



National  
Oceanography  
Centre

World-Leading & Innovative Science  
and Technology Underpinning the  
Ocean Economy



The ocean is a vast resource of food, minerals and energy, and its importance to the global economy is growing. These opportunities are gaining the increasing interest of both traditional marine and maritime businesses, and those outside of the sector.

The UK's National Oceanography Centre is in the unique position of having world-leading multi-disciplinary scientific and technical expertise – from coast to the deep ocean.

This expertise can be accessed in a number of ways to help unlock the economic and societal potential of the ocean across industry sectors including:

- Oil and gas
- Deep-sea mining
- Carbon capture and storage
- Defence and security
- Coastal infrastructure, ports and harbours
- Search, rescue and emergency response
- Aquaculture
- Shipping, freight and leisure
- Offshore renewable energy
- Insurance and reinsurance
- Telecommunications
- Regulation and legislation

## How we can work with you

Through a collaborative and consultative approach, you can gain access to the National Oceanography Centre's world-class knowledge and facilities.

### Commissioned Research

We have a proven track record of providing research expertise across a range of challenges.

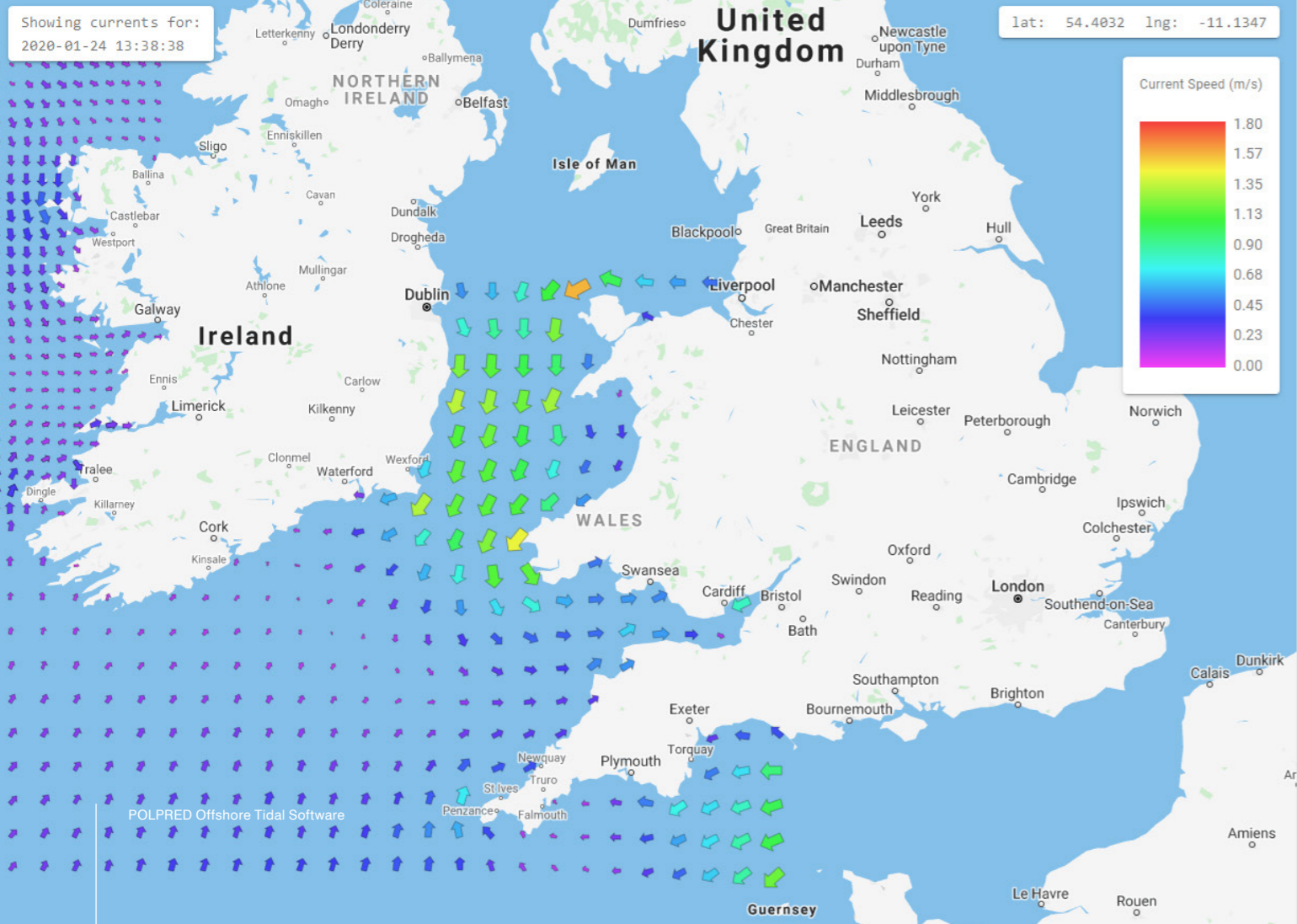
### Consultancy

You can access our experts to advise on your challenges utilising their experience in delivering world-leading global science.

### Collaborative R&D Projects and Programmes

We are always open to working on collaborative funded programmes with partners who have complimentary scientific and technology roadmaps to our own. Together we can leverage funding opportunities that advance joint goals.





Output:

Elevation Units: **Metres**

Current Speed Units: **Meters per second**

Time Series Data:

Hide Current Components

Spatial Data:

Hide Out of Bound Regions

List Model Codes

Map Display:

Current Arrow Size:

Display: **Current Speed**

Interval Jump: **1 Hour**

Auto compute on map view

If a selected licence's boundaries are covered on the map view and covers the system date/time, an area prediction will automatically be calculated for these parameters when the map is traversed.

### Strategic Partnerships

Where there are multiple threads and areas that align with the National Oceanography Centre's objectives, there is the potential to explore long term strategic partnerships.

### Commercial Software Products

The National Oceanography Centre gathers data from around the globe and has a huge data resource that is freely available to access. We also have commercially available added-value software aimed at bespoke applications and can work with you to develop products that deliver information for your specific needs.

### Access to Facilities

The National Oceanography Centre has world-class facilities that enable the testing, deployment and data analysis required to deliver our scientific missions. These can be made available to address challenges in your business area.

## Scientific Expertise

Our expertise, which represents the latest marine research and technology, is accessible to businesses around the world. We collaborate and provide consultation, survey and research services to a global client base across a broad range of industries. Through this, we endeavour to make science relevant and accessible to the needs of business.

Our science is improving the understanding of marine related risks and hazards, reducing the risks of deep ocean drilling and providing data into the insurance industry. Our persistent presence in the oceans, alongside our world-class data modelling capabilities, provides monitoring of, and predicting variability and changes in, the natural environment. All of this work is underpinned by our commitment to developing and working with innovative technologies to solve industry challenges.





Talk to us about:

- Geohazard assessment
- Ecological and environmental survey
- Environmental Impact Assessment
- Understanding of energy and resource availability
- Sustainable exploitation of energy and resources from the ocean
- Route characterisation
- Fluid flow dynamics
- Infrastructure and seafloor mapping
- Local and global modelling
- Prediction of environmental conditions
- Storm surge monitoring

## Technology Expertise

Through collaboration with academic, government and industry partners, we are developing the next generation of marine technologies to transform ocean measurement and scientific survey.

The National Oceanography Centre operates the largest fleet of Marine Autonomous Systems in Europe for science use, a combination of in-house and collaborative developments, as well as commercial off-the-shelf systems.

With partners, we have also developed novel micro and lab-on-chip sensor technologies that can measure a wide range of ocean parameters. Through the collaborative development and use of these technologies, we are able to maintain a persistent presence in the ocean, at a lower cost and explore new coastal and deep ocean frontiers.





Control centre on  
the RRS James Cook

Talk to us about:

- Platform and sensor development
- Swarming and cooperative platforms
- Power and propulsion
- Novel deployment capabilities
- Testbed platforms for your demonstrations and trials
- Communications and real-time data recovery
- Mission planning and control
- Operating in extreme and unusual environments
- Licensing our technology



## Our Facilities

### Labs and Workshops

The National Oceanography Centre has a multi-disciplinary range of labs and workshops, including a sensor calibration lab, pressure testing facility, microplastics and rock physics labs, available for use.

### British Oceanographic Data Centre (BODC)

The national facility looking after and distributing marine data. Dealing with biological, chemical, physical and geophysical data, BODC databases contain measurements in excess of 25,000 variables and this data is freely available.

### British Ocean Sediment Core Research Facility (BOSCORF)

The UK's deep sea core repository, BOSCORF provides specialist non-destructive core logging facilities.





The Glider Workshop at the NOC, Southampton

#### National Marine Equipment Pool

The National Oceanography Centre operates the UK's National Marine Equipment Pool (NMEP) which includes capabilities ranging from full ocean depth moorings, coring and water column sampling systems, and the largest fleet of autonomous platforms in Europe. A team of technicians and design engineers develop, maintain and operate the NMEP in support of the Marine Facilities Programme, commissioned research expeditions and equipment development programmes.

#### Marine Robotics Innovation Centre

Where science meets business, and where we work collaboratively with partners to develop the next generation of marine autonomous systems to deliver survey for scientific, industry and government use.

### Royal Research Ships

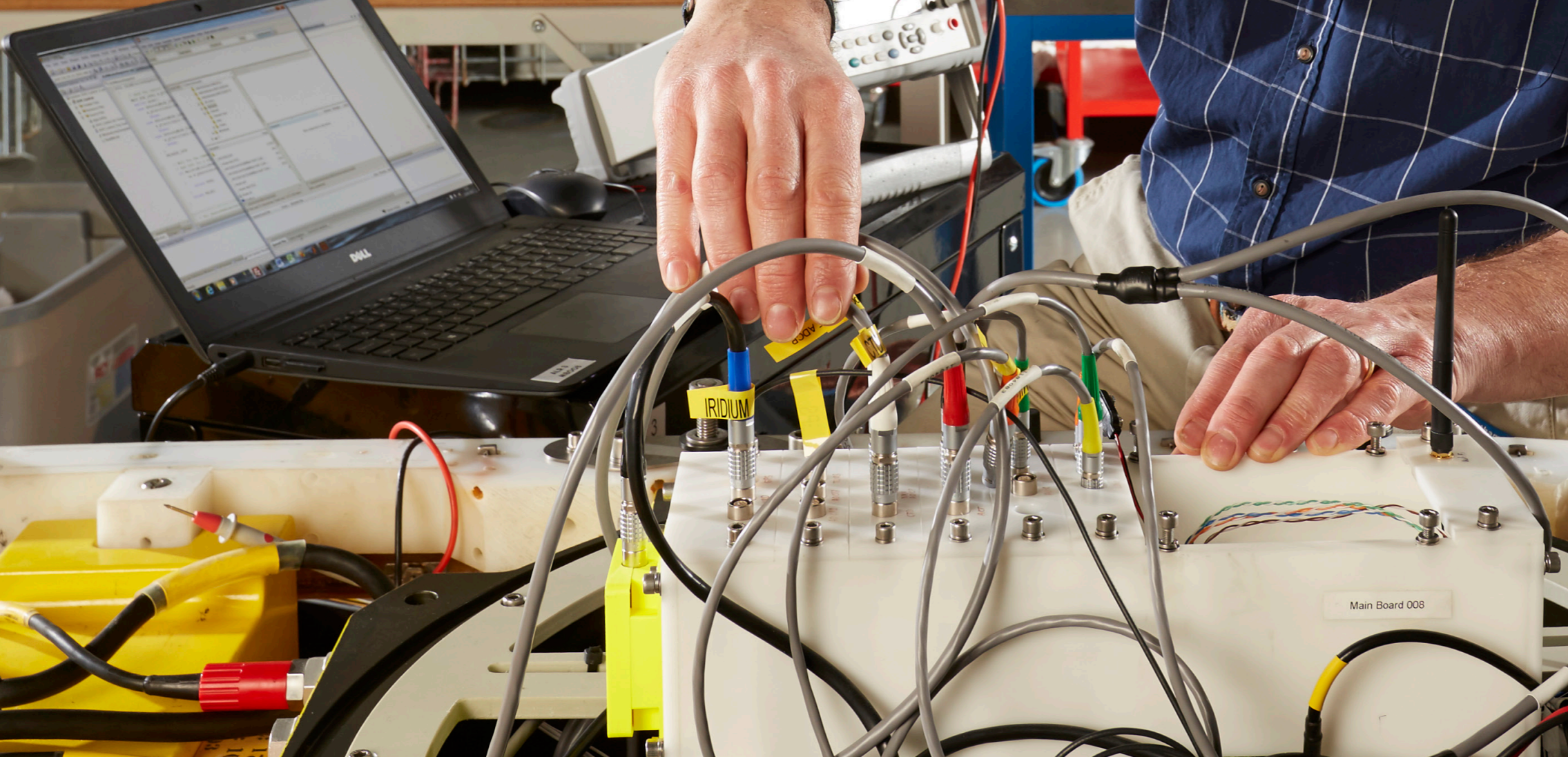
The National Oceanography Centre operates the Royal Research Ships *James Cook* and *Discovery*. Both ships are global class, multi-role DP research vessels classified as Deep Sea Category A by the European Marine Board.

Both ships are fitted with the latest scientific and technical capability, including MBES, full ocean depth winch systems and mobile equipment deployment capability. The ships mainly operate in the Atlantic, Southern and Pacific oceans. They are available for commissioned research with a full crew, as well as technical and scientific support.

In recent years the National Oceanography Centre has worked with associated UK government departments, the Canadian Department of Fisheries and Oceans and NASA, as well as various commercial partners.



RRS *James Cook*  
in Halifax, Canada





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