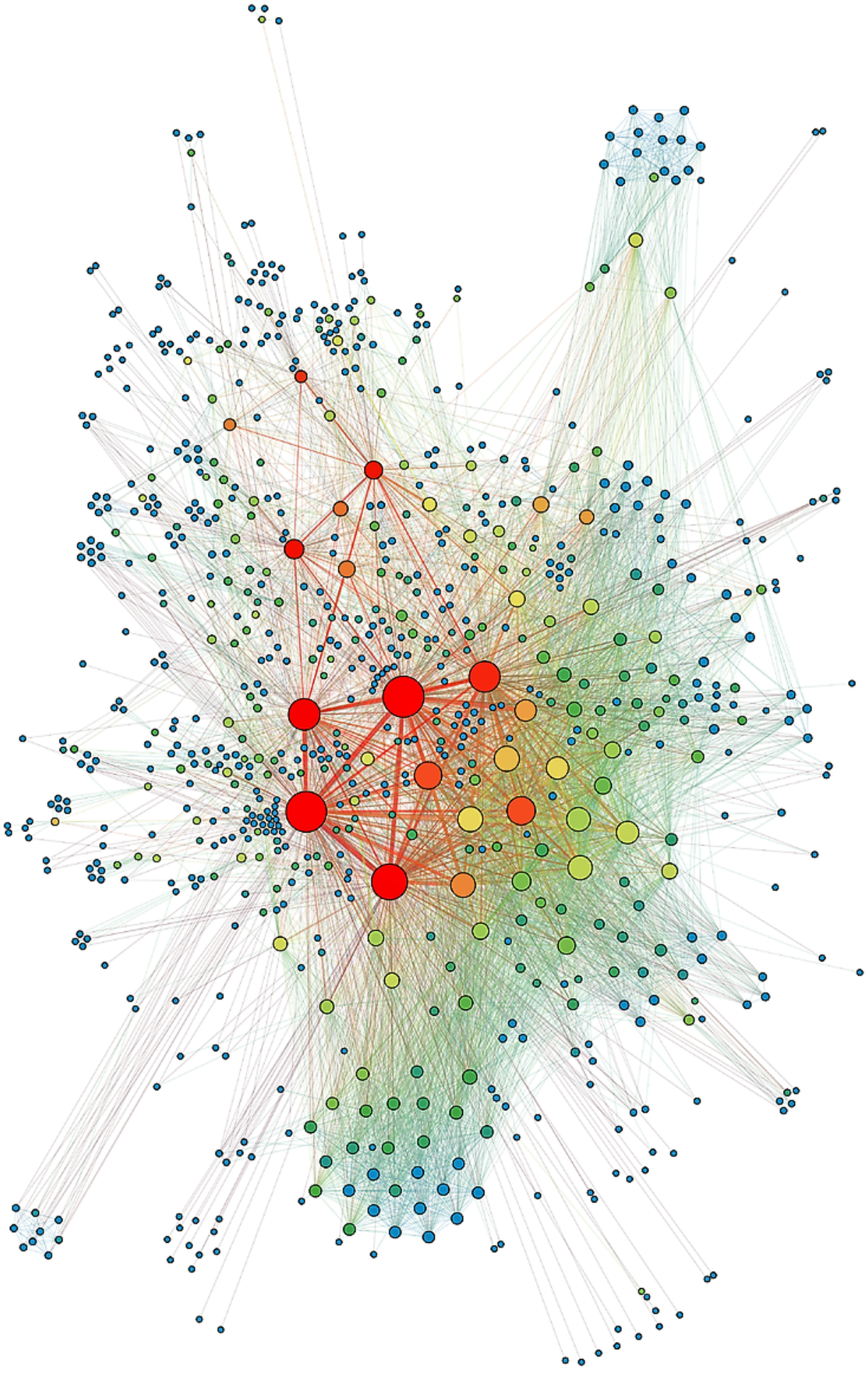
Knowledge Graph Construction

We offer strategic, methodological and technological support for all phases of the Knowledge Graph Construction process. We support many types of heterogeneous data sources (databases, tabular data in CSV or Excel formats, JSON files or APIs, documents, etc.)



Contact information

Address: Escuela Técnica Superior de Ingenieros Informáticos (ETSIINF). Universidad Politécnica de Madrid. Avda. Montepríncipe, s/n. Boadilla del Monte, 28660, España
Phone number: 910672911
Website: oeg.fi.upm.es
Email: oscar.corcho@upm.es

Technological Offers type

Technological scientific services

Research and innovation areas

- Digital Technologies, Artificial Intelligence, Cybersecurity, 5G, Robotics

ODS

Available from: 2021

Where?

Artificial Intelligence R&I Centre (AI.nnovation Space) Ontology Engineering Group

Keywords: | datos enlazados | grafo de conocimiento | knowledge graph | Linked Data | ontología | ontology

Knowledge Graph Construction

Descripción de los servicios que se ofrecen

In the context of this service, we provide your organisation with the strategic and technical support required to plan for the effective creation and use of knowledge graphs.

From a strategic point of view, we will bring in our wide expertise on the strategic planning as well as hands-on creation and maintenance of Knowledge Graphs in a diversity of domains and activity sectors. This will be based on a careful analysis of your business processes, as well as on an analysis of your main data and information sources (databases, structured and semi-structured data sources, documents, etc.).

From a technical point of view we will configure all those processes that are required in order to pre-process, transform and unify all those data sources in a single knowledge graph for your organisation. We will also align your data sources to existing knowledge graphs in your domain, as well as general ones, if relevant. All this work will be done using a range of declarative mapping languages whenever this is possible, so as to facilitate maintenance in the future. It may also need specific ad-hoc transformations, especially in the case of very messy data or documents.

Necesidades demandadas y aplicaciones

Knowledge Graphs have become an essential tool for the organisation of data, information and knowledge inside organisations, independently of their area of activity and of whether they are private or public. Knowledge Graphs ease the management and

organisation of all the data, information and knowledge assets that these organisations have, making the products that they offer more visible, making their employees more efficient when searching for data and information, etc.

Sector o área de aplicación

This service is offered to public and private organisations in all areas of activity. We have experience in the creation of knowledge graphs in a wide range of domains, including digital libraries, geographical agencies, cities and regions, academic and research data, hardware and software infrastructure, legal institutions, industry 4.0, sensor networks, etc.

Competencias diferenciales

Besides our wide experience in strategic advice to all sorts of national and international organisations, as well as in production-ready deployments of knowledge graphs, our main competitive advantage is the fact that we have been working for more than 15 years in the creation of languages, algorithms and tools for the transformation of varied sources of data into knowledge graphs. Furthermore, we lead the W3C Working Group on Knowledge Graph Construction, where we are discussing together with other stakeholders from industry, public administrations and academia about which are the next steps to follow in order to improve the currently existing languages and transformation systems.

Referencias previas de prestación

- Biblioteca Nacional de España: http://datos.bne.es/
- Ayuntamiento de Zaragoza: http://datos.zaragoza.es/
- Centro Nacional de Información Geográfica: http://datos.ign.es/
- Server for the Spanish DBpedia: https://es.dbpedia.org/

Furthermore, we have provided support on the development and deployment of knowledge graphs for several Spanish and international companies in activity sectors like ICT, legal, insurance and university management, among others. We cannot disclose their names due to confidentiality agreements.

Descripción del equipamiento

We have the hardware and software infrastructure that is necessary in order to run all these transformation processes, as well as knowledge graph hosting if necessary. However, we are commonly requested to work on the premises of our clients, given confidentiality issues, so we are flexbile on this.