planetek italia

Continuous Monitoring of Coastal Waters with Rheticus® Marine for The Blue Economy
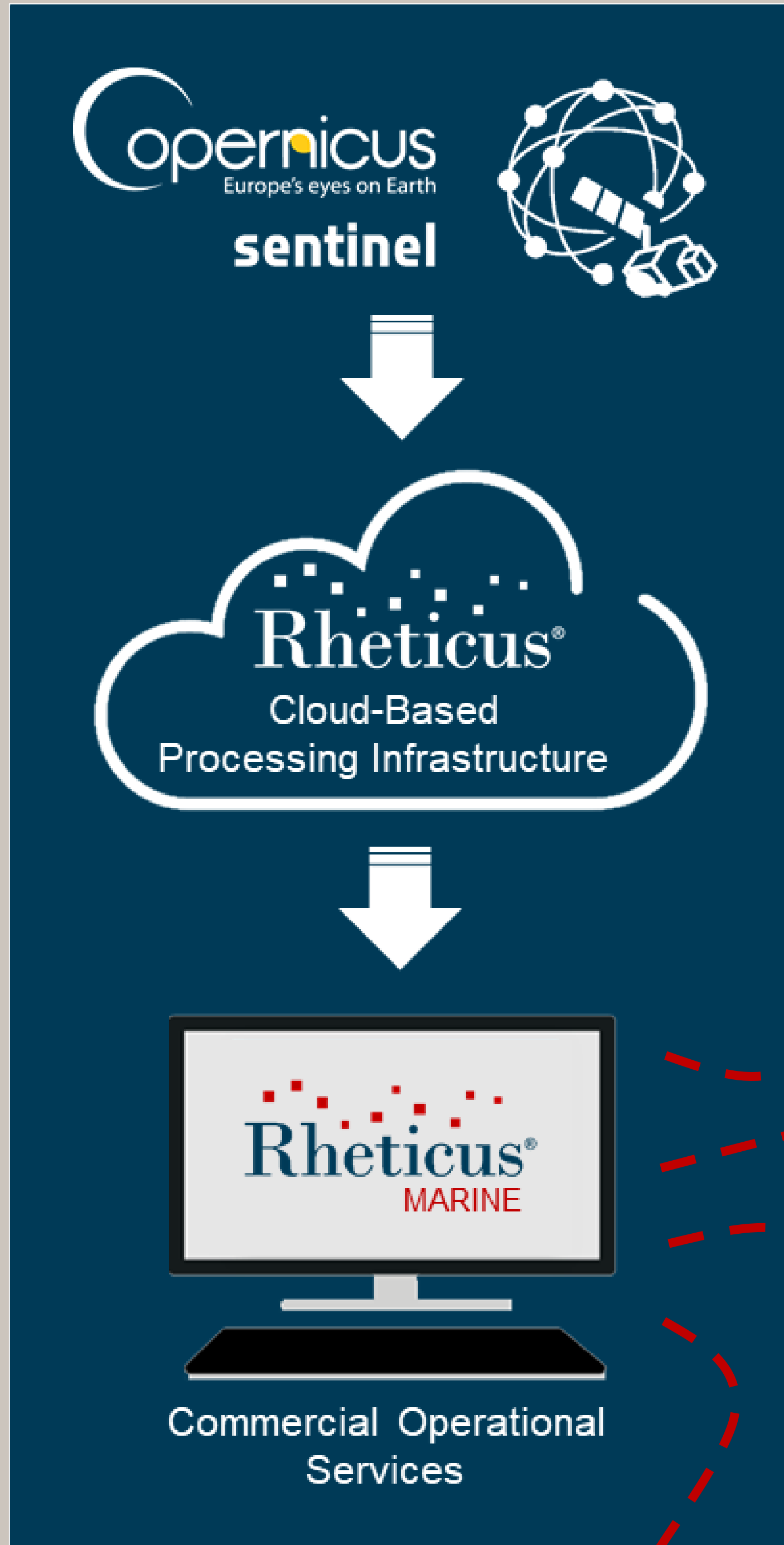
SUMMARY

Rheticus® Marine

is an automatic cloud-based geoinformation service designed by Planetek Italia to deliver fresh and accurate satellite-based information for monitoring coastal seawater quality and marine resources.

It is based on satellite open data, such as the ones from Sentinel-2 and Sentinel-3 missions and from CMEMS (Copernicus Marine Environment Monitoring Service) and other sensors like AQUA/TERRA.

Authors

Daniela Iasillo
iasillo@planetek.it

Massimo Zotti
zotti@planetek.it

Antonello Aiello
aiello@planetek.it

Giulio Ceriola
ceriola@planetek.it

Planetek Italia S.r.l.
www.planetek.it

pkm106-155-1.0

Rheticus® Architecture

Copernicus Europe's eyes on Earth — **sentinel**

→

Rheticus® Cloud-Based Processing Infrastructure

↓

Rheticus® MARINE

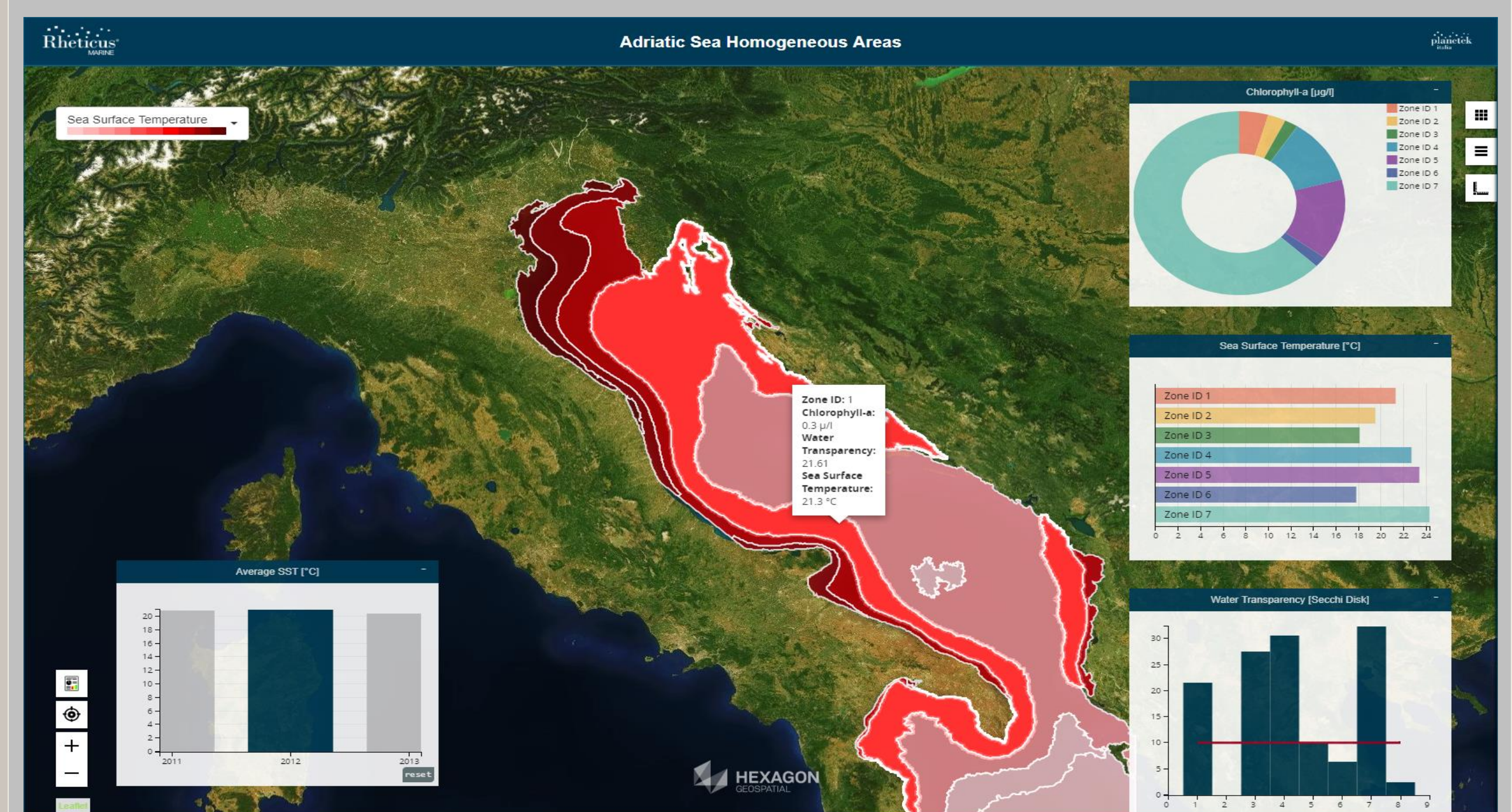Commercial Operational Services

Rheticus® Marine within the EUGENIUS Project

Within the EUGENIUS network (European Group of Enterprises for a Network of Information Using Space), which is a H2020 project for providing viable market-driven EO services in various European regions, Planetek Italia is responsible of the marine service portfolio consisting of the Rheticus® Marine services.
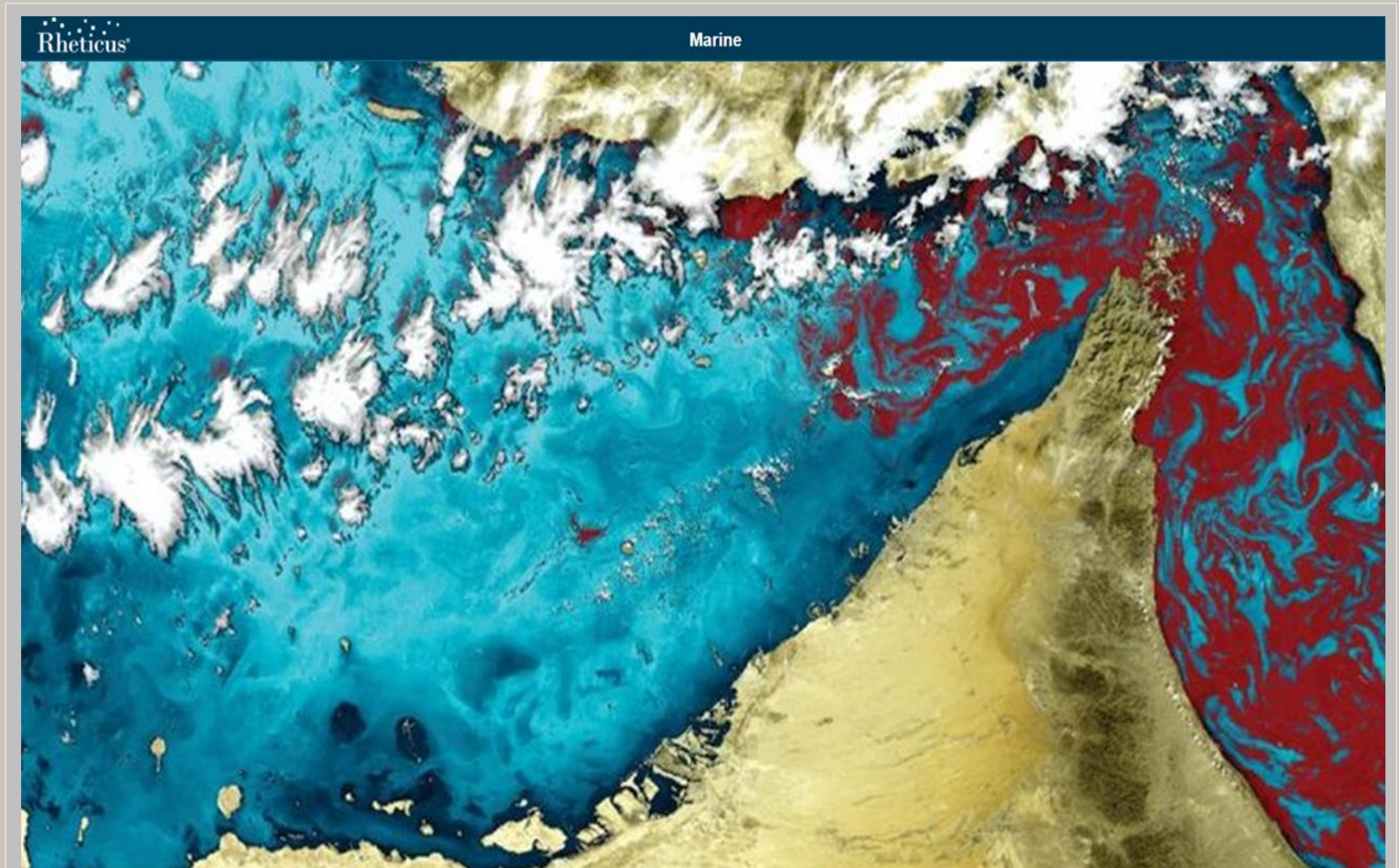
Benefits

- Automatic cloud-based geo-information service platform
- Near real-time coastal water quality monitoring
- Maximum interoperability
- Easy visualisation
- Operational services
- Cost and time saving
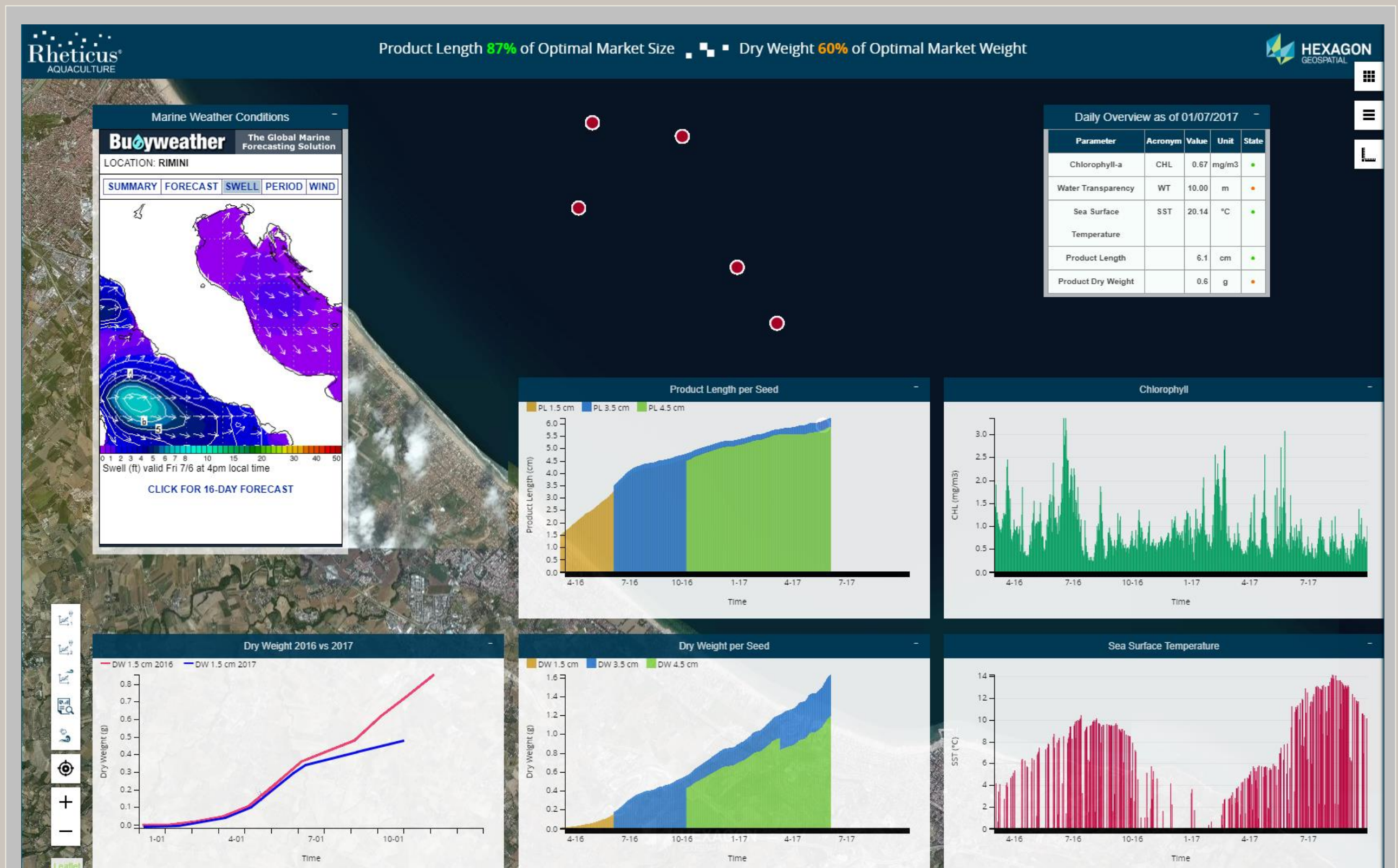
Support for Member States reporting duties

Rheticus® Marine uses CMEMS derived historical series of water quality parameters (e.g. chlorophyll and transparency) to identify areas that are homogeneous in terms of eutrophic behaviour and eligible for determining the Marine Strategy Framework Directive zones where assess the Good Environmental Status.

Support for Desalination Plants

Combining Sentinel-2 and Sentinel-3 data, Rheticus® Marine supplies near real-time alerts to plants' operators about occurrences of harmful algae bloom (HAB), together with other water quality parameters, in coastal areas close to plants' water intake. The service supports operators in decision making in case of risky situations.

Support for Smart Aquaculture

Rheticus® Aquaculture provides aquaculture farmers with daily information designed for the optimal management of fish and shellfish farming activities in marine waters, aimed at increasing production and profitability. The main benefits include determining the optimal time for harvesting and selling products by estimating the growth rates of livestock and monitoring sales prices on the markets.

Rheticus® Monitoring the evolution of our Earth

Live data and services on www.rheticus.eu