

MARITIME & HEALTHCARE OPPORTUNITIES IN DENMARK

MARITIME OVERVIEW

- The Maritime industry is one of Denmark's core industries.
- The Danish Maritime industry holds a strong position on the global market, due to highly technological and specialized products and solutions.
- Blue Denmark is the cluster for all maritime companies and operations. It consists of ship owners, ship brokers, ports and logistics companies together with shipyards, suppliers and designers of ships, maritime equipment, products and services.
 - Approximately 110,000 people are employed by Blue Denmark
 - Blue Denmark companies account for 25% of Danish exports
 - Blue Denmark is influential in developing policies, regulations and new solutions to challenges
 - There are many possibilities for innovation within Blue Denmark (ex: building test areas for autonomous ships)
- Up to 87% of companies within the Danish Maritime industry have parent companies or subsidiaries in other countries.
- More than 1,000 maritime companies are based throughout Denmark.
- The Danish Maritime industry is the 6th largest exporter of maritime technology.
- Danish ship owners transport approximately 10% of global trade
- Denmark has the 4th largest EU-flagged merchant fleet

MARITIME KEY PLAYERS

- Shipyards
 - FAYARD, Skagen, Assens, Hvide Sande, Hirtshals
- Equipment manufacturers
 - ABB, C.C.Jensen, Caverion, Danfoss, Cobham SATCOM
- Technology
 - C-Leanship, DESMI Ocean Guard, Alfa Laval
- Services
 - Ericsson, CLIIN, MAN Prime Serv, ScanTech, Man Diesel & Turbo, Insatech
- Ship designers
 - FORCE Technology, Odense Maritime Technology, OSK ShipTech
- Recycling
 - Uniscrap, H.J. Hansen
- Danish Shipowners Association operates on behalf of 90 shipping and offshore companies, including key players such as Maersk Line, TORM, NORDEN, Maersk Tankers, DFDS, J. Lauritzen, Hafnia Tankers, Royal Artic, and Stena
- Danish Ferry Association represents Molslingen A/S, Scandlines Danmark A/S, HH Ferries Group, Danske Faerger A/S, Faergeselskabet Laesoe K/S, Smaaoernes Faergeselskaber

MARITIME CURRENT TRENDS

- The market for new builds is improving and many ships are about to install new equipment in order to meet new rules related to environment and climate.
- The offshore wind industry has called for new international standards regarding specialized ships and structures.
- The north-western European shipbuilding industry does not consider construction of offshore service craft, windfarm construction vessels, or windfarm structures as priority products.
- It is predicted that the next 10 years will bring a total transformation of the transport and logistics sector (ex: introducing autonomous ships).
- The Maritime sector will see an increased use of data on ships and containers.
- Trade associations report that the industry will focus on innovation and R&D to remain competitive. Environmental friendly shipping, working environment and security are high on the industry's agenda.
- ShippingLab is a new project working on the “smart ship of the future” involving digital solutions, big data, IoT and equipment with measuring and control interfaces.
- The Danish Government launched a growth plan for the maritime sector in January 2018, known as [Maritime Denmark 2018](#)
 - The overall goal is to ensure that Denmark maintains a leading role worldwide
 - Several initiatives have been launched to help innovation and growth through closer cooperation between the industry and the Government
 - Focus is to increase competitiveness of the Danish Maritime industry by developing and implementing new technology and digitization
 - Cyber security is high on the agenda

HEALTHCARE OVERVIEW

- Healthcare in Denmark is funded by taxes and decentralized with responsibility placed in the 5 regions.
- The demand for healthcare will continue to grow, primarily due to an aging population demanding better care, lower birthrates and a reduced workforce.
- The public sector has a wish to increase efficiency and reduce costs based on technological innovation.
- In 2017/2018, the Government launched a new growth plan for Life Science. As a result, the industry is implementing a number of new initiatives to revitalize the industry, focusing on digitalization, big data, efficiency and innovation.
- There are nearly 900 medical device companies in Denmark.
- Many assistive technologies are used daily by those who help the elderly or disabled persons. Disabled and elderly people have special access to medical aids provided by the local municipality who also have an obligation to provide advice on options and costs according to the Social Service regulations.
 - These aids are supplied by more than 300 assistive technology companies in Denmark, of which 61% are involved in manufacturing and 27% are involved in trade only.
 - Products are divided into 5 main groups: treatment and training; residences, housekeeping; communication; mobility; and personal care.
- 40% of the companies cover more than one clinical area in their product range.

HEALTHCARE KEY PLAYERS

- Diagnostics (In Vitro)
 - Radiometer, Unisensor, Roche Diagnostics, Chemometec, Dako, Abbott
- Diagnostic (Radiology)
 - Philips Healthcare, Agfa Healthcare, BK Medical, Karl Storz
- Gastroenterology
 - Coloplast, Convatec, SCA Hygience, BARD Norden, Paul Hartmann
- Orthopedics
 - BSN Medical, Convatec, Biomet, Johnson & Johnson, Boston Scientific
- Cardiology
 - Medtronic, Ambu, Acarix, Linvatec
- Surgery
 - BK Medical, Baxter, Covidien, Cook Medical, Ferrosan Medical Devices
- Drug Delivery
 - Medicom, Bang & Olufsen, Leo Pharma, Convatec, Ferrosan, Novo Nordisk
- Vascular Surgery
 - Medtronic, Cook Medical, St. Jude Medical, Vygon, BARD Norden
- Wounds
 - B Braun, Molnlycke, Coloplast, Reapplix, KCI Medical, Convatec
- Miscellaneous
 - AdeptWater Technology, Knudsen Plast, Novozymes, Sterigenics

HEALTHCARE CURRENT TRENDS

- By 2025, regions are investing more than \$9.5 billion in 43 hospital projects, 6 of which are brand new hospitals.
- The Assistive Care industry works closely with the Danish Technology Institute (DTI). DTI has launched a [national network for welfare technology](#) using new technologies such as virtual reality, digital learning and augmented reality.
- Within the assistive technology and welfare industry, there is demand for digital solutions for rehabilitation needs.

CHANNELS TO MARKET

- The public healthcare system is organized in 2 main sectors:
 - Primary healthcare – administered by the 98 municipalities
 - Hospital sector – administered by the 5 regions in Denmark
- In January 2016, Denmark obtained a new Public Procurement Act in line with EU legislation.
 - A public tender is required for purchases of services and goods over \$225,000.
 - For orders under this threshold, there is no formal requirement for public tender processes, however the procurer has to ensure that the procurement process is carried out on market conditions, e.g. offers from three potential suppliers.
- SKI is the purchasing service organization in charge of the public sector's procurement needs.
 - SKI has framework agreements with suppliers on specific goods or services.
- Other providers include distributors and caregivers.
- Danish trade associations recommend access through distributors who are already familiar with the Danish system.

REGULATIONS

- The Swedish Medical Products Agency, a body under the Ministry of Health, is the national authority responsible for regulation and surveillance of the development, manufacturing and sale of drugs and medical devices.
- Sweden has brought its legislation in line with the safety requirements in force within the EU concerning testing, certification and labelling of medical devices.
- Each medical device placed on the market must comply with the requirements in the Swedish Medical Devices Act.
- In 2017, two new regulations on medical devices were adopted.
 - The two regulations are Medical Device Regulation and In Vitro Diagnostic Device Regulation
 - The new rules will apply after a transitional period.
 - The regulations contain a series of improvements to modernize the current system.