

Early Use of the MII Core Dataset: Application in the MII Demonstrator Study and planned Cross-consortia Use Cases

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Motivation for MII Demonstrator Study

Cross-consortial reviewer recommendations

- *A cross-consortia use case with explicit patient benefits within the funding period should be explored, developed and implemented.*
- *For achieving public acceptance and support it is recommended to invest in public relations: Questions that can be easily explained to the public should be chosen (reference was made to the UK initiative “100 Ways of Using Data to Make Lives Better”).*

Low-hanging fruit should be harvested by means of early-on data exchange.

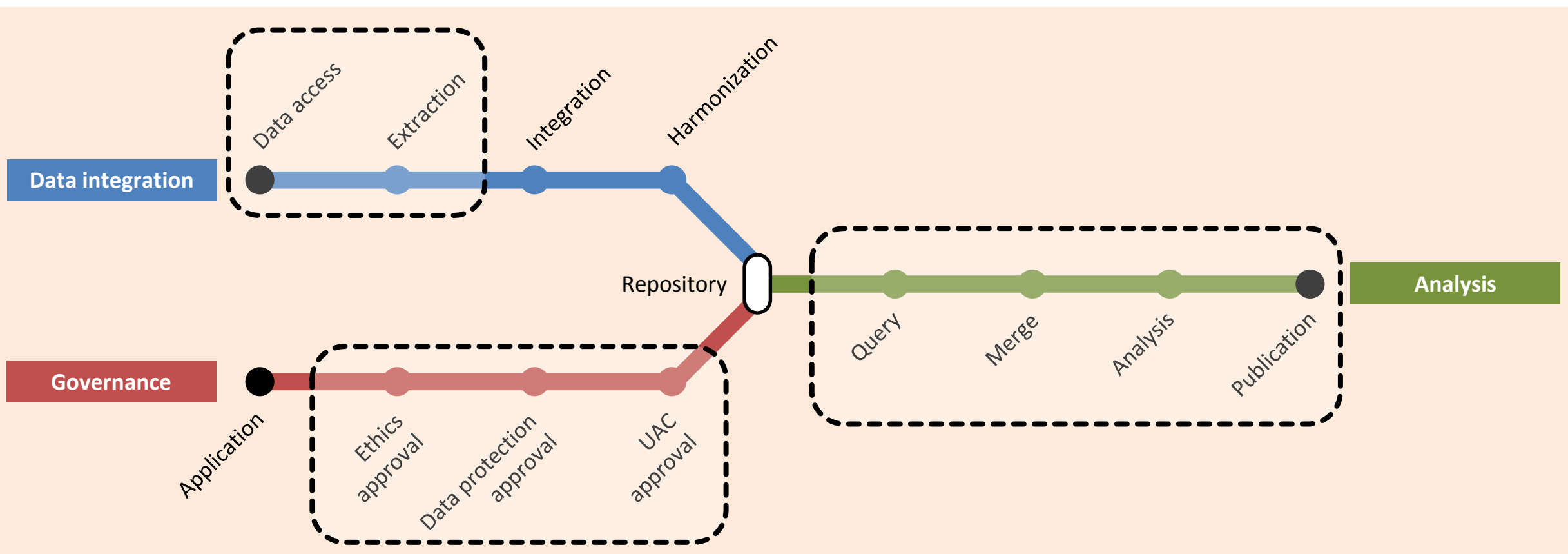
Goals & Scope of Demonstrator Study

- execute data analysis across sites of all four consortia
- restricted to simple, reproductive topics
- leverage existing data standards and tools
- gather experience with gaining data access (contacts, ethics & data protection limitations)

No preemption

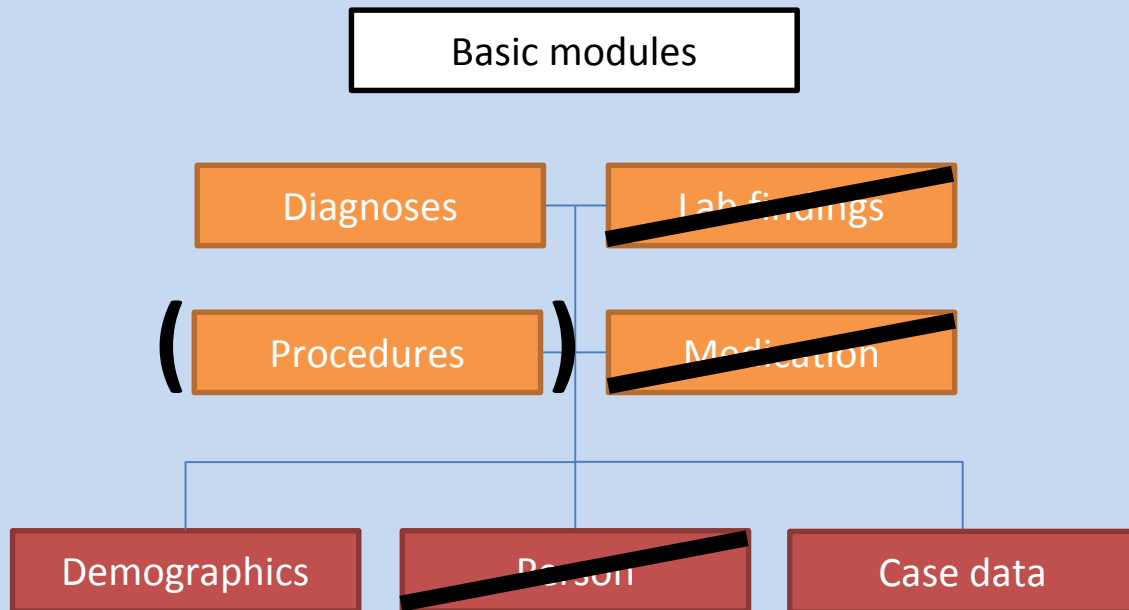
- of DIC infrastructure to built during full funding phase
- of actually interoperable data structures & interfaces

Data & Organizational Flows and Scope of the MII Demonstrator Study



Available data and topics for the MII Demonstrator Study

MII Core Dataset



Multimorbidity

- Comorbidity Scores (Charlson, Elixhauser, Stausberg/Hagn)
- Related factors: Age, Gender, Type of discharge, Principal diagnosis, ...

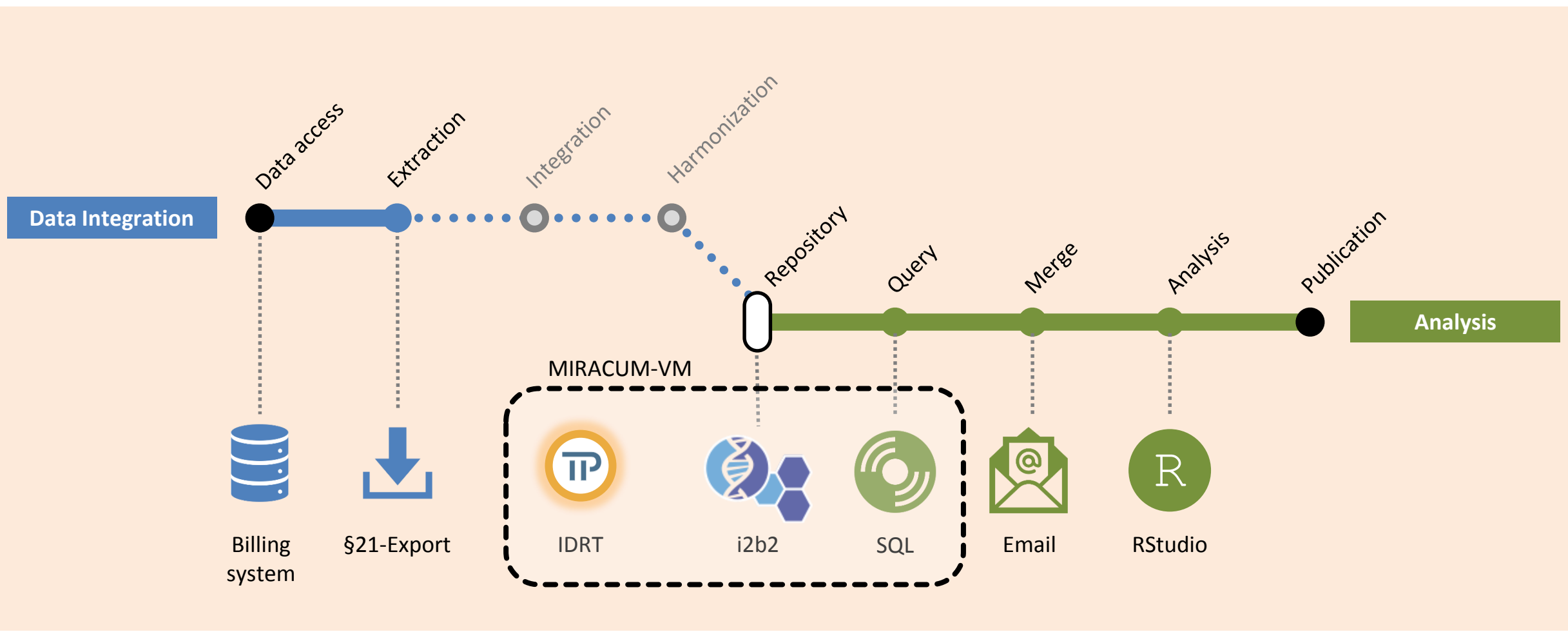
Rare diseases

- Grouping of ICD10-GM codable rare diseases
- Geovisualization by state, distance to treating hospital

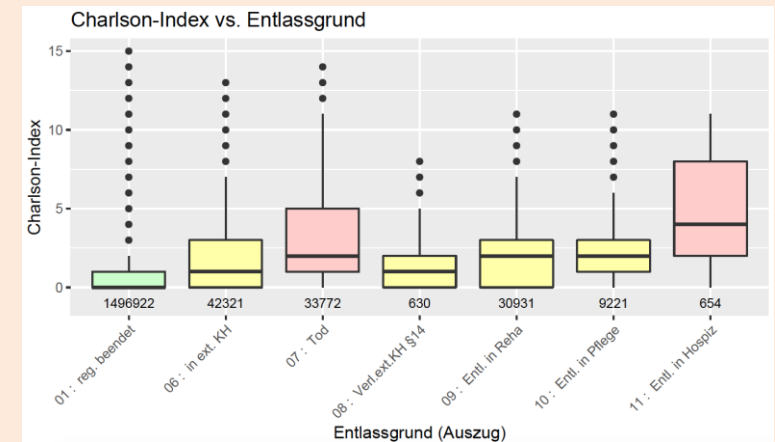
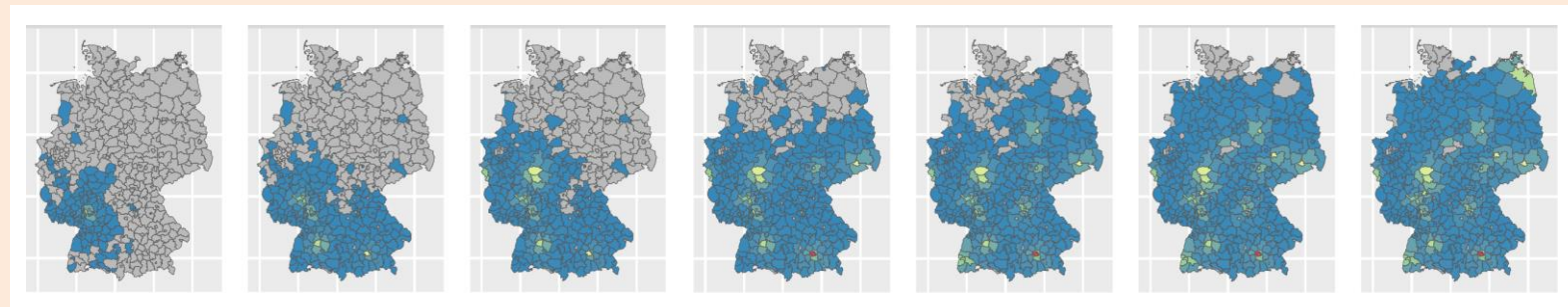
German „§21“ dataset

- legally mandated dataset for inpatient cases
- CSV-based, detailed definition of items & valuesets

Technical Platform of the MII Demonstrator Study



Preliminary Results of MII Demonstrator Study



Lessons learned: Benefits & Limitations of Demonstrator Approach

Leapfrog interoperability requirements

- use of §21 data format provided “instant compatibility” between sites
- i2b2/IDRT VM was immediately operable at all sites

Local query & aggregation approach

- allowed export of anonymized datasets
- simplified ethics & data protection approvals
 - which still took up to 6 months to process at some sites, including additional limitations on certain data elements

Limited data scope

- no support for MII Core dataset modules beyond billing data (i.e. medication, lab findings)
- only inpatient cases
- limited to Germany (though adaptable to other countries with similar datasets)

Limited analysis capabilities

- no statistical testing across full dataset
- no record linkage (relevant for rare diseases)

Going beyond the MII Demonstrator Study:

Application of the MII Core dataset in upcoming cross-consortia Use Cases

