

The Open Science initiative at VLIZ

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The VLIZ Open Science Team takes a technical (engineering, coding, standardization, automating) approach to facilitate practical Open Science Data sharing. Open access and data sharing principles have been an integral part of VLIZ since its launch in 1999.

Nowadays, it's a necessity for every funding proposal by the EU to include a data management plan to ensure that the output of the project is managed in a FAIR (findability, accessibility, interoperability, and reusability) manner. The goal of FAIR and open science is to enhance the usefulness and (re)use of data by humans and machines, therefore increasing their value and research reproducibility and transparency.

The challenge is to translate "open" movements (open source, open data, open access, ...); the well-known FAIR Principles into (technical) scalable solutions as well as (social) solid and broadly shared collaborative methods and standards. Day-to-day interactions with local scientists, sharing end-user expertise as well as international collaborations in the context of EU Horizon 2020 projects, and Research Infrastructures (RIs) like EMBRC and LifeWatch tune these further into practical solutions.

The core outset of our approach is data-agnostic. A stance that aims to achieve an elevated level of semantic interoperability to breach the existing domain-barriers. In practice, being embedded in the Marine domain, a lot of the handled data gravitates around biodiversity, genomics, climate, ecology, habitat changes, and invasiveness.

The three main goals of the Open Science division are:

- Promote Open Science (advocate and pioneer)
- Improve FAIRness of data and data systems
- Implement technologies that will foster Open Science and Open Data

Our technical toolchain blends typical data-science elements with industrial software engineering techniques and takes up many influences from core (semantic) web architecture, linked-open-data, and knowledge graph technologies. What projects come out of the VLIZ open science team consist of ARMS (autonomous reef monitoring structure), EMOBON (European Marine Omics Biodiversity Observation Network), and OSD (Ocean Sampling Day).

Keywords

Data Management; Open Data; Fair Data; Marine Data