Interreg North-West Europe
European Regional Development Fund

Ocean Power Innovation Network

seai Sustainable Energy Authority of Ireland
CATAPULT Offshore Renewable Energy
DMEC
Fraunhofer IEE
Scottish Enterprise
sirris driving industry by technology
WEAMEC Marine Energy

The **Ocean Power Innovation Network** (OPIN) is a cross-sectoral network that aims to accelerate the growth of ocean energy and its supply chains across North West Europe. Launched in 2019, the network has attracted more than 500 members from 35 countries from all over the world.

1500

Attendees

OPIN organised close to 40 events; **over 1500 people attended OPIN workshops, webinars & 3 symposiums**, which provided them with latest insights into technology and developments in the offshore renewable energy sector.

36

TAP's

OPIN provided support to **36 SMEs via the Technology Assessment Process (TAP)**, an evidence-based assessment of their technology conducted through an informal interview process by a team of OPIN experts.

5

Collaborative Innovation Groups

OPIN also supported SMEs and research institutions through **5 Collaborative Innovation Groups**, working together to solve common barriers to deployment of ocean energy.

KEY PROJECT INFORMATION

Project Title
Ocean Power Innovation Network - OPIN

Dates
25/10/2018 – 30/09/2022

Total Budget
€2.4 Million

Financial Support Contributed by Interreg NWE
€1.4 Million

Lead Organisation
SEAI (Sustainable Energy Authority of Ireland) (IR)

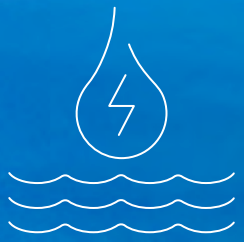
Partner Organisations

- Scottish Enterprise (UK)
- Offshore Renewable Energy Catapult (UK)
- Sirris, the collective centre of the technological industry (BE)
- Ecole Centrale de Nantes (FR)
- Dutch Marine Energy Centre (NL)
- Fraunhofer-Gesellschaft zur Förderung der angewandten Forschung e.V. (GE)

Technology Assessment Process (TAP)

TAP – Technology Assessment Process was designed to support both the developers in the ocean sector who were looking to develop their technology and the developers in other sectors who were looking for opportunities to transfer technology into ocean energy. It offered an analysis of the development & support needs of SMEs, in which OPIN partners discussed design principles, opportunities to de-risk onward development and the route to commercialisation (product to market) with the technology developer.

During the project, OPIN received a total of 49 TAP applications from 9 different countries. Following the completion of their TAP, **80%** of recipients went on to test/develop their technology further, **60%** increased their TRL Technology Readiness Level and **40%** released new products to the market.



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Increased their TRL Technology Readiness Level

40%

Released new products to the market

TAP Testimonials

KG ENERGY LTD

"Open-minded and technologically well-versed team, who make up for perfect start-up company to step forward."

KELP SYSTEMS

"The TAP just helped to validate the feasibility of the technology. Especially at a conceptual stage. Validating many of the assumptions we had made, along with highlighting a number of challenges and oversights, the TAP gave us the knowledge and confidence to develop our technology further. The report will also improve our prospects of investment through its assessment and advocacy of the unique innovation and value our technology presents."

ILLOSTA (CRACKMAP)

"Very agile and productive process and I received a great feedback and access to various resources and introduction to other organisations/ businesses."

SEAHIVES

"The TAP experience was professional, thorough and well organised. The final document is a true summary of the Sea Hives Ltd business and products. The administration for the interview and report preparation was excellent, and I was fully engaged throughout."

HelioRec

HelioRec is a company focusing on clean energy generation and developing innovative floating solar power plants.

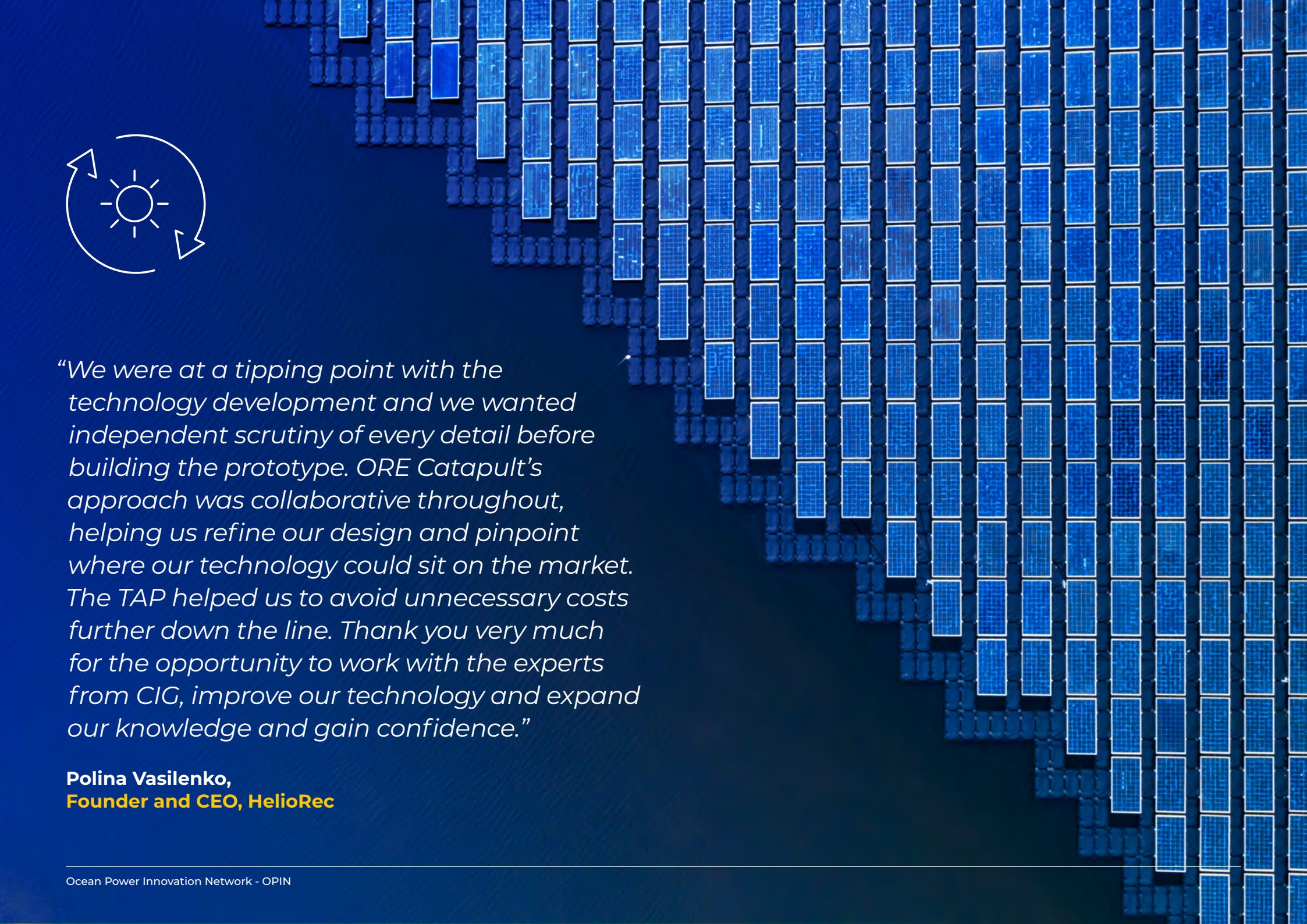
In early 2019, approaching the prototype stage of their development, they contacted OPIN for a TAP. Over the following months, they worked through the assessment with a team of engineers from the Offshore Renewable Energy (ORE) Catapult, the UK's leading research and innovation centre for renewable energy, as well as the Dutch Marine Energy Centre, Sirris and École Centrale de Nantes.

ORE Catapult's engineers conducted an in-depth survey of each component before assessing the functionality of the entire system. The primary concern of TAPs at this stage is to ensure a thorough concept exploration, identification of practical barriers and fine-tuning ahead of prototyping. They offered recommendations on adapting the design to reduce costs, ideas for alternative materials and guidance on necessary steps for market readiness. ORE Catapult and its partners offered advice on cable design, including electrical loading and temperature effects, maintenance and cleaning regimes, hydrodynamics, mooring numerical model and testing.

Over the past years, the company has won numerous international awards for its concept and begun building out its first array, returning to the OPIN network for consultancy and support. In 2020 unique project was built - a 7kWp off-grid floating solar power plant for lake purification. It was the integration of a floating solar power plant and aerators.

In 2021, Heliorec took part in an OPIN Collaborative Innovation Group (CIG) to address some technical queries relating to the development of a demonstration plant for their technology. Together with the CIG partners, they addressed challenges relating to e.g. mooring and electrical design. The CIG process provided an invaluable opportunity for HelioRec to evaluate specific aspects of their design with industry experts. The CIG resulted in an optimised mooring arrangement for deployment and improvements to the connector design and ballast system. The CIG process has led to HelioRec embarking on their pilot project with increased confidence. The Heliorec's 10kW floating solar demonstration plant was installed in the Port of Oostende in Belgium in January 2022.

HelioRec
THE FLOATING SOLAR POWER PLANT



"We were at a tipping point with the technology development and we wanted independent scrutiny of every detail before building the prototype. ORE Catapult's approach was collaborative throughout, helping us refine our design and pinpoint where our technology could sit on the market. The TAP helped us to avoid unnecessary costs further down the line. Thank you very much for the opportunity to work with the experts from CIG, improve our technology and expand our knowledge and gain confidence."

Polina Vasilenko,
Founder and CEO, HelioRec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