

# Call for Expression of Interest

## Additional Information

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### *Space Science Shops, Challenges and Bootcamps*

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Each FabSpace, will offer a “Space Science Shop” service, that collects the needs and the societal challenges of external stakeholders (Civil Society Organisations, Public Authorities and Companies), linked to application domains of EO and satellite navigation uses (i.e., Agriculture and Forestry; Energy; Environment and resource efficiency; Intelligent Transport Systems; Smart cities; Health and well-being).

The scope is to provide independent participatory research support in response to concerns experienced by external stakeholders, offering a demand-driven and bottom-up approach to the FabSpace facility and screening questions provided by these stakeholders.

Business partners will make use of their networks to upstream needs from various external stakeholders, thereby contributing to increase the number of challenges and ensure diversity in their content. This diversity is a prerequisite to attract many participants with different interests, sensibilities and innovative abilities.

For year-1, seven challenges have been identified. Challenges are collected on a continuous basis through the [fabspace.eu](http://fabspace.eu) website or through local Space Science Shops.

Actions/ events are being organized where participants play, create, learn, mentor and invent from the FabSpace resources. Students, researchers, experts, mentors, start-uppers and other interested communities are invited to these actions/ events around various sessions that tackle one or several challenges provided thanks to the space sciences shop.

Once a year, Bootcamps will be offered to the most promising applications found by the FabSpace users. The purpose is to provide sufficient support to mature projects in order to drive them up to the creation of start-ups or new services to be launched by existing SMEs.

In 2018, FabSpace will be part of ActInSpace contest. ActInSpace will be organized in 50 cities and FabSpace will take benefit of ActInSpace’s dynamic and visibility.



## The FabSpace geo-information platform to support spatial application development

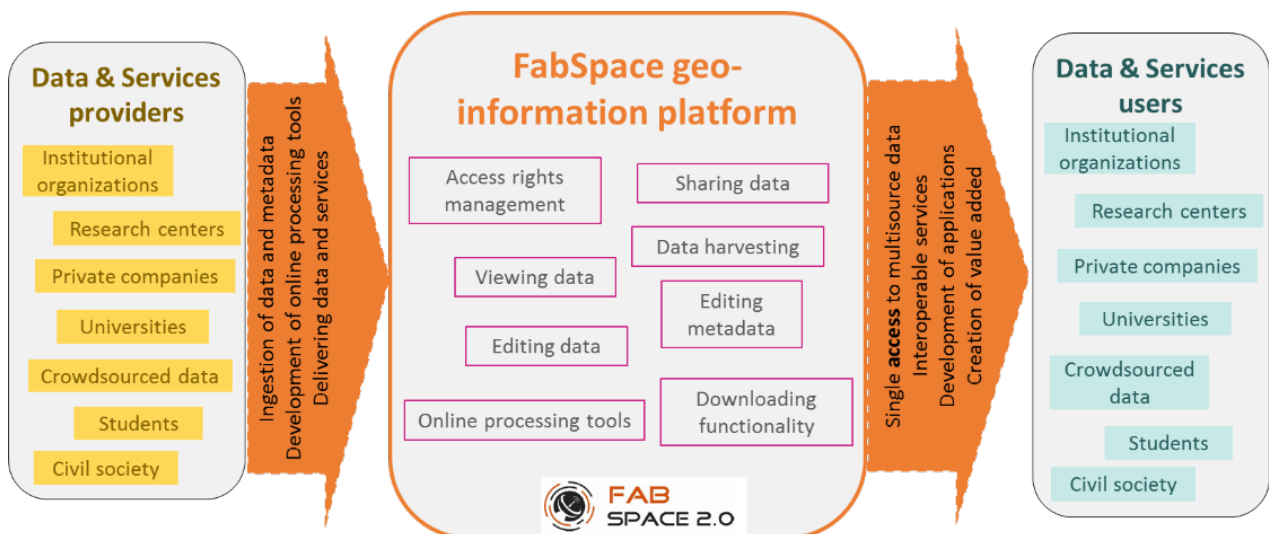
Based on an existing off-the-shelf open source software called geOrchestra, the FabSpace platform aims to integrate geo-information data coming from different sources within a single one-stop shop to ease the development of spatial applications and services.

### FabSpace platform to manage geo-information data

FabSpace platform is used to collect, manage and share various geo-referenced data such as Earth observation data, Open-data or in-situ sensor data (e.g real-time data).

The use of several open source applications, including GeoServer, GeoNetwork, and a Single Sign-On authentication module (based on LDAP) allow users to access to a set of functionalities such as:

- Viewing, editing and processing geo-information data through a web interface and standardized protocols.
- Sharing geo-information data using interoperable services (Web Map Service and Web Feature Service for example).
- Harvesting data catalogue to collect metadata files respecting the standards of the Inspire directive.
- Managing user to define and secure access rights to data and services.



The aim of FabSpace platform is to simplify and to standardize the access to geographic data in order to facilitate their integration in space application prototypes. The networking of the six FabSpace platform will ease data and service exchanges and will allow the creation of user community.

Figure 1: FabSpace geo-information platforms creating a European network sharing data, services and users



**FabSpace Platforms to prototype space applications**

Geo-information business sector is characterized by a growing and massive availability of georeferenced data. The European Inspire directive is one of the major contributor leading to the emergence of open-data by guaranteeing open access to public data.

In addition, Copernicus European program provides a wide range of data used in different application domains. Six services are provided by Copernicus with different degrees of maturity: Atmosphere, Marine, Land, Climate, Emergency and Security.

A constellation of satellites called Sentinel is being established under this program to address the needs of Earth observation data. Several products are already available including high-resolution radar (Sentinel-1) and optical (Sentinel-2) satellite.

Using geo-information data in added value services is a major challenge for the development of commercial activities. However, it several obstacles exist in accessing and using these data, including the multiplication of data access portals and the technical constraints (e.g. various standards, protocols, formats).

FabSpace users will benefit from the functionalities of the platform to have an easy access to geo-information data and to share added value services using interoperable web services.

Removing technical obstacles will ease FabSpace user’s prototyping new applications.

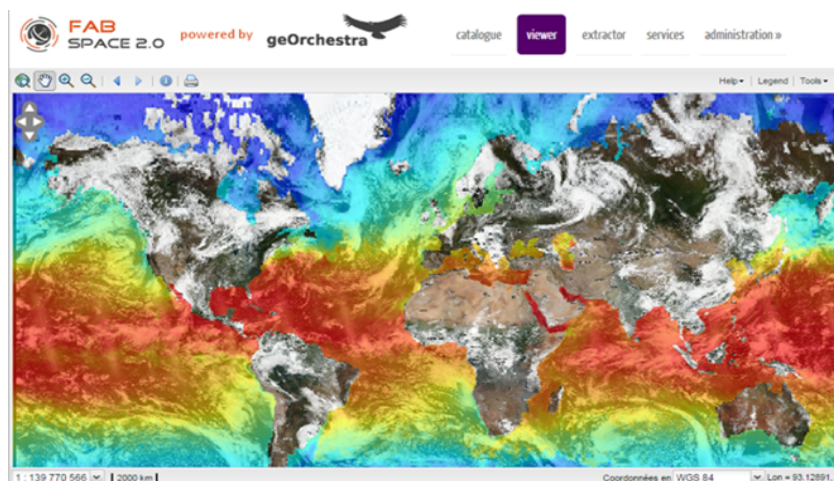


Figure 2: Visualize spatial data stored on the platform thanks to interoperable web services (ocean temperature)



## **What FabSpace 2.0 is expecting from new network members**

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### **The minimum requirement for a new FabSpace 2.0 to join the network is to have, within 4 months from application acceptance by FabSpace 2.0:**

- A dedicated server with standard HW/SW (e.g. PowerEdge R430 (motherboard), Intel Xeon E5 2.4GHz (processor), 32GB RAM and 2 x 2TB of HD plus NAS server Synology RS81; purchase cost is 3K€),
- The FabSpace 2.0 geo-information software (based on open source SW) installed on a server,
- An open working space for external people, students plus end-users,
- One (or more) FabSpace Manager(s) running the FabSpace service based on its competence and experience on EO.

### **In addition, new FabSpaces can:**

- FabSpace Manager could attend a training course on the software platform (4 weeks for 112 hours would cost 24K€ for a group of 8 people),
- Participate to the current FabSpace 2.0 project activities, such as Innovation events and bootcamps,
- Implement their own activities in their region/country, involving potential end-users from the institutional and industry sectors.

## **What new network members can expect from FabSpace 2.0**

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### **A new FabSpace joining the network will have free access to:**

- The FabSpace 2.0 geo-information platform (based on open source) to access EO and other geo-spatial data,
- On-line assistance from existing FabSpace Manager for activity start-up plus on the job training at existing FabSpace location,
- Join the FabSpace 2.0 online Forum to get support and share experiences,
- FabSpace 2.0 project outcome documents, activity description and plans, good practices for innovation actions and methodology.

Specific training sessions on the geo-information platform will be available in Toulouse at a price depending on the number of participants.

### **A new FabSpace can develop co-operation with existing FabSpaces for:**

- Participating in ongoing FabSpace 2.0 activities (Open Days, Space Science Shops, Challenges, Innovation Events, Bootcamps),
- Sharing good practices regarding educational programs and business mentoring,
- Participating in Application Challenges and sharing innovative application ideas to be proposed in R&D projects funded at local level,
- Participating in future FabSpace 2.0 initiatives, including EU/ESA projects.



FabSpace 2.0 received funding from the European Union's Horizon 2020 research and innovation program under the grant agreement no 693210



## *Modalities for presenting applications and evaluation criteria*

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Applications to become a new FabSpace 2.0 shall be submitted by sending a “Letter of Interest” using the annexed template, accompanied by the Application Form (also annexed to this document) duly filled in. In case an application is presented jointly by a University operating in the Earth Observation or Geo-Information domain in co-operation with a Business Partner (e.g incubator, accelerator, etc.) co-signing of the application or a support letter to be annexed to the applications is required.

The deadline for presenting applications is **30 September 2017**.

The Application Form includes some general information about the applicant, its the motivations/objectives in becoming a new FabSpace 2.0 and its approach/strategy in implementing the new FabSpace 2.0 as well as some detailed quantitative information.

The evaluation of all applications received within the above deadline will be made by an internal FabSpace 2.0 Evaluation Committee that will use the criteria and metrics indicated in the Application Form. The best 7 applications will be accepted to become new FabSpaces 2.0 and will become members of the FabSpace 2.0 Network.

Selected applicants are requested to start FabSpace 2.0 activities with open space for internal/external people, geo-spatial platform installed/operational on their server and FabSpace Manager active within the end of January 2018.

After the selection of the new FabSpaces, a Workshop will be held (tentatively in November 2017) to startup the new FabSpaces’ activities. The Workshop will include presentations about the Project results achieved to the date, about the new FabSpace action plans and will include specific technical sessions about how to run a FabSpace 2.0 with the participation of existing FabSpace Managers. The Workshop will also be an opportunity for questions/answers and discussion about the future of the Project and of the Network.

New FabSpaces will also be invited to participate to the 2018 Project Progress Meeting, that will be held around mid 2018 in one of the new FabSpaces willing to host it.



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