



## The Digital Twin<sub>s</sub> of the Ocean



# DIGITALE HAVTVILLINGER I NORGE

## **Velkommen og introduksjon til digitale havtvillinger**

Bente Lilja Bye, BLB

## **OptiLok - økt biosikkerhet i havbruk**

Håvard G. Frøysa, Havforskningsinstituttet

## **DigiCat og Ocean Innovation forteller litt om Norsk Katapult**

Bjørn Dimmen, ÅKP DigiCat, Bjarte Horn, Ocean Innovation

## **Havbruk og relaterte digitale tvillinger i Norge**

Ute Brønner, SINTEF Ocean

## **Diskusjon: Potensialet for digitale havbrukstvillinger i Norge**



Støttet av  
Forskingsrådet

BLB



SINTEF



NTNU

HIR Ocean

Iliad's Digital Twin of the Ocean provides a virtual environment representing the ocean, capable of running complex, predictive management scenarios. The innovative system integrates across discipline, sensors, models, and digital infrastructures.





# THE ILIAD APPROACH & CONCEPTS



The ocean is vast and complex. It consists of geophysical, biological and numerous interaction between its components and human activity.



To reflect this complexity of **European digital twin of the ocean**, the EU, its members and associates are developing a core infrastructure, Modelling capacity and implementations in local and sector /thematic twins. **This ecosystem of twins and its components are referred to as the European digital ocean twin.**



Iliad partnership being part of this dynamic ecosystem is working closely with other projects and initiatives (public & private) to ensure **alignment** by using similar standards, APIs, best practices etc.



Iliad partnership is working towards the implementation of **interoperable** systems, services and assets.



Enabling an ecosystem of **interoperable digital twins** for the ocean trough:

- Connecting to *existing* ocean data infrastructures
- Enhance ocean data infrastructures with *additional* observation technologies and **citizen science**



Create an open **marketplace** accessible for all providers and users by:

- Development of *innovative methods* in open frameworks and platforms
- Enable model *evaluations & comparisons* for many Earth science applications from weather, energy, aquaculture to climate and more



Provide **solutions** to address future societal challenges by:

- Assembling a broad and diverse *user community* of existing and new users,
- Supporting the communities in testing and using the project's *innovative technological solutions*

# ILIAD DIGITAL TWINS OF THE OCEAN



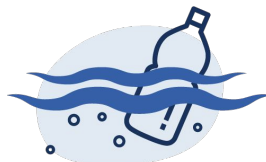
Existing Wind Farm Capacity



Ocean Energy Potential



Coastal Sediment Transport



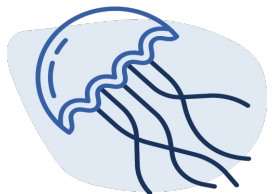
Plastic Pollution Monitoring



Oils Spill Simulation



Insurance For Marine & Maritime Activities



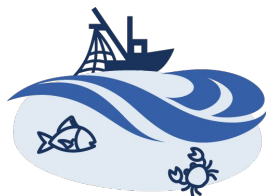
Jellyfish Swarm Forecast



Harbour Safety



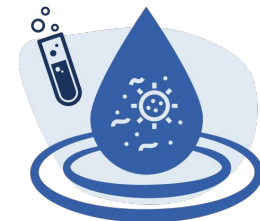
Met Ocean Hind, Now & Forecast



Fisheries Productivity & Sustainable Aquaculture



Ballast Water Monitoring



Aquaculture & Harmful Algae, Water Quality & Ship Traffic



# ILIAD numbers

▶ Full name: Integrated Digital Framework for Comprehensive Maritime Data and Information Services

▶ Coordinator: Netcompany-Intrasoft

▶ Grant Agreement No: 101037643

▶ Project start date: 1. February 2022

▶ Project end date: 31. January 2025

▶ Duration of project in months: 36

▶ Overall budget: 18 956 630 EURO

▶ EU contribution: 17 046 230 EURO

▶ Partners: 56 + 2 linked third parties



[ocean-twin.eu](https://ocean-twin.eu)



[/oceantwin](https://www.facebook.com/oceantwin)



[@ocean\\_twin](https://twitter.com/ocean_twin)





Dialog 1

Torsdag 30. november 2023, kl. 15:00

# DIGITALE HAVTVILLINGER I NORGE

Internasjonale  
rammer og norske  
data ressurser

## MØT EKSPERTENE

# E K S P E R T E N E



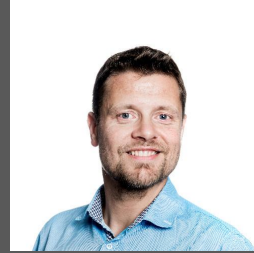
Håvard G.  
Frøysa

Havforskningsinstituttet



Bjørn  
Dimmen

DigiCat



Bjarte  
Horn

Ocean innovation



Ute  
Brønner

SINTEF Ocean

# Vi vil gjerne ha forslag til foredragsholdere og tema

*Send oss en epost*

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