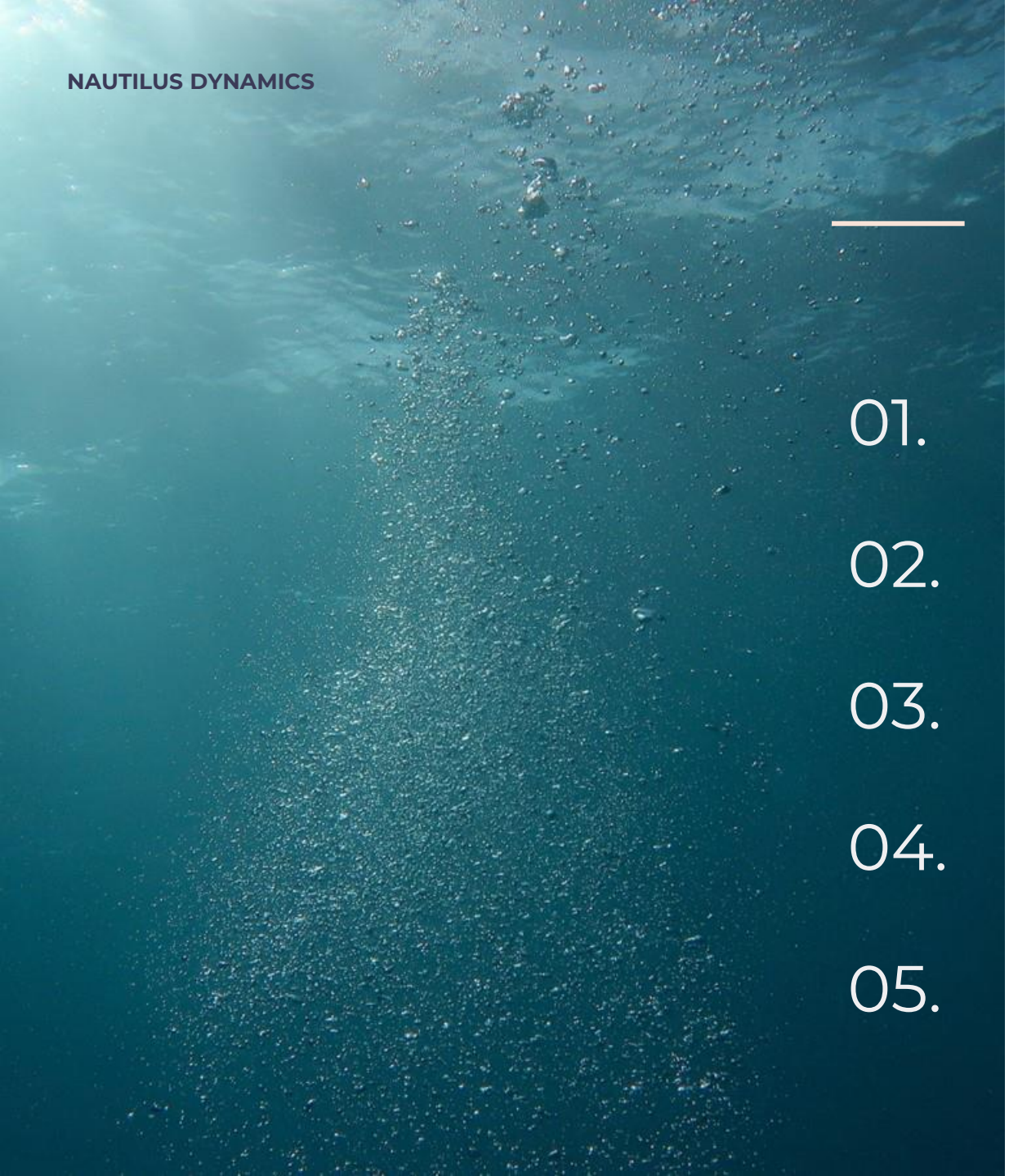
NAUTILUS DYNAMICS

Offshore Engineering Solutions

SCROLL DOWN

December 2022



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About the Company.

Established in 2017 in France, NAUTILUS DYNAMICS initially focused its activities on the Dutch and Northern European market

In 2019, Opening of a new office in Hong Kong to meet growing Asian business

About the Company.

Since 2020, multiplication of partnerships to provide more and more services to our clients

In 2022, opening of NAUTILUS DYNAMICS FRANCE SAS in Nice

In Figures

70+

OFFSHORE PROJECTS COMPLETED

15+

HAPPY CLIENTS

2

LOCATIONS WORLDWIDE

A SCALABLE TEAM OF EXPERTS

HIGH PERFORMANCE COMPUTING CREATOR

Core Values.

Core Values.

People
Engineering and technologies at human scale for clients and employees.

Innovation
The strength of a start-up, born and remain at the cutting edge.

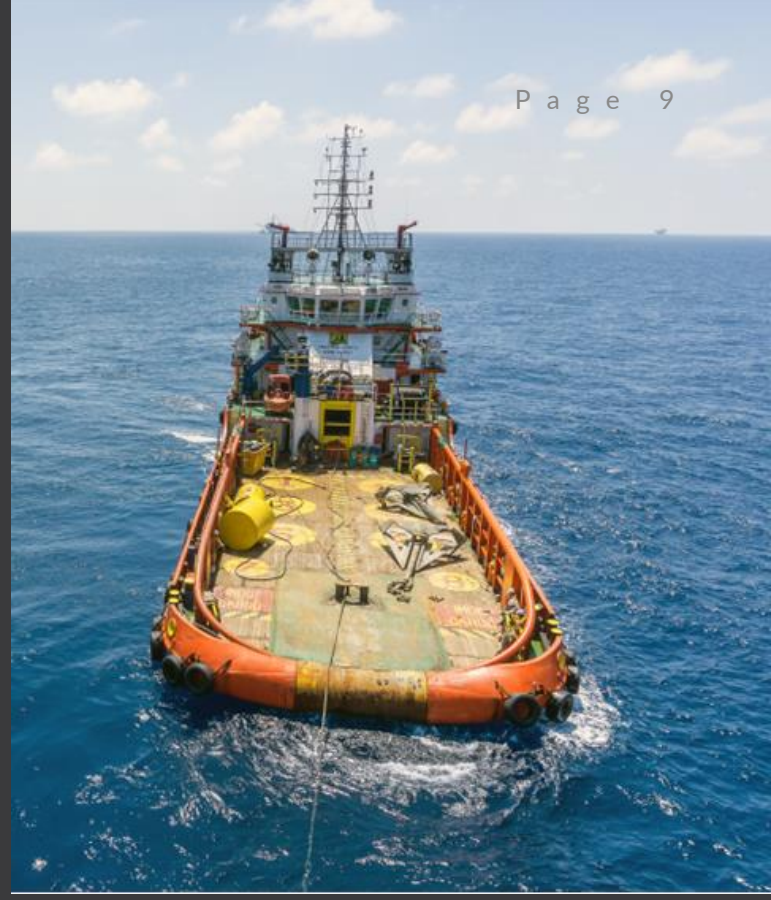
Environment
Respect and fight for the only planet we have.

Accountability
Decisions through experience, committing to our engagements.

Sectors and Services.

OFFSHORE RENEWABLE

OIL & GAS



NAVAL & OPERATIONS

OFFSHORE RENEWABLE.

In details,

Stability, Sea-keeping

Performing stability and hydrodynamic calculations on offshore structures like floating **wind foundation, solar panels, waves energy converters**, …

Stability, RAO/QTF, motions and accelerations

Mooring System

Static and dynamic **coupled** calculations to determine the most suitable and cost-effective anchoring system according to the specificities of the project.

Design Load Report, coupled simulations, fatigue

Cable Configuration

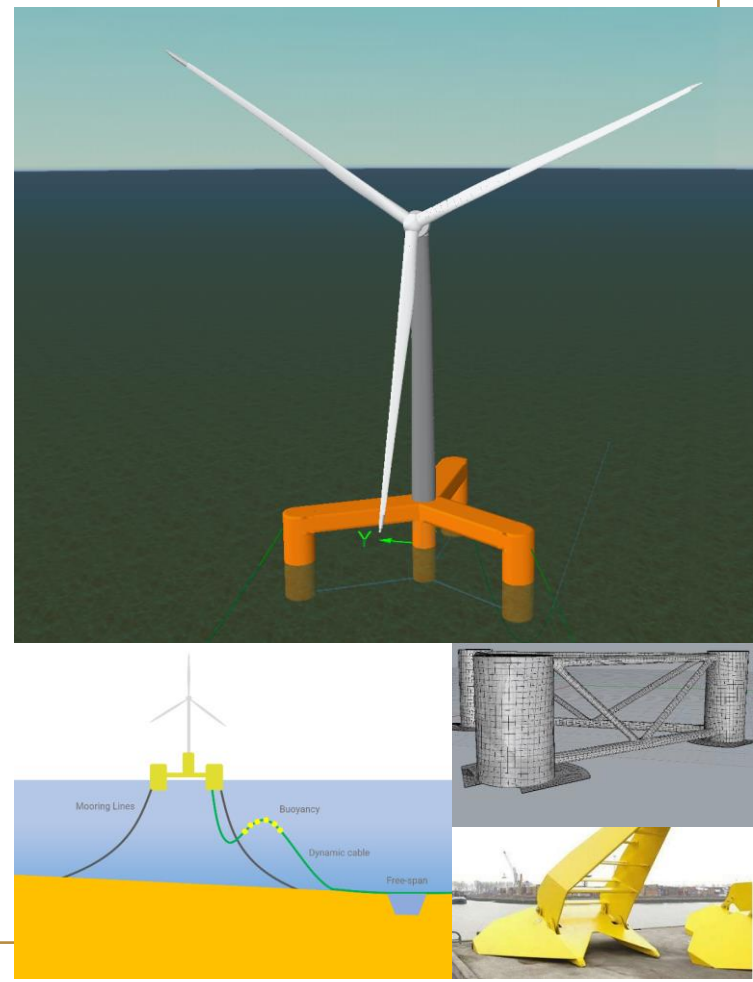
Analyzing the static and dynamic parts of data and/or power cables. Designing the submarine configuration considering site, supplier and class data.

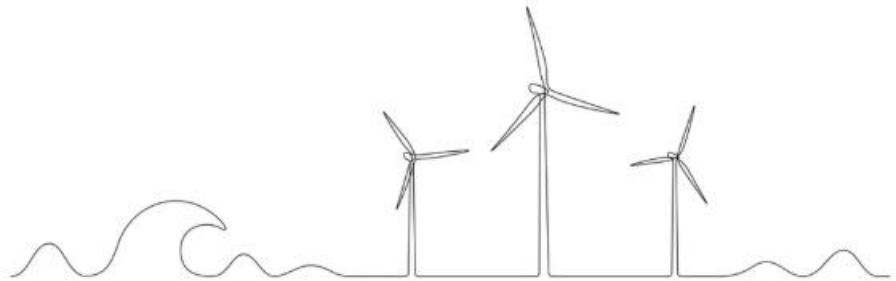
On-bottom Stability, subsea configuration

Specification & Package Follow-up

Following from Specifications to delivery the fabrication of mooring components such as connectors, accessories, chains and ropes as well as subsea cables.

Specification, fabrication, FAT, SAT





We can manage larger, fully integrated engineering projects. We are experienced in managing industrial engineering project and can rely on a network of experts in disciplines such as structural, piping, mechanical, process, geotechnical. Contact us for more details !

OIL AND GAS.

In details,

Stability, Sea-keeping

Performing stability and hydrodynamic calculations on offshore structures like **F(P)SO, platform, tankers, installation vessels, CALM buoy**, …

Stability, RAO/QTF, motions and accelerations

Mooring System, Offloading

Static and dynamic calculations to determine the most suitable and cost-effective anchoring system according to the specificities of the project.

Design Load Report, turret/spread, fatigue, offloading

SURF Configuration & On-Bottom

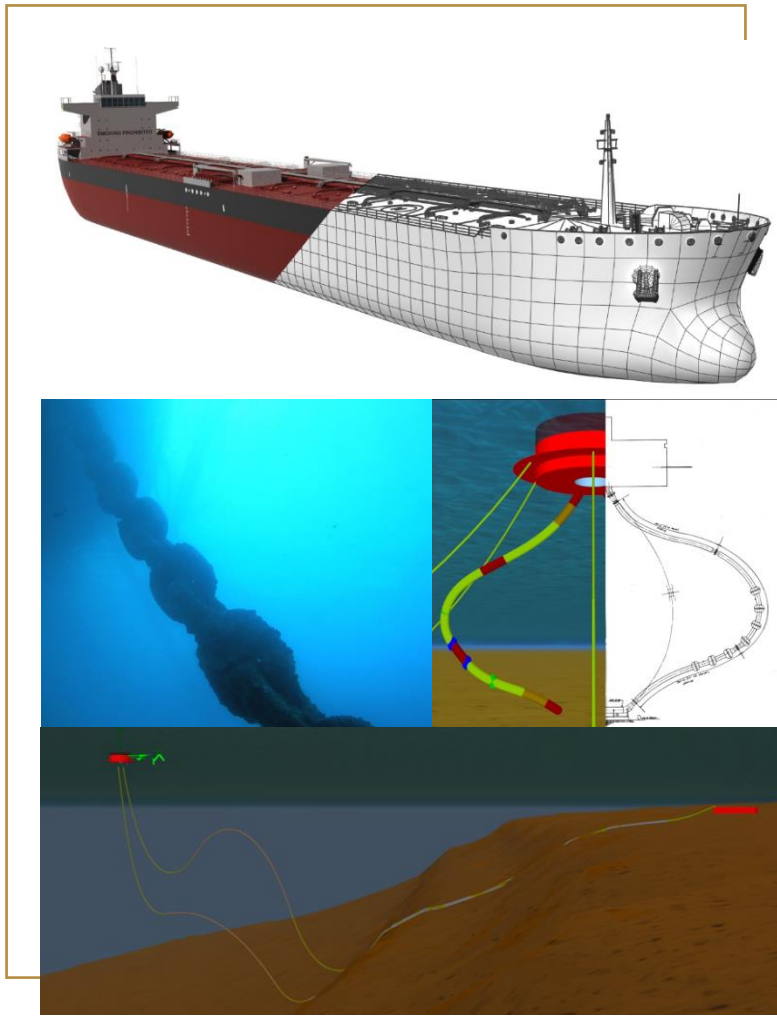
Designing submarine configuration for umbilical, (suction) hoses and risers considering metocean, soil, lines data and certification requirements.

On-bottom Stability, subsea configuration

Specification & Package Follow-up

Following from Specifications to delivery the fabrication of mooring components such as connectors, accessories, chains and ropes as well as SURF components.

Specification, fabrication, FAT, SAT



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NAVAL & OFFSHORE OPERATION.

In details,

Sea-keeping, Towing, Ship control

Performing hydrodynamic calculations on installation vessels, material barges or tugs. Sizing tugs and other vessel for operations. Heading control analysis.

RAO/QTF, motions & acc, bollard pull, control

Mooring hook-up, cable & flowline

Dynamic analysis of marine operations such as mooring hook-up, heavy lift, surface crossing, laydown. Determination of weather windows.

Installation analysis, storyboard, laying, weather limit

Stability Booklet, Structure check

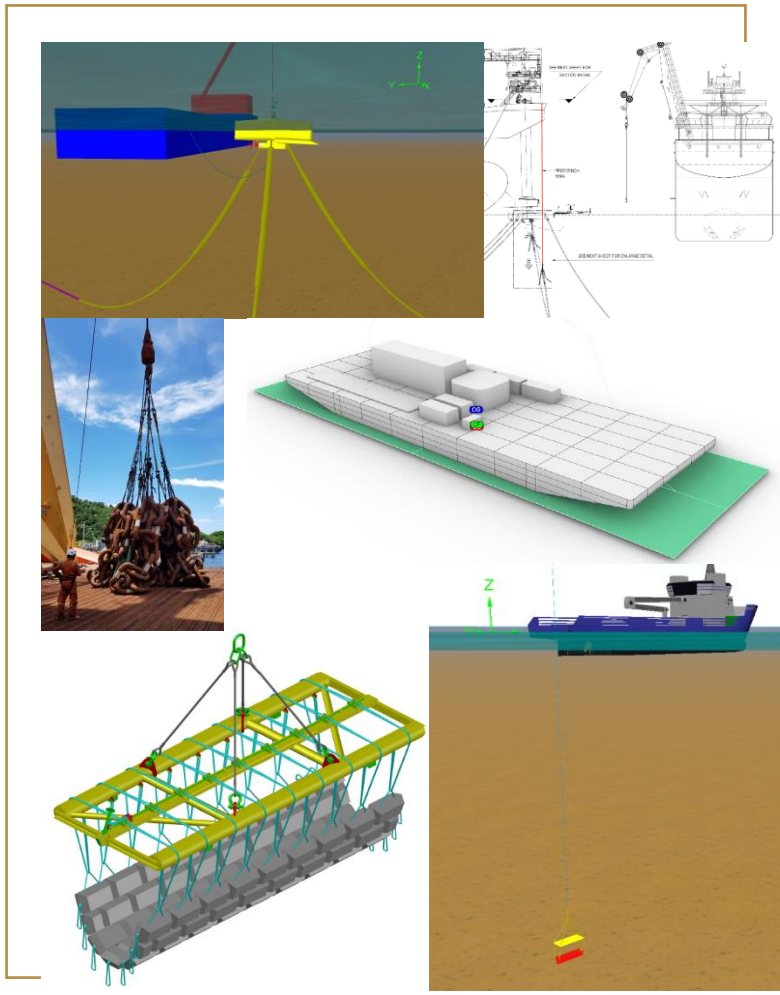
Generating, or updating Stability Booklet of your ships. Incorporating operation scenarios and performing related structural checks.

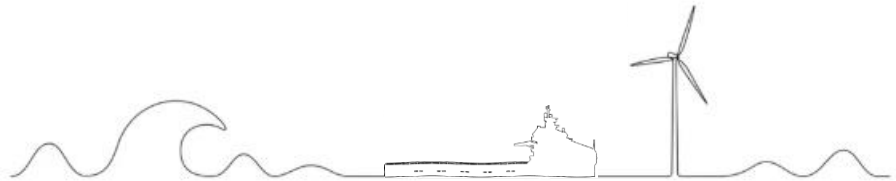
Stability, trim, scantling, free surface effect

Operations Support, Decommissioning

Live assessment of a situation using numerical models. Forecast and risk assessments based on simulations. Modeling decommissioning scenarios.

Operations, offshore decommissioning, abandon & recovery





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Services.

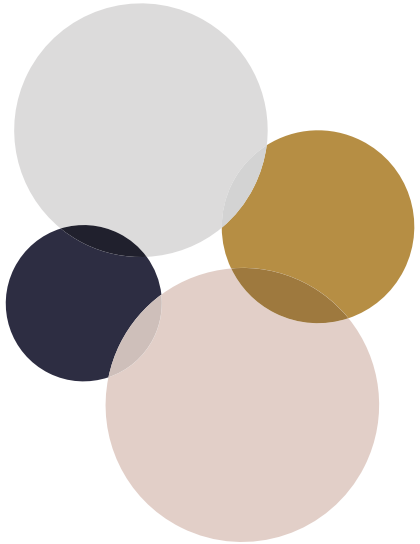
Full EPCI services at all stages of your design

Engineering

- Conceptual to Detail Design
- Package Engineering
- CLOUD High Performance Calculations

Installation Supervision

- Installation Engineering
- Offshore / Site supervision
- On-site decision making



Client Advisory Services

- ITT
- Specifications
- Bid-evaluation
- Design Review

O&M

- Specification
- Interpretation
- Digital Twin Development

Project Management

- Engineering Project Management
- Package Management
- Vendors / Sub-contractors Management

Innovation and Means.

Innovation & Means.

stay at the cutting edge and go beyond ...

2048

Number of CPUs

NAUTILUS DYNAMICS, through its sister brand dynamicscomputing.com has invested in extensive computing resources to better serve its clients. All our HPC servers are located in our datacenter in France.

2+

Internal Projects

Have constantly at least 2 internal R&D projects on going to develop for instance analysis methodologies or IT tools and become more efficient and qualitative in our future works.

7

Software Licenses

NAUTILUS DYNAMICS invests in software to stay up to date and has licenses for the main software used. This includes : Orcaflex, Rhino 7, Orca 3D, BV Ariane, HydroStar, Deeplines ...

Last examples of R&D projects :

- *HydroPanda : A post-processing program in Python able to manage large amount of data from different software.*
- *Nautilus Global Tankers Database : A global and complete database of 30 000+ tankers, categorized and modelled for quick and qualitative use in Orcaflex or other software.*

Contact.

Our addresses

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Information & Quotations on

nautilusdynamics.com

« La mer est tout ! Elle couvre les sept dixièmes du globe terrestre. Son souffle est pur et sain. C'est l'immense désert où l'homme n'est jamais seul, car il sent frémir la vie à ses côtés. »

Vingt mille lieues sous les mers, Jules Verne