



**DANISH
MARITIME
FORUM**
2014

Unleashing the potential of the global maritime industry



Copenhagen,
8-9 October 2014



“It is difficult to stimulate the creative process and creative solution making. All of the elements were here over the two days: experts contributed, each of you shared your experiences; we discussed these new ideas together. And, we focused those discussions into concise graphic summaries.”

Andreas Sohmen-Pao,
Chief Executive Officer, BW Group,
Singapore





“What politics has given us politics can take away. One of my concerns for globalisation – and the implications for the shipping industry are strong – what if these international, political conditions that made globalisation change.”

Gideon Rachman,
Foreign Affairs Columnist,
Financial Times, United Kingdom

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“How do we together unleash the full potential to shape the future of the maritime industry? The answer lies in our combined minds.”

Henrik Sass Larsen,
Minister of Business and Growth,
Denmark



FOREWORD

It is with great pleasure that I hereby present the Danish Maritime Days report “Unleashing the potential of the global maritime industry”.

The backbone of our globalized economy – the maritime industry – faces both opportunities and challenges in the coming years. Despite the current global economic problems, growth in global trade will lead to an increasing demand for sustainable shipping in the future.

At the Danish Maritime Forum more than 200 key stakeholders from the maritime industry discussed the future of the maritime sector. While the sector stands ready to meet the increased demand for shipping services, it is also clear from the discussions that global cooperation and joint actions are needed to tackle global challenges from environmental concerns to trade barriers.

Let me highlight four messages that were addressed at the Forum.

First, we must safeguard open markets for international shipping. At a time where global trade patterns are changing, this is fundamental for preserving easy access and distribution of food, goods and energy for the world's population.

Secondly, we must put smart global regulations in place. We should set targets and conditions for the shipping industry and at the same time give businesses room and flexibility to come up with innovative and efficient solutions.

Thirdly, funds – both public and private - must be available to finance necessary development of infrastructure that will allow the maritime transport chain to function efficiently from factories to consumers.

Finally, we must ensure skilled people with the right competences to support the industry. The foundation for our success is our maritime workforce.

I hope you will find this report inspiring and take the reflections with you in your future work and daily business, and that you will join us at next year's Danish Maritime Days.

Henrik Sass Larsen,
Minister of Business and Growth,
Denmark



“The difference between an opportunity and a risk is when you discover it. If we are more systematic, we can turn risks into opportunities.”

Henrik O. Madsen,
Group President and Chief Executive Officer,
DNV GL, Norway

THE BIG PICTURE

On 8-9 October 2014 more than 200 business leaders, government officials, experts and other influential decision-makers and opinion shapers from across the maritime industry - representing 39 countries - met at the inaugural Danish Maritime Forum in Copenhagen.

The objective of the Danish Maritime Forum has been to inspire participants to work together with one clear goal in mind: to unleash the full potential of the global maritime industry.

The Forum is convened by Danish Maritime Days, a public-private partnership between the Danish Shipowners' Association, Danish Maritime and the Danish Maritime Authority.

The ambition of the inaugural Danish Maritime Forum has been to address the challenge of **how to meet the demand for transporting 20 billion tons of cargo annually - a doubling from current volumes - by 2030 in a sustainable way**. Participants in the Forum worked together over two days to turn this challenge into an opportunity by defining the most urgent issues to address and generating new ideas and tangible actions to take.

Key messages from the Forum

This report reflects the two days as they were seen by the Danish Maritime Days Secretariat.

The global maritime industry is the backbone of globalization and international trade, contributing to human wellbeing through growth and development all around the world. But if there is one overriding message from participants at the Forum, it is that there is a **need to raise public awareness of the importance and value of the maritime industry**.

First, the industry should raise its profile and image with an engaging idea like "We Move the World".

Moreover, the maritime industry should start paying closer attention to the outside world and to take on a more proactive role in shaping the context in which the industry operates.





Finally, participants agreed that this traditionally inward looking industry should become more open and transparent to allow for sharing of information about the value it is providing and where it needs to improve.

The maritime industry plays an important role for the world. It is key to enabling global trade by providing efficient, cost effective and sustainable transport of goods around the world. However, participants at the Forum recognized that there is still **great potential to increase the role and positive impact of the maritime industry.**

First, participants suggested that the industry can afford to significantly reduce its environmental impact while growing. Smart global regulation is an important step to achieve this, regulation that sets clear targets and rewards the front runners while remaining flexible so as to allow for continued innovation and growth.

Second, the maritime industry has a key role to play in securing efficient global supply chains. Participants suggested that better integration between maritime and connected infrastructure, and significant investment, especially in emerging economies, will facilitate greater supply chain efficiency and ease access to the world's markets.

Participants in the Forum agreed that **collaboration across the entire industry** is necessary to unleash the full potential of the maritime industry. They advocated that in order to move forward, all stakeholders from the entire maritime value chain should be involved, including shipowners, shipyards, equipment manufacturers, the financial community, charterers, cargo owners, port operators, trade unions, NGOs, academia, multilateral institutions and government officials.

There is a need for a more **proactive approach by industry leaders** – from all sectors of the business – to be in the driving seat and not leave it up to others to shape its future. Participants suggested that frontrunners have a key role in creating best practices and paving the way for the entire industry.

HOW WE INTEND TO MOVE FORWARD

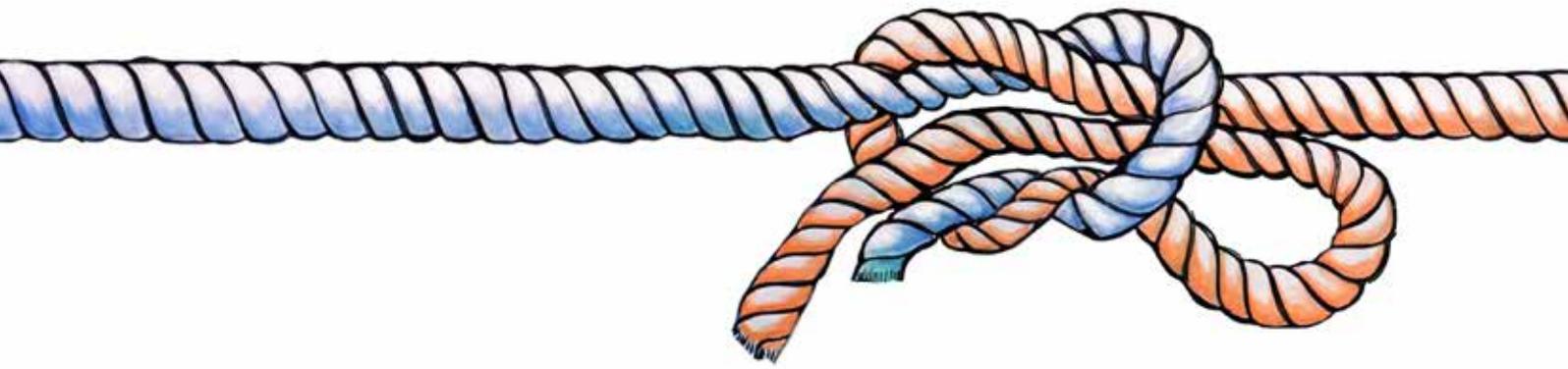
Participants in the Danish Maritime Forum expressed a strong commitment to shaping the future of the maritime industry through continued collaboration on key challenges and solutions.

Moving forward, participants see the role of the Danish Maritime Forum as a platform for collaborative dialogue and for turning ideas into action. They encourage the Forum to raise awareness of common challenges, to identify a common vision for the global maritime industry, and to facilitate a process to make that vision a reality.

Therefore, we will strive to further develop the outcomes of the Forum to advance the discussions in 2015.

At the Forum it became clear that a large part of the participants would be retired in 2030. With this in mind, it is also our ambition to involve the next generation of industry leaders in the dialogue by organizing a Youth Forum to be held in conjunction with next year's Danish Maritime Forum.

Join us on 7-8 October 2015 in Copenhagen to continue shaping the future of the global maritime industry.

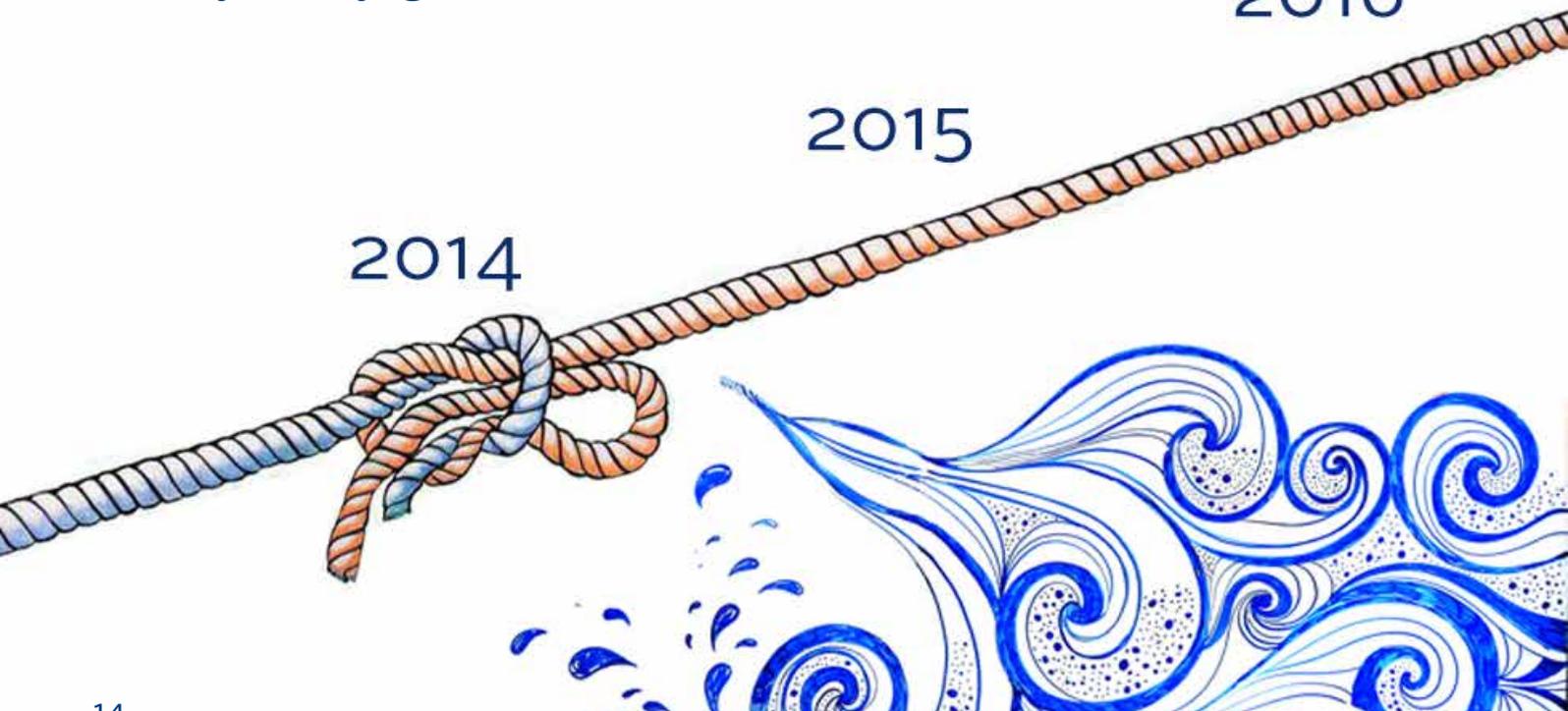


A 3 year voyage

2016

2015

2014





MOVING THE WORLD COLLABORATION IN ACTION

Bringing together a broad range of stakeholders and inviting them to join meaningful conversations allowed the participants to **co-design** plausible futures and actions from the very beginning. It requires collective intelligence to cut through the complex challenges facing the global maritime industry.

There are no experts in the fields of the unknown and undiscovered; the complex problems we face today call for all kinds of intelligence, voices, and vantage points.

The two days took participants on an inspiring voyage of learning, and intense action-oriented collaborative dialogue. The first day began with participants choosing to be in one of six parallel streams, each of which explored the industry from a different vantage point. The themes were:

- Meeting the Transportation Infrastructure Needs of the Future
- Unlocking Growth in Africa
- Financing Growth in the Maritime Industry
- Unleashing the Power of our Workforce of the Future
- Leveraging New Technologies and Innovation
- Sustainable Growth

Those conversations took place in small groups of 8-10 participants, and over the course of the two days, participants moved their thinking **“from fragmentation to global collaboration”** and developed concrete actions for the identified challenges. Through **deep collaboration** everyone’s expertise came into play in those parallel work streams.

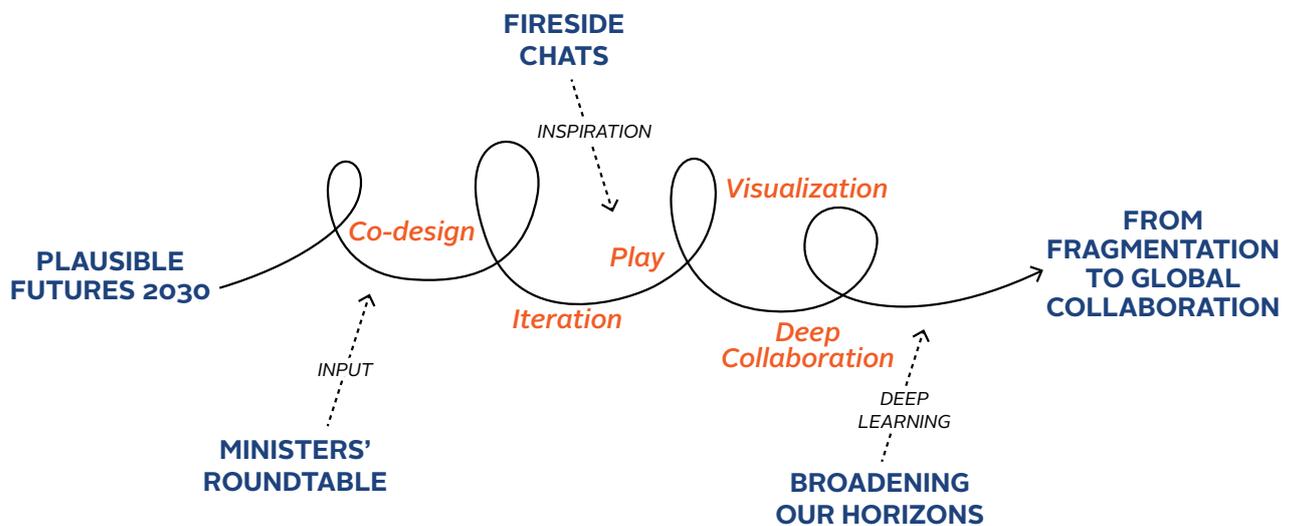
Beginning with the end in mind, the participants developed a first draft of the key challenges early on. Throughout multiple **iterations** the levels of definition, insight, detail and actions were added over the two days.

Their thinking was enriched by various learning experiences, which happened between their group conversations.



“We are an industry where there is still a lot of room for innovation. Great innovations within our industry can change the world, as containers did when they came along.”

Nils Smedegaard Andersen,
Group Chief Executive Officer,
The Maersk Group, Denmark



The first one was a playful forecasting exercise to imagine **“plausible futures 2030”**.

New thoughts generally arise with a play of the mind, and the failure to appreciate this is actually one of the major blocks to creativity. Creative **play** is an essential element in forming new hypotheses and ideas, and was another key ingredient at this Forum.

Participants also got to **“broaden their horizons”** by listening to maritime experts in ten different areas.

Equally stimulating was hearing the governmental and regulatory perspectives emerging from the **“Ministers’ roundtable”** meeting that took place on the first day. Informal **“fireside chats”** concluded the inspirational voyage.

All these experiences, including the delightful soirée in the evening of day one, enhanced the idea generation and intensified the collaboration in this stakeholder gathering.

At the end of the two days, graphic facilitators created a synthesized **visualization** of the challenges and actions for all of the six topics. Capturing the output of the parallel work streams both in pictures and words allowed all participants to get the overview of the key challenges and to see collective actions as a way forward.

This Forum has proven that it is possible to generate action through stakeholder collaboration. This is unique and has never been done this way before within the global maritime industry.

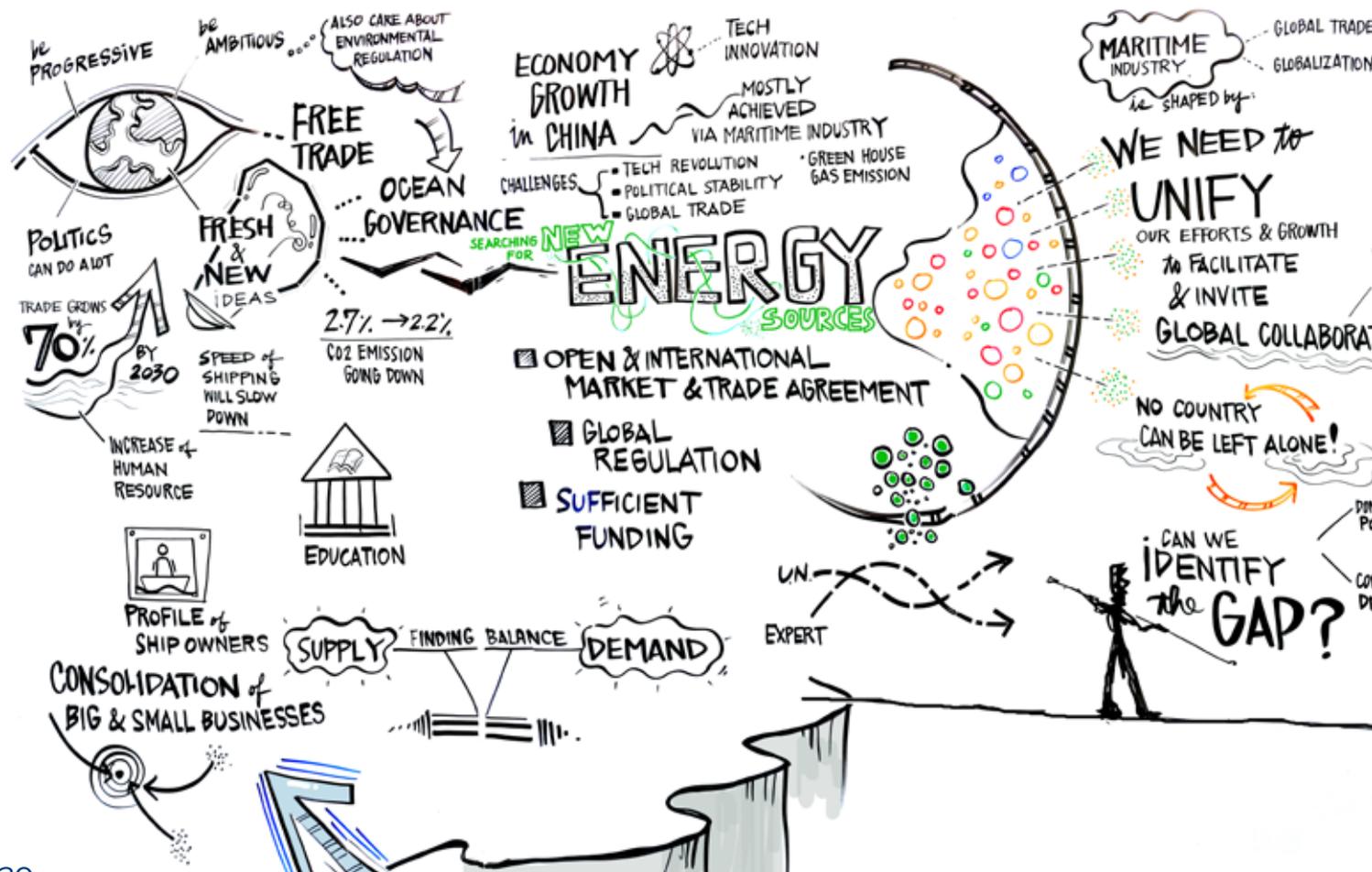


“The maritime industry plays an essential role both for the global economy at large and for the wellbeing of people around the globe.”

HRH Crown Prince Frederik of Denmark







DOCUMENTATION

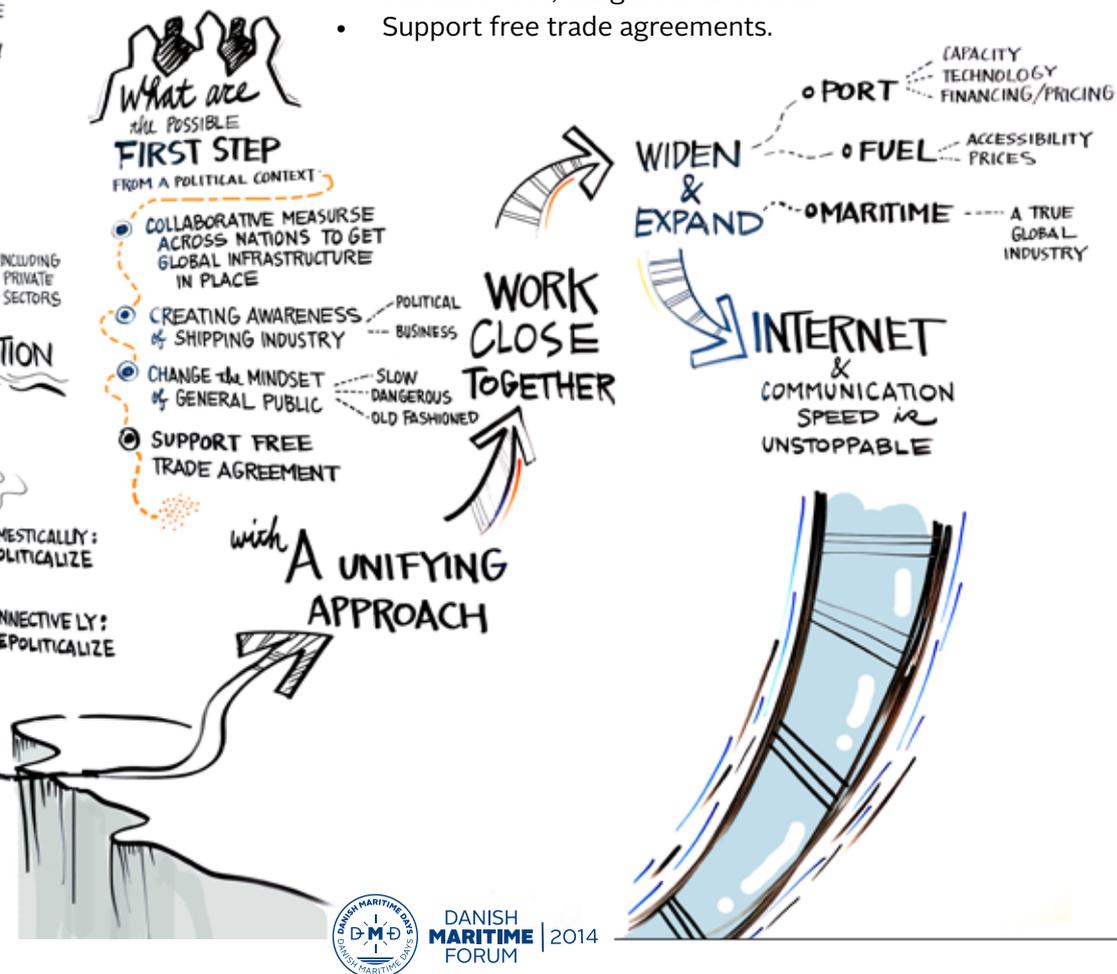
MINISTERS' ROUNDTABLE

The purpose of the Ministers' Roundtable was to bring a governmental and regulatory view on how to unleash the potential of the global maritime industry.

The participants shared visions for the maritime industry in light of anticipated global societal demands in 2030, and identified key challenges that must be overcome in order to turn the visions into reality.

The roundtable discussion led to four possible first steps that political and regulatory bodies could take to unleash the potential of the global maritime industry:

- Take collaborative measures across nations to establish a global infrastructure.
- Increase awareness of the shipping industry, its contribution and its potential.
- Contribute to changing the mindset of the general public of the shipping industry as being old-fashioned, dangerous and slow.
- Support free trade agreements.



POSITIVE

Shipping news-

Maritime stakeholders deliver a common vision for a viable and sustainable sector

KEY FACTORS

- United industry - public-private partnership
- investors confidence has returned
- skilled manpower - better and uniform global regulations
- digitalization of the sector - political stability
- sustained economic growth and infrastructure - prosperity in Africa

ECONOMISTS

SHIPPING has taken people out of poverty by technical innovations and developing talents.

KEY FACTORS

- Consolidation
- Training
- Innovation

KEY QUESTIONS

International Maritime

The Shipping Industry Wins Noble Prize for the Environment (LNG the only fuel)

KEY FACTORS

- LNG
- Global Adoption of International Shipping Convention - fuel/people/safety (on international shipping organization)
- Consolidation of shipping industry - 10 years standardization of design operation 25 500 ships (1/2 million)

CNN ONLINE

CHINA NEWS NETWORK

PROFITABILITY IN SHIPPING ENABLES GLOBAL GROWTH AND PROSPERITY

KEY FACTORS

- SUPPLY/DEMAND BALANCE
- GLOBAL STANDARDS, EFFICIENCY
- CONSOLIDATED INDUSTRY TECHNOLOGY

KEY QUESTIONS

COMMON VOICE

MARITIME INDUSTRY IN 2030

GLOBAL GROWING WEALTH WITH A "GREEN" FOOTPRINT



KEY FACTORS

- EXPANDING GLOBAL LNG INFRASTRUCTURE
- HARMONIZED GLOBAL REGULATIONS & GOVERNMENT SUPPORT

KEY QUESTIONS

- AFFORDABILITY OF NEW TECHNOLOGY
- SUPPLY DEMAND ADJUSTMENT MECHANISMS

PLAUSIBLE FUTURE

What does the global maritime industry look like in 2030?

Participants looked at both the most positive and most negative, plausible futures and created newspaper headlines for 2030.

NEGATIVE

"IDLE FLEET HITS 50%!"

- KEY FACTORS
- FLAG PROTECTIONISM
 - TRADE PROTECTIONISM
 - COLLAPSE OF GLOBAL TRADE PK.
 - SUBSIDISATION HOME INDUSTRIES
- KEY QUESTIONS (TARIFFS)

THE ECONOMIST

- SHIPPING INDUSTRY'S RACE TO THE BOTTOM
- STRUCTURAL OVER-CAPACITY
 - PROLIFERATION OF GOVERNMENT SUBSIDIES
 - CHEAP MONEY FUELS RAILROADS EXPANSION

- KEY FACTORS
- SUBSIDISED SHIPBUILDING
 - STAGNANT R&D
 - PROTECTIONISM
- KEY QUESTIONS
- HAS SHIPPING CRASHED TO BE INDEPENDENTLY FINANCIABLE SHOULD IT BE STATE-OWNED?

THE REVOLUTIONARY TIMES

~~Poverty hits 7 billion!~~ 1 million deaths attributed to shipping pollution.

- KEY FACTORS
- Failure of lobbying, unceasing building, enforcement, action
- KEY QUESTIONS
- Less trade, less need for shipping, over supply, nationalisation

Rudderless Shipping

- ADDRESS AT THE DIALOG MEETING
- SPOKESPERSON TO CHAMPION THE VIEWS FROM OUTSIDE THE INDUSTRY

- UNSUSTAINABLE RETURN ENVIRONMENT
- NOT BUILD WORKFORCE
- GLOTFIED TRACKING BUSINESS
- UNMARK REGULATIONS
- NO EFFICIENT FINANCING OF INFRASTRUCTURE

- KEY FACTORS
- LACK OF INTERNATIONAL COOPERATION
 - LOW ENTRY BARRIERS & OVERCAPACITY
 - TOLLERANCE OF SUBSIDIES
 - FRAGMENTED INDUSTRY

- KEY QUESTIONS
- WHY HAVE WE NOT BEEN ABLE TO PULL TOGETHER?

(2030) FINANCIAL TIMES

SD POWERS RALES MARITIME INDUSTRY #1 IN INNOVATION & EFFICIENCY

- REGULATORY TARGETS THAT MATCH ASSET LIFESPAN / INCENTIVES
 - REVAMPING PUBLIC PRIVATE PARTNERSHIP
 - GLOBAL SHIP REGISTRY
 - CONSISTENT / SUSTAINABLE GROWTH
 - SUCCESSFUL ROBOT / HUMAN PARTNERSHIP
- KEY QUESTIONS
- WHAT'S NEXT FOR 2060?



WHERE
are WE?

WHERE
do WE WANT
to GO?

HOW
will WE
GET THERE?

BY THE
SEA

FROM FRAGMENTATION TO GLOBAL COLLABORATION

Throughout the Danish Maritime Forum the participants worked in parallel streams to identify challenges and corresponding actions for six highly relevant themes. In small groups they explored the themes from different vantage points, enhancing the work with the input from maritime experts.

Meeting the Transportation Infrastructure Needs of the Future

Unlocking Growth in Africa

Financing Growth in the Maritime Industry

Workforce of the Future

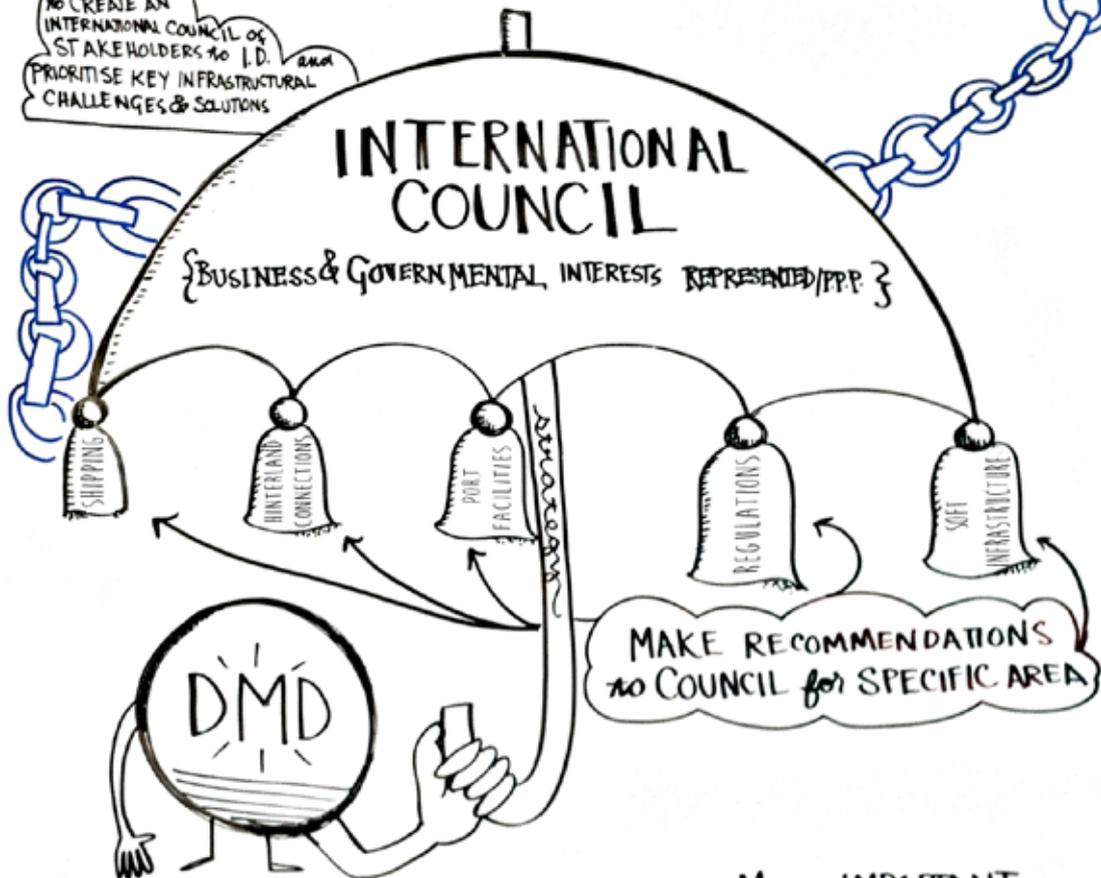
Leveraging New Technologies and Innovation

Sustainable Growth



INCREASING
supply chain
EFFICIENCY

WE WISH
TO CREATE AN
INTERNATIONAL COUNCIL OF
STAKEHOLDERS TO I.D. AND
PRIORITISE KEY INFRASTRUCTURAL
CHALLENGES & SOLUTIONS



the COUNCIL DECIDES on MOST IMPORTANT
ACTIONS NEEDED & PROACTIVELY LOBBIES
to ACHIEVE GOALS

Meeting the infrastructure needs of the future with increased supply chain efficiency, innovation and investment.

Global investment needs in port and connected infrastructure will grow strongly in the coming years to enable sustained economic growth. How can all stakeholders work together to address this challenge?

Challenges

The primary challenge for the future of infrastructure is **how to achieve a uniform and cost-efficient global supply chain** with robust legal frameworks and maintain a good relationship between rail, road, waterways, ports and shipping.

There is a need for **clear regulation**, the ability to challenge political inconsistencies and powerful unions, to protect the environment, and maximize the efficiency of the entire supply chain.

The industry must not rely upon governments alone to solve supply chain problems, but must first use the existing infrastructure at both ports and hinterland in the most efficient way.

There is a need for **predictable and sustainable local/international decisions** regarding both port and hinterland infrastructure, and to react to global infrastructure challenges with a common point of view and a single voice.

Actions

- **Map the issues facing the industry** fully and exhaustively and choose the prioritized first four or five to propose solutions. Examples of those key issues are: overloading of containers, emissions, uniform documentation for import security requirements currently being implemented, actions on board, retention of workforce.
- **Develop an international council** with representatives from all parts of the transportation industry, governmental bodies and NGOs. Here they would receive input on various issues and decide on the most important ones, and lobby globally for these issues to be solved by use of an efficient infrastructure.
- **Research and highlight best practice** on global trade.



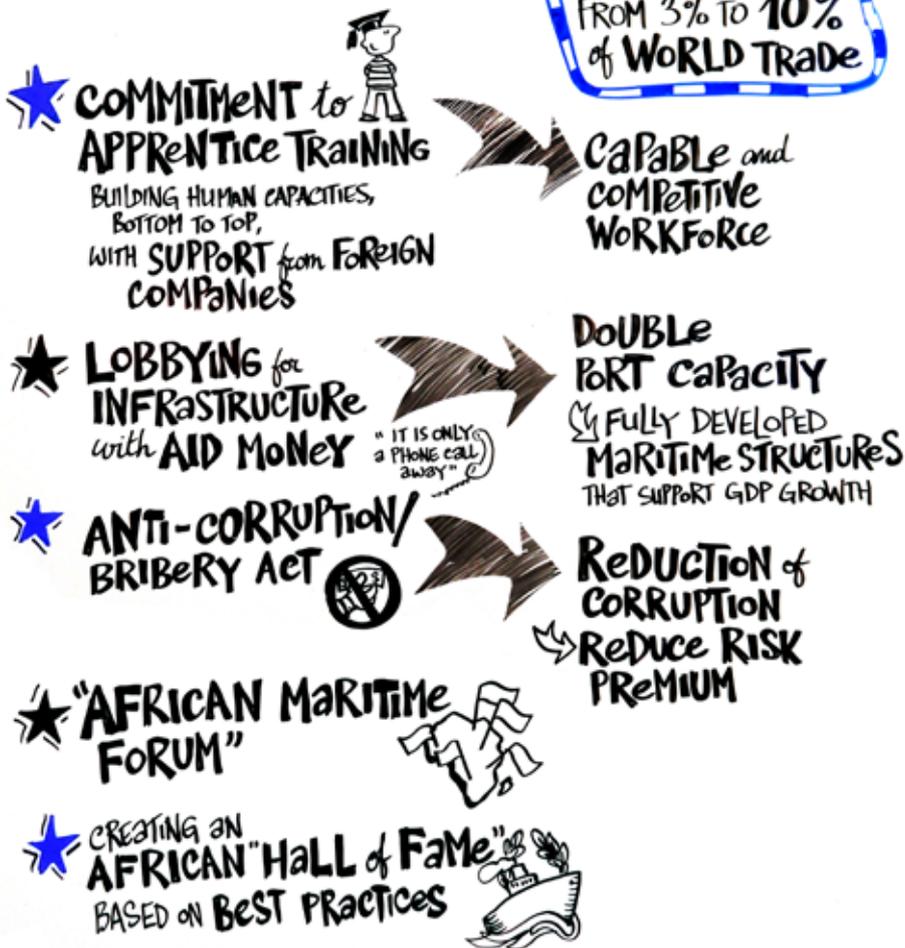
ISSUES:



ACTIONS:

WHAT SUCCESS WOULD LOOK LIKE:

GROWTH
FROM 3% TO 10%
of WORLD TRADE



Africa is the next growth market.

African economies are expected to see significant growth and transformation in the coming decades. Transport volumes are estimated to increase up to eightfold by 2040. What challenges and opportunities does this present for emerging African economies? How can the maritime industry support growth that broadens prosperity and is sustainable in the long term?

Challenges

The main issue is the **lack of strong leadership** at all levels, the spread of corruption, and the relative deterioration of the continent's image. An African Champion, who is able to inspire all African countries, could have a major impact on the maritime industry.

Africa's growth is hampered by insufficient and outdated existing infrastructure, both soft and hard. Efficient **hard infrastructure** (ports, roads, storage facilities) is a major enabler for growth; without infrastructure, trade will not grow, and "there is no better developing aid than free trade."

The issues of **soft infrastructure** were mostly around the lack of maritime education. There is a chance to move to apprenticeships, instead of focusing on formal education. Learning from each other about best practices would help educate the industry as a whole. **Corruption stands in the way** of healthy infrastructure, and is even more difficult to tackle because it involves both a "giver" and a "taker." We must learn from the best practices in other regions.

Actions

- **Commit to apprentice training.** Build human capacities from the bottom to the top with support from the shipping and maritime companies.
- **Lobby for official aid money** to be used for maritime infrastructure in Africa, and as a way to influence how money is invested and put to use in Africa. National shipping organisations and large shipping companies could do this at the national level, while organisations, such as the International Chamber of Shipping, could work at the international level.
- **Adopt an anti-corruption/bribery act** – something inspired by the UK Bribery Act.
- **Convene an African Maritime Forum** to bring together key actors.
- Create an **African Hall of Fame** based on best practices. Start with a champion country with a stable business environment and little corruption.
- **Sign a Danish Maritime Forum statement of our commitment** to unlocking growth in Africa.

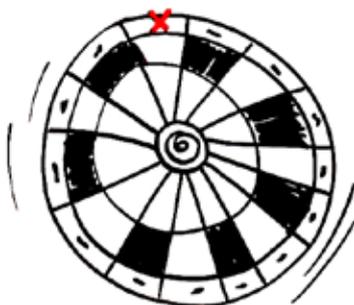


👁️ FOCUS

- ⊙ EDUCATION (KNOWLEDGE in SHIPPING)
- ⊙ LONG TERM SOURCING
- ⊙ TRANSPARENCY/SCALE/
RIGHT STRUCTURE/REPUTATION
(RATING AGENCIES)
- ⊙ INVESTORS
- ⊙ CODE of CONDUCT

⊙ A BODY REPRESENTS FOR ALL that MEETS STANDARD } **IATA**

- ★ ⊙ MOVING TOWARDS TO AN INVESTMENT GRADE INDUSTRY



♥ INTENTION

- ★ ⊙ LOWER CAPITAL COST
- ⊙ INTERNATIONAL BEST PRACTICES

👇 ACTION

- ⊙ PROVIDER
- ⊙ USER
- ⊙ ALIGNMENT of INTEREST

ESTABLISHING WORKING GROUPS

- LEADING OWNERS
- USER OF EQUIPMENTS
- INTERNATIONAL FINANCIAL COMMUNITIES
- PORT OPERATORS

SELF-FINANCED
NO GOVERNMENT INVOLVED

Compelling incentives and cooperation are necessary to reduce volatility of the maritime industry.

The financial crisis has led to a substantial restructuring of the ship finance system. Can the market provide enough capital to finance future investments? What are the long term consequences of the current developments in ship finance?

Challenges

Access to finance is a key prerequisite for the development of the shipping industry.

While global ship financing has been **severely impacted** by the recent economic turmoil, which has reduced the availability of traditional means of finance and raised the cost of capital, the shipping industry hardly ever suffers from insufficient access to finance. The problem is often an excess of the wrong kind of financing.

New actors have increased their role in ship financing, such as private equity funds and sovereign wealth funds, providing equity which requires unrealistic rates of return.

In an industry which over the long term produces a net return on capital of approx. 5-10%, attempts to boost returns on equity to 15-25% through excessive leverage merely exacerbates the industry's inherent volatility and instability.

Actions

- **Introduce a set of international best practices** among shipping finance providers and users, with a view to raising the credit quality of the top tier of the industry.
- Establish an **international standards-setting body** (like IATA in the airline industry) to include leading companies from each of the maritime sectors and representatives from the financial community. A first step would be to establish a working group to draw up a remit for this proposed body and a plan for its establishment.
- **Align interests** by studying the factors that lead to cyclical volatility.
- **Increase access to long-term institutional capital** (pension funds, insurance companies, endowments) with return criteria which more closely match the industry's long-run rates of return. For this to happen, the industry must present financing propositions which resemble infrastructure rather than speculative short-term investments.
- Consolidate the industry to **create larger and more transparent shipping entities** capable of attracting long-term debt and equity.
- **Educate all stakeholders**, including shipowners, investors, banks, rating agencies, charterers, cargo owners and regulators in order to convince them that not all shipping deals are speculative and move towards an investment grade industry.



**SHIPPING
MOVES
the WORLD**



Shipping moves the world with competent and experienced people.

Ensuring a steady supply of competent and well trained seafarers is vital for the industry. How should industry and policy makers respond to the increasing international lack of educated seafarers and how can seafarers be equipped to enter the workforce of the future?

Challenges

There is a need to raise public **awareness of the importance and value of the shipping industry**. By association, awareness of politicians, government bodies, trade associations, academic institutions, charity & welfare organizations should increase.

In order to secure the future of the maritime workforce, a **ready supply of experience and competent sea and shore staff** needs to be developed.

The public at large, including young generations, should be made aware of the career opportunities available in the maritime industry.

Actions

- **Raise the profile and image of the industry** with an engaging idea like ‘Shipping Moves the World’.
- **Identify and encourage “shipping ambassadors”** from inside and outside the industry.
- **Coordinate messaging** with international maritime organizations, (e.g. Young Ships International).
- **Develop approaches of attraction, engagement and retention** suitable to regions, countries and states internationally with a common message.
- **Break the molds of traditional training** and career path models to accelerate the time to experience/competence.
- **Offer incentives** for, and positively recognize, trade organizations and companies who create opportunities for cadets.
- **Assess what you are doing** to advance the profile and opportunities of the industry and its workforce. Is it good for the industry or only good for you?
- **Raise awareness of the activities of the industry** (e.g. Blue Denmark).



"BEHAVIOUR"

INCENTIVISING & REMOVING BARRIERS - BECOMING MORE INNOVATIVE

COOPERATION ^{SUPER} IN FRAGMENTED INDUSTRY

- INCREASE THE PIE, REDUCE WASTE
 - INTERFACE BETWEEN COMPANIES
 - INDUSTRY - AUTHORITY INTERACTION
- } COMMON VISION BUT



DANISH MARITIME FORUM

WHAT?

DOUBLE CAPACITY

- MINIMIZE ENVIRONMENT IMPACT
- INDUSTRY & REGULATORY BODIES REWARD THE NEW, NOT PUNISH
- ↳ CONSENSUS BUILDING
- INCENTIVES FOR CHANGE



REWARD INNOVATION

- EFFICIENT PROFITABLE
- INDUSTRY SHOWCASE
- GOOD STANDARDS & BEST PRACTICE



the BIG PICTURE

CAN AFFORD TO BE MORE ENVIRONMENTAL WHILE GROWING

BECAUSE INDUSTRY ADDS SO MUCH MORE VALUE THAN COST LEVEL



To realize its full potential, the maritime industry must overcome its fragmented and conservative nature, develop a common vision, and enable increased innovation.

Innovation and new technologies are key elements in improving efficiency and increasing human prosperity. However, all too often implementation of new technologies is slow and limited. How do we take advantage of technological developments to unleash the full potential of maritime innovation?

Challenges

As the global economy continues to grow, the maritime industry is faced with the daunting task of rapidly **increasing capacity** while simultaneously **reducing its environmental impact**.

To do this it must **overcome its fragmentation and sub-optimization** by increasing the transparency of efficiency and environmental impact.

A **consensus** needs to be built around a **vision for the future** and incentivize innovation.

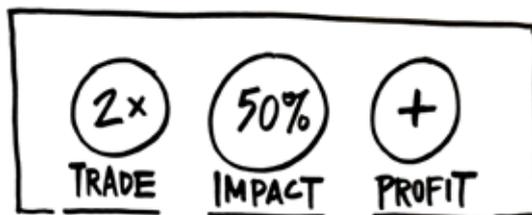
Barriers to change must be removed so that first-movers are rewarded rather than penalised for their innovations.

And through all of this the industry must **remain profitable**.

The **Danish Maritime Forum** can help identify this common vision and a road-map by creating a venue for senior players to share information and focus on common, critical challenges.

Actions

- **Create a vision** for a future where the potential of technology is used to continuously progress environmental performance of shipping in a way that rewards early adopters of new solutions.
- **Work with industry organizations** to direct their focus to the bigger picture.
- Create a group of shipowners, class societies, technology manufacturers, authorities and possibly cargo owners and others to **showcase** how new regulation and technology development can go hand in hand with environmental performance and good business.
- **Showcase how data infrastructure and analytics** can be used to eliminate waste in the value chain (cargo owner, shipowner, operator), support effective regulations and how it can be used to name and shame.
- Demonstrate how **new technical regulation** shall be developed with significant early-stage involvement of authorities and the industry in order to incentivize first-movers of technology development, and deployment while maintaining a level playing field through effective enforcement.
- **Learn best practices** from other industries.



- SMARTLY REGULATED -



- DEVELOP PAPER ON TECHNOLOGY ACCELERATION (INCLUDING PROPULSION)
- INFORMATION AVAILABILITY
- FUNDING and FINANCING
 - THIRD PARTY
 - TAPERING INCENTIVES
 - FIRST LOSS



Reduce environmental impact by half, double trade, and increase profit.

Increasing environmental concerns as well as rising fuel prices has put pressure on an already strained industry. How can sustainable growth be an economically viable response to environmental degradation, climate change, biodiversity loss and threats to human health?

Challenges

Environmental stability of the shipping industry will only be ensured with **smart, global regulation, technological innovation**, and transforming the industry's culture to embrace transparent and sustainable practices to make the industry both green and profitable.

Looking at both short-term and long-term goals and **learning from past successes and failures** will ensure better, smarter, and more sustainable regulation for the future. Up-to-date equipment will enable sustainability to help move the industry from a reactive to a proactive model. Working together, with a common voice, will more quickly usher in a more sustainable era for shipping.

Actions

- **Improve global regulation** to get better smarter regulation.
- **Submit a paper to IMO** on smart regulation and guiding principles.
- Define bold but realistic long-term goals.
- Ensure effective, uniform **enforcement of global rules**.
- Protect and encourage **early adoption of technology**.
- **Develop industrial consensus on compliance** through transparency, greater customer responsibility and engagement.
- Assemble a group to think strategically and long-term, learning from past failures and successes to **define bold but realistic long-term goals** for the future.
- **Develop and adopt a new range of technology** and align global regulations around it.
- **Promote different port fees** to attract the greenest ships.
- **Ensure transparency** using voluntary standards for the sharing of data.
- Develop a **paper on technology acceleration**.
- **Develop smart contracts** to allow for fair burden sharing to incentivize greater retrofitting investments.



BROADENING OUR HORIZONS

The purpose of these sessions was to inform and inspire further discussions on the key challenges facing the maritime industry. They provided the participants with insights and learning that helped broaden the scope of their discussions.

Through the sessions participants considered risks and opportunities that may otherwise not have been on their radar.

Maritime Industry from a Chinese Perspective

Li Hongyin, Deputy Director General, Division of International Shipping, Bureau of Water Transport, Ministry of Transport, People's Republic of China

Arctic Shipping

Ayhan Dilek, State Secretary, Ministry of Trade, Industry and Fisheries, Norway and Olof Lindén, Director of Research and Professor, World Maritime University, Sweden

The Global Economy

Torsten Sløk, Director, Global Economics, Deutsche Bank, USA

Economic Outlook for Asia

Simon Baptist, Chief Economist and Asia Regional Director, Economist Intelligence Unit, United Kingdom

Accountability in International Transport

Martin Lidegaard, Minister of Foreign Affairs, Denmark and Peder Michael Pruzan-Jørgensen, Vice President, Europe, Middle East and Africa, BSR, Denmark

Global Energy Outlook

Michael A. Levi, Senior Fellow for Energy and the Environment, Council on Foreign Relations, USA

Accelerating Deployment of Clean Technologies

Peter Boyd, Chief Operating Officer, Carbon War Room, USA

Quality in Shipping

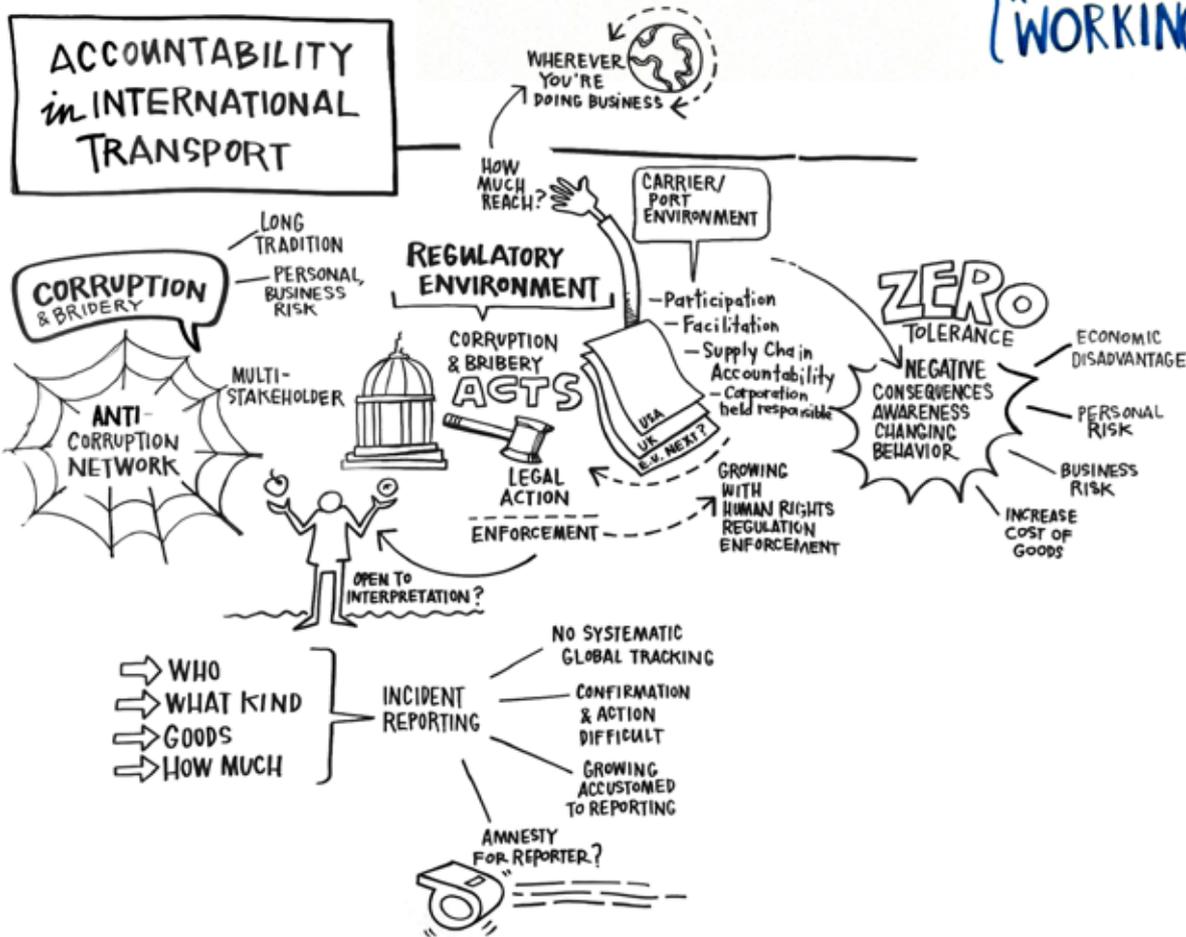
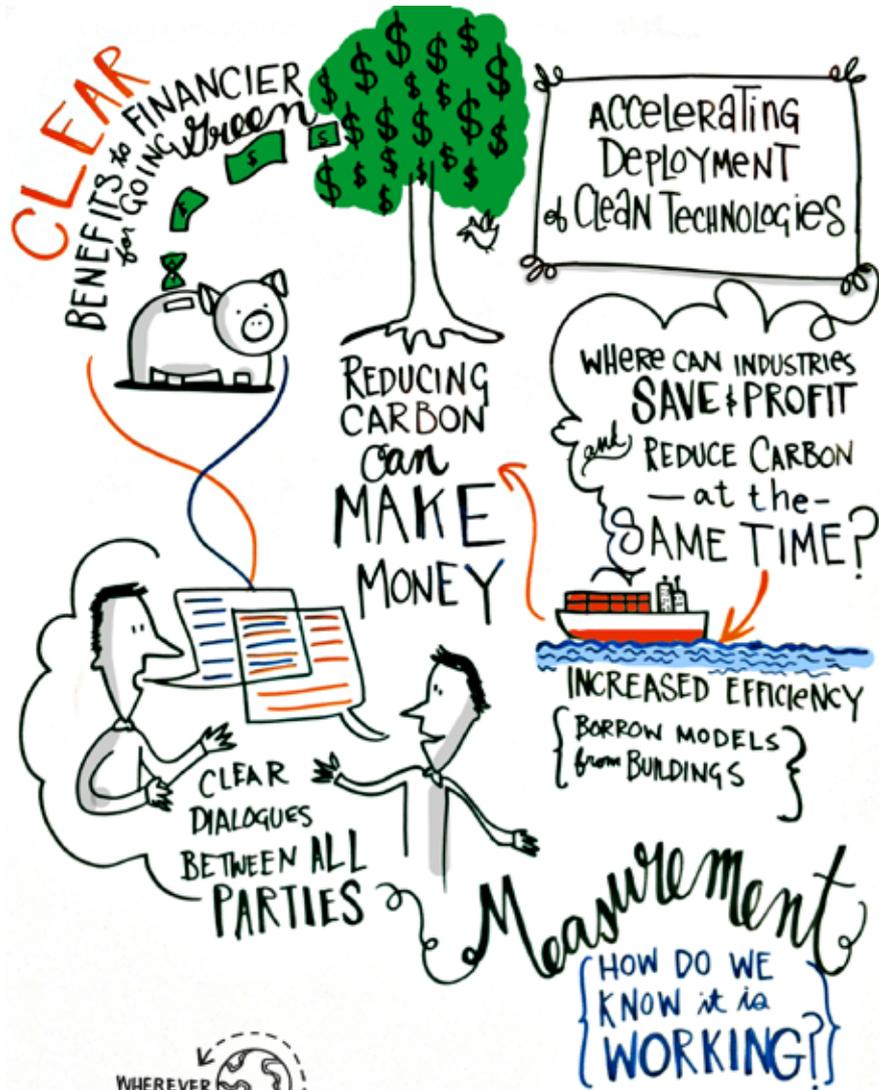
Peter Appel, Managing Partner, Gorissen Federspiel, Denmark

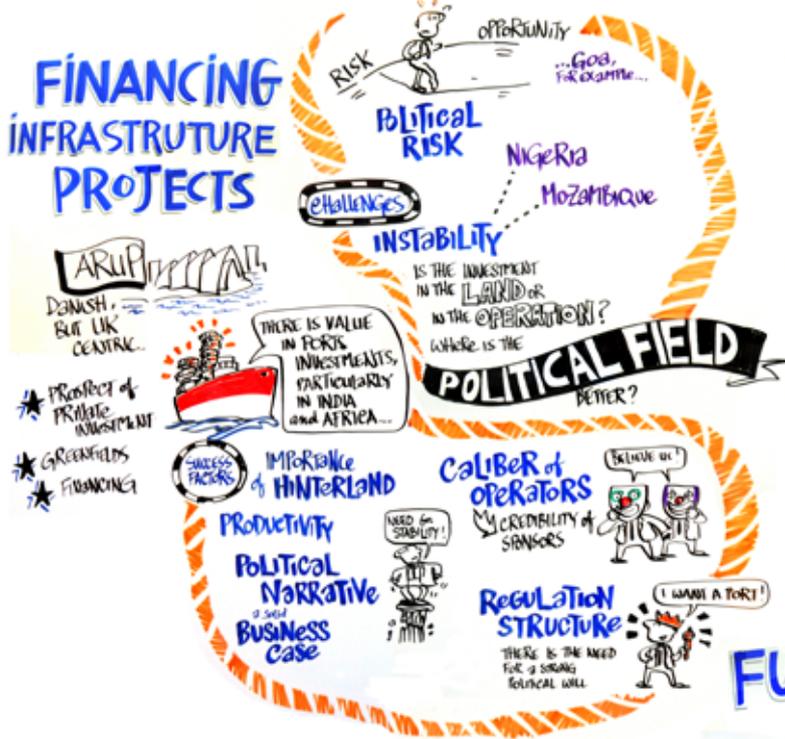
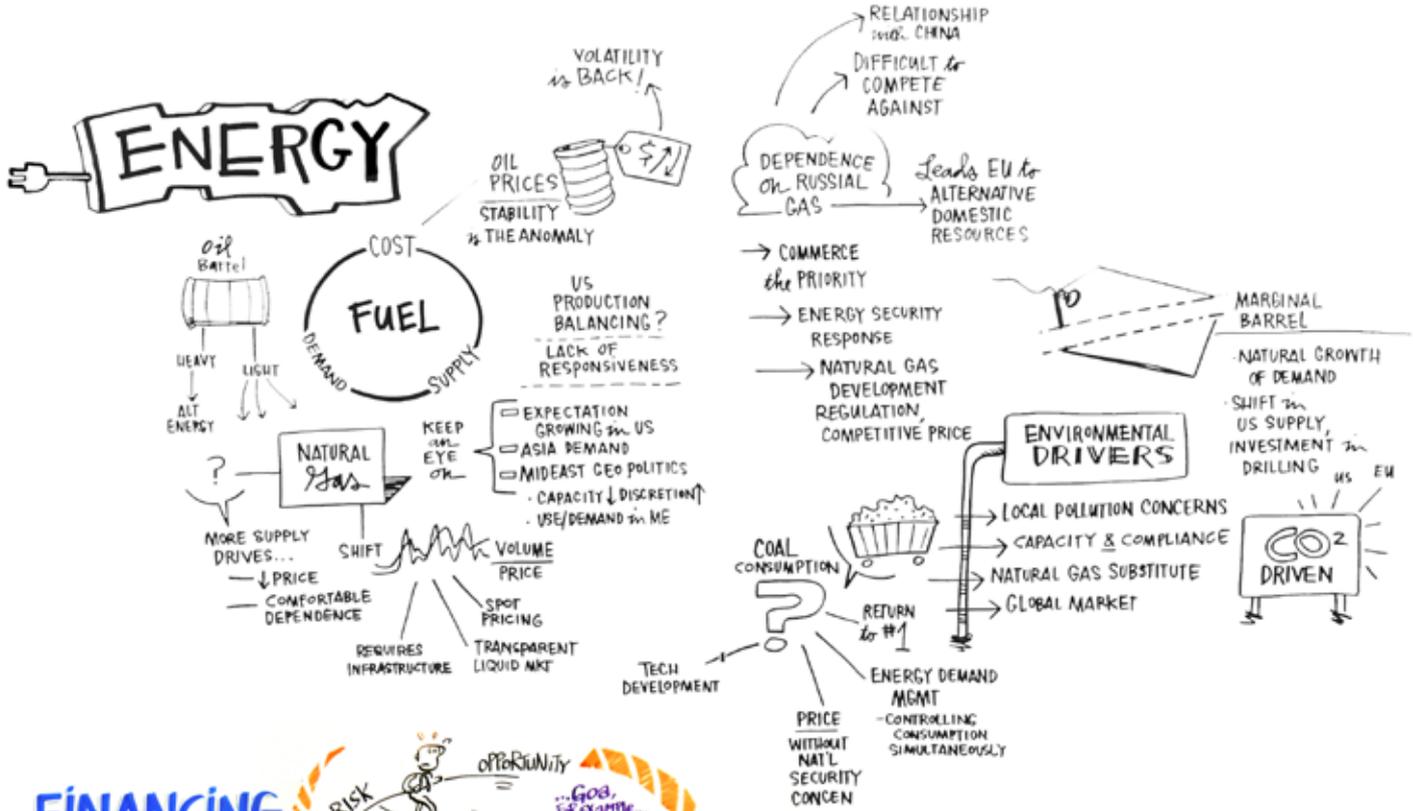
Future of Global Trade

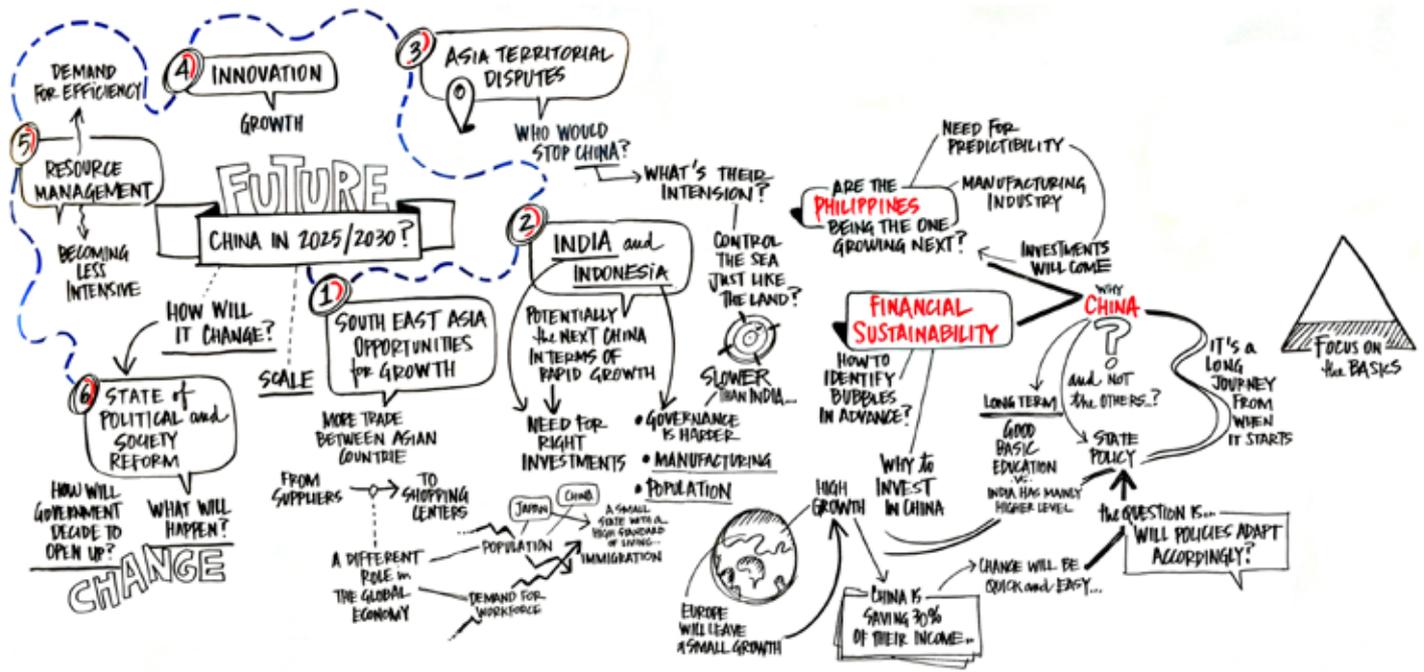
Beatriz Leycegui Gardoqui, Partner, SAI Law & Economics, Mexico

Financing Infrastructure Projects

Alexander Jan, Director, Transaction Advice, Arup









PROJECTS



FIRESIDE CHATS

These sessions were inspired by a series of radio addresses given by U.S. President Franklin D. Roosevelt in the 30s and 40s where he shared his hopes and plans for the country.

The purpose of the Fireside Chats at the Danish Maritime Forum was to provide the participants with an informal setting to share their visions for the future of the maritime industry and their own role in shaping this future.

When Business Runs in the Family

Andreas Sohmen-Pao, Group Chief Executive Officer, BW Group, Singapore

What Keeps You Up at Night?

Jose Maria Figueres, President, Carbon War Room, USA

Does the Maritime Industry Owe Anything to the World?

Martin Stopford, President, Clarksons Research Services, United Kingdom

Is Europe a Tired Old Man?

Elisabeth Waelbroek-Rocha, Chief International Economist, IHS, France

Human Factor or High Degrees: Which Brings the Most Value?

Jan N. Lauridsen, Partner, Heidrick & Struggles, Singapore

When Things Don't Go as Planned

Albert C. Stein, Managing Director, Alix Partners, United Kingdom









SNAPSHOTS OF DANISH MARITIME DAYS

Throughout the week of 6-10 October 2014 the Danish Maritime Days platform hosted more than 50 events covering many different issues including green shipping, human resources, security and piracy, international trade and development, new technologies, Arctic shipping, education, offshore shipping, global regulation and infrastructure.

The events were all organised independently on the basis of an open invitation and with the objective to find new solutions to the most important challenges facing the industry. Here are just a few snapshots from the week.

No Silver Bullet in Reducing the Environmental Impact of Shipping

It will take the joint efforts of all stakeholders to reach the ambitious goals outlined during the Danish Maritime Forum, and there is no silver bullet to reducing the environmental impact of shipping. That was a key conclusion from a conference on Cleaner and More Energy Efficient Shipping convened by the Danish Ecological Council together with the Danish Shipowners' Association, the Danish Society for Naval Architecture and Marine Engineering, Danish Maritime, Danish Ports, the Danish Environmental Protection Agency, the Danish Energy Agency, the Danish Maritime Authority, the Maritime Climate Forum, IDA Green Technology, the Transport Innovation Network, University of Aalborg and Green Ships of the Future. The objective of the conference was to discuss how the shipping industry can meet the environmental and regulatory challenges in the most cost-effective way and create benefits for the environment, climate and the industry. Discussions at the conference focused both on ways to reduce SO_x and NO_x emissions and on energy efficient technologies and fuels.

Key messages from the conference include:

- Global regulation is critical to ensure that all ships meet the necessary standards to reduce emissions.
- Reliability, open dialogue and transparency are required if reporting of CO₂ emissions is to work as a tool to increase energy efficiency.
- Alternative fuels offer possible solutions in the short and long term. Biofuels require much research and development before they become a viable alternative, whereas alternative fuels that can be used in combustions engines - such as LNG, Methanol, Ethanol and Propane - offer a short term solution.

- Both SO_x, NO_x and particles can be removed efficiently from shipping by using the same basic technologies as used on land-based sources of pollution. However, cleaning technologies must be adapted and further developed for offshore application.



Regulatory Uncertainty Poses Risk to Implementation of Sustainable Solutions

At a seminar hosted by Lloyd's Register, participants shared their experiences and ideas on the future of shipping. The seminar offered a mix of presentations, panel debates and networking. Discussions primarily focused on the commercial viability of different environmental solutions, including fuel options, engine types and other new technologies.

Key messages from the seminar were:

- No “one fuel or technology fits all”. Different operation patterns call for very different solutions to reduce environmental impact.
- More ship owners are beginning to act and there has been a notable shift in the past

three years from “what could be done” to “what has been done”. However, the pace of change remains slow, primarily due to regulatory uncertainty.

- There is concern about enforcement as of 2015, especially amongst those shipowners who are in compliance and thus have made significant investments in new technologies.
- Cooperation across the maritime industry - sharing ideas and experience between stakeholders - is necessary to meet the challenges of the future.



New International Maritime Fair

Danish Maritime Fair, organised by Maritime Denmark, showcased the entire maritime cluster with focus on the Danish Cluster.

There were presentations at the Speakers' Corner and the opportunity to meet representatives from maritime schools, suppliers, authorities, shipowners, classification societies, insurance companies and NGOs. At the Blue Innovation Camp, 200 students from the Danish engineering schools performed live innovation on a Fab Lab from Danish Technological Institute. Danish Maritime Fair was also the venue for Danish Maritime's seminar: “First Movers in Safety, Green Solutions and Technologies. Possibilities and Challenges” which was opened by the Danish Minister of the Environment Kirsten Brosbøl and had almost 100 participants. The fair included approximately 180 exhibitors from 20

different countries and had more than 4.000 visitors from 45 different countries.

First Movers in Safety, Green Solutions and Technologies.

At an event organized by Danish Maritime, a number of Danish technology companies called for regulatory certainty in order to turn challenges into business opportunities. This message was supported by Kirsten Brosbøl, Danish Minister of the Environment, who opened the event. Douwe Cunningham, Secretary General of SEA Europe, also highlighted the need for investment incentives.

Participants in the event agreed that:

- Regulation must be fixed and ratified early.
- First movers must be rewarded by grandfathering of first generation technologies.
- Regulatory barriers are harder to overcome than commercial barriers.



The Future of Global Trade

A high-level symposium hosted by A.P. Møller-Maersk, Danish Ship Finance, Danish Maritime, the Danish Shipowners' Association and ICC Denmark, brought together leading experts from around the world with CEOs from across the maritime industry to discuss how to unlock growth through global trade and to explore the link between economic development and transport and infrastructure investment.

Speakers included Nils Smedegaard Andersen of A.P. Møller-Mærsk, Simon Baptist of the Economist Intelligence Unit, Dani Rodrik of Princeton University, Beatriz Leycegui, former Mexican Under Secretary of Foreign Trade, John Danilovich of the International Chamber of Commerce and Erik I. Lassen of Danish Ship Finance.

The discussions at the symposium highlighted the following key findings:

- The socio-political context is a critical driver of continued economic globalization.

Growing income inequality and uneven progress in eradicating poverty have led to doubts in the benefits of globalization, making trade growth contentious and undermining the legitimacy of global institutions.

- Maintaining open global markets while retaining adequate policy space for countries to pursue their democratic and developmental goals is a central challenge.
- Dispersion of production is a new paradigm driving structural shifts in global production and trade patterns.
- Regional trade agreements have benefited those involved, but they also pose a risk. Inconsistent and conflicting rule structures globally lead to complexity and bureaucracy.
- While the WTO's trade facilitation agreement may be difficult to achieve, it could deliver a USD 1 trillion boost to global GDP and generate 21 million jobs.

Addressing the Adverse Effect of Maritime Crime on Growth and Development

Experts from the maritime sector, governments, international organizations, NGOs and academia participated in a seminar on maritime crime and its effects on growth and development in Africa. Speakers included representatives from the International Chamber of Shipping, the African Union, Chatham House, the Kenyan Maritime Authority, the European Union, the IMO, Oil Companies International Marine Forum and the Royal Danish Navy. The focus of the discussions was on concrete ideas for how to improve efforts against maritime crime.

The discussions resulted in the following conclusions:

- While piracy in the Gulf of Aden has been significantly reduced, international efforts must be upheld until the root causes of piracy have been addressed.
- Lessons learned from addressing maritime crime and piracy by coastal states, the international community and the maritime industry are being shared among stakeholders and applied in new areas (e.g. West Africa) according to local needs.
- Maritime nations should use diplomatic tools to influence and underpin positive developments and ensure that international and regional priorities are aligned.
- In the short term, industry and governments should collaborate on public-private partnerships such as MTISC to make practical progress.
- In the long term, all stakeholders should collaborate to promote the blue economy in Africa.

Tackling the Threat of Corruption

At a working session hosted by the Danish Shipowners' Association, shipowners, government authorities and experts highlighted the fact that corruption is a considerable threat to the shipping industry. More than most industries, shipping's global reach means that it is highly exposed to different forms of corruption around the world, often in the guise

of facilitation payments and the like. Participants in the session discussed various options for how to fight corruption, highlighting key differences between container and tramp operations, where the first can address corruption through advance arrangements with ports, where as the latter is dependent on its staff to tackle situations on the ground.

The main conclusions were:

- Rule of law is the single most effective way to avoid corruption, including enforcement through penalties.
- Business cannot solve the problem alone, but needs to work with government and other stakeholders.
- Training and support of staff and local contacts is an important tool in fighting corruption.



Seafarers Critical to Quality in Shipping

That was the central message of a conference hosted by 3F (the biggest Danish labour organization), CO-SEA, the Danish Shipowners' Association and the Danish Maritime Authority. The objective of the conference was to expand the understanding of seafarers' importance to quality in shipping, and thus to the global economy. Presentations covered such diverse topics as seafarers' rights, welfare, working conditions and daily life at sea.

The conference identified challenges very much in line with discussions at the Danish Maritime Forum:

- How do we ensure that changes in the industry don't adversely affect the welfare of

seafarers

- How do we ensure that young people choose a maritime career out of desire? How do we ensure that they will enjoy rewarding careers and achieve their full potential?
- How can mechanism for compliance with the Maritime Labour Convention be improved to address these challenges?

Showcasing Naval and Commercial Solutions in Frederikshavn and Aalborg

At a visit to the maritime cluster in Northern cities of Frederikshavn and Aalborg organized by Naval Team Denmark, the Maritime Center for Operations (MARCOD) and Danish Maritime, maritime suppliers showcased their products and solutions. The visit included presentations at the Naval base in Frederikshavn and at MAN Diesel & Turbo and Alfa Laval's test centers.



Danish Maritime Days

A Major New Event for the Global Maritime Industry

Danish Maritime Days is a major new event for the global maritime industry. This open platform brings together a broad spectrum of independent stakeholders from across the industry with the objective to find new solutions to the most important challenges facing the industry today and in the future.

With many events – including conferences, briefings, exhibitions, symposia, company visits, receptions and dinners - Danish Maritime Days is an opportunity to meet your peers from around world, to make new connections, to be inspired and to pave the way for new partnerships.

Collaboration Across Sectors

Danish Maritime Days is a global platform for collaboration across the industry – ship owners, bankers and other investors, shipyards, suppliers, brokers, lawyers, ship management, insurance, ports and various service providers – as well as

with regulators and other important stakeholders and opinion shapers. It is an opportunity to meet with stakeholders from all sectors of the industry to discuss strategic challenges and innovative solutions in a new thinking context.

Join Our Platform

Danish Maritime Days is an open platform. All stakeholders in the industry from around the world are invited to plan events as part of Danish Maritime Days and thus take advantage of the synergies that arise from participation in a larger platform of independent, international maritime events. For more information on how to join the open platform, please visit www.danishmaritimedays.com.

Danish Maritime Days is an annual event; in 2015, it will take place during the week of 5-9 October in and around Copenhagen and across Denmark.

Danish Maritime Forum

Shaping the Future of the Maritime Industry

The Danish Maritime Forum brings together key leaders in the global maritime industry with policymakers, experts and other influential decision-makers and opinion shapers. The objective with this high-level meeting is to inspire participants to work together with a clear goal in mind: to unleash the full potential of the global maritime industry.

Creating New Ideas and Solutions

The Danish Maritime Forum is known for its unique, creative format. The Forum provides an informal and innovative setting, where participants can work together to generate new ideas and solutions to the most important challenges facing the industry today and in the future. It is an opportunity for industry leaders, regulators, experts and other stakeholders to collaborate and learn from each other. The objective is not just to network, but to take on big challenges and generate tangible outcomes.

Issues on the Agenda

Discussions focus on how to enhance future profitability of the industry while strengthening the role and positive impact of the industry on global growth and development. Themes for the Danish Maritime Forum are developed in close collaboration with the industry and other key stakeholders to ensure the best discussions and outcomes.

The Danish Maritime Forum is a three year voyage from 2014 – 2016. In 2015 it will take place on 7-8 October in Copenhagen. The Danish Maritime Forum is by invitation only.

DANISH MARITIME

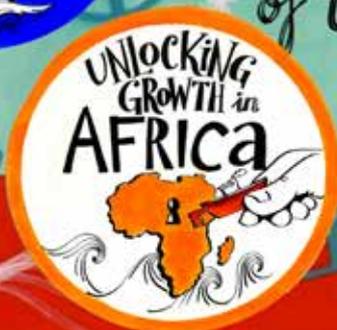
SUBSTANTIAL GROWTH **DOUBLE** THE VOLUME BY 2030



SURROUNDED & CONNECTED to the WORLD by the SEA



UNLEASHING the POTENTIAL of the GLOBAL MARITIME



WHERE are WE? WHERE do we WANT to Go? How will we GET THERE?



MARITIME DAYS

WE BELIEVE in our SHARED RESPONSIBILITY
to SHAPE the FUTURE of our INDUSTRY
with COLLABORATION and CONVERSATION



Acknowledgements

Danish Maritime Days

Danish Maritime Days is a public-private partnership between the Danish Shipowners' Association, Danish Maritime and the Danish Maritime Authority. It is supported by the Danish Maritime Fund, the Ministry of Business and Growth, A. P. Møller Relief Foundation, D/S Orients Foundation/D/S Norden, the Hempel Foundation, the Torm Foundation and the Lauritzen Foundation.

Danish Maritime Days provides an open platform for stakeholders in the global maritime industry, all of whom are invited to plan relevant events as part of Danish Maritime Days.

The Danish Maritime Forum is organised by the Danish Maritime Days Secretariat.

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Danish Maritime Days and the Danish Maritime Forum were prepared in close collaboration with our partners. We wish to thank:

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All images in this report © Danish Maritime Days / Ty Stange, Raffaele Mariotti.





DANISH
MARITIME
FORUM

2014

*CARGO FLOWS LIKE WATER;
IT ALWAYS FINDS THE MOST EFFICIENT WAYS.*

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