KTI
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Harnessing R&D Supports in the Marine Sector

Unlocking Knowledge Transfer Webinar Series

November 2021

KTI's webinar on harnessing R&D supports in the marine sector featured panelists Liam Curran, Senior Technologist at Enterprise Ireland; Tomas Flanagan, CEO of ÉireComposites; John Murphy, CEO of 8 West Consulting and Jimmy Murphy, Lead of the Lir National Ocean Test Facility at the MaREI research centre.

Moderated by Vincent Wall, Business Editor at Newstalk, the theme of sustainability underpinned the event. The discussion opened with Liam Curran speaking about innovation activity within the Irish marine sector. In addition to his role at Enterprise Ireland, Liam is a coordinator of the Marine Ireland Industry Network (MIIN), a steering group comprised of marine sector companies, state organisations, research groups and higher education institutions. Liam explained how the Irish marine sector is geographically dispersed and the network seeks to stakeholders together, encourage collaborations between companies and keep stakeholders up to date with what's happening in the sector.

Liam emphasised the critical importance of engaging in marine research and development to decarbonise the energy supply system in Ireland, by turning to marine renewables such as offshore winds. He also described the importance of remote monitoring & ongoing maintenance of platforms in the sea, something that can be achieved by innovating new IoT/data acquisition systems. Overall, in his view, Ireland has a strong technological skillset which needs to be applied to the marine sector.

8 West, a software communications company working across multiple sectors, offers a wearable, sensor based IoT 'search and rescue' device called SafeTrx Active. SafeTrx Active uses LTE-M technology which allows for a long battery life, long radio range and the ability to work through poor signal strength at sea. This device is being used in a number of ways across the marine sector. For example, to keep track of seaweed farmers' locations and to monitor any deployed IoT infrastructure nearshore, with an approximate range of 25km. John Murphy of 8 West spoke about how the company expanded its market by working with the Irish Coast Guard to develop the SafeTrx device after networking with international Coast Guards looking for a search & rescue solution. He remarked on how Ireland is adopting new global telecommunications standards such as narrow band IoT and low power wireless area networks, which are useful for effectively monitoring platforms offshore.

ÉireComposites is a company that manufactures resilient, composite materials for many sectors, including the marine. These include wind turbines, foils, wind energy devices and tidal and wave devices. ÉireComposites is involved in two floating wind research projects with support from Europe's Horizon 2020. Tomás Flanagan of ÉireComposites noted the challenge in making devices suitable for offshore application, particularly in rough sea conditions and explained that tidal energy is predictable for years to come and as such, can be the renewable energy source to balance the lack of wind and solar energy.

The Lir National Ocean Test Facility is based at MaREI, the SFI research centre in the energy, climate and blue economy sectors. It focuses on testing offshore marine technologies at scale. The test facility de-risks the technologies, the majority of which are floating platforms, before offshore deployment. Jimmy Murphy spoke about how the test facility has many different tanks available for

companies to use for R&D, for example, testing tidal energy and wave energy as well as many other technologies. He went on to explain how marine technologies must be tested at scale before deployment and that any technologies made for non-marine use will need to significantly be tweaked to withstand marine conditions. Marine technologies are tested at a scale of 1:30 to Atlantic Ocean conditions in MaREI's tanks, they are then tested at quarter scale in Galway Bay and then at a full-scale test site in Belmullet, Mayo. The biggest tank in the facility is 35m long, 3m deep and 12m wide with the ability to generate waves of 1.2m in height. Jimmy noted that wave energy is a more difficult technology to bring to commercialisation due to the rougher conditions it needs to withstand.

The final webinar for 2021 in the KTI Unlocking Knowledge Transfer series will take place on the 7th of December at 11am where featured panelists will be looking back on the performance of the Irish knowledge transfer system during this challenging year. Register now