The beauty of heterogeneity versus the need for standardization: Enabling trusted data consumption in a multi-source, multi-ownership data landscape

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Enabling a trusted data consumption in a multi-source, multi-ownership data landscape

Dr. Josef Eiblmaier

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Agenda

1. PharmaLex and Me at a Glance
2. The Pharmacolocical Multiverse
3. Case Study: centralized data access platform
4. Conclusion

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PharmaLex and Me at a Glance

About me

Josef Eiblmaier

- Chemist by training
- 22 years in Cheminformatics
- Management Consultant @ Cencora
- Experiences in software engineering, data modelling, product and project management & business development

40+

Nationalities
Are on staff, including former us food and drug administration (FDA) and European medicines agency (EMA) **experts**

43,000

Projects have been completed successfully

Lead 40+

Health agency meetings annually, including with EMA / FDA / PMDA / NMPA

9/10

of the top pharmaceutical companies are our clients

60%

of our client base are small and midsize enterprises

50+%

of our projects are global

25+

Years of industry experience

3,000+

Employees worldwide work with

1,600+ clients

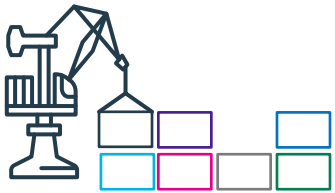
200+

Experienced & certified **local representatives** support our global coverage

90+%

of our principal consultants hold PHDS

Global solutions covering the entire product lifecycle



We offer the whole spectrum — *from* higher-value, project-based consulting work *to* longer, larger and holistic outsourcing solutions — globally.

Integrated Product Development
From discovery to product

Bringing Innovations to Market
From submission to commercialization

Optimal Patient Access
Mature product maintenance and market expansion

Program management and technology elevated

Discovery / pre-clinical → Clinical development → Approval / authorization → Post approval / maintenance

Business and portfolio mergers & acquisitions
Guiding through business transformation

Strategic and scientific consultancy
From target to implementation

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The Pharmacolocical Multiverse

The Multiverse …

Data Scientists and AI Specialists Pain Points

Data are trapped in Silos!

I can not find the data I need!

We need regulatory compliance!

I can not access the data I need!

Data are not standardized across my organization!

No clue which data even exists in my organization!

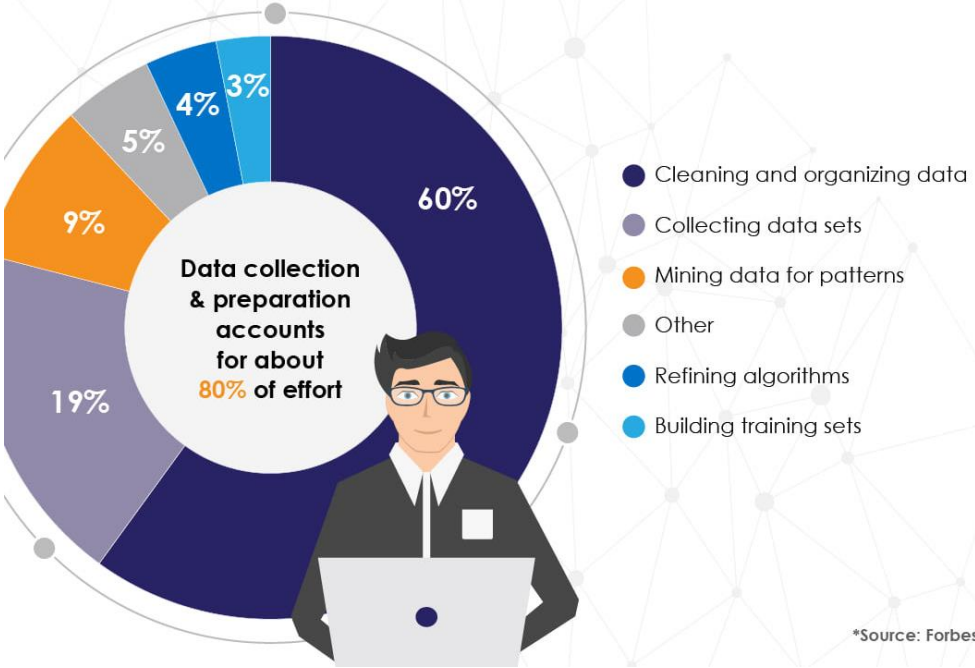
There is no central data access!

Can I trust the quality of the data?

No unified Data Governance process!

Consequence:

What data scientists spend the most time doing?



*Source: Forbes

Why?

Data are fragmented over systems and locations and are mismatching.

Need to be transformed into actionable information to create analytics, insights and visualisations.

Manual processing is time-consuming and costly.

In short: the data is not …

- Findable
- Accessible
- Interoperable
- Reusable

Source: Calvin and Hobbes

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Case Study: centralized Data Access Platform

Initial Situation and Vision

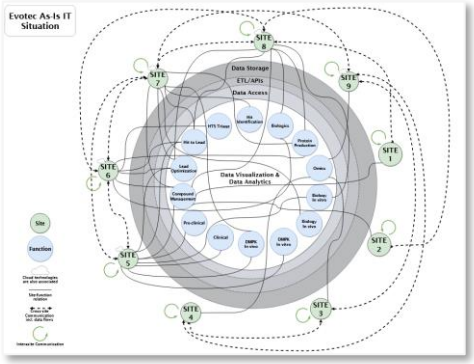
evotec

7 sites

Decentralised data landscape

Multiple access systems

No common vocabularies



One Data Access Vision

Design and implement ONE centralized architecture and ONE solution for global scientific data access across Evotec, to allow better data integration and support current/future needs for data access and consumption.

Global scientific data access

Data awareness improvement

Predictive Modelling

The Data Virtualization/Data Warehouse Hybrid approach

evotec

One central access platform allowing

- Access control, logging and monitoring
- Easy connection and aggregation of data sources (REST, SOAP, ODBC/JDBC)
- Data in real time, on the fly aggregation

Data storage platform allowing

- Complex & multi-step data transformations, data harmonization and enrichment
- Performant access quicker than access to the source system
- Unified corporate wide data model including Reference, Master and Transactional Data

Data Virtualization

Data Replication

One Data Acces

The solution

Data Discovery

Global Access

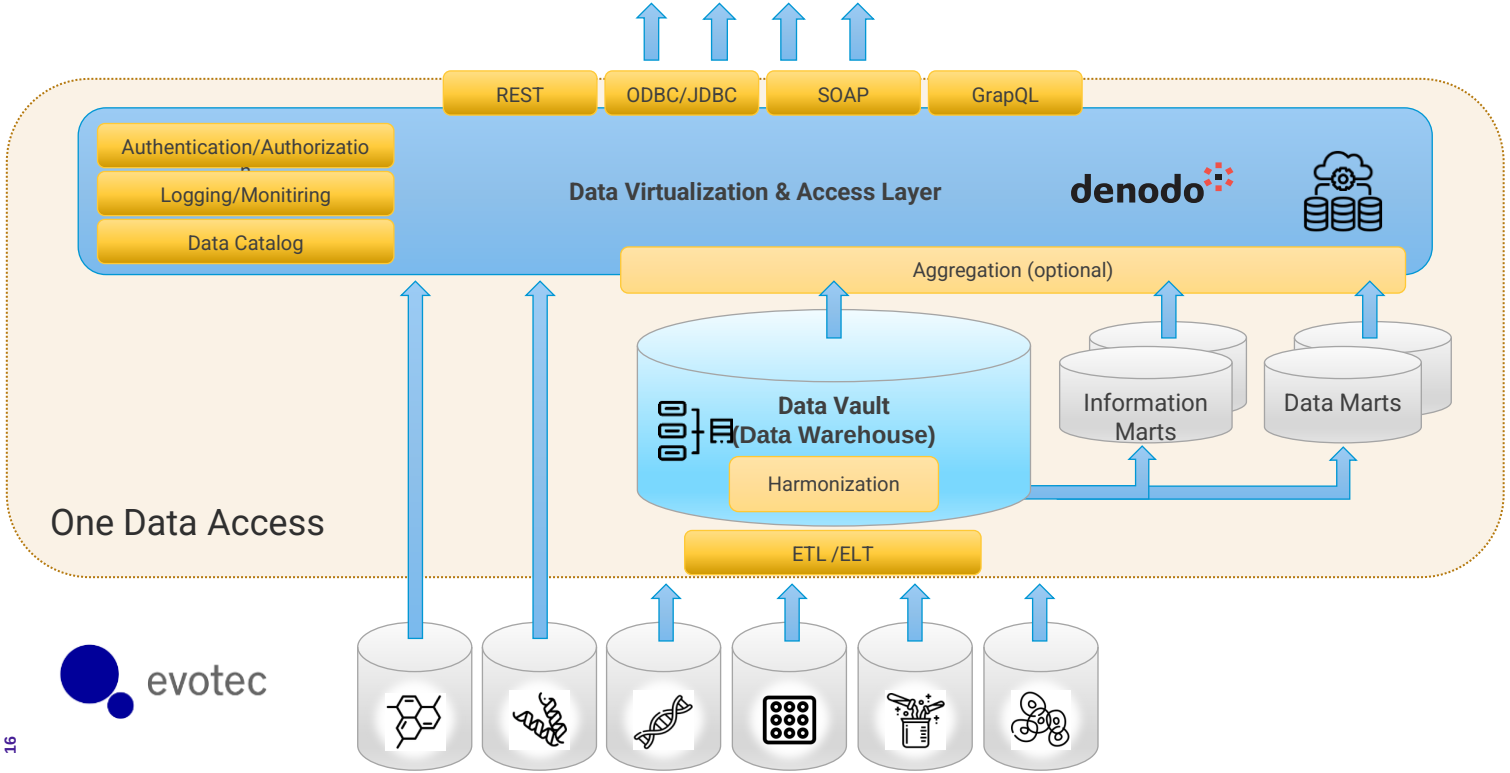
R&D Project Data

Predictive Modelling

Reporting

Translational Data Access

Data consumers in multiple sites



ODA On-Prem Data Center Fra.

Data sources from multiple sites

One Data Access Key Benefits

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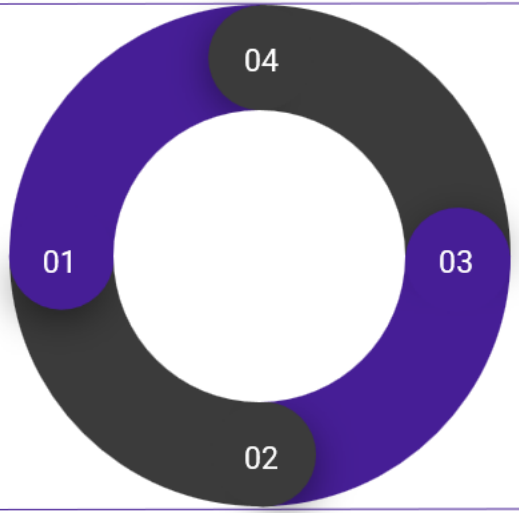
Data Access

Company wide, unified, smooth, and access controlled access to research data

Integrated Data Model

Inter connecting all major business entities in one data model including harmonization



Data Awareness

Data catalog allows search & browsing in data and meta data

Data Centricity

The connecting bridge enabling multi purpose use of data assets in different use cases

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Conclusion

Conclusion

- There are various ways to build bridges between discrete data universes such as data replication, data virtualization, and data harmonization, …
- By combining data replication and data virtualisation, we create a future-proof, high-performance, and scalable data access platform for heterogeneous and distributed R&D data.
- Questions? Happy to discuss!

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Thank you

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