



To support industry to develop R&D management and development capability and to support the commercialisation of R&D outputs

5.3.4 Marine Innovation Supporting Programme

Support for research and development is often motivated by the economic returns associated with innovation, however it is important to recognise that research is not synonymous with innovation but is, in fact, only one (albeit significant) input to innovation. Reflecting a critical weakness of Ireland's marine sector - its research and technological immaturity - the Marine Innovation Programme recognises the need for

- (i) an innovative approach to be taken (by the lead implementing agency) to the ***establishment and management of the research measures*** in this Strategy and
- (ii) the provision (by relevant development agencies) of a ***targeted suite of industry support actions*** to address the developmental issues facing the sector. The achievement of these twin objectives is imperative to the success of this Strategy and to the sector's desire to achieve economic growth.

The Innovation Programme is a cross-cutting support measure appropriate to all three Research Measures planned in this Strategy. It encompasses a significant range of technical support measures associated with the management and delivery of the Strategy by the lead implementing agency. This includes dedicated programme management resources, third-level – industry brokering and facilitation, technical mentoring, the stimulation of international collaboration and networking and support for commercialisation. The ability to commercialise the outputs from a research and development programme is an essential, yet often missing, component of management practice. It requires a closer alliance between industry, the agencies that fund research and the development agencies.

The Innovation Programme also encompasses the need for the provision of co-ordinated supports by the state's industrial development agencies. The provision of supports to firms in the marine sector to help them to improve their ability to manage technology at all stages of their value chain is recognised as essential; by the firms themselves and by development agencies. Helping firms to establish or engage in

research and development activity, whether related to the creation of new products or production processes directly supports the creation of a competitive advantage.

As specified in the Enterprise Strategy⁴⁶ the conditions required for innovation are crucially dependant on complementarities and interactions between a range of players. In the context of this strategy further research is required to identify the barriers (internal and external) to innovation in the marine sector to feed into the design of appropriate 'development agency' support measures. As the strategy evolves it will be essential to identify what areas of skills are critical for boosting innovation in the sector and support the development of a comprehensive strategy to strengthen the supply and demand for skills. This includes the need to examine new requirements for vocational training to support the adjustment of skills to labour market needs within the sector and opportunities for the third-level sector to partner with employers to increase the exposure of science and engineering graduates to opportunities in the marine sector.

This Programme will support specific innovation related actions in each of the three Research Measures as outlined below.

Industry Innovation Programme



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The Programme targets research that directly influences, supports or creates new industrial and commercial opportunities, and the creation of economic wealth by firms operating in the marine sector. The Industry Research Measure relies on the ability of firms operating in the sector to overcome barriers to innovation to become truly innovative in all aspects of their business. It also demands that support and development agencies (Marine Institute, Enterprise Ireland, IDA, BIM and Sustainable Energy Ireland) collaborate closely to respond in an integrated manner to the needs of the sector. To ensure that innovation is facilitated and accorded a high priority under the

⁴⁶ Ahead of the Curve, Ireland's Place in the Global Economy. The Enterprise Strategy Group, July 2004.

Industry Measure, the following three specific actions are proposed:

Actions	Description
Industry Measure – Programme Management	<ul style="list-style-type: none"> > Dedicated programme management to ensure ongoing relevance of programmes to commercial needs and their responsiveness to market dynamics > Dedicated research project mentoring and advice on routes to commercialisation > Provision of R&D partnering advice and services
Company Development	<ul style="list-style-type: none"> > Development and delivery of Research, Technology and Innovation Management Training Programmes > Mentor Programme > Innovation Watch – development of mechanisms to promote market, technology and environmental opportunities
Capability Enhancement	<ul style="list-style-type: none"> > Tech Start/Tech Man graduate placement programmes > Third-level – Industry staff exchange > Networking > Feasibility funding

Firms in the marine sector must be offered training and development supports to allow them to fast track their growth on the back of innovation. This will require collaboration and co-ordination between development agencies to deliver innovation management training to all firms in the sector, including the many small indigenous firms. Only by developing new capabilities will the marine industry sector be able to absorb new research and technologies and utilise them in new products and processes, which create value for the firm. The ability to manage technology, as opposed to engaging in high-level research, will ultimately determine the success of the largely indigenous marine firms. Firms will need to be able to access and acquire new skills and technical expertise to manage the new technologies on which future marine business will be based.

Discovery Innovation Programme



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The Discovery Measure involves leading edge research in marine biotechnology/biodiscovery, marine technology, functional foods, renewable ocean energy and climate change. Each research sub-programme in the Measure, as evident in the 2013 objectives, targets critical research and commercial actions on which to build economic success. Implementing the Discovery Measure and securing its key objectives requires innovation, not only on the part of the researchers, but also on the part of those involved with managing and supporting the Measure. The Discovery Measure requires considerable effort by all concerned with its operation and management to ensure its overall success. The actions necessary to support the Discovery Measure are described below.

Actions	Description
Discovery Measure – Programme Management	<ul style="list-style-type: none"> > Dedicated Programme Facilitation and Management > Stimulate the formulation of new third level-industry research partnerships at national and international level > Clear procedures regarding the use and commercial exploitation of information and knowledge generated by research programmes
Capacity & Capability Enhancement	<ul style="list-style-type: none"> > Networking > Industry/Third-level Brokerage Events. > Supporting researchers to become more proficient at research management > Research Synergies
Commercialisation	<ul style="list-style-type: none"> > Market Intelligence > Management of Intellectual Property

Policy Support Innovation Programme



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The Policy Support Measure informs both national and international policy development. The implementation of the Measure involves the delivery of specific research programmes in marine environment research; knowledge creation and information management research; and policy, socio-economic and legal research and incorporates research that is relevant to underpinning Ireland's significant marine tourism sector. Overall, there is a considerable public-good research component in the Policy Research Measure. If this is to be fully realised, it will demand co-ordinated management across each research Programme, to ensure consistency of performance and output delivery. The role of the Policy Innovation Programme is to support and enable Policy Research goals to be delivered. The planned actions are described below.

Actions	Description
Policy Support Measure – Programme Management	<ul style="list-style-type: none"> > Dedicated Programme Management > Stimulate the formulation of new third level-industry research partnerships at national and international level > Clear procedures regarding the use and commercial exploitation of information and knowledge generated by research programmes
Co-ordinated Multi-agency Development Mechanisms	<ul style="list-style-type: none"> > Development of access to information and the means to co-ordinate and disseminate this information to users
Promote Public Awareness	<ul style="list-style-type: none"> > Stakeholder feedback > Seminars, dedicated web sites, focused scientific reports and general publications
International Dimension	<ul style="list-style-type: none"> > Promote international research linkages to ensure calibration of Irish policy with international policy developments
Downstream commercialisation of information collected for basic monitoring	<ul style="list-style-type: none"> > Industry focus groups to examine opportunities for commercial spin offs associated with the use and commercial exploitation of research data