

Maritime Strategy Team – recommendations

Recommendation #1

The digitalisation of Blue Denmark should be accelerated, and an up-to-date and future-orientated maritime spatial plan should make it possible to use the waters in the Danish Realm for testing new activities on the sea to ensure Blue Denmark a competitive edge.

- The Danish Maritime Authority should take the initiative to establish a partnership between the authorities, the industry and research and training/educational institutions tasked with strengthening and promoting digitalisation of Blue Denmark and identifying new business models.
- A framework should be created for testing autonomous ships, virtual buoys and other virtual aids to navigation.
- There should continue to be favourable conditions for testing green energy, such as sea current energy, wave energy and floating offshore wind turbines.
- It should become possible to test sustainable industrial production of, for example, food on the sea, etc.
- The promotion and recognition of the possibilities of using the waters of the Realm for tests and new activities should be strengthened.

Recommendation #2

Denmark's position as a shipping nation should be maintained and developed.

- The DIS tax scheme should be extended to comprise all activities of offshore ship crews and to make Danish labour competitive with that of other countries since our neighbouring countries have made such schemes available to these activities and ships.
- Efforts should be made to promote quality shipping on a level playing field. This also means that it should be ensured, through benchmark analyses, that Danish regulation is equal to that of comparable nations.
- The registration fee payable when transferring merchant ships to the Danish flag should be altered so that its form and level correspond to that of comparable shipping nations in order to make it more attractive to transfer ships to the Danish flag.
- An investment strategy should be developed to attract capital for Blue Denmark and other Danish positions of strength, and the need to attract foreign investors in order to strengthen Denmark's position as a globally leading maritime nation should be examined.
- The financing arrangements of SMEs and shipowners should be strengthened, for example within the framework of the Danish Growth Fund.
- One point of contact should be established for shipowners and other enterprises intending to establish in Denmark in order to create a streamlined public service capable of securing clarity, transparency and predictability as well as easier contact to the Danish authorities.
- In order to attract foreign maritime investors, unambiguous, predictable and competitive tax regulations should be secured as well as fast and efficient case consideration so as to offer a safe basis for deciding to establish in Denmark. Furthermore, the possibilities of reducing the taxation of TEN-T support should be scrutinised.
- A cross-ministerial working group should be established tasked with securing efficient and smooth case consideration for seafarers, for example when handling industrial injury cases.

Recommendation #3

The public service should be digitalised in order, inter alia, to make it easier to communicate with public authorities and to reduce the administrative burdens imposed on enterprises. In this connection, a task force should secure coordination with the partnership for digitalisation of Blue Denmark.

- The Danish Register of Shipping should be digitalised as should the required certificates and the information that shipowners must acquire to have their ships fly the Danish flag or must forward to the authorities to comply with current legislation.
- The Danish authorities should work for the establishment of a standardised European "single window" making it possible to comply with the applicable reporting obligations solely in connection with the first arrival at a European port.
- Efforts should be made to continuously ensure digitalisation-ready and technology-neutral regulations, which support the use and spread of maritime data and technology as well as effective contact with the authorities. Furthermore, it should be ensured that the development of new business models and potentials can be based on real-time, web-enabled and cloud-based contents.

Recommendation #4

Efforts should be made to promote the Danish marine equipment industry's production and development of high-tech and energy-efficient solutions for the international market.

- A maritime technician arrangement should be introduced to ensure the reversal of knowledge from technical, maintenance and repair works on ships, by ranking technicians' work on board ships in foreign waters alongside with seafarers' work in terms of taxation.
- Intelligent tenders should be made, where the tender parameters are designed with more emphasis on, for example, quality, safety and the use of new green technology and the securing of work-experience placements.
- The possibilities of using Government and municipal ships as showcases and platforms for demonstration purposes should be unfolded.
- The potential should be examined for basing public maritime tenders on standardised module solutions for ferries, thus making it possible, for example, to reduce the price of, inter alia, procurement, operation and maintenance.
- In order to secure a level playing field for the maritime industries, the development of public export credit and financing schemes in comparable maritime nations should be observed continuously.

Recommendation #5

Denmark should work for quality shipping and for strengthening the maritime industries on open markets with equal competition, investment capital and global regulations.

- Bilateral cooperation with central maritime growth markets should be intensified in order to increase the marketing possibilities of Danish maritime enterprises. Furthermore, liberal trade policy views should be advocated on market access for the maritime industries in EU free trade negotiations with third countries as well as on strengthening cooperation with other leading European maritime nations that share Denmark's interest in open, global markets.
- In cooperation between the authorities and the industry, the promotion of Denmark as a maritime nation should be strengthened – as a flag State as well as a place of establishment for shipowners and Danish manufacturers of maritime products, solutions and technologies – in order to create global awareness of this.
- Information about the potential within export and investment promotion should be strength-

ened, especially for small and medium-sized enterprises, as well as the potential for maritime visibility in connection with delegation visits from, for example, export markets.

- As part of the marketing of Blue Denmark, central maritime events should be attracted to Denmark, including possibly the new global forum, at suitable intervals.
- Regulation should establish the required framework for promoting new technology, innovation and energy-efficient solutions through, inter alia, the IMO so that first movers are also taken into account.
- Efforts should be made to secure better international enforcement of international regulations and conventions as well as effective reactions to violations so that that economic incentive for non-compliance with, for example, IMO environmental regulations is removed.
- The authorities and industry associations should strengthen the spread of and knowledge-sharing on the development of equipment for enforcing international environmental requirements, including the sulphur emission requirements, and should ensure specific tests hereof.

Recommendation #6

A higher degree of cooperation should be ensured in order to have coherent training/education offers in the maritime field.

- The relevant training/educational institutions that offer targeted maritime training programmes should engage in international cooperation with foreign training/educational institutions in order to internationalise to an even higher degree training programmes such as, inter alia, those for engineers, marine engineers, ships officers and masters with additional teaching in English and the provision of training programmes with one semester, courses or entire programmes abroad.
- Enterprises in local maritime clusters – with the town of Frederikshavn as the model – should establish rotation schemes for trainees so that the enterprises have a joint responsibility that the trainees get broad/education training while, at the same time, relieving each other.
- The BlueINNOship project should be continued so as to ensure a continuous research and development platform for Blue Denmark.

Recommendation #7

There should be a critical mass of maritime competences that can be brought into play in both the shore-based and sea-based part of Blue Denmark.

- Especially relevant training/educational programmes targeted at Blue Denmark should be systematically checked so that it is ensured that their contents correspond to the industry's needs now and in the future.
- Efforts should be made to develop more flexible supplementary training offers that can be completed by persons while attending to their work. Training/educational institutions, users and authorities should be jointly responsible for creating more awareness about these possibilities and the relevant parties should be urged to include this issue in coming tripartite negotiations.
- A working relationship should be established between the industry and the training/educational institutions on an increase in the number of persons admitted to especially relevant training/educational programmes, inter alia naval architects and maritime-orientated engineers, and on the possibility of choosing a pronounced blue track at the engineer training/educational programmes.
- The two sides of industry should, together with the Government, examine the possibilities of increasing the number of work-experience placements at sea for students at the maritime training/educational programmes, discuss the economic implications hereof, and propose so-

lutions that take account of the differences between the training/educational programmes.

- The availability of work-experience placements on ships should be increased by making the work-experience periods more flexible so that more of them can be completed at various ship-owners, and the account of work-experience periods at sea should be modernised. The shipping industry should be urged to support the availability of work-experience placements through the establishment of a work-experience placement office tasked with the coordination hereof.
- In cooperation with the authorities and the users, the relevant maritime training/educational institutions should develop a special training/educational programme for the domestic ferry sector with relevant contents and learning goals aimed at the ferry sector as well as flexible requirements for seagoing service.

Recommendation #8

The efforts made to ensure that Blue Denmark and knowledge institutions create benefits from new business-related and technological knowledge should be strengthened.

- The Contact Committee for Maritime Research should annually discuss the central maritime research issues of the maritime research and training/educational institutions. These discussions could, inter alia, be based on the FORSK2025 catalogue, while securing that the necessary flexibility and openness is associated with the research issues.
- A partnership should be established between universities with maritime expertise, maritime training/educational institutions, the authorities and the industry in order to continuously adjust the prioritisation of research initiatives to the areas presenting the largest business potential so that research- and development-based projects are promoted with focus on blue growth; and research-based knowledge should be supplied to the industry within, for example, the following:
 - Ocean economy and the potential for further utilisation of the resources of the sea towards 2025.
 - Ships of the future, where digital solutions, maritime technology, sensors and maritime data are expected to be able to move developments towards autonomous ships.
 - Blue business models of the future, which can, for example, be influenced by digital developments with platforms inspired by the sharing economy.
- Annual academic summits should be held in the common maritime network of researchers from universities with maritime expertise so as to strengthen the network and to continuously combine maritime academic knowledge.
- Positions, so-called endowed chairs, should be established at relevant universities to build up and retain maritime competences which are associated with Ph.D. students and focus on various issues considered relevant from a growth perspective, for example in coordination and dialogue with the Contact Committee for Maritime Research. In this connection, the universities should seek to incorporate the relation to the industry and innovation players, such as the Advanced Technology Group (GTS) and the Innovation Network.

Recommendation #9

Efforts should be made to develop a strong sense of entrepreneurship in Blue Denmark in order to strengthen the potential for development.

- Maritime industry associations, existing entrepreneurship clusters and universities with maritime knowledge should be urged to jointly develop and establish a maritime entrepreneurship forum.
- The sense of entrepreneurship in the maritime industries should be promoted through the

establishment of an entrepreneurship programme that may help maritime entrepreneurs understand the maritime cluster. This may be done by:

- Establishing a set-up inspired by the business angels model, for example in a maritime innovation lab or in cooperation with one of the four existing innovation clusters, where entrepreneurs may get help for developing ideas and can be matched with enterprises that have capital and would like input for innovative solutions and new ideas for developing their business.
- Earmarking means for maritime innovation initiatives in the Innovation Fund.

Recommendation #10

The role of regional maritime clusters as drivers for growth across business areas should be strengthened.

- The business promotion system should be consolidated so that the means are used in the most effective manner and are, to a higher degree, used for business-related development projects in small and medium-sized enterprises and for entrepreneurship.
- The port act should be revised on the basis of the ongoing analysis of the port sector in order to secure future growth, effectivisation, marketisation and consolidation of the ports, for example through modernisation of their mode of organisation.
- The possibilities of financing ports' dredging and maintenance works should be examined, inter alia in connection with extensions.
- The opening up of ship position data (AIS data) and other maritime data should be used to launch joint efforts to offer maritime services to ships navigating Danish waters so that Blue Denmark takes more advantage of the 60-70,000 annual ship passages of Danish waters.
- Initiatives should be sought for that will ensure the transfer of more goods from road to sea and reduce the administrative burdens related to the entrance to/departure from Danish ports.

Recommendation #11

Focus should be on the potential for utilising new business opportunities for Blue Denmark.

- Efforts should be made to secure a more coherent use of the seas for the benefit of the development of new maritime business opportunities, utilising the sea as a resource through a transparent, non-bureaucratic and realistic approach to ocean governance. In this connection, it should be examined how to approach the spatial uses of the sea in the most efficient manner so as to secure areas and resources for new, innovative solutions, just as colocation and dual use should be promoted, while paying attention to safety of navigation and shipping policy interests.
- The frames for unleashing the potentials of the sea should be available, for example any barriers to decommissioning should be abolished, and efforts should be made to ensure goal-based regulation and open markets for equipment manufactured in Denmark when it comes to the management of wastewater, ballast water, LNG (liquefied natural gas) and other fuels containing sulphur.
- Efforts should be made to secure a level playing field for the activities in the North Sea and the Baltic Sea, inter alia by streamlining guidelines on, for example, safety and technical requirements across the North Sea and Baltic countries within, inter alia maritime activities related to the offshore wind sector.
- All authorities having maritime data should ensure that they are standardised, updated and well-documented and that they are available to the public in order to support innovation so that big data can be used to optimise the existing business and to build up new business models and potentials. Furthermore, efforts should be made to ensure the availability of as

many European and global maritime data as possible held by EMSA and the Paris MoU.