TRANSFORMING DECOMMISSIONING
with academic and industry collaboration

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UNIVERSITY OF ABERDEEN

In January 2019, the National Decommissioning Centre was officially opened in north-east Scotland's Energetica Corridor, as part of the Aberdeen City Region Deal.

A £38 million partnership between the University, Net Zero Technology Centre (NZTC, formerly the Oil and Gas Technology Centre) and industry. The global research centre has been established to support decommissioning activity by combining academic excellence and industry expertise in a research and development hub.

Led by the University's Professor Richard Neilson and Roger Esson from the NZTC, research at the Centre is focused on evidence-based thought leadership and transforming the traditional approach to decommissioning. It also offers a wide range of industry-led research programmes for PhD and MSc students and provides a collaborative environment for academics to work across disciplines and fully maximise the opportunities presented by decommissioning.

By working in partnership with industry experts and business partners, the University is building on its world-leading research & development capability in areas such as decommissioning technology, predictive modelling, environmental assessment and the economic and regulatory aspects of decommissioning.

The Centre is home to a variety of state-of-the-art technology and equipment. This includes the recent installation of a cutting-edge marine simulator, which provides the opportunity for the sector to access simulation capabilities which can assist in the development of new technologies and techniques for decommissioning and renewables, helping to de-risk their deployment.

The simulator, similar to a giant gaming console, features a walk-in 9m diameter, 300-degree visual immersive environment with four control stations and with the ability to split the screen into four different views, one for each station. These can be assigned control of any object or asset in the scene, for example a vessel, a remotely operated vehicle, a crane, or a new underwater lifting system. The highly detailed simulation is based on real-time physics calculations and can be modified live.

The simulator will allow companies working with the NDC to assess the viability and operability of new technologies before investment in physical prototyping. This route will offer improved safety by anticipating scenarios and mitigating any problems in advance in a safe environment before actual deployment.

The simulator also has a "smart cities" capability which will be used to visualise data and assist in decision making across the North Sea basin to reduce the cost of decommissioning and help in the transition to net zero through scenario planning. An exemplar model of the East of Shetland cluster is being built as he first stage of this "Smart Basin" project.

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Road to COP26

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