

CASE STUDY

Operating in the Balearic Islands with 100 PRO and Wassp S3R multi-beam echo-sounder



Unmanned Surface Vehicle

WASSP S3R by FURUNO + SB 100 PRO
in Majorca (Balearic Islands)



The Company

Founded in May 2019 in Barcelona as a spin-off of the GPAINNOVA Group, GPASEABOTS' activity revolves around the development of technologies for exploring and preserving the marine environment, such as USVs (Unmanned Surface Vehicles) and buoys. Just a few months after its creation, the company was granted the Fuera de Serie ("state-of-the-art") Design & Innovation Award, promoted by one of the most important publishing groups in Spain, in the category of Sustainability.

In 2020 and 2021, GPASEABOTS deployed more than 100 buoys to study the coastal waters on beaches in Eastern Spain and market the SB 100 PRO

model, a multipurpose marine drone for all kinds of tasks in sheltered waters. Depending on the payloads, this USV can be used in the fields of hydrology, water analysis, research, Search & Rescue (SAR), mooring inspection and water surface cleanup tasks. Likewise, its use allows access to restricted areas, in which navigation may be restricted, difficult or dangerous.

Another product developed by GPASEABOTS is SB 100 Cleaner, specially designed for sea surface marine litter cleaning in ports and marinas.



The Opportunity

Naval robotics can replace tasks that have always been carried out by traditional methods, which have a high ecological impact and expensive operating costs.

USVs are becoming widespread in several areas in the naval sector. In this real case study, we present a need that is shared by many ports: Mooring inspection in harbors and marinas.

Payloads

GPASEABOTS' SB 100 PRO is the most versatile USV platform on the market for sheltered waters activities. It is an indispensable tool for a fast, efficient and precise work.

Both the operating cost and its environmental footprint are extremely low, and it allows to expand the range of possibilities in the field of data acquisition.



WASSP S3R

GPASEABOTS' SB 100 PRO USV is a fully integrated kit which includes all the core components required for a multi-beam survey operation, designed to ensure functionality, ease of use and cost effectiveness, all the while achieving accuracies required by international survey standards such as IHO S-44 Standard 1a and Special Order.

INCLUDES: S3 with a Processor DRX IP66, Transducer WBFT 90-190kHz, SBG Ellipse Dual RTK INS (heading, position, pitch & roll, heave), Mini SVS Valeport, CDX, RPM and survey licenses.

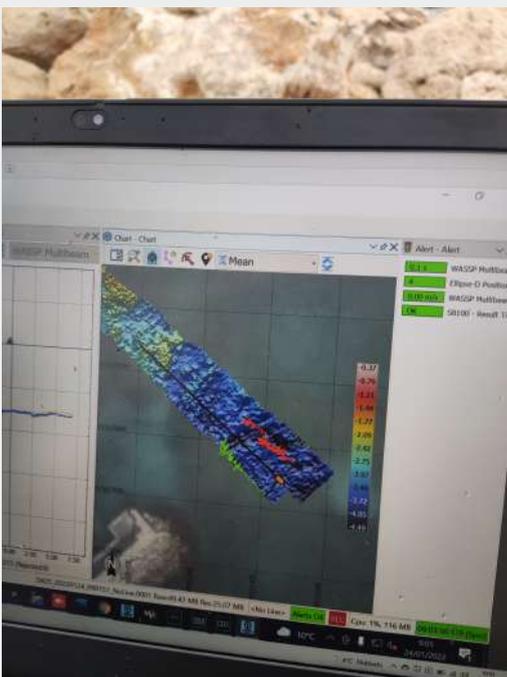


Operation

Planify Mission & Deployment

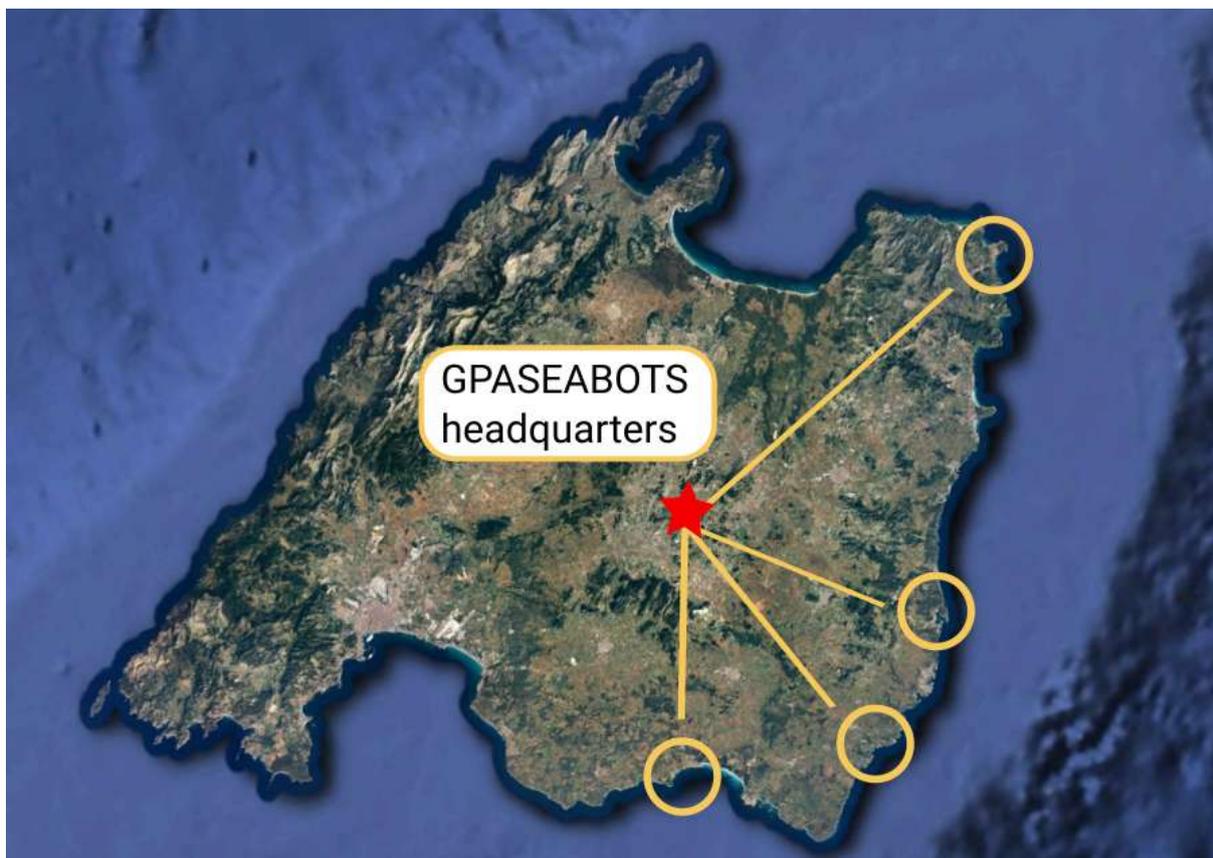
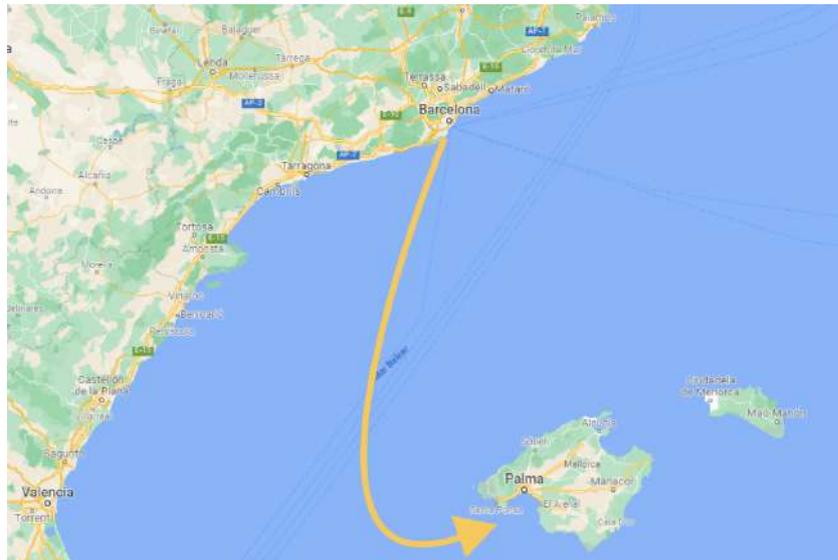


Acquisition Time

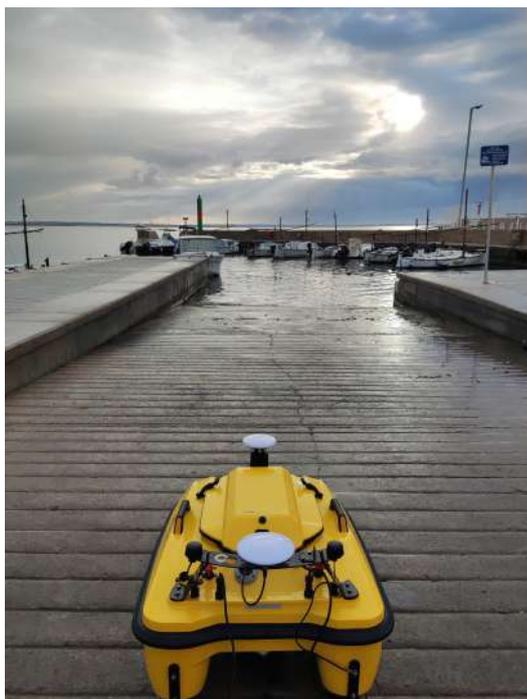


Location

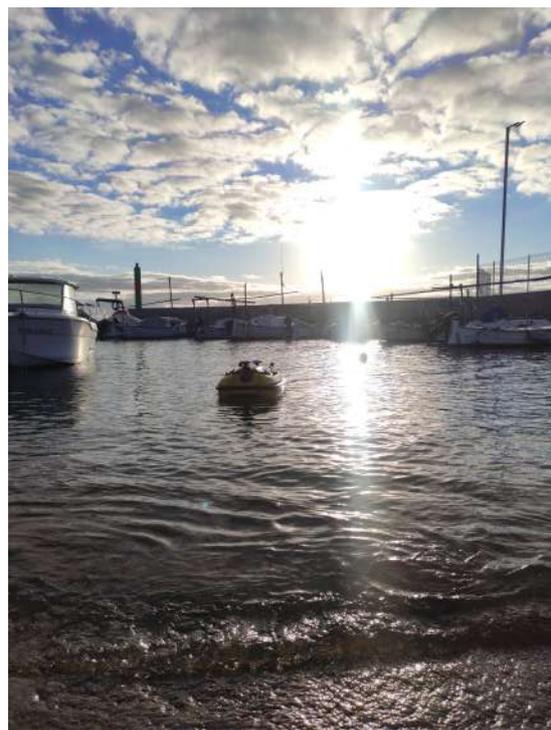
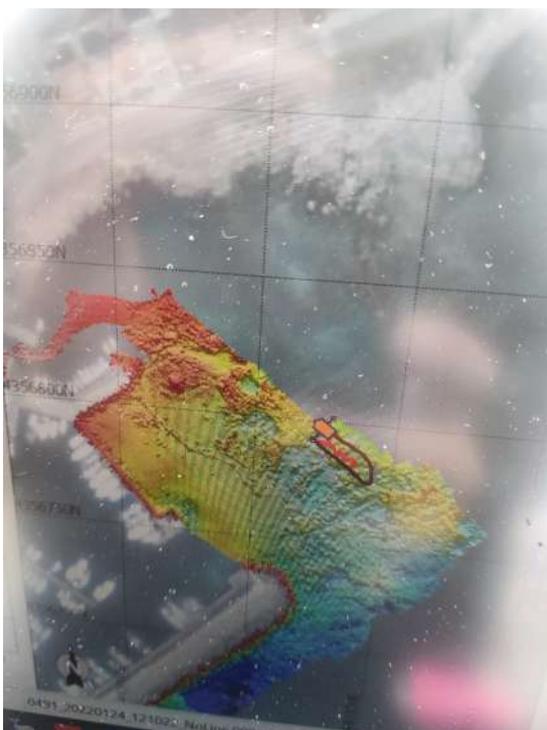
Any journey from the Iberian Peninsula to the Balearic Islands requires transportation by ferry or by air. In this case, due to the small dimensions of the SB 100 PRO equipment, we travelled by ferry to Majorca with the vehicle on board. This allowed us to move around the island freely with the SB 100 PRO, being able to carry out different services along the Balearic coast.



IMAGES



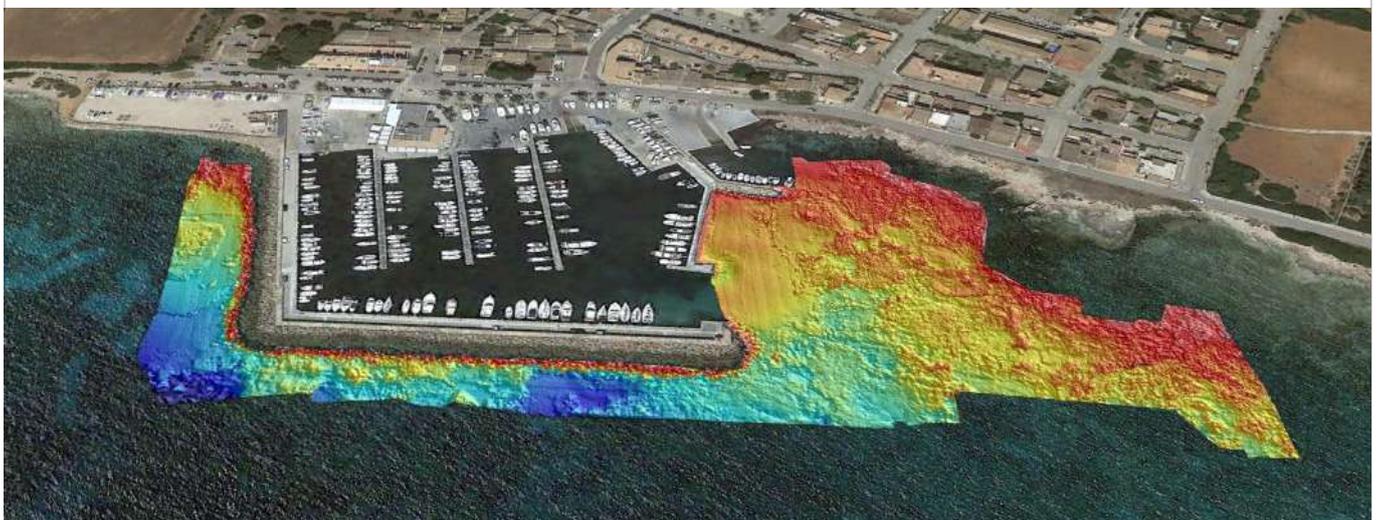
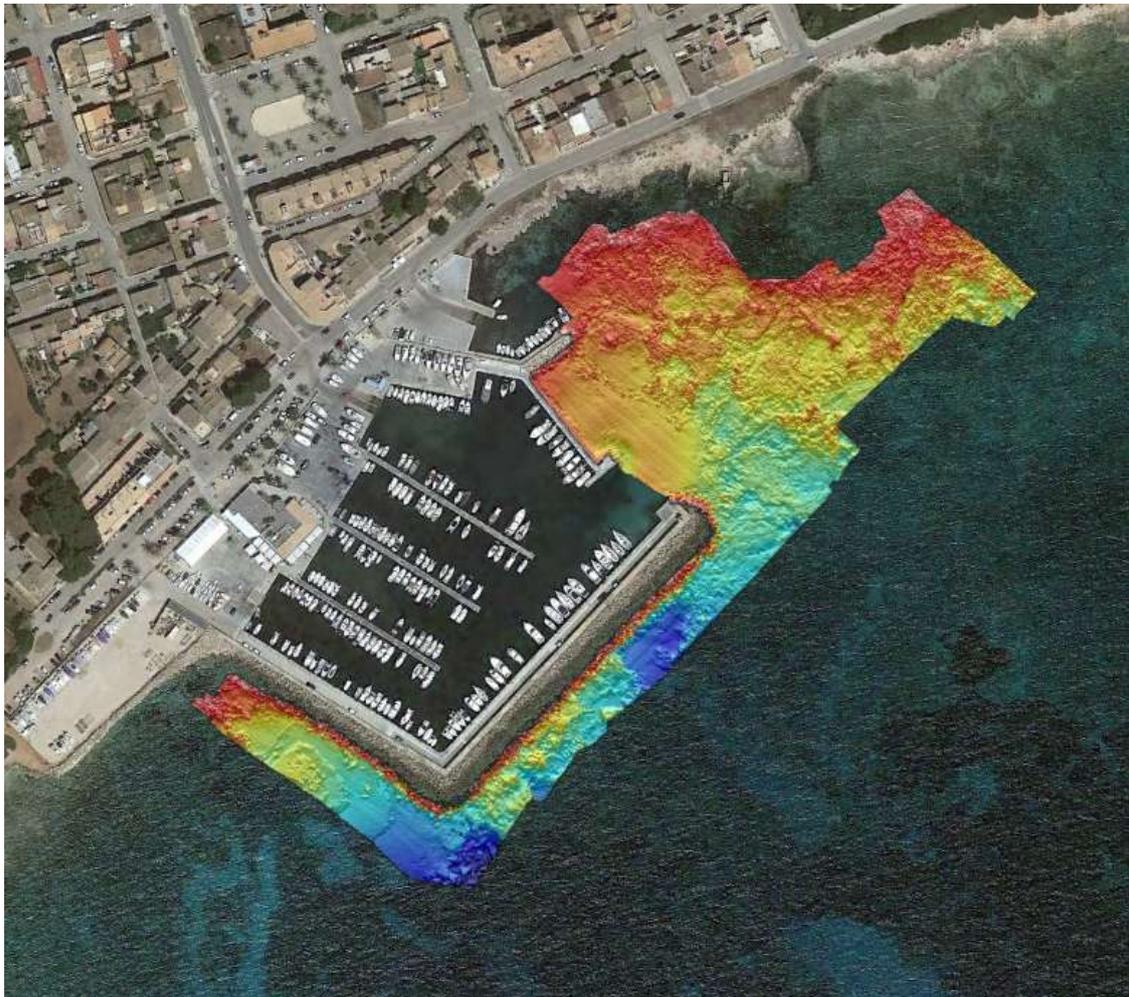
IMAGES



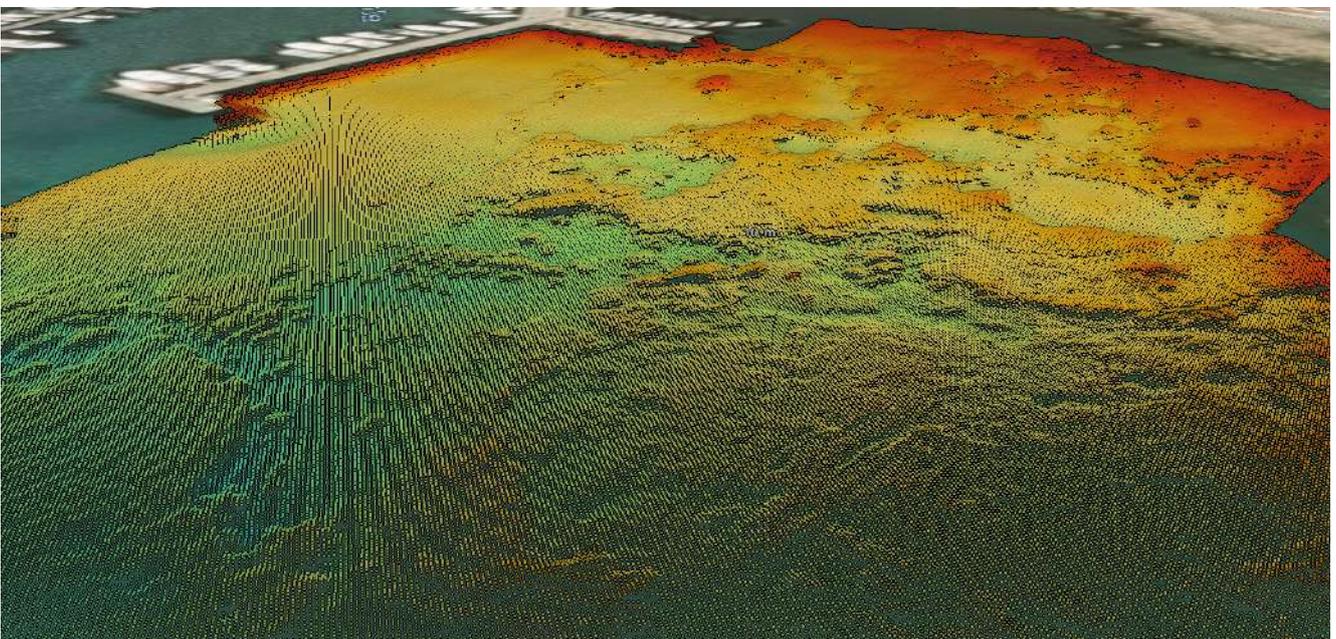
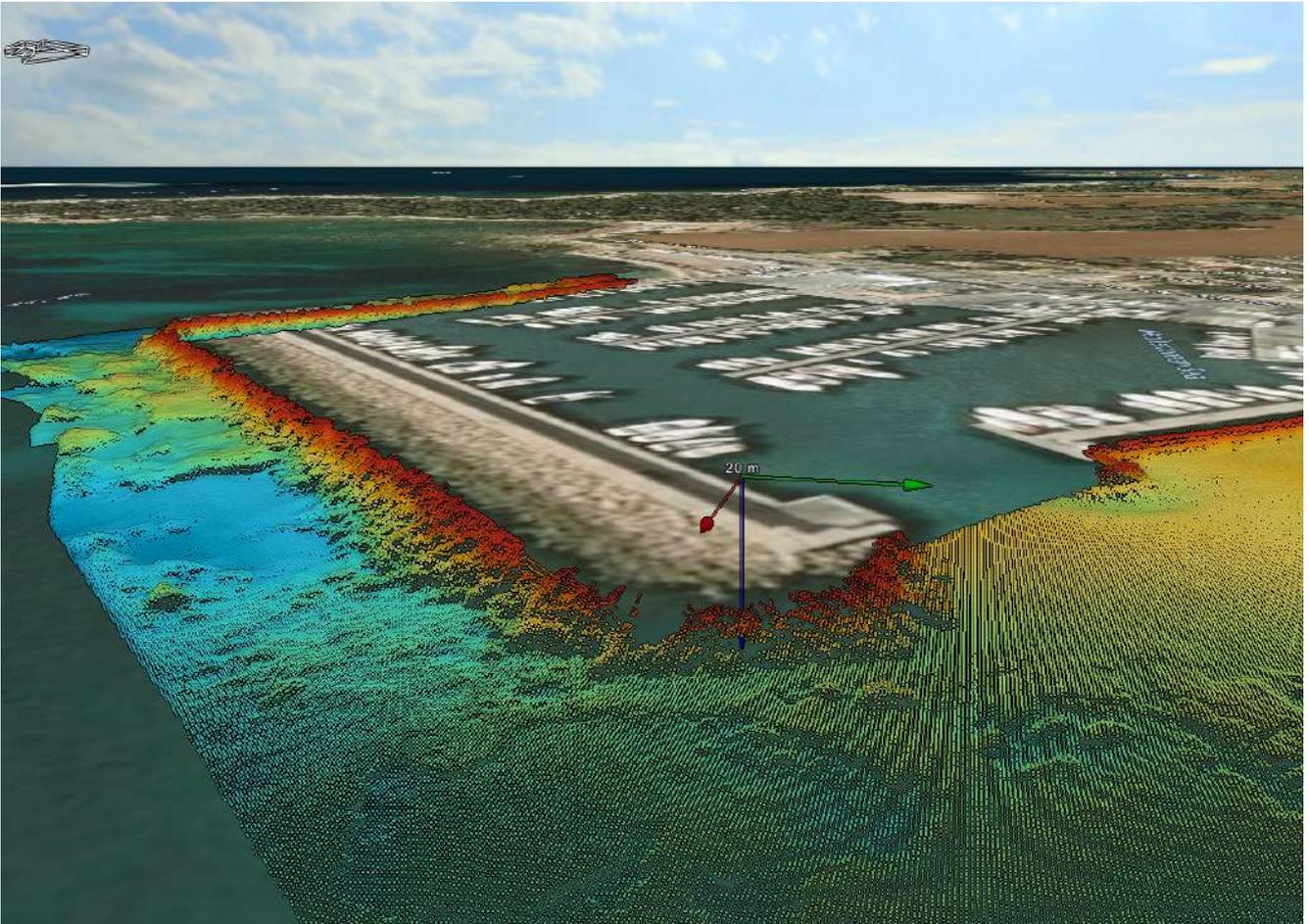
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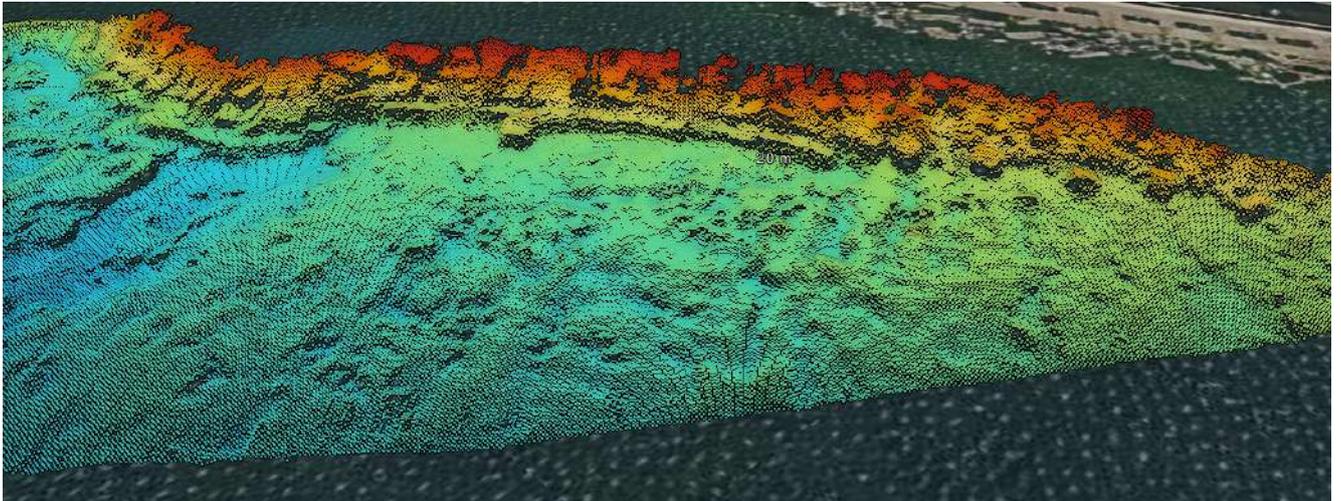
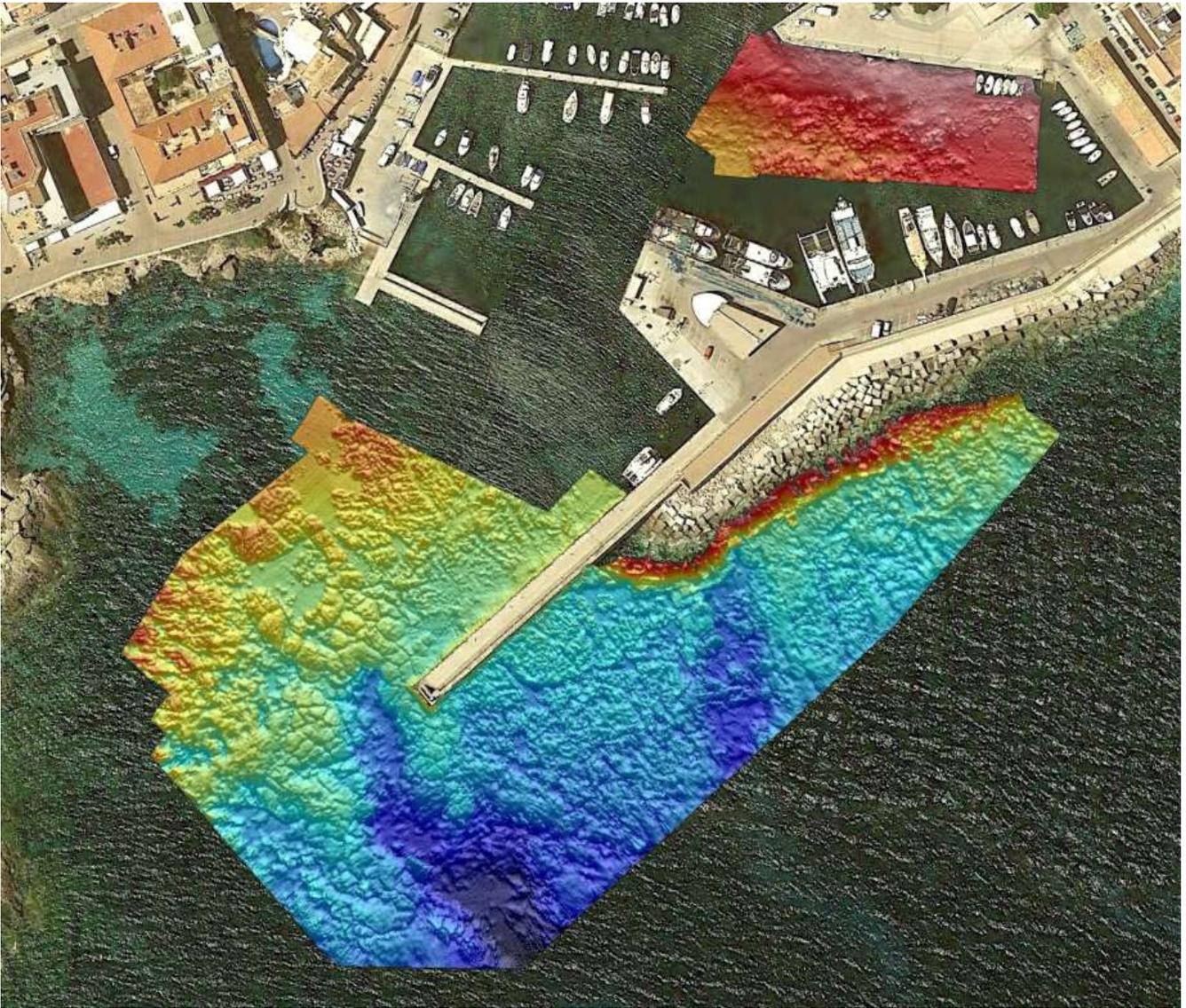
RESULTS



RESULTS



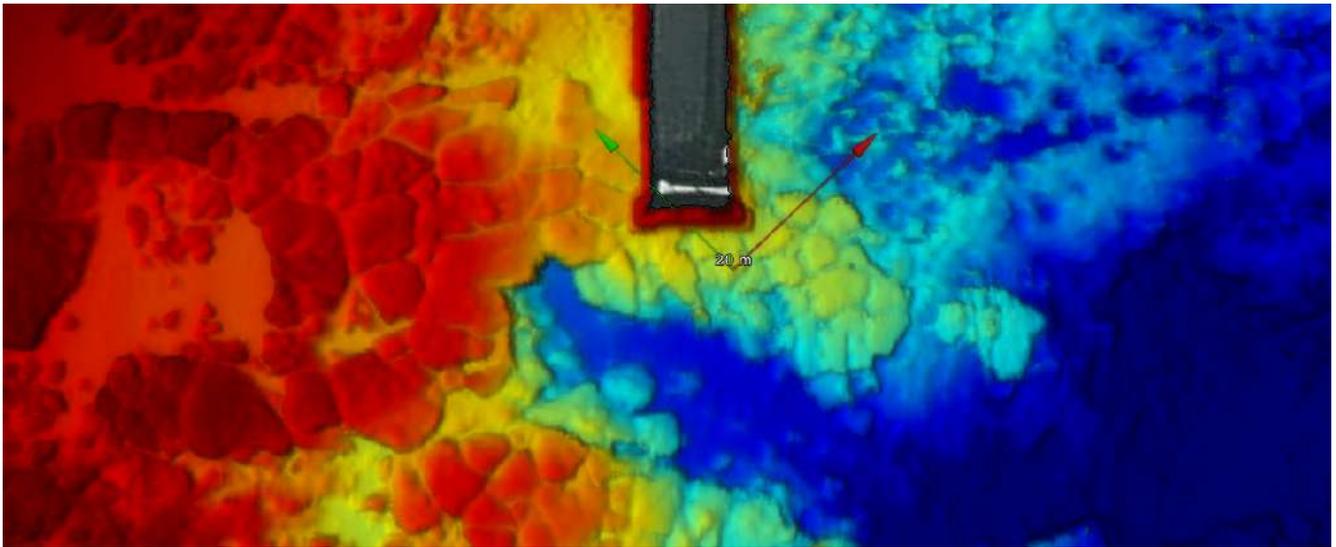
RESULTS



RESULTS



Results



Conclusions

The multipurpose **USV SB 100 PRO** equipped with a WASSP S3R multibeam echo-sounder offers an unbeatable performance. We offer a complete pack with all the necessary instruments to carry out missions while increasing potential applications in several marine sectors. It can carry out control and monitoring of dock constructions, bathymetrics surveys, draught control, dredging, volume calculation, inspection of structures and locations of submerged artifacts. The INS SBG Ellipse Dual Antenna and the SVS Valeport included on it ensure accuracy and data quality.



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