



Blue-Cloud

Piloting innovative services for Marine Research & the Blue Economy

Blue-Cloud: Demonstrating the potential of Open Science for the ocean through a thematic EOSC

Kate Larkin, Julia Vera, Seascope Belgium; Sara Pittonet, Trust-IT

OSFAIR2021

21 September 2021

@BlueCloudEU
#OSFAIR2021



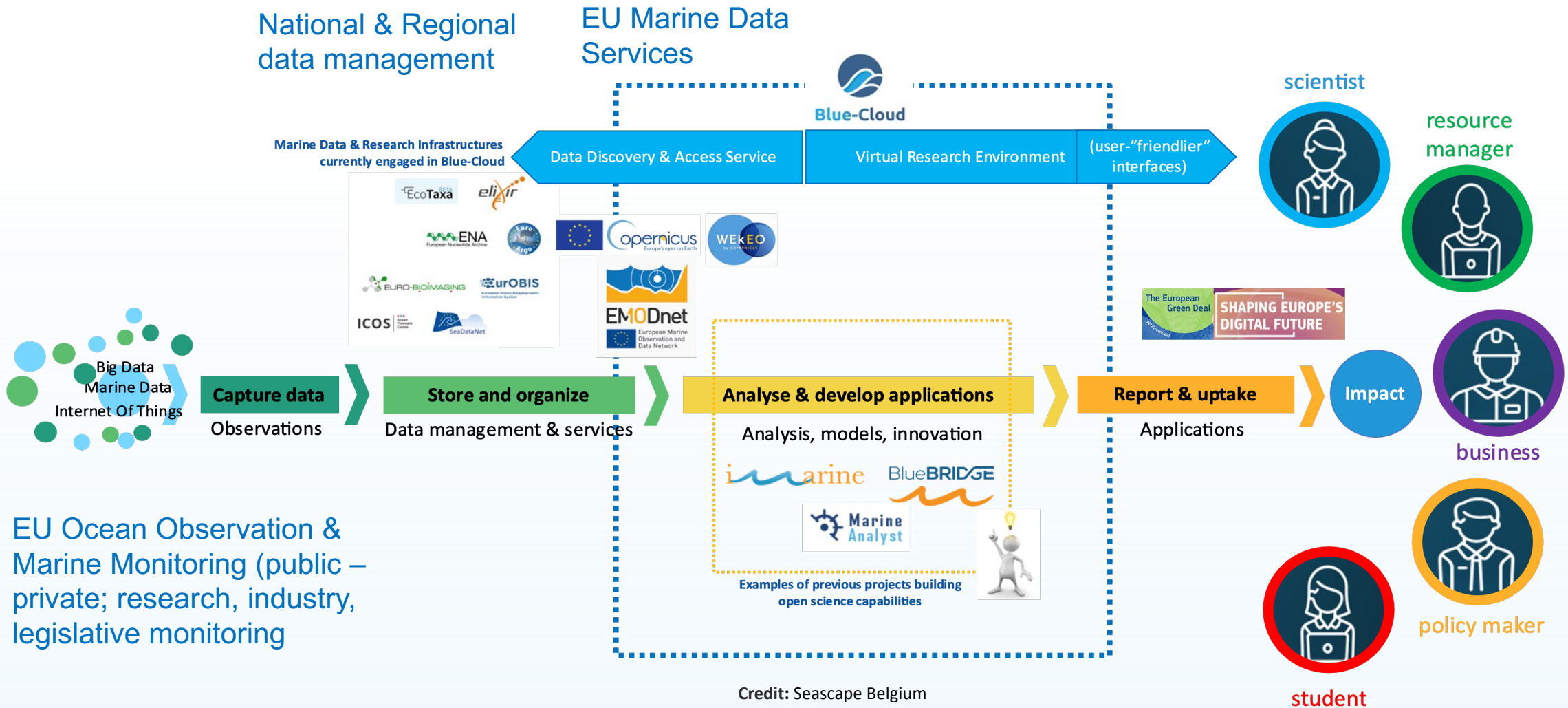
Blue-Cloud has received funding from the European Union's Horizon Programme call BG-07-2019-2020, topic: [A] 2019 - Blue Cloud services, grant Agreement number 862409.

Demonstrating the potential of Open Science in the marine domain

- EU H2020 Blue-Cloud project ‘Future of Seas and Oceans Flagship Initiative’
- October 2019 – September 2022; 20 partners
- 13 “blue” infrastructures
- Marine thematic contribution to European Open Science Cloud (EOSC)

Blue-Cloud aims “to promote the **sharing** of *data, processes and research findings* in the marine domain by delivering a **collaborative web-based environment** that enables *open science*, underpinned by simplified access to an **unprecedented wealth of marine data resources** and **interoperable added-value services and products**” Blue-Cloud Mission 2022 (from *draft* Blue-Cloud Roadmap)

Building on existing efforts and optimising the European Marine Knowledge Value Chain

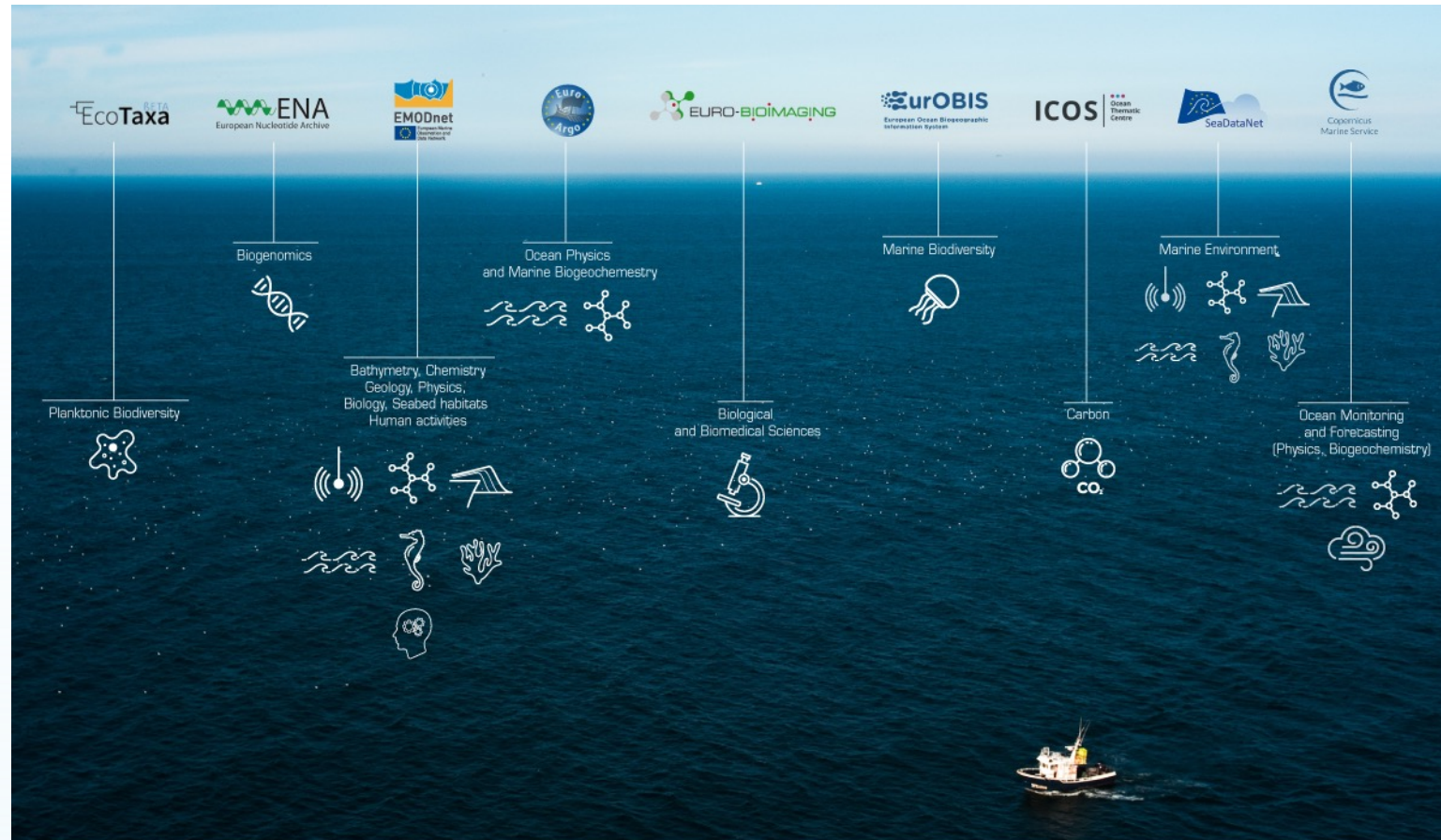


Added value:

Blue-Cloud Data & Discovery Access Service

Blue-Cloud is building on **leading European marine data management infrastructures** and **horizontal e-infrastructures** to create a trusted virtual space - the *Blue-Cloud Technical Framework* - where scientists can access the **ocean data, tools, services and research outputs** they need to engage in collaborative science in a more efficient way

<https://www.blue-cloud.org/data-infrastructures>

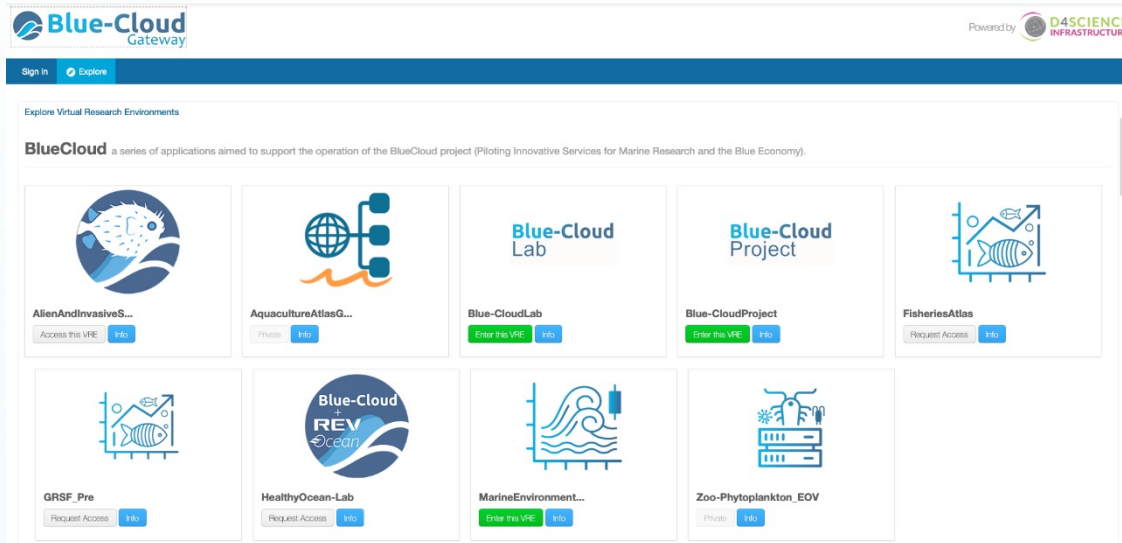


Added value:

Blue-Cloud Virtual Research Environment

What is a virtual lab?

A virtual laboratory is a web-based, problem solving environment that enables users across different physical locations and expertise to collaborate efficiently in an ongoing way, providing them with tools and services to share data, analytical methods and results towards solving complex problems.



<https://blue-cloud.d4science.org/>

Blue-Cloud VRE includes:

- services that facilitate **collaboration** between users
- services supporting the execution of **analytical tasks** embedded in a distributed computing infrastructure
- services enabling the co-creation of new entire **Virtual Laboratories**, aimed at realising open science-friendly working environments.



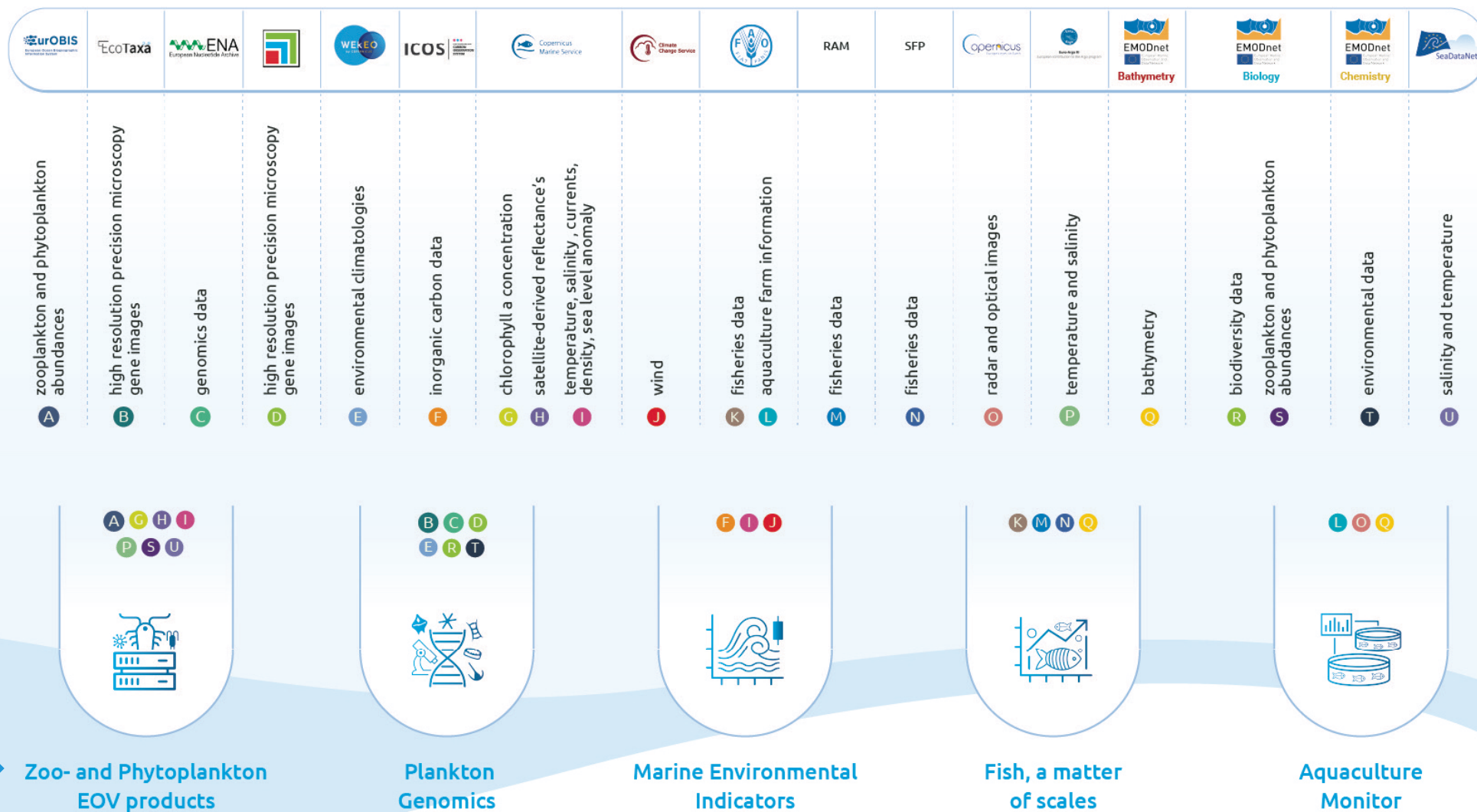
Blue-Cloud

Five real-life demonstrators

<https://www.blue-cloud.org/demonstrators>

Blue-Cloud Interoperable Data Space

The Blue Cloud **demonstrators** have been developed as Virtual Labs embedded in the D4Science VRE e-infrastructure and supported by data input and computing services, **demonstrating Blue-Cloud's potential in different fields of marine research, ranging from biodiversity to environmental science, as well as fisheries and aquaculture.**



Contribution of existing EU marine data services

EMODnet is a **EU marine data service** (EC, DG MARE), complimentary to Copernicus Marine Service

How does EMODnet **contribute** to Blue-Cloud:

- EMODnet is a **federated data infrastructure** of >120 organisations across Europe conducting marine data management on *in situ marine data*;
- EMODnet Central Portal offers **centralised marine data services** and discovery and access service for open, free access FAIR marine data & data products across 7 thematics & 100s of parameters, and metadata;
- EMODnet Data Ingestion** to support data submission by diverse producers;
- Regional leader in Ocean (Data) Best Practice** applying EU and International data and metadata standards (INSPIRE, Open Geospatial Consortium web services, metadata ISO-standards, W3C, in partnership with EU infrastructures e.g. SeaDataNet, and Global e.g. IOC-UNESCO efforts.



emodnet.ec.europa.eu

Added value for existing EU marine data services

- EMODnet is a **EU marine data service** (EC, DG MARE), complimentary to Copernicus Marine Service
- How can Blue-Cloud **benefit** EMODnet and the EU marine data space?
 - Connecting and advancing the EU marine thematic capability for web-based open science and promoting use of marine data for societal applications for the EU Green Deal: Blue Economy operations, Research, Policy, Civil society and wider society;
 - Catalysing the dialogue and collaboration across the EU marine data space (research & data) infrastructures, data management, data services, EU projects etc;
 - Further expansion and diversity of data providers and users.
 - Exposing EMODnet data to wider, cross-disciplinary audiences through Blue-Cloud connection with EOSC.



emodnet.ec.europa.eu

Synergies and partnerships

<https://www.blue-cloud.org/synergies>



3 June 2021 All Atlantic Data Space for the Ocean webinar:
<https://www.blue-cloud.org/news/data-space-ocean-information-data-sharing-atlantic>

Save-the-date: Upcoming webinar on 12 October 2012 on the All Atlantic Data metadata Space on GEOSS.

<https://allatlanticocean.org/jointaction/all-atlantic-data-enterprise-2030->



E-Infrastructures



Blue Data Infrastructures



EU-funded projects



Blue-Cloud Strategic Roadmap to 2030

- A co-created, community **B-C Vision & Mission Statement** for the development of **Blue-Cloud** beyond project-end and into the future (2030).
- Strategic policy recommendations** towards successfully delivering on **B-C Vision & Mission 2030**
- 1st (draft) public release in **June 2021** · 2nd (final) release by **July 2022**

Target audience: Policy makers & funders



**What do we want
Blue-Cloud to
achieve?**



**For whom?
By when?**



**How do we get
there?**



**R
O
A
D
M
A
P**

Have your say before 22 October 2021!



<https://www.blue-cloud.org/form/blue-cloud-roadmap-2030-2nd-online-consultation>

Thank you! Questions?

Follow Blue-Cloud

Website: www.blue-cloud.org

E-mail: info@blue-cloud.org

Twitter: [@BlueCloudEU](https://twitter.com/BlueCloudEU)

LinkedIn: [Blue-Cloud Org](https://www.linkedin.com/company/blue-cloud-org)

Join our newsletter: <https://bit.ly/2VdZD95>

*Follow **EMODnet***

Website: emodnet.ec.europa.eu

Email: secretariat@emodnet.ec.europa.eu

Twitter: [@EMODnet](https://twitter.com/EMODnet)

LinkedIn: <https://nl.linkedin.com/company/emodnet>

EMODnet News Digest: <https://bit.ly/3llu74G>