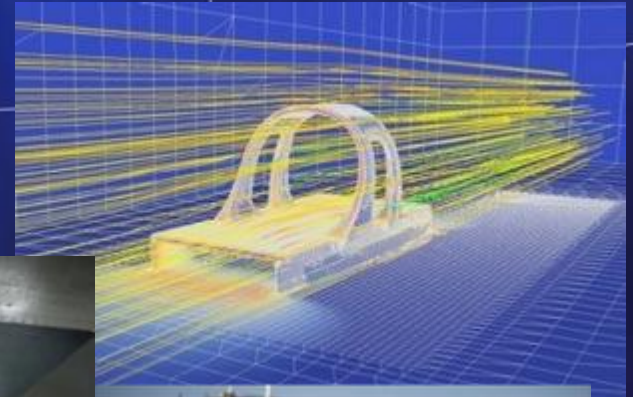


National Oceanography Centre Research Partnerships

Engaging with
the NOC for
Research &
Development
Support



Creating Impact from our Research

We seek to actively engage with business to generate positive socio-economic impacts based upon our research outputs



What do we mean by impact?

Immediate impacts on your business may include:

- Development on new products or services
- That generate additional sales / exports
- And mean that you create new jobs



Secondary impacts may include:

- Lower carbon emissions from renewables
- Greater understanding of ocean processes leading to improved flood defence, etc, etc,



It is key for us to report this back to UK Government and any new products created may reduce the cost of our ongoing research effort

How can we engage with you to create this impact?

1. Funded collaborative research, with NOC as a partner
2. Accessing NOC developed technology for development into commercial products
3. Access to NOC expertise and knowledge to improve your business operation
4. Providing added value information products
5. Access to specialist equipment and test facilities

Or, any mixture of the above to meet your specific company need



Funded collaborative research, with NOC as a partner

- The NOC seeks to engage with both individual companies, and groups of companies for collaborative research
- Many sources of funding exist to support the costs of R&D to help bring new developments to market, which then stimulate economic development
- These sources of funding can be regional (Solent LEP Bridging the Gap, MuXV), National (Research Council and Innovate UK), or European (Horizon 2020, and specifically Blue Growth calls)



Recent Examples of Funded Collaborative Research Projects

- The NOC has engaged with 3 successful consortia on the recent Innovate UK MAS CRD call
- The “Bringing together Research and Industry for the Development of Glider Environmental Services” (BRIDGES) under ‘Delivering the sub-sea technologies for new services at sea’ (EC H2020)
- The ETI funded Carbon Capture project that engages Fugro Geos , Sonardyne, Southampton and Plymouth Universities



Access to NOC expertise and knowledge to improve your business operation

- The NOC's leading scientific thinking can be accessed by your business for one-off, or longer-term projects to meet your individual need
- This could be for the following:
 - Consultancy
 - Assisting with a funded R&D project
 - A longer-term need to introduce new skills and expertise into your business via a Knowledge Transfer Partnership



What is a Knowledge Transfer Partnership?

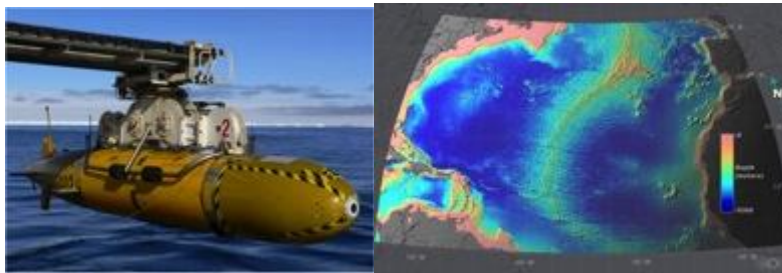
- An Innovate UK, grant supported project designed to transfer and embed new thinking and capability into your business
- Projects must be strategic (affect the long-term performance of your business), and can run from 1 to 3 years
- This is facilitated via:
 - A KTP Associate, who works in your business
 - Supported by a NOC Scientific expert for ½ day a week
 - With budgets to support travel, training and consumables project
- SMEs attract a 67% grant, and large companies a 50% grant towards total cost

Knowledge
Transfer
Partnerships



Case Study of Knowledge Transfer Partnership with ASV

- This project will transfer knowledge from the NOC's Marine Autonomy and Robotic Systems (MARS) Group that has been operating autonomous vehicles at their operational limits since 1996
- Seeking to embed innovative risk and reliability management capability, to ensure that ASV's product range is world-leading from the perspective of operational performance
- Aim is to enable ASV to take the lead in defining national reliability standards for marine autonomous vehicles



MARS Innovation Centre

During 2014-15 NOC is investing £3.5M to expand facilities for SMEs developing MAS:

- New office, laboratory and workshop space
- Access to an extensive range of testing facilities
- £1M EPSRC funding via University of Southampton for Systems Reliability Laboratory



Access to specialist equipment and test facilities

Systems Reliability Lab	Glider saltwater ballasting tank	With overhead 0.5T girder trolley hoist
	Battery testing rig	MACCOR 4200 with temperature chamber - Max 2400W 240A, Agilent DC power analyser
	Co-ordinate Measuring Machine Room	Optical Profilometer, shadowgraph, Steel and Granite tables, Measuring arm
	Hydrostatic Pressure Test Vessel PV1	Max 690 bar, 3 ports, no temp control, turnaround time 30 mins
	Hydrostatic Pressure Test Vessel PV2	Max 690 bar, 1 port, Temp -10 to +35°C, turnaround time 5 mins
	Environmental test chamber inc PhD	Temp range -72 to +180°C
	Eurotherm environmental chamber	Temp controlled
	Thunder Scientific humidity chamber	Temp and humidity controlled
	Budenberg dead-weight pressure tester	Range 100 - 10,000 PSI
Shaker inc PhD		
Salt Spray Test chamber	CW Specialist Equipment SF 450L	
MARS Hangar	3D prototyping	Stratasys Fortus 250mc for production of prototypes using ABSplus thermoplastic
	Laser cutting and engraving	Trotec Laser Speedy 400 flexx
Workshop	Comprehensive workshop facilities	Milling, Turning, CNC, welding
	Acoustic Test Tank (fresh water)	Overhead gantry crane 3.2T
Calibration Lab	Temperature, Conductivity and Pressure	
Dock	Quayside and 7m deep basin	

Thank you for Listening

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