



Innovation
Networks

Decarbonising
Ports and Harbours



Advisory Group

Member Details

AIMS

This Innovation Network is looking to convene a community of knowledge to explore the challenge of reducing emissions which lead to global climate change and poor air quality arising from sea faring port activities.

Role of the advisory group

It is the expectation of KTN, that those who are members of the Advisory Group will actively contribute to and promote the work of this Innovation Network over its duration. Members will advise on how to keep the activity of the Innovation Network timely and relevant to the set objectives. They will act as the eyes and ears of the Innovation Network to help inform its future development.

Members will use their relevant expertise to provide impartial advice to the Innovation Network, through strategic oversight and comments on proposed activities and recommendations. They will champion their community and help connect them to the wider Innovation Network community by magnifying the Innovation Network's activity and linking to relevant networks/key people across the target sectors that they represent.

Current Advisory Group members

The following organisations have agreed to be active members of the Advisory Group.

Associated British Ports

BAE Systems

BEIS

Birmingham Centre for Rail
Research & Education

British Ports Association

Carbon Trust

Connected Places Catapult

Dept of Transport

Forth Ports Limited

Maritime UK

Marine SE International Ltd

MarRi-UK

Offshore Renewable Energy
Catapult

Port of Tyne

Road Haulage Association

Royal Navy

Sustainable Energy
Association

UK Chamber of Shipping

UK Defence Solutions Centre

UK Major Ports Group

UKRI – Innovate UK

Vattenfall

MEMBER DETAILS & STATEMENTS OF ACTIVITY

Associated British Ports

- Port Harbour owner/Facility operator



ABOUT:

Challenge owner - Maritime or marine/Buildings & infrastructure

ABP is the UK's leading port operator, handling approximately a quarter of the UK's seaborne trade. ABP have been undertaking the following activity, which will be of interest to the Innovation Network community:

- ABP have invested significantly in renewable energy across their business.
- ABP are actively working with KTN and their technology contacts to look for retrofit solutions to reduce diesel consumption from our mobile plant and machinery and in-port vessels, having launched 3 challenges on KTN's Innovation Exchange in late 2019.
- ABP have made extensive investment in electric/hybrid cars, port equipment. For example: Project Pilgrim and a new fleet of electric forklifts.
- ABP are working with the LEP in Southampton to make the business case for shore-side power for visiting vessels.



Alan Tinline – Group Head of Health, Safety & Environment
(atinline@abports.co.uk)

MEMBER DETAILS & STATEMENTS OF ACTIVITY

BAE Systems Surface Ships Limited - Facility operator/Service Provider or Designer

BAE SYSTEMS

ABOUT:

Solutions Provider - Maritime/Digital/Energy/Transport (vehicles, freight and vessels)

BAE SSS Ltd have been undertaking the following activity, which will be of interest to the Innovation Network community:

- Energy Bureau System - Energy data collection to assess port consumption
- Ship Energy Assessment Systems (SEAS) - An intelligent application to optimise the fuel consumption of Ships
- Bio-Fuels - Assessment into the feasibility of using bio-fuels for fast jets (or turbine powered ships)
- Installation of a CHG power plant in Portsmouth Naval Base (as the Prime Integrator)
- Energy optimisation of stand-alone diesel generators
- Solar/Energy harvesting power pack for the BBC wildlife programs



Matthew Albans – Head of Special Projects in the Maritime Labs
(matthew.albans@baesystems.com)

Matt has worked in the Defence Industry for the last 20 years, although he advises it often seems longer. His experience is centred on finding, assessing, building and then spectacularly breaking off a range of impressive and often expensive technology.

Matt has therefore gained a proficiency in rapidly understanding the business and engineering feasibility of novel technology and innovative solutions. His experience covers a range of energy projects relevant to the Innovation Network, covering energy generation, alternative fuels and energy optimisation systems, both shore and ship based.

Matt also Chairs the Defence Research and Technology Forum at TechUK.

MEMBER DETAILS & STATEMENTS OF ACTIVITY

BEIS - Department for Business, Energy & Industrial Strategy - Government Body



ABOUT:

Influencer – Maritime or marine/Digital/Energy/Buildings & Infrastructure/Investment/Policy

BEIS is a ministerial department, supported by 41 agencies and public bodies and is responsible for Business, Energy and Industrial Strategy. BEIS is the lead government department for the delivery of the Government's Ten Point Plan for a Green Industrial Revolution. The ten point plan sets out the approach government will take to build back better, support green jobs, and accelerate our path to net zero. The ten point plan will mobilise £12 billion of government investment, and potentially 3 times as much from the private sector, to create and support up to 250,000 green jobs.

The plan focuses on increasing ambition in the following areas - relative to decarbonising ports & harbours:

- driving the growth of low carbon hydrogen
- accelerating the shift to zero emission vehicles
- 'jet zero' and green ships
- protecting our natural environment
- green finance and innovation

In the recent spending review the Government is establishing The Net Zero Innovation Portfolio (NZIP), which will accelerate near-to-market low-carbon energy innovations, stimulating private sector investment and green growth. The government is committing £200 million for NZIP in 2021-22 to support new decarbonisation solutions and bolster emerging technologies such as direct air capture and low carbon hydrogen. This fund is included within the spending plans for BEIS in Spending Review 20.

Mark Turner - Head of Defence & Marine in Advanced Manufacturing & Services

MEMBER DETAILS & STATEMENTS OF ACTIVITY

Birmingham Centre for Railway Research and Education - Trade Body (rail supply chain)

UNIVERSITY OF
BIRMINGHAM

BCRRE

ABOUT:

Solution provider (academic/research)

BCRRE have been undertaking the following activity, which will be of interest to the community. They have particular focus on research and innovation across the broad topics of digitalisation and decarbonisation.

In digitalisation, they lead the UK Rail Research and Innovation Network (UKRRIN) Centre of Excellence in Digital Systems that comprises 4 core themes:

1. Future train operations and control (includes modelling and simulation/Digital Twin etc);
2. Data Integration and Cybersecurity;
3. Remote Monitoring, Sensing, Autonomous Systems and Robotics;
4. Introducing Innovation

In decarbonisation, they are leading experts in traction systems, power electronics, climate adaptation and mitigation, asset management and sustainable infrastructure. BCRRE have recently had significant media attention after developing and running the UK's first hydrogen train, HydroFLEX, on the UK mainline railway in September.



Alex Burrows - Director
(a.burrows@bham.ac.uk)

Alex leads BCRRE, one of the largest specialist railway research, education and innovation centres in Europe. He is also the MD of the Rail Alliance, a community of rail SMEs with over 750 members.

MEMBER DETAILS & STATEMENTS OF ACTIVITY

British Ports Association - Trade body



ABOUT:

Influencer – Maritime & Marine

BPA have been undertaking the following activity, which will be of interest to the Innovation Network community:

- Part of the Department for Transport's Clean Maritime Council;
- Preparing a report on barriers and solutions to shore power (cold ironing or shore-to-ship power etc);
- Hosted a decarbonisation conference with the UK Chamber of Shipping in early 2020;
- Regularly participate in working or expert groups through the European Seaports Organisation's (ESPO) Sustainable Development Committee;
- BPA is joining the International Association of Ports and Harbour's World Ports Sustainability Programme;
- With the UK Major Ports Group, coordinated an 'Environment & Sustainability Group' for UK ports
- BPA have joined the UK Chamber of Shipping's shore power working group and are supporting PhD research on shore power
- Member of the International Collaboration on Ship Emission Reductions (ICSER) programme hosted by Vancouver Fraser Port Authority



Mark Simmonds – Head of Policy & External Affairs (mark.simmonds@britishports.org.uk)

Working Group Champion – Regulations, Legislation & Policies

Mark joined the Association as Policy Manager in 2016 and leads on environmental and technical policy issues. He is also the Association Secretary and is a member of the BPA Council. Before joining the BPA he spent five years working for an MP in the House of Commons as a senior researcher and speechwriter, focusing on business and technology policy.

Prior to that he worked in Government as a policy advisor and a Business and Systems Analyst at the Dreyfus Corporation, part of the Bank of New York Mellon in the USA.

MEMBER DETAILS & STATEMENTS OF ACTIVITY

Carbon Trust
- Charity



ABOUT:

Solution provider/Influencer – Energy

Carbon Trust suggest the following will be of interest to the Innovation Network community:

- World Ports Sustainable Programme (set up in 2017 by the International Association of Ports and Harbours) – the website includes a list of port projects related to sustainability, including specific projects focused on emission reductions;
- DNV GL's Alternative Fuels Insight platform – including a bunkering infrastructure map for alternative fuels



Giulia Rado – Programme & Innovation Analyst (giulia.rado@carbontrust.com)

Working Group Champion – Fuel & Energy Sources

Giulia supports the delivery of various projects related to the green finance, decarbonisation strategy and low carbon innovation funding programmes. She has recently been involved in the development of new commercial propositions aimed at accelerating the decarbonisation of the shipping sector. As part of this work-stream, Giulia has supported research regarding the current regulations and port-led initiatives aimed at reducing GHG emissions and air pollution. She has also been involved in research related to decarbonisation options for deep-sea vessels, including the study of key design and operational measures available to vessels to reduce their carbon intensity and the range of metrics that can be used to measure, benchmark and monitor a vessel's carbon intensity performance.

MEMBER DETAILS & STATEMENTS OF ACTIVITY

Connected Places Catapult - Academic or research body



ABOUT:

Solution Provider – Transport

Connected Places Catapult is leading a six month study for DfT on 'Transitioning to Smart Ports', which will be of interest to the SIG community CPC . This aims to deliver an industry validated blueprint for the technology-enabled UK Ports of the Future to solve real-world challenges in multimodal logistics through UK ports.



Tracy Savill – Initiative Lead (tracy.savill@ts.catapult.org.uk)

Working Group Champion – Fuel & Energy Sources

Tracy leads the CPC's maritime and net zero initiatives and sits on the Maritime UK Technology & Innovation Group.

Department of Transport - Government Body



ABOUT:

Influencer – Maritime or marine/Transport/Investment/Policy

DfT is a ministerial department, supported by 24 agencies and public bodies. They work with agencies and partners to support the transport network that helps the UK's businesses and gets people and goods travelling around the country.

Jonathan Simpson

MEMBER DETAILS & STATEMENTS OF ACTIVITY

Forth Ports Limited

- Port Harbour owner/Facility operator/
port user



FORTH PORTS LIMITED

ABOUT:

Challenge Owner - Maritime or marine/Transport (vehicles, freight and vessels)/
Buildings & infrastructure

FPL have been undertaking the following activity, which will be of interest to the Innovation Network community:

- FPL have put considerable effort into decarbonisation of warehouses, lighting (fittings and controls), heating (controls for optimisation), altering older diesel vehicles;
- FPL have facilitated battery storage on site for tenant companies and have consented on-site renewables;
- FPL have spent a lot of time looking at optimal speed for our marine craft;
- FPL consider a big challenge is dealing with the existing diesel fleet in a cost-effective way.

Dr Derek McGlashan - Group Sustainability, Safety and Regulatory Manager

Derek has been working on environmental aspects, including energy efficiency in ports for over twenty years. During this period other responsibilities have included consenting, security and more recently sustainability and safety across the Forth Ports group (FPL).

Maritime UK

- Trade body



ABOUT:

Influencer – Maritime or marine/Transport/Investment/Policy

Maritime UK is the umbrella body for the maritime sector, bringing together the shipping, ports, services, engineering and leisure marine industries. Our purpose is to champion and enable a thriving maritime sector.

Ben Murray – Director

Working Group Champion – Pollution

MEMBER DETAILS & STATEMENTS OF ACTIVITY

MarRi UK/University of Strathclyde - Academic & Research Body



ABOUT:

Solution provider – Academia

UoS have been undertaking the following activity, which will be of interest to the Innovation Network community:

- Through MarRI-UK co-ordinating and supporting projects throughout the UK to support DfT's Clean Maritime Plan all of which are directly related to reducing emissions and some within ports.
- Currently championing a DfT funded proposal in developing Autonomous Clean Land/Water Operations.



Alex Duffy - Professor and Head of Department, Design Manufacturing and Engineering Management (alex.duffy@strath.ac.uk)

Prof. Alex Duffy was previously the Vice-Dean of Research in the Faculty of Engineering and a past Vice President and President of the Design Society, an international body encompassing all aspects and disciplines of design. He is the editor of the Journal of Engineering Design, an Associate Editor of Design Science, a Strategic Advisory Board member for the International Journal of Design Creativity and Innovation, and on the editorial boards of the journals of Research in Engineering Design, Artificial Intelligence in Engineering Design Analysis and Manufacture, and the International Journal of Engineering Management and Economics.

He is a member of the UK's Department of Transport's Clean Maritime Council and the Maritime Enterprise Working Group as well as Director of Maritime Research and Innovation UK (MarRI-UK). He has been a programme/scientific member of over 120 international conferences/workshops and published over 250 papers.

MEMBER DETAILS & STATEMENTS OF ACTIVITY

Offshore Renewable Energy Catapult

- Tenant or port user and
Academic/Research Body



ABOUT:

Influencer - Offshore wind, including maritime logistics and operations

ORE have been undertaking the following activity, of interest to the Innovation Network community:

- Working on several projects with Offshore Wind industry partners to explore opportunities for decarbonising OSW O&M, including offshore and onshore activity. The Catapult is also leading work to consider decommissioning and composite recycling of blades in UK port facilities.
- Working with stakeholders and partners in the Humber region, where they are involved in the proposal development phase of a project that would seek to bring together collaborators with the objective of developing in Grimsby the world's first net-zero operations port (including both onshore and offshore scopes of activity).

Stuart Barnes - Regional Partnership Manager

Stuart has worked in the wind industry for around ten years, first as part of the development and consenting team for an onshore developer, then with an offshore developer. He has been with the ORE Catapult for 3 years and lead their work on maritime operations decarbonisation.

Throughout his time in the renewable energy and energy efficiency sector he has specialised in roles involving policy, development and consenting, stakeholder relations, project management and more recently innovation management.

MEMBER DETAILS & STATEMENTS OF ACTIVITY

Port of Tyne

- Port Harbour owner/Facility operator



ABOUT:

Challenge owner - Maritime or marine/Buildings & infrastructure

The Port of Tyne is one of UK's most innovative and efficient deep-sea ports handling cargoes across five continents.

The port continually invests in improving and extending their leading-edge facilities at their location on the River Tyne, served with a network of sea routes, major roads and rail.

The diversity of cargoes handled ranges from cars to containers and bulk goods to renewable energy and offshore. Port of Tyne offers a unique end-to-end solution ensuring goods move safely, securely and efficiently.



Jo North - Technology and Transformation Director, Port of Tyne (Jo.North@portoptyne.co.uk)

Advisory Group Chairperson

Dr Jo North is Associate Lecturer for business creativity and Innovation at the University of York and joined the Port as Technology and Transformation Director & 2050 Innovation Hub lead in 2019. Jo has leading-edge expertise in working with companies to optimise the creative potential of their people, products, services and brands and build an innovative, entrepreneurial capability into organisational culture. She brings a truly unique perspective to teams and innovation as she combines her academic excellence, research and facilitation skills with real world, commercial business experience in the transport sector and beyond.

MEMBER DETAILS & STATEMENTS OF ACTIVITY

Road Haulage Association - Trade body



ABOUT:

Influencer – Transport, Haulage or Freight operator

With a membership of over 7200 mainly SME businesses, the focus is to balance the needs of hauliers, as economic enablers, and the environmental reform agenda.

RHA have been undertaking the following activity, which is of interest to the Innovation Network community:

To inform its approach to achieving a sustainable environment, the RHA has two starting points:

1. That environmental, social and economic well-being are intrinsically linked;
2. That well-designed standards, phased in appropriately as market supply allows, works well for everyone.



Chris Ashley - Head of Policy: Environment & Regulation (c.ashley@rha.uk.net)

Chris joined the RHA in September 2019 to lead its policy on environmental and regulatory issues. Prior to this, he was a Civil Servant for 18 years, mainly at the Home Office where he developed policies to reduce offending by heroin and cocaine addicts and to address domestic abuse. Together with a family background in haulage, he brings extensive experience and insight into how central and local government decision-making, policy-making and Parliament works at the highest levels.

Chris has published a number of thought-pieces and documents including:

- Eliminate, Minimise, Offset – RHA vision for decarbonising road freight (Jan 2020)
- RHA response to APPG Road Freight call for evidence on Clean Air Zones (March 2020)
- RHA response to APPG Air Pollution call for evidence on a clean air exit strategy (May 2020)

MEMBER DETAILS & STATEMENTS OF ACTIVITY

Royal Navy, Ministry of Defence
- Port Harbour owner/Facility operator/
Service Provider



ABOUT:

Challenge Owner - Maritime or marine/Vessels



Commodore Jeremy (JJ) Bailey ADC - Naval Base Commander Portsmouth
Advisory Group Deputy Chairperson

A Royal Navy Surface Ship Engineer by background, Cdre Bailey has spent his career in support of operational delivery at sea, project leadership, Royal Navy strategy and policy formulation and in his current role, in Command of Her Majesty's Naval Base Portsmouth. Amongst a varied career since leaving sea going roles in 2012, which have included future Naval Strategy, Science and Technology research sponsorship, engineering support delivery and a year at the Royal College of Defence Studies, he has maintained an enduring focus on digitisation, organisational design, engineering support and long term strategy.

Across the last 15 years he has followed, researched, sponsored and implemented a wide range of engineering and policy interventions relating to the close management of the impact of Carbon Emissions and the Royal Navy, and in his current role is leading the Royal Navy's Naval Base strategy development on delivery of the UK commitment by 2050.

MEMBER DETAILS & STATEMENTS OF ACTIVITY

UK Chamber of Shipping - Trade body



ABOUT:

Influencer – Maritime (Shipping)

- The Chamber is a member of the Clean Maritime Council who will make the plan for a zero-emissions UK maritime sector.
- The Chamber has two active working groups working on carbon and deployment of shore-power in UK ports.
- The Chamber, in collaboration with ports, is also contributing to an independent study that is looking at the barriers and opportunities of shore-power in UK ports.
- The Chamber is working closely with other international industry association to progress these issues at the IMO and EU.

Michael Igoe – Policy Advisor (migoe@ukchamberofshipping.com)

Anna leads the UK Chamber of Shipping safety and environment policy. Her team seeks to deliver a regulatory climate that maintains high safety and environmental standards for British Shipping companies without competitive disadvantage. A large part of her policy work involves issues related to decarbonisation and air emission reduction from shipping. Anna regularly attends IMO meetings as an advisor of the UK Delegation and works closely with several organisations, including the International Chamber of Shipping (ICS) and the European Community Shipowners' Associations (ECSA).

Anna joined the Chamber in June 2013. Before that, she has worked with some of the leading shipping companies, where she gained extensive knowledge of legislative and regulatory issues affecting the shipping industry. Anna holds a BSc degree in Shipping, Trade, and Transport and an MSc in Maritime Operations and Management from the City University.

MEMBER DETAILS & STATEMENTS OF ACTIVITY

UK Defence Solutions Centre - Government body, NGO



ABOUT:

Challenge owner and influencer (policy, investment analysis) - Maritime or marine/Digital/Energy/Transport (vehicles, freight and vessels)/Buildings & infrastructure/Academia/Investment/Policy

UK DSC have been undertaking the following activity, which will be of interest to the Innovation Network community:

- Cross-Sector Innovation - Subsea Autonomous Systems (Funded, in Final Stages of the competition prior to contracting) - This is a joint initiative to share knowledge within the field of underwater autonomy across defence and those undertaking commercial activities within the maritime environment; specifically, the Oil and Gas and Offshore Renewable Energy sectors.
- Energising Defence (Funded, In development) - The modernisation of energy-related systems offers Defence both advantage in operations and efficiencies. Defence is not exempt from Zero Carbon legislation, which is emerging across the globe. The UK is seeking to position itself as a global leader in end-to-end Electrical and Energy platforms and systems in the civil market, and the intent is to pivot this advantage into Defence capability and markets.
- Cross-Sector Innovation - High Altitude Intelligence (In Development) - Exploitation of the stratospheric and low earth orbit (LEO) altitudes is reaching an important and transformative stage. Platforms at these altitudes, whether LEO satellites or High-Altitude Pseudo Satellites have been in development for many years and their performance has been steadily improving. Sensor and communications payload capabilities have improved, both in terms of size, weight and power but also the type and quality of the product.

David Wotherspoon – Executive Director: Innovation & investment (david.wotherspoon@ukdsc.org)

David is responsible for the identification and scoping of thematic innovation opportunities aligned with the UKDSC's core capability pillars.

Recently prior to joining UKDSC, David was the operations director and program manager for the successful DEEPSEA CHALLENGE expedition designing, manufacturing and operating a bespoke manned submersible that operated at 11000msw. Furthermore David was the program manager for the design, manufacture and operations of the 4500m Remotely Operated Vehicle (ROV) Subastian, a successful modular freeflying ROV that is in operations with the Schmidt Ocean Institute (SOI) and before joining UKDSC, was the senior program manager at Saildrone , an Unmanned Surface Vehicle (USV) now operating in the Bering Sea and East Coast of the USA.

MEMBER DETAILS & STATEMENTS OF ACTIVITY

UK Major Ports Group
Trade body



ABOUT:

Influencer – maritime & marine



Tim Morris – CEO (Tim.Morris@ukmajorports.org.uk)

Working Group Champion – Mapping

Tim joined the UK Major Ports Group from the communications consultancy Hanover, where he was the Director responsible for the energy and infrastructure practice. Prior to Hanover, Tim spent eleven years in the steel industry with Tata Steel Europe and its successor companies, latterly as the Head of Public Affairs and interim Director of Corporate Communications. His prior roles in steel included those involving energy, environment and strategy. Tim spent six years as a management consultant for McKinsey before joining the steel industry. He has degrees from the London School of Economics and the University of Warwick.

UKRI Innovate UK
- Government Body



ABOUT:

Influencer – Policy

David Hytch – Head of Energy

David joined Innovate UK in 2013 as Lead Technologist for Offshore Renewables having a background in wind energy and aerospace engineering. David co-created the Innovation Exchange model, which is one of the proposals to sit alongside this Innovation Network. Since then David went on to develop the Industrial Decarbonisation ICSF programme – a £170m programme looking to decarbonise industrial clusters.

In 2019 David took the role as Head of Energy at Innovate UK and taken on responsibility for programmes across the portfolio looking at supporting businesses to grow through the development of low carbon energy technologies and services. This includes offshore renewables, nuclear and energy access areas.

MEMBER DETAILS & STATEMENTS OF ACTIVITY

Vattenfall Network Solutions - Service Provider/Investor or funder



ABOUT:

Solution Provider – Energy/Buildings & Infrastructure/Investment

VSNL have been undertaking the following activity of interest to the Innovation Network community:

- Microgrid concept designs
- Smart grid concept designs
- Working with the Energy Systems Catapult on the Modern Energy Partners initiative: part of the Commercial Advisory Group for this project were we identified routes to enable decarbonisation of the public sector estate and barriers to entry (procurement rules, funding etc)
- Integration of Distributed Energy Resources to distribution networks
- Diversity and Inclusion champion (incl Women's Engineering Society)

Andy Vickers - Business Development Manager (andrew.vickers@vattenfall.com)