# KG Creation

##### Session 2.4 (SEMANTiCS)

#### Time: Thursday, September 21, 2023 - 16:45 to 18:00

#### Chair: Milan Dojchinovski, Research Associate, InfAI

## **Talks**

### LD Wizard: Create Linked Data in One Spell

Contemporary approaches for creating linked data require (1) domain knowledge of the source data, (2) knowledge of linked data techniques, and (3) significant programming skills to implement the transformations. This makes creators of new linked data a rare breed: they must have 3 individually rare traits.

LD Wizard is a new GUI-based ETL application that lowers the threshold for becoming a successful linked data creator. LD Wizard supports domain exports that have only a little bit of knowledge about linked data techniques, and that do not need to have significant programming skills.

LD Wizard supports the transformation of tabular source data into linked data, by allowing the user to select terms (classes and properties) from their domain. Linked data that is created with LD Wizard can be downloaded as an RDF file, or can be uploaded to a triple store.

Since LD Wizard focusses on domain experts, it can be configured for specific domains. There are currently configurations for the following domains: cultural heritage, biology, social sciences, humanities, and geospatial.

In this presentation, we will show how you can use LD Wizard, and how you can configure one for your own domain.

The LD Wizard was created by the Dutch Digital Heritage Network (NDE), and is currently maintained as open source software by Platform Linked Data Netherlands (PLDN). LD Wizard is actively being developed by the linked data community, and there are open bounties for new contributors to pick up.

| Wouter BeekCo-founder of Triply[Affiliation page](https://triply.cc/) | Wouter Beek is co-founder of Triply BV (<https://triply.cc>), a company that offers Linked Data software and services, and guest-researcher at the Knowledge Representation and Reasoning (KR&R) research group at VU University Amsterdam.  Wouter is interested in the Semantic Web as a platform for knowledge-intensive applications, the deployment of large-scale knowledge bases for innovative reuse, and the interaction between Web semantics and pragmatics. |
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### Knowledge Graphs, Large Language Models and Ontologies working together - observations from the field [SP]

This session explores the dynamic interplay between Knowledge Graphs (KGs), Large Language Models (LLMs), and Ontologies. We will share our experience from the field on the collaborative potential of these technologies in the creation of modern intelligent solutions across industries highlighting tangible business value.

| Dr. Jesús BarrasaHead of Solutions Architecture for EMEA at Neo4[Affiliation page](https://neo4j.com/) | Dr. Jesús Barrasa is the head of the Sales Engineering team in EMEA. Before that he led Neo4j's efforts on the Telecoms industry, engaging with most customers including CSPs and OSS vendors.  He combines over 20 years of professional experience in technical sales & consulting in the Information Management space. Prior to joining Neo Technology, Jesús worked at companies like Denodo and Ontology (now EXFO) where he got first-hand experience with many successful enterprise-wide Data integration deployments and large Graph Technology projects enhancing the operations and analytics of major companies all over the world.  Jesús holds a Ph.D. in Artificial Intelligence/Knowledge Representation and is an active thought leader in the Knowledge Graph and Semantics space. |
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| Dr. Alexander JaraschTechnical Consultant in Pharma & Lifesciences at Neo4j[Affiliation page](https://neo4j.com/) | Dr. Alexander Jarasch is Technical Consultant for Pharma and Life Sciences at Neo4j and a board member of HealthECCO, a non-profit organization. With a background in bioinformatics, his career extends across several industries, including chemistry, biotech, pharma and IT. He has expertise in machine learning and data engineering, combined with his deep domain knowledge in pharma.  In his previous roles, Alexander has been the Head of Data and Knowledge Management at the German Center for Diabetes Research (DZD). He has received numerous awards for the innovative use of advance analytics' techniques such as "Knowledge Graph" to combat widespread diseases, such as diabetes. |

### We created a Knowledge Graph and want to show you how we did it

In this case study we present how we built our Knowledge Graph at CROW, an independent not-for-profit knowledge platform. We will show the architecture, name all the components, show which software is used for what, etc. We feel that this is a question that lingers with many visitors of SEMANTiCS: I want to build a knowledge graph, but how? We give an overview of the architecture and in this interactive session, zoom in on specific parts with questions from the audience.

Our semantic approach involved setting up a complete platform, including ETL’s (with Comunica, RML, etc.), triple stores (GraphDB, Laces Hub, TriplyDB, etc.), ontology managers (Vocbench, Laces Library Manager, etc.) and creating a unified ontology that defined the concepts and relationships within the organization's data. The result enabled employees to discover and analyse data in a more intuitive and efficient manner, and in general created awareness for the data-centric approach. As a spin-off the ontology became the start of our ‘Enterprise content model’.

CROW has accumulated a vast amount of knowledge over the years, but the data which hold this knowledge was siloed and semi-structured, making it difficult for clients and employees to access and utilize it effectively. As a result, there was a lack of consistency in decision-making, inefficient workflows, and missed opportunities for innovation.

As the organization continues to add to the Knowledge Graph, the value of the solution will increase. Moreover, as CROW expands its business, the Knowledge Graph will enable the organization to better manage its data and foresee in the client needs that are yet to come.

| Rik Opgenoort | Redmer Kronemeijer |
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