CAMPUS MONDIAL DE LA MER

Spearheading the blue economy

CONTENTS

Key facts and figures

REGION

- Stretching **2,730 kilometres**, Brittany's coast represents one third of the total coastline of mainland France. Finistère is the leading coastal department at 1,200 kilometres.

Source: French National Geographic Institute (IGN)

ECONOMIC LIFE

- With **40,400 jobs**, Finistère has the highest proportion of the working population employed in the maritime sector of any French department (11% of the total).
- The 40,400 jobs are spread across **2,720 maritime institutions and businesses.**
- **The leading maritime employer is the French Ministry for the Armed Forces** with 17,147 posts throughout the department. Naval Group comes next with 2,770 employees, followed by Thales which employs 1,500.
- A dominant **fishing sector** covers **1,470 institutions and businesses**, followed by the shipping industry with 740.
- Representing 20% of wet fishing in France and almost 45% in Brittany, Cornouaille is among the leading areas in the national fishing industry.
- Lanildut is **Europe's biggest seaweed port**. It lands around 48,000 tonnes annually, accounting for 45% of total French production.

Sources: ADEUPa Brest, Atlas thématique de la pêche en Cornouaille, Ifremer.

SCIENCE, RESEARCH AND INNOVATION

- **1,830 students** enrolled on marine science and technology courses.
- **24 primarily ocean and coast research units**, where **822 people work in research and teaching** as part of France's foremost marine science community. **Ranked sixth in Europe** for the number of sea-related scientific publications. More than **1,000 scientific publications** per year.
- **2 marine stations** - Roscoff Marine Station, a centre for research and training in marine biology and ecology, and Concarneau Marine Station, the oldest marine station in the world, specialising in exploring the biodiversity of marine fauna.
- Brest, headquarters of **Pôle Mer Bretagne Atlantique**, a cluster with a global remit to promote economic competitiveness. It has endorsed over **350 projects** since 2005, representing **nearly one billion euros of investment in maritime innovation.**
- **An Institute for Energy Transition (ITE) dedicated to the marine renewable energy sector**, France Energies Marines, based in Brest.

Sources : ADEUPa Brest

NATIONAL DEFENCE

- Brest, headquarters of France's Strategic Oceanic Force (FOST), comprising **4,000 sailors**, military and civilian personnel, operating 4 nuclear ballistic missile submarines, 6 nuclear attack submarines and command and control units. FOST is the submarine component of France's nuclear defence forces.

Source : Ministère des Armées, Marine Nationale

Who we are

Campus mondial de la mer brings together France's first community devoted to understanding and developing marine resources. We have built a solid reputation at European level. Our aim now is to raise our profile further and consolidate Brittany's position as one of the key places worldwide for the study and development of the oceans and seas, alongside major international centres of maritime excellence.

Our strength lies in the complementary nature of our network, comprising academics, scientists, economic and institutional stakeholders who work in the field of marine science and technology and the maritime economy.

Our approach is a region-wide initiative based in Brest that extends from Roscoff to Concarneau. We aim to facilitate innovation and ensure that Brittany's wealth of marine science and technology knowledge brings further business and creates jobs.

We are researchers, entrepreneurs and students who want to respond to transformations in society and to develop a sustainable maritime economy.

We cooperate closely to pool our resources, enhance our reputation, reveal the brightest in our business ecosystem, promote our values and adopt a collective identity that is the source of our strength.

Our community is more than the sum of its parts: it is both richly diverse and deeply rooted in the region, ensuring that Campus mondial de la mer is successfully spearheading the blue economy.

Our diverse community creates synergy by working together in every field of marine science and technology, from research to production. From the beginning, the momentum created by Campus mondial de la mer has been underpinned by our shared values: cooperation, ambition and excellence. We want the movement to continue growing. Join us and play your part in our shared success.

Campus mondial de la mer is a wonderful tool which, in addition to its valuable work, has considerable merit in the exemplary way all local stakeholders join forces to achieve the same goal. Making the headland of Brittany THE place to study and develop the oceans is a challenge that undoubtedly requires a dynamic initiative to boost and unite our strengths. »

ÉRIC BALUFIN
Director, Naval Group Brest Site

Our vision

© Francois Hurtaud

BRITTANY'S RESPONSE TO THE CHALLENGES OF SUSTAINABLE DEVELOPMENT AND THE BLUE ECONOMY

In 2050, the world will need to feed 10 billion people and find 60% new sources of food, energy and mineral resources to meet the needs of developed and catching-up economies. Terrestrial resources are already overexploited: more will be expected of the oceans. The oceans also harbour formidable energy potential and offer other riches and opportunities, including in maritime shipping and boating and leisure. The sea has become a new driver of growth: it simultaneously represents a vast reservoir of resources and a space for new production and industrial activities whose development on land is constrained.

Many countries and multinationals aim to exploit the oceans and seas. If this is conducted indiscriminately, there is a risk that a sizeable proportion of marine resources will disappear rapidly and definitively. Understanding marine environments is therefore of strategic importance for developing new activities.

Our community is ranked first in the French marine sciences sector. It represents one third of the sector's national teaching and research workforce, employed within Ifremer, the European Institute for Marine Studies (IUEM at the Université de Bretagne Occidentale – UBO), Roscoff Marine Station, advanced higher education institutes (the grandes écoles including Ecole Navale, Institut Mines-Télécom Atlantique and ENSTA Bretagne), national public institutions such as Cerema and SHOM, and associations such as Cedre, a specialist in marine pollution. Our community has been mobilised to respond to the sustainable development challenges facing humanity.

REINFORCING OUR INTERNATIONAL GOALS

Strengths and skills must be brought together as part of the Campus mondial de la mer initiative, to enhance our reputation and help all members attain their international goals. Hosting international events will help us achieve this. Such events provide an opportunity to discover the latest scientific and technological advances across all disciplines which improve our understanding of the oceans, of the challenges faced and of potential solutions. These meetings are a forum for face-to-face encounters with international experts, encouraging new connections and fresh ideas. In our bid to extend the international influence of our community and our region, we rely on our collective strength in the form of a network of decision-makers at both European and international levels. In addition, a network of ambassadors will be established to work for the region abroad. Making our offer more attractive also involves monitoring international calls for projects, supporting projects with an international scope such as the Ocean University Initiative or the Narwhal C hallenge, hosting delegations and setting up cooperative initiatives. ●

Our community

We are founded on established areas of excellence, an interdisciplinary culture and a long tradition of collaboration.

OUR ESTABLISHED AREAS OF EXCELLENCE

Campus mondial de la mer draws on and reinforces its leading role in areas where its members have long excelled:

- Defence (submarine warfare, electronic warfare);
- Maritime security (cybersecurity);
- Shipbuilding and leisure boatbuilding;
- Ship repair and naval engineering;
- Fishing and aquaculture;
- Oceanography and knowledge of coastal areas;
- Marine biology and ecology;
- Deep-ocean exploration and associated technologies;
- Marine applied communication and space observation technologies.

OUR PRIMARY ASSET: INTERDISCIPLINARITY

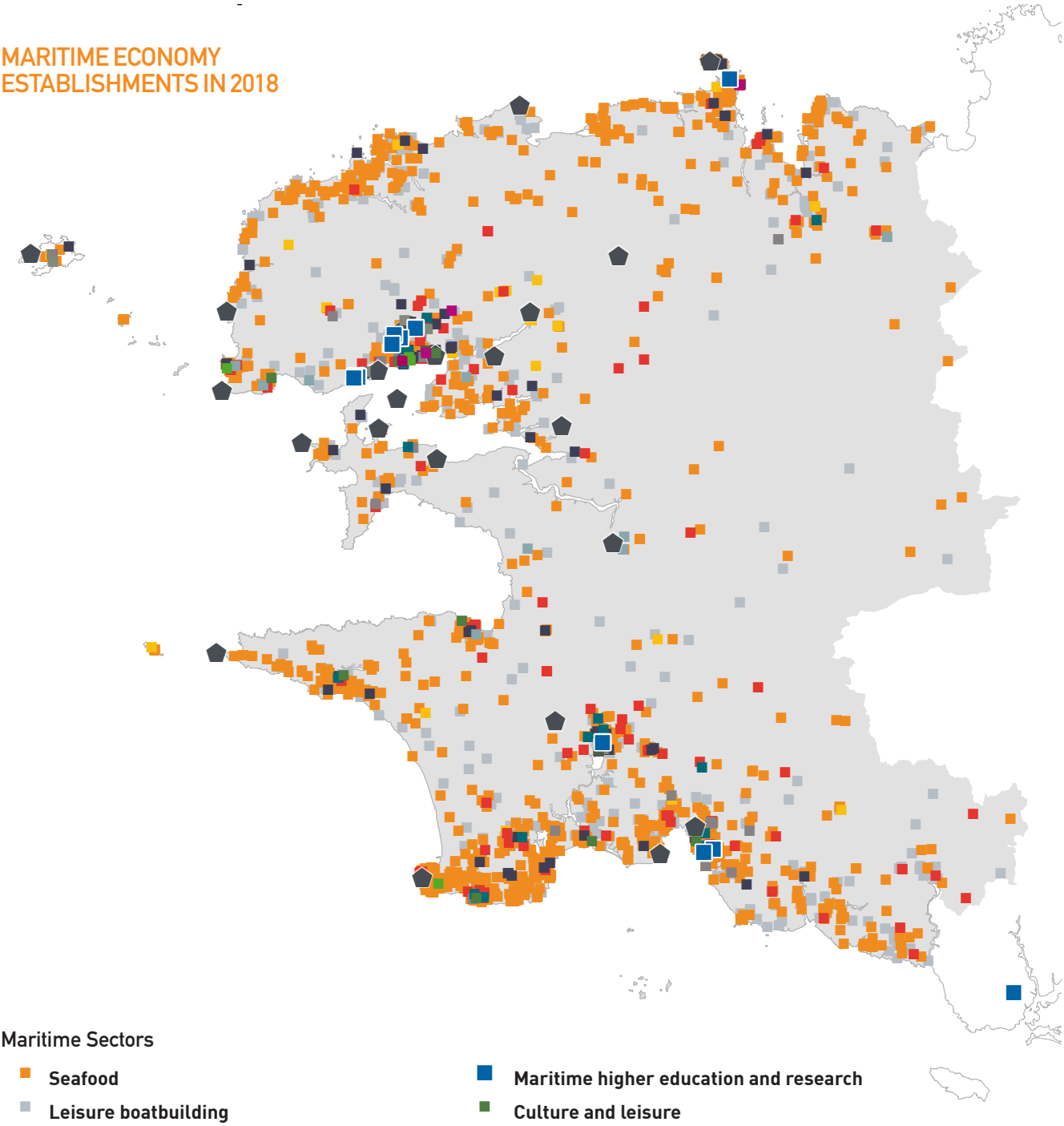
Responding to complex issues means going beyond the boundaries of disciplines and fostering hybrid cultures and practices to devise innovative solutions, particularly in the following fields:

- **Maritime information technologies** for increased ocean surveillance, involving, mobilising and enhancing the full range of undersea observation technologies: telecommunications, robotics, embedded systems, sensors, data processing and numerical modelling are just some of the technologies deployed for maritime and port security, understanding and protecting the environment and monitoring of maritime activities.
- **Human and social sciences and environmental sciences** for studying coastal management and associated risk management, the socioeconomic impact of maritime development, ecosystem services and international maritime law.
- **The oceans and health** for the development of biotechnologies derived from marine produce and their applications in the field of healthcare products and treatments.

OUR COMMUNITY INCLUDES SOME KEY PLAYERS:

- **Ifremer** is a major European institute for marine research. The Brest site is the biggest Ifremer centre in terms of area and workforce (690 permanent staff in Brittany, 640 of them in Brest). Through its various departments, it is engaged in research covering the full range of the Institute's fields of study. Ifremer's head office was transferred to Brest in 2019.
- **The European Institute for Marine Studies** (IUEM) is unique in France, specialising in ocean and coastal sciences. As one of France's major marine research centres, it employs over 400 people as researchers, lecturers, engineers and technicians. A total of 430 masters and doctoral students are enrolled at IUEM. It is part of the Université de Bretagne Occidentale (UBO) and as such has secured the twelfth place in the Shanghai Ranking for oceanography. It is made up of joint research units with co-supervisions such as IRD, CNRS and Ifremer.
- Maritime studies are also prominent at **Université Bretagne Sud** (UBS - Morbihan), both in teaching and research. Almost two-thirds of the 14 laboratories at UBS are working on marine-related research.
- Created in 1872, the **Roscoff Marine Station** (CNRS and Sorbonne Université) is a teaching and research centre for marine biology and ecology. This internationally recognised station enjoys a privileged location at the heart of an area of exceptional biodiversity.
- Created in 1859, **Concarneau Marine Station** (Ifremer and Muséum National d'Histoire Naturelle) is the oldest such station in the world still operating. It too boasts an international audience in the field of exploring marine fauna biodiversity.
- Employing a workforce of close to 16,000 in Brest and the Crozon Peninsula, **the Ministry for the Armed Forces** is the leading employer in the Pays de Brest, accounting for 58% of its maritime economy. This presence is due to Brittany's strategic geographical location as part of France's national defence framework.
- In the case of **Naval Group** and **Thales**, more than 4,200 jobs are dedicated to shipbuilding and repair, including for national defence.

MARITIME ECONOMY ESTABLISHMENTS IN 2018



Maritime Sectors

- Seafood
- Leisure boatbuilding
- Shipbuilding and repair
- Maritime transport
- Non-food marine products
- Marine and coastal environmental protection
- Maritime public works
- National maritime security
- Maritime higher education and research
- Culture and leisure
- Marine energy generation
- Marine aggregate extraction
- Offshore oil and gas-related services
- Subsea cables
- Maritime insurance
- Public sector maritime activity

Created by: ADEUPa, QCD
Source: Brest-Bretagne Urban Planning Agency (ADEUPa) Network and Brittany Chambers of Commerce (CCI Bretagne)

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ADEUPa AGENCE D'URBANISME BREST • BRETAGNE

Quimper Cornouaille Développement

Collectively

conquering emerging markets


© Manros


© Sabella

To be innovative you need the right conditions, a reasoned approach and the development of synergy - Campus mondial de la mer shows this dynamic in action. »

CLAIRE JOLLY
Head of IPSO Unit, OECD Directorate for Science, Technology and Innovation

The OECD forecasts that added value from maritime activities will double worldwide between now and 2030, with more marked growth in certain sectors. The opportunities this affords should not conceal the fact that the oceans and seas face numerous threats, which demand fresh approaches and solutions for sustainable development. Campus mondial de la mer will help its members expand into strong emerging markets by coordinating and promoting research, forging closer links between laboratories and businesses and leveraging both research and support for SMEs to develop and grow internationally.

HEALTH, NUTRITION AND WELLBEING

Marine biotechnology

Brittany is France's leading region for marine biotechnology. Western Brittany has no fewer than 120 stakeholders, 68 of them companies, across all marine biotechnology sectors. Marine biotechnology has applications in health, agrifood and cosmetics.

Polymaris Biotechnology is one of the region's most successful companies. It works essentially on the biofermentation of marine bacteria sourced from the Breton coastline. The exopolysaccharides produced have applications in sectors such as health, cosmetics, chemistry and the environment.

The algae sector

The global human nutrition market represents the main way of deriving economic value from algae, either directly for consumption as a vegetable, seasoning or ingredient, or indirectly via the market in colloids. Colloids are sometimes used as an intermediary food product (IFP) in the form of a gelling or texturing agent. Algae also have applications in fine chemicals such as cosmetics and pharmaceuticals, which are high added-value markets requiring sophisticated industrial processes. Local algaculture businesses are involved in Breton algae production for various processing companies, including in the agrifood sector.

The Pays de Brest has launched with its partners, including the Campus mondial de la mer, a cluster to develop the algae industry, which accounts for almost 800 jobs in the area, and to provide it with an organisational structure. On the one hand, the cluster will help focus the industry's economic resources on research and development and on transferring R&D outputs to industry. On the other, it will help the industry manage the resource in terms of harvesting, cultivation and supply.

Aquaculture

Aquaculture is rapidly expanding as the sector seeks to satisfy demand and tackle the overexploitation of fisheries resources by the sea fishing industry. Almost half of fish for human consumption is already provided by aquaculture. The key is to create the combination of conditions necessary for socially and environmentally successful sustainable development within genuinely local projects. These projects should create jobs at the same time as meeting consumer expectations regarding the origins and nutritional, taste and health standards of the food. Various methods are deployed for breeding and experimental aquaculture.

Martrop is a company working with CNRS researchers to create a system of prawn farming. The closed loop system operates in land-based, environmentally controlled, low-energy units, which combine appropriate technologies for processing sea water and for developing the commercial viability of crustacean shells. This zone is optimised for convenience and avoids the need for antibiotic or hormonal inputs. The company has seen its project officially endorsed by Pôle Mer Bretagne Atlantique.

Sustainable fishing

Fish stocks are overexploited and various species are endangered by the effects of super-efficient factory ships and illegal fishing (accounting for 20-30% of the total catch). Sustainable fishing secures marine resources and biodiversity for the long term, while allowing the ocean to be explored in an economically and socially viable way. This can be achieved through advances in stock assessment techniques and improvements in fishing gear selectivity (using video systems or sensors).

The management plan for the Iroise Marine Natural Park, France's first marine park, meets the requirements for sustainable fishing in terms of sustainably maintaining biomass for exploitation and respecting marine habitats. Several projects are aimed at understanding the existing biomass to determine the most appropriate fishing effort. They focus on issues such as reintroducing the spiny lobster and interactions between fisheries and marine mammals.

Collectively conquering emerging markets

MARINE RENEWABLE ENERGY

The potential of MRE cannot be realised without the political will to encourage R&D, the development of offshore demonstrators and investment. This political will exists in Brittany, as illustrated by the vast project led by Brittany Region to enhance the competitiveness of Brest's commercial port and to position it on the emerging marine renewable energy market with the construction of the first MRE berth and accompanying maintenance platform.
Brittany benefits from its acknowledged experience in shipbuilding and repair, boasting a network that brings together 180 companies, both SMEs and large groups, covering the entire marine energy value chain, including consultancy, services and support, manufacture, installation and logistics, operation and maintenance. Over 60 sectors are involved, ranging from composite materials to mechanical engineering and smart grids.

Eolink is a startup convinced of the potential of floating wind turbines. In 2018 it worked with Ifremer to design and launch an initial 1/10th-scale prototype of its project. Eolink's solution combines a powerful turbine with a lightweight structure, thus optimising the cost of electricity generation.

The objective was increased competitiveness. This type of turbine can generate 12 MW, reducing electricity production costs by 20-25% compared to the current industry standard of 6 MW.

Several conclusive trials were performed in 2018 and 2019, and Eolink's task now is to finalise the detailed design of its multi-megawatt demonstrator.

MARINE DRONES

"In terms of regulation, the 2016 French Leroy regulation was the first step towards a legal framework for surface and underwater drones. Services providing marine drones were clearly the most promising avenue to explore in developing civil or dual-use markets and opening up international markets worldwide." (Feedback on the drone-themed Blue Day organised by Pôle Mer Bretagne Atlantique). The Campus mondial de la mer community is working on this issue through its research laboratories and business network (including ENSTA Bretagne, ISEN-YNCREA-OUEST, Ecole Navale, Lab-STICC, Brest Business School, ECA Robotics and IxBlue).

The Campus mondial de la mer has become a dynamic focus for Brittany's maritime community. It plays an essential role in bringing together individuals who are seeking to break into new markets with great potential.»

MARIE-JOSÉE VAIRON
CHAIR OF PÔLE MER BRETAGNE ATLANTIQUE


© Olivier Dugornay / Ifremer

© Naval Group

MARITIME CYBERSECURITY

The Brest-Lorient defence base is home to the Atlantic Maritime Prefecture, the Maritime Information Cooperation & Awareness Center (MICA), the Maritime Security Center – Horn of Africa (MSC-HOA), the Cyber Defence Support Centre (CSC) for the French Navy and the headquarters of the Naval Hydrographic and Oceanographic Service (SHOM). Many academic institutions work in cybersecurity, such as ENSTA Bretagne, Ecole Navale, IMT Atlantique, Université de Bretagne Occidentale (UBO), ENIB and ISEN-YNCREA Ouest. In 2020 a Master's degree in Cybersecurity of maritime and port systems was created to meet strong demand from businesses and other stakeholders in the marine sector.
Public research laboratories such as Lab-STICC, IRENav, L@bISEN and CERV cover a wide range of subject areas associated with cybersecurity, including: drones and robotics, the design and maintenance of vessels, simulation, training, communications, signalling, antennae, data and image processing. These laboratories make use of research infrastructure such as the Datarmor super calculator, the Sea Test Base platform and the graphical calculation node established at ENSTA Bretagne. Industrial Chairs complement the research effort by liaising closely with businesses: the Chair on Cybersecurity of Naval Systems, the Chair IMT Atlantique on Cybersecurity of Critical Infrastructures, and the Smart Objects Chair.
Maritime industry stakeholders, such as Naval Group, Thales, Brittany Ferries, the port of Brest, DIATEAM, Asten, CEIS, CLS, eOdyn, Ellidiss and ECA, are addressing the threats they face in pursuing their professions and are producing solutions to protect themselves and others against cyber threats.

SAFE, SUSTAINABLE MARITIME TRANSPORT

Maritime transport, fishing, maritime construction and international naval forces are actively seeking solutions to improve efficiency, reduce fuel consumption and limit emissions.

MARITIME SPACE SECTOR

Brittany boasts a major scientific ecosystem and has many fledgling companies in the sector for space technology and its applications. Brittany Region and Brest métropole have supported the emergence of this sector over more than a decade.
As a means of strengthening and supporting this growth, the French Space Agency CNES and Brittany Region signed a framework partnership agreement at the end of 2019, on the occsion of the 10th anniversary of Vigisat, the world's first such collaborative station using the Brest-based satellite SENTINEL-1.

Our international cooperations

Campus mondial de la mer aims to accelerate growth in the local industry so it is competitive internationally. A turning point came in 2019, when the Campus joined various international initiatives, such as cooperation with Technopole Maritime du Québec (Canada), Maritime UK South West (the United Kingdom) and the Indian Institute of Technology Goa (India).

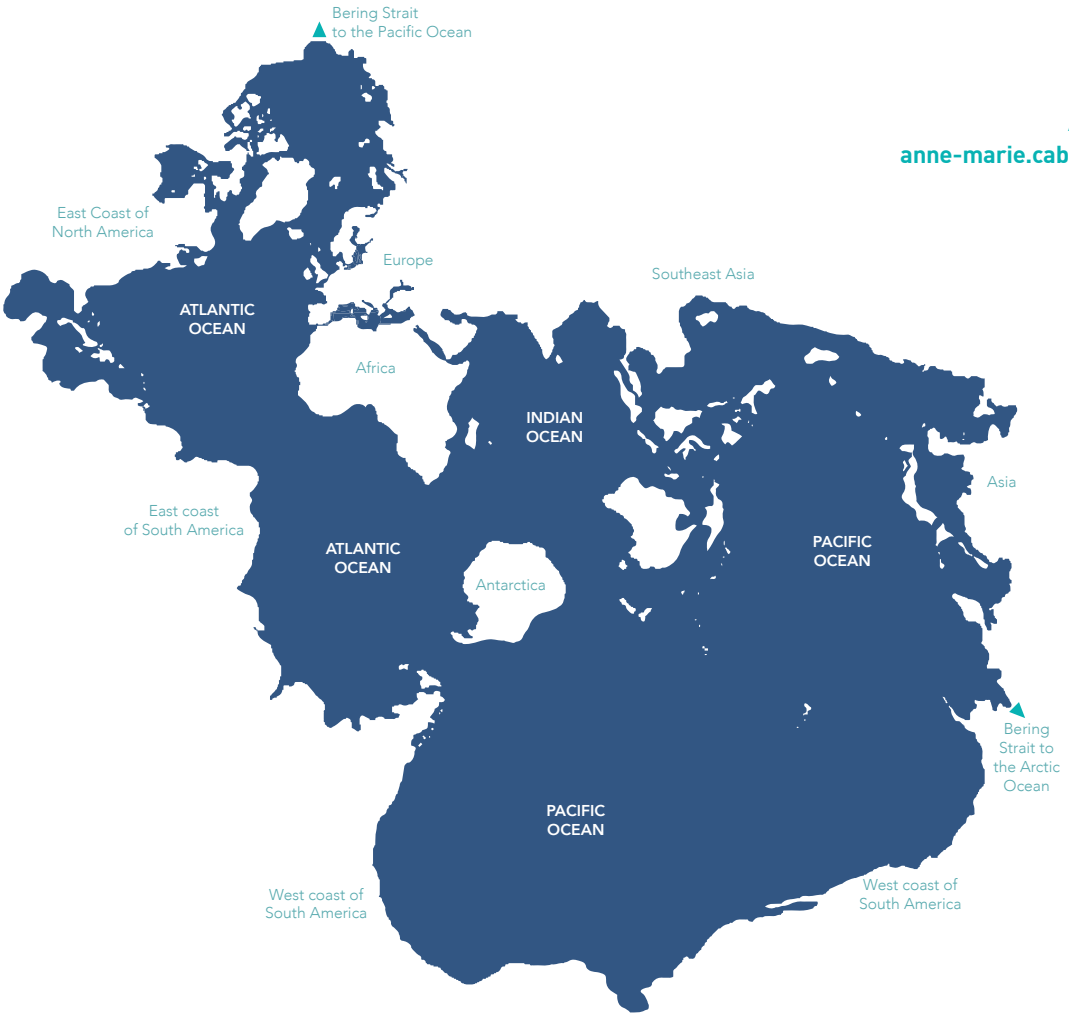
TECHNOPOLE MARITIME DU QUÉBEC

TECHNOPOLE MARITIME DU QUÉBEC, CANADA

Our cooperation with Technopole Maritime du Québec dates back to 2010 when the French Navy and Brest métropole organised a joint undertaking, with the support of the Brest Chamber of Commerce and Industry and Technopôle Brest-Iroise.

Relations between the two territories were formalised in the context of support from the France-Quebec Fund for Decentralised Cooperation, resulting in:

- Annual joint undertakings in Rimouski and Brest,
- A 'soft-landing' scheme set up so companies can try out the French and Canadian markets, and
- Participation of Rimouski in Ocean Hackathon®.



CONTACT
ANNE-MARIE CABON
anne-marie.cabon@brest-metropole.fr

MARITIME UK SOUTH WEST, THE UNITED KINGDOM

Our cooperation with Maritime UK South West began in Poole, Dorset in 2017 when it hosted European Maritime Day. After several months of getting to know one another through visits back and forth across the Channel, we signed an agreement in December 2019 at the second Campus Assembly, with plans for:

- A promotional partnership and joint presence at our two flagship events, Marine Tech Expo and Sea Tech Week®,
- A 'soft-landing' scheme set up so companies can try out the French and the UK markets, and
- Participation of Plymouth in Ocean Hackathon®.

CONTACT
JÉRÉMIE BAZIN
jeremie.bazin@tech-brest-iroise.fr

INDIAN INSTITUTE OF TECHNOLOGY GOA, INDIA

After an initiative to cooperate with the Indian Institute of Technology Goa (IIT), coordinated by the Ecole Navale, was formalised in 2018, Campus mondial de la mer stepped up its communications with Goa in order to establish the topics for cooperation between the two signatories.

Having identified these topics in the course of several fact-finding missions, early 2020 saw the parties sign a Memorandum of Understanding (MoU) involving eight Campus stakeholders.

This MoU will facilitate the first exchanges of students and researchers between the two regions.

CONTACT
MANELL ZAKHARIA
manell.zakharia@ecole-navale.fr

Our missions

We need to think about attracting, hosting and facilitating others to ensure Campus mondial de la mer has a long-term future. We are working together, drawing on the strength of the community, to welcome and retain talents. Campus mondial de la mer operates at the level needed to achieve this. »

YVES-MARIE PAULET
Member of the Board of Campus mondial de la mer, Professor and researcher at the European Institute for Marine Studies (IUEM), Vice-President of Marine Research at the Université de Bretagne Occidentale (UBO)

1. MONITORING

Definign the Campus

- Providing an observatory for the marine economy and for scientific output
- Allowing access to our open scientific archives
- Maintaining a presence on national and international bodies

Shaping future thinking

- Organising an annual forward-planning meeting
- Leading the Marine and Coastal Working Group as part of the region's higher education research conference
- Consulting micro-enterprises and SMEs to tailor measures to their needs

Providing intelligence

- On local, national and international events
- On partners' international missions
- On regional, national, European and international calls for projects in the marine sector
- On scientific publications, patents, press articles and doctoral theses

2. LEADING

Gathering regional stakeholders to focus on the future

- Supporting ALLOHa, a collaborative initiative on sustainable oceans and big data
- Assisting the structural development of the Blue Valley marine biotechnology project
- Supporting the development of the Algae Cluster
- Organising discussions on topics of interest to our stakeholders

Leading and supporting the community

- Advertising the Marine Research Infrastructures and Facilities Portal
- Arranging visits to companies and laboratories
- Hosting Ocean Hackathon® at national and international levels
- Helping the community plan the region's future maritime access
- Publishing a directory based on the expertise of the Campus' personnel
- Supporting the development of the Sea Test Base test platform

Raising our international profile

- Arranging meetings with visiting international delegations
- Delivering on existing collaboration with India and the United Kingdom
- Supporting the launch of international projects (the Ocean University Initiative, Narwhal Challenge, etc.)
- Helping SMEs to participate in European Union-funded projects

3. HOSTING

Events

- Identifying relevant national, European and international events to host in our region
- Mobilising the community to host national, European and international events (e.g. the Imber Open Science Conference 2019, European Maritime Day 2023)
- Deploying the logistical resources available to host these events

Human resources and employee integration

- Contributing to the debate about job security for researchers and engineers, particularly in the early stages of their careers
- Coordinating the young researchers' and engineers' network
- Designing a Campus welcome pack for new arrivals

4. SHARING

Major projects

- Supporting the successful 70.8 showcase for maritime research and innovation in the technical and technology sectors
- Contributing to the success of OceanoLab, widely showcasing maritime research and innovation devoted to the marine environment
- Supporting the development of the shipbuilding industries campus, Campus des Industries Navales

Training

- Running a training course on 'Environmental Issues and Blue Economy'
- Recording and detailing local, ocean-related basic training and continuous professional development
- Collectively reviewing the maritime and international dimensions of the regional training strategy
- Hosting the Campus des métiers et qualifications des industries de la mer in Brest

5. PROMOTING

- Taking the lead on social media (Twitter, LinkedIn)
- Issuing a monthly newsletter for the Campus community
- Launching a Journal for global maritime innovation networks
- Organising the Campus Assembly
- Preparing for Sea Tech Week®, a flagship event for Campus held every two years
- Maintaining a presence at key national and international maritime community events
- Establishing an international network of Campus ambassadors

“None of us knows individually what we all know collectively. »

ANTOINE DOSDAT
Director of Ifremer Brest Bretagne Centre

FOCUS ON 4 OF OUR ACTIONS

Ocean Hackathon®

Teams worked non-stop for 48 hours in response to the challenge of producing an innovative project that included a demonstrator and used the varied marine and maritime data provided.

Ocean Hackathon® is an initiative by Campus mondial de la mer which encourages sharing, the use of new digital technologies and an entrepreneurial spirit. The resultant projects enhance the value of marine and maritime data, often by repurposing it. Partner providers focus their efforts on improving data accessibility and comprehension and are involved in coaching participants throughout the event.

Since it was first launched in 2016, Ocean Hackathon® has brought together a new community around the ocean and digital environments. Originally based in Brest, it was extended in 2019 to other venues in France and beyond, with events held simultaneously in seven French locations – Brest, Champs-sur-Marne, Cherbourg, Dinan, La Rochelle, Sète and Toulon – and one in Mexico.

Ocean Hackathon® is supported by five French national bodies with an ambassadorial role – Ifremer, Shom, Office Français de la Biodiversité, Cluster Maritime Français and Cedre.

WEBSITE
ocean-hackathon.fr

CONTACT
juliette.rimetz@tech-brest-iroise.fr

© Olivier Dugornay / Ifremer

Developing

the shared use of marine research infrastructures and facilities

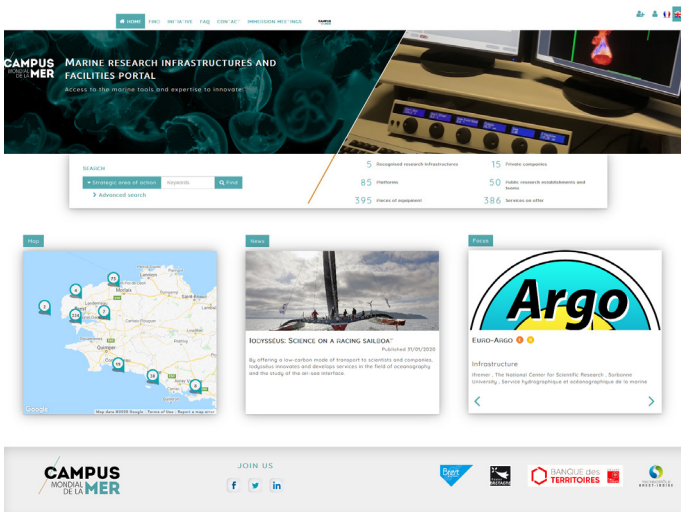
WEBSITE
www.infras-campusmer.fr

CONTACT
ALICE VANHOUTTE-BRUNIER
alice.vanhoutte@tech-brest-iroise.fr

The Campus mondial de la mer community is engaged in a radical, collaborative initiative to develop joint projects and encourage the pooling and use of its wide range of technology platforms, research infrastructures and facilities. Its remit is also to anticipate the need for new, shared equipment.

The first concrete step was for the Campus mondial de la mer to produce a bilingual French/English online portal which provides an up-to-date inventory of 400 facilities, 85 platforms and 5 national research infrastructures, covering all areas of marine science and technology: vessels and autonomous underwater vehicles, observation and experimentation systems and laboratory equipments as well as advanced databases and high-performance computers. The items in the inventory are operated by businesses and public bodies who are also available for research collaboration, research partnerships and service provision. Thus entrepreneurs, students, researchers, engineers, technicians and stakeholders in innovation can look through a range of 385 services and make direct contact with the technical advisers best able to assist them further.

This community gathers several times a year at regular "Immersion meetings", at which the platforms present the services they offer, and discuss the latest scientific progress made in a particular area and successful collaborations between research and business.



« The infrastructure and equipment portal demonstrates what Concarneau Marine Station has to offer in terms of skills and technical platforms. I really hope that this will bring lots of requests to use our equipment, and above all to collaborate. »

NADIA AMEZIANE
Head of the Concarneau Marine Station
Muséum National d'Histoire Naturelle

Sea Tech Week®

Campus mondial de la mer's international showcase

© Sébastien Durand/Brest métropole

This international marine science and technology week brings the entire Campus mondial de la mer community together in Brest every two years alongside its partners, plus existing and potential customers from around the world. Over 1,000 participants contribute to this event featuring a conference, trade fair and B2B meetings. This special event is valued for its cross-cutting, multidisciplinary approach. Sea Tech Week is intended as a collaborative event and each time it is held, it highlights a central theme and a country as Guest of Honour. The Week promotes the latest results of scientific research, R&D and innovation more broadly. It is organised by Campus mondial de la mer, with support from Brest métropole, Brittany Region, the European Union and all Campus' stakeholders. ●

WEBSITE
www.seatechweek.eu

CONTACT
juliette.rimetz@tech-brest-iroise.fr

Narwhal challenge

NARWHAL CHALLENGE
DEVELOP YOUR BLUE BUSINESS

© Franck Betermin/Brest métropole

An initiative of Le Village by CA Finistère and Campus mondial de la mer, Narwhal Challenge offers international maritime project promoters and business owners the opportunity to discover the region's expertise in marine science and technology in order to develop collaborations.

In December 2019, the challenge welcomed four startups from Germany, India, the United Kingdom and the Netherlands. Many meetings were organised for the startups with academics and businesses in Brittany, on issues ranging from underwater acoustics, developing aquaculture platforms, remediating marine pollution and the traceability of fisheries products.

CONTACT
SIGOLÈNE BRUN
sigolene.brun@levillagebyca.com

« Narwhal Challenge, what a fantastic initiative! I was proud to present our floating oil recovery unit, but also to listen to the other stakeholders and companies from Finistère to find out how we could work together. »

BERT SIBINGA
Managing Director of Foru-Solution, the Netherlands

ANY QUESTIONS OR PROJECT PROPOSALS?

Contact the Campus team,
support of our collective actions!

CONTACT
Campus mondial de la mer
Technopôle Brest-Iroise
525, Avenue Alexis de Rochon, 29280 Plouzané, France
contact@campusmer.fr
+33(0)2 98 05 44 51

www.campusmer.fr

@CampusMer Campus mondial de la mer CampusMondialMer

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