

Proposal Outline

Topic	Maritime Transport Economics: Establishing the Socio-Economic Value of Ireland's Maritime Sector
Research Theme	Transport and Logistics
Background and Rationale	<p>Ireland's Ocean Economy Report (2019) estimates the turnover of the marine industry in 2018, to be €6.23bn. The maritime sector, which includes the activities of shipping companies, port companies, and other service providers, accounts for 40% of this total. While the maritime sector has considerable intrinsic value, it generates greater indirect value as a facilitator of trade, a gateway for tourism, and a magnet for industrial development.</p> <p>Maritime transport provides the means by which over 90% of Ireland's imports and exports are brought to market. The efficacy and efficiency of maritime transport goes to the heart of Ireland's economic success as a trading nation, warranting recognition as a core competence from a strategic perspective. The performance of the maritime industry has a profound effect on the supply chains of industries such as agriculture, retail, pharmaceuticals and medical devices. These industries depend on maritime transport to connect to world markets and rely on the competitiveness of maritime sector to overcome Ireland's relative peripherality. Put simply, Ireland's economic success is inextricably linked to the performance of the maritime sector. The more that is understood about the relationship between the maritime sector and economic performance, the more secure our future as a trading nation will be.</p> <p>The National Marine Research & Innovation Strategy 2017-2021 recognises that "There is a very low-level of functioning R&D capacity in the ports and maritime transport sector, which is a major weakness that needs to be addressed". This lacuna presents an opportunity to create a research stream that can positively influence decision-making and policy development in the maritime sector. Such research must be cognisant of the national and international policies that impact on the maritime sector, including, but not limited to:</p> <ol style="list-style-type: none"> 1. National Ports Policy (2013) 2. Harnessing our Ocean Wealth (2012) 3. National Planning Framework – Project Ireland 2040 4. Climate Action Plan (2019) 5. Offshore Renewable Energy Development Plan (2015) 6. EU Alternative Fuels Infrastructure Directive (2014/94/EU) 7. EU transport infrastructure policy TEN-T (Trans-European Transport Network)

The future of Ireland's maritime industry relies heavily on its ability to deliver projects of scale that attract EU funding. Such projects must have the effect of maintaining and strengthening Ireland's connectivity to the Single Market. It is envisaged that this research project will support EU funding applications by elevating the understanding of the economic and socio-economic impacts of investing in the maritime sector and the consequential impacts on the performance of the national economy. The funding streams in question include:

1. Motorways of the Sea
2. Connecting Europe Facility
3. Horizon 2020/ Horizon Europe
4. Interreg

These funding streams place particular emphasis on Connectivity, Efficiency, Digitalisation, Decarbonisation, Innovation and Investment, which are essential building blocks in a successful maritime sector that have to be addressed in funding applications. Individually and collectively they contribute to the economic success of the maritime sector and their relevance in an Irish context is worthy of further research.

The resilience of the maritime sector has been tested in recent years by shocks to the Irish economy, such as recession and the threat of Brexit. The openness of the Irish economy makes the maritime sector vulnerable to external shocks. Research into the ability of the sector to cope with unforeseen events of this nature is lacking, both in the context of individual ports, and the ports network as a whole. Such research would contribute to increased awareness and preparedness to deal with the consequences of economic shocks to the maritime transport system.

"Our ports play a crucial and often overlooked role in facilitating economic growth and prosperity. As an island nation we depend on the quality and efficiency of our port services to a greater degree than many of our trading partners" [National Ports Policy \(2013\)](#). The role the maritime sector plays in the success of the Irish economy has also been overlooked in academic research and the purpose of this funding call is to bridge that gap.

The relationship between the maritime sector and other areas of the Irish economy is complex, as recognised in the Government's integrated plan for the Marine, [Harnessing Our Ocean Wealth \(2012\)](#). Unpacking the variables that underpin this relationship and establishing their socio-economic impacts, is central to the research project.

<p>Scope of Research (Scientific/ Technical Challenge)</p>	<p>This fellowship in Maritime Transport Economics will provide the capacity to undertake research that contributes to improved efficiency, competitiveness and connectivity in the maritime sector. The research question, which is broadly framed, asks:</p> <p><i>How can the maritime industry support the growth of the Irish economy?</i></p> <p>The question is broadly framed to allow researchers to examine a range of the most pertinent variables, in an Irish context. It is expected that research into each of the chosen variables will be undertaken as a series of distinct work-packages, within an integrated research project.</p> <p>Proposals might draw upon the need for research in any of the following areas. The examples given are indicative and the list is not intended to be exhaustive:</p> <ol style="list-style-type: none"> 1. How can improvements in Efficiency, Connectivity, Digitalisation, Decarbonisation, Innovation and Investment in Ireland's maritime sector contribute to the success of the Irish Economy? 2. What are the socio-economic impacts of developing port infrastructure in Ireland and how can such infrastructure contribute to the success of the Irish economy? 3. How can the application of emerging technologies in the maritime sector, such as Blockchain, Smart Ports and Autonomous Craft, contribute to the success of the Irish Economy? 4. How can the optimisation of resources across Ireland's maritime transport network contribute to the success of the Irish economy? 5. How can the application of cluster theory to the maritime sector contribute to the success of the Irish Economy? <p>The research is located within the discipline of Economics. Although it relates specifically to challenges within the maritime sector, it is expected to draw from the application of relevant theories in other industry sectors. Although a research background in the maritime sector would be helpful, the issues to be addressed are likely to be observable in other industry settings.</p>
<p>Expected Impact</p>	<p>The fellow will engage with relevant national and international networks, and explore opportunities for collaboration and securing further research funding under Horizon Europe and other relevant funding programs</p> <p>This fellowship will help to build national expertise in this research area and contribute to creating a research stream that will endure beyond the lifetime of this project.</p>

	The fellow will produce policy briefs for stakeholders, and publish research findings as widely as possible through peer-reviewed papers, conference presentations, articles, etc.
Specific Collaboration	Irish Maritime Development Office, Marine Institute The fellow will provide policy briefs for relevant Government Departments including DDTAS, DBEI and DCCAIE.
Location of Fellow	Higher Education Institute or Public Research Body (Republic of Ireland)
Duration and Funding Available	3-5 years €100,000 per annum maximum (e.g. €400,000 for 4 years duration)
References	<p>The Implications of Brexit on the Use of the Landbridge Irish Maritime Development Office (2018)</p> <p>A New Open-source System for Strategic Freight Logistics Planning: the SYNCHRO-NET Optimization Tools R. Giusti et al Transportation Research Procedia, Vol 30 Pg. 245-254 Elsevier (2018)</p> <p>The Potential Impact of Brexit on Ireland's Demand for Shipping Services to Continental Europe A. Vega, M. Feo-Valero, R. Espino-Espino Transport Policy, Vol 71 Pg. 1-13 Elsevier (2018)</p> <p>Charting a low carbon future for shipping: A UK perspective C. Walsh, S. Mander, A. Larkin Marine Policy, Vol 82 Pg. 32-40 Elsevier (2017)</p> <p>Climate Action Plan (2019)</p> <p>National Planning Framework (2018)</p> <p>EU Directive on Alternative Fuels Infrastructure in Ports (2014)</p> <p>Trans European Transport Networks (Ten-T)</p>