



UniversitätsKlinikum Heidelberg

Towards a Holistic Biomedical Information Platform for Primary and Secondary Use Settings

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Goals

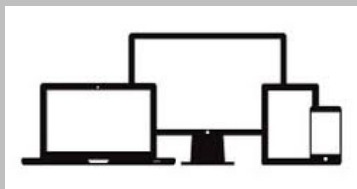
- Single holistic architecture
- Support for patient care and biomedical research regarding data privacy issues
 - Integration of medical data from clinical information systems and medical devices
 - Holistic overview on patient for individualized care
 - Making anonymized clinical data available for biomedical research
- Single point of truth
- Using international standards (IHE)
- Required components are not available from one vendor

External
Data Consumer

Pseudonymized/
Anonymized



Service Platform

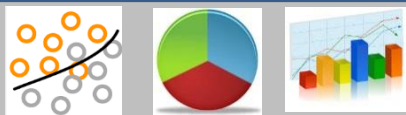


UI & Value-added Services

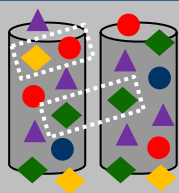
Medical Research Services



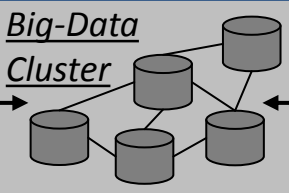
Analytics Platform



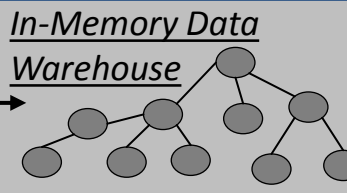
(Event) Stream Processing



Big-Data Cluster



In-Memory Data Warehouse



Data & Processing Platform

Data Harvesting

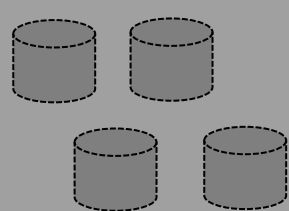
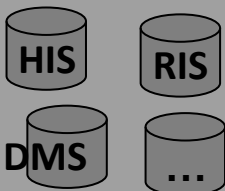
Materialized Sources

Virtualized Sources

Batch Layer

Speed Layer

ETL, Semantic Preprocessing



Data Provider

Support Systems

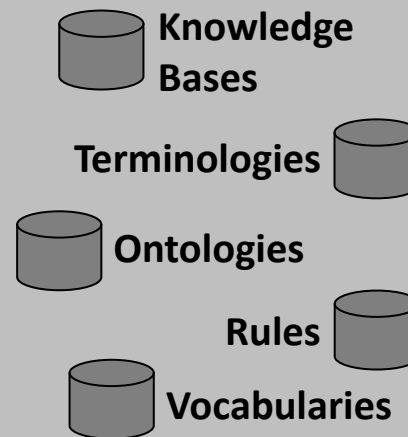
Knowledge Bases

Terminologies

Ontologies

Rules

Vocabularies





Conclusion

- Combination of methods for the identification of requirements
- Modularization simplified the architecture design and allows for different vendors' software components
- First step towards a single platform for data storage and analytics to support patient care and biomedical research



Thank you!

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