UNIVERSITY OF HULL | LOGISTICS INSTITUTE

Sustainable Trade Through Better Logistics

hull.ac.uk/logisticsinstitute

The Logistics Institute is a thought leader in supply chain management and a globally recognised centre of excellence for research, education and industry outreach. We work closely with our partners to understand their needs and deliver strategies and methods for sustainable growth."

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Professor Amar Ramudhin
Director, Logistics Institute

ABOUT THE **UNIVERSITY OF HULL LOGISTICS INSTITUTE**

Established in 2008 at the University of Hull, The Logistics Institute is a world-renowned centre for research, education and expertise in logistics and supply chain management. Our focus is to drive sustainable growth through better logistics.

We can help you to boost your competitiveness, productivity and performance by empowering your workforce with the knowledge and tools to address supply chain challenges and create more sustainable solutions.

Through applied research:

Our research can help your business facilitate trade through better processes and systems, whether moving freight in more efficient and environmentally sustainable ways, developing new planning and tracking methods, or improving the flow of information throughout the supply chain.

Through industry and technical expertise:

Through close collaboration with partners in industry and other stakeholder groups, we tackle real world industry problems in a practical and tangible way. Grounded in solid academic research and knowledge, our team consist of experts with a mix of academic and industry backgrounds.

We use a variety of vehicles including industry grants, enterprise consultancy and Knowledge Transfer Partnerships (KTPs) to deliver our industry focused projects. Contact our team to discuss how we can assist with your business challenge.

Through education:

The University offers degree courses in logistics at all levels up to MBA and PhD. Many students get the opportunity to be involved in Logistics Institute projects, which play an important role in preparing them for careers in industry or applied research.

The Logistics Institute offers executive education programmes that can be tailored to your enterprise's unique needs.

We have a regional, national and global presence with ongoing projects in the UK, China, India, Malaysia, Thailand and Vietnam.

RESEARCH **THAT MATTERS**

Our team of researchers work with academics and experts across the University (including engineering, computer science, economics and health sciences) to ensure deep understanding of our areas of focus. Our logistics and supply chain industry expertise ensures that the research we do is relevant to the real challenges faced by industry today and those anticipated for the future.

The Institute's research areas include all facets of modern logistics and supply chains and include:

- End-to-end global supply chain optimisation
- Design of logistics hubs and corridor
- Decarbonisation of freight movement
- The digital supply chain and Industry4.0 – logistics in a massively connected world
- Social, economic and environmental impact assessment of complex systems
- Business process design and improvement.

We operate in many industry sectors including:

- Retail and distribution
- Manufacturing
- Healthcare and medical
- Agriculture and food
- Renewable energy
- Freight and logistics
- Local government services.

The Institute created and maintains the **Logistics Institute Data Observatory (LIDO)** as a tool to showcase the advantages of the Humber for trade and logistics. It provides detailed information and statistics on logistics assets, the main industries and trade within the Humber area. To unlock intelligence that can aid your business visit **www.lido.hull.ac.uk**

Logistics & Supply Chain Education

We have a number of 2-day executive education offerings that can be adapted to suit your specific requirements:

- Supply chain strategies and the future
- Supply chain planning and optimisation
- Improving productivity and performance through lean thinking
- Improving transport and warehouse operations.

We can also structure our executive education as part of larger business improvement programmes, for example, as part of the implementation of new core business IT systems.

We delivered a custom designed programme for Howdens Joinery to analyse specific challenges they were experiencing, while conveying knowledge of relevant logistics and supply chain concepts.

Hull University Business School offers standard degree programmes in logistics and supply chain management, such as BA in Business Management and Supply Chain Management; the BSc in Logistics and Supply Chain Management and the brand new Supply Chain Leadership Degree Apprenticeship. All programmes are accredited by The Chartered Institute of Logistics and Transport (CILT) and The Chartered Institute of Procurement and Supply (CIPS).

The Logistics Institute offers PhD scholarships, with the PhD researchers getting the opportunity to work on our projects that enrich their PhD research.

CIPS Chartered Institute of Procurement & Supply

The Chartered Institute of Logistics and Transport

Research & Enterprise Engagement

Research and Enterprise engagement with industry partners and stakeholders is at the heart of all we do. Engagement is responsive to partners' specific needs, whether through research funded by public bodies such as Innovate UK, ERDF, ESPRC or H2020 or through direct enterprise funded projects.

Publicly funded projects are usually in specific thematic areas that are considered important for economic development and societal good. Delivered by a consortium of several partners, they typically have a large research and innovation component that may result in some form of commercialisation to the benefit of our partners.

Examples of these are:

- Liverpool-Humber Optimisation of Freight (LHOFT) project (Innovate UK funded)

- Collaborative and AdaPtive Integrated Transport Across Land and Sea (CAPITALS) project (Innovate UK funded)

Direct enterprise engagement applies our expertise for the sole benefit of a business. We work with the businesses to gain an understanding of the scope of work and to define the appropriate approach and terms for performing the work according to the needs of the customer.

The Knowledge Transfer Partnership (KTP) scheme assists businesses to set up three-way partnerships between a business, an academic institution & a graduate. It not only provides the business with the skills and knowledge of a graduate, but also academic support for both the graduate and the business.

A KTP transfers valuable knowledge from the University into your organisation, enhancing in-house research capabilities for your long-term benefit.

We can also advise on appropriate funding sources for your enterprise. The University of Hull administered Spark Fund, provides support and grants for innovation in SMEs on a match funding basis and the Green Port Growth Programme supports development of the renewables industry in Hull and East Riding.

All data and information shared are kept confidential and secure. Our shared IP model for research projects is flexible and supports the maximum opportunity for successful leverage of any IP created.

We encourage businesses having specific challenges to contact us so that we can determine the proper avenues of engagement.

SAMPLE OF **RESEARCH & ENTERPRISE PROJECTS**

Liverpool-Humber Optimisation of Freight Transportation (LHOFT)

The LHOFT project seeks to unlock the practical barriers that force cargo owners based in the North of England to ship import and export freight on long distance road routes to and from southern ports.

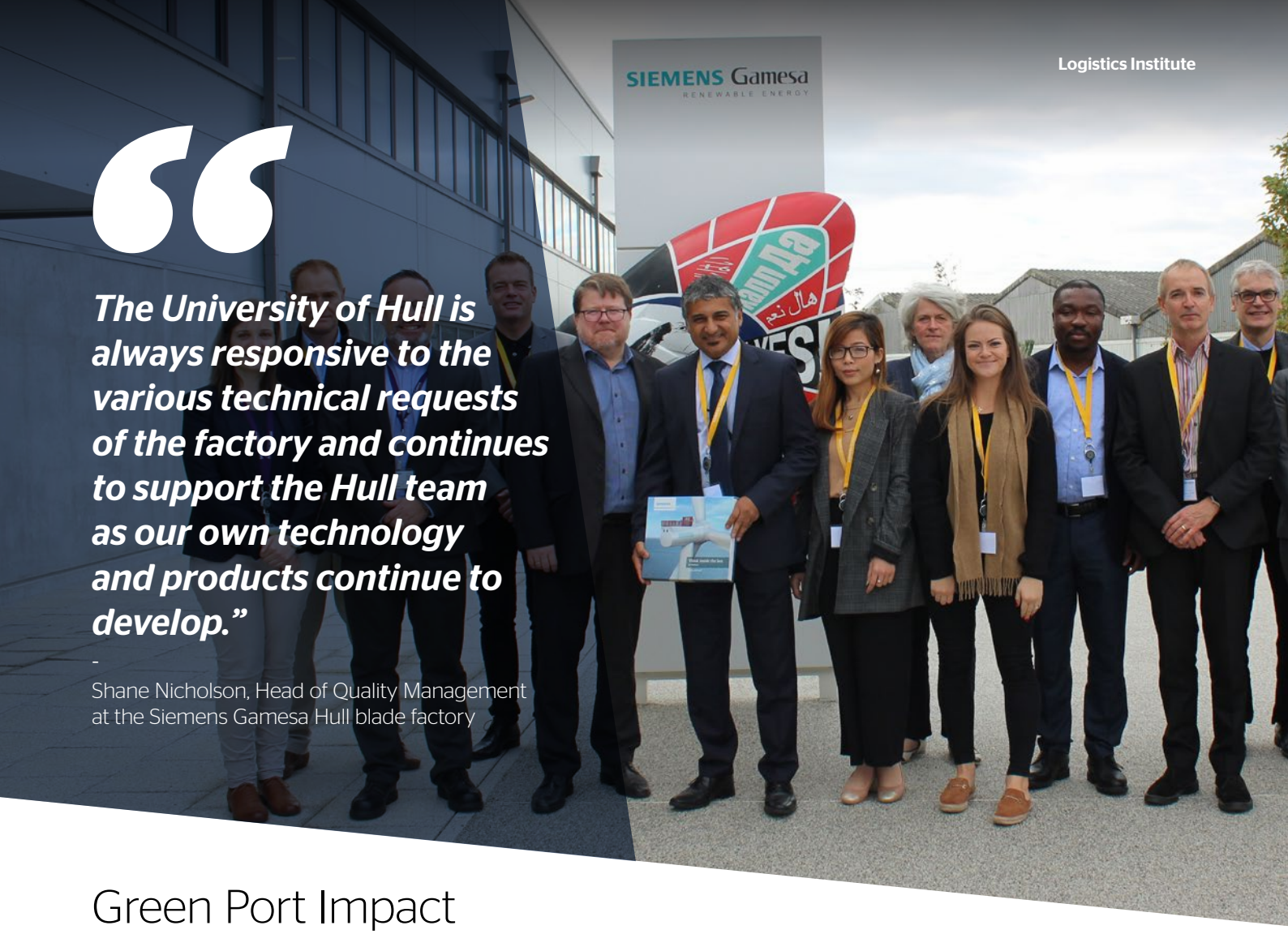
The project will achieve this by developing a system that identifies alternative end-to-end routes for cargo travelling through UK ports. Individual cargo owners will be encouraged to collaborate with each other and with service and infrastructure providers to support the development of expanded import and export routes through northern ports (specifically the Humber and Liverpool clusters) which will provide more options for efficiency from a cost, environmental and resilience perspective. The resulting impact could relieve the UK land transport network of in excess of 100 million miles of freight transport per year.

The consortium behind the project brings together some of the largest players in each of the fields, including Kraft Heinz, Nestlé, ABP, GB Rail Freight and DA Cargo with strong academic, consulting and technical support from Hull and Lancaster Universities, SMSR, PRB Associates, Oxford Rail Strategies and ZipAbout. The Logistics Institute fulfils the academic lead role for this project and provides thought leadership.

Collaborative and AdaPtive Integrated Transport Across Land and Sea (CAPITALS)

The CAPITALS project seeks to develop a user centred multimodal transport application and services to improve the movement of freight across land and sea transport modes. The project specifically develops solutions to address the lack of effective end-to-end journey coordination in freight transport resulting in inefficiency and higher cost on the maritime-to-port and land-to-port legs of journeys. These arise from a lack of information coordination within the supply chain with consequences such as unsynchronised ETA/ETD between vessels and vehicles, missed berthing windows, congestion due to inappropriate routing, missed loading and unloading windows, wasted driver hours/fuel, and empty running.

The University of Hull Logistics Institute is developing a large scale agent-based simulation platform for multimodal freight movement scenarios. The simulation platform allows testing of various strategies to manage and coordinate freight flows and to understand the impact that the CAPITALS systems can have in specific situations. Due to the size and complexity of multimodal freight flows, spanning large geographic areas, the simulation platform needs to be extremely scalable, drawing on our leading edge computing methods and infrastructure.



The University of Hull is always responsive to the various technical requests of the factory and continues to support the Hull team as our own technology and products continue to develop."

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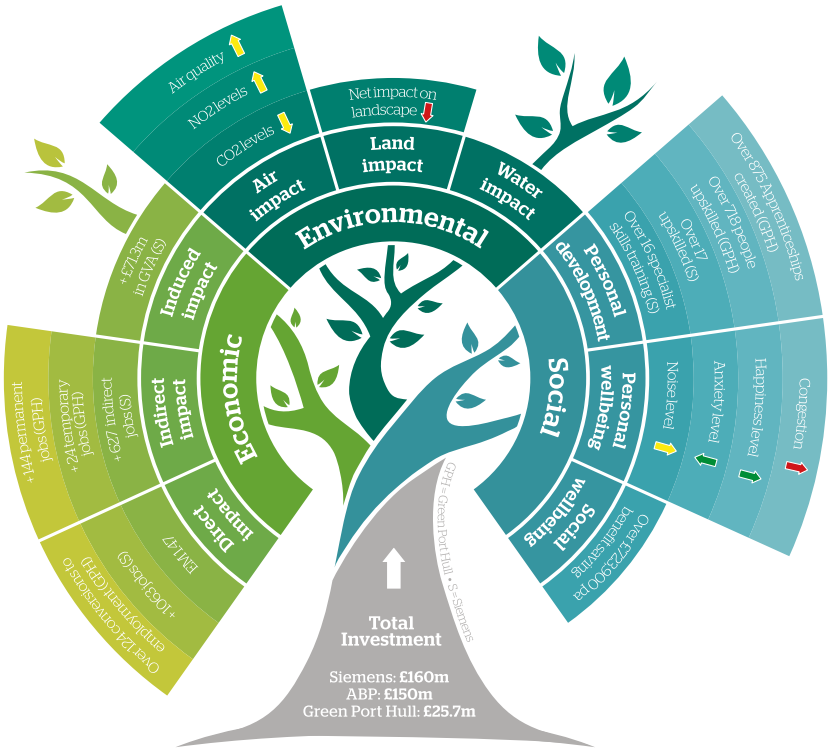
Shane Nicholson, Head of Quality Management at the Siemens Gamesa Hull blade factory

Green Port Impact Assessment (GIA)

The Logistics Institute worked with Green Port Hull on the GIA project, to provide a robust evaluation of its strategy to develop a sustainable, world-class renewable sector in Hull and East-Riding. Our feedback helped Green Port improve efficiencies in attracting inward investment while ensuring the maximum economic, social and environmental benefits to its population and businesses. Using the Siemens Gamesa and ABP investments as case studies, the multi-disciplinary team at the Logistics Institute developed a novel methodology, including methods for measuring the economic multiplier effect, growth in GDP, analysing skills and training needs while quantifying jobs created, secured and displaced, measuring the impact on general wellbeing of the population and the environment around the developments.

Results of the study were disseminated through regular updates to a website (https://gia.hull.ac.uk/), which also hosts a secure portal for confidential project information. This site provides evidence, analytics and key performance indicators to the stakeholders and to the public.

The methodology used for this project can be applied or adapted to any major development or regeneration project to track the social, economic and environmental impacts and provide continuous feedback to the stakeholder community.



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