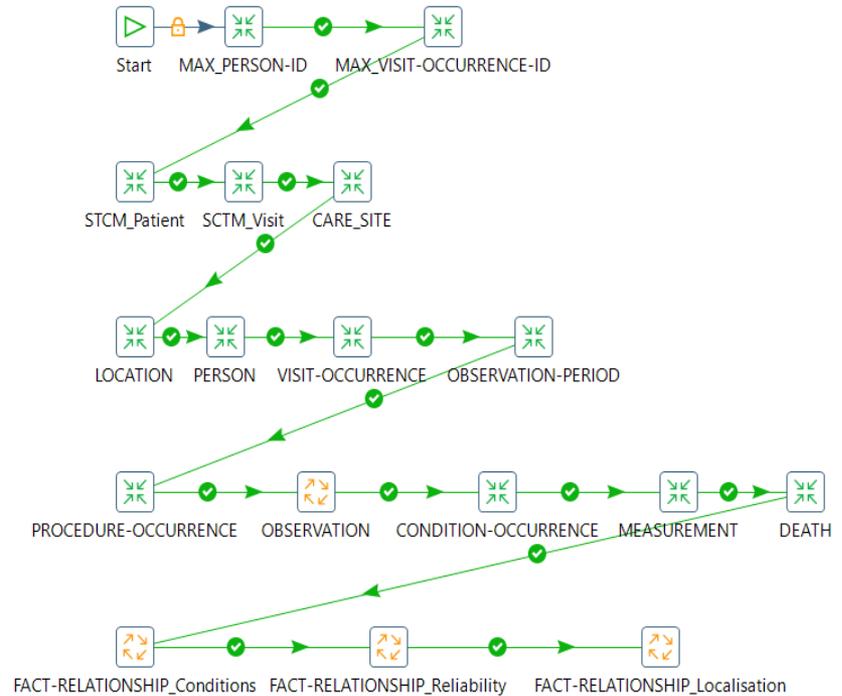


# Transition Database for a harmonized mapping of German patient data to the OMOP CDM

Michèle Kümmel

- Standardized data load process for all:
  - Clinical case data
  - Observational data
  - Diagnoses
  - Procedures
- Completely integrated in the docker environment



Mirko's docker environment

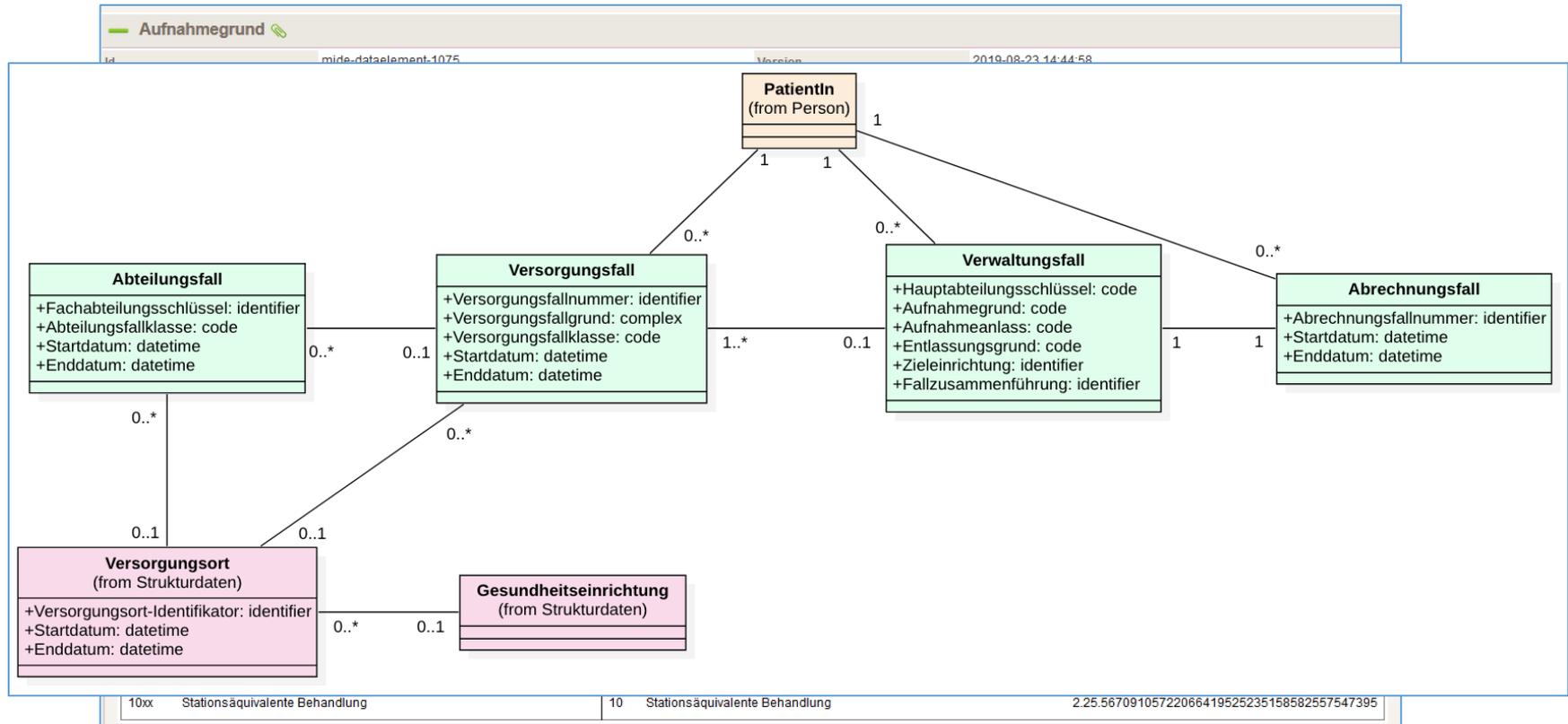
- *Institute for the Remuneration System in Hospital:*

## Reason of admission

01xx	hospital treatment, fully inpatient
02xx	hospital treatment, fully inpatient with previous pre-admission treatment
03xx	hospital treatment, semi-stationary
04xx	pre-stationary treatment without subsequent full inpatient treatment
05xx	inpatient delivery
06xx	birth
07xx	inpatient admission for organ removal
10xx	inpatient equivalent treatment

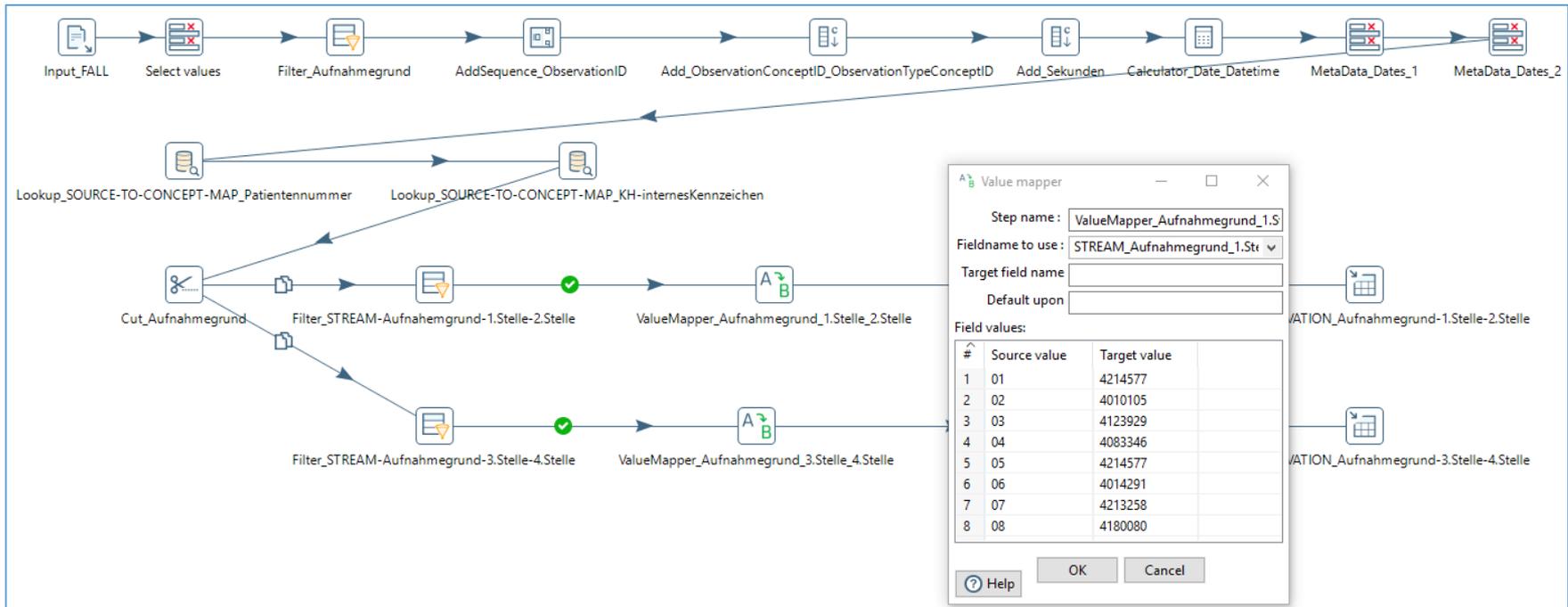
# Definition of source data

- *ArtDecor* and *Simplifier.net*:



# Defintion of the mapping

- Semantic mapping of basic modules (person, visit, diagnosis, procedure)
- Design of the ETL process with the help of *Pentaho Data Integration*:



# Definition of the Transition Database

- Design of the Transition Database with SQL:

	<b>source_value</b> character varying (20)	<b>omop_target_domain_id</b> character varying (20)	<b>omop_target_concept_id</b> character varying (20)	<b>relationship_id</b> integer	<b>valid_start_date</b> date	<b>valid_end_date</b> date
1	01xx	Observation	4214577	45754864	2019-02-04	2099-12-31
2	02xx	Observation	4010105	45754864	2019-02-04	2099-12-31
3	03xx	Observation	4123929	45754864	2019-02-04	2099-12-31
4	04xx	Observation	4083346	45754864	2019-02-04	2099-12-31
5	05xx	Observation	4214577	45754864	2019-02-04	2099-12-31
6	06xx	Observation	3022007	45754864	2019-02-04	2099-12-31
7	07xx	Observation	4213258	45754864	2019-02-04	2099-12-31
8	08xx	Observation	4180080	45754864	2019-02-04	2099-12-31

# Definition of the Transition Database

- Advantages:
  - Increase interoperability
  - Increase transparency
  - Guarantee maintaining
  - Versioning of mappings
  - Iterative extension

Name	Last commit	Last update
 01_coding_concept.sql	Correction of the Column Size	3 months ago
 02_reason-of-admission.sql	Initial Commit	3 months ago
 03_reason-of-dismissal.sql	Initial Commit	3 months ago
 04_realiability-of-diagnosis.sql	Initial Commit	3 months ago
 05_abnormality-of-labs.sql	Initial Commit	3 months ago
 README.md	Update README.md	3 months ago

 README.md

## German TDB

This project aims to develop a database to simplify and improve the ETL processes concerning German clinical data as a source and the OMOP CDM as the target system.

At present, following mappings can be used:

- Concept\_Coding which contains an overview of the mappings
- German data element 'Reason of admission' (German: 'Aufnahmearlass' and 'Aufgrundgrund') to SNOMED
- German data element 'Reason of dismissal' (German: 'Entlassgrund') to SNOMED
- German data element 'Reliability of diagnosis' (German: 'Diagnosensicherheit') to SNOMED
- German data element 'Abnormality of the laboratory value' (German: 'Abnormität') to LOINC

- Available on GitHub:

- <https://gitlab.miracum.org/michele.kuemmel/german-tdb>

- Use case of the Medical Informatics Initiative: „Collaboration on Rare Diseases“ ([CORD](#))
- Extension for rare diseases:
  - German [Alpha-ID SE](#)
  - International [ORPHAcode](#)
  - Phenotypes (e.g. Human Phenotype Ontology)

# Thanks for your attention!



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