

# OBELICS

CALL FOR EXPRESSIONS OF INTEREST

*Giovanni Lamanna, LAPP.*

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## BACKGROUND

Astronomy is experiencing a surge of data from its current generation of observatories, with a size and complexity not seen before. The surge will become a deluge with the next generation of telescopes prioritized in the European Strategy Forum on Research Infrastructures (ESFRI), and with other world-class projects. The Astronomy ESFRI and Research Infrastructure Cluster, ASTERICS, is a Research Infrastructure funded by the European Commission's Horizon 2020 framework. It aims to help Europe's world-leading observatories work together to find common solutions to their Big Data challenges, their interoperability and scheduling, and their data access. The major objectives of ASTERICS are to support and accelerate the implementation of the ESFRI telescopes, to enhance their performance beyond the current state-of-the-art, and to see them interoperate as an integrated, multi-wavelength and multi-messenger facility.

ASTERICS aims to address the cross-cutting synergies and common challenges shared by the various Astronomy ESFRI facilities (SKA, CTA, KM3NeT & E-ELT). Other facilities benefitting from ASTERICS support include forthcoming experiments such as the Einstein gravitational-wave Telescope (ET, coordinated by the European Gravitational Observatory-EGO), the Euclid Space Telescope and the Large Synoptic Survey Telescope (LSST), and current facilities such as the Low Frequency Array (LOFAR), the High Energy Stereoscopic System (H.E.S.S.), Major Atmospheric Gamma Imaging Cherenkov (MAGIC), the gravitational-wave detector Advanced Virgo and the European Very Large Baseline Interferometry Network (EVN).

In order to achieve these objectives, ASTERICS is keen to establish collaborative links with industries, ESFRI projects, other H2020 projects, partnering consortia members, large computing centres, research network providers and e-science facilities in the field of Science data cloud and computing models for big data management of ASTERICS projects.

## OBJECTIVE

Under ASTERICS, work package 3 OBELICS (OBservatory E-environments Linked by common Challenges) is enabling interoperability and software re-use for the data generation, integration and analysis of the ASTERICS ESFRI and pathfinder facilities. OBELICS is creating an open innovation environment for establishing open standards and software libraries for multi-wavelength/multi-messenger data. OBELICS is also developing common solutions for streaming data processing and extremely large databases, as well as studying advanced analysis algorithms and software frameworks for data processing and quality control.

There has been considerable complementarity noticed with some of the industries and OBELICS activities in the field big data challenges. We strongly believe the industrial participation will bring in new innovative approaches with some good practice to the ASTERICS consortium. It will be key to capture these linking competences, infrastructures and innovation efforts from the industries to support innovation-related objectives of ASTERICS.

The aim of this call for expressions of interest for industrial cooperation is to encourage the partnering process between OBELICS partners and the industries on following potential but not exhaustive list of innovation-related objectives of OBELICS workpackage.

- “Professional software co-developments” with intellectual property of the delivered products transferred entirely to ASTERICS partners.
- Co-development of database software frameworks or cloud services where private companies have already achieved a superior level of competence or are willing to follow-up the ESFRI use cases for cooperative work.
- Consulting contracts to support technological survey (e.g. on workload management on distributed data centres; engineering of on-line data streaming processing/ground segments).
- Co-funded PhD scholarships with major private IT & software companies about astronomical data analysis use cases.
- Sub-contracting to SMEs some computing benchmark prototypes about new computing and data architectures.
- Engineering of “User Support” services for multiwavelength data archive access and management.

## Types of funding

This call offers support for investment but also travel, subsistence and shared salary support costs are eligible. As a result of this call, a funding support up to €300,000 will be provided from ASTERICS project. The duration of the funding support will be at most 30 months. The project should be accomplished latest by 1 May 2019 with submission of all the deliverables. Any complimentary funding made available would be an asset. The proposal should define the investment planned by all parties including industries for the collaborations for the corresponding in kind contributions and when applicable.

## Provisional timescale

Call for expressions of interest opens	14 December 2016
Closing date for expressions of interest	15 March 2017
Outcome communication of expressions of interest call	15 April 2017

Full proposal submission & evaluation will take place between 15 April 2017 & 15 May 2017.

## Application Procedure

The application must include:

- Completed EOI Proposal form, all text in Calibri 12, single spaced
- Detailed CV with list of publications of the lead applicant
- Executed PDF copy by email to wagh@lapp.in2p3.fr

## APPLICATION FORM

The OBELICS Call for expressions of interest is specifically designed to bolster innovation in big data challenges through industrial cooperation under the H2020-ASTERICS programme.

Applicant projects should have:

- A focus on product co-development demonstration and innovation.
- Defined roles and responsibilities for industrial partner and OBELICS Consortium.
- Clearly described benefits of the collaboration for the OBELICS work package.

### PART A: INDUSTRY INFORMATION

<b>Name of the Industrial Enterprise:</b>	<b>Lead applicant:</b>	<b>Designation:</b>
<b>Core Business:</b>	<b>Number of Employees in R&amp;D:</b>	
<b>Lead applicant contact details:</b> Complete Postal address, phone number, email, and website.		
<b>Some details about the Industry:</b>		

## PART B: PROPOSAL INFORMATION

### B1: Project title:

### B2: Details of the proposed work bringing out the innovative Product co-development:

- Clearly and concisely describe the product that will be the result of your proposed R&D collaboration. This should be the “end-result” or what this collaboration hopes to produce as a tangible product or service.
- Describe the innovation (an identifiable problem and your solution to it) and how its implementation will address challenges identified by ASTERICS.

### B3: Key objectives of the proposed Industrial cooperation

- Explain the expertise of collaborators contributing to this project. Discuss how the collaboration is integrating those expertise both in R&D and commercialization activities.
- Describe the roles and responsibilities of the collaborators.
  - Explain the role of the industry in the project
  - Explain the role of the OBELICS partners in the project





## PART D: Intellectual Property

- Is the work likely to result in intellectual property (IP) needing protection? If so, kindly indicate the nature of IP expected.
- Does the proposed work infringe on the existing patents?

## Confirmation of support from R&D Department Head

Please provide confirmation of support from the Director of R&D Department of your enterprise

<b>Director of R&amp;D Department:</b>	Name: _____
<b>Signature:</b>	
<b>Place &amp; Date:</b>	

## Confirmation of details

I confirm that:

- All information reported on this application is true and accurate
- The project described in this application is not being funded from any other source.

<b>Name:</b>	
<b>Signature:</b>	
<b>Place &amp; Date:</b>	