TECHWORKS MARINE LTD.

Greater Awareness of Coastal Environment

TechWorks Marine is based in Dublin, Ireland, from where we service clients worldwide in the provision of oceanographic products and related data services. Our expanding team has a diverse range of skills relating to electronic engineering and marine science as well as mechanical engineering and earth observation.

TechWorks Marine is a privately owned SME, founded in 2002 by Charlotte O'Kelly (managing director) and Philip Trickett (technical director), which develops data loggers for use on multi-sensor oceanographic data buoys in the marine sector.

The TMBB range of data acquisition and transmission systems are core to all the integrations supplied to clients (data buoys and other data platforms). Over the last 12 years we have grown the business from 2 to 12 staff and from an Irish client base to an international one, servicing clients across Ireland, the UK, France, Norway, Sweden, the US and as far afield as Tonga.

"When we initially started the business we offered our clients bespoke data acquisition systems and integrated them with a variety of sensors depending on the clients' applications. Today we offer a range of data acquisition systems to our growing client base as well as fully integrated data buoys for coastal and offshore applications. In addition, we offer full project management and consultancy services around metocean equipment deployment for sectors such as marine renewables and coastal engineering. We are also expanding into Earth Observation and modelling, and integrating these areas with our original core business to create exciting new products and opportunities", explains Charlotte.

Who we Are

"We aim to consistently deliver operational data platforms that deliver at least 98% data return over 24 months or more. At the same time, we are improving and upgrading both our technology and methodologies to ensure data quality. Remotely monitoring and controlling platforms as well as ensuring our staff deliver world class metocean surveys in the harshest of environments with 98% data return or more are core to our business success."

We currently service a range of different industries:

· Marine Renewables. Current and wave equipment, deployment activities, data analysis, resource assessment, numerical modelling, earth observation, hydrographic surveys, ROV operations

· Ocean and Environmental Science. Water quality monitoring, current and wave equipment, deployment activities, data analysis, numerical modelling, earth observation, GIS services

· Coastal Engineering. Current and wave equipment, deployment activities, data analysis, numerical modelling, earth observation, hydrographic surveys, GIS services

· National Infrastructure. Data buoy networks, centralised web-based buoy management and data visualising systems

· Aquaculture. Water quality monitoring, early warning systems, ROV operations, numerical modelling, earth observation, hydrographic surveys

The TechWorks Marine Black Box (TMBB) range of data acquisition and transmission systems is the core of all integrations we supply clients (data buoys and other data platforms). In recent years we have delivered a number of complex monitoring systems for key clients

such as SmartBay Ireland and the Swedish CoDAS data buoy network. In 2015, we will be providing a buoy network to Irish Water, the national water agency. We plan to further expand this market internationally in 2015. Other areas of expansion include the provision of metocean services, with our increasingly large equipment pool to ensure we can serve clients in a professional and timely manner internationally.

One of our new areas of interest this year is commercialising our Earth Observation and modelling service portfolio. Over the last 3 years, through a number of European Space agency projects, we have built up a team of four Earth Observation and numerical modelling experts. In 2014, we completed the development of our suite of water quality products, which are now commercially available. We plan to launch a range of forecast and hindcast services aimed at the marine renewables area (offshore wind, wave and tidal sectors) later in 2015, based on EO data and modelling. The integration of Earth Observation, modelling and in situ products and data services has huge potential, as we can now offer a complete service including fully validated data products in any area of interest. To complement this, we have developed the CoastEye (coasteye.eu) web portal through which users can access and analyse our data products in an easy to use, intuitive way.

International and Global Scope

Our multidisciplinary team works closely with our clients to ensure that we deliver cost effective de-risked solutions for their operations. We are developing relationships with local partners in key overseas markets, to tap into the huge global market for real-time integrated data buoys. To date, most of our larger sales have been international, and although we value and are looking to increase our activities in Ireland, our focus is very much an international one and will continue to be so.

We strongly believe that being able to offer our clients a full end to end service from equipment provision to secure web-based data service is essential to our future growth internationally. In the world we live in, people expect to be able to access a diverse range of data from remote coastal or offshore buoys in an easy to use intuitive way. We provide the ability to set up the network remotely, add and remove buoys when necessary as well as the micro management of buoys such as sensor swap-out and upload of new calibrations, and all the Quality Control which goes with it. Sensor technology is also becoming more cost-effective, which will in time generate growth in the deployment of long-term operational buoys by national organisations to commercial ones, for example in the case of offshore windfarms.

The Future

To consistently deliver operational platforms that operate at least 98% data delivery over 24 months or more is challenging at the best of times, but this is what we in TechWorks Marine aim to deliver and have proved with existing clients. At the same time we are always improving and upgrading both our technology and methodologies to ensure data quality and remote monitoring and control of platforms as well as ensuring our staff deliver world class metocean surveys in the harshest of environments with 98% data return or more.

The expansion and development of the marine renewable energy sector is an exciting one in terms of growth potential globally. We have been involved in this sector for the last 8 years and have seen huge changes. We are living in exciting times, there is a shift towards greater awareness of our coastal environment, which is going to drive monitoring programmes and the way we approach and deliver monitoring solutions. As a company focused on integration, control and data access for both temporal and spatial data we look forward to growing internationally over the coming years.

---

https://www.hydro-international.com/content/article/greater-awareness-of-coastal-environment