

"Una manera de hacer Europa"



## HERCULES' OBJECTIVES

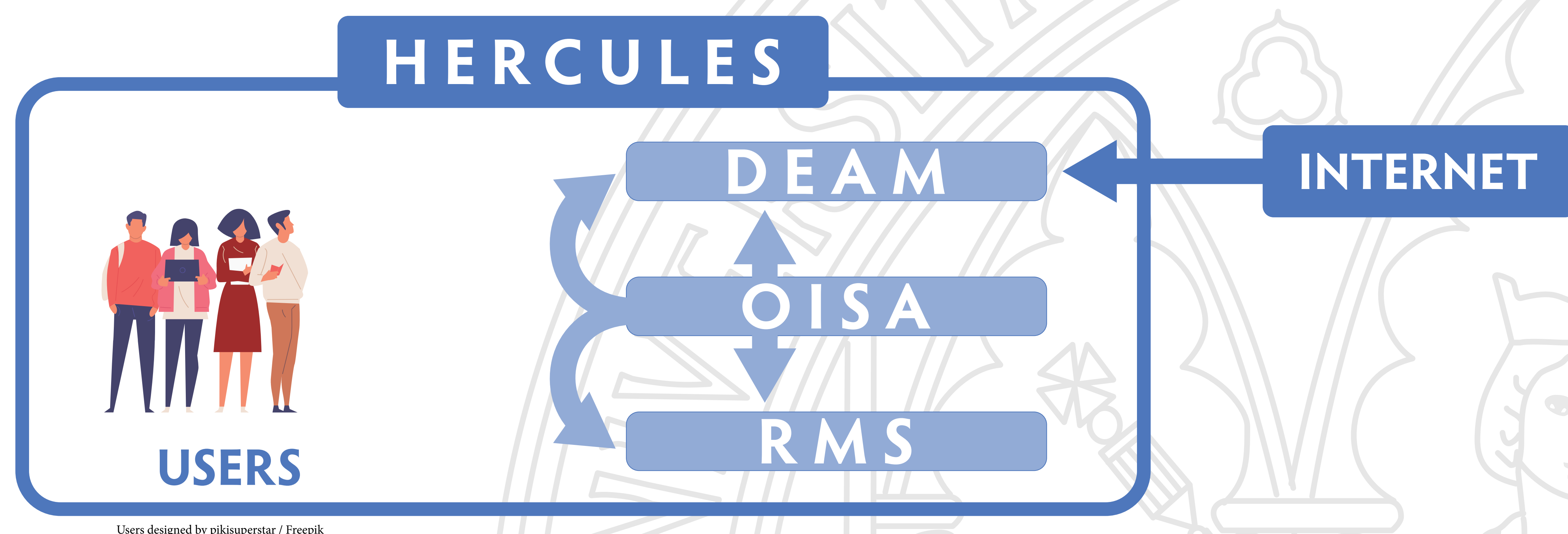
Spanish Universities are actively involved in research programs through its "Research Plans" governed by the principle of quality, and aimed to improve competitiveness, fostering relations with other Universities and research Centers. The current management systems supporting these research processes are not standardized and present interoperability problems due to the fact that universities use different data models which do not facilitate collaborations in research labor nowadays. This general situation and, specifically, with regards to research management systems, causes great inefficiencies in the management of information and knowledge of the research system of not only the University of Murcia, but all Spanish universities involved in research processes.

This entails additional costs derived from carrying out exploitation tasks with partial sets of data in each university, which it is then necessary to homogenize. With the implementation of the Semantic Web, the University of Murcia encountered the opportunity to enhance their current system: Hercules' objective is therefore to create a Research Management System (RMS) based on open semantic data that offers a global vision of the research data of the Spanish University System (SUS), to improve the management, analysis and possible synergies between universities and the general public

HERCULES' aims to:

- Develop an ontological infrastructure for the description of SUS information: OISA
- Develop a semantic architecture for the SUS data management: OISA
- Research data enrichment from internet sources and analysis methods for the information managed: DEAM
- Development of a Research Management System and its connection to the semantic research data: RMS

## FUNCTIONAL STRUCTURE



## RELEVANT INFORMATION

Project	OISA (1)	DEAM (2)	RMS (3)
Value of the contract *	1.577.856€	910.000 €	1.362.744 €
Execution timeframe	18 months	17 months	24 months
Tender status:	Execution process	Expected publication november 2019	Expected publication november 2019
Public procurement	PCP**	PCP	PPI***

\*VAT included

\*\* PPT: Precommercial Public Procurement

\*\*\*PPTI: Public Procurement of Innovative Solutions (PPI)

1: Ontological Infrastructure and Semantic Architecture

2: Enrichment of data and Analysis Methods

3: Research Management System

## EXPECTED RESULTS

HERCULES will introduce in the market new web semantic techniques that will allow obtaining new information from the integration of information from multiple nodes with heterogeneous ontologies and vocabularies, making possible a greater inductive knowledge from apparently unconnected data. This will be a real UE's OpenScience implementation and it will be provided as open source.

Some expected results:

- Greater efficiency in public investment: decrease in investment duplication in R&D&I.
- Improving research efficiency in universities.
- Improving dissemination of scientific research results.
- Creating a research management system with semantic capabilities and infrastructures.
- Creating a system to detect R&D synergies between universities.
- Possessing semantic capabilities to strengthen the transfer of R&D results to companies.
- Improving efficiency in the management of research expenditures on licenses and software maintenance.

