

Limits and Extension of LOD

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Dr. Jörg Wurzer, iQser AG

1.

Limits and Extension of LOD

LOD is a great vision but limited for industry solutions

- **Limited to standardized RDF data**

Today's companies distributed data in various formats and silos

- **Limited to standardized URIs for links**

Convention for identifiers are not practicable for distributed corporate data silos

- **Limited scalability for corporate solutions**

Migration of existing data into a triple store multiplies the amount of data

- **Limited to read access of data**

No data production, processing or transactions in real time disqualifies LOD

- **Shifting the problem of heterogeneity**

LOD shifts the problem to the heterogeneity of identifier and ontologies

2.

Limits and Extension of LOD

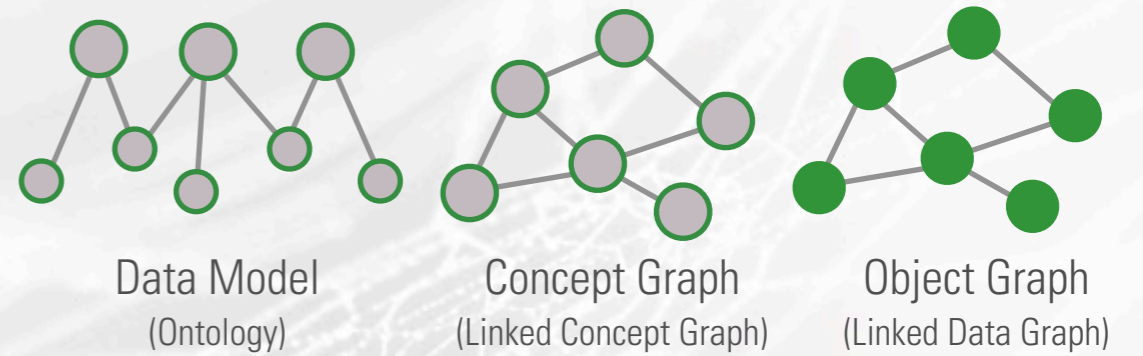
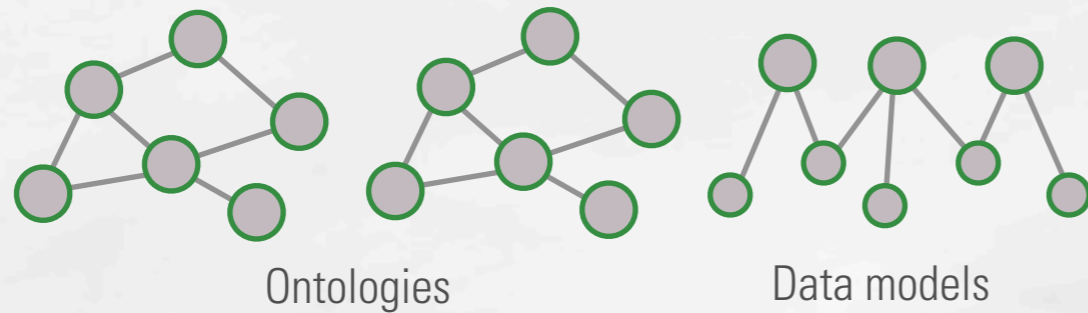
Extended approach to build smart industry solutions

- **Extension to any data by efficient semantic integration**
Real benefit and potential by mixing up LOD with any existing data with bottom-up approach
- **Extension to dynamic links by semantic analysis**
Productively used and enriched LOD by dynamic links of any data beyond RDF and URIs.
- **Extension to linked actions including graph manipulation**
Productively used LOD by linking data with actions to enable new business models.
- **Extension to scalable persistency concepts**
Industry ready by a scalable, lean persistency layer without federation or migration
- **Extension to uniform information layer**
Simplifies access of LOD for existing data silos and formats and adaptation of ontologies

3.

Limits and Extension of LOD

Bottom-up versus top-down-approach



Conventional: Top-down

Manual Mapping



Automatically derived

iQser: Bottom-up



4.

Limits and Extension of LOD

Potential research activities

- **SPARQL endpoint for uniform information layer**

Using a query language standard to query graphs in a complex way to benefit from the real potential of aggregated and linked data beyond LOD and RDF.

- **Performing ontologies on data sets generically**

Bridging the gap between abstract domain knowledge and real data by automatically performed ontologies in an analyzer chain.

- **Consuming and producing LOD generically**

Benefit from mixing up LOD to enrich internal company data and publish internal data to the LOD cloud for new business models in an automatically process.



Dr. Jörg Wurzer, iQser AG

Member of the Board

joerg.wurzer@iqser.net

www.iqser.com

www.twitter.com/jwurzer

www.youtube.com/iqser