UKHO White Paper Identifies Key Drivers for Maritime Industry

The UK Hydrographic Office (UKHO) recently presented a white paper on the opportunities and challenges facing the maritime industry as it transforms through decarbonization and digitalization. The paper was presented at the sixth International Hydrographic Organization (IHO) Council meeting in Monaco, which was attended by representatives of 26 countries. The meeting focused on the maritime sector's transition to digital data services and the development and implementation of the new S-100 data standards.

The IHO's S-100 data standards will greatly enhance our understanding of the ocean and the portrayal of the maritime environment. S-100 will provide a coherent framework for high-fidelity maritime data applications, which are fundamental to the shift from Electronic Navigational Charts (ENCs) to digital geo-information systems. Those systems will be capable of receiving and processing information on a wide range of applications, including imagery and gridded data, high-density bathymetry, dynamic tidal monitoring and surface currents.

Decarbonization and Digitalization

As requested by the IHO, the UK's National Hydrographer, Rear Admiral Rhett Hatcher, presented a White Paper on behalf of the UK Hydrographic Office (UKHO) that sets out the key drivers influencing the shipping industry: decarbonization and digitalization. Reducing shipping's carbon emissions and increasing operational efficiency will require harnessing the latest innovation in navigational standards, such as the growing availability of high-speed internet at sea, integrated bridge systems, machine learning and artificial intelligence. Decarbonization and digitalization are shaping the future of maritime navigation, encouraging organizations to adapt and develop new solutions that meet the evolving needs of their customers.

The digitalization of onboard systems, the rapid growth of the Internet of Things and the improvements in broadband communications increase the potential for smarter navigation, and for the number of connected solutions that the industry adopts. Decarbonization has become a global imperative and a priority for governments, companies and society at large, which are now making commitments and increasing efforts to close the gap to net-zero emissions and create a sustainable maritime industry. A younger workforce at sea that is fully conversant with a digital world increasingly expects the sorts of connected services that it experiences on land.

Meeting Digital and Sustainable Needs

The UKHO's White Paper sets out four themes for successfully meeting the evolving digital and sustainable needs of the mariner. Firstly, 'resilience' to create assured, secure and reliable services for mariners today and tomorrow, followed by 'sustainable', ensuring we deliver solutions that enable efficiencies in route planning, analytics and voyage optimization. The third is 'data solutions', which involves making the most of enhanced technology and connectivity between ship and shore to increase the speed at which we gather data on the marine environment. Lastly, 'together' is about collaborating with industry partners and users to research and innovate, learning how to unlock the potential of S-100 data services.

In Monaco for the sixth IHO Council meeting: (from left to right): James Harper, IC-ENC general manager; Helena Patton, IHO strategy manager; Clare Lain, head of international bodies and technical engagement; Rear Admiral Rhett Hatcher, national hydrographer & director of data aquisition and defence; and Jake Thacker Pugsley, MA to Rear Admiral Rhett Hatcher. (Image courtesey: UKHO)