

MARITIME

INVESTING IN A **CONNECTED** FUTURE.



RICH WITH OPPORTUNITIES.

Liverpool City Region is home to a large and hugely diverse maritime and marine cluster alive with opportunity. We have it all, from the OEMs producing the next generation vessels, the state of the art port accommodating the world's largest ships, the HQs of global shipping lines and the innovators developing future tech. We have the talent, the infrastructure, the facilities and the network. If you are in the business of moving goods or you serve the maritime market, Liverpool City Region provides the ideal location for your business.

WELCOME TO THE FUTURE OF LOGISTICS.

We're famous for the quarter of a million cars made here each year; and for Europe's biggest bio-manufacturing cluster. We're known for the hundreds of global brands that are made here and shipped around the world.

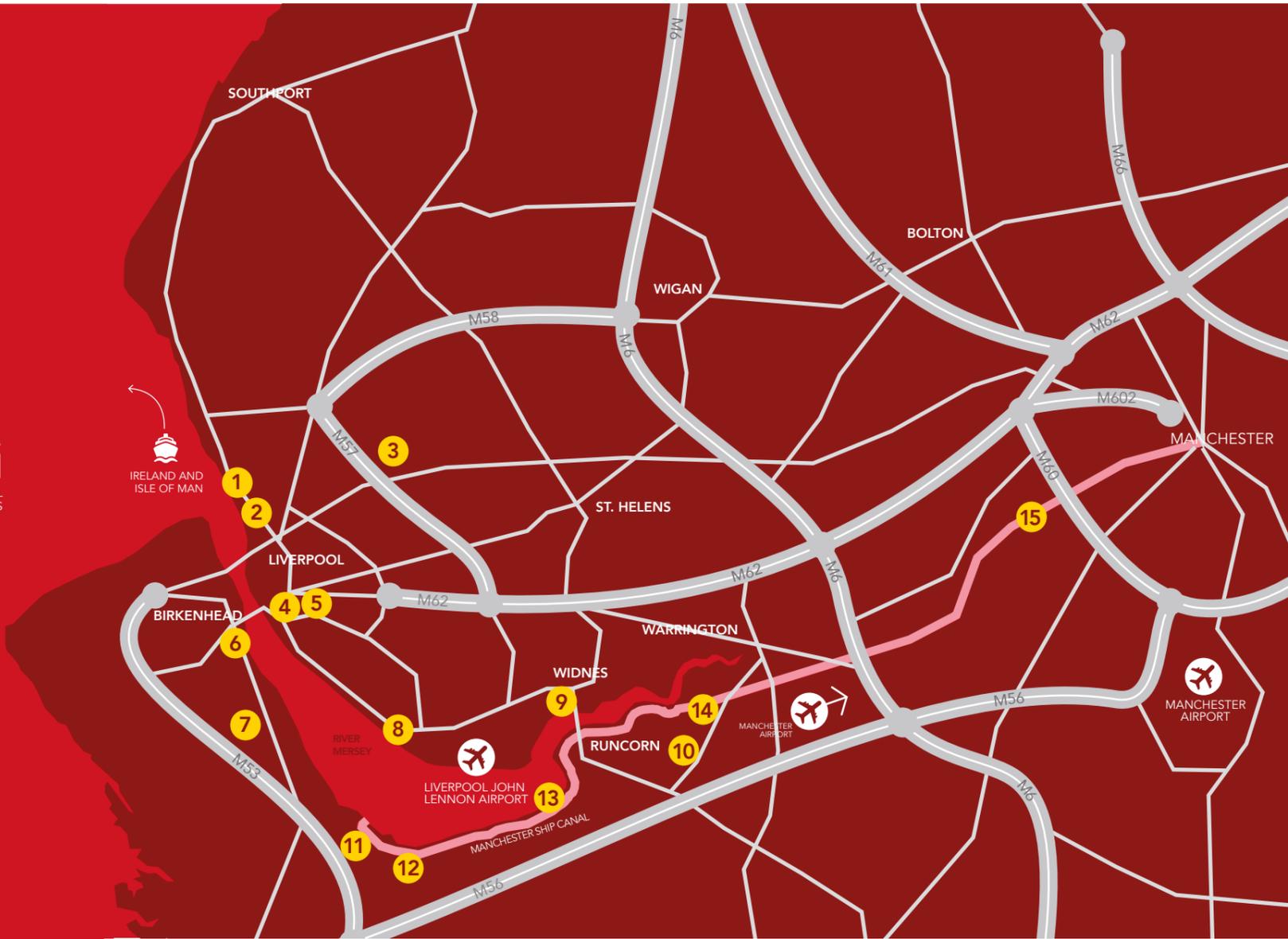
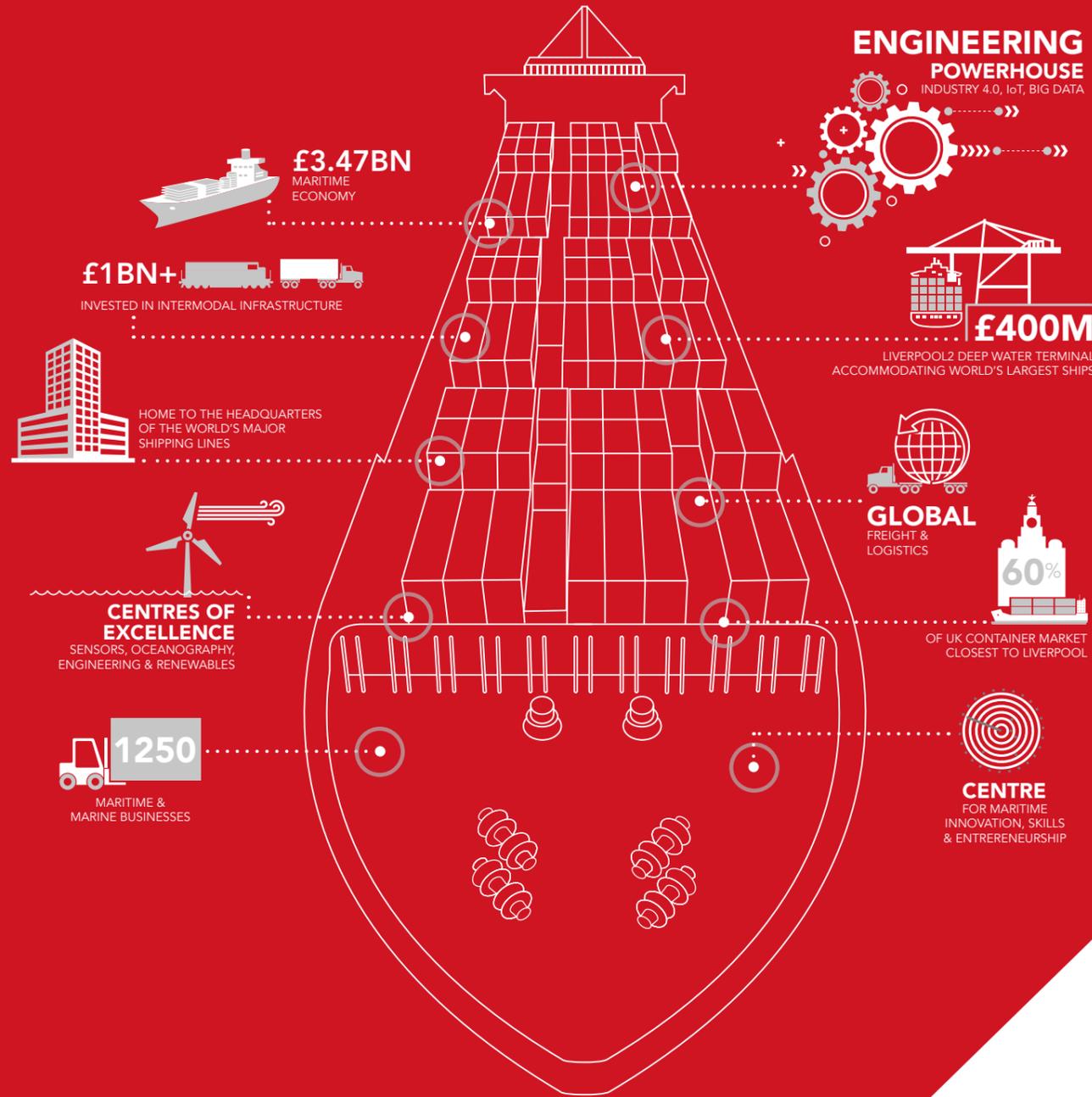
Liverpool City Region is a place where digital technologies enable real-world solutions to radically transform the way we ship, handle and deliver goods. It's where supercomputing meets shipping and Big Data opens up huge opportunities.

We've got the ports, the roads and the railways; and we've got airports, warehouses and all the things you'd expect from a world-class logistics hub – but we're also home to smart stuff.

Supercomputing; Robotics; Virtual Reality; Internet of Things; Sensors; Big Data and Big Science. We've got the largest supercomputing facility for industrial applications in the UK and the highest concentration of robotics for materials science in the world. But there's nothing artificial about our intelligence. And there's nothing robotic about our people.

There's never been a better time to move your business to Liverpool City Region. Our economy is one of the fastest growing in the UK, with more than a billion pounds of new logistics investment creating opportunities for businesses of all sizes to rethink and reshape their supply-chains.

MARITIME



KEY:

- | | |
|---|--|
| 1. Peel Ports Liverpool & Liverpool2 deep water facility | 7. Bromborough maritime cluster |
| 2. Port Academy Liverpool | 8. ABP Port of Garston |
| 3. Northern Logistics Academy | 9. 3MG – Mersey Multi Modal Gateway |
| 4. Shipping Line HQs and Professional Services centres | 10. Sci-Tech Daresbury, Hartree Centre, Virtual Engineering Centre |
| 5. Knowledge Quarter: University of Liverpool, LJMU, Liverpool Logistics, Offshore and Marine Research Institute (LOOM), National Oceanography Centre (NOC), Liverpool Institute for Sustainable Coasts and Oceans (LISCO), Sensor City, Materials Innovation Factory | Manchester Ship Canal inland ports - |
| 6. Cammell Laird, MEA Park (Marine, Energy & Automotive Park), Maritime Knowledge Hub, The Engineering College, Birkenhead and Lairdsid maritime cluster | 11. Port Wirral |
| | 12. Port Bridgewater |
| | 13. Port Ince |
| | 14. Port Warrington |
| | 15. Port Salford |

£1 BILLION+ INVESTMENT.

The sheer scale of new investment in ports and logistics infrastructure here is truly breathtaking.

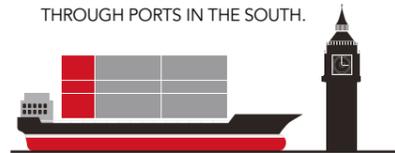
Liverpool City Region is home to many of the world's major shipping lines and marine businesses. We offer an integrated cluster of logistics assets that delivers faster, greener global access. A range of infrastructure and skills projects are focused on shipping and logistics connectivity that creates a compelling proposition and huge opportunities for major businesses and internationally-expanding SMEs.

With more than £1 billion of intermodal infrastructure investment, including the £400 million Liverpool2 deep water facility, Liverpool can service 95% of the world's largest container ships, opening up faster supply chain transit to at least 60% of the UK container market.

These expanding facilities will provide even more capacity and boost Peel Ports' Cargo200 campaign, which is attracting importers and exporters whose goods are destined for the North of England to switch delivery of ocean freight from South East ports to Liverpool City Region.



90% OF DEEP-SEA CONTAINERS ARRIVE IN OR DEPART THE UK THROUGH PORTS IN THE SOUTH.



60% OF THE DEMAND FOR CONTAINER CARGO IS CLOSER TO LIVERPOOL THAN SOUTHERN PORTS.

45%
OF NORTH AMERICAN SHIPPING TRADE FROM UK COMES THROUGH LIVERPOOL CITY REGION

60 ACRE
MARINE, ENERGY & AUTOMOTIVE PARK (MEA PARK)

3 ENTERPRISE ZONES OFFERING SIGNIFICANT INCENTIVES INCLUDING A

GRADE A OFFICE ACCOMMODATION & LABORATORY SPACE

HIGHEST DENSITY OF WAREHOUSING IN THE UK WITHIN 70 MILES OF THE PORT OF LIVERPOOL

LARGE LOGISTICS & MANUFACTURING SITES INCLUDING QUAYSIDE ACCESS & COMAH TOP TIER

ADVANCED ENGINEERING INDUSTRY ACCESS FACILITIES & SUPPORT

PORT CENTRIC LOGISTICS SPACE INCLUDING MULTI-USER WAREHOUSING

GATEWAY TO THE WORLD.

Liverpool has one of the largest and busiest ports in the UK, handling a diverse mix of cargo going to and coming from all corners of the globe. We've got direct access to North and South America – and via the Panama Canal to Australia and Asia.

From cars to containers and energy products to liquid bulks and with leading RoRo facilities, we handle it all, making this a gateway to global trade and the place to be for the shipping and logistics industry.

Liverpool's location gives direct access to the Manchester Ship Canal and links the North and South of the UK. It is also one of very few locations capable of connecting East and West Coast operations, through fully-integrated ports, land holdings, marine fabrication and supply chain solution.

For the UK market, the region is well-connected. Wherever your customers are, Liverpool is within easy reach. London is just two hours away by train – with services every hour. Direct rail services go to Manchester, Birmingham, Leeds, Sheffield, Nottingham and others. And our motorway connections put the vast majority of UK cities from Glasgow to Southampton within four hours' drive time.

With a range of UK-wide facilities, stretching across the country, provided by partners The Peel Group, Cammell Laird and A&P, we benefit from a two-way logistics flow, across the country, making Liverpool City Region the ideal industry hub.

FULL STEAM AHEAD AT LIVERPOOL2.

In November 2016, one of the UK's most exciting infrastructure projects opened its doors to the world. Liverpool2 represents a £400m investment providing a state-of-the-art ocean gateway for international trade to and from the UK.

The terminal is the only major deep-sea container terminal in the north or west of the UK and is the country's biggest transatlantic container port, with 45% share of the North America market.

Liverpool2 allows the world's largest container vessels to dock in Liverpool City Region, for onward transport of goods to the rest of the region and wider UK, via sea, road, rail and the Manchester Ship Canal.

Almost a year on from the launch of Liverpool2, Phase 2 has been unveiled, boosting capacity to 8 ship-to-shore cranes and 12 cantilever rail-mounted gantry cranes. It will also allow the facility to manage the unloading of two 380m vessels simultaneously, with additional 'reefer' power points to handle more refrigerated containers.

Mark Whitworth, CEO of Peel Ports, said:

"This reflects our confidence and our long-term commitment to positioning the North of England as a competitive route to international markets and a major port for global trade"

"The world-class facilities at Liverpool2 allow us to capture and grow a greater share of the container market, offering cargo owners in the north of the country a more competitive route to market, getting their goods closer to their end destination. We are in a good place in our discussions with shipping lines. There are more opportunities on the horizon and our confidence is high, as a result."



CASE STUDY: LIVERPOOL SUPPORTS RETAIL EXPANSION

One business that has benefited hugely from working closely with Peel Ports, is fast-growing discount retailer B&M which has 500 high street and out-of-town stores across the UK.

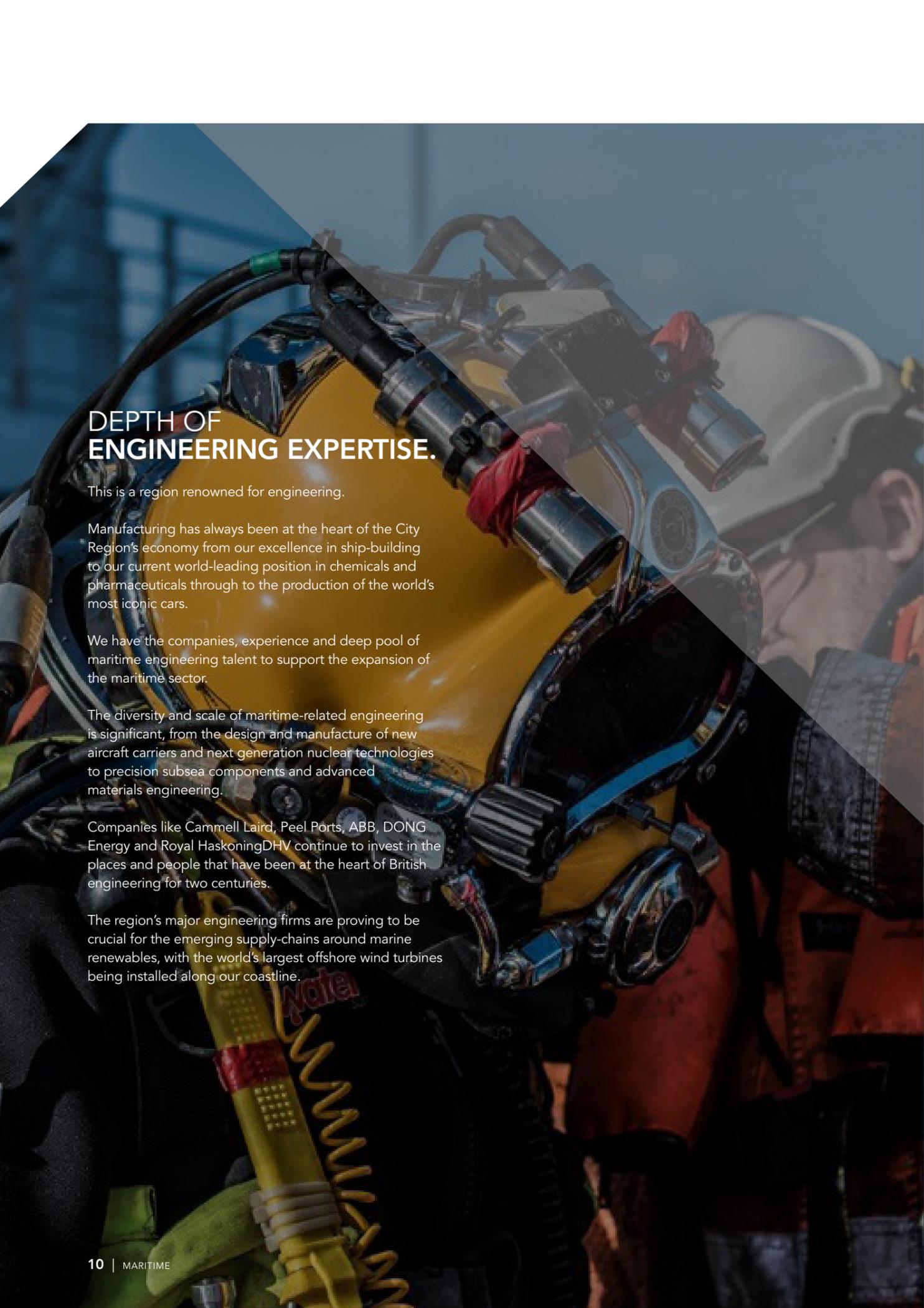
From its Liverpool City Region headquarters, B&M is focused on value so a lean, flexible operation is critical to its business model. With seasonal cost fluctuations in stock and high consumer expectations on range, availability and price, it is critical to B&M's proposition to remain as competitive as possible so it continually reviews logistics arrangements across its supply chain, looking for opportunities to keep total costs as low as possible.

This has seen B&M working with Peel Ports to identify and secure greater efficiencies, as well as expanding quayside and in-warehouse storage.

A flexible arrangement allows B&M to accommodate an extra 85,000 pallets of stock in the run-up to Christmas, avoiding the extra miles and costs that would be incurred by using separate stores across the North West.

With Peel's port-centric multi-user warehousing, there are no rigid, long-term contracts so costs drop when stock requirements are lower. This on-demand approach has contributed to B&M's extremely efficient supply chain, helping the retailer open 200 new stores since 2013.

B&M also saved on capital investment and overhead costs, by using the port facilities and has cut the equivalent of four million road miles, reducing transport costs, being more environmentally responsible and mitigating delays on the UK network.



DEPTH OF ENGINEERING EXPERTISE.

This is a region renowned for engineering.

Manufacturing has always been at the heart of the City Region's economy from our excellence in ship-building to our current world-leading position in chemicals and pharmaceuticals through to the production of the world's most iconic cars.

We have the companies, experience and deep pool of maritime engineering talent to support the expansion of the maritime sector.

The diversity and scale of maritime-related engineering is significant, from the design and manufacture of new aircraft carriers and next generation nuclear technologies to precision subsea components and advanced materials engineering.

Companies like Cammell Laird, Peel Ports, ABB, DONG Energy and Royal HaskoningDHV continue to invest in the places and people that have been at the heart of British engineering for two centuries.

The region's major engineering firms are proving to be crucial for the emerging supply-chains around marine renewables, with the world's largest offshore wind turbines being installed along our coastline.

CASE STUDY: ATLANTIC CONTAINER LINE

Since 1967, ACL has been a specialised carrier of containers, project and oversized cargo, heavy equipment and vehicles with the world's largest combination Container/RORO (CONROs) ships. The company's headquarters are in Westfield, New Jersey with offices throughout Europe and North America. ACL employs 160 people at its European Customer Center in Liverpool's City Centre in a newly constructed, highly sustainable, BREEAM Excellent, 40,000 sq ft building on Duke Street.

ACL offers a direct RORO/Container service which calls Baltimore, Norfolk-PMT, New York and Halifax, Liverpool, Antwerp, Hamburg and Gothenburg. ACL has slot exchanges with other lines, offering five weekly transatlantic sailings. ACL offers fast connections to Ireland and Scotland and offers a choice of three ports in the UK; Liverpool, Southampton and London Gateway for services between the United Kingdom and the North American East Coast and Gulf ports.

In 2015, ACL commenced replacing its existing fleet, the five new Generation 4 (G4) vessels: Atlantic Star, Atlantic Sail, Atlantic Sea, Atlantic Sky and Atlantic Sun. They incorporate an innovative design that increases capacity without significantly changing the dimensions of the vessel. They are bigger, greener and more efficient than their predecessors. Their container capacity is more than doubled at 3800 TEUs, with 28,900 square meters of RORO space and a car capacity of 1300+ vehicles. The RORO ramps are wider and shallower and the RORO decks are higher (up to 7.4 meters) with fewer columns, enabling much easier loading and discharge of oversized cargo. Emissions per TEU are reduced by 65%. The fleet continues to employ cell-guides on deck, a feature that will allow ACL to extend its enviable record: ACL ships have never lost a container over the side. All five G4s are now in service.

The ACL vessels are registered in the UK and call at Liverpool twice each week.

ACL is a subsidiary of the Grimaldi Group of Naples, Italy.

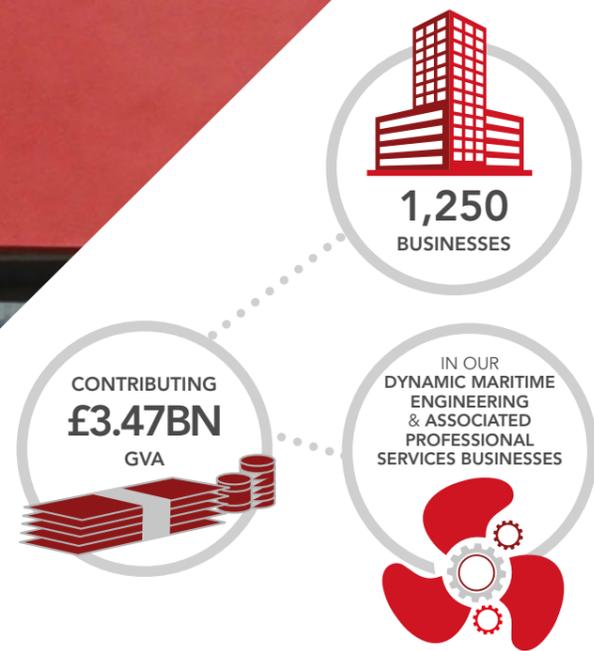


NETWORK OF MARITIME EXPERTS.

As you would expect from a region with world-class maritime credentials, we have a proven and supportive network of expert professionals that understand the complexities and dynamics of the sector.

Our network offers support with all aspects of the industry's needs from law to logistics, manufacturing to marketing and cargo handling to computer engineering.

A great example of how a wide range of service providers come together for the benefit of the region is Mersey Maritime. As the representative body for the ports and maritime sector in Liverpool City Region, Mersey Maritime works with businesses of all sizes and in all locations to develop strong, market-responsive supply chains and promote Liverpool's maritime industry as a world-class Centre of Excellence.



CASE STUDY: CAMMELL LAIRD

An exemplar of modern manufacturing and marine engineering excellence can be seen in the iconic Cammell Laird.

Cammell Laird was founded in 1828 and is based on the River Mersey in Liverpool City Region on the west coast of Britain. The company's Birkenhead site expands across 130 acres and includes four dry docks, a large modular construction hall and extensive covered workshops. It is also at the centre of a marine and engineering cluster with easy access to support services classification societies and port state authorities.

Today the company is rapidly expanding as a cutting edge engineering services specialist. Its highly skilled workforce and extensive world-class facilities are used to support a broad range of sectors and projects.

Cammell Laird has continued to develop its capability in the marine sector, and is a world leader specialising in military ship refit, commercial ship repair, upgrade conversion and shipbuilding. Cammell Laird was recently

selected to build the new, state-of-the-art £200m NERC polar research vessel that will maintain the UK's position firmly at the forefront of climate and ocean research. Named the RRS Sir David Attenborough, the new vessel is due for completion in 2019.

The business is further active in the industrial services and energy sector. It has become a hub of the off-shore wind industry seeing major investment in its port side infrastructure and facilities. The company is also working in the civil nuclear sector where it has built upon its core engineering strength to demonstrate how its modular construction facility can deliver optimised solutions for the planned new nuclear power plants across the UK and Europe.

Cammell Laird has further recognised the benefits of modular construction and delivery techniques for the nuclear decommissioning sector. In addition, the firm can offer its services to the offshore oil and gas sector, the petrochemical industry and a wide range of sectors requiring of engineering and heavy fabrication work.

MARITIME RESEARCH EXCELLENCE.

There is world-class academic research at Liverpool Logistics, Offshore and Marine Research Institute (LOOM) based at Liverpool John Moores University. LOOM specialises in marine and offshore systems design, evolutionary algorithms and optimisations, simulator and optimisation on port operations and 3D simulation of logistics movements. LOOM works with more than 50 global partners, including: AMEC, Bibby Line, Shell, Lloyd's Register, Maersk Line, The Peel Group, ABS Group, Vectra Group, Nippon Express and ACL.

Liverpool John Moores University's Department of Maritime and Mechanical Engineering is also a world leader, with navigation and radar simulation equipment and a ship-handling simulator with a 360 degrees field-of-view visual system.

Liverpool Institute for Sustainable Coasts and Oceans (LISCO) combines the marine and maritime expertise of the National Oceanography Centre, the University of Liverpool, and Liverpool John Moores University. The Institute brings together marine scientists, social scientists, engineers and economists to meet the challenges of a changing ocean and a changing coastal population.

Within an hour of the City Region, you'll find more great engineering talent at universities in Manchester, Salford, Lancaster and Preston.



CASE STUDY: HILL DICKINSON

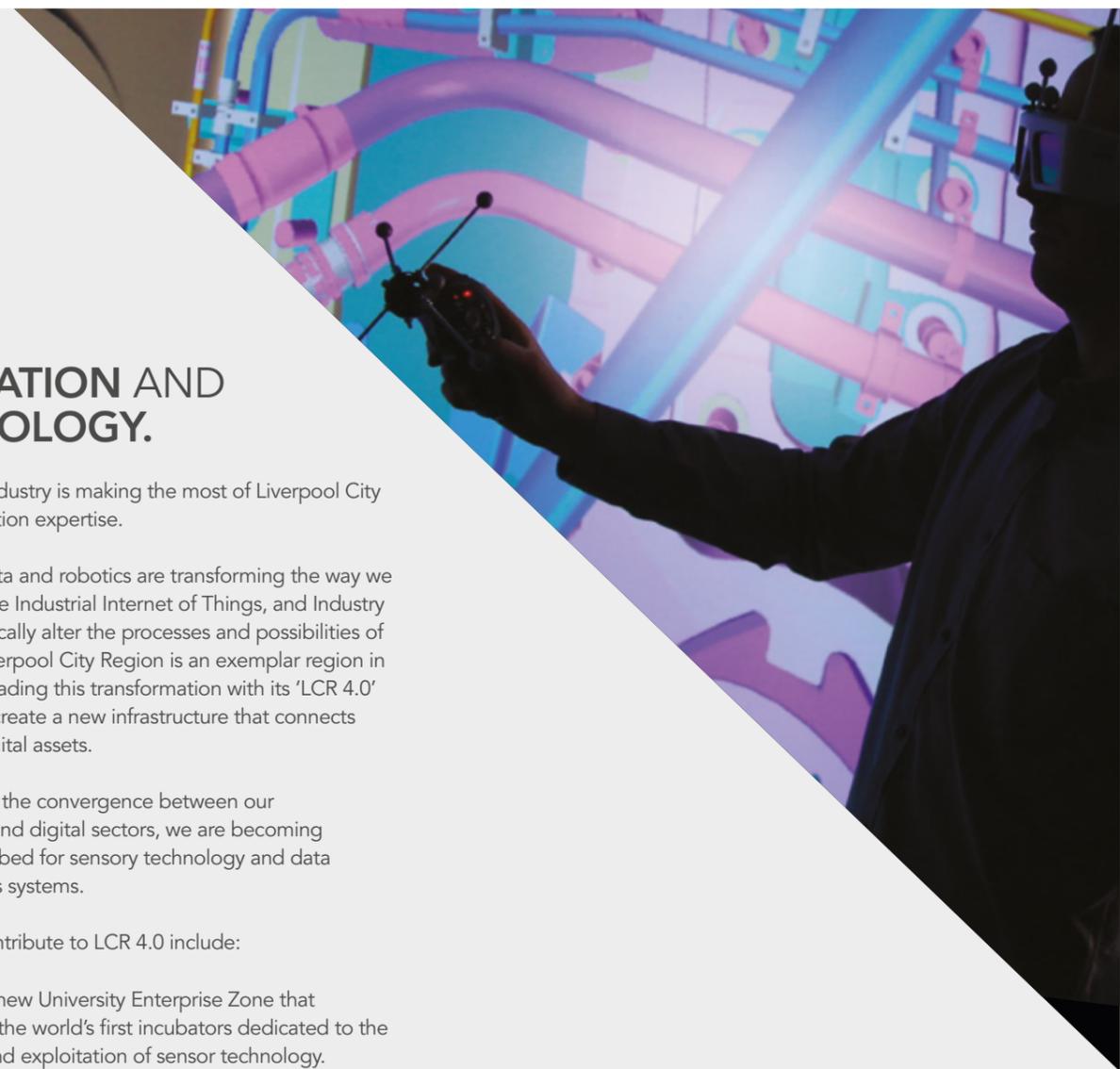
Hill Dickinson LLP has a proud and long connection with Liverpool and its maritime sector. The firm was founded here in 1810 and has expanded from a local shipping practice to an international full service law firm with a global presence.

Its lawyers have covered iconic cases such as the Titanic and Lusitania and continue to serve the maritime industry, which lies at the vibrant heart of the region's business community.

The firm has grown to provide a wide offering to businesses in the North West with commercial expertise in areas such as infrastructure, transport, finance, health, retail, pensions and employment.

Chief Executive Peter Jackson puts the firm's longevity and success down to its ability to combine high-level vision with flexibility, commercial pragmatism and close local knowledge.

"Hill Dickinson has always remained synonymous with Liverpool, even as we have expanded our reach and our offering. It's no coincidence that we have kept our head office here; we pride ourselves on being embedded in the local economy and the local community supporting, not just local business but community projects within the city that is our first home."



INNOVATION AND TECHNOLOGY.

Our maritime industry is making the most of Liverpool City Region's innovation expertise.

Sensors, Big Data and robotics are transforming the way we make things. The Industrial Internet of Things, and Industry 4.0, will dramatically alter the processes and possibilities of production. Liverpool City Region is an exemplar region in the UK that is leading this transformation with its 'LCR 4.0' programme to create a new infrastructure that connects physical and digital assets.

By encouraging the convergence between our manufacturing and digital sectors, we are becoming a hardware test bed for sensory technology and data communications systems.

Projects that contribute to LCR 4.0 include:

- **Sensor City** – new University Enterprise Zone that includes one of the world's first incubators dedicated to the development and exploitation of sensor technology.
- **STFC Hartree Centre** – leading collaborative research and innovation centre focused on accelerating the adoption of data-centric computing, big data and cognitive technologies into industry to gain competitive advantage.
- **Virtual Engineering Centre** – the UK's leading centre of virtual engineering technology integration for industrial and commercial applications.
- **Engineering and Technology Research Institute** – world class research facilities including Advanced Manufacturing Technology Research Laboratory.

CASE STUDY: ROYAL HASKONINGDHV

Royal HaskoningDHV is an independent international engineering and project management consultancy leading the way in sustainable development and innovation. The company employs more than 6,000 people around the world.

The Liverpool office of Royal HaskoningDHV has a market focus in maritime consultancy services. The team is at the cutting edge of innovation and technology and is a vital part of the region's maritime infrastructure playing a pivotal role in organisations like Mersey Maritime and won Engineering Company of the Year award at the Mersey Maritime Industry Awards in 2016.

The team in Liverpool is pioneering the use of Augmented Reality via the (Microsoft) HoloLens in the UK, a digital tool that will help shape the future of engineering to create a blended environment to showcase and test its designs and projects. This allows clients to explore and interact with modelled structures, providing the team with instant data acquisition for design amendments.

This is part of a global drive to embrace digital innovation applying emerging technologies. A further example of this is the use of the latest parametric design techniques that allow project teams team to collaboratively explore greater options to optimise structures without compromising on creativity and efficiency.

Jamie Gray, Associate Director, Aviation and Maritime, said: "We are fully committed to working in partnership with the maritime cluster in Liverpool City Region. This is an exciting place with access to plenty of tech talent and engineering expertise. Innovative new tools like AR and the application of advanced design techniques will help Royal HaskoningDHV to continually improve our client services."



INVESTING IN MARITIME TALENT.

At the epicentre of the UK's largest advanced manufacturing and engineering sector and with a thriving academic centre involved in some of the world's most important science and engineering projects, we can give you unprecedented access to a diverse and highly-skilled talent pool.

Liverpool has a large concentration of maritime-specific education establishments and state-of-the-art training facilities and projects including:

- **Manufacturing Technology Centre (MTC@LJMU)** - promotes innovation and links the maritime sector with academic expertise to deliver cluster based knowledge transfer programmes that boost productivity.

- **Maritime Knowledge Hub Phase 2** - will be a new £20 million, 66,000 sq ft facility serving as a focus for sector development by bringing together skills and training, innovation, research and development, business space and professional support all under one roof.

- **Maritime SuperSkills Project** - to help businesses develop high-level apprenticeship standards that are in line with city region growth sectors. A consortium comprising Liverpool John Moores University, Mersey Maritime, Hugh Baird College (Port Academy Liverpool), Wirral Metropolitan College, the Engineering College and Northern Logistics Academy will enable Liverpool City Region maritime-focused employers to map and develop a complete pipeline of maritime/logistics/advanced manufacturing skills progression from Levels 3/4 (advanced/higher Apprenticeships) through to Masters Level 7 (Degree Apprenticeships) for the key occupations that will accelerate growth.

An integrated approach to training and skills development for the maritime industry means that you'll have no problem finding a pipeline of talented people with practical experience and sector-specific skills.

WITHIN 1 HOUR OF LIVERPOOL CITY REGION:

6.2
MILLION



PEOPLE

6,000



ENGINEERING GRADUATES

72,000



UNIVERSITY GRADUATES EACH YEAR

323,000



PEOPLE IN ADVANCED MANUFACTURING & ENGINEERING JOBS

SEIZE YOUR OPPORTUNITY.

Liverpool City Region is a place bursting with opportunity. Find out how you can transform your business and create a more profitable future from here. We can help you to:

- rethink your logistics operations
- reach more customers
- cut your carbon footprint
- reduce the cost of your premises
- take your business global
- get financial support for expansion
- find the right partners and networks
- access training and skills support
- recruit from our deep talent pool
- optimise new technologies

There has never been a better time to become a part of the world's most iconic and exciting maritime location.

We have a team of business location experts from across Liverpool City Region that can assist you with your next project.

We can provide detailed research on markets, sectors and workforce demographics. We can put you in touch with the right contacts at industry networks and partner organisations. We're happy to introduce you to potential partners at our world-class universities and our existing businesses. We can help you to identify all the available support to help your expansion and show you a wider range of sites, premises and development opportunities.

Email us at LCR@investliverpool.com or telephone +44 (0)151 600 2930 for help and we'll look forward to working on your plans with you.

investliverpool.com

INVESTLIVERPOOL

ADVANCING THE CITY REGION

