

ANNUAL REPORT

PORT OF ESBJERG

2017



Gateway Scandinavia



INVESTMENTS

32.11

MILLION EUR



TURNOVER

31.61

MILLION EUR

PREFACE

This year, the Port of Esbjerg marks its 150th anniversary in a celebration of its history, its present and future. For Esbjerg, this is a story of entrepreneurship and of the will and ability to adapt. The story recounts the development from a single coastal farm, 3 houses and 23 inhabitants in 1868 into an international port, which today provides the setting for more than 200 entrepreneurial businesses and thousands of jobs.

All in all, I find that in its anniversary year, the city and its port are in fine form, and that we are united in having a strong basis for pursuing onward development well into the future.

The 2017 financial results are the best in the Port of Esbjerg's 150-year history. This is, of course, a natural consequence of the growth of the Port, and the fact that our turnover is now at the EUR 32 million mark. This reflects a high level of activity across our business areas. The cargo volume is generally following a positive trend, and there is solid demand for contracted areas. Equally, the results for the year confirm that our double-figure million-EUR investments in infrastructure and new solutions initiated in 2004 square with demand. In 2017, we completed 250,000 m² in the East Port with direct access to RoRo ramps. This was the last major expansion of the Port under the current masterplan. By the turn of the year, we were already able to open a 116,000 m² RoRo terminal on the newly completed site.

Overall, the Port of Esbjerg has invested nearly a quarter of a billion Euros in the Port since it was brought under autonomous municipal control. In 2017, the return on average invested capital (ROAIC) was 8.4 per cent. In 2017 alone, the investments amounted to EUR 32.11 million. Port earnings, combined with the constant cost-focus, have been, and will continue to be, crucial for our capacity to cater to customer demand. And the requirements for the Port's willingness to invest and hence its financial strength will remain substantial into the future, not least in the light of the unprecedented fast pace of change affecting our externalities, especially in areas such as digitalisation and the energy transition.

The prevailing trends call for incisive innovation capacity and the courage to pursue new directions. I find that both exist in abundance among our customers and partners, and

in this field, the Port of Esbjerg must naturally match their pace and capacity. Aside from up-to-date and visionary infrastructure, it is also a question of implementing new technology and innovative partnership models. The Port of Esbjerg is on track and in focus in that respect.

Essentially, the outlook for the three primary business areas at the Port of Esbjerg – oil and gas, RoRo and wind – is fair. The price of oil has risen

from its all-time low of less than USD 30 per barrel, while one of the largest infrastructure investments in Danish history

redevelopment of the Tyra field – has been launched. This will have significant impact on the Danish offshore industry from the end of 2018 onwards.

The RoRo traffic is stable, in spite of uncertainty surrounding the specific challenges that will be posed by a Brexit. In 2017, we saw an increase in the number of RoRo-ferry calls, the number of imported non-registered cars rose to nearly 74,000, while general trailer and container trade matched the level of previous years.

The wind turbine industry has a long pipeline in prospect towards 2020, with in excess of 12 GW scheduled for shipment and installation in Northern Europe in the period 2018-2020. The Port of Esbjerg will be shipping out a large share of this capacity, with 1.3 GW scheduled for 2018 alone.

However, the horizon for the onward roll-out of offshore wind power is still clouded with uncertainty. As noted by the International Energy Agency in its latest report, the EU Member States have so far only addressed plans for the period up to 2020. That uncertainty must be laid to rest as soon as possible. Even more imperative are the efforts to secure free trade across national borders and continents, and in that respect, 2018 will be a watershed year. The time has now come for the terms of Brexit to fall into place. Anything other than unchanged market access will be a severe setback for free trade and for all of us.

In other areas, politicians have already stepped up to the mark. The ground rules for the extraction of oil and gas in the Danish sector of the North Sea have been defined, and at the start of 2018, the Danish Government presented its 32-item Plan for Growth for Denmark as a global maritime superpower towards 2025. This is an important plan. Ambitious, yet realistic. The Port of Esbjerg and its resident companies are ready to make a substantial contribution to its realisation.

I am also pleased that real momentum has now been gathered in the efforts to unlock the potential of the North Sea as the pan-European energy source. The laying of the power cable links, Cobra and Viking, is now well underway. And in extension of the 2016 North Sea Agreement between the nations in the region on an energy cooperation, in 2017, Denmark's Energinet.dk and their partners in the Netherlands and Germany presented their concept for a joint offshore wind energy island on Dogger Bank; North Sea Wind Power Hub. A visionary project that holds strong promise, including for the companies in Esbjerg and for the Port of Esbjerg.

Finally, we have launched an environmental impact assessment (EIA) for a future port expansion of up to 1.0 million m². The scope of the existing environmental approval is about to be exhausted. We aim to create scope for future port expansions, which we are convinced will be needed. The EIA process is scheduled for completion by the end of 2019, after which any expansion can be planned and commenced.

All told, Esbjerg is on track to celebrate its anniversary year with a good deal of optimism, and in the firm belief that the future holds great opportunities for the Port and its businesses.

Finally, I would like to thank all our customers and partners for their valued custom and cooperation with the Port of Esbjerg in 2017.

Flemming N. Enevoldsen

Chairman, Port of Esbjerg



6

FINANCIAL AND KEY FIGURES

7

FINANCIAL STATEMENT

8

FACTS AND KEY FIGURES 2017

10

DIGITISATION WILL DRIVE
SHIPPING IN THE YEARS TO COME

14

HENRIK POULSEN:
"OFFSHORE WIND POWER IS
THE OBVIOUS CHOICE"

18

PORTS TO POSITION DENMARK
AS A GLOBAL MARITIME
POWER HUB BY 2025

20

OIL AND GAS INDUSTRY ON A WAVE
OF RENEWED OPTIMISM IN 2018

24

AMBASSADORS ANTICIPATE
GREAT GREEN GROWTH
IN THE NORTH SEA REGION

26

THE WORLD HAS GAINED A NEW
LANGUAGE FOR SUSTAINABILITY

28

PORT OF ESBJERG CELEBRATES
ITS 150TH ANNIVERSARY

ANNUAL ACCOUNTS



2017

FINANCIAL

AND KEY FIGURES

EUR million	2015	2016	2017
Turnover	30.03	30.94	31.61
Other operating income	0.0	0.0	0.953
Other external expenses	-5.33	-6.15	-5.73
Gross profit	24.70	24.79	26.83
Staff costs	-4.51	-4.44	-4.66
Depreciation	-6.78	-7.41	-7.95
Other operating expenses	0.0	0.0	-1.07
Operating profit	13.40	12.95	13.15
Net financials	-3.09	-2.27	-2.32
Net profit for the year	10.31	10.68	10.83
Total assets	180.17	190.87	195.72
Tangible fixed assets	146.83	146.70	170.86
Equity	97.38	108.23	119.06
Capital expenditure	7.10	7.13	32.11
Financial ratios (%)			
Return on equity	11.2%	10.4%	9.5%
ROAIC	9.2%	8.9%	8.4%
Solvency ratio	54.0%	57.4%	60.8%

FINANCIAL STATEMENT

The Port of Esbjerg came out of 2017 with a net profit of EUR 10.83 million. Compared to 2016, this was a total increase in earnings of 1.4 per cent. The profit for 2016 was EUR 10.68 million. The profit for the year is considered satisfactory.

Group turnover for 2017 amounted to EUR 31.61 million against EUR 30.94 million in 2016, which is an increase of 2.2 per cent.

The stable result can be attributed to cargo turnover for 2017 being on a level with 2016, reflecting a continuously declining oil and gas market, while activity related to the handling of offshore and onshore wind components increased. In addition, gravel handling also saw strong growth.

INCREASED INVESTMENTS

The rising activity level related to the handling of wind components has led to alterations of port activities and designation of areas for building and construction. Accordingly, major investments have been made in completion of the fourth stage of the East Port. The port areas were ready for use at the end of 2017.

The investment level for the Port of Esbjerg remains high. Since 2000, the Port of Esbjerg has invested just over EUR 228.19 million in expansion and modernisation of the port, while net income was EUR 119.06 million.

BALANCE SHEET AND CASH FLOW STATEMENT

The Port of Esbjerg's total assets at the end of 2017 amounted to EUR 195.72 million against EUR 190.87 million at the end of 2016.

Equity ended at EUR 119.06 million against EUR 108.23 million in 2016. The solvency ratio thus rose from 57.4 per cent in 2016 to 60.8 per cent in 2017, confirming the robustness of the business.

In the course of 2017, EUR 32.11 million was invested, and repayments on long-term debt amounted to EUR 4.08 million. Return on average invested capital (ROAIC) was 8.4 per cent in 2017 against 8.9 per cent in 2016.

The main part of capital expenditure was spent on further expansion of the new East Port, construction of a new warehouse, a new service yard and a new welfare building and upgrading of the through-going port road.

The Port staff averaged 53 people in 2017 compared to 55 in 2016.

Turnover per employee increased to EUR 563,758. The average among larger Danish ports is EUR 335,570.

Depreciation for 2017 amounted to EUR 7.95 million against EUR 7.41 million in 2016. Going forward, depreciation will rise as a result of the major investments that have been activated.

SLIGHT DECLINE IN DEMAND FOR AREAS

The share of areas on long-term contracts at the Port of Esbjerg was at the end of 2017 2,340,000 square metres against 2,454,000 square metres in 2016.

This is mainly attributable to a smaller number of wind turbine installation projects in 2017 and an indication of a

structural change in the demand for areas with both wind and oil/gas offshore markets requiring increased flexibility. The use of flexible short-term leases increased in the same period.

CARGO TRANSPORT MAINTAINS ITS LEVEL

Total cargo turnover increased slightly to 4,519 million tonnes against 4,507 million tonnes in 2016. RoRo cargo amounted to 37 per cent of the total cargo turnover, which is on a par with 2016, while cargo turnover for wind components rose substantially from 8 to 13 per cent. Bulk (coal, gravel and liquid bulk in the form of fish oil etc.) accounted for 42 per cent. Containers accounted for 5 per cent.

Offshore wind capacity shipments reached a total of 1,300 MW in 2017 against 1,100 MW in the previous year. In the first half of the year, the Port implemented two major installation projects for offshore wind farms in the UK. The majority of the exports were not directly linked to installation of wind farms, however, but were exports of assembled components sailed to installation ports in Germany, the Netherlands and the UK. Components for the world market for onshore wind turbines are also shipped from Esbjerg.

Once again, the number of cars also leaped upwards: In 2017, 73,893 cars drove across the quay against 70,207 in 2016.

DROP IN NUMBER OF SHIP CALLS

The number of ship calls dropped to 5,867 in 2017 (excluding the Fanø Ferry). While this is a drop from last year's record of 6,628, it still remains approximately 40 per cent above the level in 2012. The lower number is directly attributable to a lower level of activity in the offshore industry. The number of Crew Transfer Vessels to the wind farms fell by 25 per cent, and the number of Platform Supply Vessels to the offshore industry fell by 24 per cent. On the other hand, the Port saw substantial growth in the number of general cargo ship calls, which increased by 32 per cent.

DEVELOPMENT ACTIVITIES

An environmental impact assessment (EIA) for a future port expansion of up to 1.0 million square metres was launched in 2017. The EIA process is expected to be completed by the end of 2019, after which any expansion can be commenced. The Port of Esbjerg phases the completion of its port expansions in step with the market demand for areas, so it may be staggered over many years.

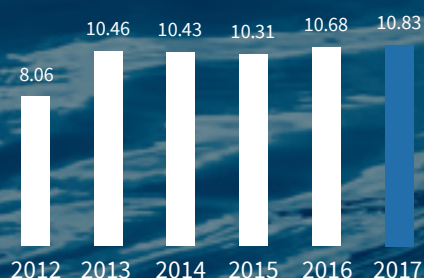
EXPECTATIONS FOR 2018

A small rise in net turnover is budgeted due to expectations for a continued increase in activity at the Port of Esbjerg. Installation of the Horns Rev 3 offshore wind farm will influence activity in the first half of the year, and activities linked to the Tyra field will commence towards the end of the year. Investments in the range of EUR 3.33 million are expected in 2018.

FACTS AND KEY FIGURES 2017

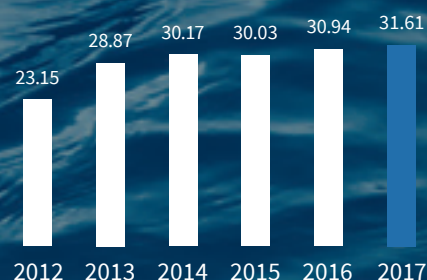
NET PROFIT

 **10.83** million EUR



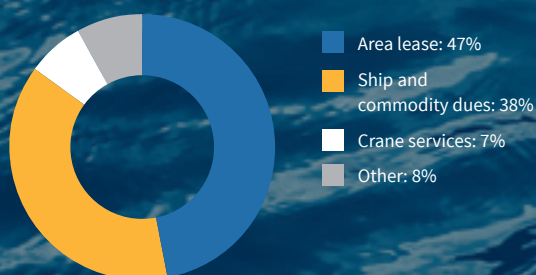
TURNOVER

 **31.61** million EUR



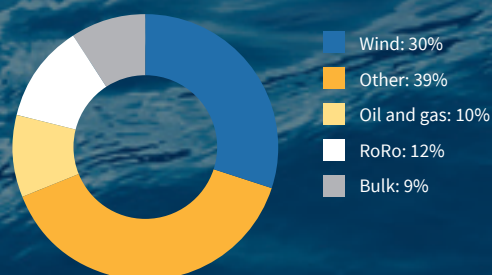
TURNOVER

 by type



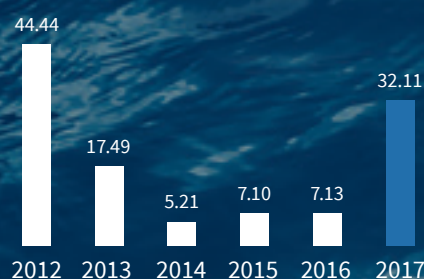
TURNOVER

 by business area



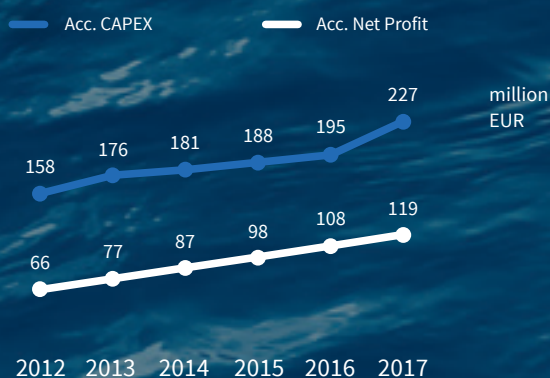
INVESTMENTS

 **32.11** million EUR



INVESTMENTS

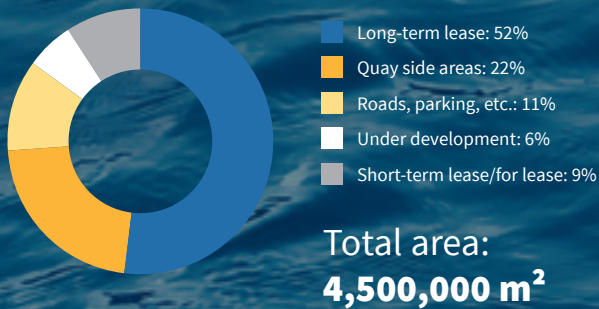
compared to net. result (accumulated)



CONTRACTED AREAS



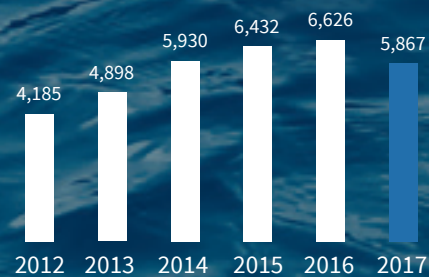
by type



SHIP CALLS



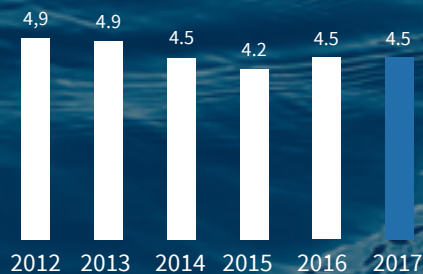
5,867



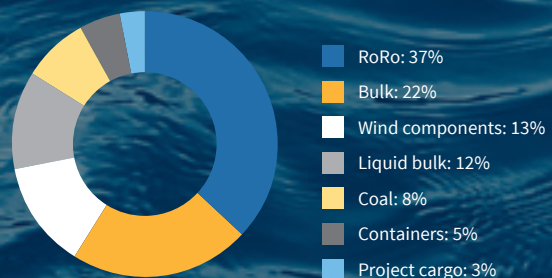
CARGO TURNOVER



4.5 million tonnes



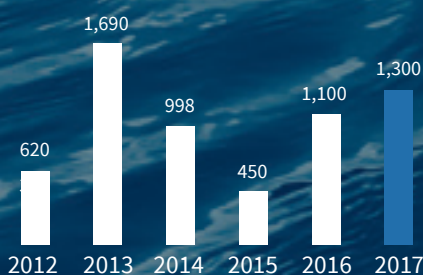
CARGO BY TYPE



OFFSHORE WIND SHIPPED



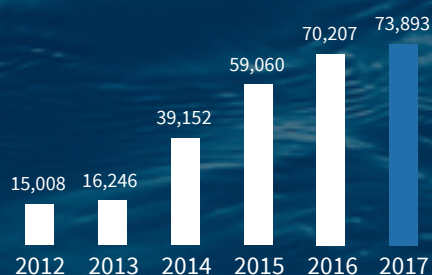
1,300 MW

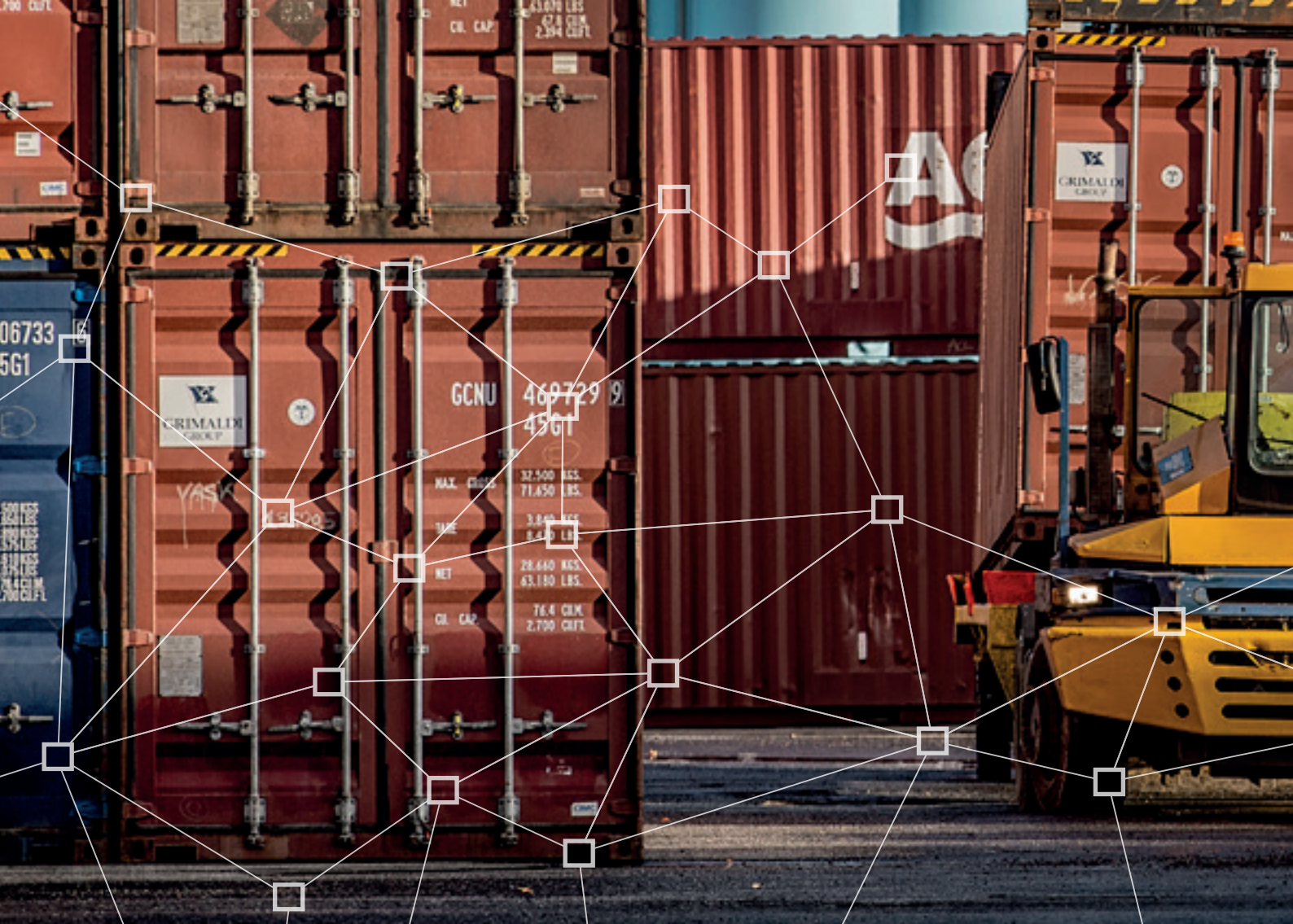


CARS



73,893





DIGITISATION WILL DRIVE SHIPPING IN THE YEARS TO COME

The shipping industry is investing billions in digitisation, and according to a global expert, major changes will occur within a few years. The Port of Esbjerg is also ready for the transformation.

"The rate of investment in digital solutions for shipping and logistics has soared within a short space of time. The time is ripe now," says Ulrik Sanders.

He is a senior partner and managing director with the consulting firm BCG in Copenhagen and global manager of the firm's shipping activities. He has been working in the fields of transportation and logistics since he joined BCG in 2005.

According to Ulrik Sanders, the shipping industry is generally digitally immature compared to other industries. The technology and media business took a giant leap forward

10 years ago, but things are now taking off in the shipping industry. Investments of 3.3 billion dollars have been made in digital shipping and logistics solutions in the last six years.

Within logistics and transportation alone, 700 start-ups have been created on the basis of good ideas, and many of them are digitally based.

"Obviously, many of them will not make it, but some of them will. And they pose a threat to established firms. This partly explains the current propensity to invest," says Ulrik Sanders.

BOTH INTERNAL AND EXTERNAL CHANGES

Concepts such as automation, analytics, blockchain and ventures will contribute to a dramatic shift in the shipping industry within a few years. According to Ulrik Sanders, developments will take two directions.

We will see internal optimisation where big data is used



The digitisation of the shipping industry will also have an impact at the Port of Esbjerg. This is partly because container capacity can be utilised far better so that fewer containers leave ports empty. The potential will be even greater in the years to come, believes Ulrik Sanders, senior partner and managing director of BCG.

for everything from advanced pricing to development of new digital tools to optimise the corporate processes. And entirely new marketplaces will emerge as a result of the external part.

Such as the company Flexport, which transports goods around the world by air, sea, rail and road, based on a digital platform.

Ulrik Sanders believes that many of the new start-ups can gain market shares from traditional companies. So they have to move fast or make acquisitions.

"Many of the small start-ups have not had any fundamental impact yet, but they will. Whether it will be in two or five years' time is hard to say, but it will happen," he says.

CONTAINER XCHANGE PUSHING THE TREND

BCG has taken a lead role itself. In September 2014, it launched Container xChange, which is an example of how digitisation can transform the shipping industry. Many of BCG's customers were experiencing logistical difficulties in having containers in e.g. Hamburg and no goods to put in them. At the same time, they might have goods in Shanghai that needed to go to Europe. It costs 500 dollars per container to send them to the other side of the globe without cargo. With the digital xChange platform, containers are now being 'interchanged', enabling companies to coordinate internationally.

Today, the marketplace includes around a third of the

global container ship capacity, saving billions of kroner. But needless to say, the potential is even greater.

"It did not take us long to build the technology, but it is hard to get people to change the way they do things. It takes time, because doing things the way they always have is deeply rooted in them," says Ulrik Sanders.

SHARING ECONOMY IN THE CONTAINER SHIPPING INDUSTRY

BCG's experience with the xChange marketplace shows that it is highly demanding for companies to achieve the full savings. Clear specification of responsibilities is required while working pro-actively to find as many solutions as possible. The best results are achieved by defining KPIs and clear targets.

xChange is based on the concept of the sharing economy and seeks to implement some of those principles in the container shipping industry. And, according to Ulrik Sanders, thinking out of the box and seeing the bigger picture are necessary if the industry is to increase its profits.

"Much will be gained by large companies joining forces. It is for the good of everyone," he says.

GREATEST POTENTIAL

Containers are one thing. But the shipping industry contains obvious potential that digitisation has not yet unlocked. The



complex cooperation between ports, terminals and shipping companies is an obvious area for action.

"This is probably where we find the greatest potential for using digitisation to improve processes," says Ulrik Sanders, who believes the parties are currently treating each other too much as suppliers and customers. We need to break away from that approach.

"We need information to flow more freely. When will the ship be in port? What is the ship carrying? Does the ship's staff know that a tug is available in the port?," says Ulrik Sanders.

In addition to that, there is the relationship between customers and shipping companies. For example, Ulrik Sanders thinks online container booking is too cumbersome.

"Physical papers still need to be handed over and stamped. The process has to be electronic, and we need to develop track & trace and many other functions. If you are able to optimise this while at the same time linking financial flows, much can be gained," Ulrik Sanders says.

The blockchain technology can help with this, but gigantic investments are necessary. That is why the industry needs to join forces for digitisation purposes.

"It is hard to see beyond the end of one's nose and become friends with people who are ordinarily your competitors. And who is to pay? Finding the right model is not easy," says Ulrik Sanders.

"But it takes forever to book a container, find a price and email back and forth. You can book a flight to Timbuktu in two minutes. So why does it have to be so complicated in the shipping industry? It must be possible find a smarter way."

WHERE WILL WE BE IN FIVE YEARS?

Nobody knows what the shipping industry will look like in five years. But change is coming – no question about it.

"It is going to happen fast, given the huge investments. Whether we will see a gigantic break-through or a slow improvement, I don't know. But if the Maersk and IBM blockchain projects are successful, things are bound to change fundamentally," says Ulrik Sanders.

It will transform the entire cooperation model of the shipping industry. Ports, authorities, customers and shipping companies will be linked to the same portal, and there will be full transparency. So in addition to providing huge savings, this will prevent money laundering, increase security and much more.

"The time is ripe for that sort of thing," says Ulrik Sanders.



Ulrik Sanders is senior partner and managing director of the global management consulting firm BCG. He is in charge of BCG's international work on shipping and is behind both the Center for Digital in Transportation and BCG's Shipping Benchmark Initiative.

FOCUS ON DIGITISATION AT THE PORT OF ESBJERG

At the Port of Esbjerg, digital consultant Cheryl Basil Sequeira is currently working on assignments for the Port while completing her PhD thesis on port digitisation at CBS. She has been involved in this field for more than 10 years, and she also believes that now is the time we are going to see some changes.

"Shipping and ports are among the world's oldest industries. People are proud of their work and may be difficult to change. But it is happening now. Even here in Esbjerg. People have realised that it could create value for everyone. That is why they are positive."

Whether it will be drones for warehouse monitoring, paperless trucks, autonomous vehicles at the port or something else again is hard to say.

"It requires documenting the need, analysing data and creating artificial intelligence. It is a creative process, really. But it has started. Also here in Esbjerg," says Cheryl Basil Sequeira.

The trend in the shipping industry will also affect the wind turbine industry, where digitisation, RoRo solutions and transshipment of goods from road to sea are already producing structural changes in logistics planning methods.



“The North Sea is perfect for offshore wind, and the Port of Esbjerg has been a significant factor in positioning Denmark so robustly in the offshore wind sector,” says Ørsted CEO, Henrik Poulsen.

HENRIK POULSEN:

“OFFSHORE WIND POWER IS THE OBVIOUS CHOICE IN TERMS OF BOTH THE ECONOMIC AND ENVIRONMENTAL BENEFITS”

2017 was a new record year for offshore wind power with 560 new turbines, corresponding to 3,148 MW new capacity in the market. The future growth of the sector in Denmark is contingent on overseas electricity interconnectors, increased turbine size and political intervention, says Henrik Poulsen, CEO of Ørsted, which accounted for 19 per cent of the newly installed capacity in 2017. In this article he offers his perspective on the growth potentials and what it will take to unlock them.

In 2017, DONG Energy changed its name to Ørsted and announced that the company would now be focusing exclusively on green energy. And wind is key to that commitment. Ørsted has built more offshore wind farms than any other enterprise on the market and expects to have achieved total installed offshore wind capacity of 7.45 GW by 2020.

Since the establishment of the Horns Rev 1 Offshore Wind Farm, Ørsted has played an important role in the increasing prominence of Denmark and the Port of Esbjerg within offshore wind power. What, in your view, enabled Denmark to achieve this position?

The North Sea is as if made for generating offshore wind power because it has so much wind! Off Esbjerg and the Jutland West

According to the 'World Energy Outlook' from the International Energy Agency, wind will be the biggest energy source in Europe in 2030. "We see a clear growth scenario," says Henrik Poulsen, CEO, Ørsted.





"The Port of Esbjerg can provide everything we need," says Henrik Poulsen, CEO of Ørsted, who finds the Port to be a service-minded, flexible partner.

Coast, we have some of the best sites for offshore wind power in the whole of the North Sea region. Equally, in Denmark, we were able to base our offshore wind industry on our solid expertise in onshore wind power. The Port of Esbjerg's role in relation to the operation of offshore wind farms and shipping turbines out to the new offshore wind farms was also a significant factor in positioning Denmark so robustly in the offshore wind sector.

In its latest World Energy Outlook, the International Energy Agency predicts that wind power will be the leading source of electricity soon after 2030, due in part to continued offshore growth. More recently, in an analysis of the market, Boston Consulting Group forecasts that the offshore wind sector will be capable of generating 101 GW in Europe and 170 GW in the rest of the world by 2030. How does Ørsted see the European and global markets developing?

We envisage a well-defined growth scenario. Until a couple of years ago, offshore wind power was a niche technology implemented with the aid of substantial government subsidies in a few Northern European countries. Today, now that the industry has cracked the cost-efficiency curve, the picture is quite different. In Europe, newbuild offshore wind projects are fully competitive with newbuild coal-fired power plants, and the price is coming down outside Europe too. As such, offshore wind power also has global potential. We have opened offices in USA and Taiwan, and in the space of just the last couple of months, both countries have increased their offshore wind targets substantially. We have every confidence and hope that this is just the beginning of the uptake of offshore wind power beyond Europe.

You mentioned coal. At Ørsted, you have decided to phase coal out completely by 2023 as part of the transition from black to green energy. If the aim is to bring the energy transition up to full speed, what should Danish and European politicians be giving highest priority in the coming years?

One decisive area would be to strengthen the price signal of the CO₂ quota market, so that it is no longer virtually cost-free to emit CO₂ in Europe. This would also kill two birds with one stone; on the one hand phasing out the most emissions-heavy plants in Europe, and on the other hand setting a fairer electricity price, meaning one at a level at which renewable energy capacity no longer entails a fixed premium on the kWh end-user price [ed. the Danish variant of European feed-in tariff support schemes].

Recognising that Ørsted won the first support-free tender in 2017, what terms do you believe should be met in future for non-subsidised wind farms to be the rule rather than the exception?

Industry for its part needs to carry on innovating so that we can continue to bringing the per-MWh cost down. This might, for example, be accomplished by bringing out even bigger turbines that can harvest more wind and thereby help to reduce costs per MWh. This could also be achieved by improving the logistics of the projects, both when the wind farms are built and over the many years of service and maintenance. Politically, it is important for governments to set explicit targets for offshore wind power development so that the industry has predictability for making the necessary long-term investments in manufacturing plants and innovation.

EUROPEAN OFFSHORE WIND POWER HIGHLIGHTS IN 2017

- 3,148 MW was installed in 2017. This is twice as much as in 2016 and 4 per cent more than the previous record in 2015.
- 560 new turbines were erected in Europe, across 17 different wind farms. The water depth averages 27.5 m and the distance to the coast 41 km.
- 14 new projects were completed in 2017, including Hywind Scotland, the world's first operational floating wind farm.
- The average size of the turbines in 2017 had increased by 23 per cent from 2016, bringing it up to 5.9 MW. The total capacity of wind farms also increased. In 2017, the average per wind farm was 493 MW. This is an increase of 34 per cent relative to 2016.

Source: WindEurope: Offshore Wind in Europe – Key Trends and Statistics 2017

In 2017, Energinet.dk in Denmark together with TenneT in the Netherlands and Germany formed a consortium to explore the scope for realising a North Sea Wind Power Hub. How do you rate the prospects for the North Sea as a “hub” supplying energy to the whole of Europe?

As I mentioned, the North Sea has some of the best conditions anywhere in the world for offshore wind power, and the potential for generating green electricity for Europeans from offshore wind farms in the North Sea is vast. The Dogger Bank project is an interesting and spectacular concept, but politically, it is more important to concentrate on how we can avoid bottlenecks in the grid so the green electricity can be brought efficiently from the North Sea out to the European electricity consumers. We are keen to assist in that with both expertise and investments.

Minister for Energy, Utilities and Climate Lars Chr. Lilleholt attaches great importance to increasing the number of overseas electricity interconnectors, most recently in connection with the impending Viking Link. What interconnectors do you see as needed in order to ensure optimal utilisation and distribution of offshore wind power in the future?

Overseas interconnectors will be important in unlocking the North Sea's green energy potentials. The interconnectors are a kind of electrical submarine ‘motorway system’, which provide access to exporting Danish-generated electricity to our neighbouring countries. Equally, we must not forget that on the few windless days that occur in the North Sea, the submarine cables give Denmark the option of importing the electricity it needs from those countries where the price is most favourable in that particular period of hours. The future interconnectors will naturally be with markets with the best prices – only time will tell if that is going to be Britain, Germany, the Netherlands or a fourth country.

In order for Europe to gain the full clean-energy benefit of the North Sea, it is also decisive that the policy-makers understand that offshore wind power has come so far down in price that it is the obvious choice in terms of both the economic and environmental benefits. The transition to clean energy systems may create many jobs along the way in sectors formerly sustained by other sectors and industries such as the fisheries, ferry services or the oil and gas industry. Esbjerg is of course an excellent point in case.

What role are ports like the Port of Esbjerg playing in the energy transition?

With offshore wind power as a crucial element in the energy transition, especially here in Northwestern Europe, ports like Port of Esbjerg are natural infrastructure hubs for operational and maintenance activities, shipping of components to sites, pre-assembly and production facilities for the very largest components that make up an offshore turbine today. It will be virtually impossible to transport the blades, nacelles, foundations and towers by road. For those reasons, the supply chain will naturally be setting its sights on port locations when investing in new production facilities.

Ørsted has had a long-standing cooperation with the Port of Esbjerg on offshore wind projects in the North Sea. What are the determinant factors for the viability of this form of cooperation?

We regard the Port of Esbjerg as a service-oriented and flexible business partner. We have access into and out of the port 24/7, which is crucial for coordinating our operations with a high degree of flexibility so that we can get out to the turbines at any time, weather permitting. We can also use the port for major repairs, and we don't have to go elsewhere if, say, we need to replace a main component and bring in a jackup ship. The Port of Esbjerg caters for all our needs.

HENRIK POULSEN has been CEO of DONG Energy, now Ørsted, since 2012. Formerly CEO of the telecommunications company TDC and since 2008 member of the Board of Management of the Confederation of Danish Industry. Henrik Poulsen also serves on the boards of the healthcare and emergency services company Falck A/S, the facility services company ISS A/S and the capital fund EQT Partners.

PORTS TO POSITION DENMARK AS A GLOBAL MARITIME POWER HUB BY 2025

As logistics hubs, Denmark's ports will be vital in assuring future growth in the nation's maritime sector. This was the message from Minister for Industry, Business and Growth Brian Mikkelsen in the wake of the launch of the new Plan for Growth in the Danish Maritime Sector presented by the Danish Government in early 2018. The Minister sees the Southwest Jutland cluster around the city of Esbjerg as a textbook example of how a port can boost development and growth.

A global maritime powerhouse. The Government's ambition for the growth in the Danish maritime sector by 2025 was clearly stated when Minister for Industry, Business and Growth Brian Mikkelsen presented the new Plan for Growth in the Danish Maritime Sector on 22 January 2018. Denmark is currently in sixth place on the list of the world's major shipping nations, and the Danish maritime industry ranks seventh on the global list of operator nations.



The Minister for Industry, Business and Financial Affairs, Brian Mikkelsen, wants the Danish maritime sector to be a stronger international force.

This high ranking is not an invitation for the sector to rest on its laurels, warns the Minister.

"My express objective is for Denmark's maritime sector to be positioned even more strongly in the face of global competition by 2025 than it is today, whether in shipping, offshore or the maritime equipment industry. This means that we have to embrace and develop tomorrow's new maritime technologies and business models, while continually ensuring that Denmark offers competitive framework conditions to ensure the attractiveness in the future of operating a maritime business in Denmark," he says.

Port of Esbjerg's Director Ole Ingrisch was part of the Maritime Strategy Team that drew up the recommendations for the Government's Plan for Growth. He welcomes the finalised plan and sets great store by the fact that seafarers on Danish offshore vessels will benefit from the same taxation scheme as neighbouring countries, and that the registration fee for merchant ships seems set to be abolished.

"The Danish Government has removed a number of barriers

to growth while focusing on development. This is obviously welcome, but also incredibly important given that 25% of the value of Danish exports stems from the national maritime sector, which also provides 95,000 jobs," he says.

DIGITALISATION SET TO BE A GAME CHANGER

According to Brian Mikkelsen, there is also no doubt that the ongoing digitalisation wave is set to be a game changer throughout the global maritime sector. And the Minister for Industry, Business and Growth is calling for Denmark to be active in driving the digital transformation. As the first country in the world, Denmark will be digitalising its shipping register, and will be finding new avenues for better utilisation of public maritime data with a view to developing new business models.

"Ultimately, we might, for example, be able to use vessel positioning data to develop tailored services for ships in transit through Danish territorial waters," says Brian Mikkelsen, who also explains that a new advisory partnership on digitalisation of the Danish maritime sector will be proposing how Denmark might utilise digitalisation potentials in public-private partnerships to create innovation, improved services and fewer administrative burdens for the industry.

One of the digitalisation initiatives Ole Ingrisch sees as

HOW TO GROW THE DANISH MARITIME SECTOR

In May 2016, the Danish Government appointed the Maritime Strategy Team, which submitted its 52 recommendations in May 2017. In January 2018, the Government, spearheaded by the Minister for Industry, Business and Growth, presented a national Plan for Growth consisting of 36 specific initiatives. The Minister explains that by 2025, he expects that:

- Denmark will have established itself as a leading centre for testing of new maritime technologies and business models.
- Denmark will have fronted the digitalisation of maritime services such as the digitisation of the Danish Register of Shipping.
- Denmark will have developed as a hotspot for maritime entrepreneurship and innovation.
- Denmark will have raised its ranking as a quality shipping nation.
- Denmark will have continued to train world-class seafarers.



All 22 government ministers visited the Port of Esbjerg on 11 September 2017. They were given a tour of the Port and discussions included how to implement the growth plan for the Danish maritime sector. The Minister for Industry, Business and Financial Affairs, Brian Mikkelsen, believes the ports are ideal hubs for business clusters.

holding great promise is the Government's plan to place stretches of Danish waters at the disposal of companies and researchers wishing to test new technology and systems in areas such as autonomous shipping.

"We need to invest in maritime technology research, but it is also imperative to create an environment in which such technology can be tested on an ongoing basis. The two aspects go hand in hand," he says.

THE IMPORTANCE OF DENMARK'S PORTS GOING FORWARD

Brian Mikkelsen offers every assurance that the major Danish industrial ports are set to remain as Denmark's windows onto the world. This is down to factors such as their significance as logistics hubs for a number of diversified industrial activities. A position which holds a great many potentials:

"The ports are the obvious hubs for trade and industry clusters, where businesses right along the maritime value chain stand to benefit from the positive synergies offered by portside co-location in terms of consolidated knowledge and their ability to attract investment and labour," explains the Minister, who highlights Esbjerg as a textbook example of how a port can power the development of a new market sector.

"The offshore cluster in Southwest Jutland will hopefully be further strengthened by the conclusion of the North Sea Energy Cooperation and the Government's extension of the Danish International Register of Shipping taxation scheme to seafarers on offshore supply ships. The hope is that these initiatives will mean that we can retain activity in the offshore sector for the benefit of the many businesses operating out of Esbjerg, for example," he says.

Ole Ingrisch explains that the Port of Esbjerg reports a high level of activity and, like the Danish Government, the



Port Director sees excellent potential for future growth in the maritime sector with ports such as Esbjerg's playing a key role. This means, all things being equal, that the port will need to be enlarged in order to realise the growth potential in Esbjerg.

"Our analyses indicate that we will need to expand the Port of Esbjerg by around 1 million m² and 1 km extra quay space towards 2030 if we are to keep up with market growth," he says, and elaborates on the plans:

"The precondition for businesses on the port continuing to grow and develop for the benefit of the entire Southwest Jutland region is that we are able to offer a port infrastructure which, in its standard of quality, facilities and capacity, matches customer demand. Otherwise, they'll go elsewhere, including outside Denmark."

The Port of Esbjerg enlarged its East Dock by 250,000 m² in 2017, and is currently performing an EIA (environmental impact assessment) to investigate the scope for a further enlargement of up to 1 million m² towards 2030.



OIL AND GAS INDUSTRY ON A WAVE OF RENEWED OPTIMISM IN 2018

After three trying years in the oil and gas industry, the negative trend was reversed in 2017. OPEC's production cut spells stability in the market in 2018, and experts are forecasting new opportunities in the North Sea on the back of the consolidations in the Danish oil and gas industry. The industry too is confident in growth for 2018.

A buoyant global economy resulted in increased demand in the market in 2017, and by November, the price of a barrel of Brent oil reached its highest level since autumn 2015. In other words, the cautious optimism that characterised the oil market at the start of the year was borne out, explains Jens Nærvig Pedersen, senior analyst with Danske Bank.

"2017 was a good year for the oil and gas industry, due not least to the oil output cuts introduced by OPEC together with Russia. Added to which, a robust global economy has spurred growth on several fronts. When we buy more and travel more, demand for oil goes up," he says.

The international market research and consultancy firm Westwood Global Energy Group monitored industry trends closely in 2017, with its senior analyst Matt Adams reporting a significant upturn in the industry. One indicator was

the number of FPS (Floating Production Systems) projects sanctioned. In 2016, there was a complete dearth of new projects. By 2017, the figure was 17.

"In my view, the upshot of 2017 is that the market is set for a rebound," says Matt Adams.

That optimism is also all in evidence in the industry. 63 per cent responded that they are confident about growth in 2018. The equivalent figure in 2017 was 32 per cent. This is the finding of DNV-GL Outlook 2018, which surveyed 731 oil and gas industry executives on the outlook for 2018.

NEW TECHNOLOGY BLAZES THE TRAIL

Another notable finding of the survey is that the industry is reporting new R&D investments for the first time in three years. Two-thirds of the respondents are planning to maintain or increase their R&D expenditure. This is a significant leap relative to 2017, when only 39 per cent answered yes to this question. And more than one third respond that they are planning to increase their R&D investments, which is the highest share in four years.

Matt Adams points out that the conditions for innovation and development are better now than they have been for years. He is also in no doubt that new technology especially is set to drive development in 2018 and beyond.



"In my view, the upshot of 2017 is that the market is set for a rebound," says Matt Adams, senior analyst at Westwood Global Energy.

© Maersk Oil

"We know from onshore projects that we can achieve substantial efficiency gains with the aid of new technology, and we are currently seeing several of the major North Sea operators looking into the options for reducing their production costs. It will be interesting to see just how soon the new technologies impact the offshore sector in 2018," he says, highlighting three types of technology he will personally be keeping a close eye on.

The first is standardisation in different parts of the value chain, for example, when designing new products to reduce their *time to market*. The second concerns big data, where new technology is making it possible to process vast volumes of information to identify patterns that can be used for optimising production. Thirdly and finally, Adams highlights the potentials of automation, although these would not be realised until well beyond 2018:

"If the industry ultimately succeeds in implementing automatic drilling rigs and pumps, this will have substantial impact on the expenditure side of output," he says.

CONTINUED FOCUS ON COMPETITIVENESS

Although 2017 was a good year, and the outlook for 2018 is bright, both Jens Nærvig Pedersen and Matt Adams conclude that the industry should sustain the hard-nosed focus on

optimisation and competitiveness that has prevailed in recent years.

"One of the biggest problems in the industry up until 2014 was the outsize scale of the ideas and the new projects. The focus was overly narrow on getting more barrels on the market faster. My hope is that the industry – regardless of upticks – will play safe with cautious investment, e.g. in standardising the value chain in order to bring costs down," says Matt Adams.

As Jens Nærvig Pedersen sees it, the most likely scenario in 2018 will be for the price to stabilise rather than rise further. Which makes it important to continue to focus on optimising production with efficiency improvements to get the industry into gear – even if 2019 takes a different turn.

"In the Danish share of the industry, we should be calling for efficiency improvements so as to retain our competitiveness. Because the competition is set to increase from operators such as OPEC and the American shale producers," he says.

CONSOLIDATIONS HOLD OPPORTUNITIES IN THE NORTH SEA

2017 was an eventful year in the Danish oil and gas industry. In the spring, British INEOS acquired Danish DONG Energy's oil and gas business, and later in the year came the news

THE PRICE OF BRENT OIL



of TOTAL's acquisition of Maersk Oil, which has just been approved by the authorities. Meanwhile, the largest investment ever in the Danish sector of the North Sea went ahead when Danish Underground Consortium (DUC) and Maersk Oil agreed to invest EUR 2.8bn in redevelopment of the Tyra field.

These consolidations in the market bode well for the efforts to maintain the competitiveness of the industry in Denmark to ensure its survival on the global market. Plus, explains Jens Nærvig Pedersen, the timing is good in relation to Tyra:

"Redevelopment of the Tyra field makes far more sense today than it did three years ago because of the current market outlook. Demand globally is rising, so the resources are likely to be in demand for the long term," he says.

According to Matt Adams, the two major consolidations on the Danish market in 2017 reflect a distinct trend across markets and national borders:

"It's a question of honing the business. Ørsted, for example, is pursuing a new strategy distanced from oil and gas, whereas INEOS is focused on oil and gas production in the North Sea, so it has a different interest in ramping up development through new investments in older production facilities, for example. In that sense, it bodes well," he says.

Flemming Horn Nielsen, CEO of INEOS Oil & Gas Denmark,

confirms that the acquisition of DONG Energy's activities was made with development in mind:

"Our ambition is to grow the business to make it a significant operator in the North Sea, with a portfolio of both production and short and long-term development projects," he says.

By acquiring the DONG Energy assets, INEOS is now positioned as the biggest private enterprise operating in the North Sea. INEOS' investment in these waters is no coincidence either, explains Flemming Horn Nielsen:

"INEOS' objective is to expand our oil and gas business, and on that front, the North Sea holds huge potential, which we will be exploring further in 2018. In the first instance, the aim is to operate the existing activities effectively and then to look for new investment opportunities," is how he explains the prospects in sight, while stressing that the expertise that resided in Dong Energy in relation to the offshore activities was a key factor for INEOS in making the acquisition.

A NECESSARY TRANSITION IN THE PIPELINE

The bright prospects for 2018 do not mean maintaining the status quo.

"The key determinant for the scale of oil production generally is basically the number of people on the planet, and as the global population continues to grow, we can undoubtedly expect increased demand. That said, the demand patterns are ultimately set to change, meaning that we will be exporting more to remote markets rather than local ones. Our products are destined for China, India and Africa," predicts Jens Nærvig Pedersen.

"The energy demand trend will in any case rise so steeply up to 2020 that renewables will not be able to meet demand. This is why oil and gas are still significantly in play," says Jens Nærvig Pedersen.

"One of the biggest challenges facing the industry will be the same as that pre-crisis in 2014: to attract skilled labour," says Matt Adams.

"We risk finding ourselves in a situation where the oil and gas industry needs the workforce that was shed in the wake of the 2014 oil price crash. The problem being that this skilled labour is now working in other industries and is not necessarily about to make a return," he says, stressing that the shortage of engineers is a problem in many of the North Sea states such as the UK and Denmark.

"The industry should work on its brand if it wants to attract the younger generation. That might mean highlighting the strong commitment to innovation and development that is set to shape the industry in 2018," is his suggestion.

Finally, there are all the unknowns, says Jens Nærvig Pedersen. Basically, the oil and gas market is so dependent on geopolitics and the global economy that it can take a different turn in no time:

"What keeps most analysts awake at night is the fact that we have not had a crisis or recession for a long while – because it's almost too good to be true," he says.

That said, looking ahead into 2018, the going still looks good.

"The prospects certainly seem to be shaping up nicely," says Jens Nærvig Pedersen.





AMBASSADORS ANTICIPATE GREAT GREEN GROWTH IN THE NORTH SEA REGION

In 2016, the North Sea countries and the European Commission resolved to step up their commitment to unlocking the potentials of the North Sea. The so-called North Sea Energy Cooperation is promising, and the time has now come to realise its potentials, assert two ambassadors. “Esbjerg is a major hub, and shipping operations out of the Port of Esbjerg to the large-scale wind farms create value throughout Europe,” says the German Ambassador to Denmark.

A tenfold increase in offshore wind capacity in the North Sea by 2030. This was how the European Commission rated the potentials when it met with Denmark, Germany, Norway, Sweden, Belgium, the Netherlands and the United Kingdom on 6 June 2016 to sign the declaration on an all-new North Sea regional alliance.

However, this will be accomplished only if the States jointly succeed in extending the power grid in the North Sea and establishing an internal energy market. With the North Sea Energy Cooperation, the course was charted, and 2017 saw the advent of further events and projects to give impetus to the joint mission.

Firstly, 2,105 MW of new capacity was installed in the North Sea. Danish EnergiNet.dk and Dutch TenneT started laying Cobracable from Endrup, south of Esbjerg, to the Port of Eemshaven on the Dutch north coast. Next, the decision was made to establish VikingLink, Europe’s longest power interconnector to date, between Denmark and the UK.

For the Dutch Ambassador to Denmark, Henk Swarttouw, this development is both promising and necessary:

“In both the Netherlands and across the EU, achievement of our objectives is contingent on developments in renewables. By 2050, the target is for the Netherlands to have 40-70 GW of our electricity generated from wind energy. Consequently, we have to pursue intensive growth in the development of wind energy in the coming years in the entire North Sea region, and not least along the Dutch coast,” he explains, adding:

“I am in no doubt that the North Sea will be crucial for our energy supply in the years to come.”

GERMANY ESCALATING NORTH SEA DEVELOPMENTS

In Germany too, developments in the North Sea are a major focus for future energy supply. According to the German

Ambassador to Denmark, Andreas Meitzner, the target of ensuring that 65% of German electricity consumption is covered by renewables by 2030 is explicitly incorporated in the new German government’s draft coalition agreement:

“In that context, the North Sea plays a crucial role. In 2017 already, around 15 per cent of Germany’s wind energy was harvested from the North Sea, and while this is a good result, all things being equal, there is still huge expansion potential,” he explains.

He was therefore also pleased to see developments in offshore wind power in the North Sea scale new heights in 2017.

“Developments in the North Sea over the last year have been very positive. Not only because the capacity is increasing, and the technology is improving, but also because costs have come down significantly,” he says, while also highlighting the Port of Esbjerg’s role as a hub for development:

“The Port of Esbjerg has played a pivotal role in recent decades in the development of the offshore wind sector Europe-wide, and especially as regards German projects in the North Sea. For the German wind farms, the Port of Esbjerg is crucial as a hub for shipping out both turbines and equipment. The shipping operations out of the Port of Esbjerg to the large-scale wind farms create value throughout Europe.”

FOCUS ON MORE INTERCONNECTORS

The two ambassadors agree that new wind farms will not be enough in themselves if the countries are to realise their ambition for an internal energy market. This will also require an increase in transnational electricity links.

“We are going to have to extend the existing grid system and establish new interconnectors between the countries. This will serve to stabilise energy supply across the whole of continental Europe and mean lower production costs,” says Andreas Meitzner. When the electricity cannot be stored, it can then instead be redirected to those locations that need it.

According to the Dutch Ambassador, Henk Swarttouw, the benefits of the interconnectors are also plain to see:

“Both onshore and offshore investments in electricity interconnectors hold a host of benefits. Firstly, they have a positive effect on electricity prices, while they are also conducive to improved reliability of supply and wind farm efficiency. All three factors have spurred Dutch TenneT and Denmark’s Energinet.dk to start laying Cobracable,” he says.

NORTH SEA WIND POWER HUB CHARTS THE COURSE

One of the more remarkable projects, which took off in earnest in 2017, is the vision for an ‘energy island’ known as the North



In 2017, Energinet.dk and TenneT began working on a North Sea Wind Power Hub. The project is still in the initial stages, and no decision has yet been made on location or design. This is an illustration of what the energy island might look like. Prepared by TenneT.

Sea Wind Power Hub project. In the previous year, Energinet.dk in Denmark together with TenneT in the Netherlands and Germany formed a consortium to explore the scope for realising this project.

The aim is to establish a manmade island and collection point for wind energy in the North Sea with links to several of the surrounding countries. Energinet.dk estimates that North Sea Power Hub could potentially supply 80-100 million Europeans with renewable energy Europe-wide.

Henk Swarttouw expresses great enthusiasm for the project and the potentials, which he believes are visionary:

“This project holds huge potential for both the Netherlands and the EU, but with it being an ambitious project it will take time to establish. However, it is promising that the consortium was formed in 2017 and that work has got underway. For example, in developing the technology needed to ensure that the project is feasible in the first place,” says Henk Swarttouw with reference to the scope for converting the electricity generated by the farms into other energy sources such as gas.

This specific prospect was one of the reasons that led the Dutch gas company Gasunie to join the consortium in autumn 2017.

Germany too is keeping a close eye on this project, says Andreas Meitzner, although the German government has not yet reached a decision on the project as regards its own national strategy in this area:

“We are currently witnessing a number of promising development projects in the North Sea, and the German government is following developments with both interest and openness,” he says.

COOPERATION ON SEVERAL FRONTS

Both ambassadors agree that the prospects for the North Sea Energy Cooperation in 2018 are promising. Equally, they point

out that the strengthened cooperation to enhance utilisation of resources in the North Sea will be increasingly crucial in the years ahead. At least if the aim is to escalate development:

“The German government has great confidence in the North Sea Energy Cooperation and in the dedicated neighbouring Member States we are now in dialogue with. It is a great advantage that we agree on the priorities for long-term enlargement so that we can pool our efforts on cross-border infrastructure, the development of new cross-border wind farms, and not least on knowledge sharing,” says Andreas Meitzner.

Henk Swarttouw agrees, and also highlights the joint obligation of these nations to ensure that environmental protection is assured every step of the way:

“We have a joint undertaking across the region when it comes to conservation of North Sea ecosystems. On that front we have an obligation to cooperate in order to ensure that our ambitions for the energy sector are not realised at the expense of the North Sea,” he says.



Andreas Meitzner,
German ambassador to
Denmark.



Henk Swarttouw,
Dutch ambassador to
Denmark.

© Photo HASSE FERROLD



These are the 17 UN global goals. According to Marie Gad, Leading Senior Advisor with the Confederation of Danish Industry, one positive aspect of the SDGs is that they apply to all sectors and industries.

THE WORLD HAS GAINED A NEW LANGUAGE FOR SUSTAINABILITY

The UN 2030 Agenda for Sustainable Development has accelerated efforts on sustainability worldwide, including in Denmark. The Confederation of Danish Industry and the Ramboll Group A/S agree that this makes sustainability a key competitive parameter for the future. Not least for the Danish maritime sector, which has many opportunities for making sustainability part of its business.

17 goals for making the world a better place. This neatly sums up the Sustainable Development Goals (SDGs) adopted by all the United Nations Member States in 2015.

The SDGs have been decisive in speeding up efforts on sustainability in both the private and public sectors worldwide. And the rate of change is set to accelerate further in 2018, predicts Marie Gad, Leading Senior Advisor with Confederation of Danish Industry and responsible for the organisation's political advocacy for achieving the SDGs. She believes that the SDGs have had such impact because they are the first of their kind to recognise trade and industry as part of the solution:

"Their predecessors, the Millennium Development Goals, were flawed in terms of some parameters because they were far too narrow and failed to engage private-sector trade and industry in any role. With the new SDGs, we have seen, for the first time, businesses recognised as having a part to play in ringing the changes, which I see as high time. Trade and industry have long been more than ready to do their bit," is her comment on the paradigm shift that is now in progress.

At Ramboll Group A/S, sustainability has been a cause since the company was founded in 1945, and organisation is certainly feeling the effects of the changes initiated by the SDGs. Neel Strøbæk, Senior Corporate Director – Sustainability & CR, explains:

"The SDGs have basically accelerated corporate efforts towards sustainability because they have given us a common language for talking about and defining sustainability, which

is otherwise a fairly complex concept to get to grips with," she says.

In Ramboll's new strategy for 2017-2020, the SDGs are actually incorporated directly into the strategy platform in order to define how the company's sustainability programme is to be aligned in the coming years. But the SDGs are also tied in with the goal of growing the project portfolio within sustainability by 40 per cent.

IMO SETS THE COURSE

The maritime sector also recognises the potentials inherent in the SDGs. In December, the United Nations International Maritime Organization (IMO) adopted its strategy for 2018-23. This contained an unprecedented vision of how IMO will contribute to support implementation of the SDGs.

IMO Secretary-General Kitack Lim explains:

"A sustainable transport sector plays a crucial role in realizing the ambitions set by the United Nations, because transport is so closely linked to world trade. And that trade is underpinned by shipping, which transports more than 80% of world trade. Consequently, we need to take the lead and ensure that the shipping industry helps meet the goals that are most relevant to it," he says.

While IMO's work is most obviously linked with the goals related to the oceans and to climate change, every single goal has relevance to IMO's work, says Kitack Lim:

"Each of the 17 world goals is followed by a number of sub-goals and objectives and IMO's remit directly supports many of those sub-goals and objectives."

For IMO, this means an all-new focus on partnerships as a means of achieving greater impact. IMO currently has partnership arrangements with more than 60 IGOs and more than 70 NGOs to promote the implementation of new initiatives, conventions and regulations. Examples of partnership initiatives from IMO include the Global Ballast Partnerships Project (with the Global Environment Facility (GEF) and United Nations Development Project (UNDP)) to implement IMO's ballast water convention in least developed countries; and the Global Industry Alliance, under the GloMEEP (Global Maritime Energy

Efficiency Partnerships) Project, which is working to reduce CO₂ within shipping via new types of vessel equipment and technology.

EUROPEAN PORTS ALREADY WELL UNDERWAY

While the SDGs have provided a strategic direction for the efforts, Isabelle Ryckbost, Secretary General of European Sea Ports Organisation (ESPO), points out that a great many of the European ports are already well underway, and have been so for a long time. Environmental protection is an integral component of the operation of the majority of European ports, she explains, referring to the benchmark review compiled annually by the ESPO initiative EcoPorts, see figure 2.

The review ranks the different environmental priorities according to what counts for most at the ports. Air quality ranks number 1 and has done so since 2013. This is no surprise to Isabelle Ryckbost:

“Air quality is an important action area solely because 90 per cent of European ports are located in or very close to

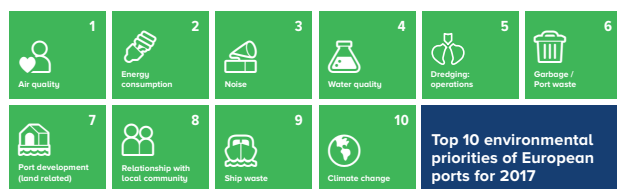


Figure 2. Top 10: environmental priorities at European ports.
(Source: ecoports.com)

urban areas. All emissions reductions have direct impact on the state of health and quality of life of people living near the port,” she says.

However, 2017 was the first year in which climate change ranked among the top-10 environmental priorities at the participating ports. And this is a clear sign that European ports are now stepping up the efforts to reduce their carbon footprint,” says Isabelle Ryckbost.

“The Paris Agreement was truly a milestone in relation to the efforts of ports to develop initiatives to reduce their own and their stakeholders’ carbon footprint. At present, we are seeing everything from new types of monitoring of activities, investment in renewables and the goal of becoming coal-free,” she says.

THE FUTURE COMPETITIVE PARAMETER FOR THE INDUSTRY

For many businesses, the SDGs are razor-sharp business, explains Neel Strøbæk, Senior Corporate Director at Ramboll Group A/S:

The market is going to be driven by the SDGs, no doubt about it. Both within energy and transportation. This is because there are lots of synergies to tap into, so business development puts plus figures on multiple bottom lines all in one go,” she says, highlighting the aviation industry as one example.

Aircraft types have been optimised in recent decades in terms of how much fuel they consume. This is good news for CO₂ emissions, but also for the operators’ business, because they cost less to fly. Another example mentioned by Neel

Strøbæk is hull coatings, and the new types of paint that can reduce vessel bunker fuel consumption but also contain fewer toxic substances.

“When the sustainability agenda is linked into business, that’s when it makes sense,” says Marie Gad about her experiences of implementing sustainability within Confederation of Danish Industry. This is also why she is in no doubt that the SDGs will be a competitive parameter going forward. Basically, those companies that align with the SDGs will be better placed in the market.

This is not least because in future we will be seeing actual requirements specifications for industry’s performance on sustainability, explains Neel Strøbæk:

“Even now, we are seeing new types of requirements as a competitive parameter in prequalifications. Most recently, in a procurement in the UK, I registered that applicant performance within the so-called EDI indicators (Equality, Diversity, Inclusion) and similar non-technical, non-financial parameters accounted for 25-30 per cent of the evaluation. This means that companies already engaged in sustainability are better placed,” she says.

THE DANISH MARITIME SECTOR HAS SEVERAL ADVANTAGES

According to both Marie Gad and Neel Strøbæk, the Danish maritime sector is already on track. This is because Denmark has had high standards of environmental protection for decades, which means that in some areas, Danish maritime companies are a step ahead.

Moreover, says Neel Strøbæk, Danish technology is very well advanced.

“We’ve got a head start because taking an environmental approach is second nature to us, and we have built up our industry under much ‘stricter’ rules than in many other countries. Now those other countries will have to adapt, and are going to be looking to us, in Scandinavia,” she says.

According to Neel Strøbæk, one obvious focus area across the Danish maritime sector is the agenda on Global Oceans, which focuses on utilisation of the ocean and its resources and is in extension of SDG no. 14, Life below water.

SDG no. 14 is the common denominator of all the activities in play in the Danish maritime sector, since the ocean is the source or the medium within food, energy, transportation, tourism etc. At the same time, in Denmark we have very robust industries with vast expertise in engineering that are well placed to take the lead in developing and harvesting marine resources sustainably,” explains Neel Strøbæk.

There are also benefits to be reaped from knowledge sharing across sectors of industry. Denmark, for example, has outstanding expertise from its oil and gas industry, which is obvious to translate and apply within other areas such as in the wind sector, for example. For Denmark, there are major export potentials in the form of knowhow, says Neel Strøbæk.

Marie Gad agrees but is also calling for political focus:

“Within the first two years after the SDGs were adopted, Danish businesses have made far more progress than the politicians have. Hopefully, the politicians will be catching up in 2018 so that we have the framework conditions to match and support industry’s progress,” she says.

PORT OF ESBJERG CELEBRATES ITS 150TH ANNIVERSARY

In 2018, the Port of Esbjerg celebrates the 150th anniversary of the decision to turn a shore into an international port. This momentous decision laid the foundation for what was to become the modern-day city of Esbjerg. The port was formerly a leader in exports and fisheries until it became a principal energy port. Here we offer a retrospective.

The city that is now Esbjerg has undergone a sea change since 1868 when the then Parliament passed a bill to establish what is now the Port of Esbjerg. Because originally, this was just a small hamlet consisting of a

single farm, three houses and 23 inhabitants. Today, the population of Esbjerg exceeds 72,000. The port is an international hub, home to more than 200 companies and the site of some 10,000 jobs.

After its completion in 1874, the Port of Esbjerg soon became pivotal for Danish agricultural exports, especially to Britain. Later, the fisheries came to predominate and by 1910, the Port of Esbjerg was Denmark's largest fishing port with more than 600 fishing boats. Today, the Port of Esbjerg is the leading North Sea offshore wind port, the base for the Danish offshore industry and an international hub for multimodal transport with six scheduled RoRo routes.

Here we present highlights of the history of the port with the aid of images from the Esbjerg local archives.

1874



The original port, now the Dock Port, opened after a delay of some years on 15 August 1874. The lock gate is seen on the far right, and the leading lights are on the left.

1956



Loading of butter casks at East Port, in 1956. Note the safety net slung alongships to catch the casks if they tumble off the rolling ramp.

1952



Recruitment station in the Port of Esbjerg in 1952: The stevedoring manager Mr Olesen of the shipping company DFDS hires dockers in front of the port's recruitment station, Mønstringshuset. Those hired were assured of a day's paid labour, while those passed over would have to stand in line with other hopefuls the next day.

1967



Aerial photo of the two quays Engelskaj and Søndre Dokkaj in 1967. The MS Winston Churchill car ferry is seen berthed at Engelskaj. Berthed in the Dock Port, the Scandinavian Seaways DFDS freight ship, the MS Bellona, frequently called at Esbjerg.

1972



The "Ny Havn" fishing port circa 1972. A couple of boats have landed their catch, which is now being cleaned and sorted by the fishermen. For many years, the Port of Esbjerg was Denmark's largest fishing port.

1983



The Maersk Explorer drilling rig entering the Port of Esbjerg in 1983. Since the boom in oil and gas discoveries that started in 1971, several major companies have set up operations at the Port of Esbjerg, which is now a base port for the Danish offshore industry.

2017



Offshore wind turbines ready to ship out from the port. In 2017, turbines with a capacity 1,300 MW were shipped out of the port, along with the world's longest wind turbine blades to date (88 m).

2017



A Siemens RoRo vessel docking in 2017. The Port of Esbjerg is currently Denmark's leading RoRo port with six scheduled RoRo routes and links serving more than 25 ports in Northern Europe and the Mediterranean Region. More than 4.5 million tonnes of goods transit the port annually.

2017



Aerial photo of the East Port, Port of Esbjerg, 2017. The new East Port opened in 2013. The 650,000 m² are primarily used for pre-assembling, testing and shipping out wind turbines. Since then, the East Port has been extended several times over, and after the latest redevelopment completed in autumn 2017, it now covers an area of 1,000,000 m².

2017



The centre of Denmark's oil and gas production, Esbjerg 2017: 11,500 people work in the oil and gas industry in the City of Esbjerg, and the majority are based at the Port of Esbjerg. 2019 will see the commencement of the EUR 2.8bn redevelopment of the Tyra field.

TEXT:

Radius Kommunikation A/S

PHOTOS:

Red Star

MEDVIND/Bent Sørensen

LAYOUT AND PRODUCTION:

Reese Grafisk

Front page design:

Allan Tønning / www.tønning.tv







BOARD OF DIRECTORS

CHAIRMAN

Flemming N. Enevoldsen

VICE CHAIRMAN

Jesper Frost Rasmussen, Mayor

MEMBERS

John Snedker, Town Councillor

Helle Vingolf Larsen, Plant Director

Finn Strøm Madsen, Managing Director

John Sørensen, Managing Director

Peter Therkelsen, Managing Director

Freddy Hansen, Service Assistant
(employee representative)

Jane Behrens von Qualen, Team Leader
(employee representative)

MANAGEMENT

Ole Ingrisch, Port Director

Port of Esbjerg
Hulvejen 1 · DK-6700 Esbjerg
Phone: 76 12 40 00
adm@portesbjerg.dk · www.portesbjerg.dk

CVR: 27 05 46 92