



## **About WASDI Sarl**

WASDI SARL is a Luxembourg-based start-up founded by FadeOut Software, the Luxembourg Institute of Science and Technology (LIST) and RSS-Hydro. The company operates a homonymous Earth Observation Exploitation Platform, and its purposes are:

1. to ease the work of EO experts, with cloud technology
2. address real-world business needs of end-users, with specific EO applications
3. help the two meets, with an app marketplace

Moving processors closer to the data, WASDI allows experts to perform, on the cloud, all the steps of EO data processing using big data technologies. EO experts can easily deploy their algorithms on the cloud and work both online and in their own usual environment.

WASDI has been and is adopted successfully in various high-impact international initiatives, where its capabilities, including those related to interoperability, have been widely demonstrated.

## **Data Processing as a Service**

WASDI Marketplace is the catalogue of the available applications. All the WASDI users can decide to deploy and offer their own application using WASDI; at the moment of writing 30 applications are available, but the number can change quickly.

WASDI applications can be triggered in different ways: using the WASDI Web User Interface, using the WASDI libraries, using OGC WPS API and using WASDI proprietary API. All the WASDI applications can call other WASDI application. The user can also upload and run on the cloud any SNAP Workflow generated with the tool's Graph Builder.

The outputs of the applications can be in general new maps generated or any other kind of info. The maps are saved in the workspace and can be accessed using WASDI Libraries, downloaded, or published using WxS standards. The other information is stored in the so-called payload.

As an example, are available applications for bare soil flooded area detections, urban flood detection, burned area detection, active fire detection, urban footprint detection, air quality, oil spill, impact calculation and many others.

## **User Algorithm Hosting and Interactive Development**

### WASDI Space Developer Interface

WASDI offers different solutions for Earth Observation Experts to develop their own algorithms.

Online coding is supported using Jupyter Notebook technology. Every registered user can create workspaces on the cloud. In each workspace the user can start a Jupyter Notebook to start coding immediately.

WASDI also offers the possibility to "Develop at Home, Deploy to the Cloud". This alternative solution is based on the usage of the WASDI Libraries that are available in Python, Java, Matlab/Octave, IDL, C#.NET. Once installed the library, the user can code in any compatible web based or desktop environment. The libraries can delegate to the cloud all the possible operations, also when coding from our own desktop.

Once the application has been developed and tested, the user can drag and drop the source code directly in the cloud and run the application using both the WASDI User Interface, the WASDI APIs or OGC Standard API.

All the WASDI apps, coded desktop or online, can be refined with an automatic online user interface. All the apps can be public, private, or shared with specific users. Apps can be offered for free or under payment.