



Maritime Oslofjord

www.maritimeoslofjord.no



**Nor-
Shipping
2022**

The leader

Dear reader

It's a great pleasure to present this magazine to you, made for Nor-Shipping 2022.



In June 2018 the Maritime Oslofjord Alliance was launched as a collaboration between three industry associations in shipping, maritime and other ocean industries:

- Ocean Industry Forum Oslofjord, est. 2012
- Oslo Shipowners' Association, est. 1905
- Shipping & Offshore Network, est. 1981

The two first ones are part of Maritime Forum and the Norwegian Shipowners' Association, respectively, and centred around the Oslofjord region, whereas the latter is an independent association established as Bulkforum, with members from all over the world.

In this magazine you will learn more about the three associations and some of our members, and indeed about some of the industry's main challenges too. You meet our three chairmen who were visionary to form this collaboration and who, some years later, initiated the Project Retrofit to look at options to use alternative fuels in shipping for the existing fleet within some selected segments. You can read about two of our international partners, the SUBMARINER Network in Berlin and the Lithuanian Maritime Cluster in Klaipėda. Our strong relations with Lithuania started in 2016, when Shipping & Offshore Network became one of several partners in the EU Interreg Baltic Sea Region (BSR) project called Go LNG (2016-19).

We are proud to present some of the startup members in Ocean Industry Forum Oslofjord: Brim Explorer, Kruser, Massterly, Maritime Optima and Zeabuz, and to show what we did on 9 March, 2022 at the Norwegian pavilion at EXPO 2020 Dubai, where we, in close collaboration with DNV, introduced several of our members to the authorities in the Middle East region who plan to establish sustainable coastal tourism and transport solutions.

You will meet Ivar Engan, the general manager of Maritime Forum, and Dr. Josef Mondl, one of the world's leading experts on China, who teaches at The Shipping Academy. By Shipping & Offshore Network.

Professor Emeritus Torger Reve from BI Norwegian Business School is a leading expert on industry clusters, in fact he introduced the concept in Norway in 1992, and I was one of his many students who were part of that. Since then our paths have crossed several times. He was on the Board of Ocean Industry Forum Oslofjord since it was known as Oslo Maritime Network and has made a significant contribution to the development of what is today the Maritime Oslofjord Alliance.

Last, but not least, we introduce you to Oslo Maritime Stiftelse (Foundation), which has made our attendance at Nor-Shipping possible through their financial support, for which we are very grateful. They work for a maritime past and a maritime future, as they say.

Tom O. Kleppes

General Manager

The value in collaboration

Cooperation, knowledge sharing and strong commitment to the industry are central to the Maritime Oslofjord Alliance. The chairmen of the three alliance partners have long and varied experience and an extensive knowledge base in both the maritime industry, shipping, oil and gas, and offshore.

AAGE THOEN:

BUILDING STRENGTH AND ATTENTION

Maritime Oslofjord Alliance combines professional competence and experience in international shipping with origins in the Oslofjord area, and creates useful forums and meeting places for members and other interested parties. Shipowner Aage Thoen is chairman of the board of the Oslo Shipowners' Association, and believes the alliance is of great importance to the industry.

- We maximize group effects, and distribute this to all members and stakeholders. In this way, we hope that we will become increasingly better and more relevant to all members and partners, Thoen emphasizes.

Professionally strong input

The chairman of the board has worked in banking, finance and shipping for 30 years, and both owns and operates a fleet of PCTC vessels, as well as property with offices in Oslo, Tokyo and Malaga. Thoen has also held several active board positions in banking, offshore, shipping and oil and gas.

- The work of the alliance provides strength and attention to the maritime industry in important challenges that we face. Important work ahead will be to provide objective and professionally strong input in the challenges that our industry will face in the transformation towards carbon-free shipping.

JON RYSST:

COMMUNICATION, UNDERSTANDING AND SOLUTIONS

One of the reasons why Norway as a country has been successful in the maritime industries is our flat structures, willingness to cooperate and our ability to innovate, says chairman of the board of Ocean Industry Forum Oslofjord, Jon Rysst.

The maritime industries are among the most important for Norway's economic growth, employment and exports. Jon Rysst has worked in the maritime industry for 40 years, in research, consulting and classification of ships. For the past 30 years, he has held management positions in both Norway and abroad. He now works with business development globally, and as Senior Vice President and Regional Manager

North Europe in DNV Maritime, he has a special focus on business opportunities in light of the digital transformation that is going on in the maritime industry.

Increases available knowledge

- The maritime industries face important challenges in the future, both in terms of sustainability, cost efficiency and further growth. By joining forces across industries and players in the expanded Oslofjord region, it will be easier to find solutions to some of these challenges. The alliance's goal is to make a strong contribution to this.

Through the alliance, the members of the three organizations will have the opportunity to participate in the vast majority of the activities offered by all the associations. In other words, a membership provides a significantly greater range of activities and a greater supply of knowledge.

In the future, we want to make a strong contribution to, among other things, the dissemination of knowledge and understanding of challenges and opportunities related to the decarbonisation of the maritime industry.

PER OLAF BRETT:

- CHALLENGES PREDICTIONS

As chair of the board of Shipping & Offshore Network, Per Olaf Brett describes Maritime Oslofjord Alliance as a knowledge building organization run by and for members - with

no pressure to worry about, only other knowledgeable members to trust and learn from.

Dr. Brett holds a Dr. oecón (DBA), an MBA and a B.Sc.-HONS degree from UK universities, and has held several expert and managerial positions in Det Norske Veritas and its subsidiaries in Norway and abroad. He is a recognised expert in business development and innovation, organisational science and leadership development. Currently, he is involved with the international business development of the Ulstein Group ASA and new approaches in fleet renewal, offshore wind energy generation, oil and gas field development as Board member.

Builds strong bonds

In his opinion, the meetings and workshops are important for both experts, executives, stakeholders and practitioners to freely express and discuss ideas about the global market place and challenge the predictions of the future.

- You will always receive a considered, personal response to your questions, which is not provided in all other organizations. Strong bonds are often built among the members, and many lifelong friendships have been formed. Nothing is easier than to ask a friend in the Network to participate in a video meeting, share experiences or evaluate the current and future market situation, says Dr. Brett.



Board Chairs of the three associations - Jon Rysst, Per Olaf Brett, and Aage Thoen.

Project Retrofit:

Alternative fuels in shipping

The Maritime Oslofjord Alliance has just completed a project studying the possibility of using alternative fuels in shipping.

Alternative fuels are meant to replace fossil fuels currently used with low or zero emission fuels to help achieve climate targets and comply with environmental regulations. About 20% of the ships in the world fleet represent over 80% of the total tonnage.

The study focused particularly on the large ships which are also the ships using most fuels and with the highest CO2 emissions. One could say that 20% of the ships use 80% of the fuel. The time perspective in the study was a 3-5 years horizon.

What was found was that only 15% of the ships have main engines that can be retrofitted to use alternative fuels. To convert an engine to use alternative fuels it must be fully electronically controlled. There are about 2,700 such engines installed in existing ships that are candidates for retrofit to alternative fuels. Retrofitting these ships to use low or zero carbon fuel has a potential to significantly reduce emission with about 100 Metric Tonnes (MT) CO2 per year.

The remaining 85% of the ships in the world fleet must find other ways to reduce their emission levels to comply with environmental regulations.

The study also found that the energy needed to produce alternative fuels with low or zero carbon emission like eLNG, e-methanol, hydrogen, ammonia is so large that the total emissions in a life cycle perspective (LCA) would be lower with the use of conventional fossil fuels.

The production of the fuels must be done by use of renewable energy without pollution. It will take a long time and massive investments to install sufficient renewable energy (electricity) to shift production of fuels to become green, at a time that society trends towards electricity.

Another finding was that the current emission regulations are only considering emission generated on board (TTW) and do not include the upstream emissions. It is anticipated that including the full perspective will be mandatory soon. The uncertainty about future regulations (IMO vs EU vs USA) makes it even more difficult to decide which fuels to use for a new vessel.

And not to make it simpler, it was also found that each type of fuel will need its single purpose logistic and distribution network. Developing many parallel fuel infrastructures all over the world will take time and large investments to be able to provide fuel in sufficient scale. Just look at how long it took for LNG to reach an acceptable distribution to become a trusted fuel.

The best positioning for existing ships in the short perspective is to reduce speed. For each 10% reduction of speed the emission is reduced with 27% and imply other operational and technical measures like retuning the main engine and optimise bow and propeller for lower speed, as well as jumboizing the ships for larger capacity.



One of the many project meetings in our office. From left Svein Helge Guldteig, project leader, Aage Thoen from Oslo Shipowners' Association and Jon Rysst from Ocean Industry Forum Oslofjord. Per Olaf Brett from Shipping & Offshore Network participated via Teams.

THE ALLIANCE PARTNERS

OSLO SHIPOWNERS' ASSOCIATION is the Oslo chapter of the Norwegian Shipowners' Association (NSA) in relation to which it has two main tasks: Approval of new members applying for membership of NSA and nominating candidates from the association for election to NSA's board and committees. The member enterprises' permanent representatives, normally 1-4 persons from the top management, are invited to attend the association's events. The association also has 'Executive Members' who are top executives in related businesses: banking, finance, brokers, lawyers, and shipowners who, for various reasons, are not members of NSA. These Executive Members are personal members, by invitation only. As of 1 January 2022, the association had around 60 Executive Members. The association's main event is the meeting series 'Executive Dialogue: From executives to executives unfiltered', which is held two to three times a year.

AAGE THOEN, SHIPOWNER, CHAIRMAN OF ASSOCIATION'S BOARD

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OCEAN INDUSTRY FORUM OSLOFJORD is in fact Maritimt Forum Oslofjorden. Geographically, the association covers Oslo, Akershus, Buskerud, Vestfold, Østfold and Telemark counties. OIFO aims to be a cooperation arena for innovation and restructuring in the ocean industries. The arena includes local and global enterprises from the region that are part of the ocean industries, as well as expert environments at the University of South-Eastern Norway (USN), OsloMet - Oslo Metropolitan University, the Oslo School of Architecture and Design and BI Norwegian Business School in Oslo. Through various network activities and committees, OIFO endeavours to contribute to increased innovation, restructuring and value creation in the region.

JON RYSST, SVP & BUSINESS DEVELOPMENT DIRECTOR, DNV - MARITIME



www.maritimt-forum.no/oslofjorden

SHIPPING & OFFSHORE NETWORK is a maritime network organisation for enterprises in the maritime and offshore industries in the Nordic countries. Established in 1981 as Bulkforum, Shipping &

Shipping & Offshore
NETWORK

Offshore Network now mainly focuses on geopolitics, market analysis and competence development. SON hosts its flagship event Annual Summit at Losby Gods in April every year. The fixed items on SON's annual schedule include the annual meeting on a geopolitical issue in February, the DNV meeting for SON's members in March (Oslo and Bergen), the Annual Summit in April, Market Update meetings in Oslo and Bergen in October, and the 'Tjuvholmen seminar' (paid for by suppliers) at Tjuvholmen Sjømagasin and in Bergen in November every year. The course Basic Shipping and Maritime Law, which is also organized once or twice a year, comes in addition. SON's members come from all over Norway and from countries such as Sweden, Denmark, Germany, Japan and China. SON was also a partner in the three-year (2016-2019) Interreg project GO LNG in the Baltic Sea Region (BSR).

PER OLAF BRETT, DIRECTOR AND ADVISOR, ULSTEIN INTERNATIONAL AS

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Alliance with great professional breadth

Through the three associations in the alliance, the Maritime Oslofjord Alliance has a total of approx. 150 members. These belong to a variety of professional and competence environment, and are a mixture of both service industries, shipping companies, suppliers and educational institutions. We also have several startups.

Through the Maritime Oslofjord Alliance, we wish to contribute to strengthening the maritime and other ocean industries in the Oslofjord region, through increased innovation, cooperation and by ensuring that the companies benefit even more from their memberships of the three associations.



Connecting

Networking

Link ocean expertise within the Oslofjord region

Accelerate innovation

Merge experience into action

Think tank

Provide inspiration and learning



Ocean

Explore

Establish dialogue and pursue ocean opportunities

Executive ocean forums

Greater insight and stronger ocean networks

Value creation

Secure collaborative and ocean industry value for Norway



Expertise

Experience

Broad ocean industry understanding

Resilience

The ability to react to adversity

Success

The ability to convert opportunity to profitability



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Angela Schultz-Zehden, Founder & Managing Director.

The Submariner Network, Berlin

Together we improve the Baltic Sea environment

The SUBMARINER (Sustainable use of Baltic Sea Marine Resources) Network promotes innovative approaches to the sustainable use of marine resources, and offers a cooperation platform to related actors and initiatives in the Baltic Sea Region. Our members represent both research institutions, public administrations, business parks and private companies.

The Blue Bioeconomy is the (commercial) use and conversion of living aquatic resources – such as algae, mussels or jellyfish – into a wide variety of products and services, such as food, feed, biobased materials and bio-energy. It is still a relatively young concept, but is driven by increasing interest, knowledge and technical developments.

Products from the Blue Bioeconomy include novel foods and food additives, animal feeds, nutraceuticals, pharmaceuticals, cosmetics and materials, as well as energy.

Businesses that grow the raw materials for these products, that extract, refine, process and transform the biological compounds, as well as those developing the required technologies and equipment, all form part of the Blue Bioeconomy.

Services from the Blue Bioeconomy can include the closing of the nutrient loop from agriculture, aquaculture and other sectors, and it also has the potential to create many employment opportunities and a generally healthier and more prosperous society.

The Submariner Network has promoted these topics from its inception, and does not only work with Blue Bioeconomy topics, but also specifically with tools – including Maritime Spatial Planning, Multi-Use and Smart Specialisation.

info@submariner-network.eu

**ABOUT
Lithuanian
Maritime Cluster**

Aims to become a platform for the development of high value-added products and services. The Cluster is focused on boosting the development of the maritime innovation ecosystem, and strengthening cooperation between Lithuanian and foreign business organizations, science and public institutions.

www.maritimecluster.lt

**ABOUT
Klaipėda Science and
Technology Park (KSTP)**

An innovation support agency that acts as Lithuanian Maritime Cluster coordinator. KSTP is involved in many project activities related to the scope of blue and green technologies. Organisation keeps close connections with the local industries and startup community.

www.kmtp.lt

**ABOUT
Andrius Sutnikas**

An internationally recognized expert in the field of liquefied natural gas (LNG), and a frequent speaker at leading industry events. For over 10 years, he has gained and shared his experience in various international projects, bringing together critical mass of businesses, experts and academic institutions, boosting cooperation in development of innovative technology solutions, establishing clusters and competence centers.

Approaching the best strategies

Innovative technologies today are driving a rapidly changing reality, and we also face environmental challenges that are really important to our societies. If we seek to adapt, we need to exchange our experiences, analyze them and discuss all that in wider international circles – this kind of approach leads to best strategies and solutions.



The cooperation between Lithuania and Norway in the maritime sector can be called a long-lasting success story. Events, study visits, B2B activities – we've already explored and empowered this partnership in many different ways. There is no doubt that we have to develop joint activities further, facilitating cooperation between the Lithuanian and Norwegian maritime industries and creating added value for both countries.

Andrius Sutnikas

Coordinator – Lithuanian Maritime Cluster- Development Manager – Klaipėda Science and Technology Park



Institutt for maritime operasjoner (IMA) tilbyr profesjonsorientert og arbeidslivsrettet utdanning, forskning og kunnskapsformidling med høy internasjonal kvalitet.

IMA tilbyr studier innen bachelor i nautikk, bachelor i marinteknisk drift (A og Y-vei), bachelor i skipsfart og logistikk, master i maritim ledelse og doktorgrad i nautiske operasjoner (fellesgrad). I tillegg tilbyr IMA maritime kurs.

Instituttet har en av de største og beste simulatorparkene i Norge og er med i prosjektet COAST - Centre of Excellence in Maritime Simulator Training and Assessment.

www.usn.no

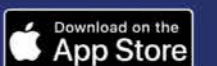


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Kruser: A worry-free boating life

In collaboration with Kruser, companies can offer their employees an innovative and sustainable boatlife.

In addition to offering private individuals access to a boatpool, Kruser launched a company membership last summer. Storebrand was their pilot customer and will continue its employee benefit for 2022



sion electric boats than it is to own or rent boats with fossil propulsion, says founder and general manager of Kruser AS, Christer Ervik.

ments with 7 other companies, including DNV, Visma wise and Bouvet. They all see the value of employees making sustainable choices and will also have internal meetings onboard Kruser's electric boats as well as inviting customers and partners on electric boat trips.

Through "Kruser Bedrift", the companies offer their employees local and simple leisure activities at the same time as the companies actively contribute to the green shift. Kruser takes care of the operation and maintenance of the boats and ensures that they are ready before each trip. This gives employees easy access to the sea, in noise-free and environmentally friendly boats.

- This includes a strong focus on safety and training, so even inexperienced or new boat drivers become safe drivers and have a great time at sea.

- We will be a driving force for an environmentally friendly boating life and show the world that a boating life that plays on a team with nature works, Ervik concludes.

Pushes for an environmentally friendly boating life

- We are very happy that Storebrand also will join in 2022. We have in addition signed agree-

See Kruser.no for more information

Boating - quite simply

- We see that our employees greatly appreciate being able to easily book nice and clean boats. If we had to own and rent out boats ourselves, it would be very resource-intensive and not as professional. Kruser is also great at training boat operating and boating safety, says Tove Selnes, Executive Vice President for HR at Storebrand.



- The feedback from the employees has only been positive, and we see that both new boaters and the more experienced ones use the boats. The fact that Kruser is environmentally friendly on several levels, is also an important element for us, she emphasizes.

For Kruser, the world's first electric boat-pool, the pilot collaboration with Storebrand made them able to prove that the concept also works in the corporate market.

In 2022, Kruser will be in the following places: Oslo, Bærum, Asker, Moss and Bergen, in a total of 11 ports. Employees are free to pick up boats in all ports. A great way to get variety in the boating experiences!

- We offer boat experiences that make it more attractive for many to share zero-emis-

Strength in the unity

Visibility, transparency and the opportunity to offer networks, arenas and initiatives to the entire maritime cluster in Oslo and the surrounding area, is the greatest strength of Maritime Oslofjord. There is a great power in getting together. Each organization has its perspective and purpose, but together we make each other better and can coordinate and collaborate across the alliance's broad fields.

We work to create good arenas for professional and relevant replenishment in an extremely dynamic, uncertain and complex world. We want to be a quality provider of good conferences and market updates in the Shipping and Offshore Networks - and we also believe in the power of both technology and the physical presence of people. There is something special about getting together, experiencing a unique and interesting lecture, and then discussing the topic with like-minded people in the maritime environment. This is where ideas, understanding and contacts are created!

Jan Peder Myklebost

Head of Shipping and Inbound Logistics - Hydro Aluminium
Board member, Shipping & Offshore Network



- Energy and proactiveness

The shipping industry is facing momentous change and upheaval over the next decades. Cross-industry collaboration, networking and partnerships are absolutely key if we are to find the best solutions, grasp opportunities and emerge from challenges in a strong and resilient manner. By sitting on the board of the Shipping & Offshore Network I got to witness a lot of this collaboration and sharing of ideas first-hand from deeply knowledgeable people. That was a privilege.

The shipping industry is no stranger to challenging weather, and it's inspiring to see the energy and proactiveness that is preparing to tackle it this time.



Marthe Lamp Sandvik

Vice President - Energy Transition Solutions,
DNB Ocean Industries
Former board member, Shipping & Offshore Network

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The Shipping Academy:

By Shipping & Offshore Network

- From my perspective, a look at what members expect from such an alliance might offer a good explanation of why the Maritime Oslofjord Alliance is important, says Professor Dr. Josef Mondl.

In his experience, members want to shape things, want to see clear benefits, look for space for recognition, want to explore fields of learning and experiencing, need an environment of conviviality, hope the alliance is a good and competent dialog partner for politics and business, and be provided with access to important information. This and much more is what the Maritime Oslofjord Alliance offers – and why it is of great importance, according to Dr. Mondl.

Developing into an international community Professor Dr. Josef Mondl is the China Expert of The Shipping Academy, which aims to take up topics and deal with them in events which are considered to be the most important trends of the future, while establishing more international cooperation and create added value for its members through systematic activities, like seminars, courses, lectures and events.

– With a focus on geopolitics, market analysis and competence development, the Shipping Academy already has set a solid foundation for future development and sustainable growth, with the aim of developing more and more into an international community, says Dr. Mondl.

He believes that by addressing the topics of digitization and challenges of globalization (e.g. China) and bring them closer to the members, the alliance will play an important and critical part in giving their members added value.

– In near future, I hope to explore and expand suitable forms of cooperation in the two focal points of my work (China and digitization), and find and foster synergies with the Academy and the Alliance. Also, I hope we can establish a chapter in Oslo to build and develop mutual exchange and cooperation.

Professor Dr. Josef Mondl,
St. Gallen

**ABOUT
Dr. Josef Mondl**



- Executive Director of the China Competence Center, University of St Gallen.
- Main focus is on international business development strategies based on intercultural dimensional theories, and his core competence is the integrative approach of diplomatic, business and academic experiences to be integrated in Executive Training programs and teaching activities.

The Shipping Academy.

By Shipping & Offshore Network, offers the following courses:

- **Basic Shipping and Maritime Law** with Tor Erik Jensen from University of South-Eastern Norway (USN) and Kristin Omholt-Jensen from Maritime Optima AS
- **Tian Xia – All under heaven**, about China's vision 2049 for a new world in order with Dr. Josef Mondl from University of St. Gallen, Switzerland
- **5 Types of Risk in Shipping** with Mark Williams, Shipping Strategy, London



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MARITIME FORUM

- A world-leading and comprehensive maritime cluster with 700 members
- Interest organization that brings together the entire Norwegian maritime industry
- Represents common interests for both the employee and the employer side
- Eight regional offices along the coast, as well as as well as the head office in Oslo
- Ocean Industry Forum Oslofjord (OIFO) is Maritime Forum Oslofjord



Important for the green maritime change

With world-leading companies in almost all segments of the Norwegian maritime cluster, the Oslofjord region is one of the country's leading maritime centers. - Close cooperation between shipping companies, shipyards, equipment suppliers and maritime service providers is both a hallmark of, and a competitive advantage for the Norwegian maritime cluster, says Ivar Engan, general manager of Maritime Forum.

All these companies account for significant value creation, employment and exports, which in turn are based on strong technology development and high competence at all levels. In this part of the country, the alliance cooperation through the Maritime Oslofjord has become an important facilitator for extensive experience and knowledge sharing.

The alliance and their three associations will have an important task in building up

during the ongoing green maritime change in the years to come. It is only through close cooperation that we will succeed in the further development of the Oslofjord region as a hotbed for green maritime technologies, Engan points out.

- Must be teamplayers

Maritime Forum aims to achieve a breakthrough for an active maritime policy, with offensive and predictable framework conditions for the entire Norwegian maritime cluster.

In the years to come, the most important task will be to ensure that the authorities, the industry and knowledge environments play a part in the development of new green technologies. It is through investing in digitization and decarbonisation that the Norwegian maritime cluster will be able to consolidate its leading position globally.

Ivar Engan
General Manager,
Maritime Forum



**DEN NORSKE KRIGSFORSIKRING FOR SKIB
GJENSIDIG FORENING**
The Norwegian Shipowners' Mutual
War Risks Insurance Association



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WHEN AT RISK
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Brim Explorer

Technology development with focus on sustainability

Brim Explorer (member of OIFO) is a small shipping company with big ambitions, with the goal of developing the sightseeing boats of the future.

The winner of Nor-Shipping Entrepreneurship Award 2019



Espen Larsen-Hakkebo is one of the founders of the shipping company and tourism company Brim Explorer, and together with Agnes Árnadóttir he started Brim Explorer in 2018.

After working with boat tourism in Tromsø for two years, they saw a clear need to raise the quality of boat tourism.

- In 2022, we will launch our third vessel, and the first all-electric vessel in Oslo. MS Bris will be a valuable platform for exchanging knowhow about electrification of several vessel types in the future, he emphasizes.

Strengthens a growing company
Larsen-Hakkebo hopes that MS Bris can

also be a natural gathering place for many of the members of the Maritime Oslofjord Alliance for gatherings and launching events in the future, and believes that the value of the alliance is indisputable.

- Gathering the expertise among the member companies in the Maritime Oslofjord Alliance is a strength for the entire maritime industry in the Oslo area. For our part, it has been a strength to attend events and get to know several of the members of the alliance - some of them have become suppliers, other sparring partners in technology and research.

Brim Explorer is growing, and in the future they will expand the fleet to new destinations - both in Norway and abroad. In parallel with this, work will continue on technology development in the company Brim Tech:



- We aim to make both progress solutions and efficiency philosophy commercially available. Here we have great faith that there is a market!



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Maintenance Planning

Real-Time Alerts & Automated Reports
Up to date Intelligence





Shipping & Offshore Network:

Annual Summit

In April each year, SON arranges its flagship event Annual Summit at Losby Estate outside Oslo, where an international environment meets to shed light on current topics, new development and professional challenges. SON's members come from all over Norway and from i.a. Sweden, Denmark, Finland, Germany, Japan, Lithuania, Greece, and USA.

www.shippingoffshorenetwork.no

MEETING PLACES

- Annual professional events
- Annual meeting on geopolitics
- DNV meeting for members of the Alliance
- Annual Summit
- Market Update meetings
- Tjuvholmen Seminar
- The Shipping Academy



Julie Jacobsen, Skipsfinansiering Pareto Bank



Oslo Maritime Stiftelse

The foundation mainly supports maritime and shipping-related purposes.

The purpose of the foundation is to provide financial support to companies and initiatives such as:

- safeguards the welfare of Norwegian seafarers
- sheds light on Norwegian seafarers' efforts
- promotes understanding and interest in Norwegian shipping and its history, its position in today's society and the future development of shipping
- contributes to promoting Norwegian maritime competence and shipping activities

This also includes vessel protection and museums, homes for elderly seafarers, associations and coastal teams, school ships as well as publications or book publications. The foundation continuously receives applications and has four fixed annual application deadlines each year: 15 February, 15 May, 15 September and 15 November. The board members are appointed by Oslo Shipowners' Association and Oslo Seafarers' Association.

Read more on: www.unifor.no/stiftelser/oslo-maritime-stiftelse



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Professional exchange

During the year, we have a number of events that bring together members of the alliance, and encourage the exchange of experiences and expertise. This is how we build important ties between players in the industry.

From Executive to Executive Unfiltered

Oslo Shipowners' Association is the Oslo chapter of the Norwegian Shipowners' Association, and represents shipowners and top managers in related sectors within the industry. The association's main event is the meeting series «Executive Dialogue»:

«From executive to executive unfiltered», which is arranged two or three times a year. Executive Dialogue provides a structured and confidential environment for CEOs, presidents and business owners to share best

practices and resolve business challenges. Participants can expect to make better decisions, improve communication skills and build strong relationships with other members.

Christmas dinner

This December event arranged by the Oslo Shipowners' Association has become a highly valued event, and brings together executives from the entire industry. The Christmas dinner was arranged for the 60th time in 2019.

Competence Forum

A number of interesting and highly competent speakers in various parts of the maritime field deal with current issues. The participants both acquire new skills and meet new, exciting people.

Lunch & Learn

Lunch meetings with presentations on topics that move in the industry, followed by open discussion and brainstorming on what you can do together.



Shipowner Leif Høegh was the guest at Oslo Shipowners' Association's Executive Dialogue meeting on 2 September 2019 at the Norwegian Shipowners' Association.



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The Ocean has been an important part of Norwegian business life for generations, and DNB has long traditions as a leading Seafood, Energy and Maritime Bank. We will continue to finance and advise companies that are future oriented, and who embrace sustainable business practices.

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New York
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New York, NY 10001, USA
+1 212 681 3800

London
DNB Bank ASA
The Walbrook Building, 25 Walbrook
London EC4N 8AF, England, UK
+44 20 7621 1111



Maritime Optima AS:

A visionary Tech company

Following the establishment and sale of two other tech companies, Maritime Optima is the third tech start-up for Kristin Omholt-Jensen. She has long and broad work experience from various parts of the shipping industry, over 10 years of experience as an independent consultant - and more than 10 years behind her as a tech entrepreneur. She recognizes the value in an alliance like Maritime Oslofjord.

- **The Norwegian maritime cluster** and this alliance are of great importance for maritime innovation. The alliance creates good meeting places where companies, R&D institutions and public administration meet and participate in interdisciplinary discussions. This is a good learning and networking arena, both for young graduates and more experienced shipping people, and you meet companies from all over the maritime cluster.

- So far, we have invested in a comprehensive machine-readable data foundation that we will now begin to commercialize. Since we also have a lot of data and people with long industry experience, we can also contribute knowledge and data to various projects if desired. We believe we can help the industry to both make more money, make better decisions for the environment and work more efficiently together, says Omholt Jensen.

have sailed. Here you can make fleets of ships, check the weather, make sea routes and find carbon emission imprints. You can also upgrade to a paid version if you want more functionality.

- Maritime Optima Pro

For maritime professionals interested in ShipAtlas features, shipping market intelligence, pre-voyage calculations and efficient workflows.

More knowledge ensures good choices

Maritime Optima is a tech startup that believes that data and knowledge can influence the shipping industry to make better decisions:

- ShipAtlas by Maritime Optima

Free software program where anyone who wants can create a user and find more than 80,000 ships and 5,000 ports, follow the ships in near real time and see where they

This opens up opportunities to work with colleagues, calculate, send information to selected partners. You save time and make better decisions, and build company value.



Zeabuz:

Zero Emission Autonomous Blue Mobility

Zeabuz will deliver sustainable mobility to urban citizens by utilizing the abundance of open urban waterways to establish shortcuts for pedestrians and bikers in cities all over the world.



Erik Dyrkoren is a civil engineer and Board Member of OIFO, with a broad background from both aerospace, renewable energy and oil, before he started a career in the maritime industry. Four years after the start-up of Blueye Robotics in 2015, he joined Zeabuz, which makes electric autonomous city ferries - and is well underway with another commercialization process.

- Zeabuz has been established by a research environment at NTNU, which has developed an autonomy system especially suitable for small electric city ferries. Zeabuz is also a member of OIFO. The company is now establishing an expansive organization to establish shortcuts over urban waterways throughout the world, says Dyrkoren.

Technology that benefits the industry

The potential is very large, and the most important job in the future will be to get good pilot projects underway to demonstrate what the company is doing, and test this in the market.

- An important spin-off of companies such as Zeabuz, is that we establish new knowledge and commercialize research-based technology - which paves the way for the industry to also benefit from it.

Alliances such as Maritime Oslofjord are important for bringing the industry together on current topics such as digitization, which can be difficult for old industries such as the maritime sector, and climate measures that apply to everyone. Here the alliance plays a significant role.

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Massterly AS :
Autonomous innovation

Kongsberg Maritime and Wilhelmsen founded Massterly in 2018 to help move transport from road to sea - from polluting trucks that queue through cities and tunnels, to safe, efficient and environmentally friendly transport by sea.

Kongsberg has world-leading technology in automation, cyber security and autonomy, while Wilhelmsen has extensive experience from operating ships, terminals and logistics solutions. Both companies have a large, international network and a high degree of innovation and digitization.

Strong, local cluster
 Massterly offers services throughout the value chain to customers - from the design and development of ships and control systems, financing, insurance, logistics solutions in port and operation of ships. Good dialogue

within the industry ensures that everyone benefits from the development.

- The Maritime Oslofjord Alliance brings the maritime cluster in the Oslofjord region closer together, and since Massterly's first customers - Yara and ASKO - want autonomous, fully electric vessels in operation in the Oslo Fjord, the company has a strong interest in building a strong, local cluster here, says Pia Meling, who is responsible for sales and marketing in what is the world's first company for the operation of autonomous ships. Massterly is a member of OIFO.

the goal in themselves, but a means that will increase safety and reduce operating costs, so sea transport becomes competitive with road transport. Massterly's control center in Horten is an important resource for competence development, testing and verification of autonomous and remote-controlled solutions, and we look forward to developing future solutions for the maritime industry together with the other partners in the Maritime Oslofjord Alliance, says Meling.



Solutions for the future
 The battle to reduce local emissions and pollution is a major driver worldwide. Autonomous ships will have battery operation or other zero-emission solutions as propulsion - both because these are the solutions of the future and to minimize ongoing maintenance needs on board.

- Autonomous ships that can operate in whole or in part without human interaction are not

MASSTERLY
 Our name is from the IMO definition of "Maritime Autonomous Surface Ship" (MASS): "A ship which, to a varying degree, can operate independently of human interaction".

Expo 2020 Dubai:

Substainable green coastal transport & tourism

Our seminar at the Norway Pavilion Expo 2020 Dubai on 9 March, 2022 turned out to be a success. It was a great pleasure and honour for us to co-organise this seminar together with DNV and Norway at Expo 2020 Dubai.

Over the past year, DNV has experienced increased interest from the Middle East as several Gulf countries see a need to diversify their income from their current dependency on fossil energy. There are development projects in the region where a desire for autonomous water buses has been outlined.

The second feature DNV have seen is that more countries are investing to become attractive tourist destinations, and several of the inquiries DNV have received are related to smaller zero-emission vessels that can provide tourists with water experiences. DNV have also received inquiries that indicate

that there is a desire to start building vessels for the tourist and pleasure segment locally.

The theme for Norway's Expo Dubai pavilion is "Pioneering Sustainable Ocean Solutions" so what better way to use the pavilion for a seminar where we let relevant actors in the region meet some of the leading Norwegian developers and operators of exactly that kind of vessels mentioned above, in addition to the latest update on autonomy and maritime batteries.

We were very happy to have our members Brim Explorer, Hyke by Hydrolift, Zeabuz and

SES-X Marine Technologies, as well as ship-builder Brødrene Aa, Kongsberg Maritime on autonomy and Maritime Battery Forum presenting themselves in person for the 60+ crowd that attended the seminar.

Thanks a lot to the Norway Pavilion staff with Commissioner General Ole Johan Sandvør and Deputy CG Dag Koppervik as well as Per Bardalen Wiggen for their enthusiastic assistance, and to the DNV team with Ian Edwards, Sherif Azzam and Benjamin Dineshkar for their invaluable contribution to make this happen.





Concentration of knowledge

Clusters emerge from an environment with a lot of knowledge, and gather a lot of expertise and competition in one place. They facilitate that companies can learn from each other, become more innovative and have higher value creation. Professor Torger Reve believes that the culture in the cluster determines growth and success.

Torger Reve is a professor of strategy and industrial competitiveness at BI Norwegian Business School in Oslo, and has the status of one of the world's foremost experts on business cooperation, competitiveness and clusters. He was a board member in OIFO from the very beginning when Maritime Forum Oslofjord was established in 2012 to 2020. Reve was the founder of the Centre for Ocean Business (OBZ) at BI.

He points out that the research clearly shows that the cluster activities has many positive effects: Empirically, the clusters are more innovative, and have higher value creation and productivity per employee compared to other similar companies.

According to Reve, who is also referred to as "the father of cluster theory in Norway", culture is crucial for the emergence of clusters. Cooperation and trust are fundamentally important, and development takes place most quickly where there is a flat structure and high ceilings.

Natural sea clusters

There are today clusters of marine companies along the entire Norwegian coast, in both shipping, ship equipment, fish farming and oil and gas extraction, which are world leaders. Unique knowledge and expertise have fostered further innovation and value creation.

These clusters are found in both small and large places along the coast - in places where there is strong enthusiasm, willingness to compete hard and where you lift together. In Reve's eyes, Norwegian value creation and exports are about more than the extraction of marine resources: The knowledge of everything concerning marine resources is strong in Norwegian clusters, and it is precisely this that makes them both innovative and adaptable.

Focuses on sustainability

Today, Norwegian ocean clusters have taken a new and renewable direction, and Norwegian companies are today investing more and more of their expertise in renewable

industries. This is necessary both for Norwegian value creation and for the environment of the future, and Reve believes that clusters are particularly well equipped to contribute to the green shift.

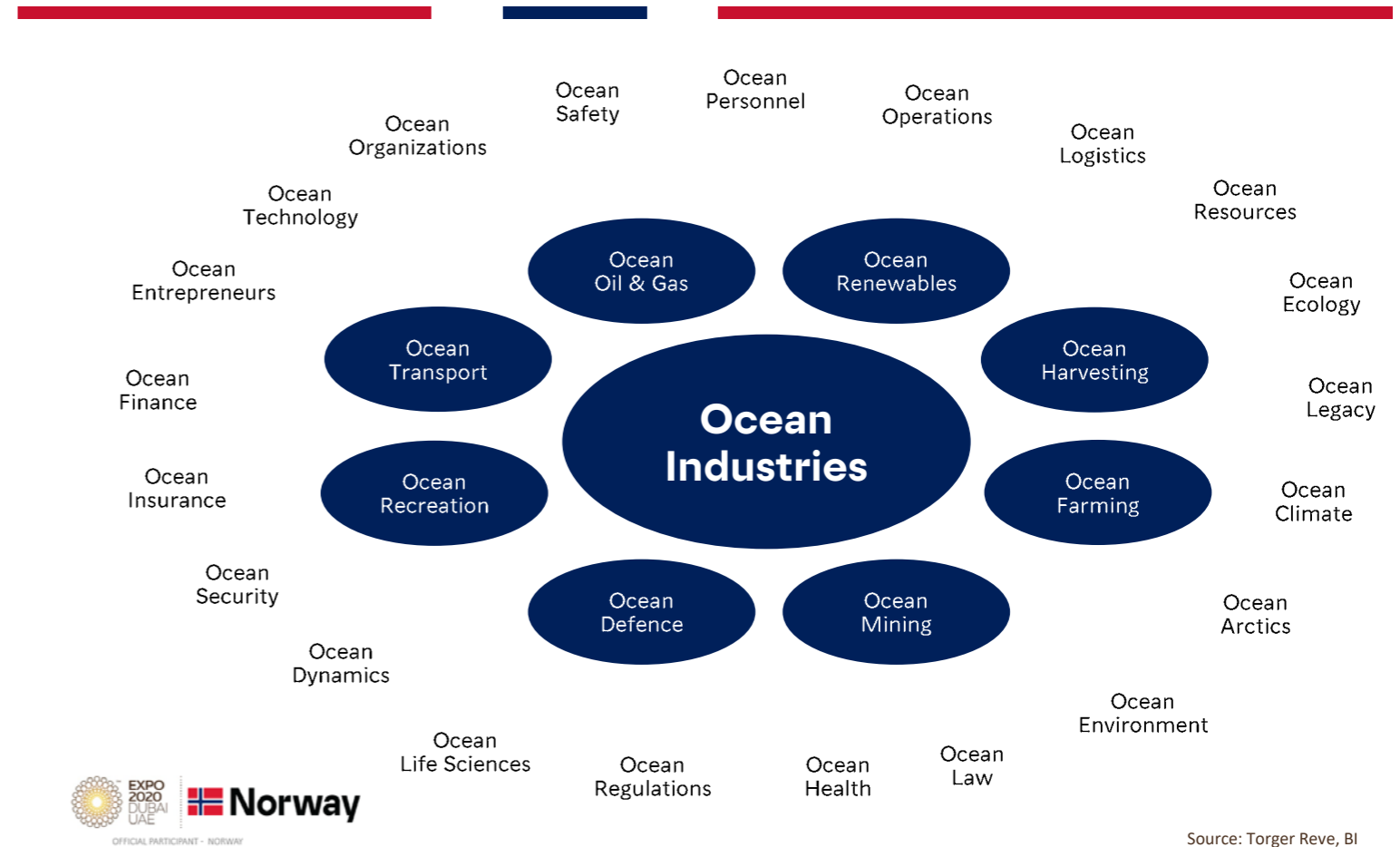
According to him, two things must be in place to succeed with the sustainable solutions: Good technological solutions, combined with superior commercial solutions.

The business model must make it possible to make money on the technical solution. And here Reve believes that it is precisely the clusters that have their most important value: There they have become skilled at grasping good ideas - and making them profitable together.



CLUSTER

- A geographical concentration of companies in the same or related industries.
- Promotes innovation, knowledge and competitiveness.
- Formal - part of a formal collaboration program with other companies.
- Informal - the flow of competence and innovation takes place organically, through informal networks.



Source: Torger Reve, BI

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Maritime Oslofjord

The Maritime Oslofjord Alliance

General Manager – Tom O. Kleppestø

+47 22 33 57 00 | +47 48 14 40 00

tom@maritimeoslofjord.no

Visiting address

Rådhusgata 25, Oslo, Norway

Postal address

P.O. Box 683 Sentrum, N-0106 Oslo

www.maritimeoslofjord.no



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