

# SEALS

## Semantic Evaluation At Large Scale



The SEALS project will create a lasting reference infrastructure for semantic technology evaluation (the SEALS Platform) and thus facilitate the continuous evaluation of semantic technologies at a large scale via public world-wide evaluation campaigns.

The SEALS Platform will be an independent, open, scalable, extensible and sustainable infrastructure that will allow the remote evaluation of semantic technologies by providing an integrated set of evaluation services and test suites.

The SEALS Platform will be used in two public world-wide evaluation campaigns and the results of these evaluation campaigns will be employed in creating semantic technology roadmaps, identifying sets of efficient and compatible tools for developing large-scale semantic applications.

Additionally, the platform will provide easy and free access to evaluation services and to the results of the evaluations performed, allowing researchers and users to effectively compare available technologies, helping them to select appropriate technologies and advancing the state of the art through continuous evaluation.

Semantic technology evaluation services will initially be available for different evaluation criteria (interoperability, scalability, etc.) and for five different types of semantic technologies:

- Ontology Engineering tools
- Ontology Storage and Reasoning Systems
- Ontology Matching tools
- Semantic Search tools
- Semantic Web Service tools

**Objectives:** The following scientific and technological objectives will be addressed:

- To develop the SEALS Platform and its services.
- To define the evaluations to be executed using the SEALS Platform.
- To implement the different evaluations as services of the SEALS Platform.
- To develop the SEALS methodology for the continuous evaluation of semantic technologies.
- To organize and execute two public evaluation campaigns including the best-in-class semantic technologies.
- To identify semantic technology roadmaps by analyzing the evaluation results produced in the evaluation campaigns.
- To construct a sustainable worldwide reference community for semantic technology evaluation.

SEALS will work towards the creation of an open and sustainable worldwide community which will survive the SEALS project and which is focused on the evaluation and progressive development of semantic technologies. Our long-term goal is that the SEALS Platform be actively used and managed by the semantic community.

Therefore, SEALS is relevant to the entire semantic technology community, namely, researchers in semantic technologies, tool developers, and users. Participation will enable the establishment and diffusion of best practices in evaluation within the whole community. The semantic technology community will benefit by having access to a set of services that support the whole life-cycle of the evaluation of these technologies. Therefore, this community will be able not just to evaluate tools by reusing the evaluations provided by the platform, but to define their own evaluations or to access the content stored in the platform (test data, results, etc.).

The SEALS project answers an urgent need felt by the semantic technology community for evaluation of semantic technologies. SEALS aims at a world-wide impact, leading to a faster maturation of semantic technologies and increasing the adoption of research results by industry.

SEALS will change the way in which semantic technology is evaluated. The infrastructure developed within SEALS is, therefore, expected to provide future yardsticks for both industry and academia when they evaluate their applications and/or innovations. Indirectly, this is expected to help accelerate innovation in all those fields in which evaluation mechanisms are provided, as has been the case with both the TREC benchmarks in information retrieval and the TPC benchmarks in database research.

### SEALS at a glance

#### Duration:

June 2009 – May 2012

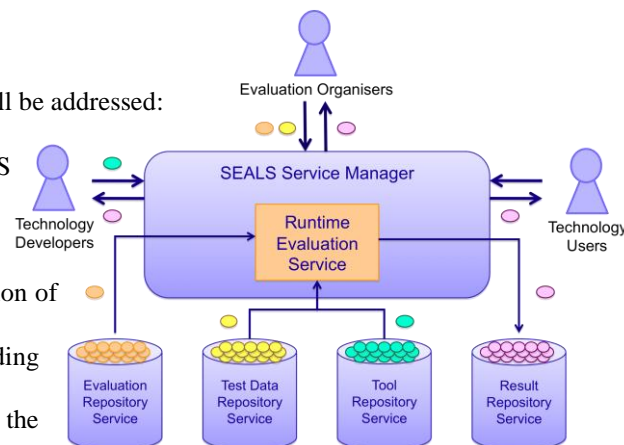
#### Project participants:

Universidad Politécnica de Madrid (ES)  
University of Sheffield (UK)  
Forschungszentrum Informatik Karlsruhe (DE)  
University of Innsbruck (AT)  
INRIA (FR)  
University of Mannheim (DE)  
University of Zurich (CH)  
STI International (AT)  
Open University (UK)  
Oxford University (UK)

#### Contact:

Asunción Gómez-Pérez  
email: asun@fi.upm.es  
tel.: +34 913367439  
fax.: +34 913524819

<http://www.seals-project.eu/>



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**Contact:**  
Asunción Gómez-Pérez  
email: [asun@fi.upm.es](mailto:asun@fi.upm.es)  
tel.: +34 913367439  
fax.: +34 913524819

The SEALS project has taken the first steps towards providing a lasting research infrastructure in the form of the SEALS platform and has performed a global evaluation of semantic technologies in the first evaluation campaign, which will lead to a first report on the state of semantic technology today.

### The SEALS Platform and Portal

The SEALS Project is developing a reference infrastructure known as the **SEALS Platform** to facilitate the formal evaluation of semantic technologies. This allows both large-scale evaluation campaigns to be run (such as the one described in this leaflet) and ad-hoc evaluations by individuals or organizations.

Use of the SEALS Platform and associated technologies is **free of charge** and all code is Open Source (Apache 2.0). The main means of interacting with the SEALS Platform will be via the SEALS Portal. Tool developers will be able to upload their tool to the platform (which will be stored in the Tools Repository), request that it be evaluated in one or more tool categories and be able to retrieve the benchmarking results. The SEALS Portal will also provide information targeted at tool consumers ranging from individual tool results to analyses and technology roadmaps.

Everyone is free to join the **SEALS Community** and access further information via the portal about the SEALS semantic tool evaluation methodology, campaigns and results. Already over 130 individuals from all over the world joined the community in the first three months after its launch in June 2010.

### The SEALS Evaluation Campaign

The first evaluation campaign opened in May 2010 and pursues the evaluation of semantic technologies in five core areas: Ontology Engineering Tools, Semantic Search Tools, Semantic Web Services, Ontology Matching and Storage & Reasoning Tools. In this first phase, 31 tools from 10 countries participate in the campaign. The results of this campaign will be announced at the IWEST workshop at ISWC 2010 (in November 2010, see for more information <http://oeg-lia3.dia.fi.upm.es/iwest2010>) and will be published as the first SEALS report on the state of semantic technology today.

### Next steps

Following the success of the SEALS 1<sup>st</sup> International Evaluation Campaign, SEALS is pleased to announce the 2<sup>nd</sup> SEALS Evaluation Campaign opening in July 2011. This campaign will make use of the SEALS Platform and Portal to provide remote evaluation functionality to participants. Participation is open to all and will continue to focus on benchmarking the **five** core technology areas on the basis of various criteria, e.g.: Interoperability, Scalability, Usability, Conformance to standards, and Efficiency.

Register at [www.seals-project.eu/join-the-community](http://www.seals-project.eu/join-the-community) now and don't miss out!

