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North Sea Neighbours

The longstanding trading relationship between the UK and the Netherlands

04–07



Insight from Britain's Leading Port Operator

In this issue

Welcome to the Winter 2018 edition of Report magazine.

As 2018, a busy year for businesses and Westminster alike comes to a close, this issue of our magazine looks beyond Brexit preparations.

We are reminded of the longstanding trading relationship between the UK and the Netherlands, and Dutch ambitions to ensure trade continues to flow between our two countries in future, on pages 4-7.

Developments in renewable energy, such as hydrogen and biomass, also play a key role in shaping the future of the maritime sector. On pages 10-13, ITM Power CEO Graham Cooley, discusses how hydrogen energy could make port operations more sustainable by eliminating their carbon footprint.

Nevertheless, preparing for Brexit is still a vital theme in our sector as our Humber ports continue to invest for future growth, as outlined by Humber Ports Director Simon Bird on pages 20-21. In addition, the benefits of introducing Free Trade Zones into the UK, as found in the US and Dubai, are discussed by the Mayor of the Tees Valley, Ben Houchen.

The maritime industry's commitment to long-term commercial success is paired with a strong focus on safety, which is reflected in an article by the Chief Executive of Ports Skills and Safety, found on pages 16-17.

This issue concludes with an exploration by Dr Shishank Shishank, Lecturer at Birmingham City University, of the potential benefits of Blockchain technology for building more transparent, trusted and secure global supply chains.



David Leighton Group Head of Corporate Affairs

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North Sea neighbours: the Netherlands and the UK

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hydrogen-fuelled future for ports

ITM Power CEO, Dr Graham Cooley.



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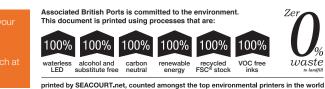
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North Sea neighbours: the Netherlands and the UK

Marjolein Bouwers, Chief Representative at The Netherlands Business Support Office (NBSO) in Manchester, discusses the longstanding trading relationship between the UK and the Netherlands and the ambition to ensure trade continues to flow between the two countries in future.

As North Sea neighbours, the relationship between the British and the Dutch has endured for centuries. Both Britain and the Netherlands have built on our illustrious past as global players and are continuing to be successful trading nations.

During the 17th and 18th centuries, the Dutch ran the VOC (the United East India Company), which was the biggest trading company in the world and a truly multinational corporation. Similarly, the British created an immense empire which straddled the globe and left a lasting legacy, including the English language, which has become the lingua franca of modern times.

Both countries were affluent and their economic success was accompanied by the worldwide projection of naval power, inevitably leading to rivalry and ultimately to confrontation. We declared war on each other no less than four times during the course of the 17th century and it was only

with the marriage between Mary II Stuart and Dutch stadtholder Prince William III of Orange, who then became King of England, that the British and the Dutch truly made up.

Today, the economic ties between our two countries are very strong and of vital importance for both. The Netherlands exported goods to the value of €22.7 billion to the UK in 2017, which makes the UK our second largest trading partner. Equally, the Netherlands are one of the UK's top export destinations after the US and Germany and an important gateway for UK products into the EU – or rather 'Europe'. As ports play a crucial role in both countries' trade, it is not surprising that we have become important stakeholders in the Brexit discussions.

While the Brexit negotiations may have been as difficult as extracting an egg from an omelette, one of the outcomes should be that we continue to work together. \triangleright





"It was only with the marriage between Mary II Stuart and Dutch stadtholder Prince William III of Orange, who then became King of England, that the British and the Dutch truly made up."



Port of Rotterdam, Netherlands

"The Dutch maritime sector recognises that this is also a time to seize new opportunities."

Naturally, there have been many concerns on both the Dutch and the UK side around a potential increase in waiting times before customs, increasing export costs and the accompanying administrative burden, but there will also be scope to strengthen our ties. While ports and related parties in the the supply chain are eagerly waiting for the exact Brexit scenario, the Dutch maritime sector recognises that this is also a time to seize new opportunities.

Recently, ports on the west coast of the Netherlands and east coast of the UK have started looking into creating new container and Ro-Ro line hauls and opportunities for new warehouses and distribution centres. These explorations could benefit from the proposed LHOFT (Liverpool Hull Optimisation of Freight Transport) and other port road and rail connectivity schemes or from the creation of enhanced coastal enterprise zones or free ports.

There is also a wider call to more actively exchange knowledge, skills and concepts in the areas of e-shipping and emission free waterways, hydrogen generation, cybersecurity and maritime clusters. Ports play an important role in emission reduction and are well positioned to take advantage of innovations in IoT, AI and big data to not only improve flow, situation and customer management, but also address climate challenges. Yet they are not always fast to respond to and implement innovations. A closer collaboration between the digital port transformation hubs, smart port clusters and maritime knowledge institutes in both countries will open up a wealth of knowledge for maritime clusters in both the Netherlands and the UK.

Irrespective of the export numbers, contingency planning and political motivations, there is a strong desire to maintain healthy and close relationships with what many Dutch consider to be their most like-minded friends in Europe. The proximity of our countries, our shared values and – as is often referred to by the Dutch – our same sense of humour, our entrepreneurial spirit and magnificent maritime industries will continue to inspire collaboration and strong business partnerships. To quote the King of the Netherlands during his recent state visit to the UK "Our ties will never be broken." However high the waves may rise, the United Kingdom will remain an important partner, for the European Union and for us as your North Sea neighbour." 🔢

"Our ties will never be broken. However high the waves may rise, the United Kingdom will remain an important partner, for the European Union and for us as your North Sea neighbour." *King Willem-Alexander of the Netherlands*



Thriving operations in Southampton: Solent Stevedores



Kate Thompson Peace interviews Managing Director of Solent Stevedores, Fiona Robson about her experience of running a fast-paced cargo handling business and how she has seen the thriving operation go from strength to strength.



"I love our people and if I ever need cheering up I love nothing more than to sit in the mess room and listen to the stories the old guys tell about their fathers and grandfathers working in the port."

Twenty years ago, when Fiona Robson's brother Stuart Cullen started the business he did so with just £1,000. Two decades later they are now turning over £25 million.

An award-winning business, Solent Stevedores provides a broad range of bulk, general cargo handling and storage services at the ports of Southampton, Immingham and St Helier, as well as Silvertown in London.

Since 2010, they have built a considerable cruise support service for a growing list of prestigious cruise operators calling at the Port of Southampton. The numbers are impressive: in 2018, they handled 2.7 million suitcases and 100,000 tonnes of ship's stores.

Solent Stevedores' five-acre, off-dock, 1,800 TEU empty container handling

facility officially opened in April 2018 at London Gateway. The facility offers a broad range of next-generation empty container handling and storage services together with container maintenance and repairs.

Fiona has been at the heart of the business throughout its rapid expansion, ensuring everything runs as it should and that their rapidly growing team is happy and fulfilled. It is the people, after all, who have been key to the success of their business.

"It's all about people. Stuart started the business back in 1997 as a salt trading company, and he asked me to help with a bit of admin in those early days.

"We started with just a handful of people and today we work with 140 full-time employees supplemented by more than

a hundred additional agency staff at peak times across several ports," said Fiona,

"I love our people and if I ever need cheering up I love nothing more than to sit in the mess room and listen to the stories the old guys tell about their fathers and grandfathers working in the port."

Her approach to dealing with people has enabled the company to build a loyal team who are willing to go the extra mile when needed.

Stories of Fiona and Stuart's generosity and thoughtfulness abound in the close-knit port industry. The team in Southampton have a Bentley they can use for special occasions like weddings, christenings or a loved one's birthday.

"It's Stuart's car and he's happy to share it with the workforce. A while ago, we

were looking at where we could make some savings and the chaps suggested that, while they like having the Bentley, they would understand if it had to go.

"At the next board meeting I fed this back only for Stuart to admit that he thought it was looking a bit shabby, so he had bought another one.

"We don't set out to treat our people in a certain way - we are just being us," she said.

When one of Fiona's head office team was diagnosed with breast cancer, her immediate concern was how she could practically help and she came up with the idea of employing

a cleaner to keep on top of the housework while she went through her treatment.

"I wanted to do something that would really help – it was a practical response to a difficult situation," explained Fiona.

Women in executive roles in the marine and maritime world are still worthy of note because of their rarity. Fiona is a passionate champion for encouraging more women to choose careers working in our ports.

"I would love to employ some female crane drivers - they have them in Rotterdam and it's only a matter of time before we have them. Sadly, I think women still see ports as



dirty, grimy places but there is so much to love about them.

"I must admit, I still get a buzz every time I drive onto a port and I would encourage women to consider a career here," she said.

Looking to the future, Fiona wants to see the business continue to flourish. A recent acquisition means they will be expanding their business into Singapore in the cruise services sector.

"We are always looking for the next step forward and keeping our staff engaged and fully involved is important for our future success."

Making the case for a hydrogen-fuelled future for ports



ITM Power CEO Dr Graham Cooley discusses the potential of a hydrogen-fuelled, sustainable future for the maritime industry and beyond.



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Unlike batteries, which can only store power in limited quantities for hours, hydrogen can store power for days or weeks.

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"If the electricity source is renewable, the hydrogen produced is 100% 'green' and can be used as a clean fuel for transport - including ships in *the future – and for* generating clean power."

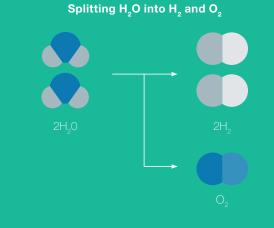
In a world in which fossil fuel energy is becoming more scarce and expensive, countries are struggling to meet their carbon reduction and air quality obligations. This highlights the increasing importance of making the most of renewable energy sources to decarbonise our transport networks. One such source, championed by British company, ITM Power, based in Sheffield, is hydrogen a solution that has finally reached the top of energy agendas. Air quality regulations are stimulating the need for clean fuels and reduced transport emissions. Energy storage provision has started to become a mandatory requirement in areas of the world such as California where it is recognised as an essential first step for efficient renewable energy deployment.

Alongside this regulatory 'push', auto OEMs are rolling out Fuel Cell Electric Vehicles (FCEVs) that require high-purity hydrogen fuel. Hyundai and Toyota have commercial vehicles in production, with

Honda being the latest to launch an FCEV. More are expected from the likes of BMW and Mercedes. Global hydrogen refuelling station infrastructure programmes are underway, with significant deployment plans in place.

An electrolyser (the opposite of a fuel cell) uses water and electricity to make hydrogen. If the electricity source is renewable, the hydrogen produced is 100% 'green' and can be used as a clean fuel for transport – including ships in the future - and for generating clean power. Because hydrogen can be stored for long periods, or injected directly into the gas grid, the ability to use renewable power when other sources are unavailable (wind, solar) is significantly enhanced. Unlike batteries, which can only store power in limited quantities for hours, hydrogen can store power for days or weeks. Σ





GREEN HYDROGEN

"For the ports industry, using hydrogen could mean a materially reduced carbon footprint and cleaner air."

For the ports industry, using hydrogen could mean a materially reduced carbon footprint and cleaner air. In a world in which all ports have their own sources of wind or solar power, these sources, for the whole time they are available, could be coupled directly to an electrolyser to produce hydrogen that is then either stored or injected into our gas grid (by far the largest energy storage mechanism in any developed country). This is known in the energy industry as 'power-to-gas'. If used on-site at ports, hydrogen could power shore-side FCEVs such as loaders, fork lifts and buses, as well as potentially being used to power fuel cells to provide completely clean shore-to-ship energy when vessels are in dock.

Businesses new to the idea of hydrogen power may wonder if this is just pie in the sky, but we can prove otherwise. ITM Power currently has seven hydrogen refuelling stations open to the public in the UK and is partnering with Shell to build more. Around the world, Japan has adopted FCEVs enthusiastically with more passenger cars, at lower cost, in the pipeline. Attention is now being focused on road transportation that is too heavy to economically run on batteries: buses and trucks. And there are already hydrogen trains, predictably in Germany.

Also in Germany, Shell is developing the world's largest rapid response electrolyser to generate clean hydrogen at Europe's biggest refinery. There have been two pilot power-to-gas plants operating in Germany for two of the country's largest utilities operators. In the UK, studies are underway for power-to-gas installations with partners including INEOS, Engie and Northern Gas Networks.

In maritime, ITM Power is a partner in the BIG HIT project in the Orkney Islands. BIG HIT (Building Innovative Green Hydrogen Systems in an Isolated Territory) features an electrolyser, using energy from renewables, including tidal power, producing hydrogen that is then used to fuel cleaner vehicles.

We are working to increase the adoption of hydrogen as a key element in the future of power and there are many areas within the maritime industry which will benefit from cleaner energy. But this is not tomorrow's world we are talking about the capability is here today.

ITM POWER TECHNOLOGY







Improving infrastructure decisions



There is still room to improve on cost, quality and efficiency in the delivery of UK infrastructure. Graham Atkins of the Institute for Government explains what lessons can be learnt from France.

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Over the past year, the Institute for Government has analysed how government can improve infrastructure policy in transport, energy, flood defences, digital communication, waste and water. Successive governments have made progress but could still help industry to generate improvements in cost, quality and the time it takes to approve infrastructure projects.

None of these problems - over-optimistic appraisals, limited independent scrutiny and poor public engagement – are unique to government projects. As the private sector continues to invest in the UK's ports, they should see what they can learn from improvements in government.

The UK needs to invest more in economic infrastructure, but this cannot come at any cost. Choosing the most effective options is vital.

But picking the best options is made more difficult when cost and time estimates are almost always over-optimistic. Across the public and private sectors, nine out of ten projects costing more than £1 billion go over budget.

This is a problem. If a government commits to projects-based on over-optimistic early cost estimates, they will find it hard to select the best options and find themselves locked into undeliverable targets.

But it is a resolvable problem if operators systematically learn from the experience of past projects. Highways England, for example, has vastly improved the

accuracy of its cost estimates by consistently evaluating projects after completing them. This can and should be replicated beyond roads. Departments must consistently evaluate the cost and time taken to complete projects, then use this data to appraise future projects more realistically.

In order to be delivered efficiently, high-quality projects require independent scrutiny of a department's objectives, the options for delivering them, and how realistic the success of these options are. Failure to devote sufficient attention to the early examination of options can result in better solutions being overlooked. Simply pushing ahead with a project is tempting, but this approach risks overlooking foreseeable problems in implementation and delivery, as successive governments have seen with projects from the Thames Tideway sewer tunnel to Universal Credit.

The Government has recognised that the level of scrutiny projects receive is a problem. The creation of the Infrastructure and Projects Authority and use of independent external challenge panels for certain major projects, has helped, but it could still do better.

Parliament should play a much more active role in scrutinising the Government's infrastructure choices. In the House of Lords, a new infrastructure committee drawing on peers' expertise in relevant fields – should be established to scrutinise project proposals.

Good public engagement requires trusted, independent institutions to provide open forums for debate.

The Government often fails to make timely decisions on individual projects. Difficult, important decisions can be put off indefinitely - the saga of expanding airport capacity in the South East has dragged on for more than half a century. The principal problem is that local public input comes too late in the process to be part of a constructive dialogue about options. Faced with local opposition, usually complicated by parliamentary arithmetic, government decision-making can grind to a halt.

Good public engagement requires trusted, independent institutions to provide open forums for debate. The French Commission Nationale du Débat Public (CNDP) provides a particularly good model for how this can work in practice, as it hosts public debates on contentious major projects as early as possible in their development – and this approach has a real impact. Of the 61 projects on which the CNDP facilitated debates between 2002 and 2012, 38 made modifications, including 25 that changed their plans based on options that emerged from public discussion.

In order to instil a sense of fairness among local communities and reduce unnecessary delays, the Government could create a Commission for Public Engagement, learning from the success of France's CNDP.

Port Skills and Safety on achieving a zero harm workplace culture



Richard Steele, Chief Executive of Port Skills and Safety (PSS), the UK's professional ports health and safety membership organization, discusses future health and safety priorities for the maritime industry.

UK ports have been sharing accident information through Port Skills and Safety for many years as part of their commitment to safety improvement. This approach has proved effective as, since 2000, the sector has reduced statutory reportable accidents by 59%. Simply put, the industry has become safer.

But nobody is sitting back thinking that the job is done.

Clichéd as it may sound, one injury is one too many. While the industry has made a lot of progress, it is important to keep the rate of improvement going. As with many things in life, the better you get the harder it is to improve.

Ports have sweated core safety to achieve the improvement. Risk assessments, elimination of hazards or substitution with lesser hazards, engineering controls (e.g. plant/people segregation), administrative controls (e.g. procedures and training) and personal protective equipment have brought us to where we are today. Ports must keep a firm foot on this pedal.

How, then, should we tackle the remaining 41%?

Core safety and skills are the prerequisites for further improvement, but they are not enough to achieve zero harm. You cannot 'procedure out' or 'train out' all accidents. People and their workplaces are too variable, too complex and too subject to change to have a procedure for every eventuality or for every individual's circumstances.

If you ask someone their number-one priority at work, "to be safe" is unlikely to be the first answer. Nevertheless, UK ports understand that it is the way that people and organisations work, how they value health and safety and the culture that they genuinely embody that is important.

To catalyse positive change, the sector is focusing on human factors, values and behaviours. It is important to understand why people do what they do and how to create workplaces that actively promote a positive health and safety culture through leadership, engagement and empowerment. It is not easy to write a good procedure, as anyone who has tried to self-assembly kit furniture can agree. It is considerably harder still to grow and make real a culture where everyone genuinely shares the same values and trust. You still need good procedures for clarity, communication and understanding. But a zero harm culture also needs every person in the organisation to be a safety champion, knowing that they will be backed up if they spot a problem and will be listened to when they have an idea for making the workplace healthier and safer.

Organisations intent on zero harm need to accentuate the positives. Health and safety has tended to be defined negatively, and has been dealt with primarily on a reactive basis, when something happens or is seen as an unacceptable risk. Many port

organisations including ABP are looking at health and safety from a more positive perspective.

A positive health and safety culture organisation is based on proactively and continuously trying to anticipate developments and events. Importantly, it sees people as agents bringing flexibility and resilience. It empowers people to act as problem-solvers and allies in successful, sustainable workplaces. To achieve this requires changes in thinking, language and additions to how we measure success. While we still need to record and investigate accidents, we also need positive indicators to promote engaged people at all levels, ensuring that our people are spotting and anticipating issues, thinking of better ways to work, getting involved and learning from doing things right.

Getting core safety right and developing a successful culture will take us much closer to zero harm or even 'Beyond Zero', as ABP aspires to. There is also more work to be done to address baseline physical and mental health.

The Health and Safety Executive has described health as the silent partner in health and safety. In the UK, occupational lung disease is estimated at 12,000 deaths per year. Compare that with 144 worker fatalities in workplace accidents in 2017/18. Musculoskeletal disorders account for 41% of all work-related ill health cases and 34% of all working days lost due to ill-health. The culture that ABP and the sector as a whole have set their sights on, working together through PSS, has to support healthy workplaces. A commitment to zero harm includes reducing harm to health. Our engaged and supported people need to be both health and safety champions.

UK research indicates that 42% of people with ill health believe that it affects their work, which gives another reason for shining the spotlight on health.

attention, for example, that could put an individual at greater risk. Through sharing information across ports, we are starting to measure how healthy our industry is, which is important in order to be able to achieve positive change.

H&S culture

Mental health

Another major issue in attaining a zero harm workplace is mental health. In the UK. 49% of all ill health loss (12.5 million working days per year) is a result of mental ill health. On top of this, mental health related presenteeism (working whilst ill at reduced ability) costs employers three times the cost of the person being absent. In many cases the roots of a person's condition may be

outside of work, but they can't leave it all at the gate. There is a clear business case and a duty of care for organisations to address mental ill health in the workplace. Additionally, as with physical health, mental ill health conditions such as stress may impact on a person's judgement and attention leaving them more vulnerable to workplace risks. The challenge is to provide a good work environment (a safe, healthy environment, a sense of security and autonomy, good line management and effective communication) as well as appropriate support to those experiencing mental ill health.

The good news is that the features that support an effective safety culture are

Health "Together they bring a 'whole person' approach to health and safety which is essential to achieving zero harm."



the same as those that support good health and good mental health. It is about creating, communicating and delivering a complete approach across strategy, systems, processes and people.

Culture, health and mental health are the remaining pieces of the puzzle, alongside core safety and skills. They are more difficult to get right because human factors are more complex than systems and infrastructure. Together they bring a 'whole person' approach to health and safety that is essential to achieving zero harm.



Are free ports the future?

Ben Houchen, Mayor of the Tees Valley, discusses the trade benefits of introducing Free Trade Zones into the UK, as seen in the US and Dubai.

A year ago, the idea of free ports in the UK was almost exclusively the domain of think tanks, policy wonks and academics, but today the reality couldn't be further from that. Those of us campaigning for Free Ports now have the attention of government ministers, the backing of significant port operators and other businesses, and the support of a cross-party group of MPs.

The concept of Free Ports or Free Trade Zones is relatively simple. They would be areas inside the UK that sit outside of our customs border and allow tariff relief on imports and exports, as well as providing a number of other incentives to economic growth. While very limited free ports are allowed inside the EU, the kind of free zones that would be of the greatest benefit to the UK can be found in other developed economies, notably Dubai and in the United States.

The US has had "foreign trade zone" programme since the 1930s, with more than 175 such zones across the country today, where 420,000 people work to create almost \$100 billion in exports. Even when scaled to fit the UK's geography and economy, the potential here is huge.

The UK stands at a crossroads when it comes to international trade, with the outcome of the Brexit negotiations and our future relationship with the EU largely dictating the path we will choose. It is extremely likely that the UK will find itself outside of the EU's Customs Union and that is certainly what most people in my

region voted for. This would not only allow us to have a fully-fledged free port or Free Trade Zone programme, the need to make Brexit a financial and economic success would practically dictate that we should have one.

In the Tees Valley, my officials are working with lawyers, economists, trade and tariff experts, and partners in the port sector to set out our Free Port vision. We are looking at a number of different Brexit scenarios and even considering how we might maximise the potential of our ports using existing but under-used legislation, should we remain shackled to some form of customs union with the EU.

Technological advances in the ports and for paper documents, track shipments across the world and optimise our ports, make this the perfect time for the UK to up its international trade offering. We also have an opportunity to combine the introduction of Free Ports with the rise of trade tech, and hopefully the UK's first trade tech accelerator. The Frictionless Trade report I recently launched with PUBLIC.IO sets out a number of recommendations for the public and private sectors in this sphere.

The campaign for Free Ports has already proved itself to have an appeal across different political groups, with an all party parliamentary group to explore the idea being formed of Conservative, Labour and Scottish National MPs. In my own region, it has attracted support from both sides



"Technological advances" in the ports and maritime sector, which reduce the need for paper documents, track shipments across the world and optimise our ports, make this the perfect time for the UK to up its international trade offering."

of the party political spectrum, because all politicians, whatever the colour of their rosette, can appreciate the job creation potential Free Ports have.

As the choices that will determine our future status as a global trading nation are made, the need for companies and professionals in the world of trade to make their voices heard in favour of Free Ports becomes all the more important.

Being part of this debate is the only way to have a say on what is quickly becoming the most exciting policy area on the UK's international trade agenda. I'm pushing this for the good of the Tees Valley and the wider UK, and I'm happy to work with partners from across the country to make Britain's free trade dream a reality.

ABP Humber: gateway to Europe and opportunity



Simon Bird, ABP Humber ports director discusses how improved transport links have the potential to unlock additional trade on the Humber.

In the summer, the Department for Transport published the annual statistics on the UK's major ports, which confirmed that the Port of Immingham in the Humber has extended its lead as the nation's largest port by tonnage. In fact, the Humber ports combined are the biggest port complex in the UK by a factor of two.

Given that coal usage has declined sharply in recent years, the continued growth in trade volumes in the Humber represents a considerable achievement. In 2013, the Port of Immingham handled 16 million tonnes of coal at the height of coal imports, but that had dropped to 4 million tonnes by 2017. To keep growing in that context has involved considerable diversification and now being involved in so many parts of the economy means that the Humber is a strong indicator of how UK trade is performing.

The Humber ports handle steel, timber. cars, animal feed, fertilisers, food products, building aggregates and many other cargoes. In addition, energy is big business, with 10% of the UK's energy being supplied with resources handled in the Humber ports, with biomass and coal going to power stations, oil to refineries and a growing interest in offshore wind.

By far the biggest growth, however, is in shipping containers. Containers touch just about every part of the economy and, "The Humber ports combined are the biggest port complex in the UK by a factor of two."

across the Humber, container volumes grew by 16% between 2016 and 2017. ABP has just announced a new £36 million investment to expand the container terminal in Immingham, increasing the capacity to meet growing demand. Container volumes have been growing every year since 2013. The growth is, in part, due to the rise in the number of regional distribution centres across the M1/M62 corridor, which look to the Humber ports as their gateway to trade.

A shift in trade volumes has also been noticed, with cargoes originally destined for southern ports, such as Dover, moving increasingly north as trade partners look at alternatives to mitigate any difficulties the more traditional routes may experience in the future. This is good news for the Yorkshire and Humber region as recent economic impact assessment figures suggest that, whilst the Humber ports support around 35,000 jobs, they also contribute £2.5 billion to the economy, much of which is retained in the region.

The key to continuing this growth is improving transport connectivity. Keeping cargoes flowing freely through good transport links is hugely important. The strategic corridor approach adopted by Transport for the North is especially important to the Humber ports. The strategy is pivotal to the success of our wider economy, ensuring that connectivity between the east and west coasts is improved and enhanced.

There is a well-established benefit to improving access to ports by moving freight by rail, not just in terms of the economy but in environmental terms as well. Plans by Network Rail, working with the Humber Local Enterprise Partnership to invest in enhancing the rail gauge to the Port of Immingham, are very welcome and it is important that it happens on schedule so that, in the course of the coming years, the UK's largest port by tonnage can expand the offer it gives for using rail freight. It is an especially exciting prospect to consider the possibility of connecting the container terminals in the Humber to major regional distribution centres in South Yorkshire. If that opportunity is seized, in future years the statistics will not just show Immingham as the largest port in the UK, but one of the largest and most important in Europe, which can only benefit the economy across the North of England. 🖪

35,000

Humber ports jobs supported

The Humber ports handle

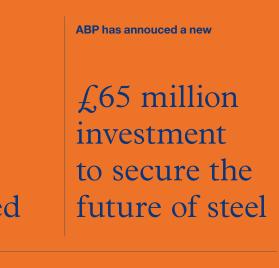
ABP has annouced a new

steel, timber, cars, agribulks, biomass, construction materials

£50m

ABP has annouced a new





investment in expanding Humber Container Terminal

The Humber ports contribute



to the economy

Ports and biomass



Benedict McAleenan, head of Biomass UK, which is part of the Renewable Energy Association, lays out why ports are vital to the future of biomass energy, which is the UK's second largest source of renewable energy generation.

What was the UK's second largest source of renewable power last year? It wasn't, as most people guess, wind or solar.

Wind was the leader, generating around half of our renewable power supply, much of which came from offshore wind farms, supported by infrastructure and skilled workforces in ABP's ports such as Grimsby and Hull.

It was biomass that came second, generating nearly a third of our renewable power. To put that in context, that's around 8-9% of the UK's total electricity supply. Solar panels generated just under 12% of renewable power. But it's important not to see these technologies as competing with each other. The real challenge is to understand how they work in concert to keep costs and carbon down. Bioenergy is crucial to our energy system because it backs up wind and solar, helping the power grid to flex with increasingly complex supply and demand curves. It also provides a range of industrial benefits, with ports at the heart of the story.

Ports are central because most of the biomass we use is imported through hubs such as ABP's Port of Immingham. Around 7 million tonnes of biomass pellets are imported into UK ports each year, just for Drax Power Station in Selby, North Yorkshire. This will increase as new biomass power stations come online (Lynemouth earlier this year and MGT Teesside soon). The benefits are manifold: investment in UK trading infrastructure; reinforcement of trading relationships; supporting jobs, especially in industrial hubs such as North East England; technology innovations from shipping to air quality; and supporting a smoother transition from coal to low-carbon renewables.

The most important benefit of bioenergy has been underlined repeatedly this autumn, with independent reports from the Intergovernmental Panel on Climate Change, the International Energy Agency and the UK's Energy Technologies Institute. All restated the centrality of bioenergy for decarbonising the world's economies. By combining bioenergy with carbon capture and storage (known as BECCS), we could actually remove carbon from the atmosphere. But we won't get there if we don't invest in the bioenergy infrastructure on which BECCS will depend. The government's taskforce on carbon capture said in 2018 that regional hubs will be vital to making it all happen. With the North East of England an obvious candidate for this, ports such as Immingham will play a long-term role.

Starting out as unwanted, low-grade forestry by-products, biomass raw materials are pelletised and then shipped to the UK. They're received by specialist facilities at the port, loaded onto trains or lorries and brought to facilities like Drax. Through its conversion from coal to biomass, Drax has transformed itself to become the biggest decarbonisation project in Europe and the UK's largest renewable generator. By using biomass instead of coal, it has cut its carbon emissions by more than 80%. Add on bioenergy carbon capture and storage (BECCS) in the future at Drax (it is already trialling the technology), and the power station could deliver negative emissions, meaning the electricity it generates will help to reduce the amount of carbon accumulating in the atmosphere.

Through support for biomass, Britain has become a world leader in the technologies and the regulations needed to ensure a low-carbon supply chain. This is being studied throughout the world as other nations seek to create stable, low-carbon energy systems. Just like the UK, those countries are often looking for more abundant bioenergy resources than their own landscapes provide, which means turning to the global shipping and ports system to access the 'wood baskets' of the world, especially the US and Canada.

The resources available in North America are vast; the working forests supplying Drax in the southern USA are three times the entire landmass of Great Britain. You can drive for hours without seeing anything but trees. And they're growing faster than they're being harvested, with annual net growth of around 0.7-1%. Foresters there manage growth rates to ensure constant net growth and to prevent land being turned over to urban or agricultural use. Their priority is supplying high-quality timber for buildings and furniture. Woody material that they can't use because it's misshapen, diseased or too small, they often burn on site or leave to rot. The alternative is to sell to industries such as pulp and paper or bioenergy. With many paper mills shutting down, bioenergy provides a profitable alternative revenue stream for the forest. Put simply, bioenergy helps keep forests as forests. As a result, standing stocks in the southeastern USA have more than doubled over 70 years. There's a similar story in Canada and the EU.

So a waste product becomes a way to replace fossil fuels in our energy system and a way to support international forestry.

However, this isn't the end of the low-carbon story. By regulating the entire biomass supply chain, the UK ensures bioenergy provides a genuine reduction in emissions. UK-based generators have their supply chains, from forest to power station, independently audited and they must show a cut in emissions of at least 60% compared to fossil fuels. That requirement is growing far stricter in coming years, creating extra incentives (and funding) for shipping to decarbonise through bold technological advances.

Through British ports, we can access the world's forestry resources in a way that supports forest growth, lowers emissions and drives industrial innovation. This isn't temporary or transitional. As bioenergy becomes an accepted commodity for energy systems around the world (as the IEA and IPCC suggest), and as BECCS technology becomes a scalable reality, global shipping will play a central role. It's a long-term partnership.









HMS Cambria: coming home to Cardiff

By spring 2020, HMS Cambria, Wales' historic Royal Naval Reserve unit, will once again be based in Cardiff, thanks to a new working partnership between the Reserve Forces' and Cadets' Association and ABP South Wales.

HMS Cambria's rich heritage as Wales' create the Cardiff Bay we know today,

construction, HMS Cambria's current home, at the former Service Married Quarters at Sully, near Barry in the Vale of Glamorgan, was opened in 1980 and has remained Cambria's base for almost 40 years.

Forces' and Cadets' Association (RFCA) and ABP South Wales, the unit is set to

Cardiff Port estate, located near Roath Dock, in the heart of Cardiff Bay, only

The new building will provide a new state-of-the-art training centre, as well as accommodation and social facilities for the Royal Naval Reserve, the Royal Naval Unit. From opening, it is planned that HMS Cambria will offer these vital years thanks to a long-term lease.

It is hoped that the new site will provide more opportunities for existing reservists to fulfil their roles as vital and valued members of the armed forces family, as potential by getting involved and making

development, ABP Director South Wales September – together with HMS Cambria's commanding officer Commander Steve Thorne, and Commander of the Maritime

At the visit, Commodore Quinn reiterated develop. It will deliver state-of-the-art the Royal Naval Reserve for many years to

"I am excited to see this project develop. It will deliver state-of-the-art training and accommodation facilities for the Royal Naval Reserve for many years to come."

vessels regularly visit Britannia Quay, facility will also provide the unit with easy

On behalf of ABP, Matthew Kennerley welcomed Cambria back to its Cardiff home and said that ABP was "delighted to be using our port infrastructure to support such

ABP South Wales has provided a to support the project and will be working closely with the Reserve Forces' and Cadets' Association over the next reality, securing a new proud Welsh base for reservists, well into the future.

The political party conference season provided an ideal opportunity for discussing key issues facing the ports and maritime sector.



With the ongoing Brexit negotiations looming large over UK politics, many of the nation's leading policy makers and influencers gathered in Liverpool and Birmingham in the autumn for the Labour and Conservative party conferences. The conference season offers delegates from politics, media and business the chance to meet and discuss the most pressing issues of the day. ABP attended both conferences and engaged with representatives from across the political spectrum on vital issues affecting UK ports, from transport and infrastructure investment to the future of international trade.

Now in its fifth year, the ABP Sea Shanty Reception is one of the most popular events at conference, attracting over 500 delegates to lively events in Liverpool and Birmingham. The Roaring Trowmen sea shanty singers helped to create a unique and enjoyable atmosphere for delegates, who also enjoyed traditional maritime fare while learning more about the important role ports play in supporting businesses and industry across the country. Guests included Shipping Minister Nusrat Ghani MP, who took time out of a busy schedule to attend the event in Birmingham. Other attendees included party members, MPs, local councillors, and representatives from industry and the media who all contributed to record attendances at both events.

Transport was a hot topic on the conference fringe programme at both conferences, with several meetings taking place across venues in Liverpool and Birmingham. ABP and Transport for the North sponsored The Northern Transport Fringe, which focussed on issues surrounding devolution, transport and infrastructure investment in the North of England. The packed room learned about Labour's investment plans from Shadow Transport Minister Rachael Maskell MP and the Mayor of Liverpool City Region, Steve Rotherham. ABP's Dafydd Williams highlighted the vital role of northern ports in supporting industry and economic growth across the North, the need for investment in road and rail links to ports, specifically the A63 in Hull, and the role of the Humber in providing resilience to UK supply chains after Brexit.

An equally well-attended event on the same topic took place at the Conservative Conference in Birmingham the following week, with attendees and viewers of BBC Look North hearing perspectives on northern transport priorities from Transport Secretary Chris Gravling MP and Mayor of the Tees Valley Ben Houchen. David Leighton, ABP Group Head of Corporate Affairs, emphasised ABP's recent investment in port infrastructure on the Humber and how northern ports can help alleviate concerns about disruption to trade after Brexit. Transport Secretary Chris Grayling agreed that too much trade was concentrated through the Port of Dover and that other ports had an important role to play. The panel also discussed the opportunities for free ports to help attract investment and boost economic growth in northern cities and regions.

The future of international trade was top of the agenda at another well-attended fringe event, hosted by leading current affairs magazine Prospect. Brexit Minister Suella Braverman MP spoke in enthusiastic terms about the opportunities ahead, both in terms of the future trading relationship with the EU and the prospects for new trade deals with fast-growth economies





in the rest of the world. ABP's David Leighton emphasised that despite reports of potential difficulties at the Port of Dover, Britain had many other ports which had historically handled more of the cross-channel traffic than they do today. He added that preparations were well underway at ABP to ensure our ports are prepared for any eventuality. Experts on trade and business also contributed to a lively and informative discussion on the future of trade. The meeting resulted in positive coverage from BBC Radio 4 and the BBC World Service.

Maritime matters were the focus of discussion elsewhere at the conference, with Maritime UK hosting a fringe meeting on the opening day in Birmingham. Sir Bernard Jenkin MP was joined by speakers representing ports, shipping and other maritime industries to discuss how the

maritime sector can help drive growth in coastal communities across the UK. Martin Vickers MP, who spoke from the floor at the event, highlighted ABP's investment in Humber ports as an example of the positive impact of the maritime sector and called for a free ports policy to further boost growth in coastal communities.

ABP also attended receptions for businesses and other stakeholders engaged in supporting the Northern Powerhouse Partnership and the Midlands Engine.

With the UK's departure from the EU only months away, the conference season provided a timely opportunity for wide-ranging policy discussions about the UK's future as a successful trading nation and the role of ports and maritime in realising this ambition.



Bite-sized, all the latest news highlights from ABP



ABP LAUNCHES NEW MULTI-MILLION POUND BUSINESS TO TAKE OVER BRITISH STEEL'S OPERATION IN IMMINGHAM

In November, ABP announced a new deal with British Steel, which involves an investment of f_{65} million into the Immingham Bulk Terminal. The new deal will see ABP take over the operation of the terminal, which is located on the west side of the Port of Immingham, from British Steel. The investment will help to support the long-term future of steel manufacturing in the Humber region.

MULTI-MILLION POUND **INVESTMENTS IN** SOUTHAMPTON

Work on the latest f_{15} million multi-deck storage facility in Southampton's Eastern Docks will take nine months and will create 3,000 additional spaces for vehicles to be stored. This is the eighth multideck at the port and this significant investment will further strengthen the port's position as a global hub for the automotive trade.

TALL SHIPS ARRIVE AT PORT OF IPSWICH AS PART OF 'RACE OF THE CLASSICS'

In October, a fleet of 21 classic tall ships arrived at the Port of Ipswich from the Netherlands as part of the annual 'Race of the Classics for Young Professionals', which aims to celebrate and preserve sailing heritage. As part of the race, participants sail and navigate from Veerhaven in Rotterdam to the Port of Ipswich, where the event culminates.

"Work on the latest £,15 million multi-deck storage facility in Southampton's Eastern Docks will take nine months and will create 3,000 additional spaces for vehicles to be stored."





ABP INVESTS £1 MILLION IN PORT OF LOWESTOFT AS PART OF ENERGY **HUB VISION**

In November, the first phase of a $f_{300,000}$ demolition project to clear a new 13-acre development site was completed at the Port of Lowestoft's Shell Quay. The project, which will provide more development land for ABP and surrounding local businesses, brings ABP's total investment in the Port of Lowestoft to f_1 million in the last quarter.

"The Port of Immingham has won 'Commercial Rooftop Solar Installation of the Year' at the Solar Power Portal Awards."

STATE OPENS IMMINGHAM LOCK GATES

COMMERCIAL MANAGER WINS CRUISE INDUSTRY AWARD

In September, the Port of Southampton's commercial manager Rebekah Keeler was among the winners in a global search for the top 20 young professionals in the cruise industry under the age of 40. The Seatrade Cruise News competition was held in Lisbon and saw Solent Stevedores General Manager Tom Dynes also shortlisted for the award.

In October, it was announced that an installation at the Port of Immingham has won 'Commercial Rooftop Solar Installation of the Year' at the Solar Power Portal Awards. The recognised project, which was delivered by the company Custom Solar, has the capacity 4.5 megawatts, enough to power almost 750 homes.

LOWESTOFT **WELCOMES NEW CUSTOMER, WORLD MARINE OFFSHORE**

In October, ABP's Port of Lowestoft welcomed its newest customer, World Marine Offshore (WMO), as part of the company's project to support ScottishPower Renewables' East Anglia ONE offshore wind farm. The port will provide indoor storage as well as quay and yard space for marine operations to enable WMO to mobilise its workforce and equipment with ease and efficiency.

ABP SCOTLAND MANAGER **APPOINTED AS NEW SCOTTISH CHAMBERS OF COMMERCE** DIRECTOR

the Ports of Ayr and Troon.





SECRETARY OF

In October, Immingham's new $f_{4.75}$

officially opened by the Secretary of

million state-of-the-art lock gates were

State for Environment, Food and Rural

Affairs Michael Gove and Cleethorpes

MP Martin Vickers. Mr Gove enjoyed

Humber Simon Bird prior to revealing

a tour of the port with ABP Director

a special plaque beside the lock gates

with attendees from the press, ABP's

marine team and those who were

involved with the installation.

SOUTHAMPTON





AWARD FOR PORT

OF IMMINGHAM'S

ROOFTOP SOLAR

ARRAY

"ABP South Wales announced a £400k investment in new engineering workshop facilities for employees at the Port of Cardiff."



PORT OF CARDIFF INVESTS £400K IN NEW ENGINEERING FACILITIES

In October, ABP Port Manager, Stuart Cresswell was appointed as a new director of the Scottish Chambers of Commerce (SCC). Mr Cresswell is an experienced general manager with responsibility for ABP's operations in Scotland, which include

In October, ABP South Wales announced a £400k investment in new engineering workshop facilities for employees at the Port of Cardiff. The new state-of-theart 1,200-square metre workshop provides an increased amount of space for the engineering department to undertake servicing and maintenance of operational equipment used by stevedores to load and discharge customer vessels.



An update from Westminster

Party conference season, the Budget and Brexit preparations made for a busy end to the year at Westminster.

The Chancellor delivered the final budget before Brexit to Parliament in October, with the Prime Minister's conference pledge to "end austerity" adding further intrigue to the occasion. Philip Hammond MP announced the Government's spending programme against the backdrop of steady growth forecasts and improved public finances. This allowed for significant spending announcements for key sectors such as health and defence.

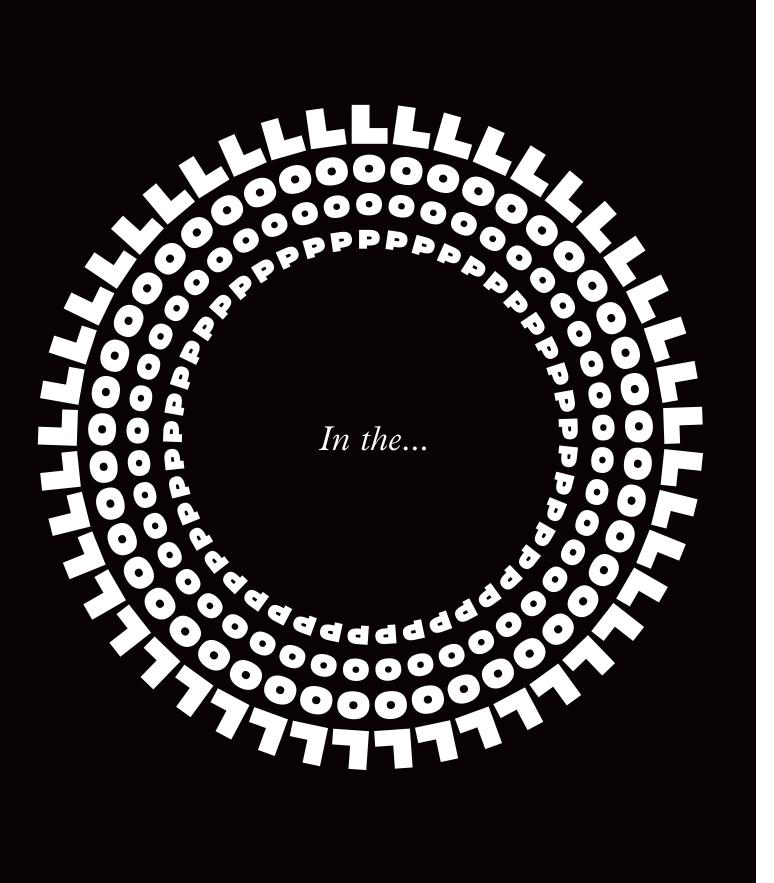
There were also big announcements on transport spending, with £25.3 billion promised for major road network improvements between 2020-25 and an additional £420 million available to local authorities to deal with pot holes. This investment will support the Department for Transport's Draft Road Investment Strategy, published on the day of the Budget, which includes a commitment to wider government policies including supporting growth, aiding rebalancing and linking ports. The explicit recognition of the importance of connectivity to the nation's ports is particularly welcome and will allow ports to play an even greater role in boosting trade and economic growth across the country.

While there were fewer headlines for the rail industry, an additional £37 million has been made available to support Northern Powerhouse Rail and £20 million for East West Rail. The Budget also announced the continued freeze in fuel duty, a package of proposals for small businesses and the high street, plus

further investment in infrastructure and housing. The personal allowance, the rate at which people start paying income tax, will also rise a year earlier than planned.

An additional £500 million was also allocated to help government departments with no-deal Brexit contingency planning. The Government has continued its preparations for Brexit by publishing additional 'technical notices' which set out plans to be put into place in the event that the UK leaves the EU without a deal in March 2019. The Department for Transport has now published 13 documents outlining the potential impact such a scenario would have on areas of transport policy, including the haulage industry and aspects of maritime. ABP is progressing plans to ensure our ports are prepared to keep trade flowing in any eventuality after Brexit.

Looking beyond Brexit, there was a debate on the establishment of free ports in Westminster Hall in October. Participants discussed the potential for free ports, or free trade zones', to help supercharge the UK economy and support regional rebalancing. The debate was arranged by Simon Clarke MP, who opened the debate by defining free ports as an area that is physically within a country but legally outside it for customs purposes. The advantage of such a policy is that goods could be imported, processed and then re-exported without incurring any duty and that this would incentivise international businesses to use





UK free ports as part of their supply chain. The location of many UK ports in areas of relative economic deprivation also means the policy could help encourage investment in parts of the country most in need of economic regeneration. A cross-party group to further discussion of the topic has also been established and will be chaired by Martin Vickers MP.

The Industrial Strategy Council held its inaugural meeting to discuss its strategy to hold government to account on the objectives laid out in the industrial strategy. The Council will convene at least three times a year and agree its annual work programme and priorities with the Department for Business, Energy and Industrial Strategy and HM Treasury. The group comprises business leaders from across a range of sectors and is chaired by Andy Haldane, Chief Economist at the Bank of England. The Chair will meet annually with the Business Secretary and the Chancellor to discuss its work programme and progress.

A busy autumn also saw Maritime Minister Nusrat Ghani MP open the first meeting of the Clean Maritime Council, which brought together experts from across the maritime sector, from industry leaders developing greener vessels, to academics studying the economics of emission reduction. The group will devise a strategy to reduce greenhouse gas emissions from the sector to improve air quality on and around our waterways, ports and shipping lanes. The UK is already actively developing plans to reduce emissions from shipping through hybrid ferries, shore-side electricity and alternative fuels. The environment is also one of the main strands of the Government's Maritime 2050 Strategy, which targets opportunities for the sector for the next 30 years.

A day in the life... Michael Webster, ABP Operations Manager

Can you tell us more about the career path that brought you to ABP?

After completing a BSc in Physical Geography at Anglia Ruskin University, I wanted to start a career in the logistics sector, as I had previously held a summer job at Tuffnells Parcels in Ipswich. The job market was quite though at the time, but I decided to approach one of the regional directors at Tuffnells and ask whether they had any vacancies. Fortunately, they had a position available and, 18 months later, I had left lpswich and was the traffic manager at a busy London depot. From there I held various posts as either operations or depot manager for both Tuffnells and TNT, which encompassed managing national and international road haulage, as well as cargo transported via international flights. I found the logistics sector to be a fast-paced and intensive environment. What encouraged me to consider ABP as an employer. was the draw of moving to the maritime industry as a career opportunity, but also my personal interest in maritime outside of work, having been part of pleasure boating as a hobby for many years. When my current job in ABP was advertised, I applied and I was delighted to get it and excited by the prospect of learning more about the sector. I think the reason why I was successful in landing my job at ABP is because people management is important to me and I am focused on staff engagement. I believe in never promising what one cannot deliver. Also, coming from a different industry has allowed me to bring a fresh perspective to work patterns that had previously been accepted as the norm.

What does your typical work day involve?

My current role at ABP is Operations Manager, Service and Deliver, which encompasses communicating with internal and external customers as well "I'm convinced that we all have the capability to learn and, with the right leadership and attitude, we all have the opportunity to succeed. We can all play a vital role in the maritime industry and contribute to the ongoing prosperity of the UK."

as my team daily, in order to manage complex delivery processes. My key role is to oversee the West Bank Terminal at the Port of Ipswich, where we handle a wide variety of cargoes including timber and mixed aggregates. We also offer a high specification timber treatment plant and parking facilities for haulage companies. Day-to-day work can be guite demanding but I am lucky to have a good team and a network of supportive colleagues. Our key objective every day is to provide the best service to our customers in line with health and safety procedures, as part of ABP's wider Beyond Zero safety culture. I think it is also important to assist colleagues from other departments and a couple of times I have been lucky to get on board ships with the pilots, which were great experiences.

Can you tell us more about a key project you are currently working on?

We are always open to new projects and I have been involved in a number of them since joining. I was recently invited to an ABP innovation weekend, which allowed me to share direct feedback on the current induction process in order to help its continuous improvement. I also take part in an ongoing wildflower project, which involves a collaboration with Kew Gardens and sees the planting of hundreds of wildflower seeds across ABP's network of 21 ports to support local wildlife. My team like to call it 'Webster's Weeds', because of my enthusiasm for the project. For instance, I renovated an old boat dingy in order to create a more interesting flower pot. I think the social aspect of projects like this shouldn't be underestimated, as they create a sense of camaraderie at the port and make it a great place to work. One of the recent key ongoing projects I have been involved in, is the 'Port Walkway' project, which represents a £150,000 investment and includes the installation of new footpaths, line markings and signs. The speed control signs have been particularly successful in creating a safer work environment for everyone, which is one of the foundations of what we do as a business.

What advice would you give to young people who are interested in pursuing a career in the maritime industry?

I'm convinced that we all have the capability to learn and, with the right leadership and attitude, we all have the opportunity to succeed. We can all play a vital role in the maritime industry and contribute to the ongoing prosperity of the UK. ABP is a business with longevity, offering excellent prospects for career development and it is great to be part of that journey. We're always on the lookout for fresh talent and skills such as the willingness to learn and a positive attitude. My advice to young people in particular is not to be afraid if they don't know a great deal about the industry and always ask guestions. They should also be prepared to do independent research and have a 'go-getter' attitude. For those further down the line, I would say that you can learn from all your seniors. I would recommend picking the traits that you like most in your leaders and striving to combine them in your own work patterns.



View from the bridge: blockchain and frictionless ports

Dr Shishank Shishank. Lecturer in Operations Management at Birmingham City University, explores how blockchain technology can allow ports and harbours, the key enablers in global supply chains, to build a more transparent, trusted and secure network.

> "This technology could allow the realisation of a digital, transparent, secure, paperless supply chain."

"A key advantage of blockchain technology is that it allows us to build a trusted network."

as links for businesses to move goods from one means of transport to another. They function as nodal links between sea and land, which are a clear example of intermodality. In other words, ports and harbours sit at the crossroads of global trade routes, making the sector a key enabler of the global supply chain. In its essence, the supply chain is about the processes from raw material to finished products, including associated flows of data and capital. The flow of data and products should maintain fluidity across the supply chain ecosystem in order to minimize the time required and costs incurred. More importantly, the fluidity and seamless transition of goods requires the integrity and authenticity of information as the basis of trust amongst all parties involved.

In this globalised economy, ports act

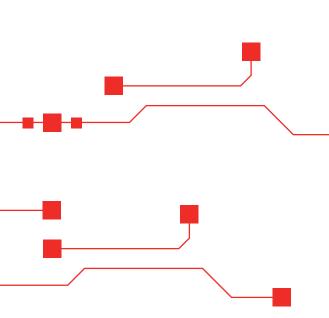
A key advantage of blockchain technology is that it allows us to build a trusted network. Blockchain technology, or distributed ledger technology (DLT) was originally created to manage the

databases of cryptocurrency platforms. The blockchain aims to establish a distributed ledger on a decentralised network to record transactions. Since each block is decentralised and linked to other blocks by hash value, this mechanism can guarantee the security and validity of transactions. Blockchain technology can be applied at major ports for provenance of goods and all other information about goods within the supply chain ecosystem, introducing a new source of trust. This could be achieved by saving the records in the distributed ledger transparently, thereby eliminating problems raised from distrust, even though there is no authoritative third party to oversee it.

Businesses over the years have overcome trade friction across the board by embracing technology. Specialist institutions have also emerged to reduce risk in business transactions. Innovations in technology have helped businesses overcome distances and inefficiencies, but supply chains are still open to risk



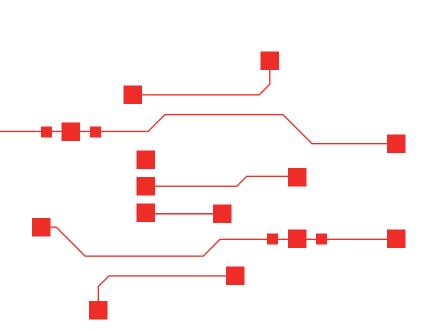






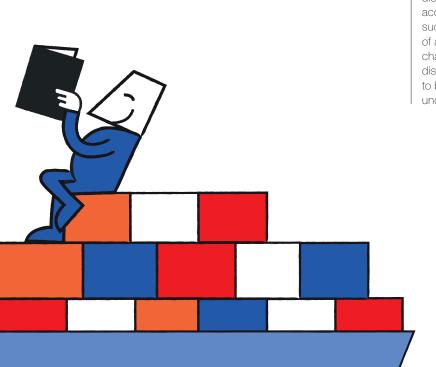
and vulnerability. Blockchain technology has the capability to remove much of the remaining market friction – the speed bumps that slow the pace of businesses. For example, the speed of freight slows at ports when proper paperwork for import or export is not completed, or is missing altogether. If the information was received at the import or export terminal (i.e. port/ harbour) from the bill of lading prior to the freight container arriving, terminals could process goods, planning and executing trade more efficiently, without concerns about data protection. This could be achieved by setting up a blockchain between the port terminal and the shipping company. Blockchain technology could make the required data visible in real time (or be precise, near real time). This near-real-time sharing of information could avoid costly delays and losses due to missing paperwork.

On a larger scale, blockchain application at ports can enhance the supply chain ecosystem, allowing the sharing of information on import and export data, manifests and loading lists, certificates relating to origin of components and products, customs values, status information and tariff codes amongst all the parties involved. This technology could allow the realisation of a digital, transparent, secure, paperless supply chain. 📐

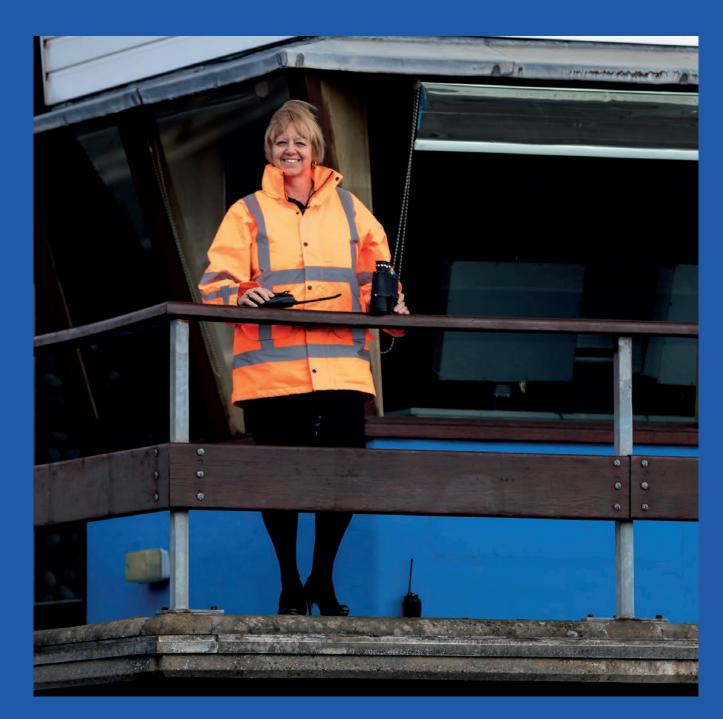


In essence, blockchains can allow a reduction in friction, while revolutionising the supply chain ecosystem. It can be said that countries across the world have realised that investment in critical technologies such as blockchain is important to increase economic growth and keep pace with the evolving digital ecosystem. In the United Kingdom, government initiatives such as Innovate UK are focused on driving and accelerating innovation by investing in disruptive technology and providing access to cutting-edge technologies, such as blockchain. As with the advent of any new technology, there will be challenges as blockchain matures and disrupts the ecosystem, but its promise to boost business growth shouldn't be underestimated.

READ MORE AT: WWW.ABPORTS.CO.UK



Proud of our people Ruth White, ABP Bridge Operator at Port of Lowestoft



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In 2018, ABP supported a number of charities





