ILIAD
Digital Twin of the Ocean

Project Information

URL: www.ocean-twin.eu

Project Coordinator: NETCOMPANY - INTRASOFT

Coordinator Country: Belgium

Project Duration: 01/02/2022 - 31/05/2025

Funding programme: H2020-EU.3.2. - SOCIETAL CHALLENGES - Food security, sustainable agriculture and forestry, marine, maritime and inland water research, and the bioeconomy

Project mission

The EU-funded ILIAD project creates an interoperable, data-intensive, and cost-effective Digital Twin of the Ocean (DTO) contributing to the implementation of the European Green Deal. It capitalises on the increasing wealth of data and advanced computing infrastructures by combining these diverse data in a semantically rich and data-agnostic approach allowing simultaneous communication with real-world systems and models. ILIAD also aims to create a marketplace to distribute apps, plug-ins, interfaces, raw data, citizen science data, synthesised information and value-added services.

Type of synergy

Data Access and Discovery Service: the DTO will be a free and unrestricted infrastructure that provides access to all ocean data, software and computational resources to enable increased knowledge and innovation in order to build the digital twin of the ocean. In order to build it, the ILIAD project needs to gather a consistent amount of data related to the ocean and marine environments. Within this infrastructure, Blue-Cloud is seen as one of the founding research components, offering e-infrastructure services (computing, storage, analytical, SSO, AAI and generic services to be orchestrated with a large variety of data resources), federated data and research intensive virtual labs. Hence, the Blue-Cloud infrastructure is a key component to increase quality and quantity of data used to build the DTO.

A first meeting with the ILIAD consortium was organised on 24th June 2022 as an online session, to showcase to each other the projects, their activities and their targeted Key Exploitable Results. This way a first insight was established at both sides and possible ways for collaboration were explored. ILIAD has a focus on end-user applications and it more or less relies on other developments and infrastructures such as Copernicus Marine and EMODnet for getting access to the required data, data products, and services. From the meeting it appeared, that ILIAD could also make good use from Blue-Cloud services such as the DD&AS for finding

and retrieving data sets, and VLabs for analyses. Therefore, it was agreed to keep contact and to explore the options for synergy and actual cooperation further. This will take place in the Blue-Cloud 2026 framework.

Contribution to Blue-Cloud Roadmap: The cooperation between Blue-Cloud and ILIAD is strategic also in terms of future developments of Blue-Cloud. Plans and developments coming from ILIAD have contributed to building the strategic Blue-Cloud Roadmap in relation with the development of the European Digital Twin.

Joint dissemination/communication activities: Blue-Cloud and ILIAD have joined events where both projects were invited to provide strategic overviews in terms of the future of the DTO. An example is given by "*Digital Ocean Forum*", organised in April 2022 in Paris by Mercator Ocean, one of the major players in developing the European DTO and Blue-Cloud partner. The outcomes of the event are collected in a dedicated article.

ILIAD was also invited to join the Blue-Cloud final event. Akrivi Vivian Kiousi, Netcompany INTRASOFT and member of ILIAD coordination office joined the Round Table "*Delivering a digital marine knowledge system to support the EU Green Deal & UN Agenda 2030: How can Blue-Cloud further contribute to accelerate progress in the marine domain?*"

Sara Pittonet Gaiarin, Coordinator of Blue-Cloud, has also been invited to join the **ILIAD Advisory Group**.