



Blue-Cloud

Piloting innovative services for Marine Research & the Blue Economy

D5.1 Communication, Dissemination & Stakeholders Engagement Strategy & Plan

Work Package	WP5 - Communication, Stakeholders Engagement & Uptake of Blue Cloud VRE & services
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Glossary

Acronym	Name
COP	United Nations Climate Change Conference
COVID-19	Corona Virus Disease 2019
DG	Directorate General
EBV	Essential Biodiversity Variables
EC	European Commission
EFG	Expert Foresight Group
EOSC	European Open Science Cloud
EOV	Essential Ocean Variables
EU	European Union
GDPR	General Data Protection Regulation
ICT	Information & Communication Technologies
KPI	Key Performance Indicators
M1	Month 1
MSFD	Marine Strategy Framework Directive
NGO	Non-Government Organisations
R&D	Research and Development
VRE	Virtual Research Environment
WP	Work Package

Executive Summary

The Blue-Cloud “Communication, Stakeholders Engagement & Uptake of Blue Cloud VRE & Services” Work Package (WP5) overarching objective is to ensure a consistent and content-rich communication and dissemination of Blue-Cloud results to its relevant stakeholders, by using multiple integrated communication tools, for the roll-out of the Blue-Cloud services and demonstrate impact in the Blue Economy and the European Open Science Cloud (EOSC). To assure this, an effective and efficient communication, dissemination and stakeholder engagement strategy & plan must be defined. This document is the first of two communication, dissemination and stakeholder engagement strategy & plans (the second iteration is due by M18, March 2021), with a final report of the overall outcomes of these activities to be delivered by the end of the project (M36, September 2021).

The “Communication, Dissemination and Stakeholders Engagement Strategy” of Blue-Cloud is structured around three specific phases that are matching the technical developments of the project.

- **During phase 1 (M1-M14)**, the main goal is to **create awareness** about the Blue-Cloud project, its goals, its ambition and the expected services and results that it will deliver.
- **On M14**, when a version of the Blue-Cloud demonstrators will be available, the project will start **disseminating** the Blue-Cloud early results, **engaging stakeholders** with a twofold purpose: to collect their feedback on the solutions developed and to educate them on the opportunities of the available solutions to stimulate service uptake and further developments.
- **The final phase of the project (M28-M36)** will be dedicated to a massive **promotion** of the project **results** and to the **engagement** of potential **user communities** willing to adopt the developed solutions in the future or willing to be part of the Blue-Cloud framework (e.g. access policies, on boarding procedures for new service providers/users, amongst others).

All activities will be performed keeping in mind the variety of stakeholders targeted by Blue-Cloud, spanning from the Blue-Growth area to the ICT sector and science at large, namely data infrastructures & horizontal e-infrastructures, academia & researchers, along with funding bodies, relevant EU projects/initiatives and international organisations. This plan also details the messages that Blue-Cloud will convey to targeted stakeholders, what communication tools and channels, as well as how the overall strategy will be used. The communication, dissemination and stakeholder engagement strategy plan will be continuously aligned with the work from the other Blue-Cloud WPs, and will be adapted due to the dynamic nature of communication and to the rapidly evolving scenario of Blue Growth and e-infrastructures.

The implementation of the plan counts with the support of Blue-Cloud partners and it will be monitored through monthly virtual WP meetings. These meetings are organised by the WP leader (Trust-IT) to discuss the activities performed during the last month and brainstorm not only about the next tasks for the following month but also corrective actions that may be necessary. Additional meetings may be schedule at any appropriate time throughout the project duration, if necessary.

The success of WP5 is based on the joint and coordinated effort from all Blue-Cloud partners not only on the communication activities but also on the quality of the technical work that will be developed during the project time frame.

1 The Blue-Cloud Strategy & Plan for successful Stakeholder Communication, Outreach and Engagement

The objective of the Blue-Cloud communication, dissemination and stakeholder engagement plan is to widely promote the innovation of Blue-Cloud, maximize visibility, activate an engaged end-user community, disseminate results, and demonstrate impact in the Blue Economy and in the European Open Science Cloud (EOSC) arena.

The Communication, Dissemination and Stakeholders Engagement Strategy of Blue-Cloud is structured around three precise phases that match the technical developments of the project.

- **During phase 1 (M1-M14)**, the main goal is to **create awareness** about the Blue-Cloud project, its goals, its ambition and the services and results that it plans to deliver.
- **On M14 and until M27 (phase 2)**, when a beta version of the Blue-Cloud demonstrators will be available, the project will start **disseminating** Blue-Cloud results, **engaging stakeholders** with a twofold purpose: to collect their feedback on the solutions developed and to educate them on the opportunities of the solutions and to stimulate service uptake.
- **The final phase of the project (M28-M36)** will be dedicated to a massive **promotion** of the project **results** and to the **engagement** of potential **user communities** to adopt the developed solutions in the future or willing to be part of the Blue-Cloud framework in the future (e.g. new blue-data infrastructures willing to become part of the Blue-Cloud federation).

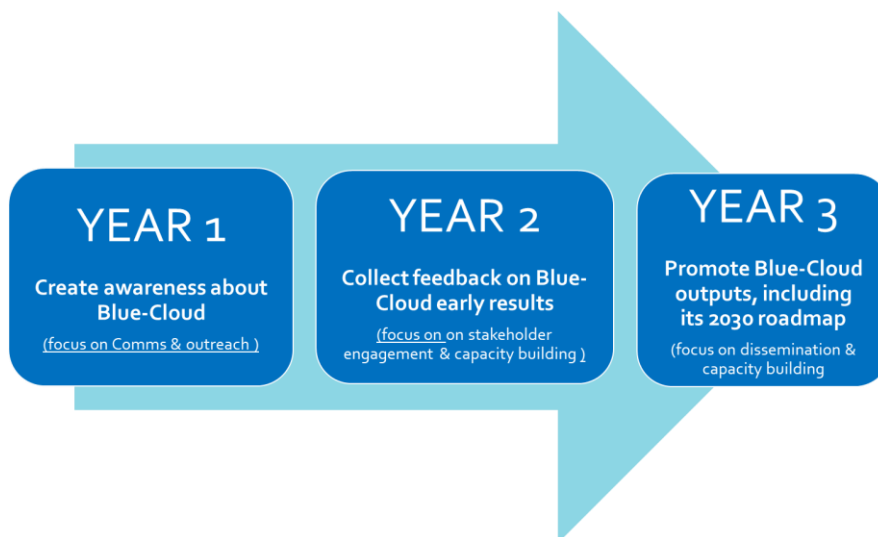


Figure 1 Communication, Dissemination & Stakeholders Engagement Strategy in Blue-Cloud for the 3 years

The strategy addresses three main questions: What? Whom and why? How and how well?

- **The what** by identifying the assets and key results that will be developed during the development of the project, in close collaboration with all Blue-Cloud work packages.
- **The whom and why** by outlining the targeted groups to whom Blue-Cloud will disseminate and promote project outcomes in order to ensure their adoption with related benefits.

- **The how** and **the how well** by describing how the plan will be implemented and its effectiveness will be measured.

The Blue-Cloud strategy and plan will be updated and adapted to market reality, during the whole time-frame of the project. It will support the technical developments and demonstrators’ evolution by defining the benefits and advances enabled by Blue-Cloud. Moreover, the plan will also support the exploitation and sustainability efforts, which will define the short and long-term visions for Blue-Cloud beyond the project.

The table below summarises the specific communication, dissemination and stakeholder engagement objectives and the related set of activities that will be performed during the project lifetime.

Table 1 Blue-Cloud communication, dissemination and stakeholder engagement objectives

Phase	Specific communication & stakeholder engagement objectives	Activity Plan
1	Objective 1: Raising awareness about Blue-Cloud	<ul style="list-style-type: none"> • Create a consolidated Blue-Cloud brand identity that is recognisable and further exploitable after the end of the project; • Deliver the Blue-Cloud web platform on Blue-Cloud.org; • Set up social media accounts to reach out to the targeted audience; • Continuously update the Blue-Cloud website, with reports on the latest activities of the project; • Drive traffic to the website through social media, communication materials and organisation of events; • Produce articles, press releases, news pieces and reports to disseminate the Blue-Cloud value proposition for its target stakeholders (detailed described on chapter 3); • Set up a database of media contacts to reach out a wide audience; • Engage partners and multipliers (influencers with access to a wide audience) to spread the word about Blue-Cloud; • Publish Blue-Cloud papers in scientific journals, conferences proceedings, etc.; • Present Blue-Cloud at relevant events and conferences; • Produce communication and dissemination material for distribution at selected events, to be used at the EU and national level by the project (e.g. flyers, roll-up banners, posters to be distributed online and at physical events, etc.).
1	Objective 2: Identifying the relevant Blue-Cloud Stakeholders	<ul style="list-style-type: none"> • Create a stakeholder database, including the list of relevant Blue-Cloud stakeholders; • Create target communication messages and value propositions able to stimulate the interest in the Blue-Cloud outcomes and services and future trajectory; • Identify the most appropriate communication tools (e.g. newsletters, email-marketing campaigns, social networks, organisations of virtual and face-to-face events, etc.).
1-2-3	Objective 3: Implementing an effective Stakeholders Engagement strategy	<ul style="list-style-type: none"> • Deliver timely and targeted communications to the key stakeholders via the most appropriate communications channels (e.g. Blue-Cloud newsletter); • Organise Blue-Cloud workshops and final conference; • Organise open consultations to collect stakeholders’ feedback on the Blue-Cloud services and framework; • Interview targeted stakeholders to collect their view and advice on Blue-Cloud assets; • Define key performance indicators (KPIs) to measure the impact of the engagement activities performed; • Identify collaboration activities with relevant stakeholders/initiatives to co-develop the future Blue-Cloud; • Leverage on the Blue-Cloud External Stakeholder Experts Board (ESEB) and the Expert Foresight Group (EFG) experts as champions to engage the related communities.

Phase	Specific communication & stakeholder engagement objectives	Activity Plan
2, 3	Objective 4: Positioning Blue-Cloud as a reference framework in the Blue-Economy and EOSC areas	<ul style="list-style-type: none"> • Promote the Blue-Cloud Roadmap 2030; • Organise consultation dedicated to the Blue-Cloud Roadmap; • Organise dedicated meetings with the different EC DGs (DG CNECT; DG MARE, DG GROW, DG ENV, etc.); • Generate position papers to describe the benefits of Blue-Cloud in a specific domain and its complementarities to other competing initiatives.
2, 3	Objective 5: Ensure uptake of Blue Cloud services through a skills-oriented programme of training	<ul style="list-style-type: none"> • Prepare a training kit to disseminate early results and provide users/service providers with appropriate knowledge, to be distributed at events, workshops and webinars; • Organisation of 1 virtual Hackathon to involve end-users in testing the Blue-Cloud Services, through an open consultation approach; • Organise 10 webinars to raise awareness and engagement, specific on demonstrators.
1, 2, 3	Objective 6: Ensure coordinated, regular communication, with the project partners.	<ul style="list-style-type: none"> • Set up appropriate internal communications tools (e.g. Blue-Cloud Gateway, mailing lists, etc.); • Organise regular calls and internal meetings.

More detailed information, about the activities that will be implemented, are available in the following chapters.

1.1 Measuring impact and monitoring the activities

To make sure that all the activities mentioned above bring the expected results, Blue-Cloud has set up a tailored Monitoring Service to track and measure the impact of the communication, dissemination and engagement activities carried out during the project.

The Monitoring Service uses Key Performance Indicators (KPIs) for the whole project timeframe, to track progress and results of the communication, dissemination and engagement activities.

A continuous activity of monitoring will be carried out by Trust-IT, the WP5 leader, and shared with all partners during monthly calls. The table below shows the end-of-project targets.

Table 2 Communication & Stakeholder engagement KPIs

Activity	Key Performance Indicator (KPI)
Produce a detailed “Communication & Dissemination Strategy Plan” for the project duration, to establish a coordinated communication and engagement strategy within the project (Objectives: 1, 3, 5 and 6)	Create a plan with an update at month 18 and final report by M36.
Generate a service-oriented, responsive, attractive, content rich web platform integrated with social networks and easy to understand content like videos, visuals, etc. To ensure a continuous online engagement with key communities (Objectives: 1)	KPIs for Year 3 (Y3) by the end of the project: - Website visitors: 13.200 - Sessions: 28.800
Build an online Blue-Cloud community, through setting up Blue-Cloud channels on the most relevant social networks (Twitter, LinkedIn, YouTube), with weekly updates, re-using content website and external content of interest to the Blue-Cloud Community. (Objectives: 1 and 2)	KPIs for Y3 is to have over 2.000 social media followers and achieve the more specific KPIs below: - Twitter: 1.000 followers, 700.000 impressions, 700 tweets - LinkedIn: 200 followers & 100.000 impressions - YouTube: 6 videos & 500 views

Activity	Key Performance Indicator (KPI)
Produce content for the website & media coverage (press releases, articles, interviews, etc.), customised to each Blue-Cloud target stakeholder (Objectives: 1, 2, 3)	30 interviews/blog pieces will be produced, by the end of the project, about representatives of different stakeholders' groups, from at least 10 different countries.
Promote Blue-Cloud results and engage with relevant stakeholders in third-party events, to maximise like-minded audiences & the right stakeholders. (Objectives: 1, 4 and 5)	Blue-Cloud visibility at 50+ third party physical and virtual events
Produce promotional material (design & content) to increase the visibility of Blue-Cloud at events and promote its main results. (Objectives: 1)	4 fliers; 4 posters; 2 rollup banners; 50 presentations, 6 videos & 2 give-aways
Define personalised approach and messaging for each target stakeholder group and plan to reinforce the relationships through groups around specific topics or specific service user groups. (Objectives: 1, 2, 3)	1 newsletter every 3 months, total of 12 newsletters
Organise one event where IT professionals, to involve end-users in testing the Blue-Cloud Services. (Objectives: 1 and 5)	One virtual hackathon, by M28, with at least 100 participants, while linking to existing marine open data competitions such as Open Sea Lab
Expand synergies to reach new communities & for mutual visibility, identifying together with T6.2 activities the most relevant European & international initiatives. (Objectives: 1, 2, 3)	Establish 10 new synergies documented via fact sheets
Build a Segmented & Profiled Dissemination database including all relevant stakeholder contacts. (Objectives: 1 and 2)	2,000 qualified contacts at the end of the project, to be maintained beyond project completion for 3 years, to bridge towards further activities that might be granted as a result of Blue Cloud Roadmap
Organise Blue-Cloud open workshops, to showcase Blue-Cloud Demonstrators through the eyes of end-user. (Objectives: 1 and 4)	Two workshops (at least 50 participants each), at M14 and M22. Prepare Concept & Agenda; Event announcements; Press release before the event; Promotion of the event through media channels; Support material; one post-event report.
Organise Blue-Cloud roadmap workshops, to collect inputs from strategic stakeholders for the Blue Cloud Roadmap to 2030 (Objectives: 1, 4 and 5)	Three workshops, at M14, M22 and M34. Prepare Concept & Agenda; Event announcements; Press release before the event; Promotion of the event through media channels; Support material; one post-event report.
Organise Blue-Cloud final event, to showcase the final set of Blue-Cloud services & Strategic Roadmap 2030 (Objectives: 1 and 3)	One event at M34, with at least 100 participants. Prepare Concept & Agenda; Event announcements; Press release before the event; Promotion of the event through media channels; Support material; one post-event report.
Innovation focused webinars on Blue-Cloud exploitable results delivered through the Blue-Cloud website or by exploiting a dedicated external channel. (Objectives: 1 and 5)	Delivery of 10 webinars, with at least 30 participants each, to raise awareness and engagement, specific on Blue-Cloud demonstrators, on M10, M12, M15, M17, M20, M29, M30, M31, M32, M33.

To monitor the digital presence of Blue-Cloud, a dashboard has been set up. The first version of the dashboard is available¹. Updates and adjustments will be made during the project. Alerts will keep partners informed on the content of the Blue-Cloud website and social media.

¹ Link: <https://www.blue-cloud.org/blue-cloud-dashboard>

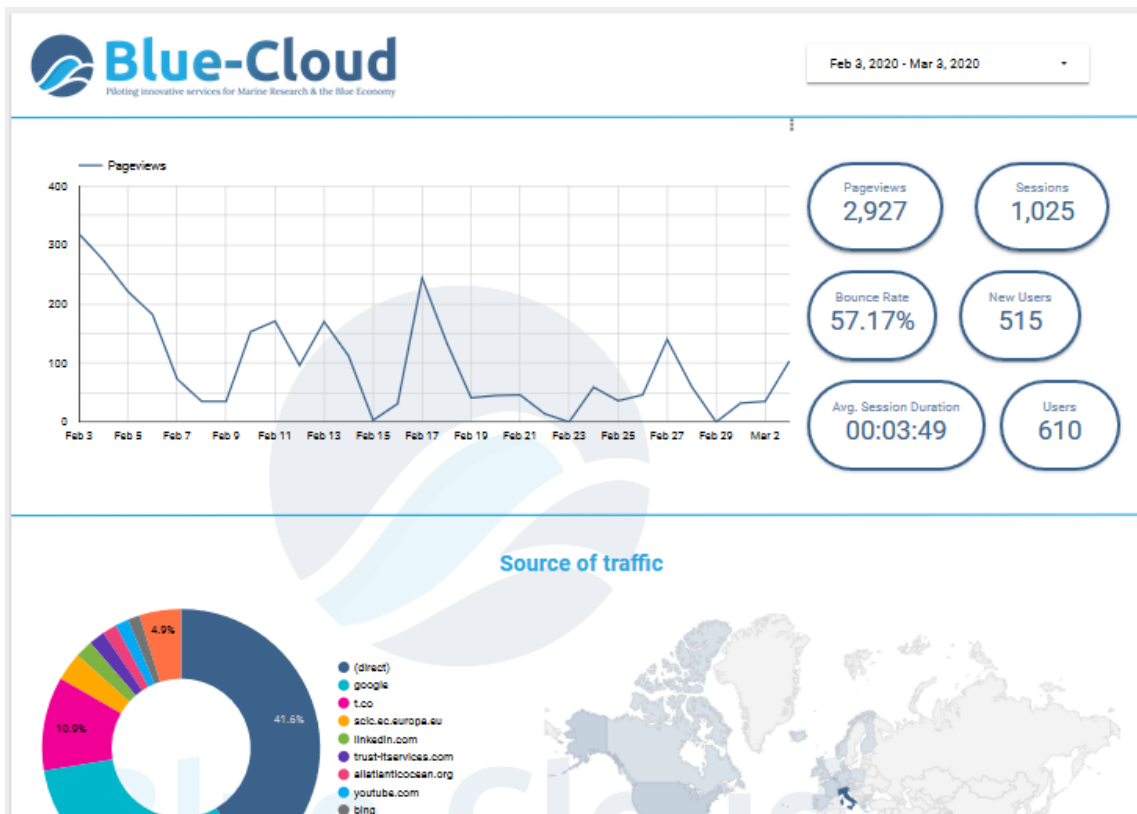


Figure 2 Blue-Cloud Dashboard

Collaborative and participatory Implementation The communication, dissemination and stakeholder engagement activities are a joint and coordinated effort of all Blue-Cloud partners in proportion to the effort allocated to each of them in WP5.

However, all the consortium partners have committed to contribute to the communication and stakeholder engagement activities according to their effort and possibility (e.g. by presenting Blue-Cloud at relevant events, disseminating information about Blue-Cloud results to their contact network by exploiting their individual communication channels, by supporting WP5 partners in producing communication and training material). Specific details on every partner’s commitment on single activities will be defined and reported during the regular WP5 monthly conference calls.







In addition, WP5 will work in close collaboration with WP6 “Blue Cloud Roadmap, Exploitation & Sustainability Measures, and trans-European Liaisons” that aims at establishing and managing collaborations and co-operations with other R&D national/EU/international projects, initiatives, e-Infrastructures and Research Infrastructures. In order to jointly address activities of common interest by re-using data, tools, services and resources provided by existing initiatives, WP6 is responsible for the delivery of the Blue-Cloud Roadmap and the short- and long-term plan for the Blue-Cloud exploitation.

Finally, WP5 partners will strongly interact with all the other WPs in order to collect relevant information and updates, in particular from WP3 about the Blue-Cloud Demonstrators and WP2 and WP4 for the technical implementation. This information will be transformed by WP5 members in effective communication by “ready-to-use” messages for stakeholder engagement.

2 Blue-Cloud results and assets for dissemination, communication and capacity building

The main focus of Blue-Cloud is to build and demonstrate the Pilot of “Blue-Cloud” as the marine thematic cloud of EOSC to support innovative research and innovation on data management for sustainability, through a set of five compelling pilot Blue-Cloud demonstrators. These demonstrators will use existing domain services but also will co-develop upgraded services based on those ones. It focuses on developing and deploying, through a pragmatic work plan, the Pilot Blue-Cloud as a cyber-platform that brings together and provides access to multidisciplinary data from observations and models, analytical tools and computing facilities essential for key blue science use cases. In particular, Blue-Cloud will deliver the following assets.

Table 3 Blue-Cloud main assets

	Service	Description
	Blue-Cloud Data Discovery and Access Service	Allows users and machines to find and retrieve data sets from a diversified array of key marine data infrastructures dealing with physics, biology, biodiversity, chemistry, and bio genomics.
	Blue-Cloud Virtual Research Environment (VRE)	Drive a number of high-level demonstrators and, for each demonstrator, a so-called Virtual Lab will be configured with a range of services. It facilitates collaborative research using a variety of data sets and analytical tools.
	Blue-Cloud Data and Service Catalogue	Blue-Cloud final users can discover interesting data collections from the federated Blue-Cloud “Data & Access” services and request access for downloading selected data collections, all through a common Blue-Cloud interface.
	Demonstrators	Five applications, specific for seas and oceans, which will make use of existing, and drive, the further development of additional Blue-Cloud services. They will make optimal use of access to multidisciplinary data, algorithms, and computing resources. More information about the demonstrators is available under D3.1 Demonstrator general technical requirements
	Technical Architecture Interface with EOSC	Develop and provide dedicated blue services complementing EOSC’s basic services, to make EOSC more attractive and fit for purposes of the blue community.
	Blue-Cloud Strategic Roadmap 2030 development	Future strategic development of the Blue-Cloud as a leading marine component of EOSC and an essential platform for synergizing with several infrastructure developments from marine field, such as part of the COPERNICUS, EMODnet, ESFRI, EOOS, and MSFD initiatives.

All the communication and dissemination efforts will be put in place to support the pre-release and release of the above assets.




3 Blue-Cloud Stakeholders





Target audience definition and segmentation is crucial to ensure effective impact and select appropriate messaging tools and communication channels, for seeking and consolidating synergies with relevant initiatives, community gatekeepers and multipliers.

Blue-Cloud has, since its inception, started analysing and identifying its stakeholder groupings to define effective communication and engagement activities. Interaction with each group will have different priorities, activities and outputs, examples of which are provided below. Engagement is fundamental for each target group as active involvement increases the likelihood of a broader uptake of the developed services.

Primary stakeholders have to be engaged by Blue-Cloud for its long term sustainability. These stakeholders represent the demand, the supply and the funding side of Blue-Cloud. Secondary and other stakeholders represent target groups that can also benefit from the Blue-Cloud offer or influence in some way its uptake and sustainability.

Table 4 Blue-Cloud Stakeholders

Blue-Cloud Stakeholders			
Stakeholder	Description	Examples	
 <p>Data Infrastructures and Horizontal e-Infrastructures PRIMARY STAKEHOLDER</p>	<p>Marine data infrastructures and European wide networks of data originators of marine biodiversity, fisheries, physical oceanography, meteorology, biogenomics, biogeochemistry, and carbon cycle. Also EOSC horizontal e-infrastructures aiming for a seamless and open access to a system of research data and services provided across nations and disciplines, serving heterogeneous communities</p>	<p>Data infrastructures: SeaDataNet, EurOBIS, Euro-Argo, EMODnet, Elixir-ENA, EuroBioImaging, Copernicus CMEMS/CS3, ICOS-Marine ESFRIs: EMBRC, Lifewatch, EPOS EOSC thematic clusters: ENVRI-FAIR, EOSC-Life, SSHOC Horizontal e-infrastructures: EUDAT, EGI, GEANT, OpenAIRE, D4Sciences</p>	
 <p>Academia and Researchers PRIMARY STAKEHOLDER</p>	<p>Marine related universities, research institutes dealing with data relevant for the Blue Economy.</p>	<p>IFREMER, H C M R - Institute of Oceanography, Laboratorio di Biologia Marina, Centre for Marine and Environmental Research (CIMA), Antwerp Maritime Academy, Ghent University, University of Liège, Muséum National d’Histoire Naturel (MNHM), Insitut de la Mer de Villefranche-sur-Mer (IMEV), Institut Méditerranéen d’Océanologie (MIO), Vlaams Institut voor de Zee/Flanders Marine Institute (VLIZ), Consiglio Nazionale delle Ricerche (CNR)</p>	
 <p>International Organisations PRIMARY STAKEHOLDER</p>	<p>Data and Marine related organisations with an international mandate</p>	<p>Food and Agricultural Organization (FAO), International Council for the Exploration of the Sea (ICES); Intergovernmental Oceanographic Commission of the United Nations Educational, Scientific and Cultural Organization (IOC of UNESCO); International Oceanographic Data and Information Exchange (IODE)</p>	

Blue-Cloud Stakeholders			
Stakeholder		Description	Examples
	Policy & Funding bodies PRIMARY STAKEHOLDER	Organizations and initiatives that provide the policy drivers, and funds for the EOSC and blue economy purposes at national (e.g. member state ministries), regional (e.g. regional sea conventions), European (e.g. EC) and International levels.	National government / national authorities; European Commission services: DG RTD, EU DG MARE, EU DG DEFIS, EU DG ENV, EU DG CONNECT
	Relevant EU-funded projects and initiatives PRIMARY STAKEHOLDER	Funded projects and initiatives working on complementary areas	EOSC related projects: EOSC Secretariat, EOSC-hub, INFRAEOSC03, INFRAEOSC07, EOSC 5B projects Food Cloud Observing system related projects: EuroSea, iAtlantic, H2020 Atlas
	Industrial players & Trade Associations SECONDARY STAKEHOLDER	Organisations & industry dealing with offshore engineering, hazard and disaster management, tourist industry, and many other socio-economic activities at sea and along the coasts	Coastal & Marine Union – EUCC, Associazione di Ingegneria Off-Shore e Marina
	Influencers, hacktivists, NGO's & general public SECONDARY STAKEHOLDER	Non-profit organization that operates independently of any government, typically one whose purpose is to address the blue economy topic.	World Wildlife Fund, Green peace, One Ocean Foundation, Sea Shepherd Conservation Society, Oceano Azul Foundation

The communication, dissemination and stakeholder engagement strategy will revolve about the promotion of Blue-Cloud assets to these stakeholders, using the communication tools described in Section 4. Furthermore, the strategy will also gather feedback from stakeholders about their expectations from Blue-Cloud results.

It has to be noted that the above stakeholders can be also differentiated on the basis of their thematic domains. Four main thematic macro-areas can be identified in Blue-Cloud:

- Blue Economy domain;
- E-Infrastructure & ICT domain;
- Food sector;
- Other thematic sectors (e.g. social sciences) where the Blue-Cloud model and assets can be adopted.

The following paragraphs describe the different stakeholders addressed by Blue-Cloud by giving some examples of target stakeholders, explaining how they can benefit from Blue-Cloud and the priority of engagement.

3.1 Primary Stakeholders

3.1.1 Blue Data Infrastructures and Horizontal e-Infrastructures

Who are they?

Data infrastructures and e-infrastructures are digital infrastructures dealing with data collection, data management and the provision of the resources (e.g. cloud computing, storage, amongst others) necessary to run applications and scientific workflows. While Blue Data infrastructures include mainly data infrastructure dealing with ocean and sea data, horizontal e-Infrastructures are domain agnostic

and more focused on the provision of computing and storage resources, AAI systems, data management tools, etc. This category also includes Research Infrastructures and thematic clusters.

Table 5 Examples of blue data infrastructures and Horizontal e-infrastructures institutions

Field	Examples
Blue Data Infrastructures (thematic discipline)	Examples: SeaDataNet, EurOBIS, Euro-Argo, EMODnet, Elixir-ENA, EuroBioImaging, Copernicus CMEMS/CS3, ICOS-Marine, ICOS
Horizontal e-infrastructures (generic disciplines)	EUDAT, EGI, D4Science, GÉANT, OpenAIRE, DIAS

Why should these stakeholders join Blue-Cloud and how can they benefit from the Blue-Cloud?

The Blue-Cloud provides a framework in which blue data infrastructures can easily plug their data and services to make them more discoverable and therefore usable by the Blue Community and beyond (e.g. the EOSC community). Via the discovery and access service, data infrastructures will be able to share and access datasets that were only available separately, allowing to generate new data insights, useful for ocean management but also exploitable by other disciplines in need of multi-disciplinary datasets. More info about Blue-Cloud services is available on D2.1 Blue Data Infrastructures – Services Description Report.

Blue-Cloud aims at supporting the Blue Community with powerful computational, storage resources and data management services. Horizontal infrastructures are welcome to join the Blue-Cloud framework to equip the European scientists and researchers with the best resources.

3.1.2 Academia and Researchers

Who are they?

Academia and Researchers dealing with marine data either as producers or as users in a research context. Users can be from various types such as analysts, data assembling scientists, transforming raw data in usable data, people using data for public policies, etc.

Academia and Researchers, technicians, engineers, researchers, etc. may use Blue-Cloud data services in various context. Some in academia just needs maps, while others will need data transformation services and data analytics based on algorithms.

You can have Academia and Researchers dealing with data relevant for the Blue Economy either in the private sector (e.g. firm of engineering consultants, companies in Marine Renewable energy, ...) as well as in the public sectors. Their needs are not being the same.

Table 6 Examples of academia and researchers

Country	Universities and/or Research Institutions working with “marine/Blue economy” data
Australia	Commonwealth Scientific and Industrial Research Organisation (CSIRO)
Belgium	Vlaams Instituut voor de Zee/Flanders Marine Institute (VLIZ); Royal Belgian Institute of Natural Sciences (RBINS); Ghent University; Antwerp Maritime Academy; University of Liège (ULg)
Bulgaria	IO-BAS – Bulgarian National Oceanographic Data enter (BGODC)
Croatia	Institute of Oceanography and Fisheries
Cyprus	ORION Joint Research & Development Center
Denmark	Aarhus University - Bioscience (AU-BIOS); International Council for the Exploration of the Sea (ICES)
Estonia	Marine Systems Institute at Tallinn University of Technology (MSI)
Finland	Finnish Meteorological Institute (FMI); SYKE - Finnish Environment Institute; CSC – IT Center for Science
France	Institut Français de Recherche pour l’Exploitation de la MER (IFREMER / SISMER); Muséum National d’Histoire Naturel (MNHM); Institut de la Mer de Villefranche (IMEV); Institut Méditerranéen d’Océanologie (MIO); Service hydrographique et océanographique de la Marine (Shom); Centre

Country	Universities and/or Research Institutions working with “marine/Blue economy” data
	National de Recherche Scientifique (CNRS): Oceanic and Continental Environments and Paleoenvironments (EPOC); Centre National de Recherche Scientifique (CNRS) – Biological Station of Roscoff (SBR)
Georgia	Center of Relations with UNESCO Oceanological Research Center and GeoDNA
Germany	BSH – Deutsches Ozeanographisches Datenzentrum (DOD); Alfred-Wegener-Institute for Polae- and Marine Research; DKRZ - German Climate Computing Center; GEOMAR Helmholtz Center for Ocean Research Kiel
Greece	Hellenic Centre for Marine Research, Institute of Oceanography (HCMR/IO); Greek Research and Technology Network (GRNET)
Iceland	Marine and Freshwater Research Institute (MFRI)
INTERNATIONAL	International Oceanographic Commission (IOC) – International Oceanographic Data and information Exchange (IODE); JCOMMOPS – Joint Commission for Oceanography and Marine Meteorology in situ Observing Platform support
Ireland	Marine Institute (MI)
Italy	Istituto Nazionale di Oceanografia e di Geofisica Sperimentale, Division of Oceanography (OGS); ENEA (Centro Ricerche Ambiente Marino); Istituto Nazionale di Geofisica e Vulcanologia (INGV) ; CINECA EU-JRC; Consiglio Nazionale delle Ricerche (CNR): Institute of Atmospheric Sciences and Climate (CNR – ISAC)– Institute for atmospheric pollution (CNR - IIA) - Istituto per lo Studio del MARE (CNR – MAR)
Latvia	Latvian Institute of Aquatic Ecology
Malta	International Ocean Institute - Malta Operational Centre (University Of Malta - UOM) / Physical Oceanography Unit
Netherlands	DELTA RES; Royal Netherlands Institute for Sea Research (NIOZ)
Norway	Institute of Marine Research (IMR); University of Bergen (UiB)
Poland	Institute of Meteorology and Water Management, Maritime Branch in Gdynia (IMGW); Institute of Oceanology, Polish Academy of Sciences (IO PAN)
Portugal	IHPT
Romania	National Institute for Marine Research and Development “Grigore Antipa”
Russian Federation	RIHMI-WDC; P.P.Shirshov Institute of Oceanology, RAS (SIO-RAS)
Slovenia	National Institute of Biology – Marine Biology Station
Spain	Instituto Español de Oceanografía (IEO); CSIC – Marine Technology Unit – Mediterranean Marine and Environmental Research Centre
Sweden	SMHI
Turkey	METU-IMS
United Kingdom	British Oceanographic Data Center (BODC); Plymouth Marine Laboratory; Science and Technology Facilities Council (STFC)
United States of America	NOAA; NASA

Why should these stakeholders join Blue-Cloud and how can they benefit from the Blue-Cloud?

Academia and Researchers can benefit from Blue-Cloud as they will have access to a “Blue” catalogue offering a unifying view of data and/or products from various datasets, but also from data distributed in different infrastructures.

Academia and Research will benefit from interoperable data from all over Europe and the World. They will also benefit from the implementation of common vocabularies. Academia and Researchers can benefit by having access to various data levels, from raw data to finished/end products (such as maps, graphs, etc.), going through transformed data at different levels. Academia and Research will benefit from the use of easily shareable notebooks (e.g. Jupyter, Gitlab, etc.) in order to better collaborate with colleagues.

The products and services that will be made available by the Blue-Cloud VRE already supports scientists in performing collaborative multi-disciplinary science, and in Blue Cloud they will find a continuously growing catalogue of FAIR compliant services.

3.1.3 International Organisations

Who are they?

This stakeholder group includes all the international organisations dealing with marine and ocean data management to address the most pressing societal challenges related to oceans. In the global landscape of marine and ocean data management great progress has been made with developing standards, services, and establishing dedicated infrastructures. These infrastructures provide services for discovery and access to collected data and for ensuring long term stewardship. Activities have been and are undertaken as part of international initiatives, in particular Intergovernmental organisations concerned with marine and fisheries science², UN international organizations that deal with oceans sustainability and marine data management³. This includes the Intergovernmental Oceanographic Commission of the United Nations Educational, Scientific and Cultural Organization (IOC, UNESCO) and its International Oceanographic Data and Information Exchange (IODE) together with its Global Ocean Observing System (GOOS), the World Meteorological Organization (WMO), the Food and Agricultural Organization (FAO) and Regional Fisheries Management Organisations⁴/Authorities⁵, the Group on Earth Observations (GEO), the International Council for the Exploration of the Sea (ICES), and others.

How can these stakeholders interact and benefit from the Blue-Cloud?

The mandates and priority activities of the international organizations mentioned above are set in the context of International marine and wider environmental policies and initiatives, including the UN2030 agenda and its Sustainable Development Goals⁶, the COP21 Paris agreement on climate change⁷ and the Decade of Ocean Science for Sustainable Development⁸, all of which require marine data and knowledge for policy support and to meet policy targets at national, European and International levels. It is important that the Blue-Cloud enables dialogue with these international initiatives and organizations to ensure that the European Blue Cloud developments align, and can contribute to, International developments in marine data services, including the upcoming Ocean information hub, and the long-standing expertise within the IODE of IOC, UNESCO. The services developed by Blue-Cloud can facilitate and support the overall policy making process of these organisations.

In addition, the Blue-Cloud demonstrators will rely on ocean observation and marine data, many of these including Essential Ocean Variables (EOVs)⁹ and most notably the biological variables, including plankton biomass and diversity. It will be important to interact not only with European projects such as EuroSea (3.1.5), but also at international levels with the Global Ocean Observing System that provides the driving force, expert guidance and strategy for these EOVs and Essential Biodiversity Variables (EBVs).

² These organizations provide a venue for fishery scientists to collaborate, share research methodologies and approaches, and address new challenges impacting fisheries and living marine resources

³ The Intergovernmental Oceanographic Commission of the United Nations Educational, Scientific and Cultural Organization (IOC, UNESCO) and its International Oceanographic Data and Information Exchange (IODE) together with its Global Ocean Observing System (GOOS), the World Meteorological Organization (WMO), the Food and Agricultural Organization (FAO), the Group on Earth Observations (GEO), the International Council for the Exploration of the Sea (ICES), and others

⁴ RFMOs are international bodies made up of countries that share a practical and/or financial interest in managing and conserving fish stocks in a particular region. These include coastal States, whose waters are home to at least part of an identified fish stock, and “distant water fishing nations” (DWFN), whose fleets travel to areas where a fish stock is found.

⁵ Fisheries management authority is that entity which has been given the mandate by the State (or States in the case of an international authority) to perform specific management functions. In many countries that authority would be a Department of Fisheries or, within a broader Department, a Division of Fisheries. However, a fisheries management authority does not have to fall directly within central government, and could be, for example, provincial, local, parastatal or private.

⁶ <https://www.un.org/sustainabledevelopment/development-agenda/>

⁷ https://ec.europa.eu/clima/policies/international/negotiations/paris_en

⁸ <https://oceandecade.org/>

⁹ https://goosocean.org/index.php?option=com_content&view=article&id=14&Itemid=114

International stakeholders will benefit from the Blue-Cloud by having a coordinated European voice for marine data services at International discussions. This has previously been difficult to achieve due to the complexity and diversity of European marine data initiatives, but will be achieved through greater collaboration and federation of key marine data infrastructures and e-infrastructures. The Blue-Cloud will offer a ‘hub’, federating European marine data services as a European contribution to international efforts in marine data and information services. The international uptake and use of Blue-Cloud data services will be pertinent not just to European policies and needs but also global societal requirements e.g. for marine ecosystems research, conservation, forecasting and innovation in the Blue Economy, marine management and governance. And, in turn, buy-in from the International community of the value of Blue Cloud data and services for supporting international policies and initiatives will add to the drive for sustainability and future funding prospects and funding models of the initiative.

Table 5 Examples of International Organisations

Field	Examples
International Organisations	Food and Agricultural Organization (FAO); International Council for the Exploration of the Sea (ICES); Intergovernmental Oceanographic Commission of the United Nations Educational, Scientific and Cultural Organization (IOC of UNESCO); International Oceanographic Data and Information Exchange (IODE); Global Ocean Observing System (GOOS), the World Meteorological Organization (WMO), the Food and Agricultural Organization (FAO), the Group on Earth Observations (GEO), JCOMM in-situ Observations Programme Support Centre (JCOMMOPS)

3.1.4 Policy and Public Funding bodies

The policy and funding bodies relevant to Blue Cloud include include stakeholders working at multiple geographical scales (National, Regional, European and International) including policy makers, advisors, managers, funders and decision makers involved with driving forward key policy priorities, matched with relevant funding to implement and support such policies. For the Blue-Cloud, a key policy and funding body stakeholder is the European Commission with its multiple EC directorates.

The national governments and funding bodies also play a key role, providing core funding for national marine data collection (including observation and monitoring programmes) that provide the marine data for the nationally funded data centres.

Why to join Blue-Cloud and how can they benefit from Blue-Cloud?

Since the early nineties, there have been a wide range of EU initiatives on blue data infrastructures. These EU initiatives were funded and/or supported by EU DG RTD (Research and Innovation), including the funding of SeaDataNet¹⁰ and multiple other marine research and marine data infrastructure projects, EU DG MARE (Maritime Affairs and Fisheries) funding EMODnet¹¹, EU DG GROW (Internal Market, Industry, Entrepreneurship and SMEs), now termed DG DEFIS (Defence, Industry and Space) that supports the Copernicus programme and the Copernicus Marine Service (CMEMS)¹², EU DG ENV (Environment) and EU DG CONNECT (Communications Networks, Content and Technology) funding initiatives such as BlueBRIDGE and other related e-infrastructure initiatives. This has developed a mature, yet complex, landscape of European marine in-situ and remote sensing data collection, data management and data services that via Blue-Cloud can be made interoperable to maximize the impact and the outputs of the previous investments. The future funding models and sustainable implementation of Blue Cloud therefore depend on close interaction across EC services.

¹⁰ <https://www.seadatanet.org/>

¹¹ www.emodnet.eu

¹² <http://marine.copernicus.eu/>

Table 6 Examples of Policy and public funding bodies

Field	Examples
Policy	Marine Strategy Framework Directive, Digital Single Markets strategy, EU Green Deal
Policy and public funding bodies	National authorities and member state governments, Regional Sea Conventions, European Commission (EU DG RTD, EU DG MARE, EU DG DEFIS, EU DG ENV, EU DG CONNECT)

From a policy perspective, policy making bodies are also crucial for the Blue-Cloud as they provide the political will and support to drive forward Blue-Cloud and its sustainable legacy, and they can guide the context and contribution to priority policies, ensuring the Blue-Cloud is fit to provide the data and knowledge for policy support. In Europe, marine data and knowledge are required to underpin the Integrated Maritime Policy, including the Marine Strategy Framework Directive (MSFD). For what concerns the EOSC context the main policy reference is the Digital Single Market strategy (published in 2015), where the Commission first announced the launch of a cloud for research data – the ‘research open science cloud’. In addition, the recently published EU Green Deal has a commitment that EU services will deliver a high precision “Digital Twin” model of the Earth which the Blue-Cloud will need to align with.

3.1.5 Relevant EU-funded projects and initiatives

Who are they?

Funded projects and initiatives, from National, European and International level, working on complementary areas where goals can be aligned and establish win-win synergies thanks to clustering opportunities.

Blue-Growth H2020 funded projects (e.g. EuroSea), thematic clusters (e.g. Food Cloud and INFRAEOSCO4 projects), marine research infrastructures and data infrastructures (e.g. EuroArgo, EMSO, EMBRC, ICOS-marine, Life-watch, EuroBioImaging, ENA-ELIXIR) and other world-wide initiatives related to data, marine and earth (e.g. Research Data Alliance, GEOSS) are potential entities with Blue-Cloud can partner with.

Why to join Blue-Cloud and how can they benefit from Blue-Cloud?

Collaboration among different initiatives can contribute to spread the visibility of the mutual results and engage different stakeholders from diverse communities. In addition, the Blue-Cloud framework will be co-developed with some of the above-mentioned initiatives that will feed into Blue-Cloud their data and services and vice versa. This will avoid overlapping developments.

The representatives of the most relevant initiatives will be invited to contribute to the Blue-Cloud roadmap to support the shaping of the future strategy.

3.2 Secondary Stakeholders

3.2.1 Industrial players & Trade Associations

Who are they?

Some of the industrial players are only users of data and others also contribute to observations at sea by giving access to their platforms or by producing data that are then assembled in data collections, processed and made available by Blue Cloud services: Oil and Gas companies (e.g. via the System of Industry Metocean data for the Offshore Industry and Research – SIMORC), voluntary observing

vessels (e.g. vessels engaged in the international Voluntary Observing Ship Program), voluntary fishing vessels.

Table 7 Examples of Industrial Players and Trade Associations

Field	Examples
Transport	Ship owners; ship routing; ship classification companies: e.g. climatologies for currents, sea states.
Energy and mineral resources	Oil & gas companies (impact studies...): Ocean Data Foundation Renewable energies (implementation studies, impact studies...): Véolia, etc. Granulate (sand...) extraction (implementation studies, impact studies...)
Fisheries	Professional associations; Regional associations (stock assessments, climate change impact...)
Aquaculture	Professional associations; Regional associations (water quality, plankton, impacts of marine farms; climate change impacts...)
Manufacturing	Marine instrumentation manufacturers including underwater acoustic; Offshore equipment design and manufacturers; Vessel manufacturers (marine physical and chemical characteristics)
Telecommunication	Telecommunication cable operators (marine physical and chemical characteristics)
Biology	Medical applications; Bio-sourced plastics; Emergent food sources (e.g. algae); Seafood preservation and transportation methods.
Environment	Project offices, Engineering offices, Environmental companies which act for environmental assessment, environmental recovery and depollution.
Defense and submarine intervention	Marine instrumentation manufacturers including underwater acoustic;

The above list of industry players is complemented by Blue-Growth and ICT related companies that builds applications on oceans data to support policy makers and ocean impact assessment.

Why to join Blue-Cloud and how can they benefit from Blue-Cloud?

Blue-Cloud will provide services to access, process and disseminate data that are necessary for most of marine industrial players. Multiple sectors can gain benefit from Blue-Cloud, such as: transport; energy; fisheries; aquaculture; manufacturing; telecommunication; biology; environment; defence; tourism industry.

Blue-Cloud could be a facilitator for the industrial players to be put in relation with researchers or research units. They could also benefit from more interoperable data issued from Academia and Research in order to be used by the industry for creating added-value products. The opposite is also true. Researchers and Academia could benefit from an easier access to data produced by industrial players for added-value products and/or for complementary testing of models (e.g. Climate change models, Ocean circulation).

Finally, ICT companies will be able to contribute to the co-design of some of the services part of the Blue-Cloud framework and to empower their commercial offer leveraging on the data made available via Blue-Cloud.

3.2.2 Influencers, activists, NGO’s & general public

Here, Influencers are thought leaders in Blue economy and ocean sustainability, with specialized knowledge, authority or insight into this subject, while Non-Government Organisations (NGOs) are non-profit institutions that operates independently of any government, addressing the same societal issues. The activists considered in Blue-Cloud are persons who campaign to bring about social change driven by data in the environmental and ocean area. These 3 categories have the potential of becoming multipliers of Blue-Cloud activities.

Table 8 Examples of Influencers, hacktivists, NGO’s & general public

Field	Examples
NGOs	World Wildlife Fund, Sustainable Seas Trust, One Ocean Foundation, Sustainable Ocean Alliance, Friends of Ocean Action, International Union for Conservation of Nature, Marine Stewardship Council, Ocean Panel Organisation, Aquaculture Stewardship Council, Global Fishing Watch, Oceano Azul Foundation, Oceana Org
Influencers & activists	Individuals, from each stakeholder category.

Why to join Blue-Cloud and how can they benefit from Blue-Cloud?

In general, the Blue-Cloud will provide targeted solutions for the areas of marine research and Blue Economy. NGOs, influencers and activists can find some best practices in Blue-Cloud that can support their communication to the broad public.

4 Communication and Dissemination Tools

4.1 Blue-Cloud Visual identity and branding

The project’s visual identity aims at ensuring a distinctive look and feel across the entire set of Blue-Cloud communication tools.



Figure 3 Logo

Several alternate versions of the logo exist, allowing for a more diverse use depending on specific needs and channels. They vary in layout and/or in colour, and can be freely downloaded through the website.



Figure 4 Alternate versions of the logo

The tagline “Piloting innovative services for Marine Research & the Blue Economy” highlights the core aspects of Blue-Cloud’s mission, identifying some of the keywords that are also employed for communication across channels.

4.2 Communication Toolkit

In addition to the logo, a complete communication toolkit¹³ has been prepared and will be further evolved during the project for all partners to use, in either digital or printed formats, for promotion of Blue-Cloud. The materials will be developed based on a needs analysis during the project lifetime and will be used to raise awareness and understanding of the Blue-Cloud offer.

Table 9 Communication material KPIs

Type of Material	Description	KPI
Flyers	To promote, at relevant events, the services and early achievements according to each stakeholder, with images, quotes and key figures	4
Posters	To highlight Blue-Cloud’s objectives, with technical information and other project updates	4
Roll-up Banners	To promote the Blue-Cloud branding.	2
Presentations	General and specific presentations of the project readily available or provided upon request under a slide deck format to be showcased at specific events or meetings.	50
Videos	Videos featuring interviews or short presentations of the Blue-Cloud mission and demonstrators will be produced to introduce the project from multiple standpoints	6
Give-aways	Appropriate give-aways (USB, postcards Gadgets) to incentivise stakeholder engagement.	2

As of the moment, the Blue-Cloud Communication toolkit includes the following resources:

¹³ <https://www.blue-cloud.org/communications-kit>

- All versions of the logo¹⁴
- A5 Flyer¹⁵
- 70x100 Poster¹⁶
- Roll-up Banner¹⁷
- PPT template¹⁸
- Previous PPTs¹⁹

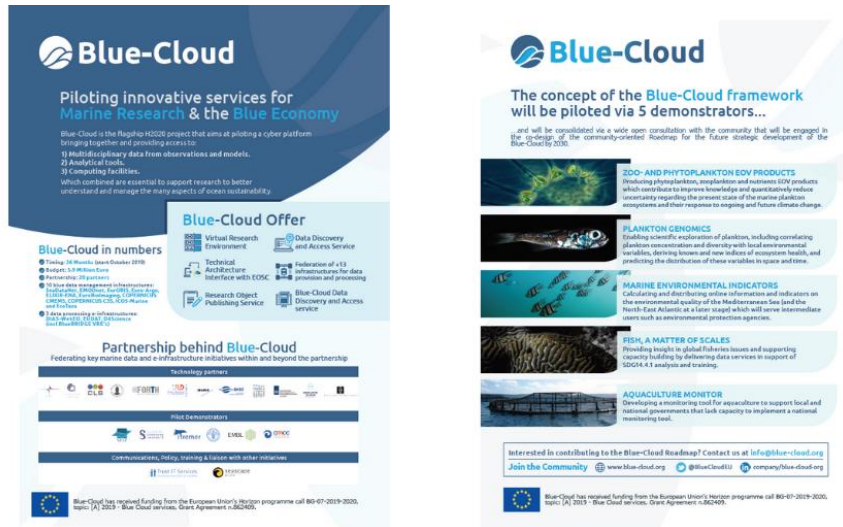


Figure 5 Blue-Cloud Flyer

All communication materials will be available in the project’s internal repository for the benefit of the consortium, and all public materials will be included in the public website.

4.3 Online Tools

4.3.1 Website

Blue-Cloud’s website²⁰ was launched on 23rd December 2019, it represents the central digital hub for communication and engagement. It plays a central role as it features all the relevant information about the project and its pilot **Demonstrators**, plus frequently updated **News** and **Events** sections.

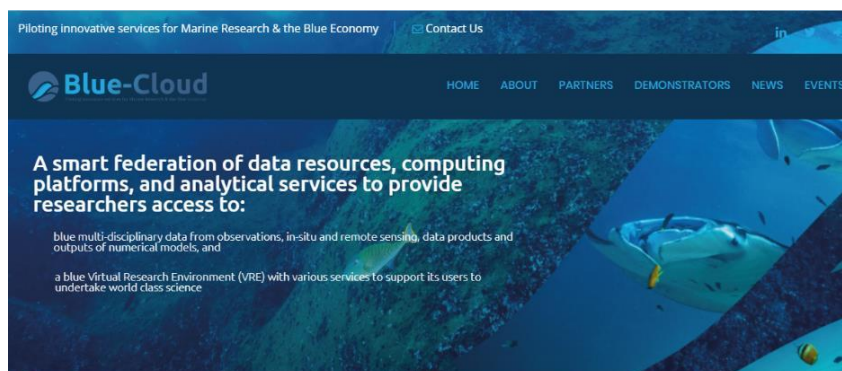


Figure 6 Blue-Cloud home page

¹⁴ https://www.blue-cloud.org/download/communications_kit/node-field_download_all-83-0

¹⁵ https://www.blue-cloud.org/sites/default/files/Flier_A5_BLUE_CLOUD_201911.pdf

¹⁶ https://www.blue-cloud.org/sites/default/files/Poster_70x100_2019.pdf

¹⁷ https://www.blue-cloud.org/sites/default/files/Blue-Cloud_Rollup-Banner_201909.pdf

¹⁸ https://www.blue-cloud.org/sites/default/files/Blue-Cloud_ppt_template.pptx

¹⁹ https://www.blue-cloud.org/download/communications_kit/node-field_download_all-90-0

²⁰ www.blue-cloud.org

The website is compliant to the General Data Protection Regulation (GDPR)²¹, it has a user-friendly structure and can be easily browsed in its entirety via desktop and mobile devices. Features include the possibility to register to the Blue-Cloud newsletter, or see what has been posted on social media, without having to leave the home page. Administrators can also employ functional and customisable web forms, as well as embed rich content, making the website more interactive and engaging for visitors. The main goals of the Blue-Cloud web platform are:

Table 10 Blue-Cloud website goals

N	Website Goals
1	Provide quality information and user-friendly access to Blue-Cloud outputs and assets, targeting appropriate stakeholders' communities.
2	Facilitate the engagement of communities and exploitation of the assets.
3	Promote all scientific papers, documents, deliverables and reports prepared by the project consortium.
4	Showcase best practices and use cases, and how its services are bringing innovation in the Blue Economy.
5	Release the Blue-Cloud Communication Toolkit: flyers, brochures, pop-up banners, posters, press releases, videos.
6	Announce Blue-Cloud participation at third party events, workshops, trade fairs.
7	Promote offline and online events organised by Blue-Cloud.
8	Collect feedback and inputs from all Blue-Cloud Stakeholders.

In line with the numbers from several other projects with a similar scope, such as the ESFRI clusters EOSC-Life, ESCAPE, and PANOSC, the website KPIs for the Blue-Cloud website were set at 400 monthly visitors and 800 monthly sessions. Targets that were met both in January and February 2020.

Table 11 Blue-Cloud website KPIs

KPI	M12	M24	M36
Visitors	3.600	8.400	13.200
Sessions	9.600	19.200	28.800

Demonstrators

A number of Blue-Cloud Demonstrators will be developed that will make use of existing, and drive the further development of additional, Blue-Cloud services. The Blue-Cloud Demonstrators have been selected as applications that are specific for oceans and seas, could be expanded to fresh water bodies, and are necessary for marine programs research, conservation, forecasting & innovation in the Blue Economy. In particular, the demonstrators have been formalised taking into account the following requirements:

- Address one or several of the policy challenges defined in the Bioeconomy Strategy, the Circular Economy Strategy, the European Open Science Cloud Initiative, the Blue Growth Strategy, the Common Fisheries Policy, the Maritime Spatial Planning Directive, the Marine Strategy Framework Directive, the International Ocean Governance Communication and the UN SDGs.
- Integrate the Essential Ocean Variables, notably the biological variables, including carbon biomass and diversity.
- Build on the multi-disciplinary data, algorithms, and computing platforms that will be federated as part of the Blue-Cloud system.
- Take account of the parallel EOSC thematic modules being developed – such as the Food-Cloud initiative.
- Demonstrate how the Blue-Cloud Services developed can contribute to unlocking the innovation potential of the Blue-Cloud showcasing its potential in promoting the blue economy shortening the time span between research and innovation in frontier fields, such as microorganisms and genomic enabled innovations.

Each demonstrator will deliver a service accessible through a Virtual Lab powered by the Blue-Cloud Platform. Each service (Virtual Lab) will provide access to datasets, products, and computational resources to analyse datasets, and integrate products. This is a core of the open science that is a pillar of the Blue-Cloud platform. Each product will be made accessible through a Virtual Lab (operational service accessible online) that will provide the documentation, examples of use, and the technology to replicate the service. The Blue-Cloud MSE will have a common dashboard for accessing Virtual Labs for performing collaborative research.

The five Blue-Cloud Demonstrators will be developed in close cooperation between the technical team implementing the Blue-Cloud technical infrastructure and with researchers in order to describe the required analytical workflows, and to use these for designing the Virtual Labs. While developing, much interaction will take place between the researchers and the technical developers in order to test and fine-tune prototypes.

Demonstrators:

- Zoo- and Phytoplankton EDV products**
Processing several data resources available under different European marine research to produce unique zoo- and phytoplankton EDV products.
- Plankton Genomics**
Enabling scientific exploration of plankton, including its distributions, dynamics and fine-grained diversity to molecular resolution, through genomics analysis.
- Marine Environmental Indicators**
Developing an online service to provide and display indicators and information on the environmental quality of the ocean.
- Fish, a matter of scales**
Improving data management and analytic capabilities for fisheries by expanding the Virtual Lab for the FMO Tuna Atlas and the GSF.
- Aquaculture Monitor**
Delivering a tool to produce national aquaculture sector overviews for monitoring aquaculture in marine cages and in coastal areas.

Figure 7 Demonstrators

²¹ <https://www.blue-cloud.org/privacy-policy>

In addition, the latest content from the News and Events sections will be shown on most pages in the right column, so as to make it easier for users to be up to date concerning what is happening in and around the Blue-Cloud.

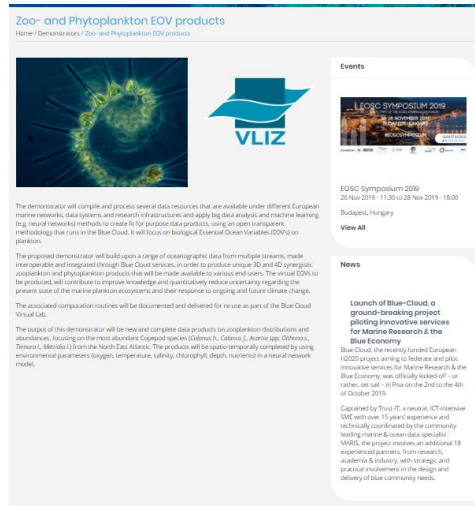


Figure 8 Page example

The platform will be upgraded during the project, making Blue-Cloud assets available, as well as publishing use cases that demonstrate Blue-Cloud outputs. The main goal of these updates is to increase visibility for the project activities and to promote the Blue-Cloud technical developments and user scenario.

4.3.2 Social media

The social media activity of Blue-Cloud will mostly focus on its **Twitter** and **LinkedIn** channels, providing an instant form of communication with community members and potentially interested people or organisations out of the community.

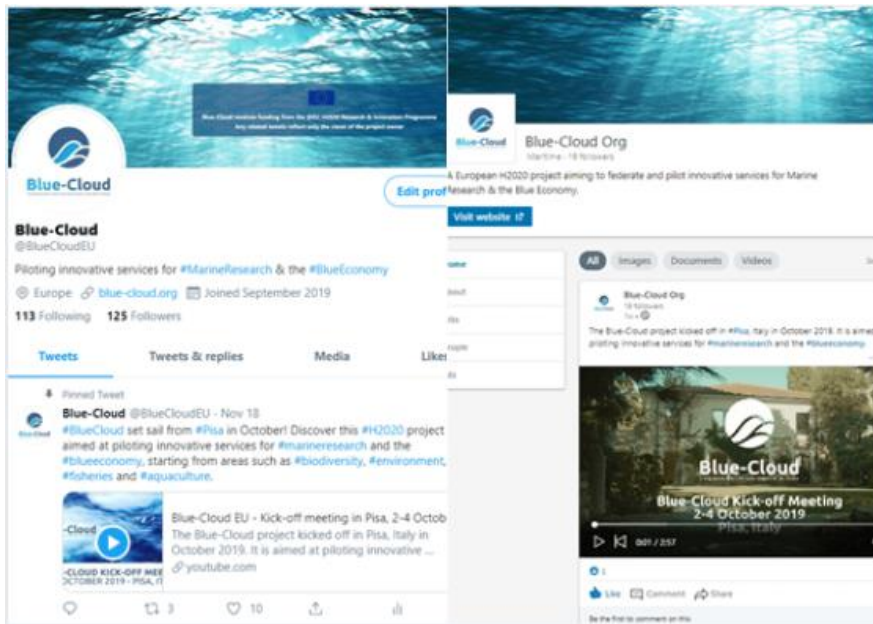


Figure 9 Blue-Cloud social media

Through frequent activity and interaction, the outreach team will ensure continual visibility of the project’s efforts such as events, seminars, news posts, and announcements. Social media channels especially support community building by providing a path from seeing the messages to potentially converting as an engaged stakeholder.

Some of the partners already act as multipliers and influencers, as they present a high number of followers in areas that are relevant for our project, such as marine or environmental research.

Aside from these two channels, Blue-Cloud also leverages on the YouTube platform for uploading and sharing videos. Generally, content with videos get more interaction from users either on their own or they help retain attention and support other content.

The project aims at creating at least **six videos** over its three years. Duration of videos will generally be under 3 minutes, depending on the specific content and use.

As of March 2020, the Twitter profile has reached **more than 300 followers**, while the video of the kick-off meeting in Pisa²² collected **more than 450 views** across YouTube and LinkedIn. All of the channels are expected to grow in 2020 as the project goes on and starts producing more results.

Table 12 Social Media KPIs

Social Media	Purpose	KPIs by M36
Twitter²³	Immediate interaction and sharing of news, videos, content	Followers: 1,000 Impressions: 700,000 Tweets: 700
LinkedIn²⁴	Community building, sharing content in specific groups	Followers: 200 Impressions: 100,000
YouTube²⁵	Mostly used for embedding and sharing our video material	Videos: 6 Views: 500 views per video across channels

Twitter focuses on more immediate content, such as media, news, events, or direct interactions with the community, such as the #BlueQuiz which was launched before the 2019 holiday season. It also serves as a useful tool to learn about relevant activities and topics in the fields of ocean research and blue economy, as well as the latest updates from funding bodies and institutions.

²² <https://www.youtube.com/watch?v=DE0AggDsxXk>

²³ <https://twitter.com/BlueCloudEU>

²⁴ <https://www.linkedin.com/company/26247064/>

²⁵ <https://www.youtube.com/channel/UChYrsWsZulrjVCAUsBfw8PA>

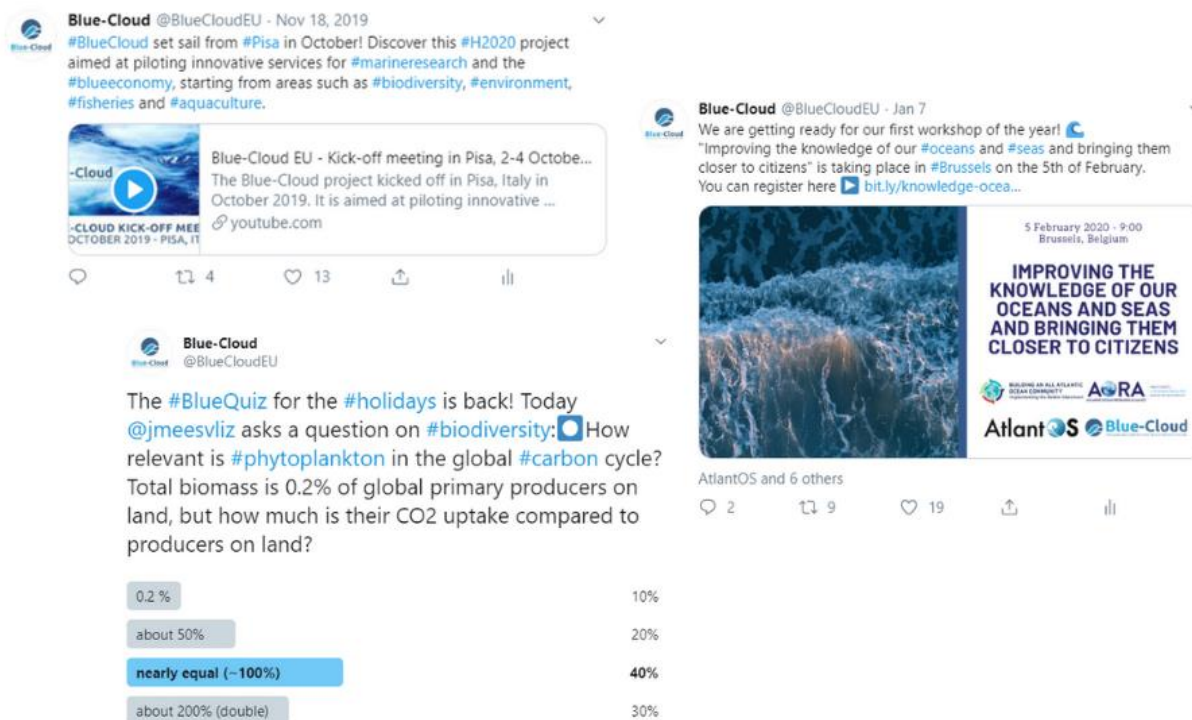


Figure 10 Examples of tweets

Table 13 Examples of relevant hashtags and accounts for stakeholder groups on Twitter

Data Infrastructures and Horizontal e-Infrastructures	Academia and Researchers	International Organisations	Policy & Funding bodies	Industrial players & Trade Associations	Influencers, hacktivists, NGO's & general public
#openscience #eosc #research #fairdata	#biodiversity #marineresearch #oceanliteracy #oceanscience	#OceanDecade #OurOcean #BluePlanet #OurPlanet #COP25 #unesco2030	#EUGreenDeal #EUBiodiversity #EUBlueDeal	#sustainability #BlueEconomy #BlueGrowth #fisheries #aquaculture	#climatechange #marinelitter #noplanetb #environment
@EMODnet @SeaDataNet @EurOBIS_VLIZ @EuroArgoERIC @ELIXIREurope @EuroBioImaging @CMEMS_EU @Eudat_eu @OpenAIRE_eu @d4science	@CmccClimate @jmeesvliz @ScienceSorbonne @embl @MPI_Meteo @Ifremer_en	@UNEP @FAO @FAOfish @FAOclimate @COP25CL @IODEocean @GOOSocean	@EU_MARE @EU_EASME @EU_ecoinno @EU_ENV @EU_Commission @EU_Growth @EUClimateAction	@rev_ocean @OceanEnergyEU @seaeurope @goceantrust	@OceanaEurope @WWFEU @TheOceanCleanup @FishSecretariat

As for **LinkedIn**, aside from being a channel for regularly posting news and content from the Blue-Cloud website, it will mostly serve as a tool for sharing content within relevant groups, specifically concerning such topics as marine research, H2020 projects related to climate change, or the blue economy. The LinkedIn page will also be used for uploading videos directly, so as to make it easier to share them inside the social network, instead of having to use the YouTube link.

Table 14 Examples of related LinkedIn groups

Group name	Members	Link
Horizon 2020: Blue Growth	500	https://www.linkedin.com/groups/5137641/
"H2020 ENVIRONMENT" Hydroinformatics, Climate Change, Water Resources Research	11,700	https://www.linkedin.com/groups/4427008/
"H2020 BIOTECH" BioEconomy, Agriculture, Forestry, Food, BioScience & BioTechnology	9,300	https://www.linkedin.com/groups/4427000/
Coastal Adaptation - planning to adapt to coastal climate change	4,600	https://www.linkedin.com/groups/3661405/

4.3.3 Newsletter

One newsletter will be sent out **every three months** (see Table 15), its contents will be shaped around the milestone results of the work planning, featuring comments and articles published on the Blue-Cloud website by our team. Newsletters will also include details about upcoming and past events, as well as achievements and relevant messages for the Blue-Cloud community.

Table 15 Blue-Cloud newsletters to be sent

Newsletters	Y1	Y2	Y3
Nº	4	8	12

Aside from collecting newsletter subscribers through events, face-to-face meetings, consortium network and social media, we have also set up a way to sign up for newsletters through the website.

4.4 Blue-Cloud Events

4.4.1 Blue-Cloud Workshops & final conference

At the time of writing of the deliverable, the COVID-19 situation should not affect the Blue-Cloud events plan.

4.4.1.1 Blue-Cloud Open Workshops

Blue-Cloud, as part of its work plan, sees the organisation of **two Blue-Cloud Open Workshops**, scheduled to take place **by M14 and M22** (November 2020 and July 2021, respectively). The dates and locations of both events might change according to the needs of the project.

The primary goal of these workshops is to showcase the Blue-Cloud Demonstrators through the eyes of end-users, while highlighting the benefits of Blue-Cloud services, that is, how they are helping these demonstrators on overcoming their challenges and, consequently, contribute to a more sustainable blue economy. They will be fundamental to build the basis for a future sustainability, by collecting feedback from potential new users and improve the Blue-Cloud developed tools.

An intensive dissemination campaign will be implemented to bring on board representatives of each Blue-Cloud stakeholder category. **It is expected to reach at least 50 participants in each edition, with a post-event report with the main insights discussed during the workshop.**

Some of the workshops will be organised in collaboration with the FNS-Cloud (known as “FoodCloud initiative”)²⁶, a project whose core mission matches the Blue-Cloud one: develop an infrastructure and services to exploit food, nutrition and security data (data, knowledge, tools – resources) for a range of purposes, and integrate with the EOSC. This collaboration will contribute to the full potential of current and future researchers in food, nutrition and aquaculture domains, by sharing knowledge and

²⁶ Website: <http://www.fns-cloud.eu/>

practical skills. These workshops will be co-located with the Blue-Cloud Roadmap workshops, described in detail in the following section.

Social media activities and communication materials will be prepared to maximise the online exposure of Blue-Cloud workshops and, therefore, reach new audiences.

4.4.1.2 *Blue-Cloud Roadmap Workshops*

A co-designed, community-oriented Blue-Cloud Roadmap will be formulated for the future strategic development of the Blue-Cloud as a leading marine component of EOOSC and as essential platform for synergizing infrastructure developments as part of the COPERNICUS, EMODnet, ESFRI, EOOS, and MSFD initiatives. The development of the roadmap will be driven by an inter-disciplinary, cross-sectoral Expert Foresight Group (EFG), with experts being drawn from the project Steering Committee, the Advisory Board, and potentially an additional three up to five external experts. The Expert Foresight Group will act as the drafting/editorial group to develop the core content of the Roadmap through a series of stages with specific windows for review and input from all project partners and a wider range of stakeholders beyond the consortium.

The **target stakeholder** groups include both Policy & Decision Makers from different EC DGs (e.g. DG RTD, DG MARE, DG GROW, DG CONNECT & DG ENV) and services (JRC, EEA, etc.), industry, research & academia organisations, blue data infrastructures & research infrastructures and horizontal e-Infrastructures (see section 3) and Blue-Cloud consortium members. It is expected to reach at least 50 participants. Identified stakeholder groups will be for different messaging. They will be involved in the project through implementation of various activities, as are dissemination and communication, awareness raising, educational/training activities and through the access and use of the developed Innovation Tools and Services.

The approach encompasses extensive stakeholder consultations using a variety of tools to harness stakeholder input and foresight contributions, including two workshops back-to-back with the other Blue Cloud workshops, online open consultation(s), targeted interviews and open feedback sessions with specific groups of stakeholders and users.

Two Blue-Cloud Roadmap Workshops will be organized (one-day duration) to consider the development of the Strategic Roadmap with members of the Expert Foresight Group (EFG) according to a predetermined structured dialogue:

- The **first Workshop** (M14) will develop a set of priority topics for development of future services and demonstrators and initial recommendations with priority areas.
- The **second Workshop** (M22) will result in a mature draft built on the draft Roadmap outline (M14).

In the Roadmap Workshops, experts will be asked to identify the most important emerging trends, problems and opportunities and provide these as input for designing the components of the future Blue-Cloud cyber platform as a framework for the Blue-Economy and EOOSC area (including infrastructure, resources, capacity and training aspects). These will be held back-to-back with two Blue-Cloud open workshops (see 4.4.1.1).

To prepare the Blue-Cloud Roadmap Workshops, a concept note with the approach, scope, format of the targeted roadmap including policy context, a draft contents page and plan for stakeholder consultation and time-scale for delivery will be developed. For input either as a member of the Expert Group, or for targeted stakeholder interviews and as reviewers, a list of leading experts across a range of identified fields will be compiled. A wide range of expertise will be considered, including marine science, blue growth, data and IT resources and infrastructures. In the selection of experts, attention

will also be paid to ensuring a broad geographic representation, and gender and socio-economic balance.

The stakeholder consultation will involve three steps:

- **Step 1:** Identification of interests and needs of Blue-Cloud stakeholders towards the challenge and clarification of their different priorities and perspectives. This will be done via questionnaires, Delphi Surveys, interviews (face-to-face, online, phone), etc. The output will be a detailed list in which skills, know-how and economic potential, identify good practices, priorities for each type of stakeholder are recorded;
- **Step 2:** Invite primary stakeholders (Section 3.1) that will participate in the next milestones/actions. The primary stakeholders will ensure the successful establishment of specific bridges with open dialogue and exchange of information with relevant H2020 projects, EOSC-related projects, FNS-Cloud, EU bodies and European commission, other European and international projects and initiatives. The network will be maintained via phone-call and/or email.
- **Step 3:** Roadmap open consultation. In this phase, the mature version of the roadmap will be open for consultation to the wider audience to build consensus among the different actors that were not directly involved in the writing.

Throughout the process, representatives from key stakeholder organisations and networks will be interviewed live or by phone. In addition, a wider community of experts and stakeholders will be given the opportunity to comment on and contribute to the roadmap through an open on-line consultation process. The Roadmap will be presented for adoption at the final event organised towards the end of the project.

4.4.1.3 *Blue-Cloud Final Conference*

The Blue-Cloud final conference (M34) aims to present the policy oriented, Blue Cloud Roadmap to 2030 implementation which seeks a series of EU Calls for further development and uptake of the Blue Cloud by multiple VRE (virtual research environment) applications and connecting additional marine data infrastructures. The conference will be key to provide preliminary insights on the Blue Cloud 2030 implementation policy roadmap to collect feedback on the final version of the Roadmap to build plans for future uptake and sustainability. The societal benefit will be maximized leading to more sustained funding and resource commitments.

The project results will be presented while a significant part of the conference will be dedicated to showcase the demonstrators. All stakeholders particularly around pilot demonstrator users will be invited to showcase to policy makers the impact generated by the demonstrators. For this purpose, this might include a demonstration workshop targeted at invited Local Governments, EU bodies, and other policy makers to highlight the Blue-Cloud outcomes.

The conference will be a public event, open to all stakeholders and of international character as relevant representatives from European and other non-European countries will be invited to participate. This way, international representatives will have the chance to exchange opinions and to gain significant knowledge on the sustainability of the Blue-Cloud. Finally, through this conference the path for future actions and synergies will be paved.

The optimum communication strategies for the Final event will be developed by Trust-IT, in collaboration with Seascope Belgium and partners, to ensure all the network channels are fully engaged to promote the Blue-Cloud Final event and Roadmap through multiple mediums and

methods (social media, news items on websites, targeted information to the Blue Cloud opt-in mailing list, individual invitations and dialogue with key stakeholder groups).

Representatives from local and national media shall also be invited to the conference in order for the dissemination of the project results to be wider. The Conference will be announced through national and local media, press releases at local newspapers and social media, through the project website, the partners’ websites and other relevant websites, while invitations will also be send via email.

The date and place of the conference as well as the precise contents will be decided at a later stage of the projects.

4.4.2 Presence at third-party events

Various events organised by third-parties’ organisations have been identified for possible submission of papers, conducting workshops and exhibitions, joining a panel, poster session, demonstrations, networking activities, amongst others. Presence at these events will allow:

- The promotion of Blue-Cloud solutions and results to different target stakeholders;
- Collection of new contacts for database enrichment opportunities;
- Engage directly with potential Blue-Cloud service users;
- Identification of win-win synergies with different organisations and initiatives, for potential collaboration and knowledge transfer;
- Dissemination of scientific results and engagement with the scientific community.

Events will be selected based on the audiences expected, while well targeted presentations and promotional material will be generated for focused and effective communication, dissemination and engagement outcomes. An initial list, of relevant potential events to promote Blue-Cloud, has been defined. Table 16 gives a limited and non-exhaustive sample of events, for the first year of the project (the rows in green are events where the project was already showcased by the time of writing of this deliverable).

A dedicated page has been set up²⁷ to collect all the relevant details to track and monitor Blue-Cloud’s event participation. Moreover, the Blue-Cloud event participation is highlighted on the web platform’s Events section, to inform beforehand the audience that they can meet Blue-Cloud partners there: <https://www.blue-cloud.org/events>

Please note that due to the current COVID-19 situation many third party events have been rescheduled or transformed in remote sessions. Blue-Cloud will adapt its contribution and participation according to the new plans.

Table 16 Potential events to showcase Blue-Cloud in 2020 before COVID-19 emergency.

Date, Location	Event	Target Audience	Type of participation
18-21 Nov 2019 Rome (Italy)	FAO International Symposium on Fisheries Sustainability	National Authorities & Policy & Decision Makers, NGO’s & other international organisations, Research & Academia Organisations	Distribution of Blue-Cloud flyer
26-28 Nov 2019 Budapest (Hungary)	EOSC Symposium	Shakers and makers in the growing EOSC community	Presentations: - Blue-Cloud Demo Zoo- and Phytoplankton EOY products - EOY Life – Blue-Cloud for marine sciences

²⁷ Link: https://docs.google.com/spreadsheets/d/1jOT1GPhgOnkYtSLPn_DR0XQTQaUxpG93PkP-2K_H_yo/edit#gid=0

Date, Location	Event	Target Audience	Type of participation
			- Blue-Cloud Poster
27-28 Nov 2019 Brussels (Belgium)	EuroSea Kick-off Meeting	European actors of ocean observation and forecasting with key end users of ocean observations	Blue-Cloud Presentation
5 Feb 2020 Brussels (Belgium)	Improving the knowledge of our oceans and seas and bringing them closer to citizens	Policy makers, funding agencies, e-Infrastructures and Research Infrastructures, data providers, research & academic institution representatives, research communities, industry representatives, maritime business and innovation clusters, and projects related to blue economy from countries around the Atlantic.	Presentation and demonstration
6-7 Feb 2020 Brussels (Belgium)	All-Atlantic Ocean Research Forum	Policy makers and stakeholders from many Atlantic coastal countries	Presentation and demonstration
22-24 April 2020 Brussels (Belgium)	International Ocean Forum	Policy makers and international stakeholders	Working group on “Strengthening International Ocean Research, Data, and Knowledge”
30-31 Mar 2020 Hong Kong (Hong Kong)	12th Global Summit on Aquaculture & Fisheries	Scientists and Researchers from Aquaculture, Fisheries and Marine biology	TBD
15-16 May 2020 (postponed)	European Maritime Day 2020	Policy makers and funding bodies, blue economy industry	TBD
18-20 May 2020 Karlsruhe (Germany)	EOSC-hub week 2020	EOSC stakeholders & EOSC governance	TBD
19-21 May 2020 Aviemore (UK)	AQUACULTURE UK	Aquaculture professionals from industry	TBD
20-21 May Tokyo (Japan)	World Aquaculture and Fisheries Conference	International scholars and researchers to voice their research discoveries on Aquaculture , Fisheries and Marine biology	Session
02-06 Jun 2020 Lisbon (Portugal)	2020 UN Ocean Conference	Policy Makers, non-governmental organizations, civil society organizations, academic institutions, the scientific community, the private sector and philanthropic organizations.	TBD
03-05 Jun 2020 Amsterdam (The Netherlands)	ICCS International Conference on Computational Science	Researchers and scientists from mathematics and computer science as basic computing disciplines, researchers from various application areas who are pioneering computational methods in sciences such as physics, chemistry, life sciences, engineering, and arts and humanitarian fields	Papers
23-25 June 2020 Lyon (France)	EGI Conference 2020	Research and industry partners from technology providers, data centres, user communities from scientific computing.	Presentation
07-10 Sep 2020 Copenhagen (Denmark)	ICES Annual Science Conference 2020	marine scientists and leaders of research institutes	Networking session
21-25 Sep 2020 Oostende (Belgium)	EMODnet Open Conference and Jamboree	Marine Data providers and users.	Presentation
29 Sep – 2 Oct Cork (Ireland)	Aquaculture Europe 2020	Stakeholders from industry and research from many diverse disciplines to discuss	Exhibition, Poster, Paper, presentation

Date, Location	Event	Target Audience	Type of participation
		and debate cross cut-ting issues such as new circular economies, life-long health and environmentally sustainable production	
30 Set – 2 Oct Ottawa (Canada)	International Conference on Research Infrastructures 2020	High-level stakeholders from across the globe, as well as highly profiled key political Institutions, including the UN, European Commission, OECD and others.	TBD
12-16 Oct 2020 Brest (France)	SEA TECH WEEK, EOOS Technical Forum	Research & Academia Organisations, Industrial players & Trade Associations, NGO’s & other international organisations.	Exhibition, presentations and Demonstrations
15-17 Oct 2020 Izmir (Turkey)	Future Fish Eurasia	Seafood products, aquaculture, fish processing and fishing equipment professionals from industry	Presentation
19-20 Oct 2020 Berlin (Germany)	EOOSC Symposium	Stakeholders and all the involved EOOSC communities	TBD
26-28 Oct 2020, Amsterdam (Netherlands)	IMDIS 2020	Marine Researchers, Data infrastructures, data experts	Presentation
2-4 Dec 2020 London (UK)	Oceanology International 2020	Businesses, academics and government in Oceanology field	Exhibition and Demonstrations
April 2021	EGU General Assembly 2021	Geoscientists and researchers from all over the world to one meeting covering all disciplines of the Earth, planetary and space sciences.	Exhibition and Papers

4.5 Training

4.5.1 Blue-Cloud Hackathon

The Blue-Cloud services hold great potential to increase ocean knowledge and understanding of our marine and coastal environments, create new business opportunities and to underpin better management and protection of Europe’s precious marine resources.

A virtual Hackathon will be organized (M28) to engage data/service/resource providers, students and innovators to test Blue-Cloud services and create innovative solutions on top of them resulting in open consultation service that end-users will complete and serve as user-centred feedback for fine-tuning and enhancing the Blue Cloud services. It is expected to reach at least 100 participants. This will be linked to existing marine open data competitions such as EMODnet Open Sea Lab which is organized every 2-3 years in Belgium with the last one in 2019²⁸.

The target stakeholder groups are user-centric, including marine data and wider data and ICT experts and hacktivists, but also policy makers, industry and research professionals that use marine data, or the derived marine information and knowledge for their professional work. The hackathon will typically attract more technically-minded participants, but the applications and solutions developed will be societally relevant and will have a much wider and far-reaching impact. In previous hackathons, outputs ranged from tools to support fishermen, environmental managers and the windfarm sector, to marine tourism apps for the general public. Results from the virtual hackathon will be used to directly inform the developing Blue Cloud Roadmap with ideas for user-focused applications for future blue data services.

²⁸ <https://www.emodnet.eu/conference/opensealab/2019>

The hackathon will serve to bring innovative ideas to the Blue-Cloud, promote the Blue-Cloud to various user communities and serve as a training and capacity building activity, promoting the uptake, and further use and sustainability of Blue Cloud services but also to collect feedback.

An open consultation approach will be used as part of the wider Blue-Cloud continuous dialogue with user communities. This will include a public consultation process to help co-design the hackathon and a consultation during and after the hackathon to gather further ideas and user feedback. Public consultations will be communicated on the Blue-Cloud website and EMODnet Open Sea Lab webpage and further communicated through social media and targeted communication to particular stakeholder groups.

Results of the public consultation in a variety of locations (i.e. virtual & on-site) and formats (e.g. workshop, forum, online survey) will be reported publicly. Feedback from the stakeholder consultations will be used in that can be used in the Blue-Cloud Roadmap development.

4.5.2 Blue-Cloud webinars

Webinars are a key instrument to create awareness about the Blue-Cloud innovation with the broad public. Particular focus will be put on webinars dedicated to the demonstrators to:

1. Showcase the added value that the Blue-Cloud framework can bring to communities dealing with grand societal challenges;
2. Educate these communities on how to use the services and data made available by the project for future adoption also beyond Blue-Cloud.

After an initial webinar introducing the Blue-Cloud project in spring 2020, a series of webinars is foreseen to focus on the demonstrators. The first five webinars would be a starting point of each demonstrator and what their expected results would be. The last five webinars will be a presentation and live demonstration of the results of each demonstrator.

Provisional work plan for the webinars

- First year and second year of the project:
 - **1st webinar** (Spring 2020): Presentation of the Blue-Cloud project and general overview of all the demonstrators (5-10 minutes/use-case)
 - **2nd webinar** (Sep 2020): Preliminary and/or intermediate results and expected outcomes - Demo #5 and #4 (FAO)
 - **3rd webinar** (Nov 2020): Preliminary and/or intermediate results and expected outcomes - Demo #3 (CMCC)
 - **4th webinar** (Feb 2021): Preliminary and/or intermediate results and expected outcomes - Demo #1 (VLIZ)
 - **5th webinar** (April 2021): Preliminary and/or intermediate results and expected outcomes - Demo #2 (EMBL)
- Third year of the project:
 - **6th webinar** (M29 Feb 2022): Presentation of the results and/or tool training - Demo #5 (FAO)
 - **7th webinar** (M30 Mar 2022): Presentation of the results and/or tool training - Demo #4 (FAO)
 - **8th webinar** (M31 Apr 2022): Presentation of the results and/or tool training - Demo #3 (CMCC)

- **9th webinar** (M32 May 2022): Presentation of the results and/or tool training - Demo #2 (EMBL)
- **10th webinar** (M33 June 2022): Presentation of the results and/or tool training - Demo #1 (VLIZ)

To maximise the online exposure and recruit attendees for Blue-Cloud webinars, social media activities and communication materials will be prepared.

4.5.3 Blue-Cloud Training Material

Training materials will be developed with the support from all Blue-Cloud partners and, where possible, linked with the EMODnet Open Sea Lab. The training Kit will include explanations and how-to-guides for key marine data services, their data visualization, download and web service functionalities, to be used for the hackathon, together with information on the blue cloud demonstrators and services. Different formats will be used: PowerPoint presentations, demos, videos, etc. Chapter 5 reports an overview of the training material developed in the first 18 months.

4.6 Press & Media Coverage

Press Releases will be delivered in conjunction with the main project milestones to ensure timely communication of the progress of the project. In support of Blue-Cloud awareness raising and visibility, a selection of press and media channels are targeted.

The table below gives an overview of the press and media channels on which Blue-Cloud will leverage on during the project lifetime to maximize its visibility. This list is not exhaustive, and targets may be added to or some removed over the lifetime of the project. At the same time, it is imperative to highlight that not all these channels may be contacted, they will be selected on a case-by-case basis according to the communication content. In addition, all the partners will exploit at their best also their own press offices and media channels to create the right visibility for the project outcomes.

Table 17 Examples of press & media channels

Media Channels	Overview	Target Audience
Actu Environment www.actu-environnement.com	News related to environment.	Environment and related issues
Aquaculture Directory aquaculturedirectory.co.uk	Promotion of all issues relating the aquaculture including, news, articles and advertising of events. Distribution of a newsletter to registered members and house a directory of aquaculture businesses and farms	Aquaculture channel
Aquaculture Magazine www.aquaculturemag.com	Promotion of all issues relating the aquaculture including, news, articles and advertising of events.	Aquaculture channel
CORDIS Press Service http://cordis.europa.eu/fetch?CALLER=EN_PRESS	EC-based dissemination channels updated daily targeting enterprise, government and particularly research organisations across EU27 operating in ICT. Press releases and announcements.	Policy channel
Ecomagazine.com	A marine science publication committed to bringing scientists and professionals the latest ground-breaking research, industry news about environment coastal offshores.	Scientists and professionals
European Environment Agency eea.europa.eu	Independent information on the environment for those involved in developing, adopting, implementing and evaluating environmental policy, and also the general public.	

Media Channels	Overview	Target Audience
Earth Magazine www.earthmagazine.org	Promotion of all issues relating the environment including, news, articles and advertising of events.	Blue Growth channel
EBM Open Channels www.openchannels.org	Promotion of all news related to innovative tools for the fishery ecosystem management.	Blue Growth channel
EUObserver http://euobserver.com	A source of EU related news and information, editorially focused	Policy channel
EURACTIV http://www.euractiv.com	EU news and policy debates	Policy channel
Eurocean eNewsletter www.eurocean.org	EurOcean is a focal point for information on marine science and technology in Europe and its Internet portal is aiming to provide information on topics related to marine science and technology in Europe with a priority given to two main domains: marine research infrastructures and European research, technology and development information. EurOcean contributes to the initiatives aiming to implement a Marine European Research Area and a European maritime policy.	Marine research infrastructures, European researchers
Eurofish Europe www.eurofish.dk	International organisation established to assist the development of fisheries and aquaculture in Central and Eastern Europe. European related fish news and publishing of bi-monthly magazine. Publication of subscription based research documents relating to Global fish research.	Aquaculture and Fisheries in Europe.
Fish Information & Services www.fis.com	The web site of Fish Information & Services is widely recognized as the standard for global seafood industry information on the Internet.	Seafood industry
Fish Farming International http://fishfarminginternational.com	Online publishing of all aquaculture worldwide news pieces. Provides global coverage of all sectors of the aquaculture industry with an emphasis on research, production, technology, innovation, feed and industry trends and people.	Aquaculture industry
Fish Information and Services www.fis.com	The site delivers reliable, timely, comprehensive worldwide fishing, seafood, and aquaculture information. Publication of news pieces relating to worldwide fish news and data. 10,000 unique views daily. Houses a company directory for practitioners involved in different aspects of fishing	Business related to fisheries and aquaculture.
Fish News EU www.fishnewseu.com	Provide independent fishing related news, prices and service covering the catching, processing and aquaculture sectors both in a UK and international context. News stories based around Europe.	Fisheries and aquaculture
Flash FARNET magazine & newsletter https://webgate.ec.europa.eu/fpfis/cms/farnet/publications/newsletter	Provide fisheries related news of interest for small local fisheries communities. News stories based around Europe.	Small local fisheries communities
Futura Environnement - www.futura-sciences.com/magazines/environnement/	News related to environment.	Environment and related issues
Foresight www.climateforesight.eu	A forum for ideas and solutions to address future challenges on climate change.	

Media Channels	Overview	Target Audience
Frontier www.frontiersin.org	One of the largest and highest-cited publishers in the world, with the mission to make science open.	
Hatchery International http://hatcheryinternational.com	News related to aquacultures in particular hatcheries.	Aquaculture practitioners
Innovations Report www.innovations-report.com	Web-based and focused on cross-domain ICT sectors, business and R&D. Press releases and announcements.	Popular ICT & Technology Media Channel
International innovation www.internationalinnovation.com	Latest research, policy and technology insight and analysis. It has a section related to environment http://www.internationalinnovation.com/environment/ more generally for innovation in the environmental domain	Global audience
Le Marin www.lemarin.fr	Latest news from the marine & maritime sector	Marine & maritime news
Marine-oceans.com	Focused on economic, environment & politic topics related to the oceans, as well as the major challenges.	General public
Maritime affairs and fisheries online magazine http://ec.europa.eu/dgs/maritimeaffairs_fisheries/magazine/	Overview of news and events regarding to maritime affairs and fisheries in Europe.	Business and policy makers related to fisheries and aquaculture.
Nature.com	A multidisciplinary scientific journal, being one of the most recognizable scientific journals in the world.	Research scientists
Newscientist www.facebook.com/newscientist	News in science	Science & ICT news
Oceannews.com	Website news publication in the industry, delivering current information about projects, contracts, trends, technology, and company news as well as in-depth technology and information-based articles	Ocean industries
Oceanography https://tos.org/oceanography	The official magazine of the oceanography society, with peer-reviewed articles that chronicle all aspects of ocean science and its applications.	
sciencedaily.com	Breaking news about the latest discoveries in science, health, the environment, technology, and more -- from leading universities, scientific journals, and research organizations.	Research & academia
The Seafood Source www.seafoodsource.com	Global news on all subjects relating to seafood. Promotion of news and events relating to seafood. Includes sections on environment and sustainability and aquaculture.	General target interested in seafood sector. Fisheries and aquacultures.
Sciencemagazine	The world's leading outlet for scientific news, commentary, and cutting-edge research.	Science & ICT news
ScienceNode https://sciencenode.org	International weekly online publication that covers advanced computing, research networks, big data and tech trends in general. Through iSGTW a scientific readership of over 8700 can be reached.	Popular ICT & Technology & Business Media Channel

Media Channels	Overview	Target Audience
sustainability-times.com	News, debate and analysis on every facet of sustainability	Academic world and the large public
The Fish Site www.thefishsite.com	Extensive website relating to all things fish including fishers and aquacultures. Also includes a knowledge centre of information for users to learn about different aspects of the fish sector.	Popular platform for people interested in the fish sector.
The Hydro Graphic Society www.hydrographicsociety.org	Recognised for promoting the development of hydrography and hydrographic learning by providing unrivalled opportunities for the exchange of ideas and practices. Data Exchange opportunities	Oceanographers

4.7 The Blue-Cloud Database

A community database will be set-up for the Blue-Cloud project in a spreadsheet format. This database will be used for outreach (according to GDPR) and to keep track of all stakeholder engagement activities. For each contact, we aim to collect their name, organisation, job title and email and we will categorise them according to their stakeholder category. The number of verified and relevant contacts will be incremented thanks to web platform registration and newsletter subscriptions, contacts from social media networks, participations at events, partners’ efforts and synergies and strategic collaborations. The database will be exploited by Blue-Cloud to create awareness and consolidate a loyal user base for Blue-Cloud assets. The final aim and KPI for the community database is to reach 2,000 contacts by the end of the project (see Table 18).

Table 18 Number of contacts on Blue-Cloud Community Database

Community Database	Y1	Y2	Y3
Number of contacts	500	1.200	2.000

This database will be maintained beyond project completion for >3 years, to bridge towards further activities that might be granted as a result of Blue Cloud Roadmap. It will directly support the exploitation and sustainability efforts under “WP6 Blue Cloud Roadmap, Exploitation & Sustainability Measures, and trans-European Liaisons”.

During the project timeframe, especially at main events organised by Blue-Cloud, 30 interviews/blog pieces will be produced to representatives of different stakeholders’ groups, from at least 10 different countries. These interviews, besides representing content generation opportunity, they are a prime opportunity to reach out to influencers in Blue-Cloud sector and collect insights from challenges, opportunities and latest developments regarding Marine Research for the Blue-Economy.

4.8 Partners’ Network

The project outreach will be supported by each partner’s network (see Table 19 Blue-Cloud partners’ networks), thanks to the help of social media that will be used as an important, cost-effective marketing tool, building up current engagement.

Table 19 Blue-Cloud partners’ networks

Partner	Network
CINECA	CINECA is a not-for-profit Consortium, made up of 67 Italian universities, 9 Italian Research Institutions and the Italian Ministry of Education. CINECA develops advanced Information Technology applications and services supporting the academic world, the world of industry and Public Administration and scientific communities. CINECA is also member of the EU funded initiative PRACE (Partnership for Advanced Computing in Europe) and of all the EOSC initiatives at European Level. Furthermore, CINECA is full member of Big Data Value Association, a fully self-financed non-for-profit organization aimed to implement the BDV PPP programme (Big Data Value PPP). BDV Association has over 150 members all over Europe with a well-balanced composition of large, small,

Partner	Network
	and medium-sized industries as well as research organizations. In addition to this, CINECA organises each year about 30 schools and courses, where all the Blue-Cloud results can be disseminated.
Collecte Localisation Satellites (CLS)	<p>CLS is a worldwide company and pioneer provider of monitoring and surveillance solutions for maritime, fisheries and environmental applications, based on information produced from satellite Earth Observation, satellite communications, and models. CLS has customers in more than 60 countries and a network of subsidiaries and offices covering all nations with a strong Blue Economy. Specifically, CLS supports the governments (directorates of fisheries, ministries of environment) and the fishing industry with sustainable fisheries management solutions. CLS will be committed to promote the Blue-Cloud concept towards the main aquaculture markets through its network by:</p> <ul style="list-style-type: none"> • Presenting the atlas developed in Blue-Cloud and derived products to national authorities in some European countries, and in South East Asian countries where CLS has a long term infrastructure serving governmental users; • Promoting the atlas to the industry sector via press releases and exhibitions (to be confirmed if the context is favourable). These articles are disseminated through the social networks (e.g. the CLS LinkedIn page has more than 5,000 followers).
CMCC	<p>CMCC Foundation is committed to inform and facilitate the dialogue between scientists, decision makers and the general public to support decisions and actions for the benefit of society and environment. CMCC will build upon exploit this capacity to maximize the usage and exploitation of Blue-Cloud results. The Foundation is well connected in the international context, both within and outside Europe having partners from more than 70 countries, in the European Union and in the Mediterranean countries, Africa, India, China, United States, and Japan. In the context of the oceanography and Blue Economy, CMCC has a very well-established network of research institutes and public and private stakeholders. CMCC is playing leading an active partnership role in the framework of Copernicus Marine Service, EMODnet, GOOS and WMO. CMCC is contributing to several Cloud related initiatives as EOSC-Hub with the aim to mobilise providers from the EGI Federation, EUDAT CDI, INDIGODataCloud and major research e-infrastructures offering services, software and data for advanced data-driven research and innovation. These resources are offered via the Hub – the integration and management system of the European Open Science Cloud, acting as a single entry point for all stakeholders.</p>
CSC	<p>CSC – IT Center for Science is a Finnish center of expertise in information technology. We provide internationally high-quality ICT expert services for key ICT areas (higher education institutions, research institutes, culture, public administration and enterprises to help them thrive and benefit society at large), with long lasting collaborations with major initiatives related to both Cloud and Blue Economy. CSC – IT Center for Science actively participates to initiatives highly relevant to the Blue domain such as SeaDataCloud, MARINET2 and Marine Competence Center (MCC) and EC-policy discussions around data management through the European Open Science Cloud (EOSC) and its High Level Expert Group (HLEG) and the related EOSC-Hub and EOSCpilot projects and via the Research Data Alliance. CSC – IT Center for Science is a member of the EUDAT Ltd, which has provided data management and cloud services for the European research community.</p>
DKRZ	<p>DKRZ's professional network ranges from the IT infrastructures to the science domains targeted by BlueCloud. Working in close collaboration with experts from the ocean and climate sciences (e.g. Max Planck Institute for Meteorology Hamburg, Helmholtz-Zentrum Geesthacht, Helmholtz Centre for Ocean Resarch GEOMAR Kiel, Alfred-Wegener-Institute Bremerhaven, SeaDataCloud project, various universities, Cluster of Excellence "Climate, Climatic Change, and Society" Hamburg, "Center of Excellence in Science of Weather and Climate in Europe" - one of the EU-funded "Centres of Excellence in computing applications") allows DKRZ to take up expertise and suggestions from targeted end users of the BlueCloud as well as spread the BlueCloud outcomes in the relevant scientific domains.</p> <p>Besides being a major provider of the IT infrastructures for the climate modelling domain, DKRZ is well connected in the world of scientific IT infrastructures (e.g. Earth System Grid Federation - ESGF, National Research Infrastructure for Earth System Sciences - NFDI4Earth, EUDAT). DKRZ was and is active in many research infrastructure projects, from generic ones (such as EOSC-hub, EOSC-Pillar, EOSC-Nordic) to climate-focused ones (such as Copernicus, and the Infrastructure for the European Network for Earth System Modelling - IS-ENES) and ocean-focused ones (such as SeaDataCloud). DKRZ actively contributes in various Research Data Alliance Working Groups.</p>
European Molecular	<p>The European Molecular Biology Laboratory (EMBL) is one of the world's leading research institutions, and Europe's flagship laboratory for the life sciences. It is an intergovernmental organisation, consisting of more than 25 member states, associate and prospect members. As the</p>

Partner	Network
<p>Biology Laboratory</p>	<p>sole intergovernmental research-performing European infrastructure for the life sciences, EMBL frequently engages in European science policy issues with concrete advice on how to strengthen life science research in Europe and beyond, manage large-scale research infrastructures, encourage mobility of researchers and others topics. It has always had a strong commitment to interdisciplinary collaborative research and it has reached critical mass in most of the aforementioned areas.</p>
<p>Food and Agriculture Organization (FAO)</p>	<p>FAO, as the custodian organization for 21 SDG indicators and a contributing agency to another five has a huge range of responsibilities to ensure timely and correct data reporting, and to support the development of in-country capacity to access, analyse and report. To enable the reporting, It works with a wide network of international experts in key CT areas, including major initiatives in the 'Blue' domain. FAO - Fisheries Department supports capacity building in countries on SDG14, and already use a VRE for its SDG14.4.1 indicator capacity building events globally. FAO Fisheries Department operates the FIRMS partnership, and the Global Record of Stocks and Fisheries VRE evidences how a community already managed to deliver an operational tool to harmonize and publish global fisheries data. FAO Fisheries Department also uses significant amounts of spatial explicit data, and uses VREs to operate Open FAIR Viewers, a component of its wide portfolio of OGC based spatial metadata-driven SDI. These support VREs for Global Tuna Capture, but also for Regional Databases on fisheries, or Aquaculture atlases that combine Copernicus and other remote sensing data products with data from in-country offices.</p>
<p>Foundation for Research and Technology Hellas</p>	<p>FORTH has a network of collaborators engaged in the marine domain and the biodiversity in general. More specifically, FORTH has established a steady collaboration with the Hellenic Centre for Marine Research (HCMR) through a series of European and national projects. The network also involves several stakeholders that are part of the LifeWatch ERIC, since FORTH has been the core technology provider for the infrastructure and service of LifeWatch Greece node. Furthermore, stemming from FORTH activities on the Global Record of Stocks and Fisheries (GRSF), FORTH has grown its network with collaborators at national and international level, like Sustainable Fisheries Partnership and RAM Legacy. Finally, we could mention the previous and ongoing collaborations with SMEs that are specialized in the field of developing aquaculture applications.</p>
<p>IFREMER</p>	<p>IFREMER has access to a wide network of international experts in key ICT areas and data management, with various long lasting collaborations in the marine environment, marine data management, Blue economy and oceanography.</p> <p>IFREMER has been participating to highly relevant initiatives in the marine (data) environment such as SeaDataNet, SeaDataCloud, CMEMS (Copernicus Marine Environment Monitoring Service), EMODnet (Chemistry, Bathymetry, Seabed Habitats, Physics and Ingestion), IOC-IODE (from UNESCO), but also in marine policies such as the WFD (Water Framework Directive), the MSFD (Marine Strategy Framework Directive) and the MSP (Maritime Spatial Planning).</p> <p>IFREMER, through its Ocean Data Center "SISMER" which is certified as the first certified NODC (National Ocean Data Center) recognised by UNESCO-IOC/IODE in France and also the first French data center certified "Core Trust Seal" by the RDA (Research Data Alliance).</p>
<p>Institut de Recherche pour le Développement (IRD)</p>	<p>IRD is involved in different networks of interest for Blue Cloud gathering data managers or researchers working on marine ecosystems. IRD has already been involved in different infrastructure projects (iMarine, BlueBridge, OpenAIRE-Connect) and related initiatives (e.g. RDA) where best practices for data management in scientific clouds was a key issue (FAIR principles, virtual research environments). IRD is also involved in international networks of experts coordinating fisheries or marine ecosystems management (e.g. Regional Fisheries Management Organizations: IOTC, ICCAT.) and related information systems (e.g. FIRMS). Moreover, IRD is an active member of French networks gathering data managers from various institutes (INRAE, CNRS.) with cross-domain scientific questions. In this context, presentations and workshops are made on a regular basis to showcase how VREs can be used to implement FAIR principles for data management.</p>
<p>MARIS</p>	<p>MARIS as a company has been active and successful since 1996 in developing and managing projects and infrastructures for management and provision of marine and ocean data. Since the nineties, MARIS has entered also the European domain for participating and initiating European projects in the field of marine data management, thereby building a relational network with National Oceanographic Data Centres (NODCs), marine research institutes all over Europe, but also relations with marine, offshore and maritime industries, governmental departments, and international organisations like IOC-IODE and ICES. With a few core partners, MARIS took the lead for developing and implementing a Pan-European infrastructure for ocean and marine data. First, as coordinator of EU Sea-Search project (2002-2005), and followed by functioning as technical coordinator of its successor projects EU SeaDataNet (2006-2011), EU SeaDataNet II (2011-2015) and currently EU</p>

Partner	Network
	<p>SeaDataCloud (2016-2020). MARIS has also contributed considerably to the inception of European Marine Observation and Data network (EMODnet) and establishing synergy with SeaDataNet in 2008, and since then has been engaged in the EMODnet implementation, in roles as coordinator since 2009 and later since 2016 as technical coordinator of EMODnet Bathymetry, and as technical coordinator since 2009 of EMODnet Chemistry, and EMODnet Physics, and as coordinator since 2016 of EMODnet Ingestion. In addition to these core projects for leading marine data management infrastructures, MARIS has also been and is currently involved in a series of other EU projects with networks in the marine domain, that adopted the SeaDataNet infrastructure for their data management activities, such as several regional projects for the Black Sea and Caspian Sea regions, and interacting with coastal observing networks (JERICO, JERICO-Next, JERICO-S3), European research fleet (Eurofleets 1, 2, and plus), Atlantic observing networks (AtlantOS), marine microbiology (MicroB3), and marine geology (EUMARSIN, EUSEASED, EUROCORE, and Geo-Seas). And MARIS has and is also involved in EU projects on FAIRness (ENVRI-FAIR) and interoperability (technical coordinator of ODIP 1 and 2 with USA, Canada and Australia). Moreover, MARIS has and is involved in several European marine data management projects with industry such SIMORC (oil & gas industry), BASE Platform (bathymetry), EMIDOI (offshore decommissioning), ERGIS (offshore industry), ENGINE (electronic market for offshore industry), and OGEL – TDM (legal energy market). Finally, MARIS also been developing and managing portals such as for the OSPAR regional sea convention, and for the UK MEDIN, and the UKDMOS platforms. Through all these projects over more than 3 decades, MARIS has built up an extensive network of research institutes, governmental departments, companies, and international organisations, in the marine domain, and in particular in the field of marine and ocean data management and related IT solutions. In addition, also at various DGs of the European Commission for which MARIS has worked and lobbied. This large network of contacts and the MARIS reputation can be mobilised and used for the promotion and marketing of the Blue-Cloud and its achievements as well as for developing the Blue-Cloud Roadmap.</p>
<p>Mercator Ocean International</p>	<p>Mercator Ocean has access to an international network in key environmental areas, and in particular a strong network in the Blue Economy. Mercator Ocean is responsible for the implementation of the Copernicus Marine Service, with more than 21000 users in 2020 in the world. It is as such actively involved in the development of the Blue domain: The Copernicus Marine portfolio supports all marine sectors, from public to private companies, from government to the general public and NGOs. Mercator Ocean is animating the Copernicus marine web portal with more the 230 thousand single visits per year along with associated social media channels. Mercator Ocean is also involved in the Copernicus WEKEO DIAS service together with ECMWF and EUMETSAT, which is proposing a full portfolio merging all environmental Copernicus data, along with cloud processing capabilities and expert user support. This complements Mercator Ocean networks to reach out to IT developer’s community. Mercator Ocean is engaged with many key European and International organisations in order to develop the use of spatial and environmental data for the benefit of society at large and sustainable economy.</p>
<p>National Research Council of Italy</p>	<p>Being the coordinator of the past H2020 BlueBRIDGE and FP7 iMarine EU projects CNR developed an extensive network of contacts in the Blue domain area, allowing it to promote the work of the project though international experts in key ICT areas and though the collaborations with initiatives related to Blue Growth. CNR has access to more than 7K users in 50 countries thanks to D4Science and the different scientific domains served by this infrastructure related to the blue area, such as the biological, ecological, environmental, and statistical ones. CNR is also involved and actively participates to the European Open Science Cloud (EOSC) by supporting the EOSC Governance in the EOSC Secretariat project and by leading the work on the development, operation and training of common tools for coordinated FAIR research data provisioning in the EOSC-Pillar project.</p>
<p>Royal Netherlands Meteorological Institute</p>	<p>The Royal Netherlands Meteorological Institute (KNMI) is the Dutch national weather service. Primary tasks of KNMI are weather forecasting and monitoring of weather, climate, air quality and seismic activity. As meteorological institute KNMI is member of many meteorological and climate communities (like IPCC, CMIP) and organizations (WMO, EUMETNET, EUMETSAT, ECMWF, ECOMET). KNMI actively participates in highly relevant Blue Domain initiatives, like E-Surfmar lead by MeteoFrance, providing TURBOWIN to collect meteorological measurements collected by commercial ships. KNMI is highly involved in H2020 EOSC projects like DARE, ENVRI-FAIR and relevant research infrastructures like Euro-Argo, IS-ENES and EPOS. On a national level, of relevance to the Blue community, KNMI provides the Dutch Offshore Wind Atlas (DOWA) as a reference dataset to the off-shore wind industry. KNMI will actively promote the results from the Blue Cloud project within these communities at relevant meetings.</p>

Partner	Network
<p>SEASCAPE Belgium</p>	<p>Seascope Belgium administers the Secretariat of the European Marine Observation and Data Network (EMODnet), a long-term marine data initiative supported by the European Commission Directorate-General for Maritime Affairs and Fisheries since 2009. EMODnet has a far-reaching community of contributors, users and followers. As a federated network of over 150 organisations, the extended EMODnet community includes marine data providers (including research and research infrastructures, operational oceanography and blue economy sectors), marine data management centres (at national, regional and European levels), marine data infrastructures e.g. SeaDataNet and initiatives and multiple collaborations with other marine data initiatives e.g. Copernicus Marine Service (CMEMS) and ICES. The European reach of EMODnet is therefore very high and diverse and, increasingly, international with collaborations and contributions to initiatives including the International Oceanographic Data and Information Exchange (IODE) of IOC UNESCO, the Seabed2030 initiative and the Ocean Biogeographic Information System (OBIS) and its European counterpart EurOBIS. Seascope Belgium maintains regular interaction and collaboration with the European Commission (e.g. DG MARE, the Directorate General for Environment, Marine Affairs and Fisheries). Seascope Belgium also has also built up a large network of experts across the marine research community, both through direct EMODnet partnerships, and through added value contributions to European research projects, including Horizon 2020 project Atlas on North Atlantic marine ecosystems and iAtlantic on integrated assessments of Pan-Atlantic marine ecosystems. Seascope Belgium coordinates professional social media accounts of EMODnet (Twitter @EMODnet with 4.4k followers) and the European Atlas of the Seas (Twitter @EuropeAtlasSeas with 1.2k followers), in addition to LinkedIn and Facebook pages. These social media accounts reach a wide diversity of stakeholders spanning the blue economy sectors, marine and wider environmental policy, government and management, academic and wider research sectors, marine research infrastructures and marine data infrastructures, NGOs and wider civil society. Seascope Belgium also has extensive expertise in organizing, communicating and publicizing large conferences, including the EOOS Conference 2018 that connected ocean observation and monitoring communities and the Open Sea Lab Hackathons, with participants including marine professionals from the ocean research, modelling, data analysis and ICT.</p>
<p>Sorbonne Université</p>	<p>Sorbonne Université is a major French research university with international renown and a large collaboration network. The teams involved in BlueCloud are members of the core team of the Tara Oceans expedition. They also created the EcoTaxa database and application, which serves over 800 users in 275 organisations worldwide. Both the Tara and EcoTaxa data will play a central part in Blue Cloud and will therefore attract the wide international network of collaborators of these two initiatives.</p>
<p>Trust-IT</p>	<p>Trust-IT has access to a wide network of international experts in key ICT areas, with long lasting collaborations with major initiatives related to both Cloud and Blue Economy. Trust-IT actively participates to initiatives highly relevant to the Blue domain such as EMODnet (European Marine Observation and Data Network), BlueBRIDGE and iMarine and EC-policy discussions around data through the European Open Science Cloud (EOSC) and its High Level Expert Group (HLEG) and the related EOSC-Hub and EOSCpilot projects and via the Research Data Alliance. Trust-IT was part of the Helix Nebula - the Science Cloud success story, which has undertaken its first joint Pre-Commercial Procurement Tender Helix Nebula Science Cloud to create a common hybrid science cloud platform for the European research community.</p>
<p>University of Amsterdam</p>	<p>UvA is a key IT partner in the cluster project of environmental research infrastructures: ENVRIplus and ENVRI-FAIR, and lead their development of interoperable data management solutions. UvA has been very active in ICT research and innovation in Cloud, software and social media, and coordinated the SWITCH project and participated in ARTICONF and CLARIFY projects. UvA also leads the VRE development of the LifeWatch RI based on the early work they developed for infrastructure automation and optimization. UvA led the exploitation effort of the VRE4EIC solution, and co-chairs the Virtual Research Environment interest group in RDA. In those contexts, UvA will exploit the data management and VRE solutions developed in the BlueCloud to the broader ENVRI RIs, and share the practice with the RDA communities.</p>
<p>University of Bergen</p>	<p>The Geophysical Institute (GFI) of the University of Bergen is an internationally acknowledged contributor in the areas of marine and climate research and UiB/GFI is a partner of the Bjerknes Centre for Climate Research in Bergen, a national spearhead in climate research which hosts the Bjerknes Climate Data Centre. In 2018 UiB became the official UNAI Hub for SDG14 – Life below water of the United Nations. GFI/BCDC actively participates to initiatives highly relevant to the Blue domain such as ENVRI-FAIR, CMEMS, SeaDataCloud, H2020 EuroSea, H2020 e-shape, ESFRI research infrastructures ICOS and EMSO, and to global data synthesis activities in the field of marine</p>

Partner	Network
	biogeochemistry which are used for BlueCloud showcases. BCDC is part of the Norwegian Research Data Alliance and was part of the OECD Global Science Forum working group on data infrastructures.
VLIZ	The Flanders Marine Institute (VLIZ) acts as the coordination and information platform for marine and coastal-related scientific research in Flanders and serves as an international contact point. VLIZ set up a strong collaborative network through 21 cooperation agreements with Flemish research groups and administrations and integrates its activities in 7 national and 25 international networks. Within international networks VLIZ participates in the development of marine data infrastructures. VLIZ data centre is heavily involved in the development and management of international e-infrastructures and services: the central portal and the biology portal for the European Marine Observation and Data network (EMODnet), LifeWatch Taxonomic Backbone and data systems, World Register of Marine Species (WoRMS), Global Sea Level Observing System (GLOSS), Ocean Biogeographic Information System (EurOBIS), Marine Data Archive, Integrated Marine Information System, Marine Regions. VLIZ chairs the EMBRC Working group on E-infrastructure, is a member of the RDA Group of European Data Experts and is involved in the InfraEOSC projects for the life sciences and the environmental cluster, ENVRI FAIR and EOSC Life. VLIZ is a National Oceanographic Data Centre in the network the IODE programme of IOC-UNESCO and a regular member of the ICSU World Data System.

4.9 Synergies & Supporters

Synergies are cooperative or combined actions, which occurs when diverse or disparate individuals or groups collaborate for a common cause, having as main cause the increase of effectiveness by sharing perceptions, insights, and knowledge. Blue-Cloud WP5 is working closely with WP6, namely with T6.2, on the identification of international initiatives from blue economy and open science, to promote a structured dialogue to align and clusters common opportunities and goals. Synergies to be established will be aimed to enhance the scientific and economic potential and exploitation opportunities of the Blue Cloud services, demonstrators and applications.

5 Action Plan for next 12 months

The timeline presented in Figure 11 outlines the main Blue-Cloud communications, dissemination and engagement milestones until M18 when an updated version of this deliverable is foreseen. This timing is subject to change, particularly those related to the timing of events, outputs delivery and activities performed by other project WPs.

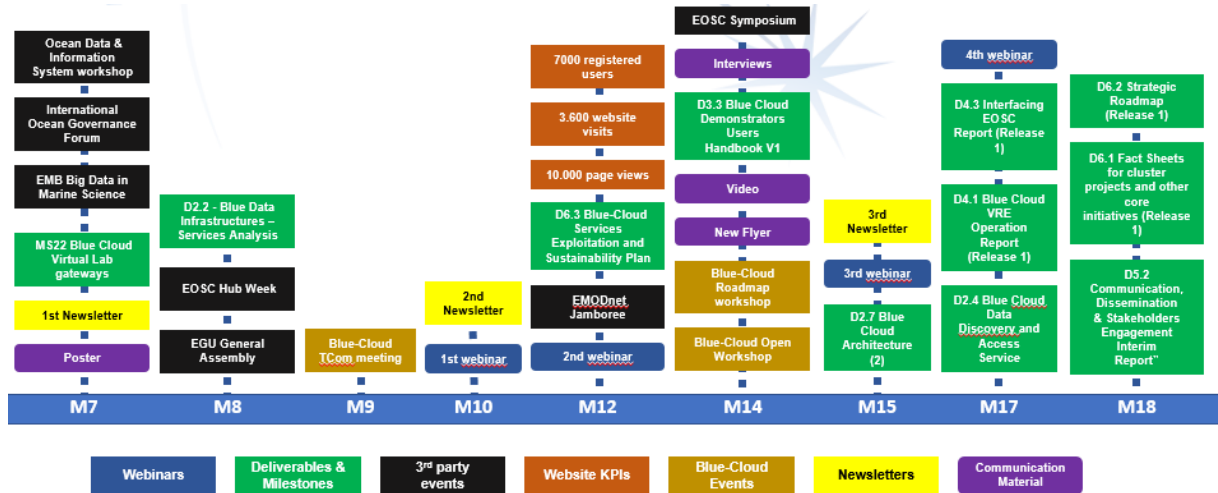


Figure 11 Blue-Cloud Main activities for next months

By month 18, it is expected to organise a total of 4 webinars focused on the demonstrators, as well start the release of newsletter, which will timely inform our community members about the latest updates from the project. A very important milestone will be the organization of both Blue-Cloud Roadmap and Open workshop, very important events that will support the creation of the roadmap, as well as the development of services, respectively. The series of interviews to each one of the data infrastructures involved in Blue-Cloud will be started as well. The project also plans to promote its activities in different several events organised by other initiatives.

The following table reports a more detailed plan of activities from M6 to M18.

Month	Activities
M6, March 2020	<ul style="list-style-type: none"> Blue-Cloud articles on FAO & VLIZ demonstrators Set-up of the “Data Infrastructures” section on the Blue-Cloud portal Promotion of the Blue-Cloud newsletter to engage new subscribers Engagement of the BlueBRIDGE followers into Blue-Cloud Social media & community db updates KPIs monitoring
M7, April 2020	<ul style="list-style-type: none"> Blue-Cloud newsletter Announcement of the first Blue-Cloud workshop Set-up of the Blue-Cloud Assets & Synergies section on the Blue-Cloud portal Promotion of the Blue-Cloud Architecture deliverable Promotion of the Blue-Cloud ESEB Blue-Cloud articles on the Blue-Cloud Gateway Contribution to the International Ocean Forum event Announcement of the webinar calendar Joint article on Blue-Cloud & EuroSea Social media & community db updates KPIs monitoring
M8, May 2020	<ul style="list-style-type: none"> Joint article on Blue-Food thematic Clouds

Month	Activities
	<ul style="list-style-type: none"> • Blue-Cloud articles on CMCC & EMBL demonstrators • Set-up of the Training section on the website • Production of training material on the VLabs • Contribution to the EGU 2020 & EOSC-hub week online conference • Webinar on the Blue-Cloud project and general overview of all the demonstrators • Social media & community db updates • KPIs monitoring
M9, June 2020	<ul style="list-style-type: none"> • Set-up of the Roadmap section on the website • Blue-Cloud newsletter – summer edition • Population of the training section • Social media & community db updates • KPIs monitoring
M10, July 2020	<ul style="list-style-type: none"> • Interviews with the Blue-Cloud ESEB • Promotion of the webinar series & upcoming Blue-Cloud workshop • Social media & community db updates • KPIs monitoring
M11, August 2020	<ul style="list-style-type: none"> • Revised Blue-Cloud Roll up banner for the first Blue-Cloud workshop • Promotion of the webinar series & upcoming Blue-Cloud workshop • Social media & community db updates • KPIs monitoring
M12, September 2020	<ul style="list-style-type: none"> • First Blue-Cloud workshop in conjunction with the EMODnet Open conference & Jamboree • Webinar on Demonstrators 4 & 5 • Blue-Cloud poster for the EOSC Symposium • Blue-Cloud newsletter • Social media & community db updates • KPIs monitoring
M13, October 2020	<ul style="list-style-type: none"> • Promotion of Blue-Cloud at the EOSC Symposium & IMDIS conference • Launch of the save the date for the Blue-Cloud hackathon • Promotion of the Blue-Cloud workshop post event report • Social media & community db updates • KPIs monitoring
M14, November 2020	<ul style="list-style-type: none"> • Promotion of the Blue-Cloud VRE Common facilities (D4.2) • Article on the outcomes of the first Blue-Cloud Roadmap workshop • Promotion of the beta releases of the Blue-Cloud demonstrators • Webinar on Demonstrator 3 • Social media & community db updates • KPIs monitoring
M15, December 2020	<ul style="list-style-type: none"> • Blue-Cloud newsletter • Press release announcing the beta releases of the Blue-Cloud demonstrators • Promotion of the Demonstrator Users Handbook (D3.3) • Social media & community db updates • KPIs monitoring
M16, January 2021	<ul style="list-style-type: none"> • Promotion of the revised deliverable on the Blue-Cloud Architecture (D2.8) • Social media & community db updates • KPIs monitoring
M17, February 2021	<ul style="list-style-type: none"> • Launch of the Blue-Cloud Data Discovery and Access service (MS10) • Webinar on Demonstrator 1 • Social media & community db updates • KPIs monitoring
M18, March 2021	<ul style="list-style-type: none"> • Communication, Dissemination & Stakeholder engagement plan for M18-M36 (D5.2)

6 Conclusions

This document describes the “Communication, Dissemination & Stakeholder Engagement Strategy & Plan” of Blue-Cloud, as part of “WP5 - Communication, Stakeholders Engagement & Uptake of Blue Cloud VRE & services”. As said, it aims to demonstrate the Blue-Cloud positive impact in the Blue Economy and the European Open Science Cloud. To achieve this goal, many communication and dissemination activities are planned till the end of the project: 1 website aiming to reach over 13.000 visits, 3 main social media channels with the goal of create a social media community of over 1.200 members, newsletters timely circulated, production of several communication materials (flyers, posters, rollups, videos), 2 Blue-Cloud Open Workshop along with 2 Blue-Cloud Roadmap workshops, 10 webinars for training, 1 Hackathon, presence at over 50 worldwide third-party events. All these efforts will also capitalize of each one of Blue-Cloud partners’ networks and the synergies to be established with worldwide initiatives.

This document is agreed upon with all the Blue-Cloud partners and constitutes a plan to deliver a series of activities to which all partners, according to the effort indicated in the Blue-Cloud work plan, commit to contribute.

The plan covers the period from M7 (April 2020) to M18 (March 2021), when the second release of this deliverable is scheduled (D5.2 Communication, Dissemination & Stakeholders Engagement Interim Report). This new release will report all the activities performed between M1 and M18 and will plan from M18 through M36.