

European project EfficienSea2

Smart Buoy deployed in Polish waters

The European project EfficienSea2 is testing a new Smart Buoy which will enable vessels to have improved navigational services and to receive data in support of operations when reaching port.

The Maritime Office in Gdynia, Poland, is testing a newly developed Smart Buoy which will allow port authorities and ships to collect information about weather, wave height and depth of water and then share that information with nearby users in a completely autonomous system.

Development of the Smart Buoys has been based on user requirements from pilots and VTS officers, and aids to navigation administration staff.

These Smart Buoys, which include an AIS/GPS module, hydro-meteorological sensors and GSM/radio hardware able to connect to cellular networks, have already been laboratory tested.

They are now ready to be subjected to a marine environment, explained Marek Ledóchowski, Navigation Manager at the Maritime Office of Gdynia: *‘We are very excited about the buoys being tested at sea and we look forward to the results.’*

‘If this final test is successful, the buoys we have developed here in Gdynia will be deployable all over the Baltic Region soon and will help ports increase the safety for ships approaching the port or another area that is difficult to navigate.’

It is understood that the system includes a radar target enhancer which will allow it to be applied far away from shore AIS or VTS coverage. The buoys can optimise their own power consumption by changing the light intensity or switching on/off the radar target enhancer for a specific time.

Part of a wider network

The Smart Buoys are expected to be connectable to the so-called Maritime Cloud, which is the innovation centrepiece of the EU EfficienSea2 project. Maritime Cloud is a communication framework, which allows mariners to find and connect to authenticated services based on their specific location and need.

Buoys will constantly gather and forward relevant information about the local conditions and it will thus be possible for vessels that have never berthed in, for

example, Gdynia before to find all the information they need in the Smart Buoy service through the Maritime Cloud.

For Marek Ledóchowski this represents a major step forward. He added: *‘Ports will be able to offer a service providing increased safety to mariners without them needing to have local knowledge or communicate excessively with the shore. It will be a service for all to access, and it will save crucial capacity on the mariner’s part so that he or she can focus on navigating the ship.’*

The Maritime Office of Gdynia is hosting a public event on 30 and 31 August to showcase their results.

More information on the project can found at: www.EfficienSea2.org

Picture caption

Component parts of the e-navigation package on the Polish Smart Buoy.

Illustration kindly provided by the Maritime Office in Gdynia, Poland and the European project EfficienSea2 ©.