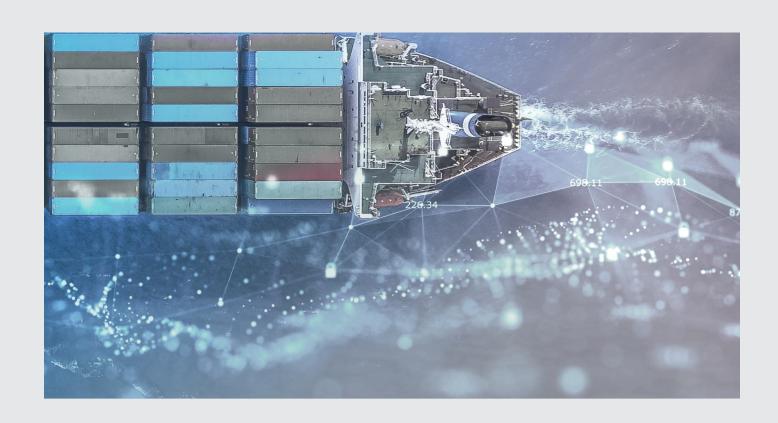
MINISTRY OF FOREIGN AFFAIRS OF DENMARK

Invest in Denmark

2022

MARITIME AND TECH

www.investindk.com







Gateway to the Nordics

Four international airports serve tourism, business and cargo. Copenhagen Airport has direct international routes to more than 184 destinations as per January 2020, making it by far the largest airport and logistics hub in the Nordics.

THE MOST DIGITAL **COUNTRY IN THE EU**

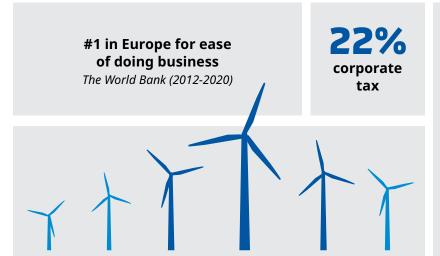
Digital Economy and Society Index (2021)

USD 60,556

Per capita GDP OECD (2020)

The most flexible labour market in the world

IMD (2021)



Denmark aims at 70% CO2 reduction and 100% green electricity by 2027



#5 in the world on work-life balance OECD Better Life Index (2021)



Language

9 out of 10 people speak English and 5 out of 10 speak German.

Strong infrastructure

Denmark has a strong infrastructure, including four international airports, sea ports, bridges and an integrated railway system. Together, they enable easy distribution of goods and services to the Nordic markets.

DENMARK'S MARITIME HISTORY

Denmark has a rich maritime history, which dates back to the Vikings who traded in large parts of the world. When writing Danish maritime history, it is difficult to ignore King Frederik the Second. On 8 June 1560, he decides to erect the first Danish lights in the Skaw, on the island of Anholt and on Kullen in present-day Sweden and thereby started the tradition of paying attention to maritime safety, which still today is a topic of priority in Denmark. From mid-18th century to mid 19th century, large Danish sailing ships are central in the early trade with China. Danish ships are also actively involved in trading in India and other parts of the world. In 1912 the World's first oceangoing motor vessel M/S Selandia, built in Copenhagen, embarked on its maiden journey from Copenhagen to Bangkok. At all times, there has been a close relationship between the Danish shipping companies and the Danish shipyards and equipment industry, which developed new technology that allowed Danish ships to gain new market shares.

Although a small nation, Denmark is a global leader in shipping. Denmark is the world's 6th largest in terms of operating tonnage and the 13th largest in terms of owned tonnage. This strong and competitive position means that Denmark figures prominently on the maritime world map, which helps pave the way for an increased demand for Danish maritime products and services.

Today, large commercial ships are mostly built in Asia, but smaller highly specialized vessels are designed and built in Denmark. Several of the shipyards turned into maritime equipment manufacturers and today most commercial ships in the world have equipment designed or built in Denmark onboard. Danish companies deliver some of the world's most safe, energy-efficient, climate-friendly, long-lasting and well-designed maritime equipment including large marine engines, advanced ship design, marine paint, life-rafts, exhaust and ballast-water cleaning systems, sensors and numerous other parts.

TEST-BED FOR NEW TECHNOLOGIES

Denmark has a stable, open environment for investments and for testing new technology, which provides fertile grounds for start-ups and tech hubs to innovate the future of shipping. Digitalization is the future of shipping. To pursue this, companies need to employ a highly educated workforce capable of applying the newest technology. Thanks to the large quantity of advanced maritime companies in Denmark, such workforce is available. The Danish maritime sector is known for its collaborative environment across companies and sub-sectors. Denmark is therefore the perfect place to be for testing of new maritime tech, digital systems for the maritime industry and innovative ways of producing advanced maritime equipment and operating ships.

Based on a strong history as seafarers since the Viking ages, Denmark has one of the strongest and most vibrant maritime clusters in the world.

This is also the reason why foreign players choose Denmark, in order to tap in to the knowhow and expertise that exist within all areas of the maritime industry.

WHY CHOOSE DENMARK FOR TECH AND MARITIME?

- One of the most digital economies and societies in Europe, Denmark provides excellent opportunities for testing and applying new technologies in maritime e.g. robotics, AI and Blockchain.
- With the Blue Growth Strategy 2018 2025, Denmark is becoming a powerhouse for digitalization with increased focus on cybersecurity and maritime start-ups. Foreign companies have the opportunity to apply for funds from the Innovation Fund, particularly aimed at new green technology within the maritime industry, if they establish themselves in Denmark or make a strategic alliance with Danish companies and researchers.
- The Growth Strategy for Denmark's digital growth dedicates funding and focus to ensuring continued development in relation to scaling of talent, start-ups and innovation.
- Access to world-class digital infrastructure, an attractive talent pool with tech competencies and a long-standing tradition for solutions with an application focus.
- A growing start-up ecosystem looking for partners to co-develop solutions and apply digital solutions in collaboration with established maritime stakeholders.
- Unique partnering opportunities with leading Danish knowledge and research institutions in the development and deployment of new technologies and digital solutions

STRONG GOVERNMENT COMMITMENT

Historically, the Danish maritime sector has been at the forefront in terms of implementing new technology. To support the continuation of this, the Danish Government has a vision for the Maritime Denmark to be a power hub for digitization, attractive framework conditions, knowledge and expertise.

In its 2018-plan for the maritime industry, the Danish Government decided to invest DKK 237m in research on new technological possibilities as well as DKK 282m in research on green growth creation.

Besides the overall strong political commitment from the Danish government, a number of strong privately-owned maritime foundations supports maritime research and development.

SUSTAINABILITY AND GREEN TRANSITION

TECH IS KEY FOR THE FUTURE

Overall, the Maritime industry lacks behind in ensuring that new technological solutions become integrated. However, Denmark and the Danish maritime tech cluster are working together strategically in the pursuit of turning the disruption of the maritime sector into a competitive advantage. The disruption of the Maritime industry may relate to the following areas:

- E-Platforms
- Advanced Analytics
- Internet of Things
- A1
- Autonomous Vessels
- Blockchain and Cybersecurity
- · Green transition to zero carbon future

The Danish maritime Ecosystem is working towards the same goal.



Equipment & Technology Specialised legal services

Maritime Research

Cooperative DMA and agile regulation

THE DANISH MARITIME ECOSYSTEM

Maritime education

Offshore, ports & handling Shipping
- across
segments

Cluster & Innovation Networks

Digitalization & start Ups Ship design ferry & vessels

DANISH TECH IS CUTTING EDGE AND HAS APPLICATIONS WITHIN MARITIME AND DANISH PLAYERS ARE EAGER TO COLLABORATE

AI, robotics, drones, blockchain and cybersecurity are essential tech fields with an increasingly impact on the maritime industry. The Danish maritime industry is open for cooperation and typically eager to integrate new technologies.

27% of maritime research in Denmark is done in cooperation with industry

DANISH MARITIME RESEARCH IS SHAPED IN COLLABORATION WITH THE INDUSTRY

The Danish Shipping Lab at the Technical University of Denmark is a prime example of how the maritime industry cooperate with government and universities in solving the challenges that could not otherwise be executed by one of the partners on their own. Another example is the Danish Maritime Fund which is a commercial foundation established in 2005. The foundation provides grants and financing to initiatives and activities that will grow and develop the maritime industry in Denmark.

PARTNERSHIPS NETWORK AND A STRONG MARITIME HUB

By placing your maritime business in Denmark, you will also benefit from strong Danish branch organizations like Danish Maritime (https://danskemaritime.dk/en/) and Danish Shipping (https://www.danishshipping.dk/en/) who welcomes new members and offer a strong maritime community. Furthermore MARLOG (https://www.marlog.dk/en/home) Denmark's national cluster organization for the maritime and logistics sectors, will help your businesses in becoming stronger.

LOCATE YOUR BUSINESS IN DENMARK AND BENEFIT FROM:

- A world-leading maritime ecosystem where innovation, digitalization and efficiency are key priorities.
- Business-relevant research and development that combine technical, academic and practical perspectives.
- A highly educated maritime workforce focused on skill development and upgrading.
- Competitive framework conditions with a political commitment to maritime industry growth.
- An attractive tonnage tax regime in the Danish International Ship (DIS) Register.
- Authorities dedicated to making it easy to do business.
- · A hub for world leading shipping and classification companies

NO. 5

Largest Merchant Fleet in the world

NO. 11

Largest Nation on ships registered in Denmark 15% GROWTH

In number of jobs 2011-2019

(9% in Average Across all Industries)

17%
OF TOTAL EXPORT

NO. 6

in the world for research publications

NO. 1

in EU Digital Economy

(DESI Index 2020)

WORLD CLASS

International Players:

Mærsk - Norden - Alfa Laval Wärtsila - Total ABB - MAN Energy Solutions

10% OF GDP

The Maritime sector accounts for 10% of the total Danish GDP

MAN ENERGY SOLUTIONS

First with development of carbon neutral methanol engines STRONG GOVERNMENT SUPPORT

New Maritime Strategy 2018 - 2025 AAA

Credit rating by S&P, Moody's and Fitch

MÆRSK

First with large ocean-going vessels to operate on carbon neutral methanol

MARITIME AND TECH

7%
of the Danish
workforce is within
Maritime & Tech







#1 IN THE WORLD on Climate Change Action

Environmental Performance Index, Yale University, 2020

PRODUCED RENEWABLE **POWER BY 2020:**

45%

WIND

SOLAR

0% **Greenhouse Gas Emissions by** 2050

100% **GREEN ELECTRICITY BY** 2027

#10ECD **RENEWABLE ENERGY TRENDS**

> World Economic Forum 2020

#3 WORLD BEST ENERGY SYSTEM

> World Energy Council 2021





DANISH HOUSEHOLDS **HEATED BY DISTRICT HEATING**

DENMARK AIMS TO BE POWERED ENTIRELY BY RENEWABLE SOURCES BY 2050

#3 IN ACHIEVING THE SDGS

SDG Index 2021

#1: VESTAS #2: CHR. HANSEN **#7: ORSTED** Danish companies receive top rankings on sustainability

Corporate Knights 2022

DANISH GOVERNMENT CLIMATE ACT TARGET:

reduction of CO2 by 2030

HEADQUARTERS

Invest in Denmark Ministry of Foreign Affairs Asiatisk Plads 2, 1448 Copenhagen K + 45 33 92 11 16 idk@um.dk www.investindk.com

ASIA-PACIFIC

Shanghai +86 21 8025 0688 Beijing +86 10 8532 9900 Tokyo +81 3 3496 3001 Bangalore +91 80 4113 6068 Taipei +886 2 2718 2101 Singapore +65 8028 3668

EUROPE

Paris +33 1 4431 2121 Munich +49 89 5458 540 London +44 207 333 0200 Oslo +47 22 54 08 00

NORTH AMERICA

New York +1 212 223 4545 Silicon Valley +1 650 543 3180 Toronto +1 416 962 5661



WE LOOK FORWARD TO WELCOMING YOU TO DENMARK

INVEST IN DENMARK

Asiatisk Plads 2 DK-1448 Copenhagen K Denmark Tel: +45 33 92 00 00

idk@um.dk

This fact sheet has been made in cooperation with independent experts in our service provider network. The information stated here may contain errors or omissions. Invest in Denmark and our partners disclaim any and all liability for any loss or damage caused by such errors or omissions.



www.investindk.com