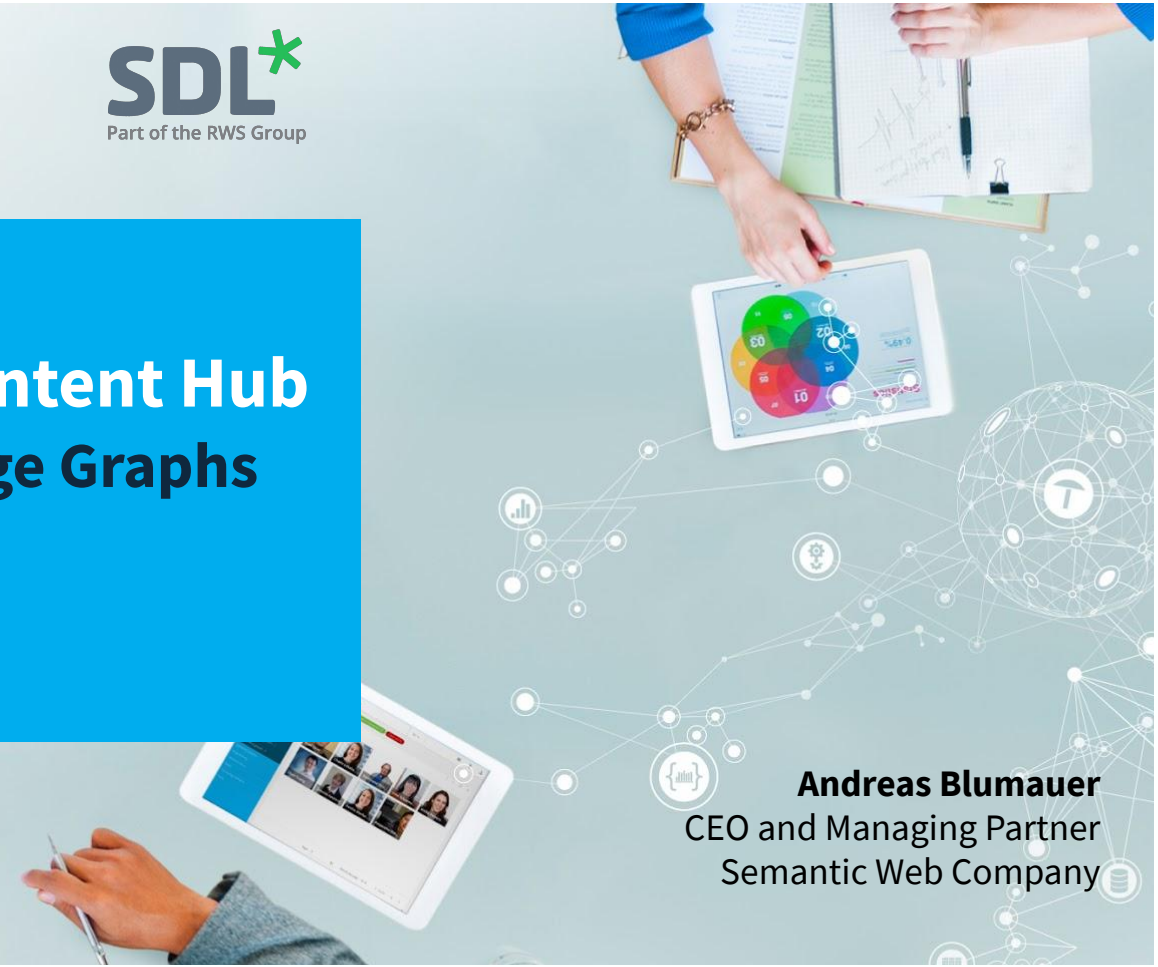
poolparty®

SDL*
Part of the RWS Group

The Semantic Content Hub
Based on Knowledge Graphs

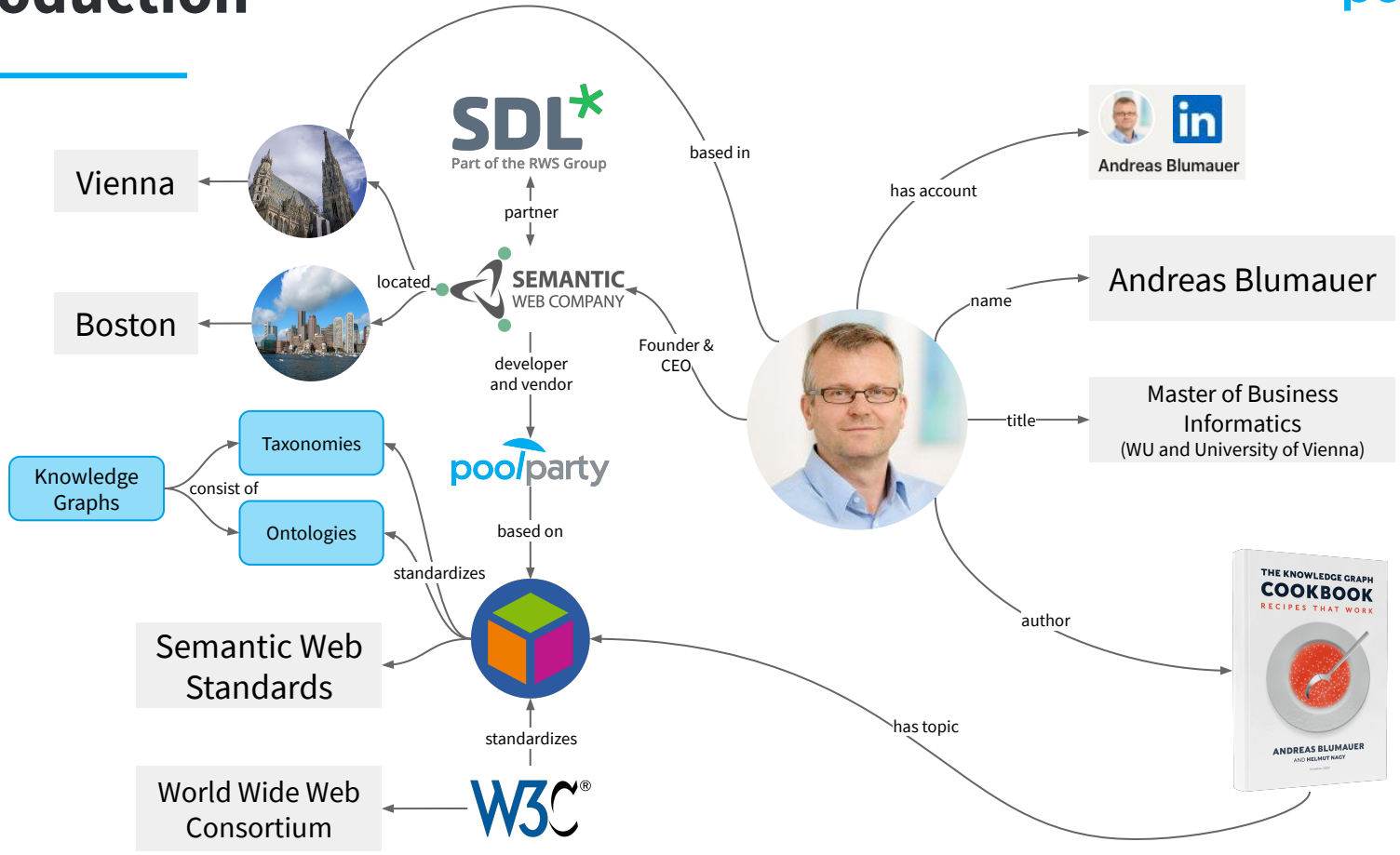
Tridion Expert Summit 2020



Andreas Blumauer
CEO and Managing Partner
Semantic Web Company


Higher customer satisfaction
Knowledge discovery
Better decisions
Structured and linked content yields knowledge
But how do I create it?
poolparty
www.poolparty.biz

Introduction



Structured, linked content yields knowledge

Is there a software company based in Austria that is specialized in graph-based text mining?

The Knowledge Graph Cookbook is a book

The KG Cookbook is about Semantic Web Standards

Semantic Web Standards standardize taxonomies

Taxonomies are parts of a knowledge graphs

Vienna is located in Austria

Andreas Blumauer is the author of the Knowledge Graph Cookbook

Ontologies are parts of a knowledge graphs

Semantic Web Standards standardize ontologies

Andreas is the CEO of Semantic Web Company

Semantic Web Company is based in Vienna

KG is used for text mining

KG is a synonym for knowledge graph

SWC is a software vendor

Intelligent Content enables:

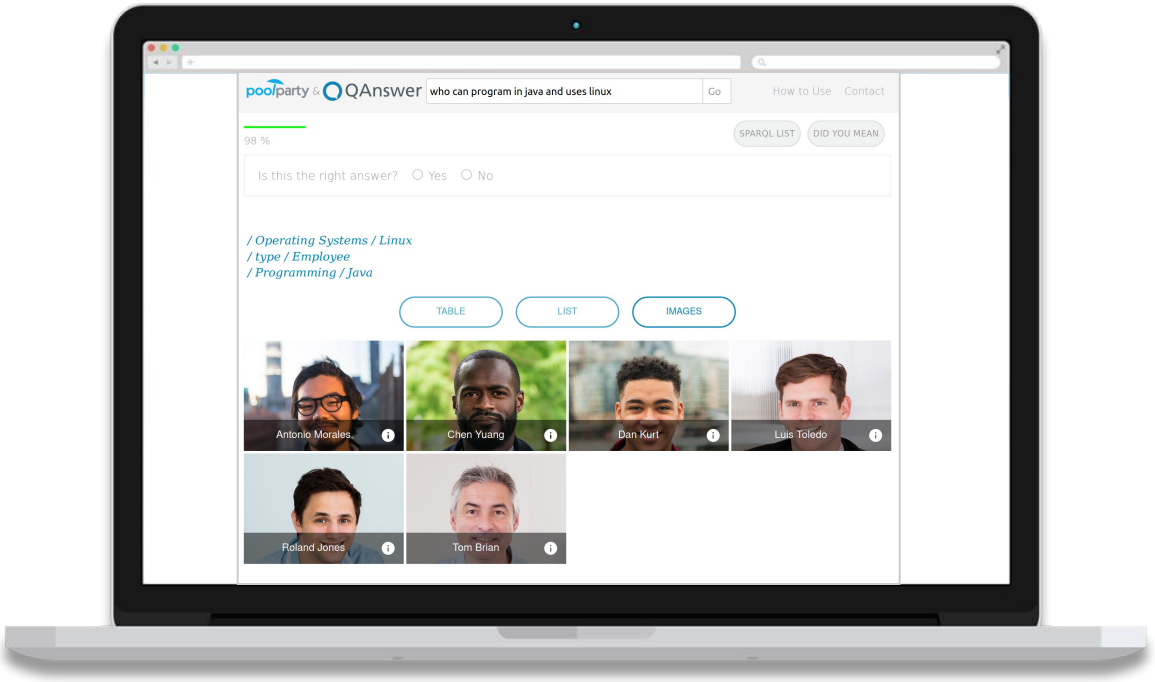
- Better decisions
- Higher customer satisfaction
- Knowledge discovery

Semantic search & matchmaking

The **HR Recommender** is a semantic matchmaking tool based on a knowledge graph. It is designed to connect employees with their coworkers, show them relevant projects, and let them know about interesting career opportunities within their organization.

Demo

Question answering



Question Answering (QA)

Knowledge graphs serve as a basis for the provision of active metadata and precise business semantics.

This is the prerequisite for being able to address questions to any existing data source, which can have any structure, schema and semantics.

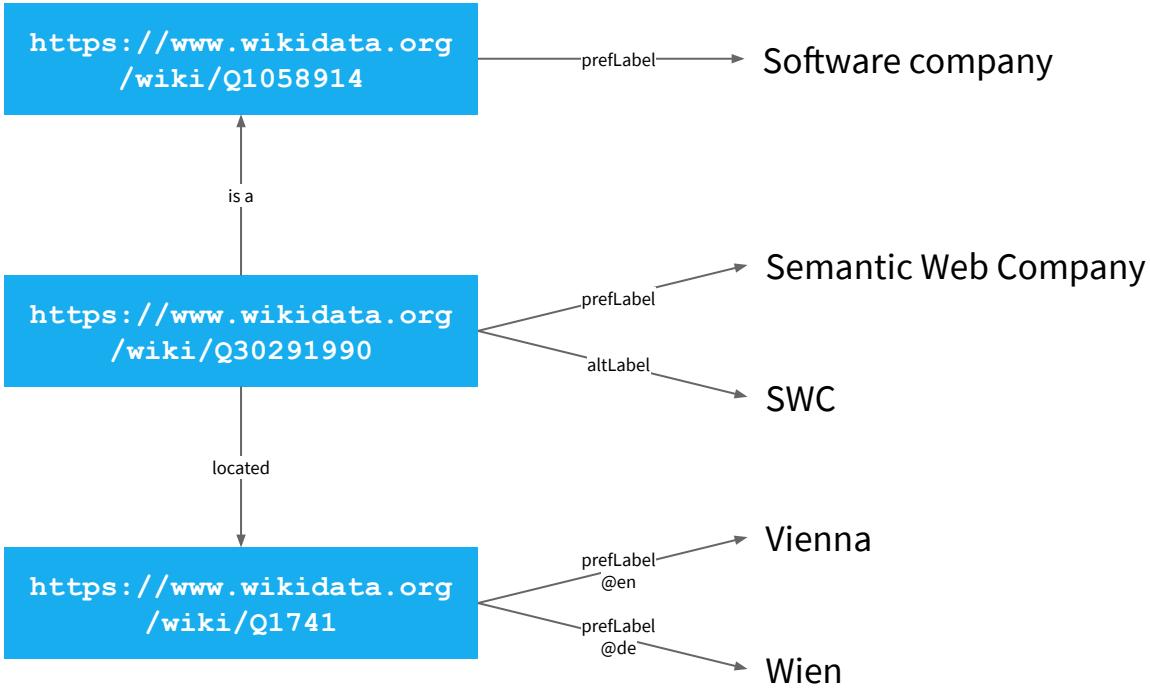
Demo

But how does all this fit together?

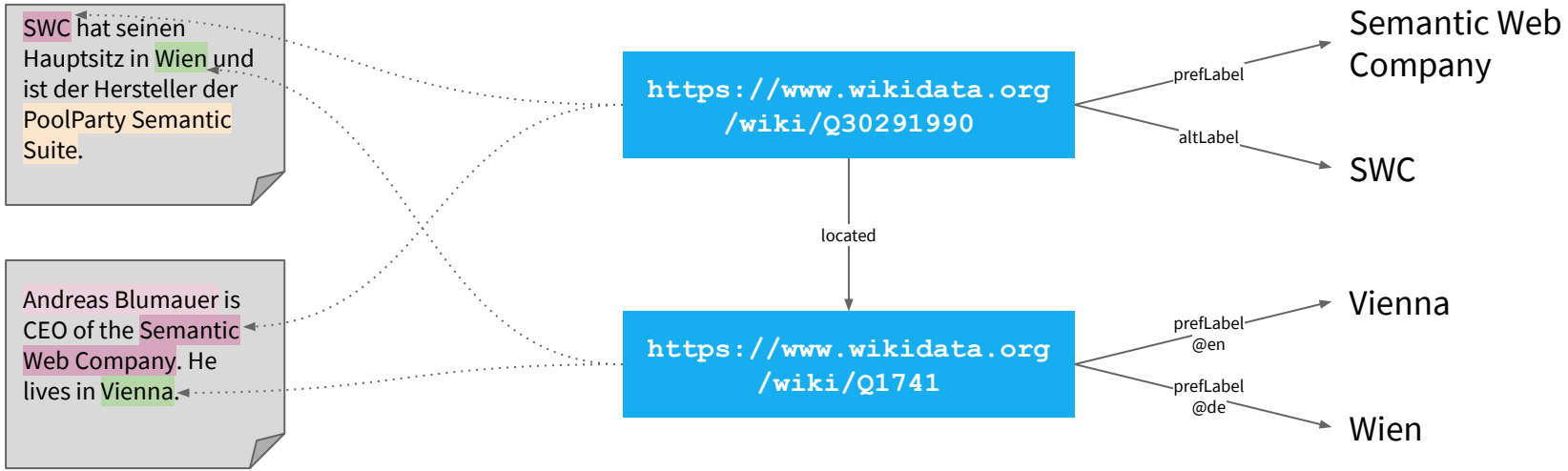
The challenges:

1. Many names for the same thing (Synonymy)
2. Ambiguity (Homography)
3. Lack of backround knowledge
4. Various languages and contexts
5. Various data models and schemas
6. Implicit semantics
7. Missing logical links

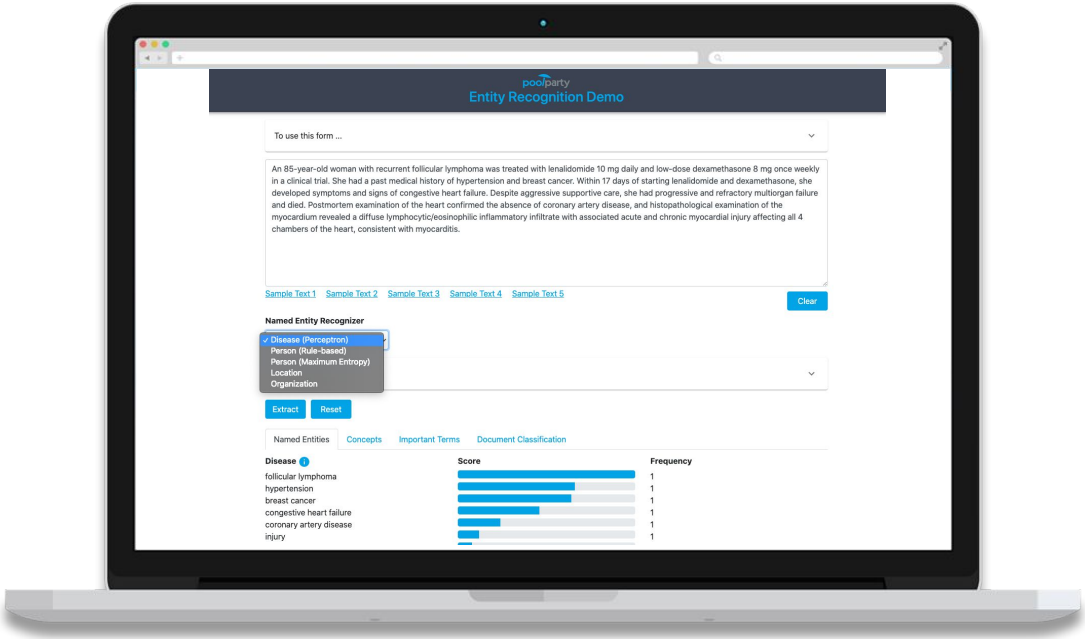
Things, not just Strings (URIs and Triples)



Entity extraction = Concept-based tagging



Named Entity Recognition (NER)

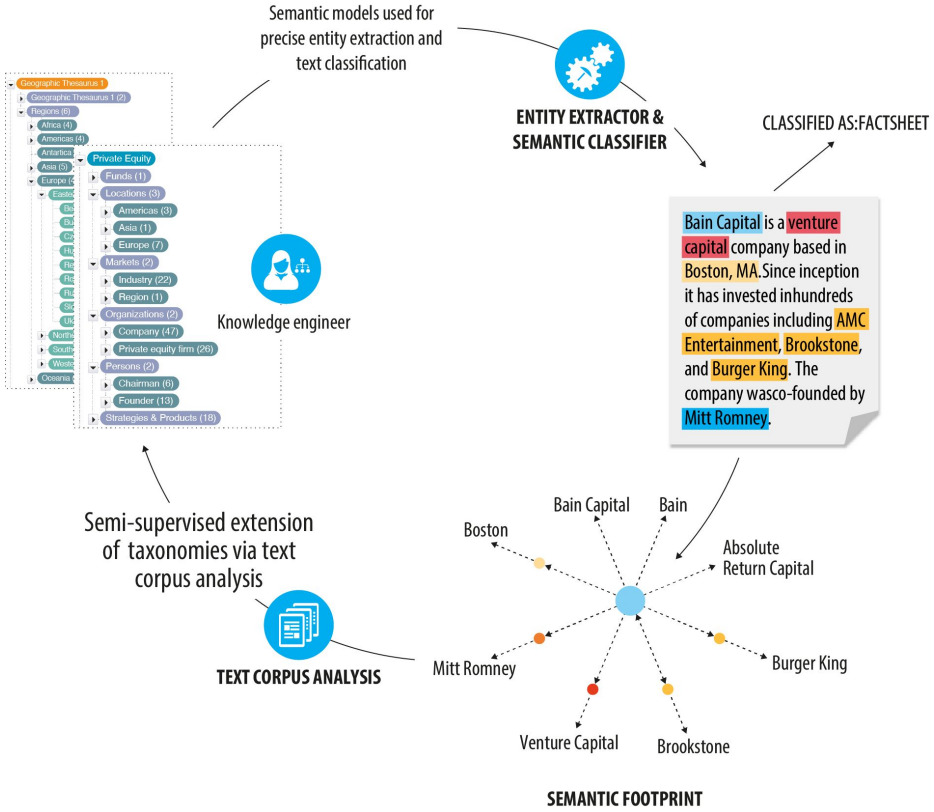


NER is the automatic extraction of entities from any given data object. It can be based on ML algorithms and/or on vocabularies/taxonomies.

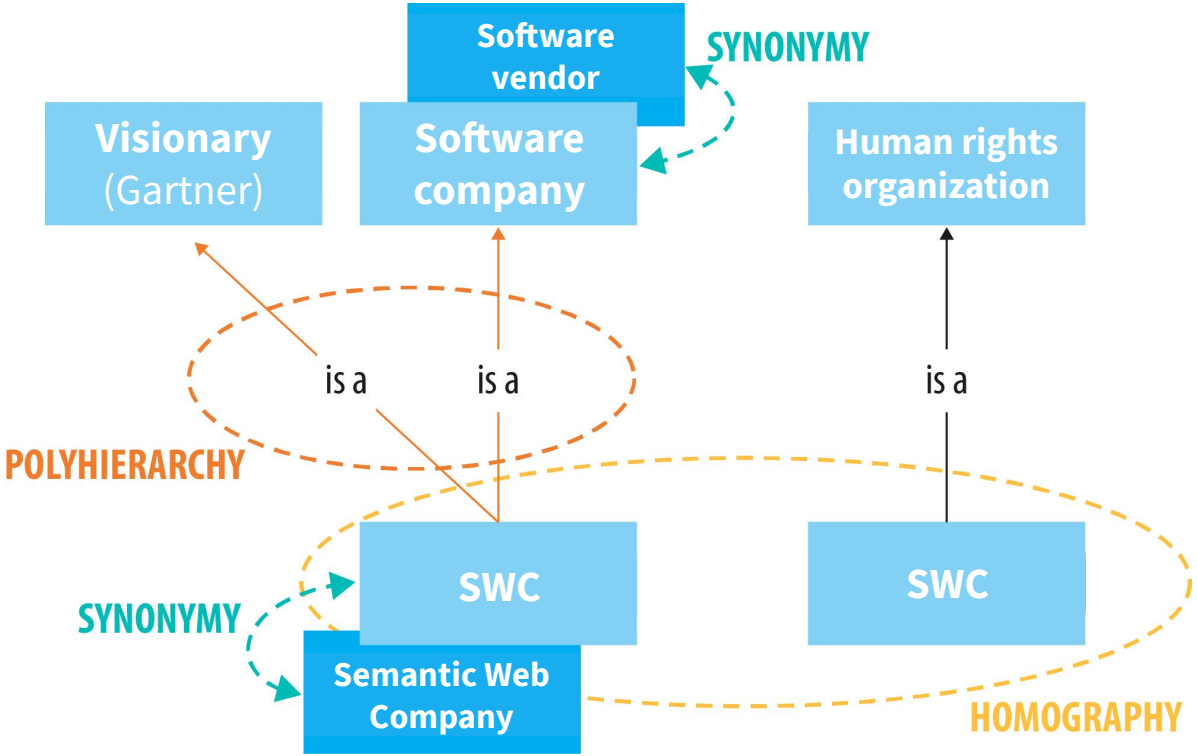
Key aspects are precision/recall, ability to disambiguate, ability to get linked to a knowedge graph.

NER Demo

A virtuous circle: learning from text



Synonymy, ambiguity and disambiguation



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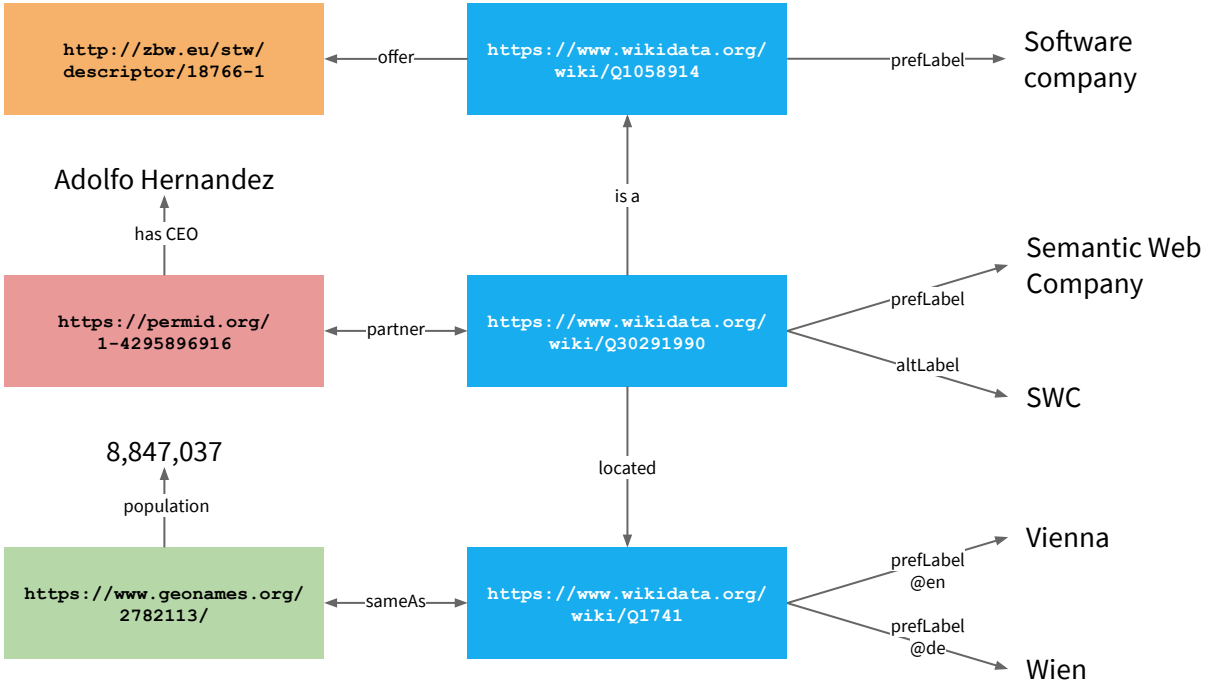
Adding knowledge by linking graphs



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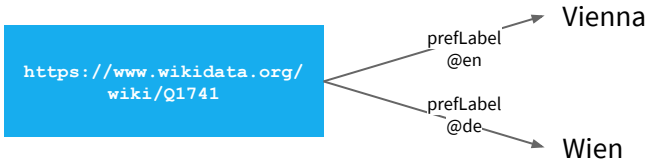
Concepts with multilingual labels

The simple case:



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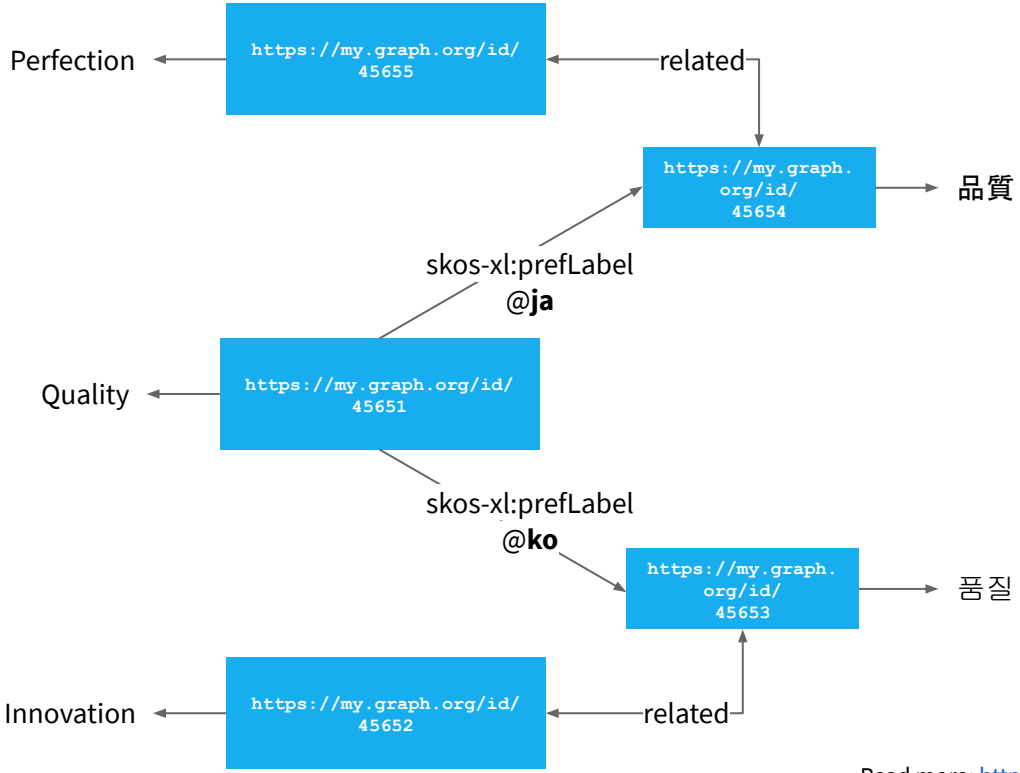
‘Multilingualism’ also means various contexts



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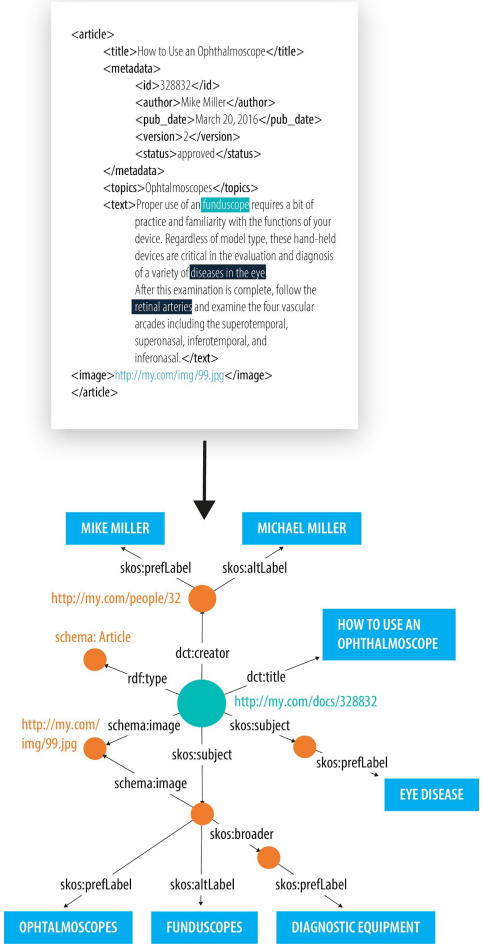
Read more: https://sive.rs/quality

Graphs are Digital Twins

- Any document and business object becomes a graph,
- embedded in an Enterprise Knowledge Graph,
- enriched by ‘active metadata’,
- linkable and queryable based on standards.



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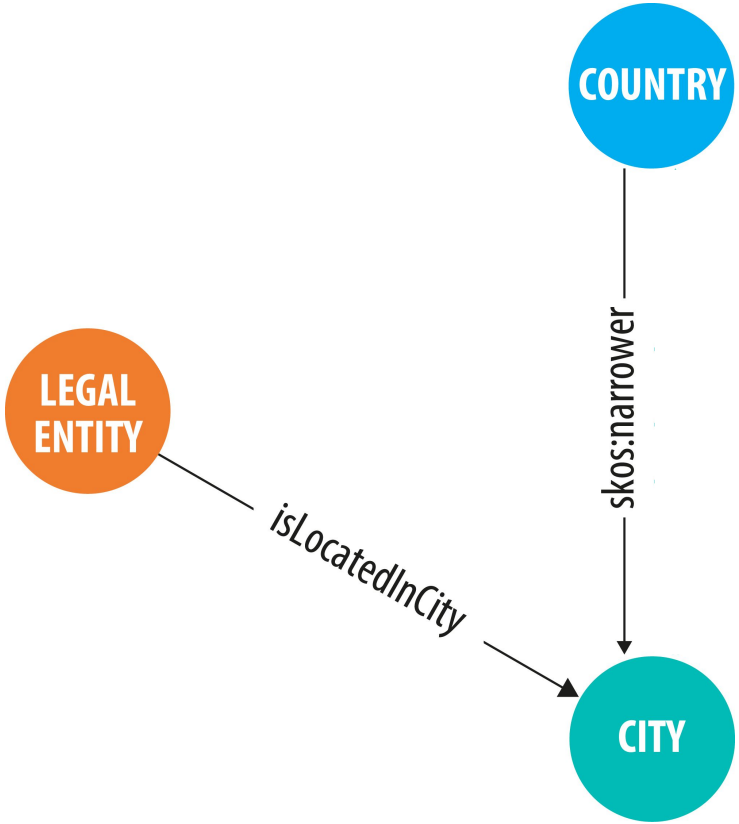
Inference of missing logical links



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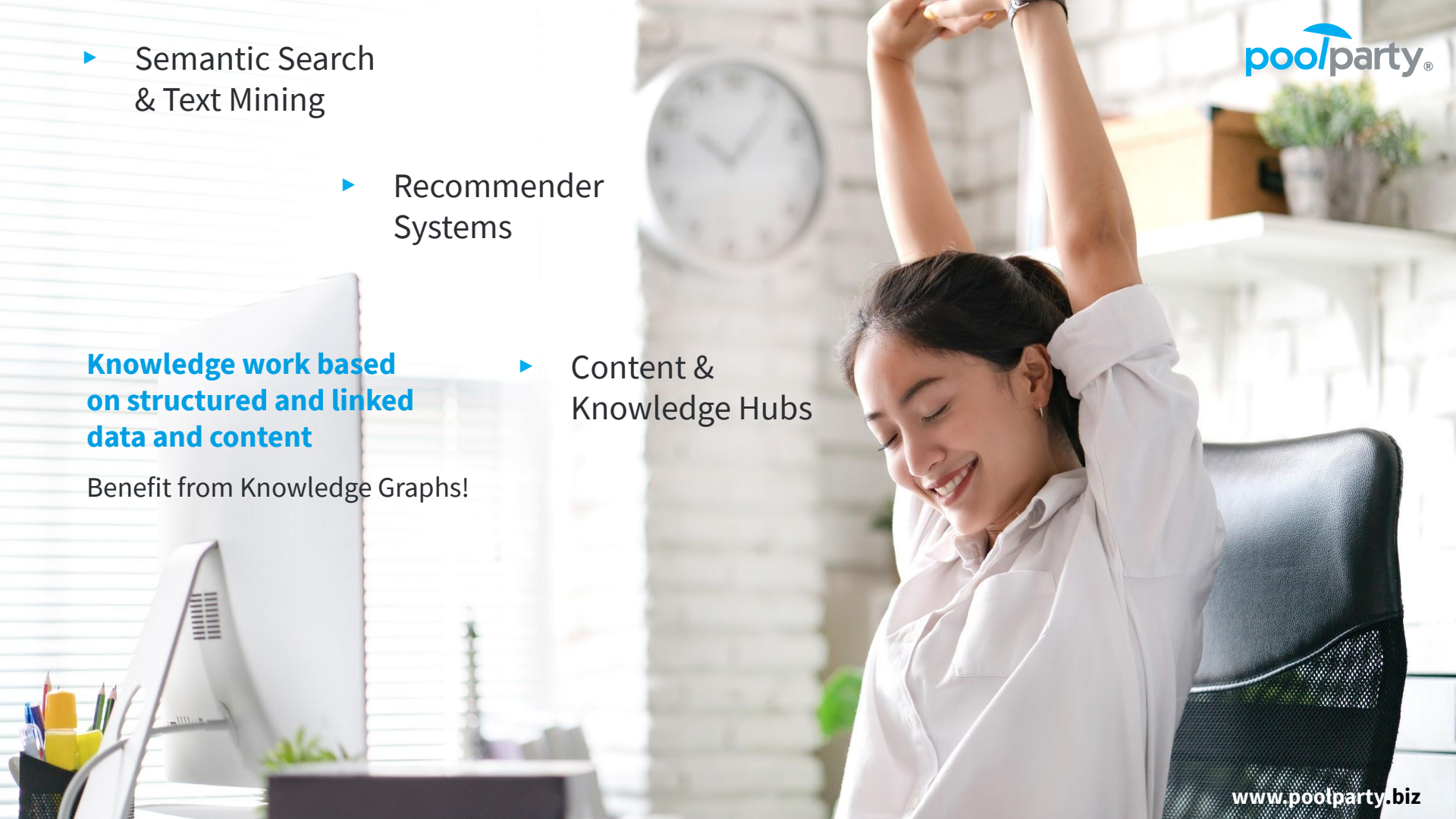
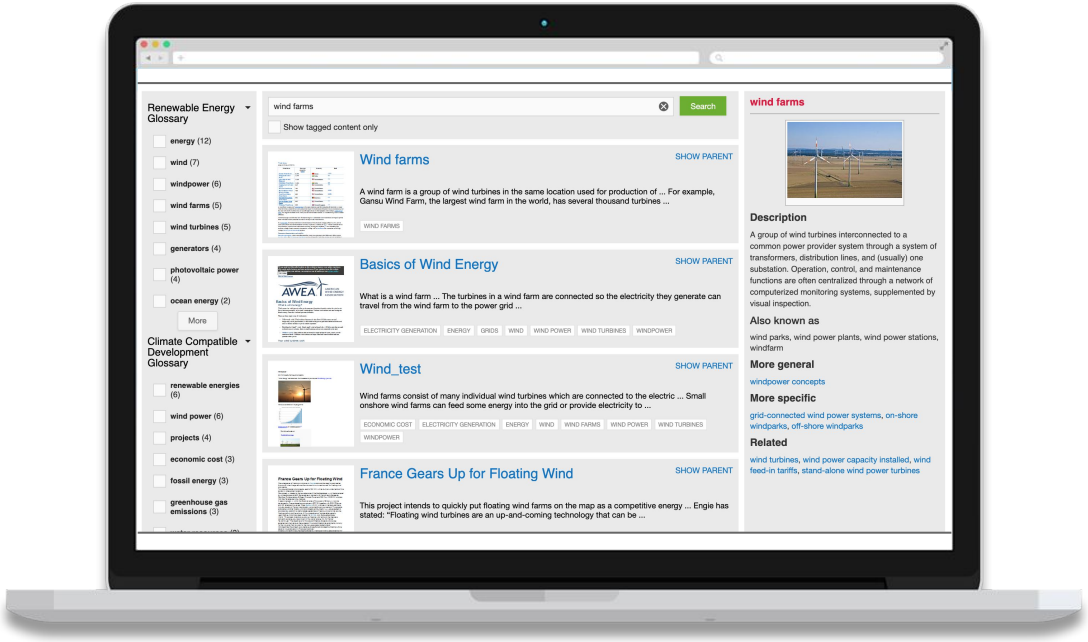
- Semantic Search & Text Mining
- Recommender Systems
- Content & Knowledge Hubs

Knowledge work based on structured and linked data and content

Benefit from Knowledge Graphs!

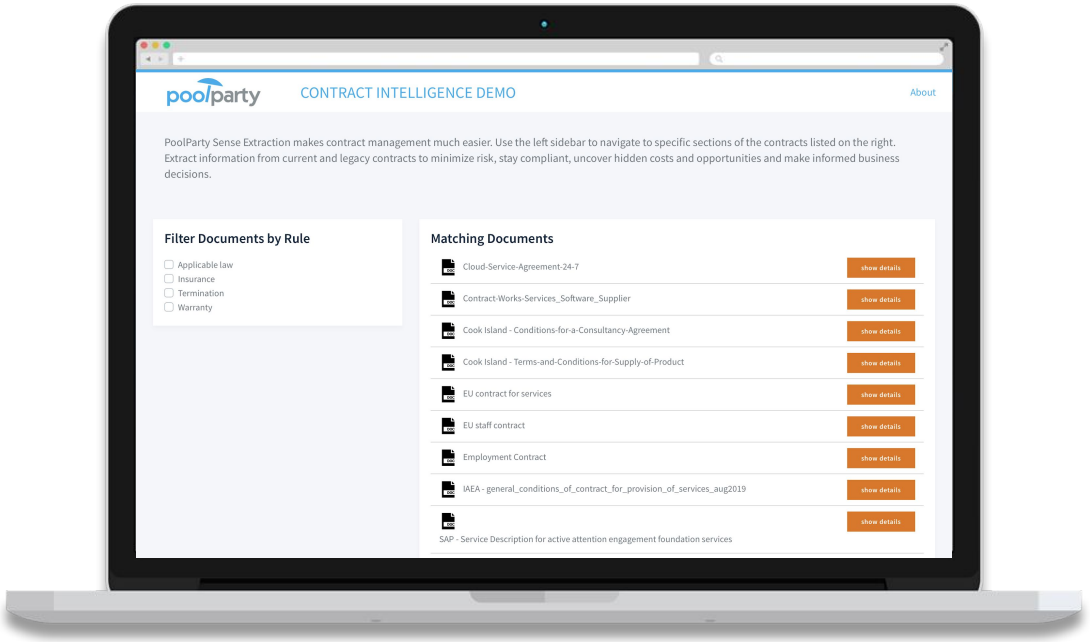


Enterprise Semantic Search



[PowerTagging and PowerSearch for SharePoint]

Deep Text Analytics

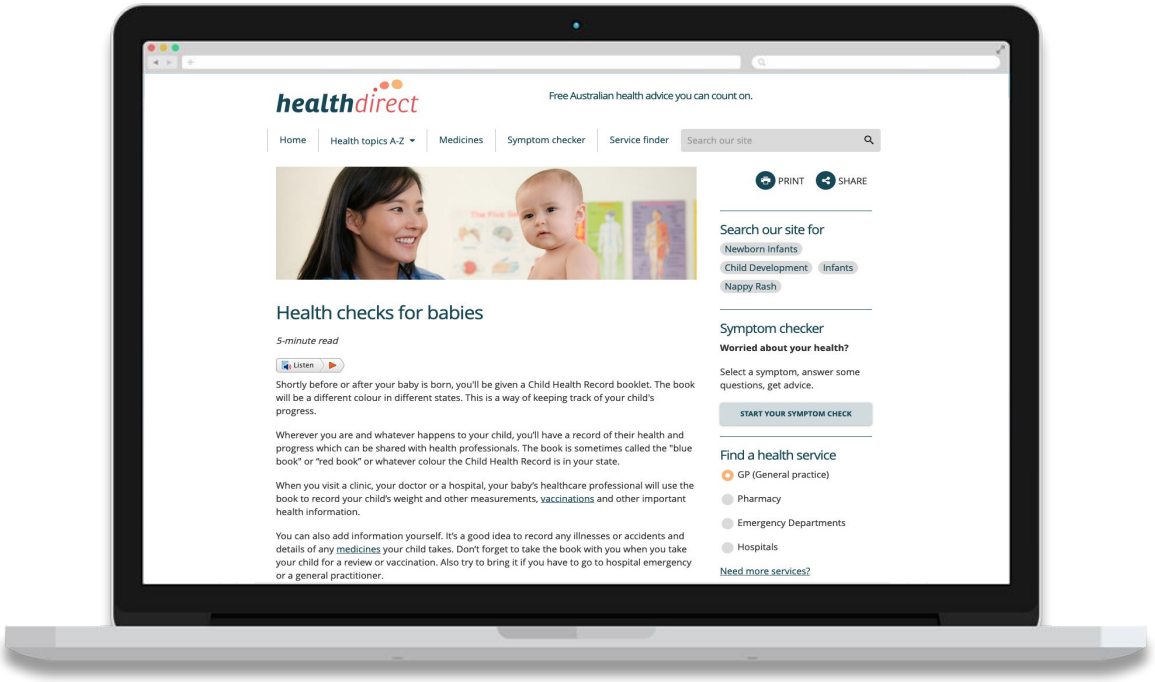


Sense Extraction

This demo application showcases in a user-friendly interface how powerful graph-based text mining based on PoolParty is. Pick a sample contract and see how automatic sense extraction can help analysts to quickly identify relevant text passages.

Contract Intelligence

Knowledge Hubs & Semantic Search

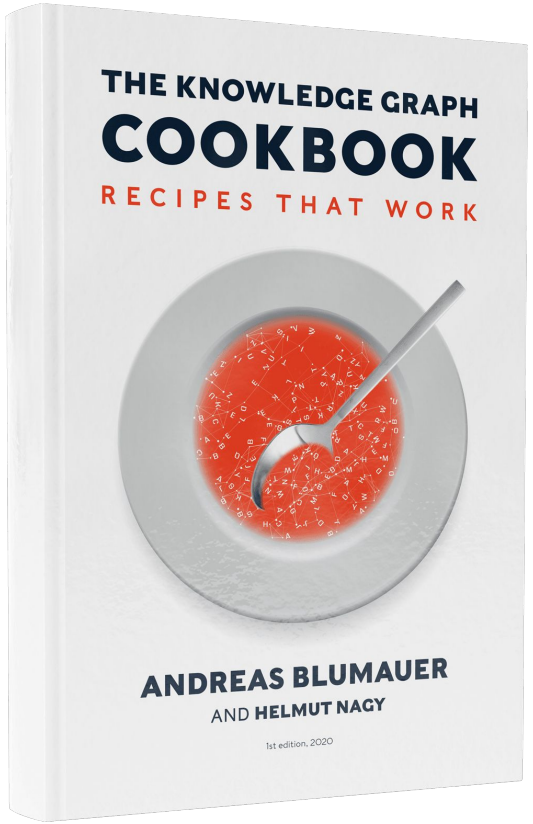


Healthdirect Australia

Healthdirect Australia is a national public health information service in Australia offering access to free health information and advice.
Their knowledge graph organises and connects different pieces of relevant health information for users and links data from different sources and displays it to the user in a logical way.

Healthdirect

The Knowledge Graph Cookbook—Facts and Figures



- 1st edition, available since April 2020
- Available in 3 versions
  - Free PDF
  - Kindle edition ($ 9.99 or kindleunlimited)
  - Paperback ($ 32.00)
- Based on more than 20 years of industry experience
- 256 pages (7 chapters + addendum)
- 49 infographics
- 177 bibliographic references
- 11 Expert interviews

Let’s talk!

Andreas Blumauer

CEO & Founder

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www.linkedin.com/in/andreasblumauer

I am passionate about Knowledge Graphs, Semantic Technologies, and Machine Learning.

“ I am confident that knowledge graphs have the potential to change not only organizations but the world because they can do nothing less than connect data, knowledge and people so that we can provide answers to small, big and even global problems.