

Developing an internationally-renowned marine economy

**The Provence-Alpes-Côte d'Azur
MARINE CLUSTER**

The internationally-oriented “ **Pôle Mer PACA (Provence-Alpes-Côte d'Azur)** ” competitiveness cluster brings together **key players from the worlds of industry, research and education** working in the areas of **safety and security** and in **sustainable development**. They are united in their ambition to become a leading player in “homeland security”, to develop innovative products and services for the shipping sector and to make the region an international centre of expertise in marine sciences and related environmental risk management.



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A Marine Cluster in France encompassing two regions: Brittany and Provence-Alpes-Côte d'Azur

These two regions boast remarkable industrial potential (**700 companies**) in the marine sector and **three-quarters of this sector's research in France** is concentrated here. The extraordinary history and unique marine environment of each of these regions entail many different yet complementary issues. Brittany and Provence-Alpes-Côte d'Azur have therefore decided to join forces and form a Marine cluster with an international outlook.



Key figures for our region

- **60,000** jobs directly dependent on the sea
- **8,000** jobs at stake in the region in the next 5 years
- A cluster supported by **135** industrial companies and SME/SMIs,
- **68** research centres, schools and universities, etc.
- ... accounting for **19,500** direct jobs ...
- ... and turnover of **€3,000 million** ...
- ... more than **€200 million** invested in R&D
- **2,200** jobs in R&D and in public-sector research
- Over **2,000** technicians, engineers and doctorate students trained every year
- Around **50** joint projects applying for labelling in 2006

Head South: the factors that make the region so special

A cluster where several areas of excellence in the region converge

Information technologies, robotics and teleoperation, optics and photonics, simulation and modelling, underwater acoustics and signal processing, biotechnologies and naval maintenance: major assets for an industry that has developed an outstanding capacity to innovate by drawing on these sectors.

Critical mass of companies, research and dedicated training centres...

... offering a high concentration of marine equipment and experimental facilities

Genuine expertise based in the region

- Commercial and navy shipping: Toulon, France's **major military port** – Marseilles, **first port in France and third worldwide oil port**
 - Super-yachts and sailing: the **leading yachting area** in the world, on a par with Florida
- These sectors account for **6,600 jobs** and more than **700 establishments** (almost exclusively made up of SMEs/SMIs)

Competitive economic and geographical positioning

- An extraordinary geostrategic position at the very heart of the Mediterranean
- High concentration of leading players in the marine sector, giving it a competitive lead

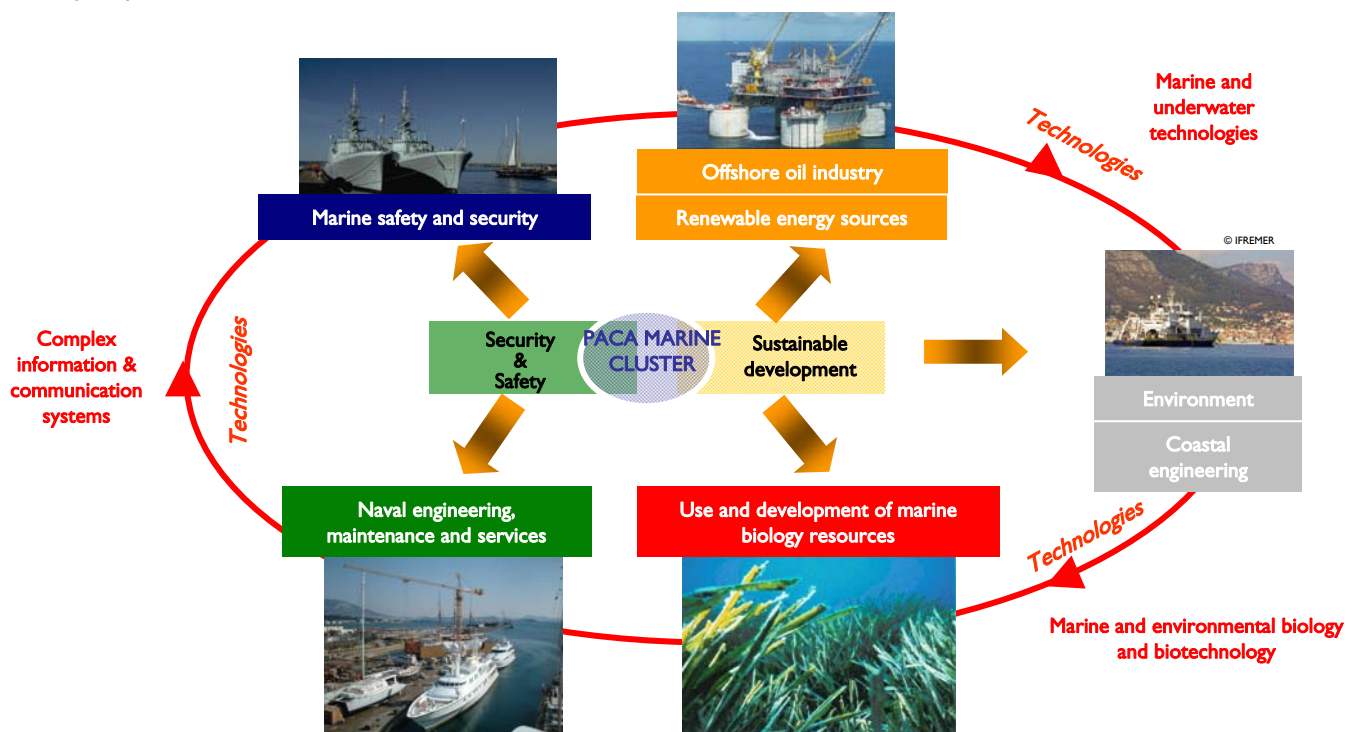
An attractive coast

The region boasts **835 km** of coast, i.e. **15%** of the French coastline, and **132 marinas** with **55,000 moorings**



All-round convergence

The **PACA Marine cluster** lies at a point where two major growth areas converge, encompassing seven sectors related to marine applications. With a view to working together on cooperative projects, it serves as a networking hub for companies, research centres and universities that develop technologies that are applicable across different sectors for an integrated marine policy.



Innovative projects within the cluster

The first projects to be labelled include:

SECMAR

(almost funded)

Subject: marine safety & security

A safety system for property, people and facilities within a sensitive maritime zone. The aim of this project is to find concrete solutions to the need to detect terrorist threats coming from the sea and targeting sensitive sites in coastal areas.

PRONOSTICS

(almost funded)

Subject: naval engineering, maintenance and services

Real-time prognosis of faults in critical vessel systems. Setting up an e-maintenance platform designed to enable the development of new prognostics technologies for naval systems maintenance. Civilian and defence markets.

GIRAC – Gestion Intégrée des Rejets d’Assainissement Côtiers / integrated coastal sewage management

(almost funded)

Subject: environment and coastal engineering

Developing methods and implementation tools for network administrators that can be used to simulate the functioning of a sewage system and its related works, as well as the physical and biological processes at work in the receiving body of water.

CAPASEATY – Cote d’Azur Provence Alpes, Safety and sEcurity Awareness Technology

Subject: marine safety & security

One of the main projects developed by the cluster. Led by DCN, it develops an observation & intervention system dedicated to extended marine safety including many risks: from accidental pollution, or prevention of illegal traffics, to prevention of terrorist attacks

RENOUVEAU

Subjects: development of marine energizing resources, renewable energy sources

Led by Veolia Eau, it aims at developing a feasibility study on the possibility to couple renewable energy sources with desalination systems on the coastline.

SEA EXPLORER

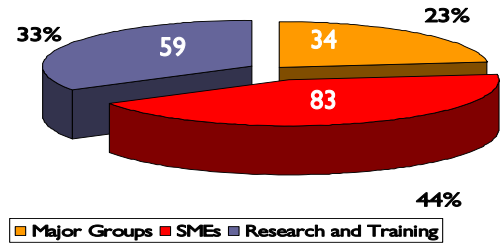
Subjects: marine safety & security, environment and coastal engineering, development of marine energizing resources, offshore engineering for the oil industry

Led by ACSA, it refers to “gliders” (unmanned machines dedicated to exploration of submarine environment). One of the various applications will be to study the impact of the Urban Community of Marseille’s waste water on its marine environment, particularly on micro-organisms



All the dynamism of a cluster

A vast network of companies, laboratories, interface and facilities companies spread across the region



- Fleet resources**
 - 1- COMEX
 - 2- IFREMER & INSU fleet and logistics base
- Facilities**
 - 1- EGIM wave flume
 - 2- IRPHE / IOA large wind tunnel and wave flume
 - 3- Luminy ocean-atmosphere interaction tank
 - 4- BGO FIRST tank basin
 - 5- CTSN Toulon
 - 6- ISITV experimentation facility
 - 7- Mediterranean test center (CEM)
 - 8- Thales Underwater test facilities
 - 9- ACRI wave and current flume
 - 10- Equipment for training to hyperbaric diving – INPP
 - 11- Endoume station

Key players involved in the cluster

135 companies that are leaders in their markets and at the cutting-edge of marine technologies

A/ ACRI, ACSA, ACTIS INGENIERIE, ADHOC VISION, AGIR, ALGART SARL, ALTIOR, ANALYTIKA, APSIS, AQUALOG, AQUA LUNG, ARPEGE DEFENSE, ARTWARE, ASSYSTEM FACILITIES, ATOS ORIGIN **B/** 2 BE FINANCES, BERTIN TECHNOLOGIES, BMTI **C/** CAMPENON BERNARD, CANNES AQUACULTURE, CATALYSE, CEGELEC SUD-EST – AGENCE TOULON, CESIC/MSC, CESIGMA, CHRISAR SOFTWARE TECHNOLOGIES, CHROMALU, CIEL SNEFF, CIRCE INGENIERIE, CISIA INGENIERIE, CLEARSY, CMR, CNIM, COMEX, CREOCEAN, CS, CYBERNETIX, CYRLINK **D/** DCN ASM, DCN LE MOURILLON (CMS INGENIERIE), DCN SERVICES TOULON, D2M, DEFENSE CONSEIL INTERNATIONAL, DEGREANE HORIZON, DGA/SMA/AIA, DIGINEXT, DIGISYS, DORIS ENGINEERING ING PETROLIERE, DYNASUB **E/** EADS SPACE TRANSPORTATION, EASYDIS, ECA, ECT INDUSTRIES, EIFFEL, ELG (SNC), EMC3, EPCOTS, ERAMM, ERG HOLDING, EURILOGIC, EURODOC **F/** FRANCE TELECOM MARINE, FOSELEV MARINE **G/** GENESIS, GENIMAR, GEOCEAN, GFI INFORMATIQUE, GIE SAFIR, GLOBOCEAN, GREEN CAP, GTM CONSTRUCTION **H/** HELION, HIGH TECH INFORMATIQUE, HYPNOW **I/** ILIOS TECHNOLOGIES, INSILIO, IRTS, IXSEA, IXWAVES, IXCORE **L/** LAPP MULLER, LOUIS DREYFUS ARMATEURS, LOUIS SOUFFLOT CONSEIL **M/** MAURIC BUREAU D'ETUDES, METTLE, MICRO BE, MOTEURS BAUDOUIIN **N/** NAVY CLEAN, NKE, NYMPHEA WATER **O/** OCEANIDE, OPTIS, ORTEC, OSEAN **P/** PORT AUTONOME DE MARSEILLE, PREDICT, PRINCIPIA RD, PROLEXIA, PROSSI, PYROALLIANCE **S/** SEGULA TECHNOLOGIES, SEMANTIC TS, SHERPA ENGINEERING AGENCE PACA, SIEMENS, SII – STE INFORMATIQUE INDUSTRIELLE, SMAC, SOACSY, SOCIETE PONS, SOFRELOG, SOFRESUD, SONOVISION ITEP, SOPRA GROUP, SQUADRON SCER, STELLA MAR SUBCOMPRESSEUR, SUBSEA TECH, STERIA, SYNAPSE DEVELOPPEMENT, SYS TECHNOLOGIES, SYSTEMIQUE **T/** TECHNICALTOME, TECHPLUS, TELINDUS MEDITERRANEE, TERRA NOVA INGENIERIE, TETHYS SAS, THALES COMPUTER SA, THALES SAFARE, THALES SERVICES, THALES UNDERWATER SYSTEMS, TIS SOMELEC, TOPLINK, TRININFOR IES **V/** VALCOBIO, VEOLIA ENVIRONNEMENT, VIBRIA

59 research and training bodies, including...

- BRGM** – Bureau des Recherches Géologiques et Minières
- CNRS** – Centre National de la Recherche Scientifique
- COM** – Centre Océanologique de Marseille
- CETE** – Centre d'Études Techniques et d'Équipement
- Ecole Centrale Marseille**
- ENSAM** – École Nationale Supérieure des Arts et Métiers
- IFP** – Institut Français du Pétrole
- IFREMER** – Institut Français de Recherche pour l'Exploitation de la Mer
- INRIA** – Institut National de la Recherche en Informatique et en Automatique
- IRD** – Institut de Recherche pour le Développement
- ISEN** – Institut Supérieur de l'Électronique et du Numérique, **ISITV** – Institut des Sciences de l'Ingénieur de Toulon et du Var and **SUPMECA**
- OOV** – Observatoire Océanographique de Villefranche
- UNIVERSITIES** : **Université Aix-Marseille 1, 2, 3 / USTV** – Université Sud Toulon Var / **UNSA** – Université de Nice Sophia Antipolis



... all specialising in the **key technologies** encompassed within the cluster:

- Electromagnetics and acoustics
- Software Engineering
- On-board electronics
- Underwater technologies
- Signal processing
- Materials
- Biotechnologies
- Robotics and automation



France's challenge, international events

In the world

- ➔ **OI** – Oceanology International

London

In the Provence-Alpes-Côte d'Azur region

- **Euronaval**, International naval defence exhibition
- **SCADA** – Subsea Control And Data Acquisition
- **MED Coast**
- **Press Open**
- **Innovation Meeting**
- ...

Toulon/Paris
Toulon
Hyères
Toulon
Marseilles



A strong growth environment

■ Trade associations, including:

- **RYN** – Riviera Yachting Network, a network of companies in the yachting and marine technologies sectors and related industries
- **SIAM** – Synergie Interprofessionnelle des Activités Maritimes – a network promoting synergy within the marine industry
- **EA ENVIRONNEMENT**

■ Real networking with the other competitiveness clusters in the region

- **“Capenergies”** – Non greenhouse-gas-generating energies – from research through to production and consumption management
- **Risk management and land vulnerability** – natural, industrial, technological and urban risk management in national territories
- **Optics and optoelectronics** – complex optical and imaging systems (POPsud)
- **SCS (Secured Communicating Solutions)** – encouraging innovation and competitiveness in the fields of microelectronics, telecommunications, software and multimedia

Contact

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