EDITO ModelLab

European Digital Twin Ocean

Underlying models for the European Digital Twin Ocean

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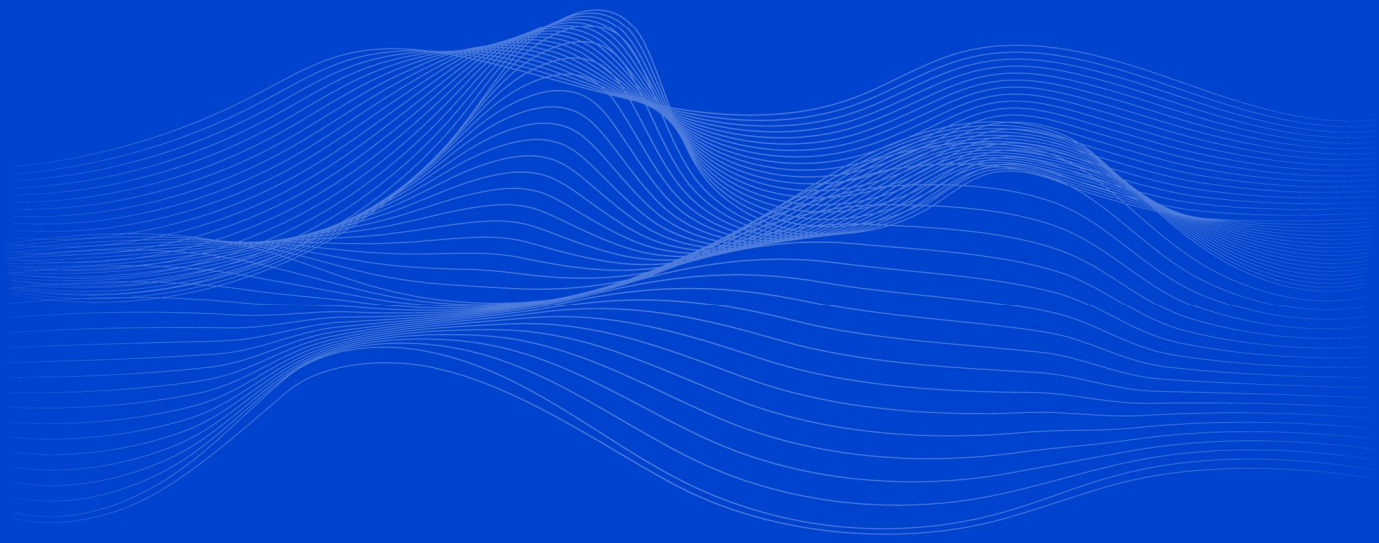

D8.1: Plan for Communication, Dissemination and Exploitation of Results

Work Package 8 | Task 8.1, 8.2 & 8.3

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List of abbreviations

AI	Artificial Intelligence
CDE	Communication, Dissemination and Exploitation
DDE	Digital Diode Emulator
DestinE	Destination Earth
DIAS	Copernicus Data and Information Access Services
DITTO	Digital Twins of the Ocean project
DTO	Digital Twin of the Ocean
EC	European Commission
ECMWF	European Centre for Medium-Range Weather Forecasts
EDITO	European Digital Twin Ocean
EDITO-Infra	EU Public Infrastructure for the European Digital Twin Ocean project
EDITO Model Lab	Underlying models for the European DIgital Twin Ocean project
EMD	European Maritime Day
EMODnet	European Marine Observation and Data Network
EMSO	European Multidisciplinary Seafloor and Water Column Observatory
EOSC	European Open Science Cloud
ERIC	European Research Infrastructure Consortium
ESA	European Space Agency
EU	European Union
EU DTO	European Digital Twin of the Ocean
EUMETSAT	The European Organisation for the Exploitation of Meteorological Satellites
EURO ARGO	European Research Infrastructure Consortium for Observing the Ocean
EUROGEO	Europe's part of the Group on Earth Observations (GEO)
EuroGOOS	European Global Ocean Observing System
EuroHPC	European High Performance Computing Joint Undertaking
FA	Focus Application
ForeSea	Ocean Prediction Capacity of the Future project
HPC	High Performance Computing

ILIAD	Integrated Digital Framework for Comprehensive Maritime Data and Information Services project
JERICO	Joint European Research Infrastructure for Coastal Observatories
KPI	Key Performance Indicator
MOL	EU Mission to Restore our Ocean and Waters, and Mission Ocean Lighthouses
MSFD	Marine Strategy Framework Directive
MSP	Maritime Spatial Planning
NGO	Non-Governmental Organization
R&I	Research and Innovation
SDG	Sustainable Development Goal
UN	United Nations
UNESCO	United Nations Educational, Scientific and Cultural Organisation
WEkEO	EU Copernicus DIAS reference service for environmental data, virtual processing environments and skilled user support
WiS	What-if Scenarios
WP	Work Package

1. Introduction

1.1. What you will find in this document

This document presents the European Digital Twin of the Ocean Model Lab (EDITO ML) plan for communication, dissemination, and exploitation (CDE) of results. It was delivered on M4 of the project, April 2023, as D8.1. Named as "Plan" moving forward, this document describes how the project will conceive, implement, and check all its CDE activities.

The Plan starts by summarising the EDITO ML project aims and the resulting CDE goals. The differences between communication, dissemination and exploitation are explained in agreement with the Horizon Europe guidelines. The Plan then describes all the target audiences, the means, and channels to reach them, as well as the key messages to be conveyed. It also introduces the indicators that will be used to check the performance of the CDE and sets a calendar for some planned activities. The responsibilities of each partner of the EDITO ML consortium are described as well.

The Plan was elaborated within the framework of the EDITO ML WP8 and relates to all its three tasks: T8.1 (Communication and dissemination), T8.2 (Training organisation), and T8.3 (Internationalisation). Closer to the end of the project, the Plan will serve to partially feed D8.4 entitled "Plan for Communication, Dissemination and Exploitation of results beyond the project lifetime". The Plan must be taken in consideration in the planning of all CDE activities, including each of the training and stakeholders' events associated to the project, in particular those to be co-organised with WP6 and WP7. All consortium partners have effort allocated to WP8 and will therefore contribute to the elaboration and implementation of this Plan.

Although the Plan consists of an official deliverable of the EDITO ML and aims at guiding its own CDE activities, it must also be considered that there is a sister project, the EDITO Infra, running in parallel. Both projects are part of a larger initiative concerning the creation of a European Digital Twin of the Ocean (EDITO) and they share various communication goals and target audiences. It is therefore recommendable, from the impact and from the efficiency point of view, that EDITO ML and EDITO Infra join forces to collaborate in specific communication activities, which are described in this Plan.

1.2. What EDITO Model Lab is – what we communicate

Under the designation "Underlying models for the European DIgital Twin Ocean", EDITO ML is a European project funded by the Horizon Europe programme. The 36-month project began in January 2023 and will end in December 2025. Mercator Ocean International ensures the project coordination and leads a 13-partner strong consortium with beneficiaries from Denmark, France, Germany, Italy, Norway, Portugal, Spain, and The Netherlands, plus an associated partner from the United Kingdom. The project's various activities on communication, dissemination, and exploitation are lead within WP8 by the +ATLANTIC CoLAB, who works hand-in-hand with the WP8 co-lead, Mercator Ocean International, and is supported by all beneficiaries to ensure seamless communication.

Project objectives

The overall goal of EDITO ML is to develop, test and implement the next generation of ocean numerical models, fit to be complementary to the Copernicus Marine Service and to be integrated into the European Digital Twin Ocean (EDITO). It will enhance the access to existing data sets (from EMODnet, EuroGOOS, ECMWF, Copernicus Services and Sentinels satellite observations) and to high-performance and distributed computing facilities (from EuroHPC for HPC and other cloud computing resources) that will be consolidated under developments of Destination Earth (DestinE).

Digital twins are virtual representations of physical systems or processes, which can be used to simulate and optimise their performance in real-time. In the case of ocean digital twins, this technology can be used to model and predict oceanic and coastal processes, such as wave patterns, currents, and water quality, which can be critical for a range of maritime applications, including shipping, offshore energy, and environmental monitoring, as well as to various ocean conservancy actions.

EDITO ML will contribute to make ocean knowledge more available to citizens, entrepreneurs, policymakers, decision-makers, and scientific experts alike, thus enabling them to become partners in knowledge generation. By easing interactions among them, EDITO ML will encourage them to explore desirable futures, develop ocean management scenarios, and assemble their own DTOs. In the long-run, EDITO ML will contribute to ensure a safe, healthy, and productive ocean in line with the UN Ocean Decade and SDG14.

A key outcome of EDITO ML will be its Virtual Ocean Model Lab (VOML) which is to include a:

- Core model suite with global high-resolution models and coastal configurations
- Downstream user toolkits
- Developer's toolkit for a sustainable ocean

The VOML will be an interactive and co-development environment to run models. EDITO core model suite will be based on modelling and simulation software, artificial intelligence (AI) algorithms and specialised tools to form a new service ability for accessing, manipulating, analysing, and understanding marine information.

Intermediate and downstream stakeholders will find digital tools, data, and information for Focus Applications (FAs) that refer to the Mission Ocean Lighthouses (MOLs) and a more sustainable blue economy, including What-if Scenarios (WiS) to find solutions to natural and man-induced ocean and coastal hazards.

2. Communication and Dissemination in EDITO Model Lab

2.1. CDE within EDITO ML

EDITO ML will adhere to the following concepts of CDE:

Communication

is about the **promotion of the project**, the societal challenges it relates to, or its added value. It goes beyond dissemination since it does not entail only project results. Thus, communication targets a much wider audience, including the media and the public. It uses a less technical language so that a non-specialist audience can easily understand the goals and means of the project.
Communication uses websites, leaflets and flyers, social media, videos, press releases, etc.
Communication usually begins at the start of the project, even before the first results are ready.

Dissemination

deals with the **diffusion of the project results** for valorisation and knowledge transfer. Dissemination aims to maximise the impact of research results in the public domain. Therefore, the target audience of the dissemination activities is any potential user of the project results, such as the scientific community, stakeholders, industry, policymakers, investors, civil society, among others. Potential means for dissemination include scientific papers, public databases, reports, workshops, etc. Dissemination can start after the first results are ready.

Exploitation

is to **make use of the results** for societal, scientific, financial, or even political purposes, such as to concretise the value and impact of the research activity on societal challenges. Exploitation has a broader scope compared to communication and dissemination. It includes using the project results in further research other than those covered by the project, developing, creating and marketing a product, creating and providing a service, or even in standardisation activities.
Exploitation tends to start closer to the end of the project and may extend beyond its terminus.

The main aspects of the EDITO ML's communication and dissemination are addressed in this chapter of the Plan. Exploitation will be addressed in a separate chapter.

2.2. Communication and dissemination goals – why we communicate

The communication and dissemination activities of EDITO ML will serve to give visibility to the project, raise awareness of the benefits of having an EDITO, engage various types of stakeholders in the development of its products, and foster the utilisation of its final outcomes in real situations. The project will therefore:

- Create and implement a communication plan to publicise the project's progress and EDITO matters, ensuring that the main achievements of all the technical WPs are properly communicated to the project's target audiences
- Make EDITO and the project known to key stakeholders, contributing to expanding society's understanding about it and supporting relevant global ocean initiatives

- Organise two training events to further develop the project's products and prove their utility for end users, fostering the outcome uptake by relevant users and boosting the networking on EDITO affairs

EDITO ML will highlight the project activities and results, and the EU's commitment to developing an EDITO by communicating with key stakeholders. Its FAs and WiS will be widely publicised to highlight the application of DTO-derived information for sustainable ocean management purposes and to attract participants to the planned training activities.

The EDITO ML CDE activities are closely related to the project's goals 5 (Demonstrate capability of the EDITO core model suite to carry out FAs and WiS) and 6 (Support uptake and communication towards scientific, intermediate and end users). The project will organise a pair of different events to involve relevant stakeholders in the development, testing, and use of the VOML. This is expected to boost the uptake and extend the exploitation of the project's information products.

The project also aims to position EDITO within various ongoing international ocean science initiatives. The targets encompass diverse Ocean Decade endorsed programmes (CoastPredict, DITTO, ForeSea) and the UN Decade Collaborative Centre for Ocean-Climate Solutions dedicated to ocean prediction, coastal resilience, and co-design of ocean-climate innovation. Several European organisations, projects, and initiatives dealing with large-scale ocean data transfer will be included, namely EuroGOOS, Copernicus Marine Service, WEkEO, EMODnet, DestinE, OceanPredict, ILIAD, IMMERSE, All-Atlantic Ocean Research and Innovation Alliance, and the AIR Centre. This effort is expected to amplify the project outcomes, highlighting the project's contribution to the European Green Deal, EU marine legislation, priorities of the EU Mission to Restore our Ocean and Waters, and MOLs.

2.3. Target audiences – to whom we communicate

The main group of recipients of the EDITO ML communication and dissemination activities is formed essentially by ocean numerical model developers, researchers and innovators involved in ocean and coastal observation and forecasting, and downstream stakeholders, such as marine policy makers and implementers. Nevertheless, the project will also conceive and run actions focused on reaching some fractions of the public at large.

The larger part of the project's communication and dissemination will target those working on the development and testing of ocean numerical modelling and digital twins, as well as those who use the resulting information to design policies, start businesses and implement concrete ocean and coastal zone management actions.

Communication for beta testers and intermediate users will be more scientific and technical to supply support to use and co-develop the EDITO core model suite, supplying documentation, notebooks, and online training during the project's lifetime. Communication towards policymakers and other end users will be mainly focused on the capacity of EDITO ML to provide WiS. Concrete examples of each of the main EDITO ML target audiences would be:

Model Developers

will be a set of representatives of the ocean modelling community inside and outside of the consortium who will be involved in model and tools development and optimisation. The model developers' role is focused on sharing models and configurations in the VOML and on using shared tools for their own needs.
Examples include first partners of the project and a choice of co-developers at the end of the project.

Beta Testers

will be a set of representatives of the ocean modelling and observation community inside and outside of the consortium who will be involved in the testing of the EDITO ML use cases. They will take part in the EDITO core model suite's development, namely its simulations to support the MOLs, and the demonstration and validation of WiS in line with the Mission priorities.
The beta testers' role is focused on co-design.
Examples include representatives from Copernicus Marine Service, WEkEO, and EMODnet, as well as MOLs and associated projects.

Intermediate Users

will be an interactive and co-development group of professionals who already work with ocean numerical modelling but do not have access to a variety of tools or computing resources. They will be engaged in the testing and validation of the project's digital tools, data, and information within the scope of the FAs.
The intermediate users' role is focused on model integration.
Examples include DestinE, EuroHPC, EDITO-Infra, Blue-Cloud, ILIAD, EUMETSAT, EuroGOOS, ECMWF and the UN Ocean Decade programmes.

End Users

will be downstream stakeholders who engage in the co-development and uptake of the WiS that refer to the MOL topics (biodiversity, zero carbon, and zero pollution) and the blue economy, including the WiS to find solutions to natural and man-induced ocean and coastal hazards.
The end users' role is focused on uptake.
Examples include MSFD and MSP, European regional sea conventions, national and local authorities, R&I communities engaged in the blue economy, ocean NGOs and citizens.

Since many European citizens and companies have contributed to the funding of EDITO ML with their taxes and have had their lives and businesses affected/affecting the ocean and coastal zones, part of the project's communication will also target the wider society. The goal is to give back/raise awareness by informing people how the investment is being converted into knowledge and information products that can contribute to solving the ocean and coastal issues that affect them/are affected by them. One way to reach out to them is to have the project progress and results publicised by large international initiatives, such as the UN Decade initiatives and the Digital Ocean Forums, which have already built vast audiences and can therefore significantly amplify the messages of EDITO ML.

2.4. Communication and dissemination channels – how do we communicate

This section of the Plan describes the communication channels to be utilised by EDITO ML in its 3-year life. As described before, in some cases, EDITO ML and EDITO Infra will run some communication activities together to achieve the best results in supporting the construction of an EDITO community. This collaboration is also expected to improve the efficiency of what would otherwise be their isolated communication activities. The communication channels marked with * below will therefore be co-managed with EDITO Infra.

Website

The centrepiece of all CDE activities in the project. Presents all public information available on the project and its progress, while also serving to raise awareness on the need and benefits of having a functional DTO in Europe. Includes

a section dedicated to project news which will serve to publish stories based on the consortium achievements within the framework of EDITO ML, including public deliverables, research articles, significant technological accomplishments, organisation of, and participation in events, among other.

Launched in April 2023 at https://edito-modellab.eu/, the EDITO ML Lab website will act as the main showcase of project and will also help visitors learn more about DTO and the overall EDITO initiative, which includes both (EDITO ML and EDITO Infra projects), guiding them to various related initiatives and projects. For those interested in receiving special announcements and updates from the EDITO initiative, the website will supply the chance to subscribe a newsletter to be jointly elaborated by EDITO ML and EDITO Infra.

Both EDITO ML and EDITO Infra websites, as sister projects, share the same visual identity, have various points on common in terms of look and feel, and share some of the content (about EDITO and DTO) in an attempt to define a common visual language and convey a unified message.

LinkedIn *

The main social media of the EDITO initiative (https://www.linkedin.com/company/edito-dto/). To be regularly used by both projects after the launch of the EDITO ML and EDITO Infra websites. Will serve to post content related to the projects' progress and selected info on DTO matters that may be relevant to the EDITO target audiences. Each post will present a specific insight in a succinct and appellative fashion, directing the reader to the EDITO ML or to the EDITO Infra websites for further details. The LinkedIn EDITO page will be managed by both projects but, in most cases each, specific content will be under the responsibility of only one of them.

The LinkedIn pages of project partners, key EU organisations and others working on numerical modelling, ocean observation and DTO matters will be tagged on posts to invite them to share and comment on the EDITO ML content. This advocacy by the consortium partners is essential to increasing the reach of the project in the highly competitive European projects' social media realm.

Twitter *

Secondary social media for EDITO ML, still relevant within the scope of European projects (https://twitter.com/edito_dto). In a similar way to the joint LinkedIn presence, both EDITO ML and EDITO Infra will join forces on Twitter after the launch of both projects' websites. Its main purpose is to publicise short specific updates and announcements on the projects' progress or relevant DTO matters.

Despite the Twitter limitations on characters and the number of accounts that can be tagged on each image, EDITO ML and EDITO Infra will take advantage of the high relevance given by the EU to this social media to reach important target audiences, mostly those linked to policymaking and to the management of research and innovation.

Research papers

A key dissemination channel. Since researchers, innovators, and model developers are at the top of the EDITO ML target audiences, all the consortium partners will be encouraged to convert their effort and results in the project into research articles, conference abstracts and other research publications that tend to be more consumed by those target audiences.

All research publications made by the consortium within the framework of EDITO ML will be included in the results section of the project website. The authors will also be encouraged to share such publications in ResearchGate. Special stories will be published on the website as news articles to highlight how each research publication is relevant in the context of DTO and how they can serve to help the European society.

Events *

Important to disseminate the project results and network towards their exploitation. EDITO ML will organise events to engage intermediate and end users in the development and testing of the project's main outcomes. These events will also serve to raise awareness about the DTO and the project among various of the key target audiences.

The first EDITO ML training workshop will target intermediate users and will run in the format of a hackathon about the FA. The second event will be an end-user' workshop dedicated to the WiS. Both training events will take place at the start of the third year of the project, allowing for the incorporation of outcomes before the project's closure. WP6 and WP7 will handle the development of the materials needed to organise (Jupyter Notebooks, handbook) each training event and will identify the participants to be invited. WP8 through T8.2 will oversee training events organisation, involving external service providers when proper.

Depending on the availability of resources, the EDITO ML consortium will also take part in various external events with different sizes, goals, and target audiences. Project partners will be encouraged to attend as many events as possible, in which there will be opportunities to highlight the project and its results to scientific, technological and governance representatives. Such events are also to be seen by the consortium as key opportunities to foster strategic collaborations that may contribute to extend the uptake and exploitation of the EDITO ML outcomes beyond the life of the project. Examples would be the Digital Ocean Forum 2023, the Operational Satellite Oceanography Symposium 2023, EuroGOOS International Conference 2023, Copernicus Marine General Assembly 2023, the EMODnet Open Conference & Jamboree 2023, the European Maritime Day annual events, UN Ocean Decade Conference 2024, among various other possibilities. Whenever proper, EDITO ML and EDITO Infra may also join forces to co-organise events that serve to display the EDITO initiative.

Newsletter *

A way to keep up to date those who do not follow the project's social media, do not search for research publications, and do not attend scientific or technological events. EDITO ML and EDITO Infra will work together to create and distribute a newsletter every six months. It will consist of a summary of the most significant news articles and content created by each project throughout that period. Key specific topics may be addressed on each issue in order to highlight different aspects of the EDITO initiative.

Consortium partners will be encouraged to have their institutions publicise the newsletters through their own networks as much as possible. This will be essential to helping the project reach much wider audiences beyond those who will directly subscribe the newsletter via the EDITO ML and EDITO Infra websites.

Press Releases

A moderately efficient way to reach journalists and traditional media. Press Releases will only be elaborated and distributed for the major announcements or achievements of the project. Given the numerous amounts of Press Releases received by journalists daily, EDITO ML will only use this channel when the project is successful in producing an outcome that is truly relevant to the wider society. Besides the obvious launch of the VOML, only a few top project achievements and project events will be considered for this purpose.

Press Releases will be sent to key journalists and traditional media (press, TV, and radio) in Europe and in the countries of the consortium partners. The goal will be to have them highlighting the project and its results in their news articles, special news pieces, and interviews.

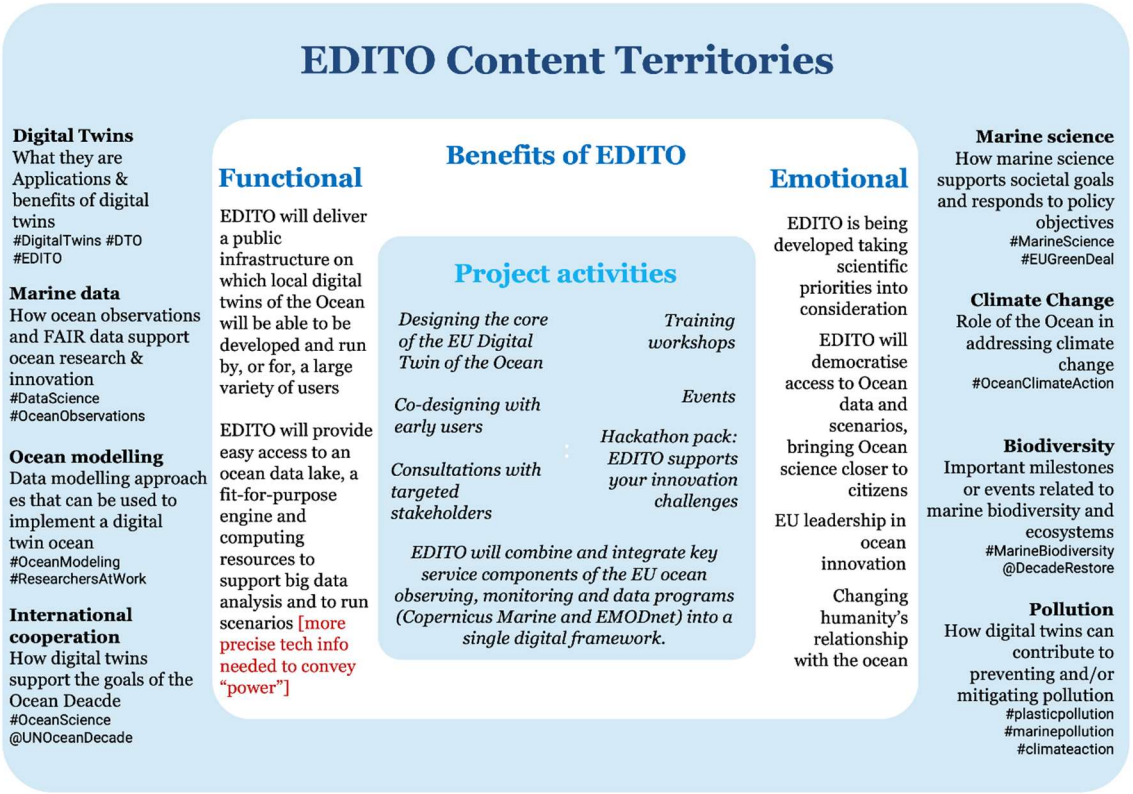
Visuals

The visual identity of EDITO ML was created before the project started, defines its graphic language and is in line with the EDITO universe graphics, also adopted by the EDITO Infra project. The project logo, colours, fonts, and standard visual materials are to be used exactly as showed in the branding guidelines presented in the final section of this Plan.

The following table summarises the communication channels to be employed by EDITO ML, showing in which cases the project will join forces with its sister project, EDITO Infra. Visuals include banners, flyers, brochures, rollups, posters, infographics, and videos to help better explain technical concepts and visions. Official Word and PowerPoint templates have also been prepared to ensure the EDITO visual identity is recognised in various meetings and events.

CHANNEL	AUDIENCES	GOALS	DATES	MANAGER
Website	All	Project visibility, awareness on DTO, stakeholders' engagement, exploitation	Project life	EDITO ML
Social Media	All	Project visibility, awareness on DTO, stakeholders' engagement	Project life	EDITO ML EDITO Infra
Research Papers	Beta testers and intermediate users	Results dissemination and project visibility	Project life and beyond	EDITO ML
Newsletter	All	Project visibility, awareness on DTO, stakeholders' engagement, exploitation	Project life	EDITO ML EDITO Infra
Press Releases	End users	Major announcements concerning main project outcomes	Project life	EDITO ML
Events	Beta testers, and intermediate and end users	Project visibility, awareness on DTO, stakeholders' engagement, dissemination, and exploitation	Project life and beyond	EDITO ML EDITO Infra
Visuals	All	Project visibility, awareness on DTO, stakeholders' engagement, dissemination, and exploitation	Project life	EDITO ML
Templates	All	Project visibility, awareness on DTO, stakeholders' engagement, dissemination, and exploitation	Project life	EDITO ML

A joint EDITO social media strategy is being prepared by EDITO-Model Lab and EDITO-Infra. As mentioned, both projects will use social media to inform about EDITO related activities, without causing fatigue to the target audiences. EDITO content should also aim to connect with the wider societal goals that EDITO will contribute to support and deliver. The content territories of EDITO are generally outlined in the figure below (courtesy of EDITO-Infra project).



3. Exploitation in EDITO Model Lab

3.1. Exploitation objectives

The exploitation of the EDITO ML results is part of the wider ambition of the project and the overarching EDITO initiative. It focuses on the uptake of the project's outcomes by society and includes training events, communication, dissemination, and exploitation activities, as well as amplification of a legacy through international initiatives. By engaging with different target groups at different phases of the project, a co-development approach will be ensured throughout the project, which is expected to drive the exploitation of results by different users beyond the project's lifetime.

Those who will contribute to the exploitation of EDITO ML results can be aggregated into three main groups:

- Ocean numerical model developers in the consortium who will employ the project outcomes to carry on other DTO-related activities during and after the life of EDITO
- External beta-testers and intermediate users who will help streamline user needs strengthen the VOML co-design
- End users who will benefit from the VOML, FAs and WiS to know better what is happening in marine and coastal environments and to assess the impacts of policies and interventions

The list of expected outcomes of EDITO ML consists of:

- Suite of models, including at least a high-resolution global ocean circulation model and coastal models at the land-sea interface ready for configuration and simulation
- Interoperable standards and APIs so that the digital twin models can be interfaced with Copernicus models (coupling, forcing, boundary conditions, etc) or external models (hybrid twins) and run in conjunction
- Enhanced on-demand ocean forecasting and ocean climate prediction capacities
- Scientific toolboxes to be used in a coworking virtual environment
- Improved capability to support EU legislation on the marine environment
- Capacity to support the three priorities of the Mission (biodiversity, zero pollution, zero carbon) and supporting the MOLs
- A sustainable and integrated set of models and services that contribute to and benefit from developments in the Digital Europe Programme, contributing to DestinE
- Contribution to the UN Decade of Ocean Science for Sustainable Development

In terms of exploitable results, EDITO ML will deliver:

- AI-based emulators (DDE) for model parameterisation, ocean products and data assimilation
- Global ocean models and regional high-resolution downscaling optimised for heterogeneous HPC infrastructure
- Coastal models ready to be configured and used on-demand by intermediate users
- VOML including its co-development environment, models, emulators and orchestrators to configure model suite on the EU Public DTO platform
- FA and WiS to show the benefit of the developed model components for the Mission priority

3.2. Exploitation activities

The exploitation goals of EDITO ML will be achieved through various activities, including training, communication and dissemination, cooperation with international initiatives and European projects, and open access to the results of research and innovation.

Exploitation via training

The training activities will involve intermediate and end users in the testing and further development of the project products. Such involvement will also serve to increase the use of DTO beyond the R&I community, namely in the governance sphere. In concrete terms, the project will organise a hackathon for intermediate users to co-work towards the development of innovative solutions to specific issues about DTO and its applications. The hackathon is an opportunity to involve and challenge intermediate users to develop innovative FA and fill their absence in certain domains. These FA will complete the offer of the DTO, and the most advanced and relevant ones will be used to highlight the DTO abilities. In a training event, end users will be invited to assess and exploit the project's DTO to simulate if certain theoretical management actions will produce the desired ocean response. The details, dates, locations, formats, audiences, number of participants, thematic sessions, etc of these events are to be defined in close collaboration with WP6 and WP7.

Exploitation via communication and dissemination

The communication and dissemination activities of the project will serve to inform various types of stakeholders about the benefits of DTO. Researchers, innovators, modellers, entrepreneurs, industry members, policymakers, implementers, and funders will receive tailored information about this revolutionary information and management tool. In addition to the standard communication channels, such as its website and social media, the project will connect with the existing networks of the consortium. A significant number of important stakeholders and a fraction of society at large will be reached this way.

The project will actively disseminate its results through scientific papers and impactful scientific events. Traditional media (TV, press, and radio) will also be invited, via Press Releases, to display the project achievements that may be more appealing to the public at large.

Exploitation via demonstrators

The FA and WiS will serve to show the use of the core model suite on real life applications and to predict different scenarios, translating research concepts and objectives into concrete solutions that have a positive impact for decision making and society.

Exploitation via international initiatives

By dedicating a full task to its internationalisation, the project assumes a strong commitment to making its products known and used by the largest possible number of stakeholders. In a first phase, various international organisations and initiatives involved in gathering ocean data and making it available will be involved to supply data and test the project's products. In a more advanced phase, various organisations and initiatives linked to the ocean governance sphere will be involved to ensure that the outcomes of the products do reach policymaking processes.

EDITO ML will interact with relevant ongoing ocean initiatives and projects, including Copernicus Marine, EMODnet, EuroGOOS, WEkEO, OceanPredict, and Ocean Prediction Decade Collaborative Centre among others. It is expected that this collaboration will also lead to the usage of EDITO ML results by them, as well as by other complementary initiatives and projects that either feed or benefit from them. For example, The Copernicus Marine data set will be available on the EU Public Infrastructure developed in EDITO-Infra based on WEkEO existing catalogue and API. Main short-term evolutions will also be used especially with the data ingestion, optimisation of data format for CLOUD application (OGC ZARR) and with some evolution of the Copernicus Marine model components, especially evolutions of the global ocean components and the regional configuration in the Mediterranean Sea, the Baltic Sea and the

Northeast Atlantic, including the European shelf and the North Sea. Another example of how the results of EDITO ML will be exploited outside of the project deals with the climate, land, and emergency services, which will be ensured by the development of the FA. These services are already available on WEkEO.

The project will also set up bridges with EuroGOOS to promote the operational oceanography value for society, namely through various activities in the five regional sea areas run within EuroGOOS (Arctic, Baltic, Northwest Shelf, Ireland-Biscay-Iberian and Mediterranean).

EDITO ML will directly contribute to the UN Decade of Ocean Science for Sustainable Development towards the expected outcomes of a clean, healthy, resilient, productive, and predicted ocean. This will be achieved through links with the Ocean Decade Programmes ForeSea, CoastPredict, Decade Collaborative Centre for Ocean Prediction, the Decade Collaborative Centre on Coastal Resilience in a Changing Climate, and it will seek factual collaborations with the programmes DITTO, Ocean Observing co Design of GOOS.

In terms of initiatives led directly by the European Commission, EDITO ML will engage with the Mission for Healthy Oceans, Seas, Coastal and Inland waters to address biodiversity, zero pollution, and zero carbon. The DG MARE EMODnet consortium and its portals will be engaged. The DG CNECT DestinE programme will benefit from EDITO-Model Lab's development of new modelling capabilities for the core model suite of the DTO that will be the ocean component of the DestinE programme. Links with ECMWF, ESA and EUMETSAT will be set up as well.

EuroHPC will be an important programme with a direct link to the EDITO-Model Lab. One important activity in the project will be the use of EuroHPC infrastructure to supply computing resources for the very challenging and demanding models that will be developed in the project and to foster the usability of EuroHPC infrastructure by the DTO models.

Exploitation via European projects

EDITO ML will set up communication bridges with various European R&D projects that are also contributing to tackle the main societal challenges addressed by the EDITO initiative. New relevant projects, mainly associated the MOLs, will be added to the list:

- Iliad
- IMMERSE
- Blue-Cloud 2026
- NECCTON

Exploitation via international projects and initiatives

In a similar way to European projects, other global projects, or initiatives that contribute to address the same societal challenges of EDITO will be engaged in exploitation activities. Examples would be:

- Ocean Predict
- GEO Blue Planet
- OceanPrediction Decade Collaborative Center
- EuroGOOS

Exploitation via open access

As per the Horizon Europe rules, EDITO ML will ensure that its products, namely software, tools, models, algorithms, metadata, peer-reviewed publications will be openly accessible through a trusted repository under a suitable Creative Commons licence.

EDITO-Model Lab will implement all the mandatory practices from the EU's Open Science policy and contribute to Open Science implementation, aligned with the Responsible Research and Innovation (RRI) approach and the European Code of Conduct for Research Integrity. EDITO-Model Lab will implement the approach in all its facets, such as engagement with society, gender, ethics, open science, and science education.

4. Implementation of CDE activities

4.1. WP8 Working Group

EDITO ML created a dedicated working group to address all its CDE activities. The group, launched before the project's Kick-off Meeting, is to include at least one representative from each of the consortium partners. The representatives consist of a mix of marine science communication officers, ocean researchers and numerical model developers. The goal of the working group is to gather online on a regular basis to conceive and implement new CDE activities, define internal responsibilities and check impact.

Each representative is to set up an efficient bridge between WP8 and the technical WPs of EDITO ML, keeping the working group up to date about any progress or results that can be used to prepare content for the various communication and dissemination channels of the project. This is essential to ensure functional internal communication within the consortium. Moreover, the representatives are also to share the CDE activities of the project within their institutions. This is essential to growing the number of social media followers and website visitors to boost the visibility of EDITO ML.

The working group should take full advantage of the main project internal communication channels (email, Teams, and meetings) to brainstorm the best possible ways to publicise each of the EDITO ML outcomes. In this sense, each representative is expected to be pro-active and inform the WP8 about any relevant achievement of their institution within the framework of EDITO ML. The representatives are therefore the starting point for most of the communication and dissemination activities to be performed by the project. Without their input, it will be impossible to fully publicise what is being done in the project and how it is contributing to the construction of EDITO.

4.2. Responsibilities and workflow

+ATLANTIC is the leader of the CDE activities of EDITO ML. Mercator Ocean Internationalis to act as the Co-Lead and is the go-to partner for most of the regular discussions and decisions that will have to be made concerning the project's CDE activities. Each of the remaining consortium partners handles actively participating in the working group meetings and reaching out to +ATLANTIC and Mercator Ocean International every time new potential inputs for communication and dissemination are available.

The publication of news articles on the project website and content on its social media will depend on the performance of the technical Work Packages (WP 2 to WP7) and on how frequent and efficient the internal communication is within the WP8 working group.

Once a given communication input is sent by a representative to WP8, +ATLANTIC will convert it into the adequate formats, most likely news articles on the website, which are to be followed by posts on social media. The publication of any news article on the project website can only take place after the working group reviews and approves its draft. For most of the news articles, the review period will be at least a full working week. Once a given news article is published on the EDITO ML website, the preparation and approval of the associated social media is to be run by +ATLANTIC and Mercator Ocean International.

At any given moment, any EDITO ML consortium partner may request WP8 to help them in the preparation of visuals or other communication and dissemination materials. However, the acceptance of such requests will obviously be dependent on timeliness, alignment with the EDITO ML CDE objectives and this Plan, and on the availability of resources (time and budget). Under some circumstances (workload peak or no budget available), WP8 may be forced to postpone or refuse such requests.

Good planning and clear internal communication are essential to guarantee that all CDE activities are performed in an efficient and well-timed manner. This must be followed by everyone involved in WP8 to avoid back and forth feedback loops. Each CDE request must be internally discussed and approved by the initiating partner before being sent to the WP8 Lead, and +ATLANTIC. Partners are responsible to supply clear, complete, and final instructions that lead to a smooth implementation. Mercator Ocean International - while in direct contact with the European Commission as coordinator of the overarching EDITO initiative - will compile requests and instructions to WP8 and supply them to +ATLANTIC once a month. Urgent or exceptional requests will be dealt with as soon as possible depending on the WP8 available resources at the time.

Deliverable-wise, WP8 is responsible for:

DELIVERABLE	DESIGNATION	LEAD	DEADLINE
D8.1	Plan for CDE of results	+ATLANTIC	M04 | April 2023*
D8.2	Website	+ATLANTIC	M03 | April 2023**
D8.3	Results Uptake Amplification	+ATLANTIC	M36 | December 2025
D8.4	Plan for CDE of results beyond the project lifetime	+ATLANTIC	M36 | December 2025

** D8.1 was originally scheduled for M3 but, after consultation of the EC Project Officer, it was postponed one month to allow a stronger involvement of all partners*
*** D8.2 was originally scheduled for M3 but, after consultation of the EC Project Officer, it was postponed one week to fully harmonize EDITO-Model Lab and EDITO-Infra projects' websites*

Despite +ATLANTIC being responsible to lead the elaboration of these four deliverables, their revision is to involve the whole consortium since each partner has effort allocated in WP8. The final approval of each deliverable and submission to the EC is to be performed by the project coordinator, Mercator Ocean.

4.3. Main messages to be conveyed

In the first phase of the life of EDITO ML, its communication will start by aiming to get visibility for the project and expand as much as possible its network of target audiences. At some point, most likely in the second year, the project will also start to disseminate its results and attract potential participants (beta testers, intermediate users, and end users) to the events in which the project products will be discussed, tested and validated (co-organised with WP6 and WP7). Closer to the end of the project, during the third year, the communication will start promoting its legacy to enhance uptake and exploitation of its results beyond the life of EDITO ML.

In terms of concrete content to be published on the website, each of the EDITO ML technical WPs will be requested to supply a draft for a news article focusing on the key goals and activities of that WP. +ATLANTIC will handle preparing the final version, publishing it on the website and then publicising it on the project's social media. In detail, these are potential subjects to be covered:

News article	Subject	Draft by
1	What is EDITO and why do we need it?	Mercator Ocean
2	What will be the EU DTO?	MOi & +ATLANTIC
3	What will EDITO initiative add to the existing European ocean observation/modelling initiatives?	MOi & +ATLANTIC
4	What are the EDITO ML consortium strengths and skills?	All WPs
5	How is EDITO ML using AI-Based Emulators?	WP2
6	What numerical models is EDITO ML using to build a DTO?	WP3
7	What is the integrated DTO core model suite?	WP4
8	What is the Virtual Ocean Model Lab?	WP5
9	How will EDITO run end to end demonstrations for FAs?	WP6
10	What can we do with the EDITO ML WiS?	WP7

4.4. Shared content creation with EDITO Infra

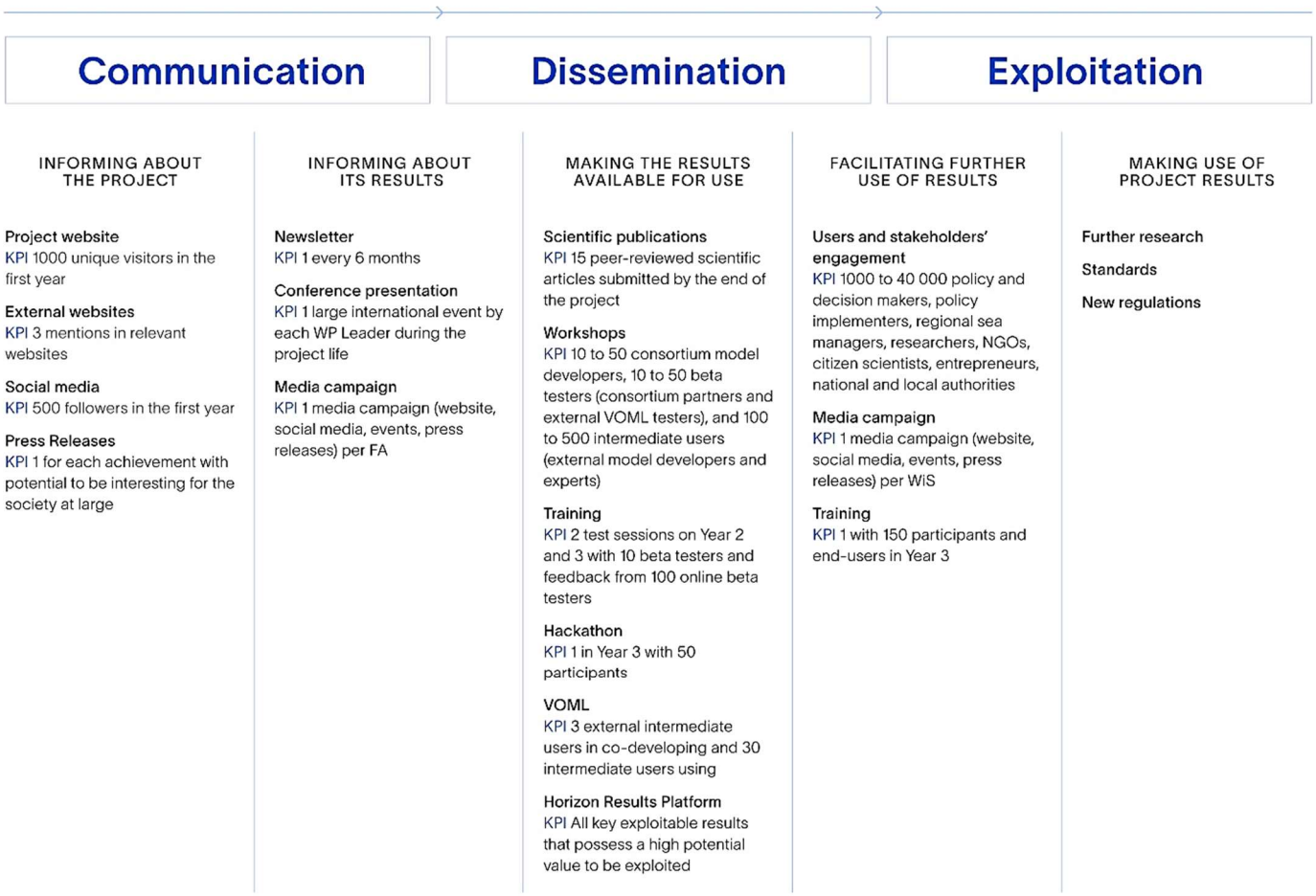
As EDITO ML and its sister project, EDITO Infra, are working together to develop EDITO, it makes sense to have both projects collaborate in some CDE activities. Each project will have its own website but will be clear to visitors that each of them is one half of the EDITO initiative, encouraging them to also visit the other project's website.

Both projects will join forces to create a common EDITO newsletter and may consider co-organising events to highlight the progress of both projects. There will be only one social media account for the whole EDITO initiative on LinkedIn and Twitter, but each project will have the freedom to post on them separately without having to involve one another in the content creation or approval.

Nevertheless, both projects agreed on co-creating and following basic guidelines for the creation and sharing of content on social media. Such guidelines should be prepared in the early stages of both projects (likely on M4, April 2023) before their social media presence actively begins. This is essential to guarantee that the visual identity of EDITO is respected and that there is a minimum level of coherence in terms of editorial lines, communication style and frequency, tone of voice, and visuals. To achieve this, the leaders, and co-leaders of the communication WPs of each project will work together on a regular basis, meeting online every two to three months to evaluate the work done and plan future content and other CDE activities.

5. Monitoring of CDE activities

In terms of KPIs, the project aims to achieve the following:



EDITO ML will use Google Analytics to check the website traffic and will employ the standard statistics provided by LinkedIn and Twitter to check how its social media reach is evolving. All other communication channels to be used will be checked as well on a regular basis using basic statistics that can serve to show how many people became familiar with the project and its results via newsletters, events, or Press Releases. The exploitation activities related to further research, the definition of standards, or new policies and regulations that can appear from the work conducted within EDITO ML can only be properly checked and evaluated after the end of the project and, therefore, there are no KPIs defined for them.

6. Branding

6.1. EDITO visual identity

One logo, four versions

Our logo should be omnipresent. It should appear on all EDITO project communication pieces and formats. In **printed formats,** we recommend that it appears on the front cover, back cover, or both. **In videos and audiovisual pieces,** its presence should be at the end, as a signature of the authorship of the message.

Here are some versions, so you can choose the one that best suits the layout you are going to use.

A

A Short

B

C

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A symbol for every occasion

All brand options can be applied with any version of the symbol. Which one to apply at any given moment? Here are some suggestions so that the reference to the sea is always present in a harmonious way in the composition:

1. In institutional communications, we use version 1 (wave background).

2. In a layout without images or with images of elements such as maps, graphics, etc., we use versions 1 or 2 (wave background and photographic background).

3. In the event of a layout with a photograph of the seabed, in order to avoid redundancies, we use version 3 (flat background).

1

2

3

Visual Style Guide

Pure versatility

Our logo is extremely versatile. It works well on both light and dark backgrounds. As long as the background contrasts sufficiently with the logo and good legibility is maintained, you can apply it over any of the brand colours.

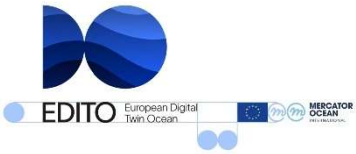
Together forever

Look, that's how we live together with Mercator Ocean's logo, our dear endorser.

When both brands appear together, the visual hierarchy, the minimum distances and the way both logos are placed must be maintained. Let's not forget that EDITO is a Mercator Ocean initiative, but at the same time it is important that our logo has relevance in all the communication we do.

A Short horizontal

C horizontal



A Short vertical

C vertical

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We all need our living space

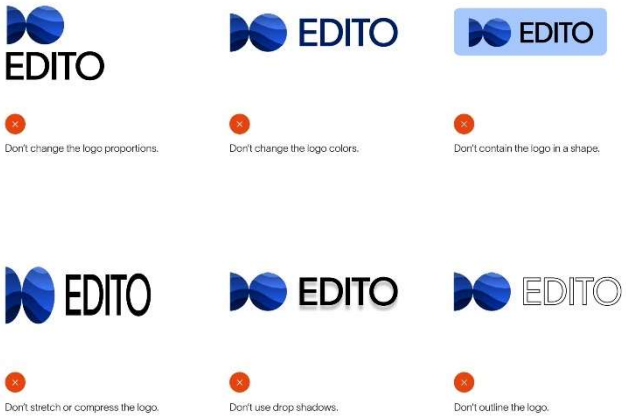
EDITO's logo should always be clearly visible, so we must keep all the logo versions separated from other visual elements by a distance proportional to their lettering height.

This distance is considered the minimum uninterrupted space surrounding the logo and it's called the isolation area, or clear space. As each version is prepared to be applied in different sizes, the clear space will be different for each version of our logo.

Visual Style Guide

Please, never ever

...modify the EDITO's logo in any way. We prefer to maintain and show off its natural beauty. It's already beautiful in itself, don't you think?



Family ties

EDITO is much more than EDITO. The project is made up of several sub-projects which, as such, have their own logos. Our brand architecture is considered a branded house, meaning that any sub-brand we create must be built from the main logo.

If this is the case for you and you have to create the logo for a new member of the EDITO family, please take the following guidelines into account:

- Use the Laussane 100 typeface, always aligned with the height of the word EDITO (with a capital letter at the beginning of each word in the naming).
- Apply the same aesthetic rules that we have defined for the EDITO logo in this brandbook.
- If necessary, the hexagonal version of the symbol can be used.

Welcome to the family!

Typo type

It's time for us to introduce you Laussane, our corporate typeface.

You can use the whole type family but, please, have in mind that the text block in its largest expression must be in its 200 version.

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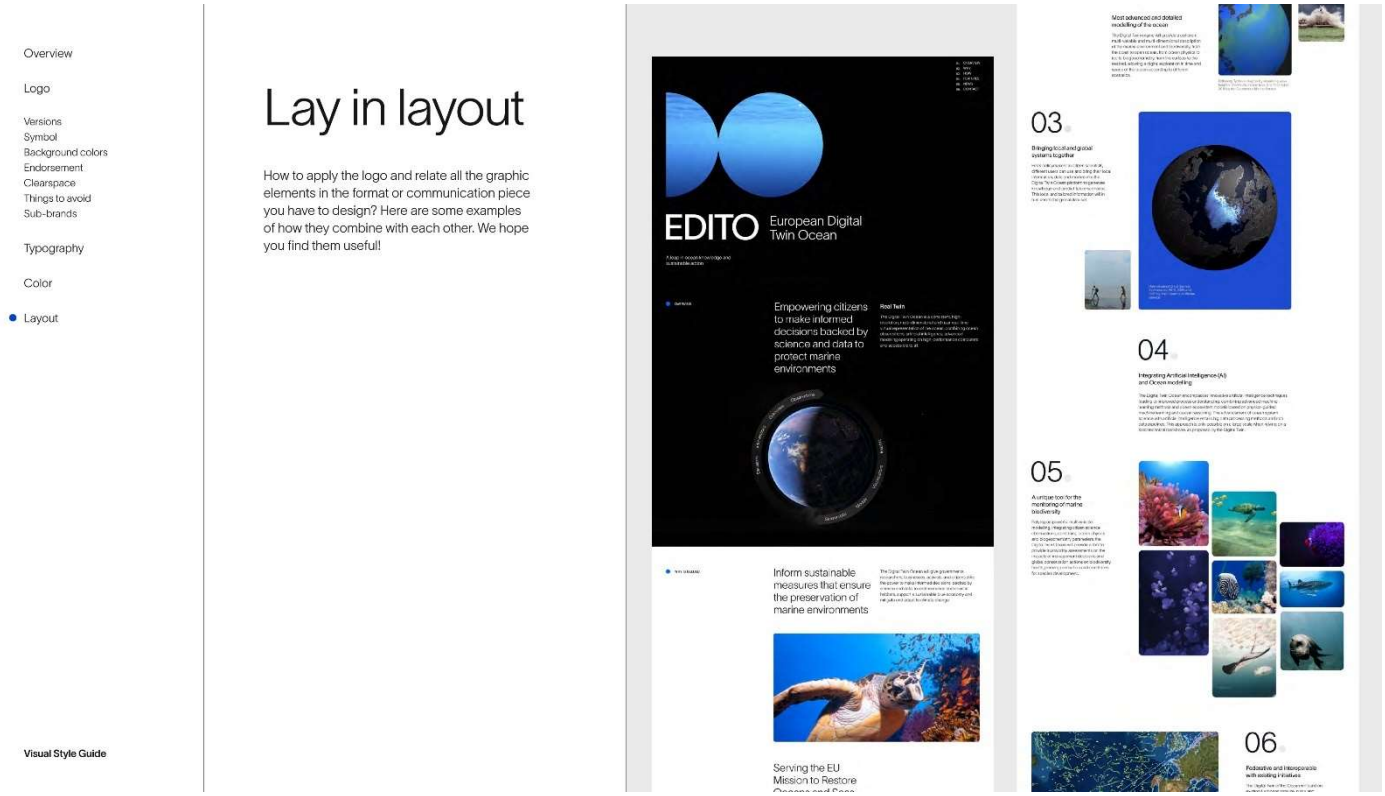
Life in colours

As could not be otherwise, the colour palette of the EDITO project is that which corresponds to the colours of the sea, but taken to the digital world (as the project consists of a digital twin ocean). Bright, pure colours, combined with the simplicity and sobriety of black and white. Colours whose use is aligned with the values of the brand.

We want to give priority to the content, to show it as it is. For this reason, in the proportions of colour use we give priority to white, and the blues are used as "accent colours", as occasional brushstrokes that visually remind us of the ocean. Apart from blue, black can be used when necessary to separate or organise content.

Visual Style Guide



6.2. EDITO-Model Lab visual identity

EDITOModelLab

European Digital Twin Ocean

EDITO
ModelLab

EDITOModelLab
European Digital Twin Ocean

6.3. EDITO-Model Lab PowerPoint template

Section Title

Lorem ipsum dolor sit amet, elit consectetur adipiscing.

Section sub-title

- Praesent ut ex mattis sapien gravida tincidunt ut et libero
- Praesent ut ex mattis sapien gravida tincidunt ut et libero
- Praesent ut ex mattis sapien gravida tincidunt ut et libero

EDITOModelLab