

Launch of the new marine weather forecast platform enovOcean



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enovOcean

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As a "Doctor of physical sciences, I worked for many years in the space field. By the late 1990s, the fruits of all space research were more than impressive, but they lacked operationality.

It is from this observation that the desire and the idea of building the NOVELTIS company were born, to make all the data useful with concrete applications and solutions and thus contribute, humbly, to protecting living beings.

It is a high added value niche sector with, always, the passion to create. After 22 years of experience, NOVELTIS has now more than 40 employees: engineers and doctors in space, oceanography, renewable energies, big data, artificial intelligence, etc. who work in partnership with the most famous European space agencies (CNES, ESA, EUMETSAT...), as well as the European Commission and manufacturers.

After developing cutting-edge research and development in weather observation, innovating with the exploitation of little used spatial data, NOVELTIS very quickly acquired a certainty: data is not enough. To build concrete solutions for decision support and risk management, you need high-performance models to correct data and to get reliable fine-scale forecasting. Forecasting has thus become our core business in this field, which sets us apart from our competitors.

Climate change and its impacts are the defining issue of our time; We must already adapt to the consequences of these changes and prevent the risks associated with them. NOVELTIS, thanks to its spatial and environmental expertise, develops solutions to protect life at sea, in the atmosphere and on land.

We provide unique forecasts and we have acquired a know-how of more than 20 years in the creation of our own modeling systems, like the SAVaS service, tested and approved by the French Navy, which is the only 7-day forecasting tool to prevent the risk of extreme and rogue waves.

Thus NOVELTIS has, over the years, created innovative solutions to protect life at sea - human lives but also all the biodiversity - in order to make it easily accessible, we have decided to bring them together in a single intuitive and userfriendly e-platform.

enovOcean is therefore the latest generation weather forecast solution developed for professionals and sea lovers, with more than 60 indicators to characterize the state of the sea anywhere on the globe and with access for all. Making the benefits of science accessible to as many people as possible is also one of the fundamental values of NOVELTIS.

enovOcean is aimed primarily at marine professionals for whom risk management has become a priority. With NOVELTIS exclusive tools and technology, we offer forecasts with unmatched reliability for maritime risks and marine weather conditions such as rogue waves or the power of sea currents.

Our ambition: enovOcean to become The marine weather forecast reference!

(Richard Bru, founder and CEO of NOVELTIS)

NOVELTIS, independent SME with private status, ISO 9001certified and labeled "Confidential Defense", whose head office is located in Labège, near Toulouse, was created in 1998 by Richard Bru, Doctor of Physical Sciences, its founder and current CEO.

With unique know-how in the environmental and sustainable development sectors, NOVELTIS develops exclusive solutions for the characterization and monitoring of environmental phenomena and prevention of risks at sea, on land and in the atmosphere, linked to weather and ocean conditions thanks to its spatial and environmental expertise.

By means of its dedicated information platforms, NOVELTIS is able to provide detailed forecasts of sea states, floods and severe meteorological events, thus helping to prevent risks to property and people. After years of work on different tools and models, NOVELTIS now brings together all its skills and expertise on a single e-platform accessible by everyone and everywhere in the world: enovOcean.

New information e-platform, enovOcean is making possible to anticipate sea state and to prevent the main risks: strong winds, wave heights, rogue waves, 3D currents, ice, extreme weather-oceanic events... Its e-platform provides easy access to complete, clear and detailed information.

enovOcean covers the whole world with unmatched precision and reliability. It uses the most relevant satellite or in-situ buoy data as well as the latest generation forecasting models and offers its users, professionals or individuals, the best decision-making tool in order to protect their activities at sea and potentially their lives.

More than 60 différents indicators to characterize weather and sea-states with:

- An overview of global maritime weather in free access.
- New and exclusive NOVELTIS tools dedicated to seafaring professional.

Forecasts of sea conditions for professionals

Wave risk

An access to a large set of risk maps providing unique information on the dangerousness of sea state conditions, with 7-day forecasts that are updated every 6 hours. Advanced indicators such as crossed sea, rogue waves and steep sea are provided on Cape of good hope for example.

Observations and inter-comparisons

Get access to a large set of satellite and in-situ observations over all maritime areas, as well as to unique inter-comparison functionalities between the different models that are available and between the models and the observations. This inter-comparisons data allow particularly to highlight the accuracy of each forecasting model and help the users to decide which forecasting model is the most appropriate for planning its operations at sea.

Fine-scale

The sea state conditions offered by NOVELTIS at fine-scale are produced by the SAVaS operational system of NOVELTIS including the most advanced forecasting technologies. The SAVaS system was developed with the support of the General Directorate for Armament in France and validated by the French Navy. 7-days forecasts are produced at different spatial and temporal scales and are updated every 6 hours. The information delivered by SAVaS is reliable, accurate, and fast and easy to use.

Sea state conditions are produced based on both the state of the art of wave modelling and wind forcing parametrization. Downscaling (from 1 degrees to 2 minutes) allow to improve sea state forecasts when focusing on an area of interest for particular marine activities like:

- Towing fragile objects
- Secure and protect people, vessels and infrastructures from the unusual sea state conditions
- Provide a decision-making support for operations planning
- Ensure a continuous monitoring of the sea state and its risks

Marine renewable energy

Our Marine Energy Products constitute a real decision-making tool to identify and characterize the most suitable sites for the development of tidal energy.

These unique products are produce by the TidEA system of NOVELTIS that cover all global coastal regions and provides data up to 100 meters deep. For each selected site, our system provides information on the maximum current speeds, the energy potential of the area and the speed threshold occurrence indicators.

The information provided in our Marine Energy Products is validated continuously with different multi-source observations (e.g. in-situ data, elevation data...)

Main benefits

Shipping

- Selection of the safest route, avoiding extreme conditions;
- Choosing the best window to set sails;
- Exclusive proprietary model for rogue waves warning;
- Identifying dangerous seas: steep sea, crossed sea;
- Fuel efficiency.

Offshore operation

- Secure barge transit for commissioning;
- Select the safest period for servicing;
- Heavy lift increase workability.
- Selecting the best time for people transfers;
- Timely unmanning of the rigs in extreme conditions;
- Helidesk motions: selecting the right weather windows;
- Facilitates barge transit and motion;
- Reducing weather downtime.

Marine energy

- Get access to high-resolution tidal atlases;
- Identify the most productive areas for tidal currents;
- Download maps, reports and statistics in seconds.

Marine insurance

- To measure and control the risk of accidents at sea;
- To reduce the risk of losing cargo;
- To challenge the conditions of high risk projects;
- Easy reconstitution of hindcast weather conditions.

Yachting

- Easy to use and to understand weather animations, even for non specialists;
- Possibility to check precise points on your route;
- Select the right weather window for a smoother navigation.