Knowledge Graphs

Linking Data to Knowledge

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iran nuclear treaty

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About 19.700.000 results (0,59 seconds)

The **Iran nuclear deal** framework was a preliminary framework **agreement** reached in 2015 between the Islamic Republic of **Iran** and a group of world powers: the P5+1 (the permanent members of the United Nations Security Council—the United States, the United Kingdom, Russia, France, and China—plus Germany) and the European ...

Iran nuclear deal framework - Wikipedia
https://en.wikipedia.org/wiki/Iran_nuclear_deal_framework

About this result | Feedback

Top stories

Britain, France and Germany fear Iran nuclear deal collapse as tensions r…

Sky News

17 hours ago

Trump axed Iran deal to spite Obama, says newly leaked U.K. diplomati…

CBC.ca

23 hours ago

EU holds crisis talks on Iran nuclear deal

Yahoo News

1 hour ago

More for iran nuclear treaty

Joint Comprehensive Plan of Action

The Joint Comprehensive Plan of Action, known commonly as the Iran nuclear deal or Iran deal, is an agreement on the Iranian nuclear program reached in Vienna on July 14, 2015, between Iran, the P5+1, and the European Union. Wikipedia

Date effective: : 18 October 2015 (Adoption); 16 January 2016 (Implementation);

Purpose: Nuclear non-proliferation

Location: Vienna, Austria

Created: 14 July 2015

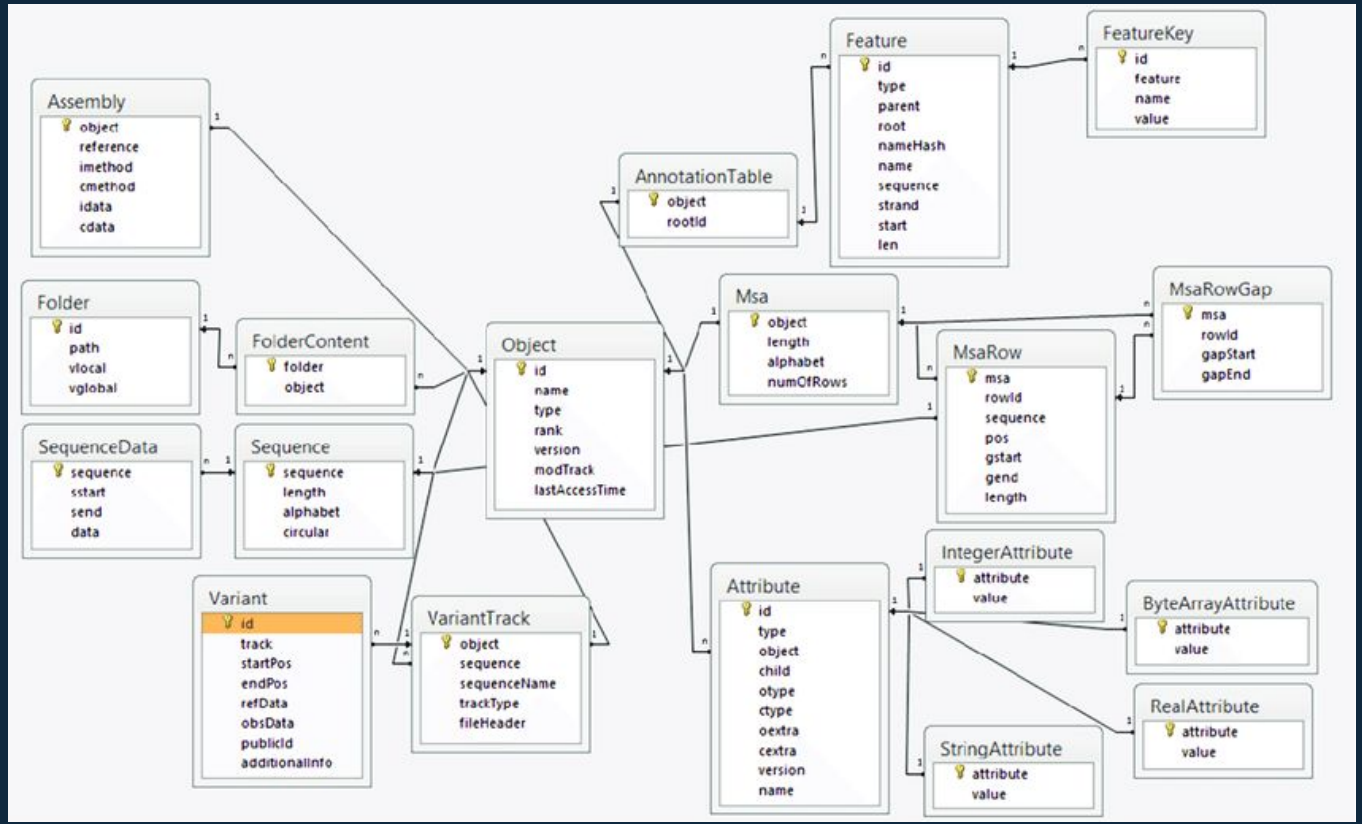
Feedback

See results about

Iran nuclear deal framework
The Iran nuclear deal framework was a preliminary framework agreement reached in 2015 between ...

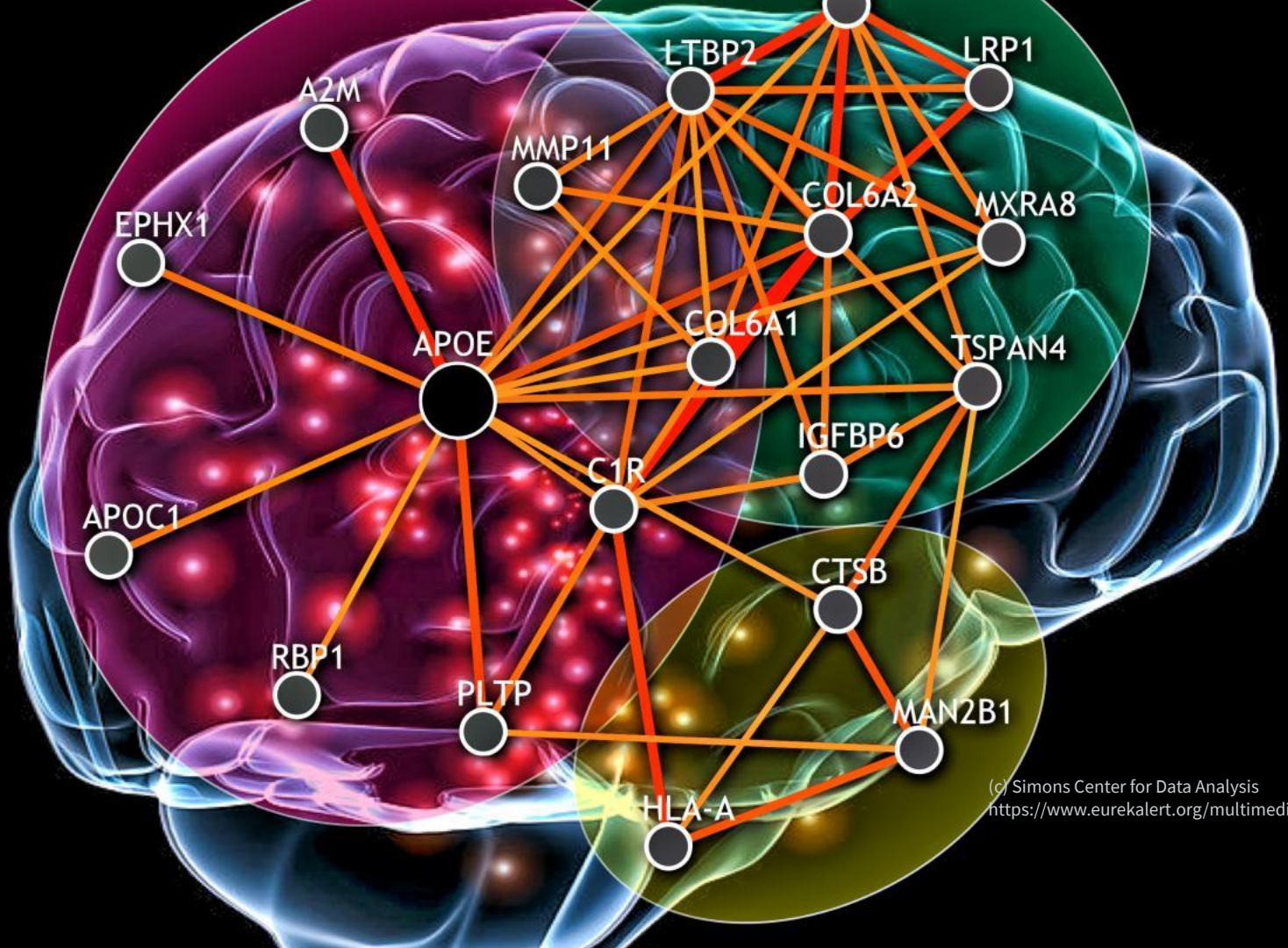
Entity-Centricity over Document-Centricity

After 5k yrs RDBMS can’t cope with agile contexts



Do all business problems fit well into tables?
What's better, more inline w/ how humans make sense of the world.

For more than 100k years

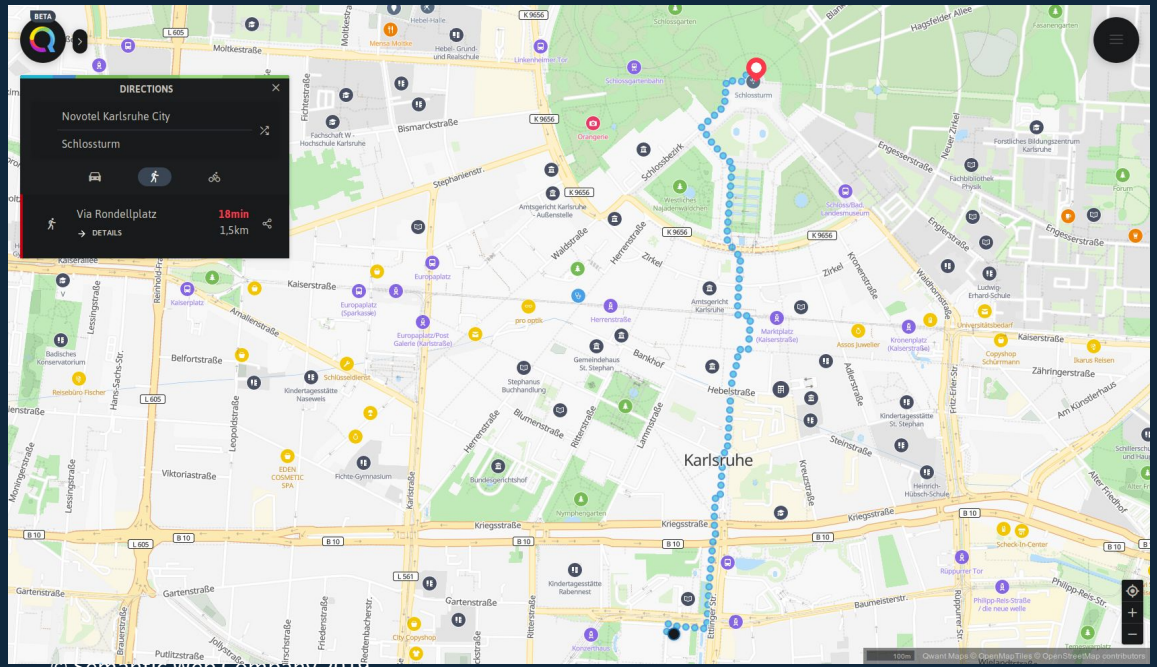


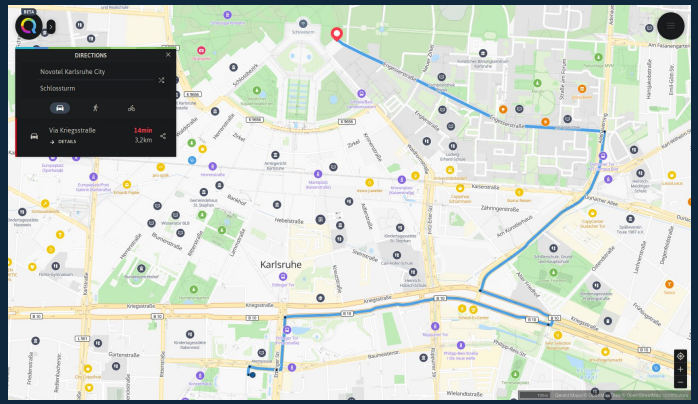
(c) Simons Center for Data Analysis
https://www.eurekalert.org/multimedia/pub/90698.php

More is better

How Graphs are changing our relationship with Data.

»Not understanding this level of complexity leaves businesses not modeling data and relationships correctly.« – *Denise Gosnell*





What is a Knowledge Graph?

From a Knowledge Engineer's perspective

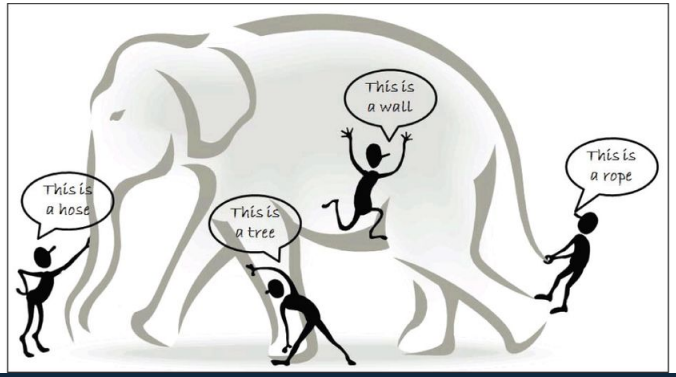
*A Knowledge Graph is a **model of a knowledge domain** created by subject-matter experts with the help of intelligent machine learning algorithms.*

From a Data Architect's perspective

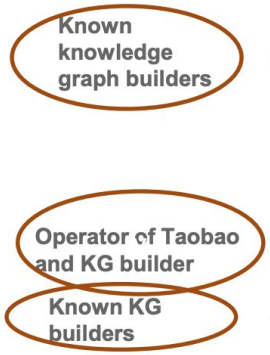
*Structured as an additional **virtual data layer**, the Knowledge Graph lies on top of your existing databases or data sets to **link all your data together at scale** – be it structured or unstructured.*

From a Data Engineer's perspective

*It provides a **structure and common interface** for all of your data and enables the creation of smart multilateral relations throughout your databases.*



KGs in use by largest companies



	Company name	Location	Industry	Change in market cap 2009-2018 ($bn)	Market cap 2018 ($bn)
1	Apple	United States	Technology	757	851
2	Amazon.Com	United States	Consumer Services	670	701
3	Alphabet	United States	Technology	609	719
4	Microsoft Corp	United States	Technology	540	703
5	Tencent Holdings	China	Technology	483	496
6	Facebook	United States	Technology	383(1)	464
7	Berkshire Hathaway	United States	Financial	358	492
8	Alibaba	China	Consumer Services	302(1)	470
9	JPMorgan Chase	United States	Financials	275	375
10	Bank of America	United States	Financials	263	307

From: [Alan Morrison - Collapsing the IT Stack: Clearing a path for AI adoption]

Graphs are a 2019 TREND and *"Graph DBMSs will grow at **100 percent annually** through 2022"...*

...because we *"need to ask **complex** questions across complex data"*

Source: Gartner.com

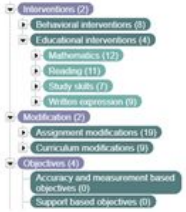
Taxonomies, Ontologies, Knowledge Graphs

ENTERPRISE KNOWLEDGE

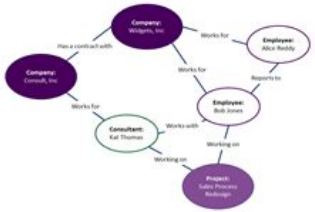
Content & Data Sources

Drupal
SharePoint
salesforce
Excel
MediaBeacon
An ESKO Company
twitter
Microsoft Dynamics
WebDAM
web-based digital asset management

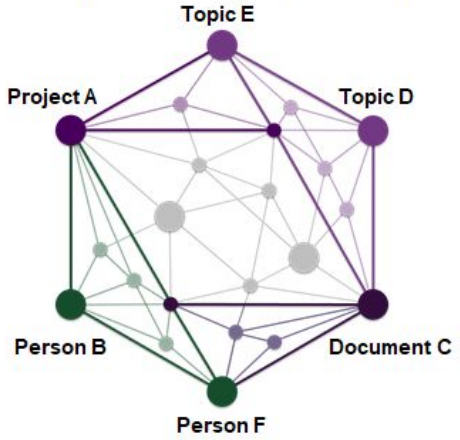
Business Taxonomy



Business Ontology



Enterprise Knowledge Graph



Subject	Predicate	Object
Person B	isPMOn	Project A
Document C	isAbout	Topic D
Document C	isAbout	Topic F
Person B	IsExpertIn	Topic D

Triple Store

Generic Use Cases for Knowledge Graphs

- **Loosely connected data**
- **Too simplistic, disconnected data models**
- **Data models don’t keep pace with market dynamics**
- **Too abstract data models**

Add Context to Data

Make Decisions with Confidence

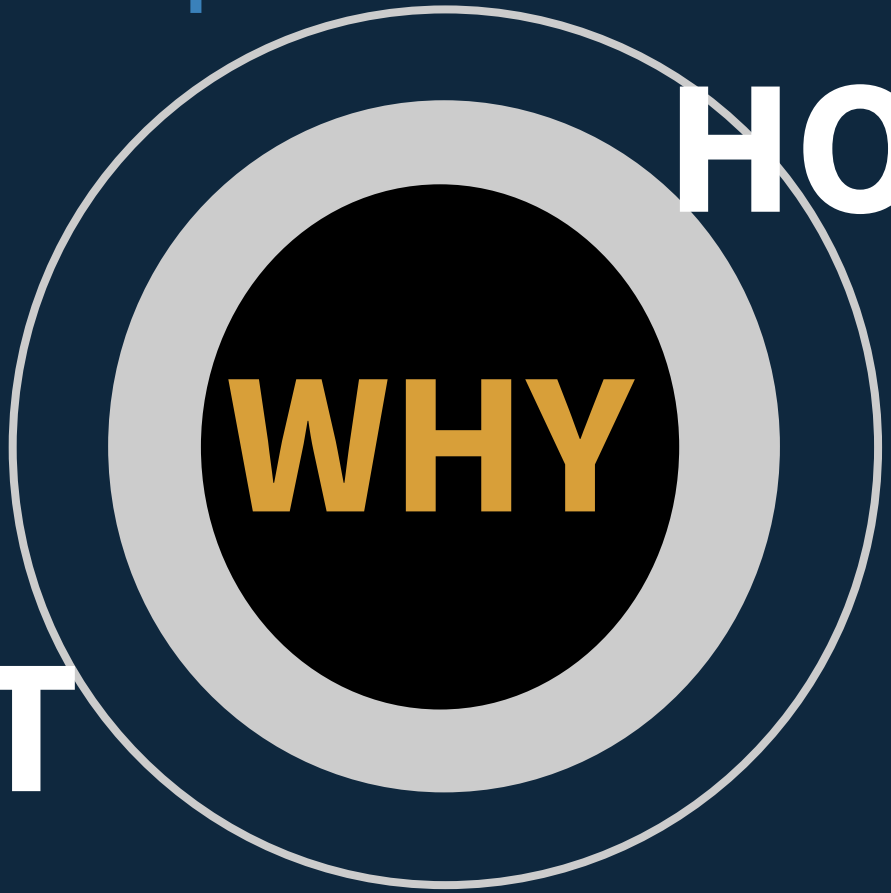
Strengthen AI Strategy

Gain Augmented Analytics

Connect Data Silos

Scale Data Governance

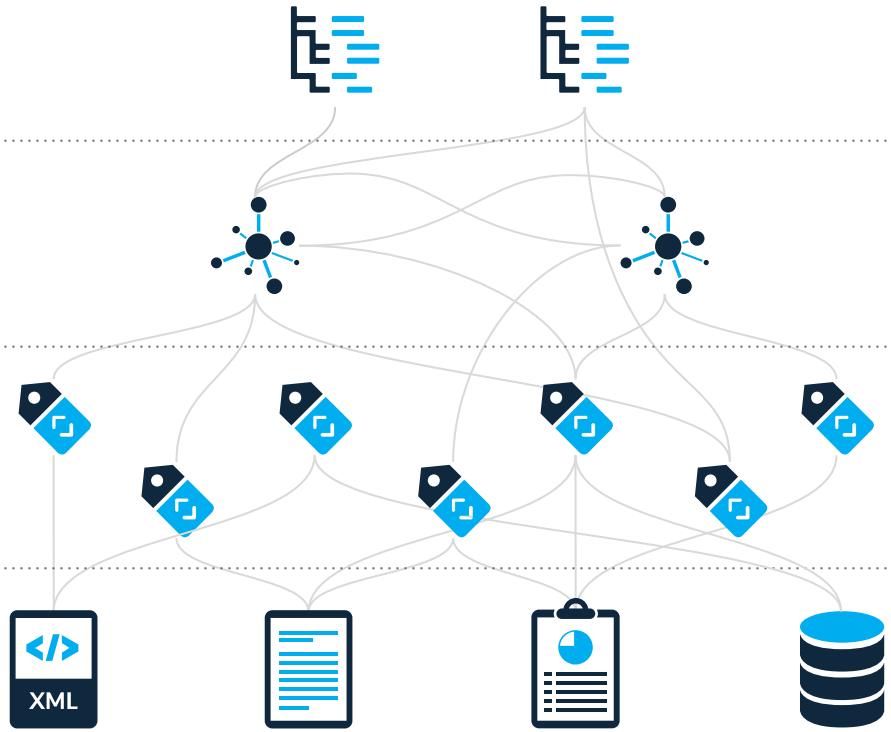
Knowledge Graphs



Governed by Knowledge

Where does Semantics sit in your information architecture?

Four-layered Information Architecture



Semantic AI application

Semantic Layer / Knowledge Graph

Metadata Layer

Content & Data Layer

Things, Not Strings

What is it and why should you care?

From keywords to entities.

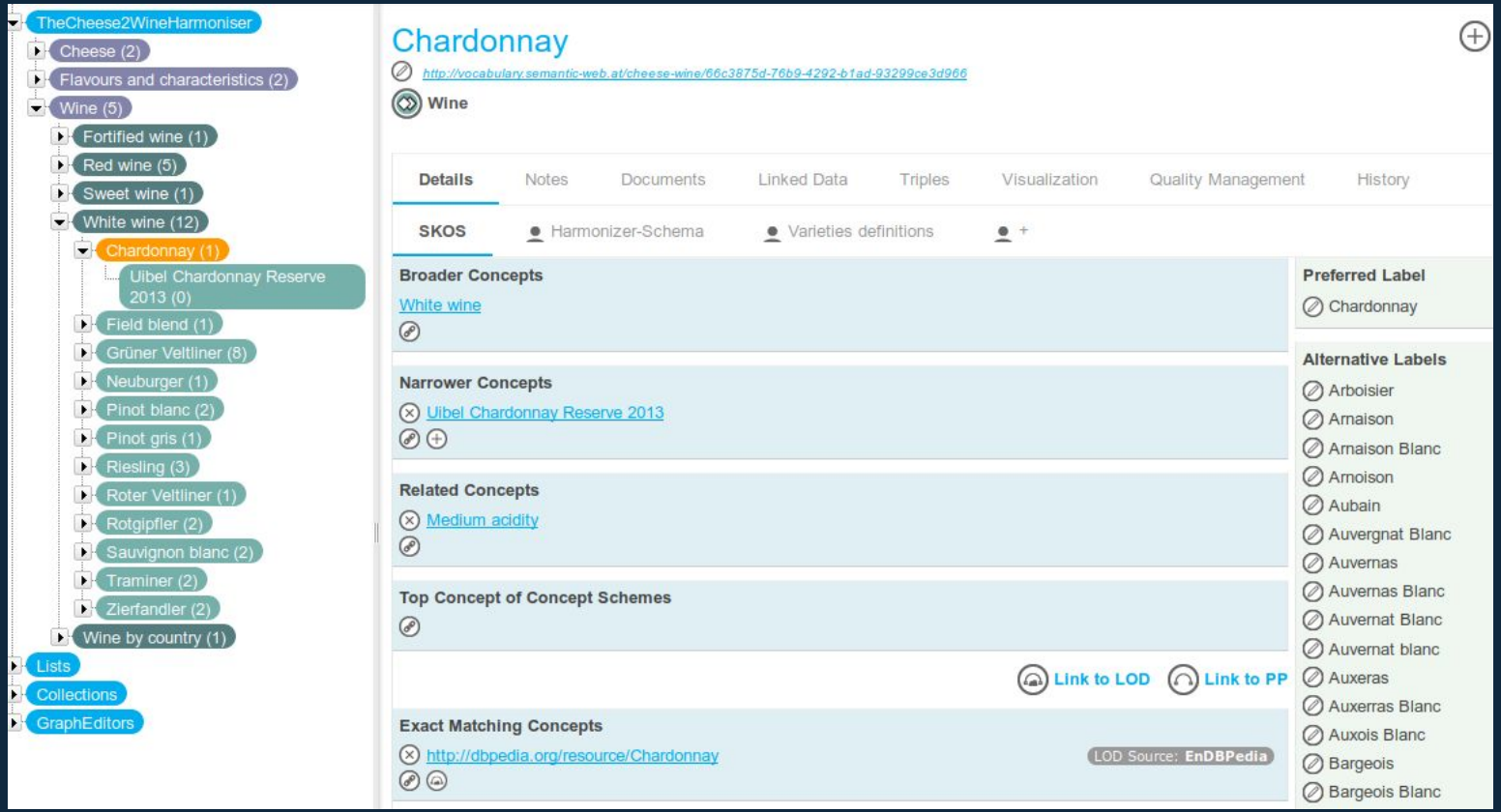
From the words that are used to describe things to the things being described.

It changes [web pages | data repos] from isolated islands, to islands joined by billions of bridges.

Aaron Bradley, EA - http://www.seoskeptic.com/semantic-seo-making-shift-strings-things/

‘Things’ but not Strings:
Using a ‘Semantic Knowledge Graph’

The standards compliant THING



The standards compliant THING

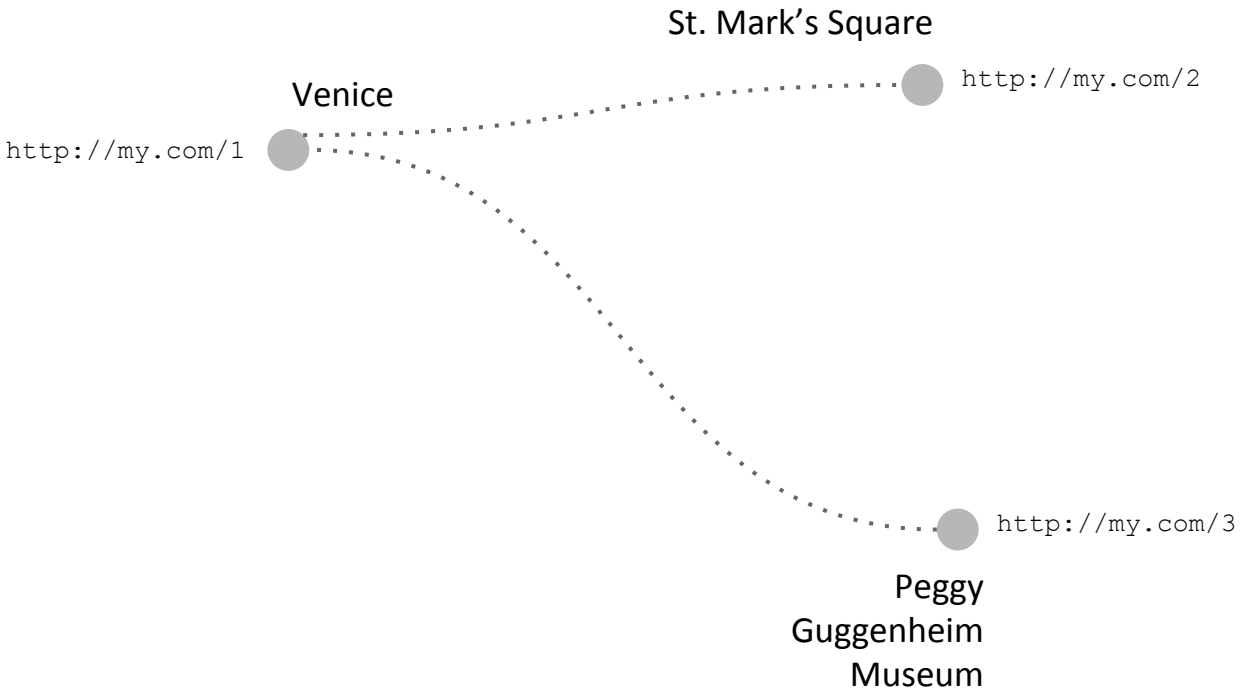
Subject (resource, entity, thing)

Predicate	Object
http://www.w3.org/2004/02/skos/core#exactMatch	http://dbpedia.org/resource/Chardonnay
http://www.w3.org/2004/02/skos/core#narrower	http://vocabulary.semantic-web.at/cheese-wine/912c97a4-ce16-40db-b85c-e751b8b1f7cd
http://www.w3.org/2004/02/skos/core#prefLabel	Chardonnay en

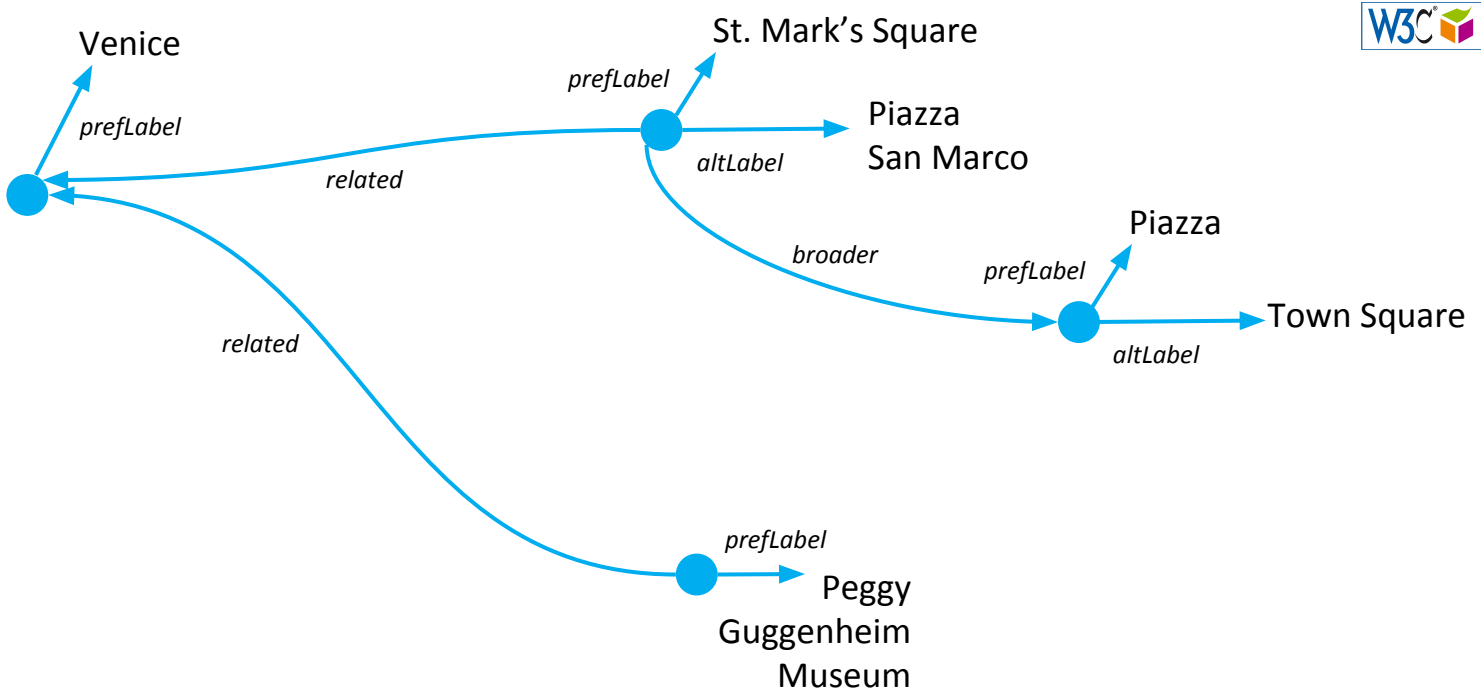
Standards-based KNOWLEDGE GRAPHS

Building Blocks

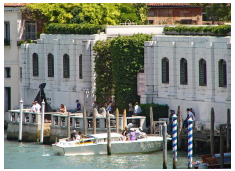
Things and URIs



Labels and basic relations



Classes, specific relations, restrictions



Venice

prefLabel

containedInPlace

St. Mark's Square

prefLabel

altLabel

Piazza San Marco

image

broader

Piazza

prefLabel

Town Square

altLabel

containedInPlace

Monday through Sunday, all day

opening Hours

prefLabel

Peggy Guggenheim Museum

schema.org

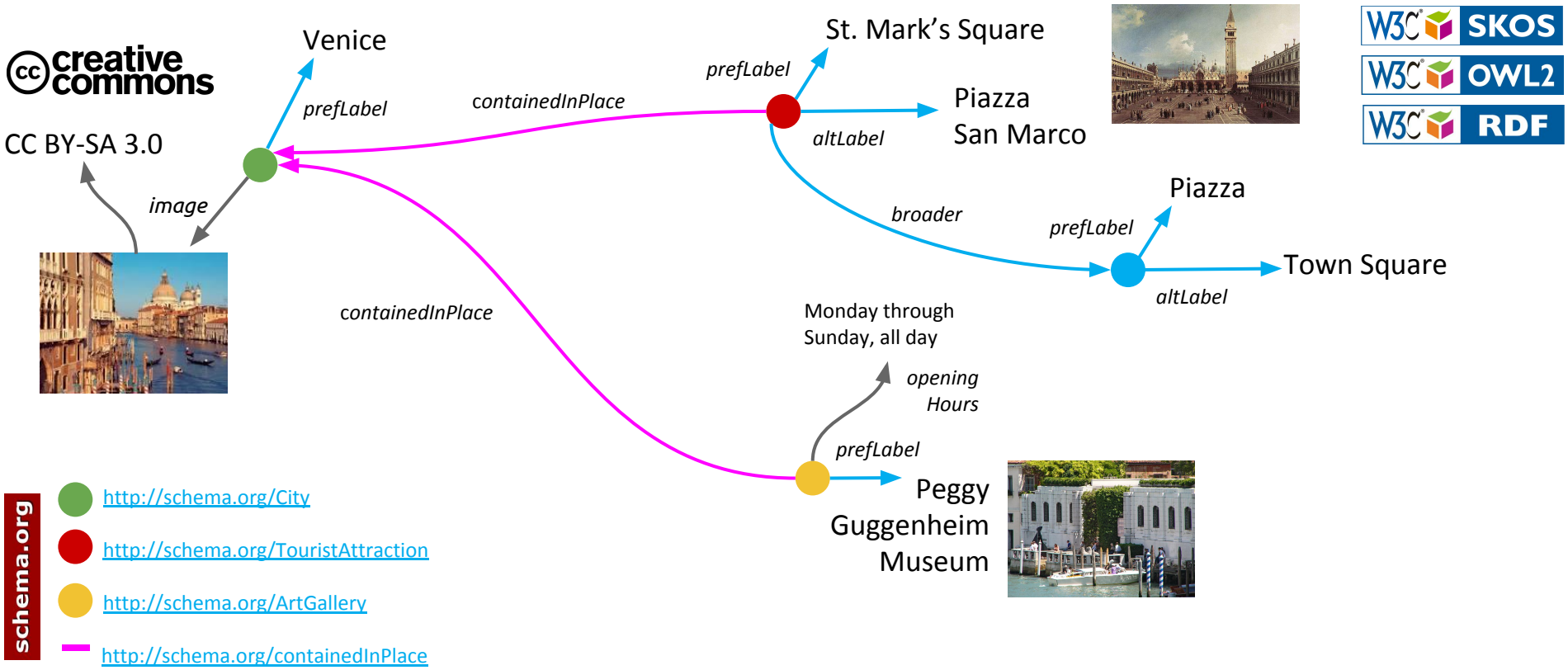
http://schema.org/City

http://schema.org/TouristAttraction

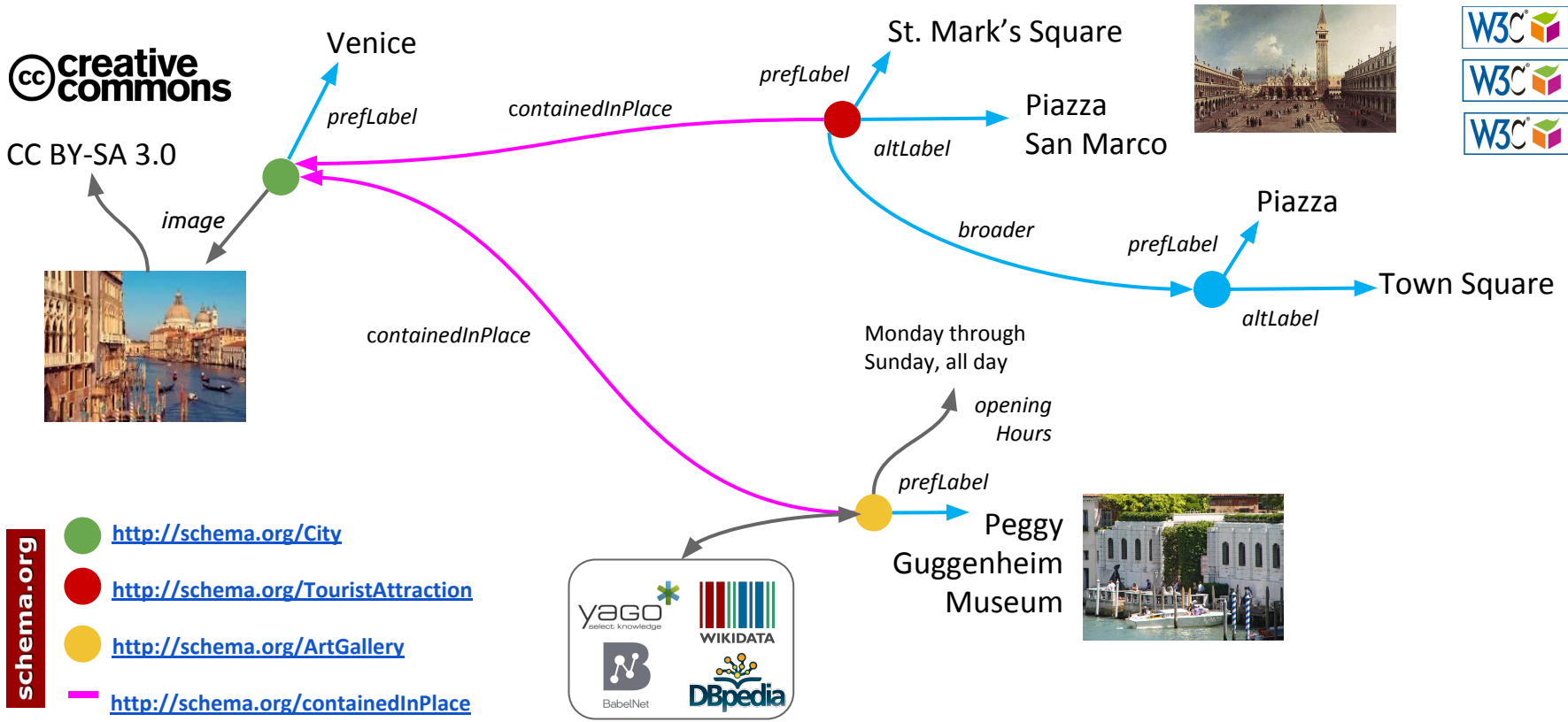
http://schema.org/ArtGallery

http://schema.org/containedInPlace

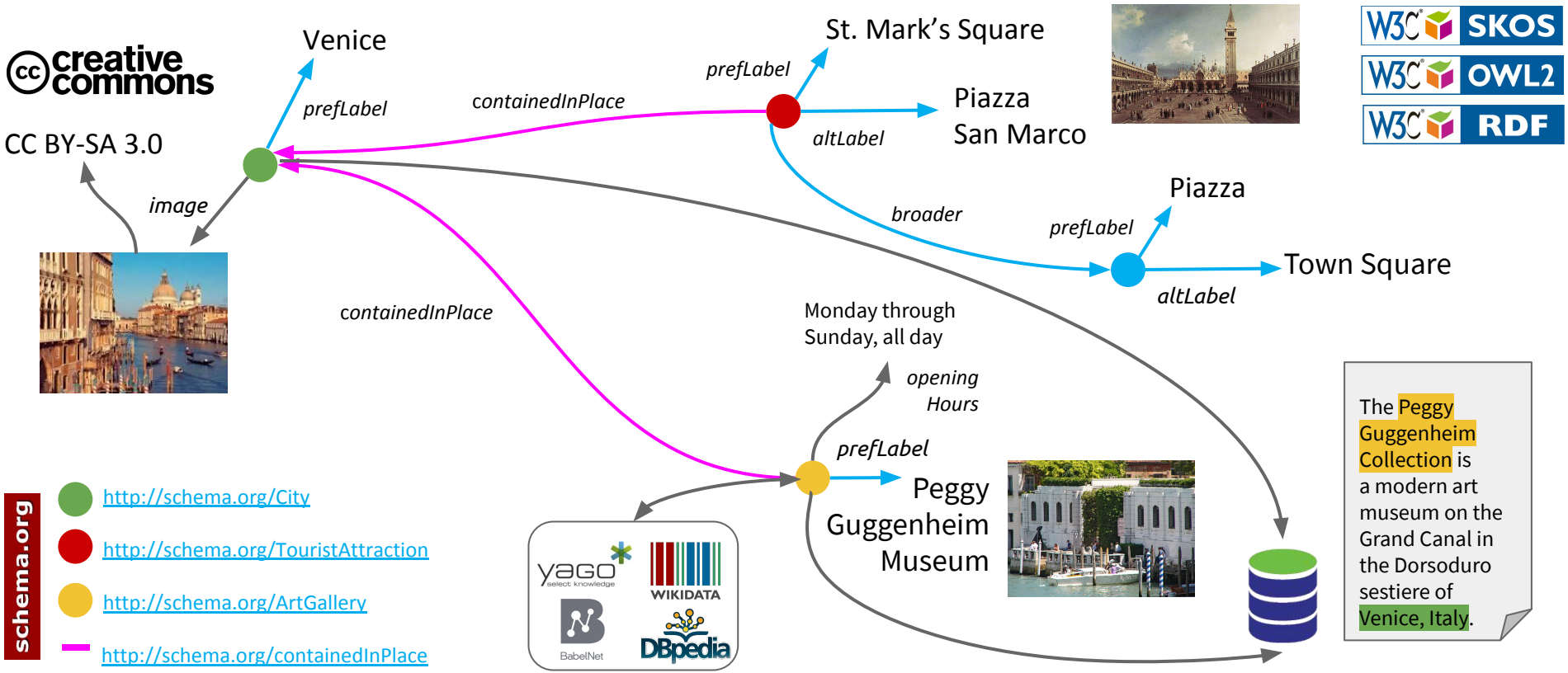
Metadata and Graph annotations



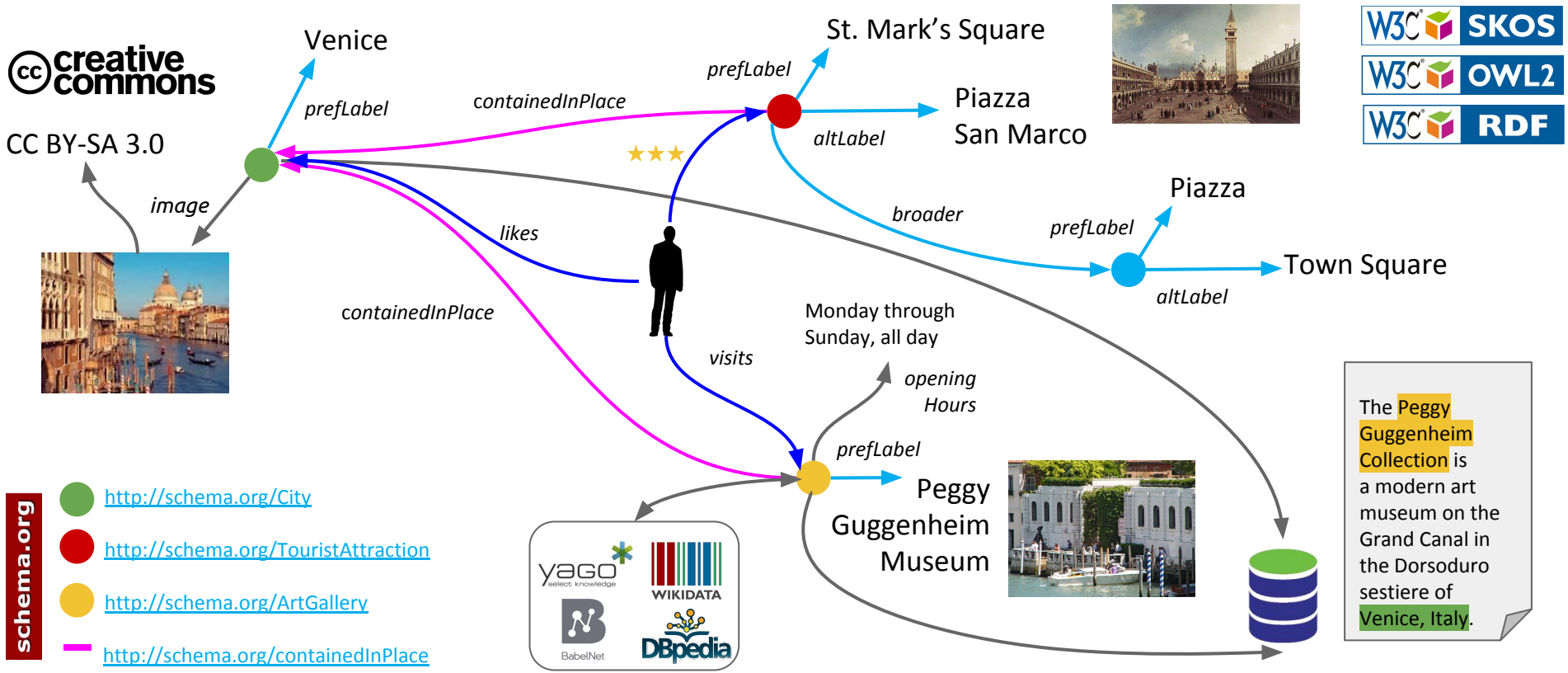
Entity linking and schema mappings



Linking to data and document stores



Putting the user into the graph



Establishing the KNOWLEDGE GRAPH

HR Analytics

As an HR manager, for upcoming training programmes, I want to identify employees who:

- have a certain skill set
- have a specific degree
- have skills that are increasingly important on the labour market
- fall into a specific salary range

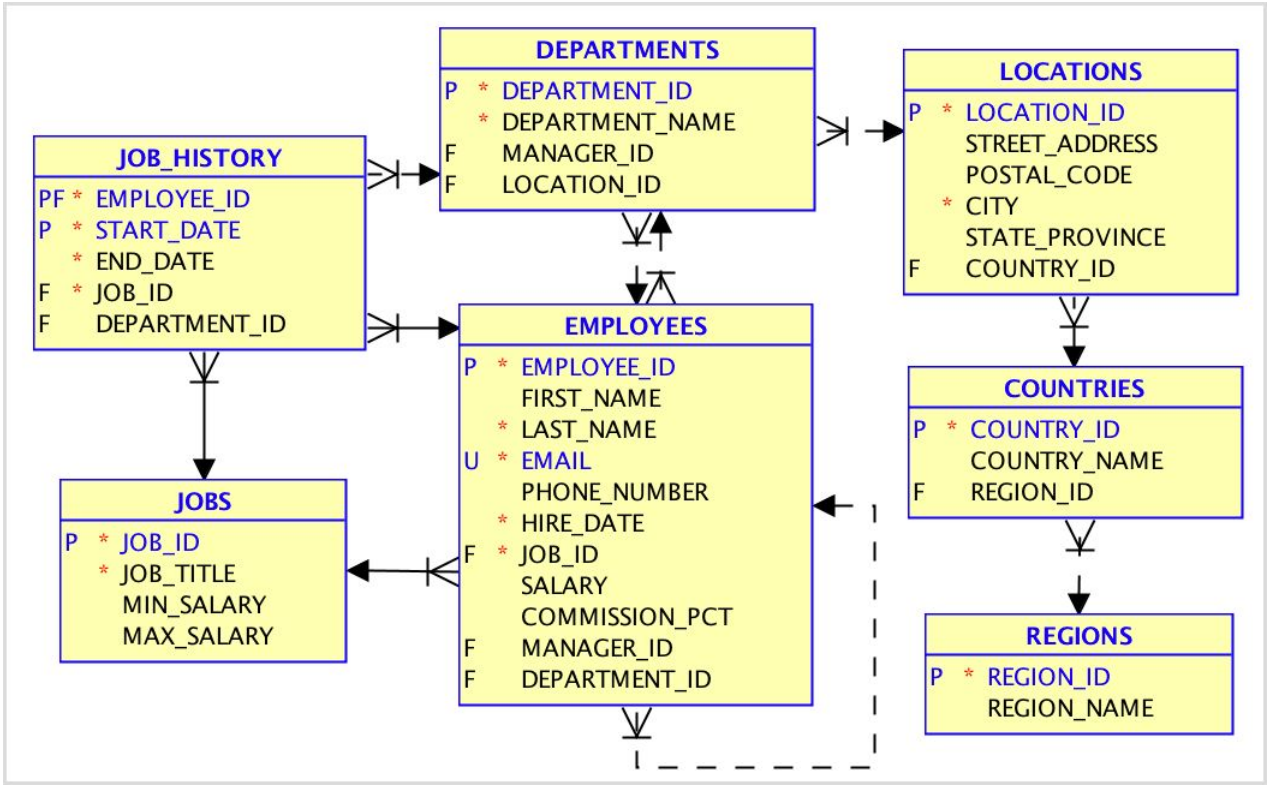
Employee database

Resumes

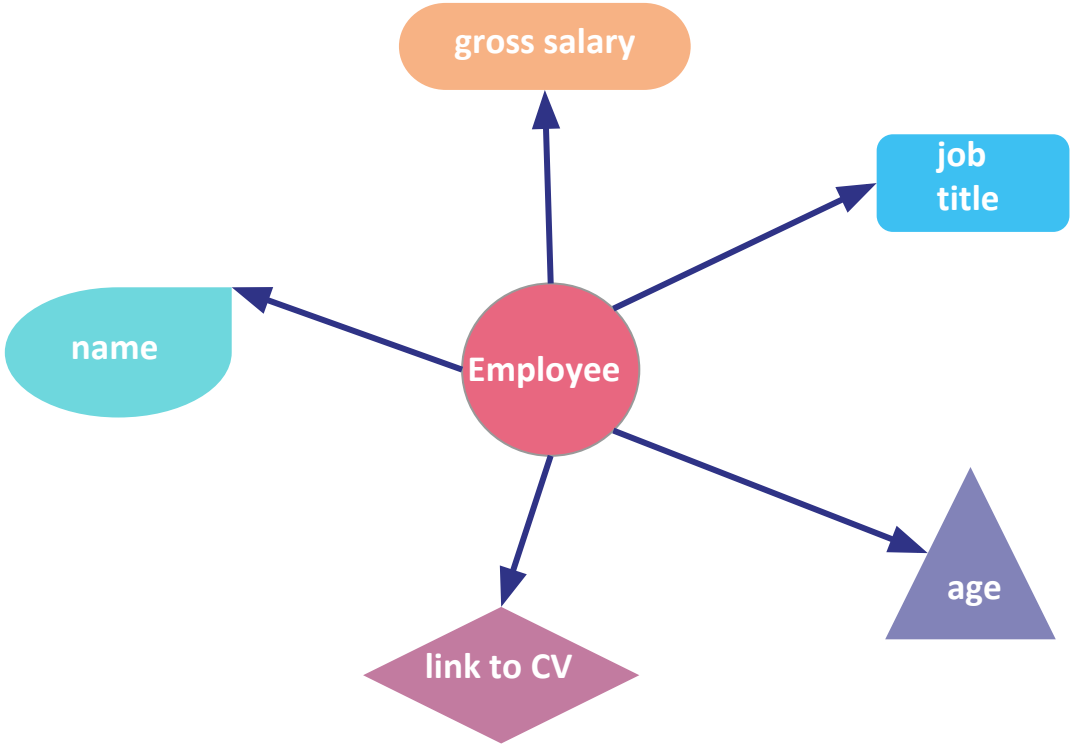
Labour market statistics

XLS

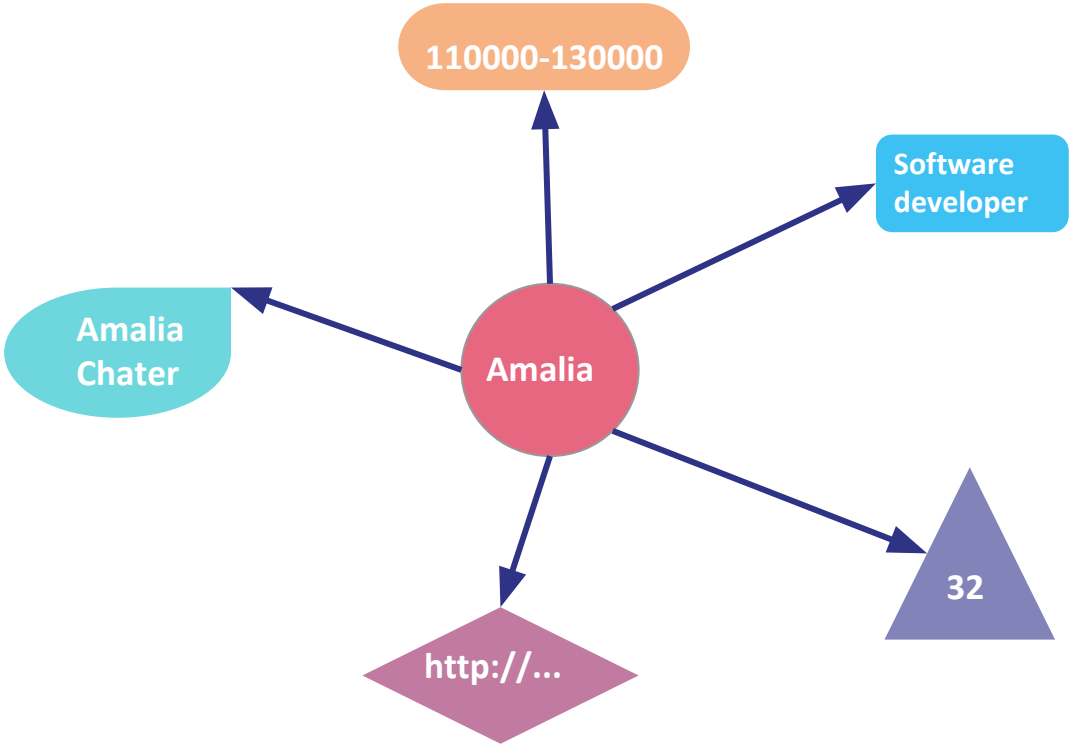
HR Analytics - relational data model



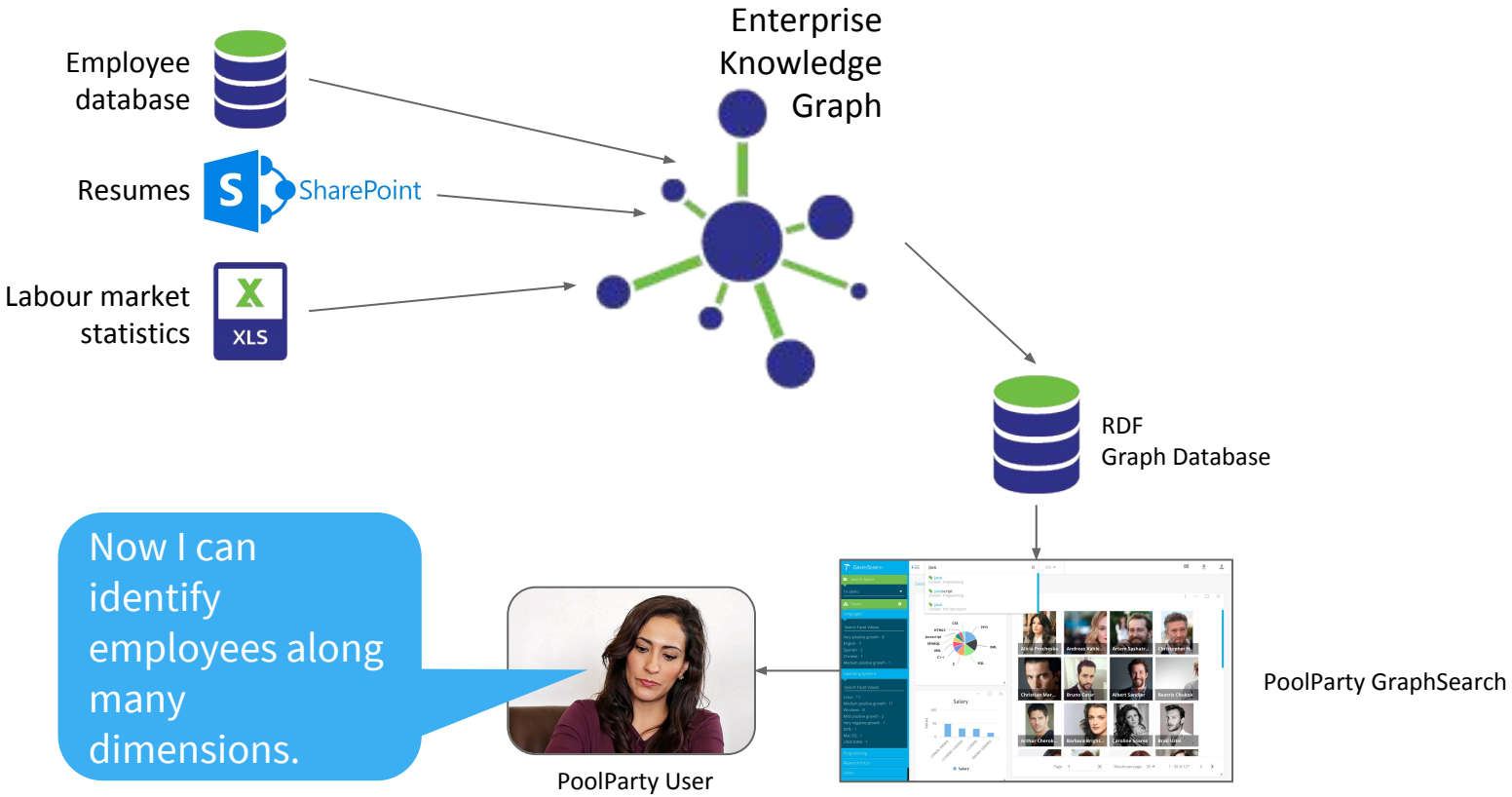
HR Analytics - graph data model



HR Analytics



HR Analytics



What do you need? And who's in charge?

- Taxonomy
  - Domain Expert
- Ontology
  - Domain Expert
- Data Orchestration {transforming, mapping}
  - Knowledge engineer
- Data
  - Organization / IT
- Settings for the front end
  - Domain Expert

- Jobs and Skills Demo Application
  - Company Type (5)
  - Employees (1)
  - Job Roles (6)
    - IT (7)
    - Knowledge Engineering Experts (3)
    - Management (6)
    - Research (3)
    - Teaching (2)
    - Writing (2)
  - Location (3)
  - Skills (6)
    - Languages (4)
      - Chinese (0)
      - English (0)
      - Japanese (0)
      - Spanish (0)
    - Operating Systems (6)
      - DOS (0)
      - Linux (0)
      - Mac OS (0)
      - Solaris (0)
      - UNIX SVR4 (0)
      - Windows (0)
    - Programming (17)
    - Research Focus (13)
    - Technology Domains (19)
    - Tools (15)
  - Studies (3)
- Lists
- Collections
- GraphEditors

Job Roles

http://vocabulary.semantic-web.at/jobs-skills/15

Metadata | Skills Facets | Triples | **Visualization** | History

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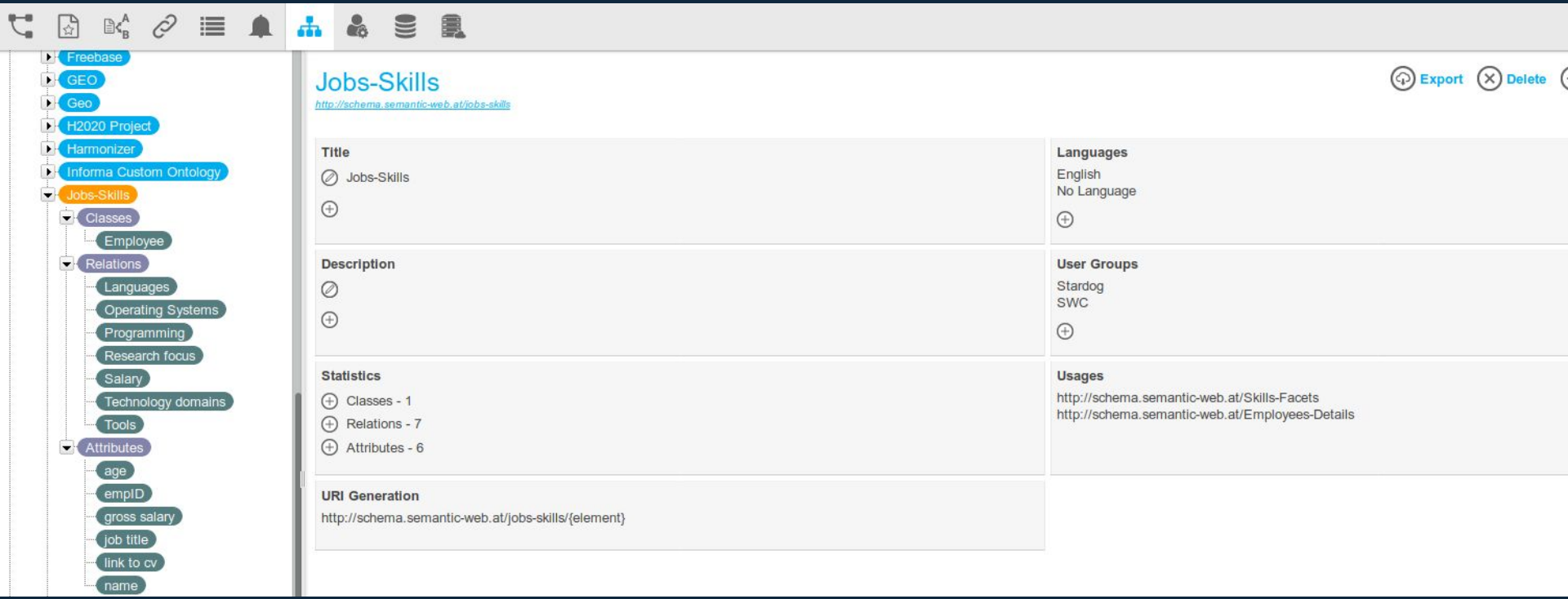
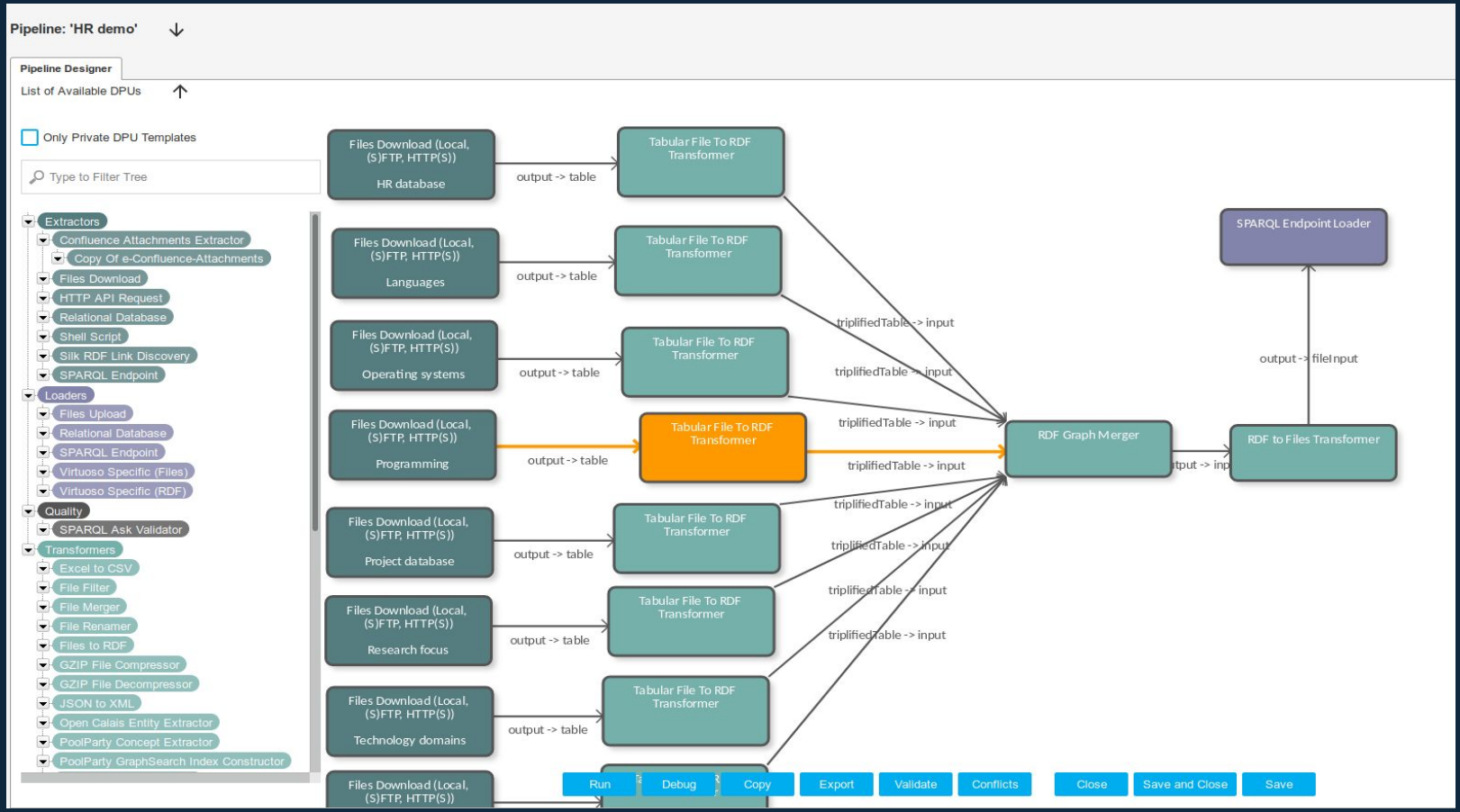
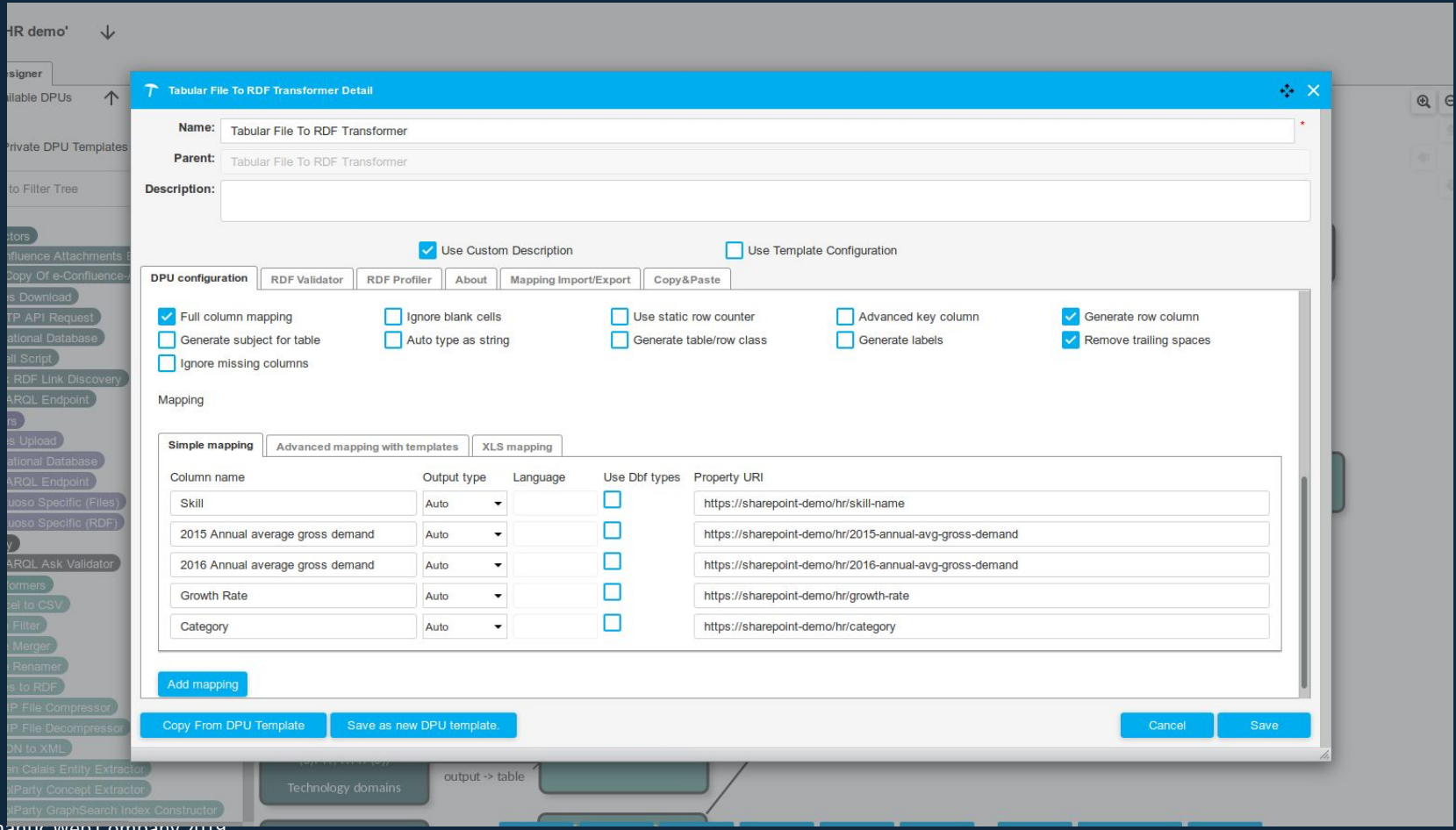
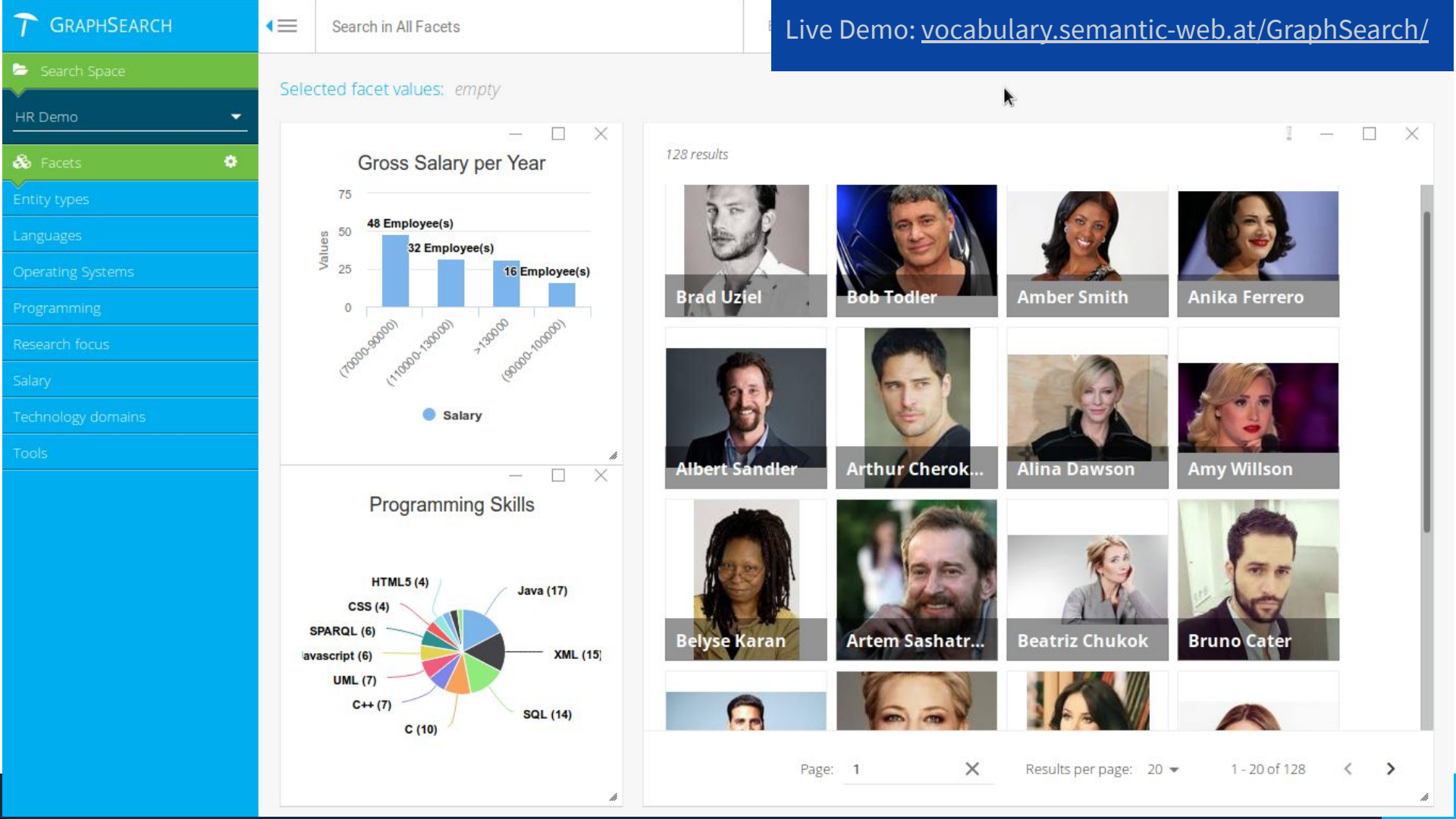






Live Demo: vocabulary.semantic-web.at/GraphSearch/



GRAPHSEARCH

Search in All Facets

EN

Search Space

HR Demo

Facets

Entity types

Languages

Operating Systems

Search Facet Values

Windows - 2
Mild positive growth - 1
Medium positive growth - 1
Linux - 1
Mac OS - 1

Programming

Research focus

Search Facet Values

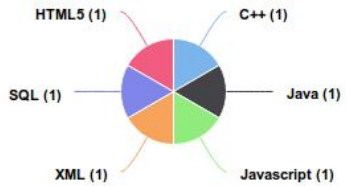
Data Mining - 2
Mild positive growth - 2
Machine Learning - 1
Medium positive growth - 1
Information retrieval - 1
Image Processing - 1

Salary

Selected facet values: Windows *(Operating Systems)* Data Mining *(Research focus)* Clear all

Gross Salary per Year

Programming Skills



2 results

Page: 1

Results per page: 20

1 - 2 of 2

GRAPHSEARCH

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Medium positive gro

Information retrieval

Image Processing - 1

Salary

Technology domains

Tools

Chen Yuang

Chen Yuang

Languages

Operating Systems

- Mild positive growth
- Medium positive growth
- Linux
- Windows
- Mac OS

Programming

Research focus

- Data Mining
- Mild positive growth
- Machine Learning
- Medium positive growth
- Information retrieval
- Image Processing

See Also

Graph Similarity

Similarities: 10

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