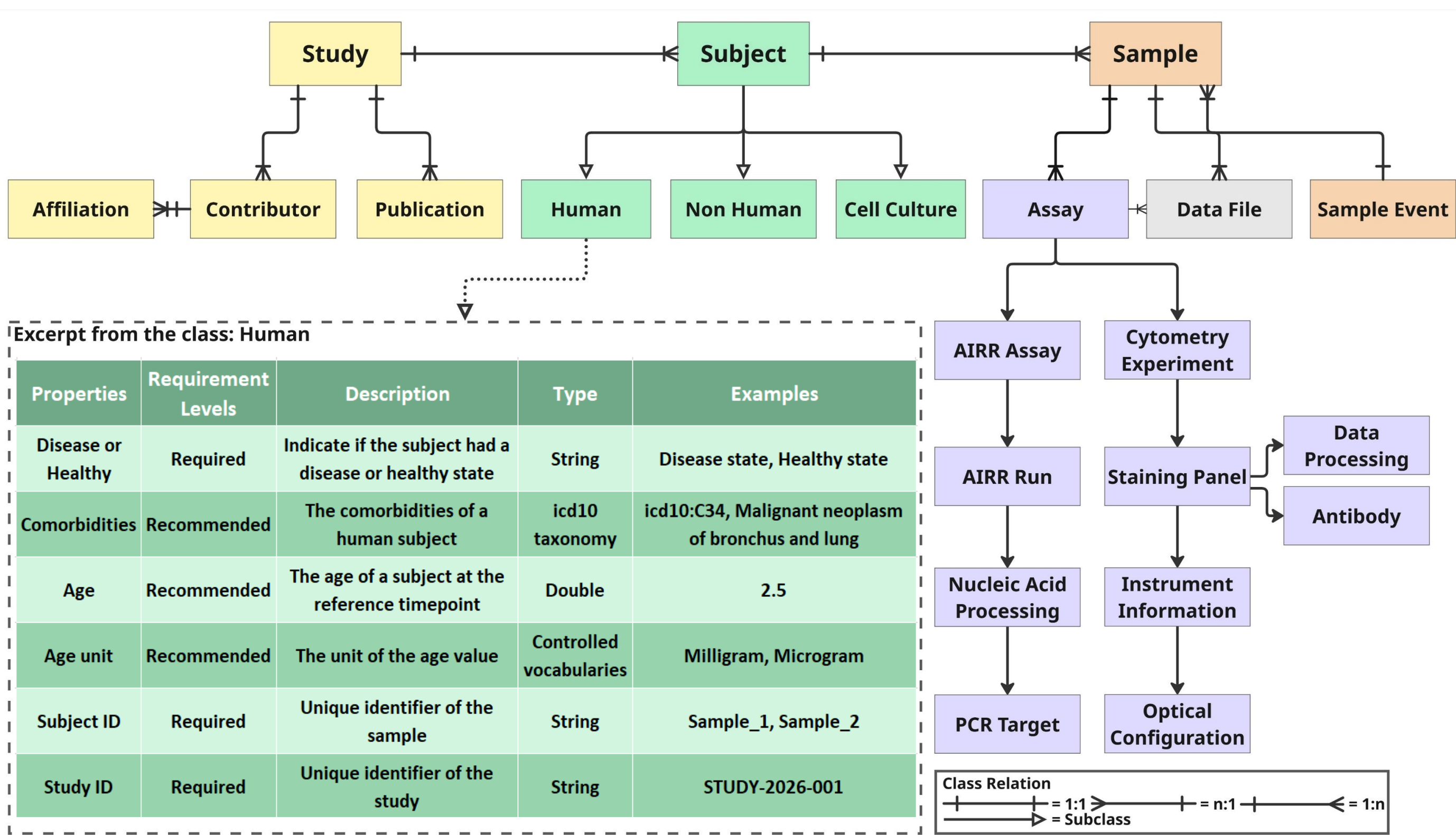
- 
Data searchability
- 
Purpose of data generation
- 
Data processing, analysis
- 
Data reusability
- 
Data creation process
- 
Long-term data storage
- 
Data quality
- 
Contact and citation
- 
Analyses pipelines

Images are sourced from Pixabay (pixabay.com)

Planned Submission Pipeline



Current Metadata Model



Next Steps

- Identify and connect with likely users
- Implement search and data retrieval system
- Help desk system for user questions/concerns
- Start populating data hub with existing data sets
- Expand metadata model to accommodate generic immunological data sets
- Build user-friendly web frontend interface

Metadata
Survey

Website



Contact

miguel.armochoa@dkfz-heidelberg.de

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