

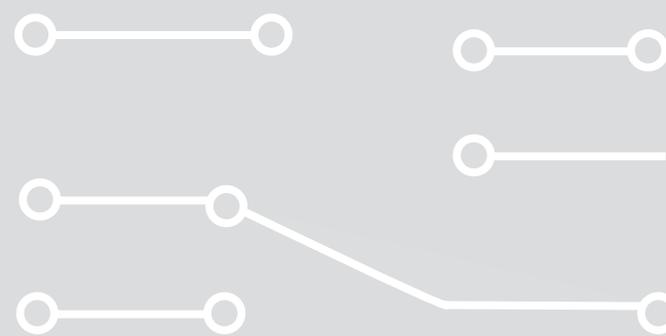


**TAIGER**

**SUCCESS STORY**

**REPSOL**

**ONTOLOGIES: OVERCOMING  
THE LIMITATIONS OF THESAURI**





# REPSOL

## INDUSTRY BACKGROUND

Repsol is a global energy company that operates in the hydrocarbon sector (exploration and production, refining and marketing) in over 30 countries. It is one of the world's largest private oil companies, with a workforce of over 36,000 people. Repsol is a leader in refining and marketing in Spain, and it is the third largest private Liquefied Petroleum Gas distribution company in the world. The company is considered one of the top marketers of Liquefied Natural Gas in the world, and its presence in strategic areas has positioned it in recent years among the energy companies with the greatest growth potential and prospects.

## THE NEED

Repsol's Strategy Department faced a challenging problem that has been characterizing and limiting the progress of search engines, particularly in areas such as document and knowledge management: improving the quality and precision of search results for very complex queries, while keeping recall limited to avoid information overload. Furthermore, Repsol wanted to improve the performance of the multi-million-euro installations currently deployed, to enable information access in unprecedented ways beyond the reach of such systems, including the discovery of hidden assets and exploitation of semantic relationships among existing concepts. This goal was paramount in order to remain competitive and work more efficiently and productively. Strategy Department staff members were spending too much time searching for information, and productivity could be improved.

With a mix of structured and unstructured information (Excel files and Adobe and Word files, respectively) and a need to reflect the internal organizational structure and processes in the access mechanism, strategists were unable to swiftly gain access to information they needed or knew was available. Repsol's Strategy Department wanted better. The aim was to overcome existing limitations, improving both the quality and efficiency of information recovery. It was fundamental that the add-on to the existing installation had to be reliable and able to deliver the right results, particularly for very complicated queries, which required a significant improvement in expressivity.

### ORGANIZATION

Repsol  
[www.repsol.com](http://www.repsol.com)

### ORGANIZATION SIZE

36,000 employees

### COUNTRY/REGION

Worldwide

### INDUSTRY

Energy - Oil and Gas

### BUSINESS NEED

- Document management
- Knowledge management

## THE SOLUTION

After a thorough analysis and a competitive selection process, Repsol chose Taiger to complement their existing installation. The goal was to overcome the expressivity limitations of traditional thesauri and build an ontology that would define and drive the overall information access mechanism. Such an ontology had to be extendable to model and drive information access across Repsol's departments and business units. Furthermore, it was to be deployed as an add-on to the existing installation. This presented a major engineering challenge, as the installation only supported thesauri (in terms of expressivity, an order of magnitude below ontologies), which was completely insufficient for meeting the functional requirements at hand.

Taiger's unique ability to support ontologies to understand and structure heterogeneous information, identify concepts within the data and exploit relationships to discover hidden assets was instrumental for Repsol to achieve its goal of improving precision while limiting recall with the utmost possible speed. In particular, the rich ontology built that integrated and observed internal policies, the structure of the organization and its processes, enables Repsol's personnel to access the information they need better, faster and exactly when they need it.

Thanks to ontologies' richer power of expressivity, strategists are now able to overcome the limitations of thesauri, building very complex queries that unleash the potential of the information in their systems. Today, Repsol's Strategy Department is better positioned to make more informed decisions through improved competitive analysis. Taiger's solution's ease of integration and native ability to complement the existing installation was paramount for exactly meeting Repsol's needs.

## THE BENEFITS

The deployment of Taiger's technology has produced significant benefits for Repsol, with the Strategy Department profiting from better, faster and more precise information access. Using an ontology containing 1,000 concepts, 7,000 instances and explicating 15,000 relationships, the staff is able to gain improved access to structured and unstructured documents on a daily basis, performing highly complex queries in under a second. Strategists are now able to make the best use of their time, making more informed decisions and leading the company into the future.

Taiger's performance and technological edge surpassed expectations by not only fulfilling Repsol's requirements, but also by making possible the discovery of hidden assets. The next step is to extend the developed ontology and its use to other parts of the organization and other business units. All in all, Repsol has benefited from a substantial improvement in the quality of results with the utmost possible speed, particularly for highly complex queries.



### TAIGER SOLUTION

Taiger iSearch

#### FUNCTIONALITY

- Content federation
- Linguistic resources
- Semantics
- Advanced text analytics/  
Semantics+
- Query expansion
- Visual query expansion
- Search+: Cross language
- Interlinking and content  
enrichment

#### LANGUAGE

- English
- Spanish

#### TECHNICAL INFORMATION

##### Platform

Windows

##### Type of Content

- In-house assets from disparate  
sources and types
- Textual content