



PRESS RELEASE | Berlin 22 June 2021

TIDEWISE from Brazil wins Elia Group's Open Innovation Challenge

- TideWise has developed an unmanned surface vehicle with advanced sensors that increases the efficiency of underwater inspections
- The jury was particularly enthusiastic about the relevance and applicability of the technology
- The Open Innovation Challenge is aimed at start-ups from all over the world
- This year, the competition – which was the competition's fifth year – focused on innovative solutions for offshore wind applications
- TideWise will receive €20,000 and the opportunity to develop its project with support from Elia Group teams

Berlin | TideWise is this year's winner of the Open Innovation Challenge, a joint initiative organised by the Belgian and German transmission system operators Elia and 50Hertz. The competition aims to foster innovation in areas related to Elia Group's work as a system operator. The focus this year was on innovative solutions for offshore wind integration. From the 78 teams who initially applied to take part in the competition, the jury chose Brazilian start-up TideWise as the winner because its technology can quickly provide a solution to offshore challenges within Elia Group.

TideWise: unmanned surface vehicle for inspections

TideWise (from Brazil) developed an unmanned surface vehicle with advanced sensors to collect aerial, surface and underwater data to carry out near real-time remote inspection and surveys. Their vehicle uses artificial intelligence for optimal control and allows offshore inspections to be performed in situations where the risk and cost of having humans on site are too high. In addition, the unmanned TideWise vehicle is able to carry a drone.

Energy transition fuelling offshore wind market growth

In the context of the European Green Deal and the European Union's ambition to become carbon-neutral by 2050, offshore wind is playing a crucial role in accelerating the decarbonisation of the energy mix. To exploit the untapped potential for higher full-load hours offered by offshore wind power generation, offshore grid operation is entering a new phase of development. When seeking to improve the planning, construction and operation of the necessary transmission infrastructure, both challenges and opportunities arise. This year, therefore, the Elia Group Open

Innovation Challenge invited start-ups from all over the world to provide innovative solutions to improve the safety, efficiency, sustainability and cost of offshore infrastructure.

This year's finalists came from five different countries: Germany, France, the United Kingdom, Iceland and Brazil. The start-ups were invited to submit their ideas in one of four categories: (1) sustainability; (2) remote management and maintenance; (3) grid integration; and (4) 'outside the box' solutions.

Five finalists, five innovative solutions

From the 78 teams who applied to take part in the competition, five finalists were shortlisted based on criteria including the value, teams, relevance and innovative nature of their proposals. TideWise scored particularly highly in terms of value and relevance. However, the other ideas could also potentially be further developed within Elia Group.

Youwind Renewables (from Iceland) developed an IT system that links weather data to data about shipping and activities occurring at sea, allowing companies wanting to operate offshore to mitigate the risk and cost of weather-related downtime. This will allow Elia Group to compare offers from potential contractors, choose the perfect time for offshore infrastructure to be constructed and predict the best timing and set-up for future offshore operations, both in terms of project development and O&M.

Forssea Robotics (from France) has developed an autonomous remotely operated vehicle (ROV) with a wide operational radius that increases the efficiency of underwater inspections, including those carried out when surveying and tracking subsea power cable systems. The ROV promises to reduce the need for employees to be present on offshore sites by providing remote supervision from Forssea's onshore Remote Control Center (thus reducing risks and costs associated with health, safety and the environment), to detect buried cables with better accuracy and without downtime.

Avasition (from Germany) specialises in converter-dominated grid studies. The company's project involves the development of a digital 'EMT Twin' which will allow possible interconnector projects (and their interoperability) to be investigated. Their proposal promises scalable digital twins which will allow projects to be optimally designed with minimal risk, enabling new process approaches to be developed for converter-dominated grids. They are aiming to build the fundament for multi-vendor HVDC system designs and compliance testing.

Optalay (United Kingdom) has developed a fiber optical time-domain reflectometer (OTDR) tester to continuously monitor export and array cables and detect any damages through the use of a hydrogen darkening method. Optalay's tester provides full-fiber monitoring of multiple wavelengths, immediate alarm notifications and the historic analysis of long-term cable performance.

Due to COVID-19 social distancing measures, the event was broadcast live from a studio in Berlin. The presentation of the winning idea can be viewed [here](#).

About Elia Group

One of Europe's top five TSOs

Elia Group is a key player in electricity transmission. We ensure that production and consumption are balanced around the clock, supplying 30 million end users with electricity. Through our subsidiaries in Belgium (Elia) and north and east Germany (50Hertz), we operate 19,276 km of high-voltage connections, meaning that we are one of Europe's top 5 transmission system operators. With a reliability level of 99.99%, we provide society with a robust power grid, which is important for socioeconomic prosperity. We also aspire to be a catalyst for a successful energy transition, helping to establish a reliable, sustainable and affordable energy system.

We are making the energy transition happen

By expanding international high-voltage connections and incorporating ever-increasing amounts of renewable energy into our grid, we are promoting both the integration of the European energy market and the decarbonisation of society. We also continuously optimise our operational systems and develop new market products so that new technologies and market parties can access our grid, thus further facilitating the energy transition.

In the interest of society

As a key player in the energy system, Elia Group is committed to working in the interest of society. We are responding to the rapid increase in renewable energy by constantly adapting our transmission grid. We also ensure that investments are made on time and within budget, with a maximum focus on safety. In carrying out our projects, we manage stakeholders proactively by establishing two-way communication channels between all relevant parties very early on in the development process. We also offer our expertise to different players across the sector in order to build the energy system of the future.

International focus

In addition to our activities as a transmission system operator, we provide various consulting services to international customers through our third subsidiary, Elia Grid International (EGI). Elia (in Belgium) is also part of the Nemo Link consortium, which operates the first subsea electrical interconnector between Belgium and the UK.

The legal entity Elia Group is a listed company whose core shareholder is the municipal holding company Publi-T.

MORE INFORMATION: eliagroup.eu



For further information, please contact:

Corporate Communication

Marleen Vanhecke (English) | M +32 486 49 01 09 | marleen.vanhecke@elia.be

Marie-Laure Vanwanseele (Dutch) | M +32 499 51 58 | marie-laure.vanwanseele@elia.be

Jean Fassiaux (French) | M +32 474 46 87 82 | jean.fassiaux@elia.be