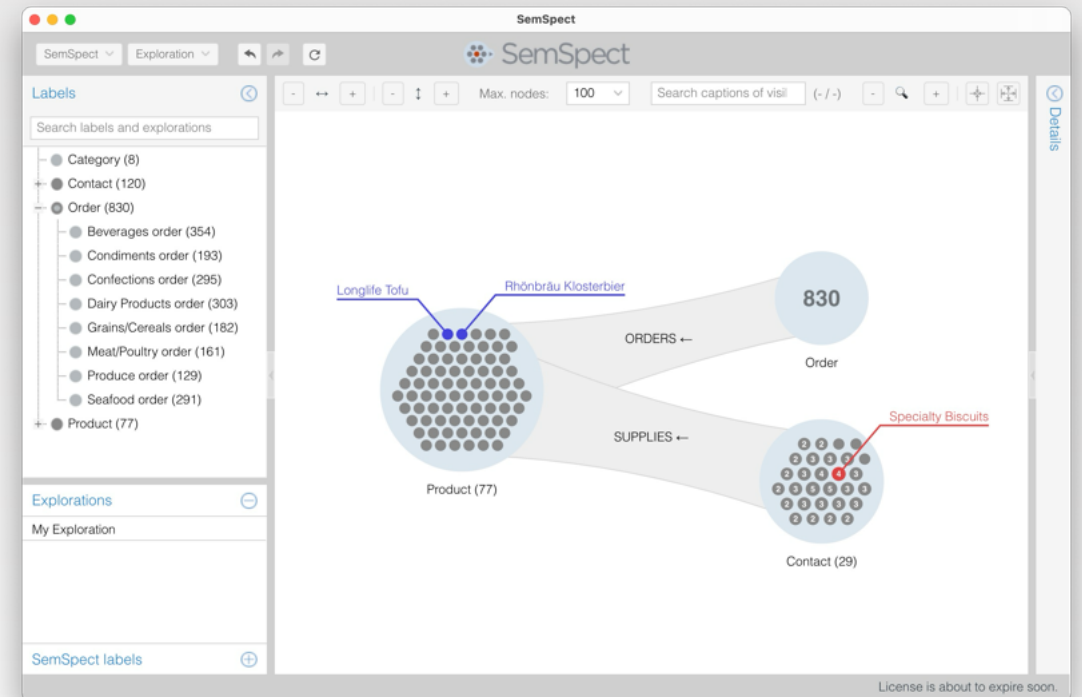# Visual Analysis and Querying of Large Knowledge Graphs

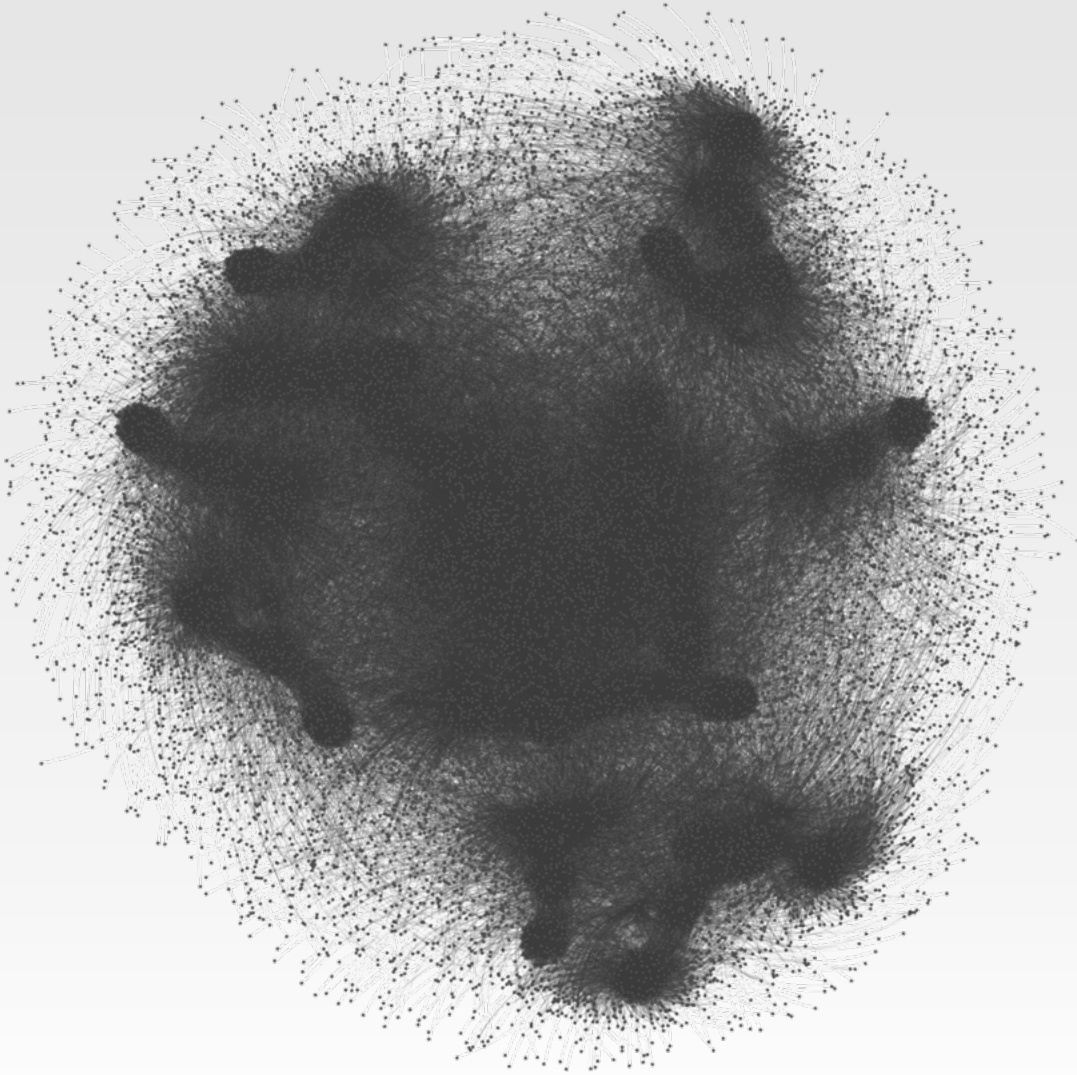Thorsten Liebig | liebig@derivo.de

derivo

derivo

- ► SME, est. 2010

- ► Background KR & reasoning

- ► Consulting and development of semantic software tools & solutions

- ► Products:
  - o Browsing:
    - o SemSpect
    - o MetaExplorer

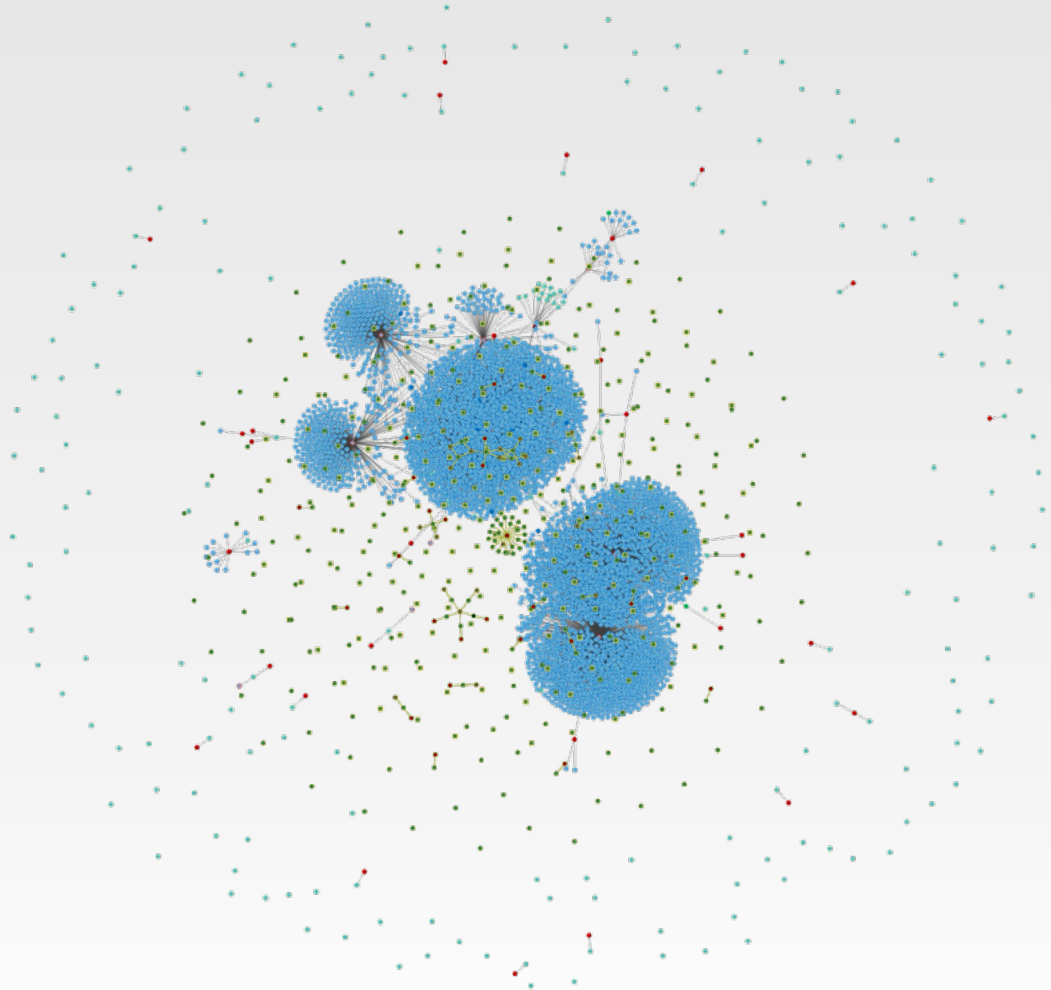- ► Community projects: neo2rdf, mongo2neo4j, Konclude

Classical Network Rendering?

+ good for small graphs

+ data-driven

− does not scale

− poor expansion control

− disorientation due to node rearrangement

− no reasonable overview

How to get Meaningful Graph Insights?
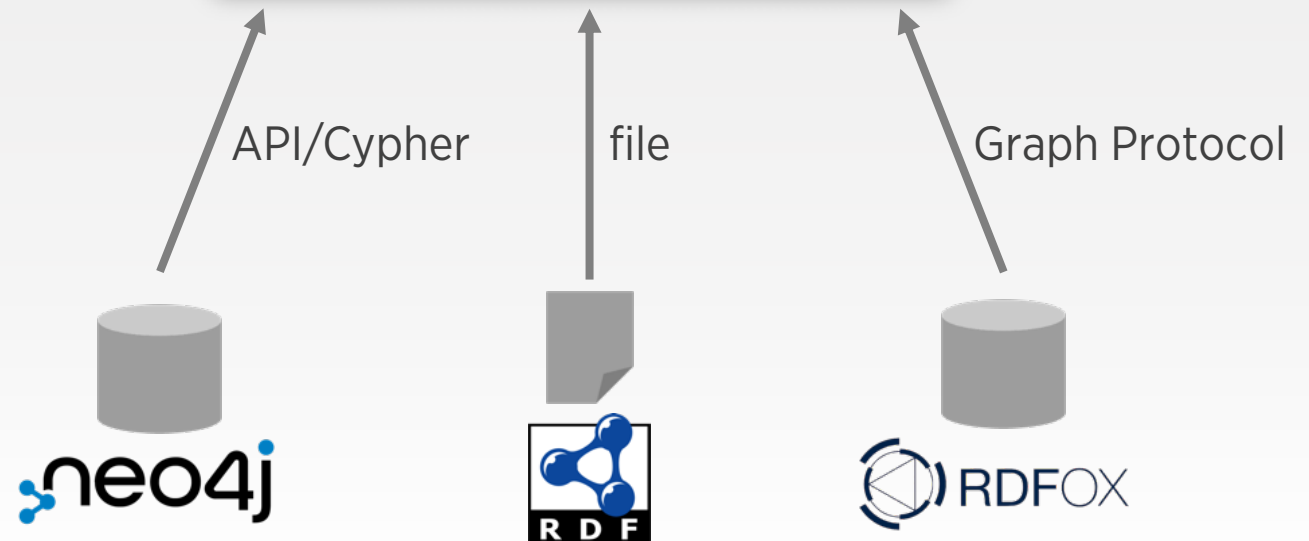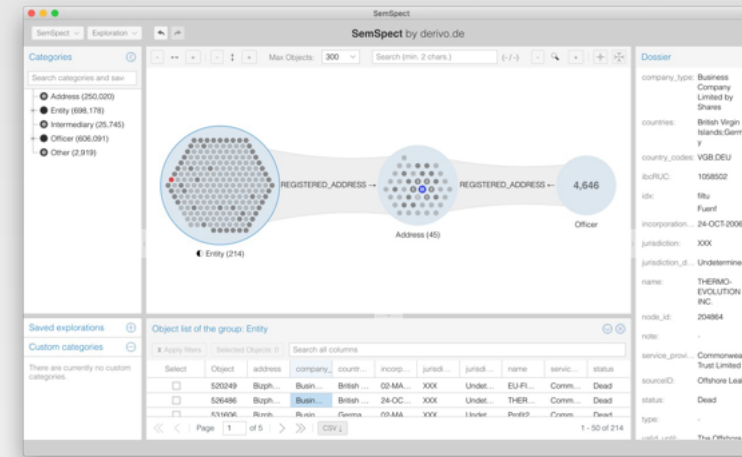

Panama Papers:

→ ICIJ (https://www.icij.org)

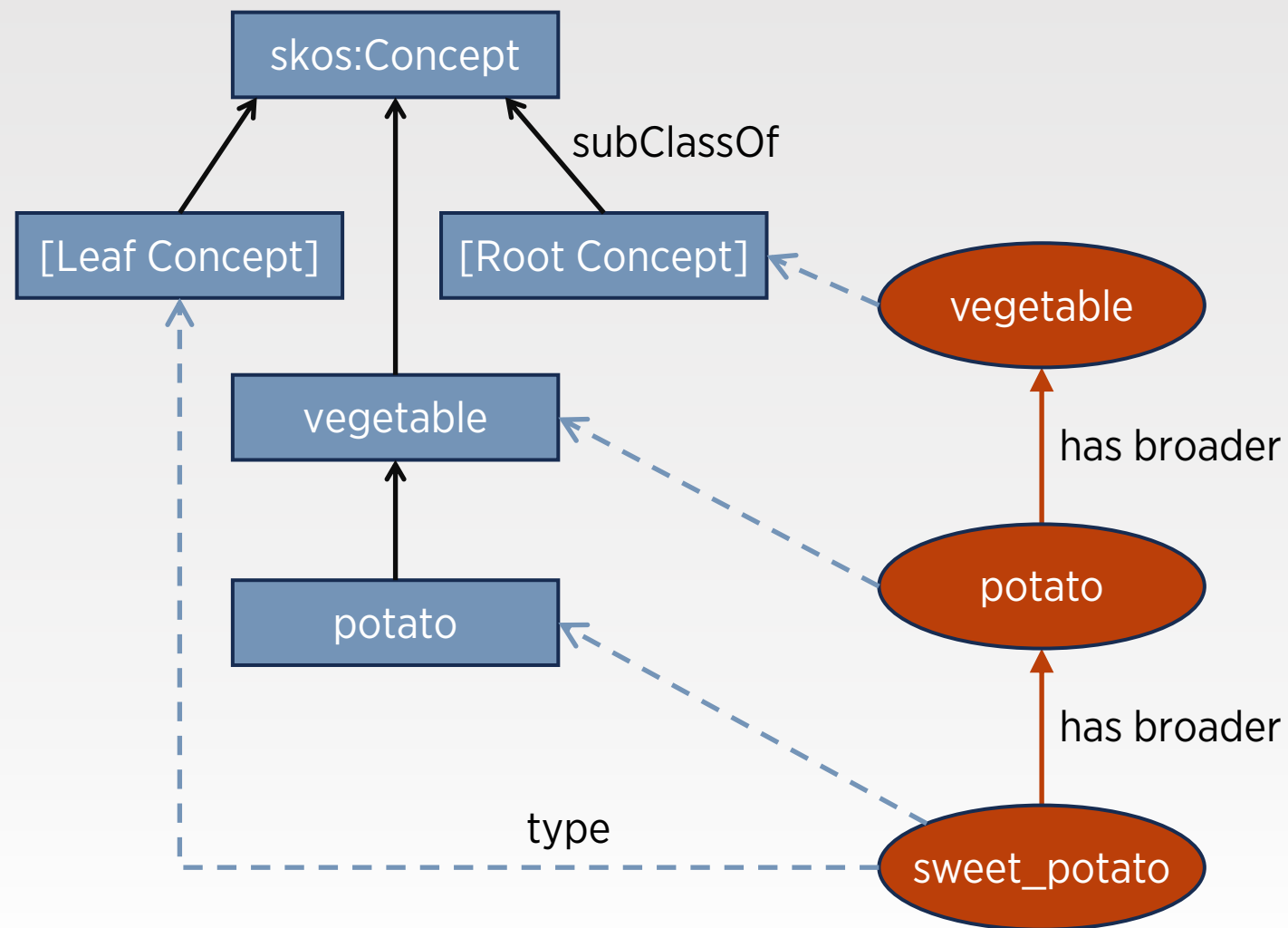"The officers that share an address with an entity in Germany"

Exploration Beyond the Hairball

http://www.semspect.de/

- ▸ node grouping

- ▸ relation aggregation

- ▸ guided exploration

- ▸ on-demand details

- ▸ node/relation filtering

- ▸ free/pro/enterprise license

API/Cypher   file   Graph Protocol

neo4j   RDF   RDFOX

SKOS Mode
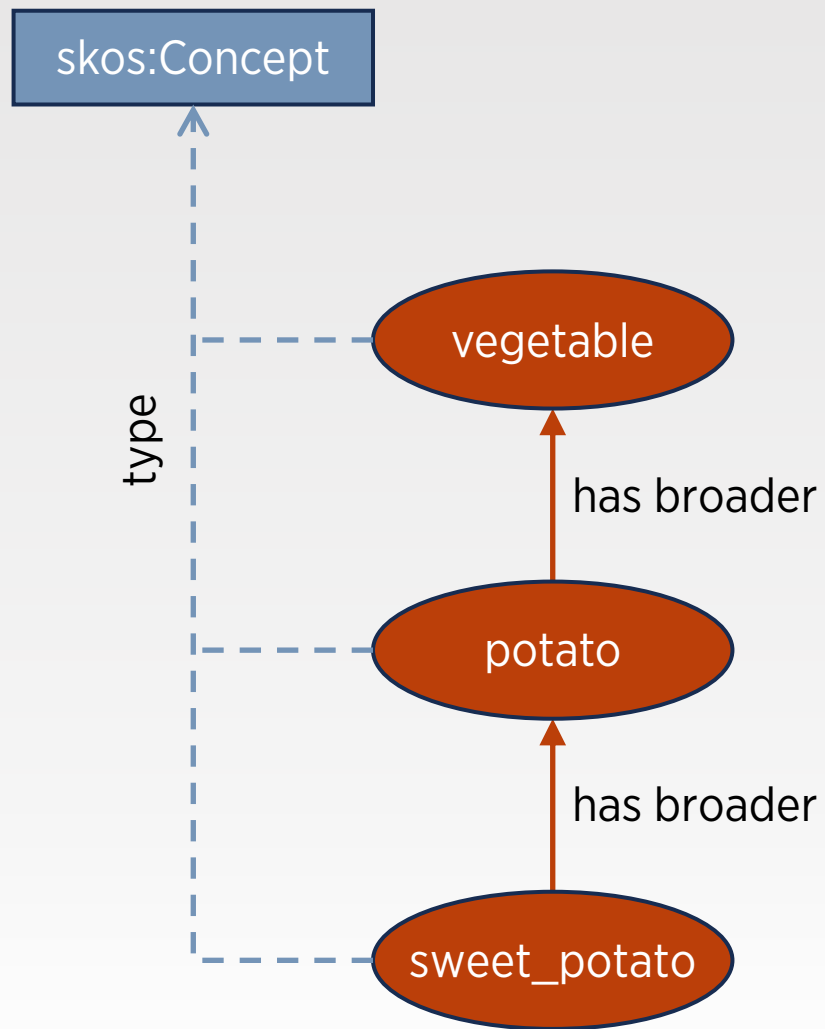
Wrap up

▶ investigate not only the structure but also the proportions

▶ find data flaws, data outliers or missing connections

▶ build complex queries just by visual exploration

▶ refine the graph schema while browsing

SemSpect for
- Neo4j: Graph App & server plugin
- RDF/OWL/SKOS/SHACL: server with own data store