

# THEYR LTD TO USE AI TO DEFINE THE SUSTAINABILITY OF COMMERCIAL SHIPPING

# in collaboration with the University of Southampton within our SPRINT program



Theyr Ltd, a premium met-ocean data provider for the marine sector, has signed up to the national SPRINT business support programme. Theyr will collaborate with SPRINT partner, the University of Southampton on the development of an industry-leading marine vessel routing application that will enable a cleaner future for commercial shipping.

The SPRINT project will focus on the real-time exploitation of space data used in the development of voyage optimisation solutions for commercial vessels.

The project combines the very latest in high fidelity Met-Ocean forecast data with leading edge genetic algorithms to create a route optimisation module that will produce the most efficient routes for vessels and reduce GHG emissions.

The University of Southampton will provide Theyr with expertise in best-in-class genetic algorithms and optimisation to exploit increasingly higher fidelity satellite data. Theyr will also use the University of Southampton's IRIDIS5 supercomputer, the UK's largest academic supercomputer to speed up the verification process.

The latest International Marine Organisation (IMO) regulations compel the shipping industry to significantly reduce its green house gas (GHG) emissions from the start of 2020, which in turn, has led to a major increase in the cost of compliant fuels. These latest regulatory requirements continue to fuel the digital revolution within the industry, facilitating the transition to a greener future.

David Young, CEO of Theyr said: "We're delighted that this SPRINT project has been given the green light. Combining our expertise with the substantial knowledge and resources of the University of Southampton will facilitate the future sustainability of commercial shipping by effectively reducing fuel costs and green house gas (GHG) emissions within the industry through the use of AI and high-fidelity MetOcean data."

Dr Adam Sobey, Associate Professor in the Maritime Engineering Group at the University of Southampton and co-lead of the marine and maritime group in the data-centric engineering programme at The Alan Turing Institute, added: "This project exploits the very latest in Al through a genetic algorithm developed by my team at the University of Southampton and which shows leading performance on a range of optimisation problems.

"We are developing a set of algorithms which will increase the fidelity of data that we can use and the range over which we will optimise. This will future proof the software against these increases in fidelity and provide leading performance over competitor software."

The project will be funded by a grant from the £4.8 million SPRINT (SPace Research and Innovation Network for Technology) programme that provides unprecedented access to

university space expertise and facilities. SPRINT helps businesses through the commercial exploitation of space data and technologies.

## **About SPRINT:**

SPRINT is supported by Research England and the Scottish Funding Council. It is being delivered by a consortium of five of the UK's leading space universities, led by the University of Leicester and including the University of Edinburgh, The Open University, University of Southampton and University of Surrey.

#### www.sprint.ac.uk

#### **About Theyr:**

Theyr ltd is a London-based software company specialising in high-fidelity MetOcean data and the mechanisms for the analysis, delivery and visualisation of this data via third party and in-house applications.

#### www.theyr.com

### About the University of Southampton

The University of Southampton drives original thinking, turns knowledge into action and impact, and creates solutions to the world's challenges. It is among the top 100 institutions globally (QS World University Rankings 2019). Its academics are leaders in their fields, forging links with high-profile international businesses and organisations, and inspiring a 24,000-strong community of exceptional students, from over 135 countries worldwide. Through its high-quality education, the University helps students on a journey of discovery to realise their potential and join its global network of over 200,000 alumni.

www.southampton.ac.uk

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