

HIGH TECHNOLOGY IN MERGING DATA

TURBO TACTIC is the fruit of more than 20 years' experience in "Geographical Information Systems" for fishing professionals. With the **TURBO TACTIC** generation, you get the best out of merging data whilst enabling operations and analysis which has never existed before in the fishing industry.

The most convincing example concerns the integration of acoustic data coming from sounder systems giving advanced "Raw Data". Every "ping" is recorded and correlated with the other available data (position, environment etc.). The skipper then has a new and different parameter for fishing traffic and for the database: the echogram and biomass content covering the trajectory. The geographical marking of a particular object (eg. a piece of wreckage) or of a reef can be carried out directly from the contents of the acoustic echogram and can also enable a return towards the original zone with incomparable accuracy.

TURBO TACTIC merges radar data with the Geographical Information System whilst providing an Overlay mode (NetRadar Options or the Koden module) of the highest quality.

CORROBORATION ...

Dominique Faou, skipper of the langoustine trawler "Gwenvidick" in Guilvinec uses the new TURBO TACTIC software.

"The work we do here can be quite delicate, with many changing conditions. With **TACTIC**, I can plan fishing traffic in advance according to the information that I've been able to record in previous weeks. The cartographical analysis of sediment areas is extremely accurate which enables me to place the trawl in optimal areas.

The important thing is to be able to obtain reliable bathymetric and trawl information. **TURBO TACTIC** enables me to make the right choice.

Little by little I can manage to create fairly powerful filters which even integrate **TURBO CATCH** data, and **TACTIC** can propose the best areas to work in."

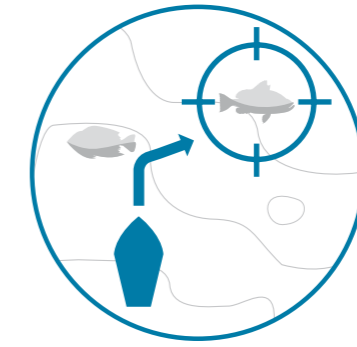
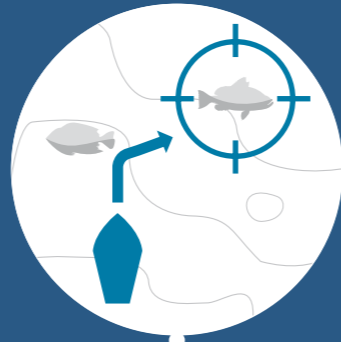
ABOUT SODENA

As a subsidiary of the **iXCore** Group, for more than 20 years **SODENA** has developed and distributed technical navigation solutions (Geographical Information Systems) and shipping data for the extremely demanding professional applications in the fishing industry, the Merchant Navy and the military.

With a presence on every continent through its specialist network, more than 6,000 skippers use **SODENA** products.

The highest level of technology and ISO 9001 certification enables the company to provide for both the French and foreign military.

This unique experience is now at the disposal of all fishing professionals through the new generation of **TURBO TACTIC**.



TURBO TACTIC

SOFTWARE FOR FISHING STRATEGY AND NAVIGATION

SUSTAINABLE FISHING STRATEGY



Credits Photos © Rémi BARANGER



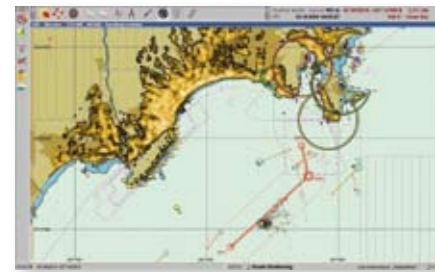
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TURBO TACTIC

Much more than merely fishing navigation software, **TURBO TACTIC** helps the skipper in establishing strategy. **TURBO TACTIC** takes on the entirety of the onboard work process including navigation security, acoustic analysis of detections, the bathymetric and oceanographic environment, fuel consumption, trawl behaviour, **TURBO CATCH** catch declaration results... This makes **TURBO TACTIC** the best fishing yield optimisation tool, whilst ensuring sustainable fishery resource harvesting practices.

NAVIGATION

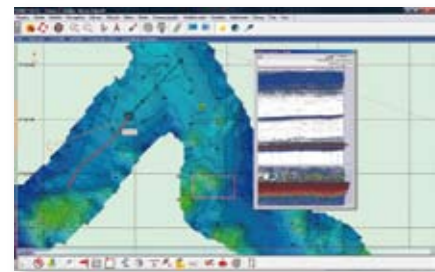


Based on ECDIS software, **TURBO TACTIC** affords the best security and navigation guarantee and also has introduced the new standard ECS (Electronic Chart System) to the fishing industry. This official marine cartographic tool is constantly updated which enables **TURBO TACTIC** to respect IMO standards.

Focussing on all onboard navigation information including radar data, **TURBO TACTIC** offers the skipper essential security information on a

daily basis comprising Overlay Radar, Anti-collision, ARPA, AIS and an interactive anti-grounding tool with the ENC cartographic base.

ACOUSTIC



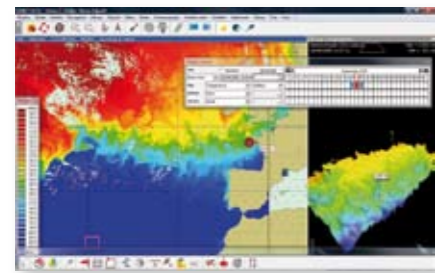
TURBO TACTIC proposes new standards of dealing with acoustic data from single and multi beam echo sounders. The very latest information in a RawData format is recorded to provide an accurate description of the bathymetry and the ocean floor together with a recording and presentation of the biomass.

Depending on the different modules and options chosen, **TURBO TACTIC** simultaneously deals with and records the 112 different beams from

the WASSP multi beam echo sounder providing a hitherto unrivalled quality of information; likewise it is able to operate the multi beam echo sounder protocols (under RawData, Simrad, Kaijo and Marport formats) together with classical sounders using NMEA data.

In this way, the skipper is able to make use of "acoustic" tracing that may be superimposed, on which the powerful filtering tools enable him to focus on the most beneficial zones.

OCEANOGRAPHY

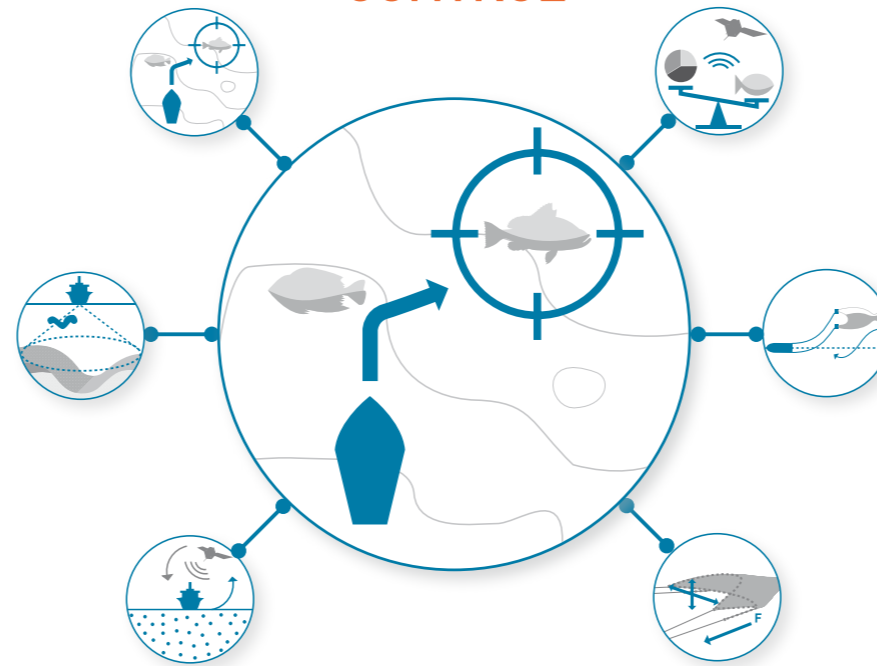


Being the very first fishing software on the market to include oceanographic parameters at the heart of the fishing database, **TURBO TACTIC** enables you to visualise and deal with CATSAT environmental data. The entirety of onboard working conditions (ocean floor, bathymetry, navigation, consumption etc.) and all catches are linked to oceanographic data, which in turn reinforces the analytical power of **TURBO TACTIC** tools.

The skipper has up-to-date forecasts which are indispensable for his navigation strategy concerning the most profitable fishing routes.

CATSAT data (temperature, isotherm, plankton, salinity, weather etc.) is distributed by CLS and THALOS.

OBSERVE ANALYZE DECIDE CONTROL



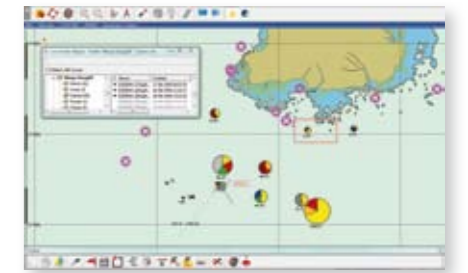
BUILD YOUR FISHING STRATEGY

TURBO CATCH

TURBO TACTIC enables the skipper to study daily production data via **TURBO CATCH**. Over and above the statutory regulations, when connected to the "Statistics" module in **TURBO TACTIC**, **SODENA's** Turbo Catch provides essential data in catch-area research.

Both systems work together and all catch results are linked to the corresponding fishing traffic (track, folder, campaign). The database is thus expanded by way of a new "catch" category.

The skipper is able to geographically visualise catch results according to the numerous criteria which he has input in the powerful **TURBO TACTIC** filter function. For example, he can call up information on the entire catch for a particular species, linking various different criteria such as the date of the catch, the sea area, the folder, the oceanographic environment, conditions on the ocean floor etc.



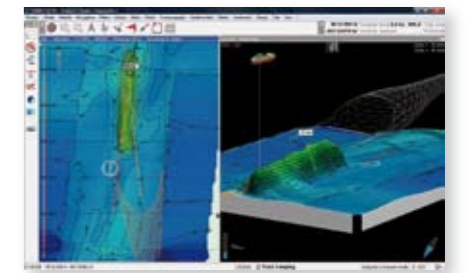
TRAWL CONTROL

TURBO TACTIC provides a noticeable evolution for trawl fishing. The highest quality presentation of trawl behaviour enables the user to optimise the catch vessel's trajectory and placement, as close as possible to a reef or a rock whilst maintaining optimum security.

Whichever sensor system is applied (Marport, Scanmar, Simrad, Geonet), **TURBO TACTIC** completes and calculates trawl information from the sensor thanks to its powerful algorithm.

This also enables the skipper to use less equipment and fuel whilst at the same time increasing productivity.

When the vessel is equipped at the same time with information on the whereabouts of the fish and on which kind of fish (WASSP multi beam echo sounder), the skipper is able to carry out selective and much improved fishing.



TRAWL OPTIMISATION

In partnership with Acruxsoft, **SODENA** proposes a new modelling and trawl optimisation module based on more than 15 years' experience on real onboard vessel measurements together with "Flume Tank".

Associated with powerful hydrodynamic algorithms, the "Trawlvision" module puts into practice a large trawl and net database from the main manufacturers (Morgère, Viking, Poly-ice, Polar, Garrido, LeDrezen, Carmen, Cardomar, Larsen etc).

This helps the skipper to optimise the fishing settings.

Onboard, in real-time, the calculation of fishing attempts and the geometry of the fishing takes into account the various parameters of the vessel (speed, trawl sensors, conditions on the ocean floor etc) and also recommends which settings should be made.

