ISEMAR
INSTITUT SUPÉRIEUR D'ÉCONOMIE MARITIME
NANTES - SAINT NAZAIRE

"French ports & yards analytic overview"

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Summary

FIRST PART: PORTS

1. Port organisation

- **National ports**

France has about sixty ports but only eleven are owned by the State.
France has transformed its port organisation with two reforms in 2004 and 2008. They clarified the "national port order" (states/territories) and transferred handling to private companies.
Since 2008, there are eight state-owned ports and the port authorities are called Grand Port Maritime (GPM).

- GPM of Dunkerque (region Hauts-de-France)
- GPM of Havre (region Normandy)
- GPM of Rouen (region Normandy)
- GPM of Nantes Saint-Nazaire (region Pays de la Loire)
- GPM of La Rochelle (region Nouvelle-Aquitaine)
- GPM of Bordeaux (region Nouvelle-Aquitaine)
- GPM of Marseille (region Provence-Alpes-Côte d'Azur)

In 2021, the GPM of Le Havre, Rouen and the river port of Paris will form a single port: Haropa.

- **Overseas ports**

France has eleven territories outside Europe, in North America (Saint-Pierre & Miquelon), aux West Indies (Martinique, Guadeloupe, Saint-Barthelemy, Saint-Martin), South America (French Guiana), South West Indian Ocean (Réunion, Mayotte), Pacific Ocean (New Caledonia, Wallis & Futuna, French Polynesia).
Four ports are port state status (GPM): Martinique, Guadeloupe, Guiana, Réunion.
The other are under the local territory supervision.

- **Governance**

The State appoints the director of the GPM. It is represented by the Ministry of Transport and the Ministry of Finance on the Supervisory Board. In practice, the state management is weak, leaving a lot of autonomy to the GPM.

The supervisory board validates the decisions of the management board (director and two other managers). The French State, the territorial authorities, the Chamber of Commerce and Industry and the port unions are represented.
The Development Council gives opinions with representation from local authorities, companies, trade unions and NGOs.
The Audit Committee is consulted on the port's investments.

A strategic plan has to be drafted every five years to programme the development with the agreement of the State and the opinion of the communities and economic actors.

- **Ports of territory**

In 2004, the French State transferred 17 ports to territorial authorities.
There are four levels of territories in France that can be a supervisory authority: region, department, agglomeration, commune.
The law has allowed French territorial authorities to choose whether they wish to become a supervisory authority.

There are different territories levels of port guardianship:

Region:

- Region Hauts-de-France: Calais, Boulogne
- Region Normandy: (with departments and cities): Dieppe, Caen, Cherbourg
- Region Brittany: Saint-Malo, Saint-Brieuc, Roscoff, Brest, Lorient
- Région Nouvelle-Aquitaine: Bayonne
- Région Occitanie : Port La Nouvelle, Sète
- Région Corse: Ajaccio, Bastia

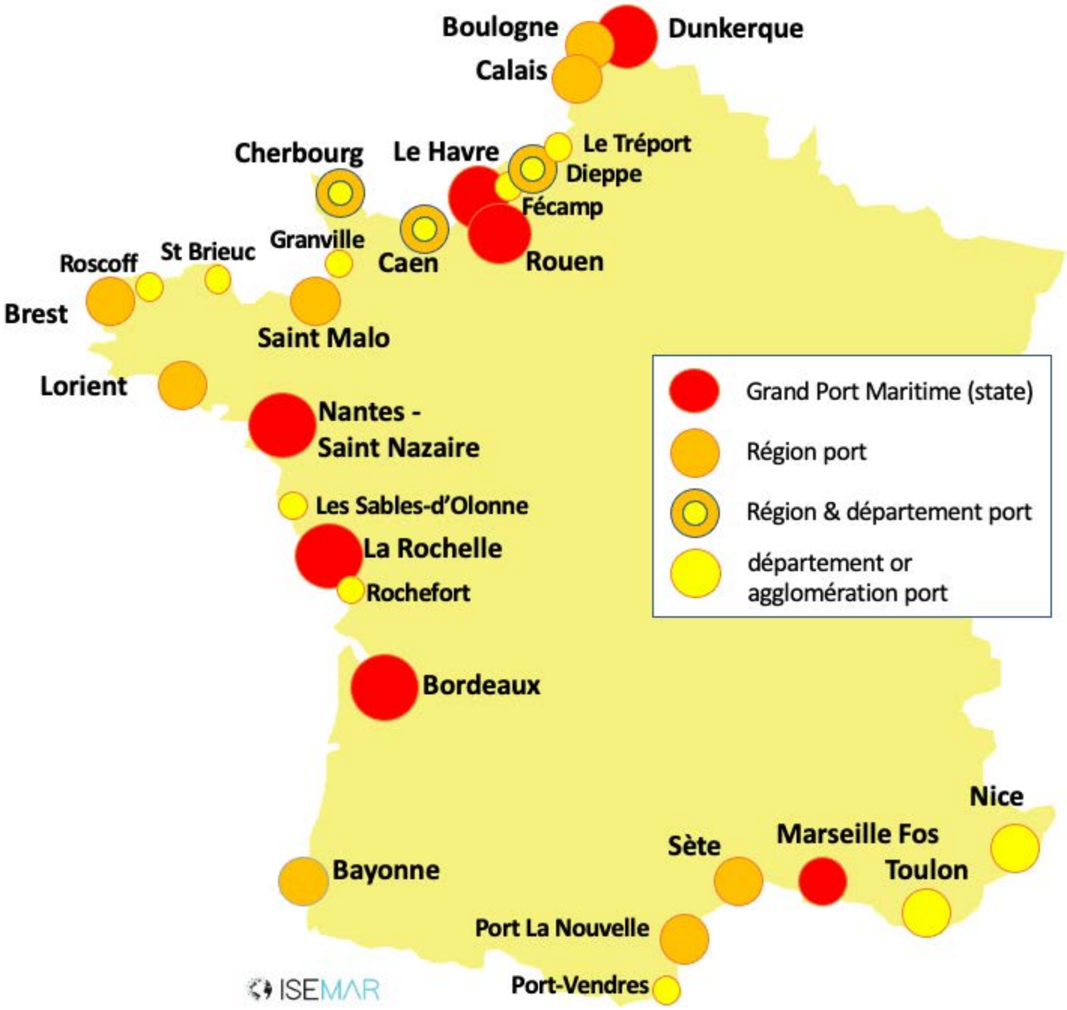
Départment:

- Seine-Maritime: Fécamp
- Vendée: Les Sables-d’Olonne
- Charente-Maritime: Rochefort
- Pyrénées-Orientales: Port-Vendres
- Alpes-Maritimes: Nice

Agglomeration:

- Toulon

Status of French ports



- **Social situation**

France is marked by often difficult social relations in the ports. Strikes are linked to internal social relations in the ports (companies, port authorities) but also to national social conflicts (eg. Retirement). This leads to a lack of confidence of the shippers in the French ports and benefits the Belgian and Dutch ports.

- **Port management**

For the state ports the situation is clear with the respective role of the state supervisory authority, the GPM and the handling companies.

The role of port authority is not clarified for ports in the territories.
Organised port authorities exist in few cases (Port of Sète, Ports of the Normandy region by Ports Normands Associés). Elsewhere, there are no port authorities, but management by the territorial administration.

When the small French ports were under state control (until 2004), they were managed by the local CCIs. Since their transfer to the local authorities, the concessions are regularly coming to an end, some ports have remained under the management of the CCI, others have been assigned to new entities (private, public, public/private).

Management of territories ports

Société d'Exploitation des Ports du Détroit (CCI et publics)	Calais et Boulogne
Régie Dieppoise des Activités portuaires (public)	Dieppe
Edeis (private)	Saint-Malo
Region Occitanie, Banque des Territoires, group of shareholders « Nou Vela » (DEME, Euroports Group BV, Qair, EPICo Fund, CCI de l'Aude)	Port La Nouvelle
Call for tender	Cherbourg
Société portuaire Brest Bretagne : Région Bretagne (51%), CCI (39%), agglomération de Brest (10%).	Brest
Local Chamber of Commerce and Industry	Caen, Lorient, Les Sables-d'Olonne, Rochefort, Bayonne, Port-Vendres, Toulon, Nice, Ajaccio, Bastia

- **Market acces**

As all ports are within the competence of public administrations, the "Public Procurement Code" applies with calls for tender (studies, supplies, works).
The management structures linked to the territories and the CCI are also concerned.
Since January 2021, the threshold of non-competition concerns contracts of less than €40,000 excluding tax.
There is also a threshold of €100,000 excluding tax for contracts for innovative works, supplies or services.
Naturally, France applies the European rules on thresholds and access to public contracts.

2. Port business

- **General overview**

France has some sixty ports on three maritime fronts in Europe and in the overseas territories.
The total traffic for the mainland is 295 Mt in 2020 (-22%) and 4.392 M teu (-20%).
In 2018 France produced 382 Mt and 3.5 M teu. The comparison with Italy (491 Mt, 10.6 M teu) and Spain (563 Mt, 17.2 M teu) is unfavourable. One reason for this is the very low level of container transhipment activity. According to one estimate, the port represents €15 billion in added value, 180,000 direct jobs and 170 indirect jobs.

From very long time, French government and French port industry are questioning the "traffic diversion" by Belgian and Dutch ports. The reasons are economic and social. France wants to limit this. A recent report of the French Senate says that this represents 700 to 1 M teu which represents 30 to 70 000 jobs.

In terms of port traffic, France has its own port hierarchy:

- Three major ports (Dunkirk, Le Havre & Rouen, Marseille)
- Two intermediate ports (Calais, Nantes Saint-Nazaire)
- Two small ports (La Rochelle, Bordeaux)
- A dozen minor ports (ports of territories).

French port traffic was affected by a strike during the winter of 2019-2020 and, like other European ports, by the crisis in the covid. The traffics are for 2020.

- **GPM of Dunkerque**

The northernmost port of France is organized around industrial activities (steelworks, aluminium smelters) as well as roro freight for England & Ireland and small container activity (CMA CGM terminal). For some years now it has been one of the three LNG French entrances.

Total traffic	45,2 Mt (-14%)
Other Liquid bulk	4,2 Mt (-18%)
LNG	3,5 Mt (-20%)
Dry bulk	18,2 Mt (-22%
Containers	0,463 M units (2%)
Roro	0,607 M units (4%)
Pax roro	1,077 M pax (-54%)

- **Calais**

Europe's most important ro-ro port suffered a crisis in 2020. The new extra-large roro port will be commissioned in May 2021. In 2020, the port handled 1.662 M roro units (-8%) and 3.269 M Pax (-61%).

- **Haropa Port**

In June 2021, the GPM of Le Havre (on the English Channel), Rouen (on the Seine) and the river port of Paris will merge under a single port authority.
The port of Le Havre concentrates the container activity and the crude oil entries (for two refineries). It is the most important French container port with three terminals (CMA CGM, MSC, Perrigault,).
The logistics parks are based on several nearby areas, that are developing regularly, the main one being the “Pont de Normandie Park”.
This is the largest port for new cars in France. There is a small ferry activity for England (Brittany Ferries).
Siemens Gamesa is building a factory to manufacture blades and turbines for wind energy. Bouygues is building the gravity foundations for the wind turbines.
Rouen is the largest grain port in Western Europe and still has a strong wood and paper industry.

Total traffic	74,93 Mt (-16,7%)
Crude Oil	7,7 Mt (-40,6%)
Other Liquid bulk	28,6 Mt (-20%)
Grains	18,2 Mt (-22%
Containers	2,417 M TEU (-20%)
New cars	0,260 units (-16%)

- **Port of Normandy**

The Normandy region has three ports, the main activities of which are roro with the UK and Ireland. Only Caen has an activity linked to agriculture (cereal exports 0.369 Mt, fertiliser imports 0.1 Mt) and wood.

	Dieppe	Caen.	Cherbourg
Total traffic	1,47 Mt (-15%)	2,97 Mt (-4,8%)	1,3 Mt (-23%)
Roro	0,035 M FU (-5%)	0,096 M FU (-1,3%)	0,161 M FU (-8%)
Pax roro	0,133 M pax (-64%)	0,298 M pax (-66%)	0,042 M pax (-82%)

- **Port of Brittany**

Western Brittany, the port of Roscoff is only dedicated to traffic to England and Ireland. The port of Saint-Malo also has passenger traffic to the UK and several other activities (wood, fertilizer).
In addition of refined products entrance, the ports of Lorient (2.546 Mt) and Brest (2.550 Mt) are positioned for agricultural products (animal feed imports, meat exports).
The port of Brest is developing a new area (the “Polder”) for offshore wind energy activities (Marine Renewable Energy, MRE).

	Saint Malo	Brest	Lorient
Total traffic	0,762 Mt (-41%)	2,550 Mt (-3%)	2,546 Mt (-3,3%)
Liquid Bulk	0,414 Mt	nd	0,881 Mt
Dry Bulk	nd	0,774 Mt (3%)	1,602 Mt (-4,3%)
General Cargo	0,09 Mt (-75%)	0,342 Mt (-10%)	0,062 Mt (3%)
TEU	-	36 261 (-13%)	-

- **GPM of Nantes Saint-Nazaire**

PNSN is an estuary port on the Loire River with an upstream site at Nantes (10%) and sites at the mouths of Donges, Montoir and Saint-Nazaire (90%).
The port has a strong energy activity with the Total refinery and Engie LNG terminal.
Coal traffic is reduced with the closure of the Nantes thermal power plant.
The agricultural port exports cereals and imports animal feed and fertilizer.
The small container activity (CMA CGM & Kuhn Group terminal) is regional in scope.
It is one of the most important traffics of new cars with short sea lines (Spain, Morocco).
The port has a GE wind turbines nacelles factory and is developing a dedicated terminal in Saint-Nazaire for the nearby wind farms.

Total trafic	28 Mt (-8,8%)
Crude oil	5,9 Mt (-24%)
Oil products	4,6 Mt (-22%)
Coal	0,2 Mt (0%)
Animal feed	2,1 Mt (+11%)
Cereals	0,8 Mt (+21%)
Roro	0,4 Mt (-29%)
Containers	0,153 M TEU (-10%)

- **GPM of La Rochelle**

The port of La Rochelle is directly on the Atlantic seaboard. The main traffics are agribusiness (exported cereals; fertilizers and imported animal feed) and forestry products (wood and paper) traffic.
It is the most dynamic French ports from many years, particular to its growing storage capacity and its quick maritime acces.

Total trafic	8,925 Mt (-8,8%)
Oil products	2,8 Mt (-5,4%)
Cereals	3,7 Mt (-10%)
Forest products	0,510 Mt (-20,9%)
Others agribulk	0,833 Mt (-4,1)

- **GPM of Bordeaux**

The port of Bordeaux is an estuary port on the Gironde with several sites around refined products and agricultural products activities similar to other French ports. Container traffic is limited with one CMA CGM service.

Total trafic	6,05 Mt (-11,2%)
Oil products	3,2 (-10,5%)
Cereals	0,608 Mt (6,5%)
Forest products	0,510 Mt (-20,9%)
Others agribulk	0,197 Mt
Containers	0,022 M TEU (-16%)

- **Bayonne**

The port is specialised in agricultural export activities with a fertilizer factory (Rougier) and in imports of scrap metal for the Celsa plant completed by the Laminoir des Landes. In 2020, traffic was 2.27 Mt (-0.8%).

- **Port of Occitanie**

The Occitanie region has three ports, two of which are under the supervision of the regional authority. The port of Port-Vendres is specialised in fruit imports (0.218 Mt in 2020). The port of Port La Nouvelle is a small agricultural port with entries of oil products. The port should be the subject of a development programme, particularly for the MRE sector.
The port of Sète is a small generalist port with diversified activities, particularly agricultural (grain, animal feed) and ro-ro (passengers, trucks, new vehicles). This activity is supported by a ferry line with Morocco (GNV) and a roro line with Turkey (DFDS).

Port of Sète		Port of Port La Nouvelle	
Total trafic	4,2 Mt	Total trafic	1,483 Mt
Liquid bulk	2,9 Mt	Liquid bulk	0,184 Mt
Dry bulk	1,3 Mt	Dry bulk	1 Mt
New cars	75 000 units	Others	0,269 Mt
Roro freight	80 000 units		

- **GPM of Marseille**

The port of Marseille, before the Haropa merger, is the largest French port. It is based on two distinct sites. The urban port of Marseille with cruise, ro-ro and ferry activities.
The port of Fos with oil, industrial, container and new vehicle terminals. The ferry and ro-pax lines concern Corsica and North Africa (Morocco, Algeria, Tunisia).
It is a major energy port even if the territory has recently lost two of the four refineries. It is the main French entry for LNG (two terminals) and LPG. The industrial activity is based on two steel plants (Ascometal, Arcelor Mittal) and two refineries (Esso, Ineos).
There are two container terminal, one CMA CGM and one MSC / Maersk. Nearby, the largest French logistics port area is Fos Distriport. A second phase of development is starting. Another zone, La Feuillanne is with Ikea warehouse.

Total trafic	69 Mt (-12,7%)
Crude oil	18,7 Mt
Oil products	11,3 Mt
LNG	4,2 Mt
GPL	1,9 Mt
Dry bulk	9,9 (-22%)
Containers	1,310 M TEU (-10%)
New Cars	0,208 M units (0%)
Roro	0,187 M units (-11%)
Pax roro	0,742 (-76%)

- **Ports of Provence**

The port of Toulon is a small port dedicated to cruise and ferry traffic with Corsica Ferries. The roro activity with Turkey has stopped in 2019. The port is positioning itself with a French automotive logistics group (CGA) on Algeria. A new line is being tested Toulon - Algeria - Cartagena (Spain). A project for cruises is evoked, but not decided.
The port of Nice has a small activity with small liners and ferries to Corsica (Corsica Ferries). Cement traffic to Corsica will be affected by the closure of the local cement factory.

French ports traffics (2018)

- **Ports of overseas**

France has eleven overseas territories. The territories are relatively populated and their level of development is high (more than in the British and Dutch dependencies). Integration into the French economy is total (eurozone, salaries, social aid).
The traffic of the overseas territories represents 14 Mt and 700,000 TEU.
The vast majority of maritime traffic is with Metropolitan France, which leads to oceanic traffic of containers, vehicles, construction products and cereals. Only fuels are regional.
Export traffic is low. The only exception is bananas from Martinique and Guadeloupe.
Regional transhipment is present in the ports of the Antilles and Reunion.
West indies territories are positioned for cruise but the level is low compared of others islands (eurozone, attractivity réduite). The majority of embarkement passengers come from France.

Main traffics (tons 2020, pax 2019)

	Total traffic	Dry bulk	Liquid bulk	General cargo	TEU	TEU transhipment	Cruise pax
Martinique	2 699 297	336 507	877 203	1 485 587	164 495	15 523	394 608
Guadeloupe	3 510 822	771 342	624 771	2 030 106	220 233	46 973	317 000
Guiana	838 325	79 338	265 618	482 040	63 480	-	-
Réunion	5 343 896	1 157 271	796 357	3 457 258	180 183	99 833	118 371

3. Port investments

- **Port of Calais**

The new port of Calais (€875m) will be commissioned in October 2021 with 13-hectare intermodal terminal for 600 trailers and two buildings for the reception of passengers.

- **GPM of Dunkerque**

The GPM communicates about small development projects. In particular, the project to develop a railway area included in the French government's economic recovery plan.
The GPM has launched a large project called “CAP 2020” to extend the container terminal site by 2 000 m in two phases (€600m).
The project is currently in the study phase before a construction permit is submitted in 2021.
The port area is to receive a unit of the Chinese group Envision, specialists in electric batteries.

- **GPM of Havre**

The container area "Port 2000" will be provided with a river access to the rest of the port's basins and the Seine system (€125m).
The construction of the Siemens Gamesa wind turbine factory (€120m) on 36 hectares in the old docks.
In the framework of the Haropa merger, the French government has announced a major investment plan of €1.45 billion for the period 2020 - 2027 for three ports without details to date.

- **Port of Saint-Malo**

The port of Saint-Malo is planning a new "maritime station" for ferries (UK, Channel Islands).

- **Port of Brest**

The regional port is building a new 40 ha area by stabilising an existing polder and creating a new one (€220 million). This vast programme of works began in 2017 and is due to be completed in 2022.
A first company has set up on the first polder, Navantia-Windar (Spain) for the construction of foundations for marine wind turbines.

- **GPM of Nantes Saint-Nazaire**

The port of the Loire estuary does not have any major projects. It is completing the development of a large area in the Saint-Nazaire part of the port to create a "logistics hub" for MREs: shipping of nacelles, pre-assembly for nearby fields.
The development of a new logistics zone in Montoir area is a small project, but other spaces will have to follow.

- **GPM of La Rochelle**

The strategic document "Port Horizon 2025" mentions new quays on the two port sites Chef de Baie n°4 (250 m) and Anse Saint Marc n°3 (250 m). The port has a developable reserve of 35 ha, which it can begin to plan for development (La Repentie), partly filled in by the channel excavation work.
The 14.5 m draught allows the port to accommodate large bulk ships (panamax, newpanamax) and the port will carry out dredging work (rocks, sand).
The port also wants to have its own logistics area for wind turbines.

- **Port of Port La Nouvelle**

The project (€234M) concerns the construction of a new infrastructure with the capacity to receive larger ships, to increase handling and storage areas. It will therefore be able to accommodate larger ships (70 to 80,000 dwt).
The future port will integrate a 70ha terminal area and an 80ha industrial area with a railway connection. Work began at the end of 2019, with the first works expected to be delivered in 2021.

- **Port of Sète**

The 2020-2025 strategic project mentions the development of intermodal transport with the construction of a new railway platform and the expansion of the logistics areas by 10 hectares.

- **GPM of Marseille**

The port authority communicated at the beginning of 2021 on a planning of development projects (342 M €) until 2024. This corresponds to rail projects in the eastern basins of Marseille (containers terminals, roro terminals) and a port service area in Fos of 28 ha.

- **Port of Toulon**

A project is underway to provide the eastern part of the harbour with a new quay for large cruise ships.

- **Overseas ports**

GPM of Martinique and Guadeloupe are developing their storage containers capacity and for call of large ships (6,900 TEU boxship for Martinique, 10,000 TEU boxship for Guadeloupe. The GPM of Reunion must also increase its capacity. New cranes and reefer plugs are on the agenda of the Guiana MPA.

- **Synthesis of major port developement**

GPM of Dunkerque	New area (quay, ground)	Last studies
GPM of Havre	Wind energy factory	Project launch
Port of Brest	New area (ground)	Work in progress
GPM of La Rochelle	New area (ground)	Planification
Port of Port La Nouvelle	New area (quay, ground)	Project launch
GPM of Marseille	Railway station for lorry	Planification
Port of Toulon	Warf for cruise	Debate

4. Development of marine wind energy

- **Offshore wind farms**

The French government's target is to have 2.4 GW of installed capacity by 2023 and between 4.7 GW and 5.2 GW by 2028.
Six offshore wind farm projects have already been approved following calls for tender in 2011 and 2013, with a total capacity of 3,000 MW. The seventh wind farm is in consultation process.

- Fécamp (498 MW, 2023) by Eolien Maritime France (leader EDF)
- Courseulles-sur-Mer (448 MW, 2024) by Eolien Maritime France (leader EDF)
- Saint-Nazaire (480 MW, 2022) by Eolien Maritime France (leader EDF)
- Saint-Brieuc (498 MW, 2023) by Ailes Marines (leader Iberdrola)
- Le Treport (496 MW, 2023) by Eoliennes en mer Dieppe Le Tréport (leader Engis)
- Deux îles (496 MW, 2022) by Éoliennes en Mer Iles d'Yeu et de Noirmoutier (leader Engie)

The project of Dunkirk (600 MW, 2027) by Éoliennes en Mer de Dunkerque (leader Engie) in public consultation stage.
The last project in north Cotentin Peninsula is in tendering phase.

In addition, for pilot farm field for floating wind turbines have been decided

- South Brittany: one by Eolfi (Shell group)
- Occitanie: two by EolMed (leader Quadran) and by Éoliennes flottantes du golfe du Lion (leader Engie).
- Provence: one by Provence Grand Large (leader EDF)

- **Factories inside port**

Some ports have seen or will see the establishment of production units about wind turbine.

- Saint-Nazaire, unit for nacelles by GE
- Saint-Nazaire, unit fort electrical substations by CdA.
- Cherbourg, unit for blades by GE
- Le Havre, under construction (nacelles & blades by Siemens Gamesa)

- **Foundations building or logistic zone dedicate**

- Le Havre, contacting gravity foundations by Bouygues.
- Cherbourg, contracting for monopiles / Sodranord Van Oord (NL).
- Brest, under construction for jackets / Navantia Windar (Spain).

- **Dedicate terminal for wind farm**

Most ports provide dedicated MRE terminals, for offshore installation logistics or for import/export activities.

- GPM of Dunkirk (stand-by)
- GPM of Le Havre (works)
- Port of Cherbourg (active)
- Port of Brest (works)
- GPM of Nantes St-Nazaire (activ)
- GPM of La Rochelle (potentiality)
- Port of Port La Nouvelle (works)
- GPM of Marseille - Fos (potentiality)

5. National policy for ports

- **National recovery plan**

In the context of the crisis of covid, the French State has an economic recovery programme with a port component under the title "green initiatives for ports".
The "recovery plan" provides for €175 million in credits in 2021 and 2022. These will be investments in favour of the ecological transition of French ports, co-financed with the ports, local authorities and the European Union.

Among the projects that will benefit from these credits, the following have already been identified (mentioned here in Metropolitan France)

- The construction of wind turbine blade and nacelle manufacturing plants in the port of Le Havre by 2022.
- The installation of electric charging stations at the quayside for sea and river cruise ships on the quays of the HAROPA port complex from 2020, for passenger ships and container ships on the quays of the port of Marseille by the end of 2022.
- Improved rail access to the ports of Dunkirk and Marseille from 2020.

In November 2020, the State announced sums per port (France Mainland): Dunkirk €33M, Le Havre €44.6M, Rouen €20.1M, Nantes Saint-Nazaire €10.5M, La Rochelle €4.2M, Bordeaux €8.1 M €, Marseille 28 M €.

- **Port national strategy**

French ports are the subject of numerous studies by National Assembly, Senate, General Council for environment and sustainable development (CGEDD) and the Court of Auditors. The last are from Senate (2020) et CGEDD (2018).

For the CGEDD there is a need for:

- a port strategy (all ports) and for the State ports (GPM) to guide the national development in all fields (infrastructures, NGL, MRE, environment, smart port).
- a port cost observatory to guide the competitiveness of ports
- more proactive ports under the term "port entrepreneur" to create more economic value.
- more attractive and easy arrangements for the supply of port space to private investment financial evolution of GPM to respond quickly to market realities
- measures to progressively reduce the "employee costs".
- make more room for the private sector in the supervisory boards of the GPM.
- transform the GPM into port companies with public capital (State, territories).

For the Senate's dedicated mission, the vision is one of more economic perspectives:

- The diversions of traffic are still without a strategic response from the State.
- The first response is to improve land access to the hinterland of French ports.
- The necessity of long time planification and finance for GPM by State.
- Beyond that, it is necessary to prepare the change in the economic model of the GPM to prepare for the post-oil resource time.
- The role of the territories and the private sector must be strengthened in the governance of ports.
- The GPM must be more reliable from an economic (deal with private) and social (no strike) point of view.
- The GPM must take up the contemporary challenges of energy, the environment and new technologies.

The new national port strategy adopted by the Interministerial Committee for the Sea on 22 January 2021 announce a clear objective of regaining market share and economic development of ports by 2025-2050:

- Market shares reconquest: Increase from 60% to 80% the share of containerized freight to/from France that is handled in French ports by 2050 and also win European flows.
- Employment: Double the number of direct and induced jobs in port (services, handling, industries) by 2050
- Intermodality: Increase the share of rail and river port traffic by 30% in major French ports by 2030.
- Environment: Contribute to the achievement of the objectives of carbon neutrality of transport by 2050.
- Smart port: Accelerate the fluidity of port transit, notably through the total dematerialisation of declarative formalities linked to the passage of ships and goods in ports by 2025.

This reconquest of traffic will mainly involve the three main maritime entry points: Haropa (Le Havre, Rouen, Paris), Marseille and Dunkirk.

6. Port enterprises overview

- **Cargo handling**

In 2008, French port handling activities were transferred by law to the private sector. The terminals of the GPM are owned by specialised companies. In small ports, the handling niches are often owned by the concessionaire.

Container terminals

- CMA CGM

The French shipping group is active in container handling in French ports via Terminal Link (partnership with China Merchants Ports) or CMA Ports (fully owned).

- o Terminal des Flandres of Dunkerque (Terminal Link):
- o Terminal de France, Terminal de l'Atlantique of Le Havre (Port Synergy: Terminal Link + DPW)
- o Terminal Grand Ouest (TGO) of Nantes Saint-Nazaire (Terminal Link + Groupe Kuhn)
- o Eurofos of Fos (Port Synergy: Terminal Link + DPW)
- o Med Euro Terminal and TRS (roro) of Marseille (CMA Ports).

- MSC et Maersk are associated in port of Fos (Seayard).

- Groupe Perrigault

The Le Havre-based company manages two terminals at Port 2000, the non-dedicated Normandy Terminal and the MSC terminal in partnership with TIL.

Breakbulk & drybulk terminals

- Groupe Maritime Kuhn

It is a family-owned group from Brest (Brittany) with a presence in Lorient, Nantes Saint-Nazaire and La Rochelle in general cargo. In 2019, Kuhn bought the French activities of Bolloré Ports with handling activities in Dunkirk, Rouen, Les Sables-d'Olonne, Rochefort and Sète. It is also the new co-shareholder of TGO in Nantes Saint-Nazaire.

- Sea Invest

The Belgian group Sea Invest is present in France in the dry bulk and general cargo sector in Dunkirk (Sea Bulk), Calais, Rouen, Nantes Saint-Nazaire, Bayonne, Bordeaux, Sète (Sotramab) and Marseille Fos (Carfos).

- Sogena

Originally from Caen, Sogena is present with Barra in Dunkirk (steel, roro for DFDS), SHGT in Le Havre (coal, sugar, clinker, cars), Dockseine in Rouen (dry bulk, general cargo), Sogemar in Caen (general cargo)

Les produits en vrac de l'agroalimentaire sont souvent gérés par des groupes de négoce de céréales, en partie par des entreprises privées, en partie par des coopératives agricoles (Invivo, Terrena, etc.).

Roro terminals

- Ferry market: Corsica Linea and Méridionale in Marseille, DFDS in Dunkirk, Brittany Ferries in Le Havre.
- New cars market: logistics groups (CGA, Gefco, CAT) have storage space. But vehicles are handled by dedicate companies (Manucar, Nicolas Frère, Somaloir).

Liquid bulk terminals

Crude oil terminal:

- CIM – CCMP (France): Le Havre Antifer
- GPM of Nantes Saint-Nazaire: Donges
- Fluxel (Ineos, SPSE, CFT, GPM of Marseille): Lavera

Tanking

- Socatra (France): Saint-Brieuc, Brest, La Rochelle, Saint-Nazaire.
- Alkion (Netherlands): Le Havre, Nantes, Marseille
- CIM (France): Le Havre
- Rubis (France): Dunkerque, Rouen, Brest
- Picoty (France): La Rochelle, St Nazaire, Lorient, Caen Brest, Rouen, Bordeaux
- Sea Tank / Sea Invest (Belgique): Bordeaux, Rouen.
- Total (France): Bordeaux, Bayonne, Brest, Caen, St Nazaire, Le Havre, Rouen, La Rochelle, Lorient, Port La Nouvelle.
- BP (GB): Sète

LNG terminals

- Elendy / Engie (France): Saint-Nazaire, Fos (2 sites)
- Fluxys (Belgique): Dunkerque

- **Port Services**

Pilotage is managed by pilot cooperatives present in each port.
Mooring is either managed by local private companies or by the port authorities.
Towing is managed by three private groups in France:

- Boluda (Spain): Dunkerque, Le Havre, Brest, Nantes Saint-Nazaire, La Rochelle, Fos.
- Compagnie Maritime Chambon (France): Calais, Boulogne, Cherbourg, Sète, Marseille, Monaco.
- Thomas Services Maritimes (France): Rouen, Dieppe, Bordeaux.

- **Dredging**

The economic interest grouping (EIG) Dragages-Ports was created in 1979. The members are the State (Ministry of Transport), the seven GPM (France Mainland) and the Hauts-de-France Region. Its purpose is to optimise the costs of maintenance dredging. The GPM as operators, recruit crews and organise maintenance dredging operations. Dredging is linked to the accessibility guaranteed by the State, but the costs raise questions and the situation may change in the future (opening of the market).

- **Inland services**

France has intermodal services for containers in most of its ports. The rail networks concern the large part of territories and the river axes (North, Seine, Rhône) connect it with the largest French economic basins. The historical rail operator is the public company SNCF with its subsidiary Naviland Cargo for containers.
Inland waterway transport has mainly been developed by Sogetrans with Logi Port Shuttle. The German group Contargo is now established in France.
Private companies have positioned themselves on some rail services.
The shipowners have also taken a position in intermodality, Marfret and MSC.
The CMA CGM group had done so, but in 2017 sold its subsidiary Greenmodal to the Charles André Group. This company also bought Novatrans (combined rail transport) and STVA (automotive logistics). Together with road transport and warehouse logistics it has become one of the largest French transport groups.

Intermodality opertors

Group	Society	River / ports related	Railway / ports related
SNCF	Naviland		Le Havre, Marseille-Fos Antwerp, Rotterdam, Zeebrugge
GCA	Greenmodal	Le Havre, Rouen, Fos	Le Havre, Fos, Dunkerque
Combronde	Ferovergne		Le Havre, Fos
Delta Rail	-		Fos
Open Modal	T3M		Fos
Sogestran	Logi Port Shuttle	Le Havre, Marseille, Dunkerque, Antwerp, Rotterdam	
Marfret	Fluviofeeder	Le Havre, Rouen	
MSC	-	Le Havre, Rouen	
Contargo	-	Dunkerque, Antwerp	

The transport of trailers (rolling motorway) is developing in France by VIIA brand of the SNCF with two ports (Calais, Sète) and several rail freights stations (Boulou, Bettembourg, Obarsano, Aiton).

7. Smart port

- **Smart port systems**

The GPM with the highest of calls activity have a maritime single window for managing calls: Sextant for Dunkirk, S-WinG for Le Havre and Nantes Saint-Nazaire, Vigie 2 for Bordeaux, Neptune for Marseille. The port community system (PCS) combines the maritime single window and the cargo community system. There are two companies developing PSCs in France, Soget and MGI, which were founded in the 1980s, one in Le Havre and the other in Marseille.

Société	System	Ports
Soget	AP+ S)ONE	Haropa, Bordeaux, Dieppe, Caen, Cherbourg, Calais, Fécamp, La Rochelle, Nantes St-N.
MGI	CI5	Marseille, Bordeaux, ports bretons, Dunkerque, Sète, Lyon

In December 2020, Soget and MGI presented "France PCS" trough an economic interest group to coordinate French systems. The association of the two companies aims to carry out four major projects

- Creation of single points of contact at borders with administrations (customs, tax, phytosanitary).
- Initiatives to support the promotion of French port performance (KPI).
- Deploy a one-stop shop in the framework of the European policy (EU 2019/1239).
- Develop port cybersecurity (Security Operation Center).

- **Smart port initiatives**

Several French ports are engaging in collaborative dynamics. This demonstrates the interest in digital innovation in port communities. Beyond communication, it is a question of developing tools specific to each situation: goods flows, local information, CO2 emissions, circular economy, smart grid.

- Le Havre Smart Port City (Haropa, University of Le Havre, CCI, Region, Le Havre agglomeration).
- Brain port community (GPM, University of Aix Marseille, CCI).
- Nantes Saint-Nazaire SmartPort Hackathon (GPM, Saint-Nazaire conurbation, Union Maritime, Pôle Mer Bretagne).

8. Energies and environmental

- **General overview**

For some years now, the environment and energy transition have been on the agenda for ports. They have to respond to imperatives of several origins: IMO regulations, strategy of private actors, public policies.
Innovation is currently particularly important with research into the maritime use of hydrogen, methanol and ammonia, as well as the use of renewable energy in French ports.

In French ports, the dynamics of energy and environmental innovation are of several dimensions:
- Ports' initiative (energy saving, solution for ships and port tools).
- Business strategy (major groups, start-ups).
- Territorial authorities' policy (environment, economy).
- State support (policy, financing).
- European aids.

Some ports are adopting ambitious programmes to bring together stakeholders in innovation: MER in La Rochelle, PEEPOS in Bordeaux, PIICTO in Marseille

- **Port initiatives**

GPM of Dunkerque

Projects	Partnerships	Time line
Shorepower for containers terrminal	CMA CGM	2021
GNL station for truck bunkering	Dunkerque LNG	2020
CO^2 for energy	GPM, Arcelor, H2V	2025-2030

GPM of Havre

Projects	Partnerships	Time line
Shorepower for cruise terminal (grid)	GPM, Enedis	2022-2023
Shorepower fort container terminal (mobile)	GPM, Enedis	2021
LNG barge bunkering for container terminal	GPM (study)	2021-2022
GNL station for truck bunkering	GPM, Total, Engie	2020-2022
Circular economy – biomass	GPM, Suez Environement	Nd
Photovoltaïc roofs	GPM	2021-2002

GPM of Rouen

Projects	Partnerships	Time line
Valorisation of dredging mud	GPM (study)	nd

Port of Brest

Projects	Partnerships	Time line
Ballast water port solution	CCI, Damen (prototype)	2020

GPM of Nantes Saint-Nazaire

Projects	Partnerships	Time line
Photovoltaïc field	GPM, Engie	2021
LNG for vehicles	GPM	2021
Smart grid	GPM, MAN, territory	2019-2020
CO^2 for micro algae	GPM, University of Nantes	nd
H2 energy	Total, Air Liquide	nd
H2 energy	Elengy	nd

GPM of La Rochelle

Projects	Partnerships	Time line
Photovoltaïc roofs	GPM, EDF	2018
H2 energy	GPM (study)	2021-2024
Circular economy	GPM, local entreprises	2020-2022
Valorisation of dredging mud	GPM	2018

GPM of Bordeaux

Projects	Partnerships	Time line
Shorepower for cruise terminal (grid)	GPM	2021-2022
Photovoltaïc roofs	GPM	2021-2022
LNG for vehicles	GPM	2021
Metanisation unit	GPM, Cap Vert Energie	2022
H2 Energy	GPM, Nexeya, Engie, Nouryon	2020-2030

Port of Sète

Projects	Partnerships	Time line
Shorepower for roro and mega yacht (grid)	Port, pilots	2021
Photovoltaïc roofs	Port, Engie	2021
Photovoltaïc roofs Auto terminal	Port, CAT	2022

GPM of Marseille

Projects	Partnerships	Time line
Photovoltaïc field	GPM, Solarcentury, Oxyn	nd
Shorepower for cruise terminal (grid)	GPM, territory	2020-2025
LNG bunkering (ship)	GPM, Total, Shell	??
LNG for vehicles	GPM, Providiris	2020
Circular economy (PIICTO)	GPM, industrial entreprises	2014
H2 energy	Elengy, Kem One, Air Liquide	nd

Port of Toulon

Projects	Partnerships	Time line
Shorepower for cruise and ferry (grid)	Territories, CCI, Enedis	2020-2025
H2 energy	Territories, CCI, Engie	nd

Port of Nice

Projects	Partnerships	Time line
Shorepower for cruise and ferry (mobile)	Territories, CCI	2020-2025

9. SWOT about French ports

Strengths	***Weaknesses***
- National port strategy is gradually taking shape. - Willingness of regional authorities to develop their port. - One of the largest European markets in terms of goods and services. - Development of MRE in many ports. - Implementation of the smart port on a national scale. - General commitment to energy and environmental innovation.	*- Social burdens, mistrust of economic actors. - Weakness in the European context (outreach, partnership). - Small ports with management to be stabilised. - European intermodal service of French ports.*
Opportunities	***Threats***
- Support the performance needs of French ports. - Development of intermodal (containers, roro). - International partnership (Africa, Mediterranean). - Open public market in the framework of French and European competition. - Reorganisation of dredging. - Some prospects for work (Dunkirk, La Rochelle).	*- Few French port companies of any kind (consolidation?) - Relative competition between ports not arbitrated by the State. - Difficulties in moving from intentions to actions (eg. energies).*

SECOND PART: SHIPYARDS

1. General overview

- **Past restructuration**

In 1986-1987, the French government accepted the drastic reduction of its shipbuilding industry with only two large yards, Le Havre (until 1999) and Saint-Nazaire.
A tradition of small-scale shipbuilding and repair by private companies is present in most French ports.
The military sector is organised around the state-owned shipbuilder DCNS, now Naval Group, which builds surface ships and submarines. Nevertheless, the largest units (helicopter carrier) were built by the Chantiers de l'Atlantique (CdA). This will be the case for the future French aircraft carrier and tankers.

- **Actual shipbuilding situation**

The most important company is the CdA. After the ownership of private French (Alstom) and two foreign groups (Aker, STX), they are now controlled by French state. The activity of the Saint-Nazaire shipyard is for the next few years giant cruise boat, large military ships and electrical substations for offshore wind farms.
The other medium-sized companies build fishing vessels and small passenger ships, cargo ships, workboats, public or military missions. They can respond to public tenders in consortium.

French companies cannot build ships over 100 m because there is no facility for this size (except Piriou in Concarneau). Even below this size (50 to 100 m), they have little presence with the Spanish, Polish and Turkish competitors.
Some French builders may have recourse to subcontracting for hulls, particularly from Poland.

French orders are concerned with the regular renewal of the fleets. The passenger fleet (local ferry, tourist boat) is not yet old enough to be reconstituted in the short term. The fishing fleet needs to be modernized, particularly about energy saving, but the Brexit give questions for future.
The civil and military state fleet program are relatively strong in the coming years.

French shipbuilders also have a tradition of sales in Africa and the Middle East for small and medium-sized vessels, patrol boats and offshore crew boats.

There are about sixty shipyards of all sizes on the various French coasts. Some of them are more substantial builders: Construction Mécanique de Normandie (CMN), Piriou, Socarenam, Ocea.

Economic weight of the sectors (data 2018, GICAN)

Shipbuilding and ship repair	21,257 employees	5.786 €bn
Naval equipment	9,670 employees	2.612 €bn
Subcontracting	5,030 employees	0.784 €bn
Defense equipment	5,171 employees	1.377 €bn
Related trades	5,648 employees	0.771 €bn
Architectures and design offices	248 employees	0.036 €bn

Civil shipbuilding	4,100 employees	1.650 €bn
Military shipbuilding	8,000 employees	2.400 €bn
Civilian repair	1,400 employees	0.300 €bn
Military maintenance	5 100 employees	1.050 €bn

- **French shipyards specialties**

The activity area of French yards is specific with three pillars: military construction of all sizes, very large cruise ships and small or very small ships for various purposes.

Public sector (Navy, administrations)

Type of vessels	Type of shipbuilder
Submarine vessel	Naval Group
Large surface vessel	Naval Group, Chantiers de l'Atlantique
Medium navy vessel	Naval Group
Small navy vessel	Intermediate shipbuilders
Coastal patrol vessel	Small shipbuilders
Seadboat	Small shipbuilders

Passengers ships

Type of vessels	Type of shipbuilder
Cruise boat	Chantiers de l'Atlantique
Expedition cruise boat	Chantiers de l'Atlantique
Large ferry	Chantiers de l'Atlantique
Small ferry	Intermediate shipbuilders
Touristic boat	Small and intermediate shipbuilders

Services ships

Type of vessels	Type of shipbuilder
Tugboat	small and intermediate shipbuilders
Maritime Works and dredging boat	intermediate shipbuiders
Research vessel	small and intermediate shipbuilders
Crew boat (offshore, wind)	Small shipbuiders
Speedboat (eg. Pilot)	small shipbuiders

Fishing ships

Type of vessels	Type of shipbuilder
Medium size	intermediate shipbuilders
Small size	small shipbuilders

- **Marine architect sector**

Shipbuilding relies on the skills of architectural firms, the main ones are Mer et Design, Agence Neuman, Bureau Mauric, Merforte, H&N.
The use of architectural firms depends on the nature of the contractual links between shipowners and shipyards. There are two possibilities:
- The shipowner is the project manager. He orders the design services and then the construction of the ship and the supply (fittings, specific equipment, engines). This is generally the process for fishing vessels.
- The shipyard is the prime contractor. On the basis of the shipowner's order, integrating all parties. For almost all shipyards use the skills of external design offices.

France has only two hull test basins, a civilian one at the Ecole Centrale (engineer major school) in Nantes and a military one at the Direction Générale de l'Armements in Val de Reuil (Normandy).

- **Subcontractor sector**

The installation of the motorization and the piping often remain the competences of the construction site. Subcontracting therefore operates in a network of direct relationships between companies (price, competence, experience).
In the case of Chantiers de l'Atlantique, the company retained the functions of the design office and the construction of the sections. The rest is subcontracted under the authority of the CdA.
The modernisation of French subcontracting is moving from "part" supply to "system" supply. Shipyards are thus becoming less of an "assembler" than an "integrator" of several industrial processes.
The risk for the sector is to lose competitiveness in the context of strong European and Asian competition.

Shipbuilding is a highly subcontracted sector. The yards often keep a hull construction activity even if there are purchases of this part as a whole or in kit form.
Shipyards are assemblers on two purchasing bases:
- Suppliers: equipment, electronics, engines
- Subcontractors: fittings, electricity, painting, services

The installation of the motorization and the piping often remain the competences of the construction site.

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- **Sectorial organisations**

The GICAN (Groupement des Industries de Construction et Activités Navales) is the national professional association that brings together 200 companies and 48,100 employees from the various civil and military sub-sectors: shipyards, systems manufacturers, equipment manufacturers, sub-contractors, engineering companies and naval architects. GICAN is also open to the offshore wind energy industry. (https://www.gican.asso.fr/)

The CORIMER (Conseil d'Orientation pour la Recherche et l'Innovation de la MER) created in 2018 includes the shipbuilding, offshore oil & gas and marine energy sectors. The aim is to target both public aid and structuring projects to be supported, for both public authorities and industry. The procedure for guiding and examining projects carried out by the sector has been optimised to better direct projects towards the most suitable funding mechanisms and to better integrate the sector into the examination process of the best projects. A single body for approving maritime research and innovation projects, bringing together public authorities and the maritime industry.

CORIMER has selected four areas for R&D:

- Smart ships and autonomous systems (Smart Ship)
- Energy and propulsion (Green Ship)
- New materials and intelligent yards (Smart Yard)
- Marine resources (Smart offshore industries).

GICAN is involved in a start-up innovation programme, SEAstart, with 12 first small companies.
CORIMER is responsible for publishing an annual call for innovative projects. The 2019 call for innovative projects resulted in 21 projects being labelled, for a total amount of funding of approximately €60M. CORIMER's second call for innovative projects, published in September 2020, resulted in 51 maritime research and innovation projects, for a total funding request of around €360M.

- **Regional clusters**

Bretagne Pôle Naval federates 200 Breton companies in three sectors: shipbuilding, marine energies and offshore oil & gas. The shipbuilding and ship repair sectors concern small and medium-sized ships. Neopolia is a multi-sector industrial cluster (Aerospace, Marine, Land Mobility, Renewable Marine Energies, Oil&Gas, Nuclear). The network aims to bring together companies to work on business issues in France and abroad. Located in Nantes Saint-Nazaire, Neopolia brings together 240 companies representing 30,000 jobs.

- **Exhibitions**

SOGENA (Naval Events Organization and Management Company) is a subsidiary of the GICAN – French Marine Industry Group. The purpose of SOGENA is to ensure international promotion of the naval and maritime industry by organizing international events and exhibitions. SOGENA organizes two international trade exhibitions in the domains of naval defense Euronaval and the civil maritime sector Euromaritime.
Euromaritime exhibition is the biennial event for those actors involved in blue growth. The EUROMARITIME exhibition is organized by the weekly magazine Le Marin and the GICAN (French Marine Industry Group), which federates all the civil and military naval industries in France. It is held every two years in February in even-numbered years, in Marseille. As an exhibition for blue growth, EUROMARITIME has decided to focus on the Mediterranean and aspires to become the trade meeting point of the entire Euro-Mediterranean maritime region.
For 4th edition in 2020: 360 exhibitors; 5,000 visitors, 300 VIP guests, 54 media partners, 8 plenary conferences.
Exist two events at Lorient, Navexpo a small business exhibition about naval industry (organization by Fishing Port of Lorient Keroman). Itechmer is the first trade fair for fishing industry in France, Itechmer is a meeting of professionals working in sectors from ship design to final processing of seafood products with a presence of shipyards for fishing sector.

Agenda:
- Itechmer October 6th to 8th 2022, 1st to 3rd 2022 in Lorient (https://www.itechmer.com/en/)
- Euromaritime February 1st to 3rd 2022 in Marseille (https://www.euromaritime.fr/)
- Navexpo June 1st to 3rd 2022 in Lorient (http://www.navexpo.com/en)

2. French maritime demand and shipbuilding industry

- **Maritime companies**

The French maritime sector is relatively large with a presence in several key sectors. These companies use ships of over 100m and order them from international shipyards. The last ferry built in France (2005) and the last LNG ship (2006) with a willingness of the State to support the Chantiers de l'Atlantique.

Sectors	Society
Container	CMA CGM, Marfret
Ropax	Brittany Ferries, Corsica Linea, La Meridionnale, Transmanche Ferries (DFDS),
Roro	Compagnie Nantaise Navigation
Dry bulk	Louis Dreyfus Armateurs
Liquid bulk	Socatra, Gazocean, Geogas, Sogestran
Luxury Cruise	Ponant
Offshore oil & gas suply	Bourbon, Jiffmar
Offshore wind energy suply	Louis Dreyfus Armateurs
Maritime Works	Louis Dreyfus Armateurs
Cables	Orange Marine, Louis Dreyfus Armateurs, Jiffmar, ETPO.
Research	Ifremer, Comex
Tugs	Boluda, Chambon, Thomas

- **Local Passengers activities**

Another part of the French fleet is active in domestic activities with passengers and cars transit activities.

- Public transportation: several cities have urban river or trans bay services (Nantes, Toulon, Bordeaux, Rouen, Marseille).
- River ferry: crossing the river estuaries, operated by the department authorities.
- Local ferry: connection of a dozen islands in the Atlantic area for passengers and freight. The companies are in public or private sector with a public service delegation.
- Touristic boat: private operators are active in areas with high touristic (Brittany, La Rochelle area, Provence, Corsica, major river estuaries).

France has 78 private passenger transport companies with vessels of all sizes (www.armam.net).
The last order in 2021 is a 250 pax and 27 m vessel for Compagnie vendéenne (Yeu island in Atlantique) by TMI shipyard.

- **Port services**

France has 30 pilot stations (22 mainland, 8 overseas), with onlt one pilot ship (Nantes Saint-Nazaire). The rest of the fleet is 101 pilot speedboats (max 12 m). Piloting is a regulated public service provided by private local association of pilots with monopoly situation.
Mooring is carried out by the port authority or by private companies (often in cooperative). The equipment is composed of very small vessels.
In the port sector, there are fleets of small pilot service vessels (local organizations) and mooring vessels.

- **Offshore Wind services**

A new sector is emerging with ships for offshore wind farms. Now French yards are not involved for “walk to work vessels” (WTV). LDA group bought one second-hand and had one built in Turkey (84 m). But French shipyards work for “crew transfer vessels” (CTV) for the transfer of personnel and materials.
For the Saint-Brieuc wind farm, Ailes Marines (Iberdola, RES, Caisse des Dépôts) has as its service partner TSM Windcat, a joint venture of the French shipping company Thomas Services Maritimes and the Dutch company Windcat Workboat.
For the Saint-Nazaire field, Eolien Maritime France (EDF, Enbridge) has chosen LD Tide, a joint venture between Louis Dreyfus Armateurs (LDA) and Tidal Transit (UK). The three CTV (26,7 m) will be built by OCEA, 26.7 m catamarans.

- **Sea rescue**

Sea rescue is managed in France by a state-supported association, the Société Nationale de Sauvetage en Mer with 40 medium speedboats and 150 small speedboats. Couach builder have the actual contract for new boat.

- **Mega yachting**

The world number one builder of sailing yacht and leisure motor boat is Bénéteau Group (Vendée). On the other hand, the positioning in mega yachts is weak. This activity is mainly Italian and Turkish.
The Ocea company built only seven 50m vessels for 2003-2016. It can build ships of up to 90m.
The under 20m segment is occupied by three companies: Couach (Cujan-Mestras), CNB (Bordeaux), Guanboat (La Grande-Motte).

- **Fishing**

France is a major fishing country (3rd EU 2021). The fleet is capped like the others by the Common Fisheries Policy in relation to exploitation licenses. France had 192 applications in 2018, 2019 and 2020 with 67 vessels of -10m, 6 vessels of +25m and 1 vessel of more than 40m.In 2018, it had 688 vessels of 12 to 24 m and 195 vessels of +25 m.
The ships are generally ordered from French shipbuilders, about thirty in France. Only Piriou in Concarneau can build 50m vessels. Factory ships are built abroad.

3. State maritime sectors

- **French Navy**

France has the seventh largest war fleet in the world and the second in Western Europe. The position of a middle power nation very involved in international issues (Africa, Near and Middle East) and the numerous overseas territories justify the size of the fleet.
The evolution of the fleet is done through programming plans which must take into account the various strategic dimensions: nuclear deterrence, deployment of force, protection of territories and maritime economic zones.
Orders are placed by the French Ministry of Defence's trough the General Directorate of Armaments (GDA). Naval Group is the heir to the State arsenals for the construction of the navy but Chantiers de l'Atlantique builds the largest ships (helicopter carriers) and will build the future aircraft carrier.

French navy orderbook

Program	Delivery	Shipbuilders
Ballistic-missile nuclear submarines	2033-2035	Naval Group
nuclear attack submarines (SNA)	2021-2036	Naval Group
nuclear aircraft carrier (PANG) – 1 unit	2025	Naval Group, Chantiers de l'Atlantique
Multipurpose frigates (FREMM DA) – 2 units	2021-2022	Naval Group
Mid-Size frigates (FDI) – 5 units	2023-2030	Naval Group
European Patrol Corvette (PESCO)	2023-2027	Naval Group, Navantia, Fincantieri
Oceanic Patrol vessels (PO) – 10 units	2025-2029	Naval Group, Piriou, CMN, Socarenam
Overseas territories Patrol vessels (POM) – 6 units	2022-2025	Socarenam
Patrouilleurs côtiers de gendarmerie (PCG) – 6 units	2022-2023	No attributed
Coastal protection speadboat (VCSM) – 4 units	2021-2022	Socarenam
Local and port protection speadboat (VPDMP)	2018-2021	Ufast
mine warfare vessels (SLAM-F)	2022-2030	No command
Large mine warfare vessels (BGDM)	2025-2030	No command
Speedboats for divers (VSP) – 8 units	2022-2025	Merré
Tanker supply ships (BRF) – 4 units	2022-2025	Chantiers de l'Atlantique
Landing ships (EDAR) – 4 units	2021	Socarenam
Intelligence & surveillance vessel (BLSR) – 1 units	2026	No command
Hydrographic vessels (BH NG) – 2 units	2025-2027	No command
30 tons tugboats (RPC 30) – 15 units	2022-2027	Pirou
10 tons tugboats (RP 10) – 29 units	2018-2023	Merré, CIB, CMN
6 tons towboats (PC 6) – 7 units	2019-201	Gléhen

Source: meretmarine.com

- **Administrations**

There are many French State entities using small and medium-sized vessels:
- Gendarmerie maritime
- Customs (Douanes)
- Maritime Affairs Administration (DGAM)
- Lighthouses & beacons Service (Phares et Balises),
- French Southerns and Antartic Lands Administration (TAAF).

The French naval hydrographic service (SHOM) depends on the French Navy.
The coastal salvage and assistance service is provided by the company Les Abeilles (Econocom group) for the French Navy (Brest, Cherbourg, Toulon, Boulogne).
France does not have a coastguard service. This function is through several civil and military corps of the State.

The French administration vessels are always ordered from small private French shipbuilders.
These yards are also positioned for export, particularly in the patrol ship and speedboat sector.

4. Ship repair

- **Merchant ships**

France has three main ship repair sites, two of which are large from the 1970s (super tanker). Brest and Marseille can repair the largest box ship. Dunkirk is active for the North West European ferry market. In the other ports, there are repairers either linked to the port authority or to private companies for local fleet maintenance and sometimes repairs.

French Repair sector

Location	Operator	Dry dock	Floating dry dock
Dunkerque	Damen	Two (100 m, 285 m)	One (180 m)
Boulogne	Socarenam	One (110 m, cover)	
Le Havre	GPM of Havre	Three (180 m, 150 m, 140 m)	
Rouen	GPM of Rouen		One (180 m)
Saint-Malo	Socarenam	One (112 m)	
Brest	Damen	Deux (225 m, 338 m)	
Concarneau	Piriou	One (115 m)	
Saint-Nazaire	Clemessy	Three (206 m, 147 m, 117 m)	
La Rochelle	Lecamus	Two (176 m, 107 m)	
Bordeaux	GPM of Bordeaux	One (240 m)	
Marseille	CNM // San Giorgio	Two (320 m, 465 m)	

In 2012, the Dutch company Damen Shipyards bought Dunkirk ARNO and Brest Sabena. The Dunkirk yard mainly works on ferries and dredgers with two dry docks (100 m, 285 m) and a floating dock. The Brest yard can accommodate the largest ships in the world (boxship, container ships) and specialises in LNG carriers with two dry docks.

The Marseille Shipyard (CNM) is under the control of the Italian company San Georgio del Porto. It is located in the Marseille Eastern Docks and operates the Dry Dock 10 which is the largest in the Mediterranean and the third largest in the world. The activity of CNM is concentrated on ferries and liners.

- **Mega yacht**

Due to the strong presence of mega yachts on the French and Italian Riviera, a major repair activity (refit, maintenance) has developed in the South-East of France with approximately 15% of the annual market. The number of mega yachts is around 40 units per year and vessels over 80 m now represent 85% of the market. Repair sites for this type of vessel are few.

La Ciotat yard was once one of the main French shipbuilding and has now been converted to ship repair for yachts and mega yachts. The yard is owned by the local authorities and managed by La Ciotat Shipyards. The site can work the ships over 80 m, but the ambitious is about the ships over 100 m.
Today's lifting equipment is a 600t crane, a 2,000t synchrolift and future equipment will be a 4,300 t, 115 m yachtlift in 2022 (Atlas project, €65 M).

The facilities are available to the companies on the site:

- MB92 (Spain): 23,000 m^2.
- Monaco Marine (Monaco, Ducros family from France): 45 000 m^2.
- Nautech (France)

In addition, there are a large number of subcontractors (35) involved in the refit of large yachts.

In Marseille, the GPM has dry docks dedicated to yachts and mega yachts under concession:
- Palumbo SY (Italy): 35,000 m², four dry docks (85 m, 100 m, 125 m, 125 m), a 200m quay and a floating dry dock (40 M x 18m).
- Sud Marine (France): 20,000 m², two dry docks (175 m, 137 m), a 500 m quay.
- Monaco Marine: 8,000 m², a 320 m quay. The company would like to have a 6,000t yacht lift in the near future.

In Toulon area, in Saint-Mandrier and La Seyne, two small yards are dedicated to repairs.
- Monaco Marine: 40,000 m², 3,600 m² covered.
- IMS: 77,000 m².

The ship repair sites of La Rochelle, Saint-Nazaire and Bordeaux can position themselves on the market, but the number of ships in the area is relatively low.

5. Ship innovation

- **LNG**

French shipowners are already adopting LNG with CMA CGM (container ships) and soon Brittany Ferries and Corsica Linea. There are no other LNG projects in France.
The small dredger Ostrea (dual LNG diesel) was delivered to the GPM of Bordeaux in 2020 by Socarenam. The dredger Samuel de Champlain of the GPM of Nantes Saint-Nazaire was converted for LNG in 2019.

- **Hydrogen**

Nantes agglomeration public transport use a hydrogen fuel cell boat (25 pax) since 2019.
The Hydrovar project in Toulon with the CCI, Hyseas Energy, the Bateliers de la Côte d'Azur and Engie aims to develop a 250 pax hydrogen-powered maritime shuttle.
The Greenharbour project aims to develop a hydrogen barge to supply electricity to ships calling at the Port of Sète by 2024. The partners are Port of Sète, Nexeya, Europe Technologies, CIAM, Jifmar, Pôle Mer Méditerranée.
The Port of Nantes Saint-Nazaire wants to develop hydrogen solutions for its small service vessels.

- **Sailing**

France is one of the most active countries for sailing maritime transport passengers and goods. The focus of this emergence is in Brittany and Nantes Saint-Nazaire area.
- Grain de Sail: 24 m vessel for 50 tons of freight.
- TransOceanic Wind Transport (TOWT): Four 67.5 m cargo sailing ships (three masts) with a capacity of 1,000 tonnes and 12 pax. In July 2020, a call for tender to 5 shipyards (Spain, Portugal, France, Netherlands) for delivery in 2022.
- Neoline: the start-up shipping company is developing a 136m ro-ro cargo ship (two masts) for 5,000 tonnes of freight. The shipping company Sogestran has acquired a 15% stake in the company. Leading French shippers have announced their future commitment. The construction site has not been designated. The delivery is planned for 2023.
- Alizés: Partnership between Zephy & Borée and Jifmar for a single vessel dedicated to transporting Ariane rocket components (France - Guyana). The ship will be 121 m long with four masts for composite wings (Ayro company). In December 2020, the Dutch shipyard Neptune Marine was awarded the contract to build the vessel by 2022.
- Solidsail: Chantiers de l'Atlantique has been developing a metal sail solution with different test levels since 2018. The first application should be liners for MSC.
- Airseas: Airbus group entities are developing a giant kite with a test with the LDA's roro ship *City of Bordeaux* in 2021.

6. Shipbuilders

- **Chantiers de l'Atlantique**

In the late 1980s, Chantiers de l'Atlantique (CdA) became one largest European shipbuilder competing with Italian, German and Finnish yards. Since 2000, some 30 cruise ships have been built for several shipowners: MSC, RCCL, NLC and Hapag Lloyd Cruises. Since the resumption of orders in 2013, CdA have enjoyed the confidence of number 2 (RCCL) and number 4 (MSC). Two groups which, because of their fleet structure and capacity, can weather the Covid crisis. For the time being, no ships are cancelled, a staggering will probably take place during the decade. Innovative projects will be confirmed at the end of this period: Sileansea class (luxury and wind), Ultimate class (giant).

The CdA have the largest construction areas in Europe, allowing them to build ships of over 200,000 GT. This is one of the company's great commercial arguments as well as a force for innovation. The MSC Europe (World Class) will be the first LNG ship build. The ship will incorporate solid oxide fuel cell (SOFC) technology that will use LNG to generate electricitý and heat on board.

CdA were sold in 2006 to Aker Yards (Norway) and in 2008 to STX Offshore and Shipbuilding (Korea). At the time of the sale of the CdA to Fincantieri (Italy), the French state set up a settlement process with the Italian company. In the meantime, it has nationalised the company, which is now called for second time Chantiers de l'Atlantique. At the beginning of 2021, the takeover process by Fincantieri is stopped.

The shareholder structure of the company is therefore:

- - French State 84.3%.
- - Naval Group 11.7
- - Employees 2.4%.
- - Local companies (COFIPME) 1.6

COFIPME includes 20 companies: Aris Services, Bretagne Oxy Coupage, Agencement Paul Champs, Charier, SMRSA, Consilio, Europe Technologies, Gestal, IDEA Groupe, MAPAC Panel, Marper, Mecachrome Atlantique, Mecasoud, Media6, Navtis, Ocea, PMO, SCTMI, Socomore, Videlio HMS.

Although CdA builds a few electrical substations for offshore wind farms and military supply tankers, almost all of its civil activity comes from conventional civil shipbuilding.

Orderbook

Year	Owner	Ship	GT	Pax	Price €
2022	RCCL	Celebrity Beyond	140 600	2900	900
2022	MSC	MSC Europa	205 700	5 264	1125
2022	RCCL	Wonder of the Seas	225 282	5 400	1400
2023	MSC	Class Meraviglia n°5	177 100	4 888	1000
2023	RCCL	Oasis class n°6	231 000	5 714	1400
2022	RCCL	Edge classe n°4	140 600	2900	900
2024	MSC	World class n°2	205 700	5 264	1125
2025	MSC	World class n°3	205 700	5 264	1125
2024	RCCL	Edge classe n°5	140 600	2900	900
2027	MSC	World classe n°4	205 700	5 264	1125

With the high and down shipbuilding cycles, CdA has reduced its surface area of building parts. Apart from the management and support services (trade, purchasing), it has kept the design offices and the machining. Everything else is provided by subcontractors (supplies, services, fitting out, construction). Orders are placed through networks and not through public tenders.

CdA produces 25% of a ship boat in-house (3,500 employees) and obtains 75% of its supplies from 500 partner companies (3,500 employees), 50% of which are located in West of France, 10% in the rest of France and 35% in Europe outside France.

The industrial movement already includes the role of small and intermediate in the Saint-Nazaire ecosystem: Mecasoud, Sofreba, ADF, Kaefer Warner, Mariniso, Marper. It is estimated that there are 1,500 companies linked to the CdA, 800 of which are in West France.

- **Naval Group**

Naval Group is the heir of the French military arsenals under the status of a private company in 2001. The shipbuilder responds to orders from the French government and to international tenders for defence vessels.

The shareholder structure is not entirely public:

- French State 62.49
- Thales 35
- Employees 1.64
- Treasury stock 0.87

Naval Group has several construction sites:

- Cherbourg for submarines (2,000 employees),
- Lorient for surface ships (1,800 employees).
- Brest for repair and maintenance,
- Nantes for the construction of nuclear engines.

The Naval Group website indicates €2.5 billion in purchases (18% of which are international) from 1,200 suppliers listed in 1,400 contracts. Subcontractors represent 2,000 people in Cherbourg and 800 in Lorient.

Purchases are of two types:

- Non-production purchases: infrastructure, overheads, IT
- Production purchases: studies, industrial services, materials, platform equipment and supplies, combat systems.

DCNS Research has been federating its technological research activities since 2011 and has two sites in France, one of which is located at Technocampus Océan, location at Bouguenais near Nantes.

- **Piriou**

Pirou is a micaps of the French naval industry. Created in 1965, it is present in France and others (Nigeria, Poland, Vietnam, Algeria). The company has 1,000 employees, including 450 in France, and a turnover of €180 million in 2019. The French site is located in Concarneau in Brittany on 25,000 m^2, with a capacity to build under cover of 100m and a dry dock of 130m.
Since 2020, the majority of the capital has been held by a group of 13 executives. The other shareholders are Arkea (Crédit Mutuel Ouest), IDIA Capital Investissement (Crédit Agricole) BPIFrance (State), and Africinvest.
It specialises in medium-sized vessels (100-120 m): small ferries, offshore supply, hydrographic boats, fishing, tugs. In 2020, the Pays de la Loire Region chose Piriou for the micro car ferry that operates on the Ile d'Yeu line.

- **Kership**

Formerly STX Lanester, Kership a joint venture founded in 2013 of Naval Group (45%) and Piriou (55%). The company specializes in military and public mission vessels in the 95m format: Coastal Patrol Vessels, Offshore Patrol Vessels, Multipurpose Vessels.

- **Ocea**

Ocea have production units, at Sables-d'Olonne, Saint-Nazaire and La Rochelle with 400 employees and a turnover of €150 M in 2019. The group builds 15 to 20 ships per year, mainly in Sables-d'Olonne yard because Saint-Nazaire unit is dedicated to subcontracting for the CdA.
The OCEA group generates 95% of its turnover from exports with four types of aluminium vessels: coastal patrol, small ferry, technical boat and crew boat. In March 2021, the company announced an order for five coastal patrols for a foreign navy. The export orderbook include crew boat, oceanic research vessels, navy speedboat and patrol vessel.
In addition to the founders' capital, the shareholding includes investment funds from French banks (Crédit Populaire, Crédit Agricole, Crédit Mutuel).

- **Construction Navale de Normandie (CMN)**

The Cherbourg-based shipbuilder (350 employees) is owned by the French-Lebanese businessman I. Safa. The turnover in 2019 was €102m.
It is a manufacturer of military ships for the French state or foreign countries. The specialities are offshore patrol vessel, coastal patrol, torpedo patrol.
Currently, CMN is building 39 interceptor ships for Saudi Arabia, 21 of which were built in Cherbourg.
CMN has acquired Hydroquest from Naval Group, a company specialising in water flows energy (tidal power, river power).

- **BMA**

Merré is a shipbuilder based on a river in the Nantes region, building vessels from 12 to 80 m in steel or aluminium. The company is owned by the BMA group. It has taken over two other shipbuilders: Mécasoud of Saint-Nazaire and CIB of Brest.

- Merré & Macoud (70 employees and €20 million in turnover): Tug boat, pilot boat, patrol ship, river ferry, barge.
- CIB (25 employees and €5 million in turnover): Speedboat, small tugboat

- **Socarenam**

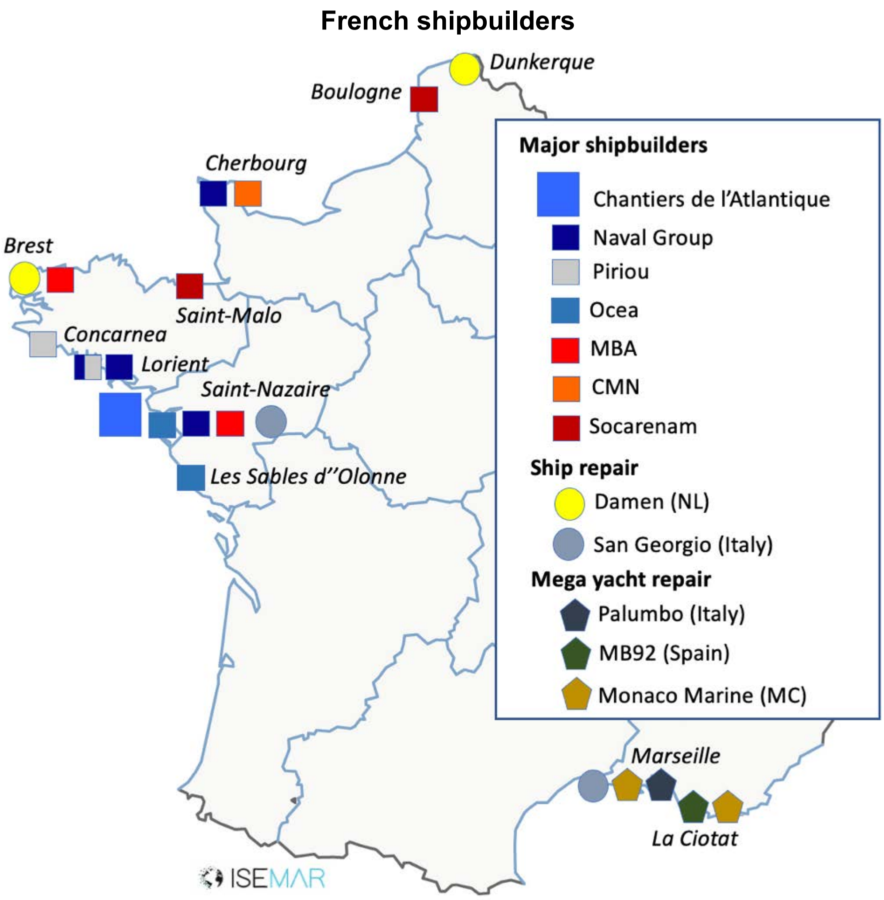
This employee-owned company (holding company Socalliance) is one of the main small French manufacturers. The various construction and maintenance sites represent 250 employees and €54 million in turnover in 2019.
Two shipyards are dedicated to the construction of ships:

- Boulogne (max 110 m): Fishing boat, fireboat, patrol boat
- St Malo (max 110 m): Patrol boat, landing craft

In 2020, the DGA ordered three coastal patrol boats (€20m) from Socarenam for the national gendarmerie. The company has built the first dredger (52 m) with LNG engines. In international, three patrol ships for Belgium and one offshore patrol ship for Poland.

- **Other French shipbuilders**

Society	Location	Type of ships	Materials	Salaries	Turnover
Manche Industrie Marine	Dieppe	Fishing boat, pontoon	steel	35	8,5 M €
CM Mouquet	St Roman de Colbosc	Fishing boat, barge	Steel, aluminium	24	2 M €
Chantiers Navals Bernard	Port en Bessin St Vaast la Hougue	Fishing boat	Bois, Polyester	31	2,5 M €
Chantiers Allais	Cherbourg	Fishing boat, crew boat	Steel, aluminium	45	nd
Sibiril	Carentec	Fishing boat, rescue boat, pilot boat	Composit	27	3 M €
Glehen	Douarnenez	Small pax boat, small tugboat, fish boat	Steel, aluminium	45	9 M €
Chantiers Bernard	Lorient	Rescue boat, pilot boat, fish boat	Polyester	40	4,5 M €
Alumarine	Couëron	Speedboat, work boat	Aluminium	26	3,6 M
Glehen	Douarnenez	Small pax boat, small tugboat, fish boat	Steel, aluminium	50	6 M €
Couach	Gujan Mestras	Yacht, speed boat, rescue boat	Composit	200	28 M €
Delavergne	Avrillé	Fishing boat, work boat	Aluminium	10	nd
Martinez	Saint-Cyprien	Small pax boat, fish boat	Polyester	24	2,5 M €
Ixblue	La Ciotat	Crew boat, speed boat, research boat	Composit, steel	55	nd
TMI	Saint-Mandrier	Speedboat, pax ship	Aluminium	19	4 M €



7. Manufacturer suppliers

France has two major shipbuilders, CdA for large cruise boats and Naval Groupe for war vessels. A network of intermediate companies and small shipyards completes the French shipbuilding network. A number of suppliers are therefore linked to this market of the French shipbuilding industry. Nevertheless, the French panorama shows a limited number of companies for the main sectors of naval supplies. Thus, the equipment suppliers are foreign, European and Asian, particularly for the construction of liners, with choices also linked to the shipowner.
There is no data to know who are the suppliers of French shipbuilders in their different sectors. International suppliers are undoubtedly numerous, particularly in motorization, mechanicals elements and electronic systems.

Main French companies manufacturing components for the naval industries

Motors & propulsion

Moteurs Baudouin (Weichai group, China)	Intermediate Moteur thermique
Barillet	Small Moteur électrique
EN Moteur	Small Moteur électrique

Équipements

France Helices	Propulsion, propeller, shaft lines
Maucourt	Propulsion, propeller, shaft lines
FOB (groupe Sofibel)	Anchor, marine safety equipment.
Bopp	Deck machinery and hydraulic power pack
Hutchinson	Vibration & isolation products
GTT	Membran for LNG tank
Davaine	chains

Systems

SNEF	Electricity
Schneider Electric	Electricity
Axima Engie	Marine and Offshore HVAC
Sofreba	Piping
FCE	Flow control
IXblue	Navigation
Marinelec Technologies	Technical alarm

8. SWOT for French shipbuilders

***S**trengths*	***W**eaknesses*
- *Two major manufacturers (one civilian, one military) in the state sphere.* - *Strength of innovation in the CoA* - *Satisfactory orderbook for the CoA.* - *Small players linked to public markets (administrations, defence).* - *Important military programme.* - *Presence on export markets (state fleet).* - *- Good presence in ship repair (large ship, mega yacht)* -	- *Competition (cruise ship, war ship) for large shipyards.* - *No links between French shipowners and shipbuilding.* - *No presence on ships over 100 m.* - *Too much dependence on public orders.* - *No international positioning apart from state ships.*
***O**pportunities*	***T**hreats*
- *Will to internationalise the CoAs and Naval Group (market, subcontracting).* - *The MRE service fleet will develop.* - *Fishing fleet to be modernised.* - *Modernisation of subcontracting (organisation, links).*	- *Crisis of covid on cruising and CoAs* - *Ship of the future, moving from intentions to reality.* - *Economic structure of some SMEs.* - *Value chain still very local and traditional (competition).*

For contact

Shipyard	Address	Contact (phone & mail)
SOCARENAM	2 Boulevard de Chatillon 62200 Boulogne-sur-Mer Quai Garnier du Fougeray 35400 Saint-Malo	+33 (0)3.21.30.56.00 +33 (0)2 99 20 17 04
Damen Shiprepair	Route de l'Écluse Watier 59140 Dunkerque	Mr CHOTARD Arnaud Directeur Commercial +33 6 75 37 16 00 arnaud.chotard@damen.com
Manche Industrie Marine	9 Rue Charles Blound 76200 Dieppe	+33 (0)2 32 90 56 00 contact@mim-dieppe.com
CM Mouquet	1004 Rue De La Chapelle 76430 Saint-Romain-de-Colbosc	+33 (0)2 35 20 10 82 infos@cm-mouquet.com
Chantier Naval Bernard	4 place Maréchal Leclerc 50550 Saint-Vaast-La-Hougue	+33 (0)2 33 54 43 47 contact@chantier-naval-bernard.com
CMN	51, rue de la Bretonnière BP 539 50105 Cherbourg Cedex	+33 (0) 2 33 88 30 00 info@cmn-cherbourg.com
Chantier Allais	Arsenal – Atelier Mécanique Nord BP 641 50100 Cherbourg-en-Cotentin	+33(0) 2 33 97 33 49
Sibiril	21 Rue Lamotte Piquet 29660 Carantec	+33 (0)2 98 78 23 87 contact@sibiril-technologies.com
CIB	Forme de Radoub 3 29200 Brest	+33 (0)2 98 33 18 18
Chantier Gléhen	Terre-Plein du port 29730 Le Guilvinec	+33 (0)2 98 58 12 00
Piriou	ZI du Moros – BP 521 29185 CONCARNEAU Cedex	+33 (0)2 98 97 09 48 piriou@piriou.fr
Chantiers Navals Bernard	Rue de Pen Mané 56570 Locmiquélic	+33 (0)2 97 33 48 41 cn.bernardnaval@wanadoo.fr
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Les Chantiers de l'Atlantique	Avenue Antoine Bourdelle CS90180 44613 Saint-Nazaire Cedex	+33 (0)2 51 10 91 00
Alumarine	20 Boulevard de l'Océan 44220 Couëron	+33 (0)2 40 65 19 31
Merré	Route de Nantes B.P. 57 44390 Nort sur Erdre	+33 (0)2 40 29 50 44 contact@merre.fr
Plasti-pêche	Le Port, 85460 L'Aiguillon-sur-Mer	+33 (0)2 51 97 07 24
Ocea	Route de la Cabaude, 85100 Les Sables-d'Olonne	+33 (0)2 51 21 05 90 commercial@ocea.fr
Delavergne	La Belle Étoile, 85440 Avrillé	+33 (0)2 51 22 32 21 delavergne2@wanadoo.fr
Couach	Rue de l'Yser, 33470 Gujan-Mestras	+33 (0)5 56 22 35 50
Martinez Constructions Navales	1 Rue Maurice Ravel 66750 Saint-Cyprien	+33 (0)4 68 21 08 62
Ixblue Shipyard	46 Quai François Mitterrand, 13600 La Ciotat	+33 (0)4 42 98 10 25

Recommendations for NBSO

Ports

- Mission of Dutch ports in France under the umbrella of NBSO by playing on the image of potential cooperation (less competitive image than Belgian ports). The best terrain is the Normandy and Atlantic ports.

- Explore market capacities for Dutch actors in the innovation sector (MRE, new energies, environmental protection, smart port).

- Explore cooperation perspectives in several market sectors (dredging, tanking, intermodality, smart).

- To explore the potential for collaboration in the Antilles between French and Dutch regional ports and economic actors.

Shipyards

- Dutch presence at business events in France around the reference actors (Damen, Holland Shipyards Group, Royal ICH…) and other companies (architechts, equipment manufacturers).

- Exploring networking in France, particularly in the Nantes Saint-Nazaire region, notably with the Néopolia business network (co-production, international market).

- Meeting with Chantiers de l'Atantique and Naval Group under the umbrella of NBSO.

- Explore the prospects for cooperation in innovative fields (design, hydrogen, sailing).

- Explore collaboration capabilities with medium-sized shipbuilders.

- Explore the possibilities of acquiring or participating in French shipbuilders.