



# COUNTRY FICHE DENMARK

## SMART SPECIALIZATION

### NATIONAL LEVEL

With more than 7.300 km of coast line, Denmark has historically always been a country, where the life, work and activities tied to the sea has held a strong position on both a regional and national scale. The Blue Industries continue to play a key role in the Danish economy and business community, with more than 3.8% of the Danish population being directly or indirectly employed within the Danish maritime industry and app. 3% being employed within the energy sector. ("Danish Maritime Authority", n.d.) ("Energistyrelsen" n.d.)

Traditionally, the fishing industry has been a key industry to the Western regions of Denmark, but in recent years there has been a change in the Danish fishing industry. As foreign suppliers increasingly unload and pack their products in Denmark, Denmark now serves as a platform for trading of fish and fish products. The export of fish products has grown increasingly and in 2016 it corresponded to 3.7% of Denmark's total export (Danish Seafood Association, 2018).

The Blue Industries are also reflected in the Danish smart specialisation strategy, which covers the following priorities:

- The maritime sector – The Blue Denmark
- Creative industries and design
- Water, bio and environmental solutions
- Health and welfare solutions
- Energy and climate
- Tourism and experience based economies
- The food industry
- ICT and digital growth

The energy and maritime industries are widely known to be key industries in Denmark, contributing significantly to the Danish economy and creating many work spaces across Denmark. Especially shipping and offshore wind energy are two key Blue Industry areas where Denmark holds a significant role on an international scale. Danish maritime companies account for about 25% of Denmark's exports. To secure that the Danish shipping and maritime industry continues to grow and keep pace with the rest of the world, the Danish Ministry of Industry, Business and Financial Affairs in January 2018 released a new growth plan for the Maritime sector, which defined four key areas of development: Digitization, framework conditions, knowledge and education, and international profile (The Ministry of Industry, Business and Financial Affairs).

In June 2018, the Danish Ministry of Energy, Utilities and Climate released their most recent Energy Agreement, which (amongst other areas) identified green energy, energy efficiency, energy research and offshore wind to be key areas for development in the coming period (Danish Ministry of Energy, Utilities and Climate, 2018).

### REGIONAL LEVEL

The region of Southern Denmark has historically been the key region for energy business in Denmark. This is caused by the easy access to the North Sea, and the city of Esbjerg, located at the Western coast of Jutland, is known as the Danish energy metropolis. The areas for smart specialization in Southern Denmark is:

- Health and social innovation
- Sustainable energy (energy efficient technologies and offshore energy)
- Experience Economy

Offshoreenergy.dk is the national cluster organization and innovation network for the Danish offshore energy sector, and from January 1<sup>st</sup> 2019 Offshoreenergy.dk will transform into Energy Innovation Cluster, backed up by the Danish energy industry, the Danish Wind Energy Association and Oil Gas Denmark, and all innovation activities related to oil and gas, offshore wind and onshore wind will be collected in the new organization. This is in line with the national policy to simplify processes and cluster the innovation and development activities for all industries in national innovation networks and not in regional clusters and hubs. Energy Innovation Cluster will have its main office in Esbjerg, and satellite offices in Silkeborg (Central Denmark Region), Aalborg (Northern Region of Denmark) and Copenhagen (Capital Region of Denmark)

## INTELLECTUAL PROPERTY RIGHTS (IPR), REGULATIONS AND STANDARDS SUPPORT

### IPR

Local IPR ambassador	Website	Telephone number	Email
Patent- og Varemærkestyrelsen (Danish Patent and Trademark Office – DKPTO)	<a href="http://www.dkpto.org/">http://www.dkpto.org/</a>	(+ 45) 43 50 80 00	pvs@dkpto.dk

DKPTO is the national office for all activities related to patents and IPR. Aside from the public entity, a number of private service providers are also offering guidance and plans for IPR and patent activities:

### PRIVATE SERVICE PROVIDERS ON IPR

Service provider	Website	Telephone number	Email
Opfind.nu	<a href="https://opfind.nu">https://opfind.nu</a>	+45 72 20 27 50	/
Styrk din ide	<a href="http://www.dkpto.org">www.dkpto.org</a>	+45 43 50 80 00	pvs@dkpto.dk
Otello	<a href="https://otello.dk">https://otello.dk</a>	+45 70 22 88 68	/
Copenhagen Patents	<a href="https://www.copenhagenpatents.com">https://www.copenhagenpatents.com</a>	+45 3324 0080	copa@copenhagenpatents.com
Patentgruppen	<a href="https://www.patentgruppen.dk">https://www.patentgruppen.dk</a>	+45 8619 2000	patent@patentgruppen.com
Nordic Patent Service	<a href="http://www.nordic-patent.dk">www.nordic-patent.dk</a>	+45 70 20 23 31	info@nordic-patent.dk
Patrade	<a href="http://www.patrade.dk">http://www.patrade.dk</a>	+45 70203770	info@patrade.dk
Høiberg	<a href="https://hoiberg.com">https://hoiberg.com</a>	+45 33 32 03 37	hoiberg@hoiberg.com
Awa	<a href="https://www.awa.com">https://www.awa.com</a>	+45 43 99 55 11	dk@awa.com
Plougmann Vingtoft	<a href="https://www.pv.dk/">https://www.pv.dk/</a>	+45 87 32 18 00	pv@pv.eu
Tropa	<a href="http://tropa.dk/">http://tropa.dk/</a>	+45 20 18 05 05	info@tropa.dk

### MARITIME SPATIAL PLANNING

Denmark does not yet have a comprehensive spatial plan for its sea areas. However, a range of sectoral plans exist (e.g. energy infrastructure, fisheries, nature protection, etc), and these will comprise key input to the coming maritime spatial plan. The coming spatial plan will apply to the marine internal waters, territorial sea and the EEZ. (European MSP platform, 2018)

### REGULATIONS AND STANDARDS SUPPORT

#### AGENCIES

Name of agency	DNV GL Denmark
Link to website	<a href="https://www.dnvgl.dk/">https://www.dnvgl.dk/</a>
Telephone number	Esbjerg office: (+45) 79 12 86 00    Copenhagen office: (+45) 39 45 48 00

Name agency	Bureau Veritas
Link to website	<a href="http://www.bureauveritas.dk">www.bureauveritas.dk</a>
Telephone number	(+45) 77 31 10 00
Name agency	Danish Energy Agency
Link to website	<a href="http://www.ens.dk/en">www.ens.dk/en</a>
Telephone number	+45 33 92 67 00
Name agency	Danish Maritime Authority
Link to website	<a href="http://www.dma.dk">www.dma.dk</a>
Telephone number	+45 72 19 60 00

## CROSS BORDER FINANCIAL INSTRUMENTS

TYPE OF FINANCIAL INSTRUMENT	GRANT
NAME FINANCIAL INSTRUMENT	<b>Horizon 2020 Transportation/Energy/Environment</b>
DESCRIPTION	With support from Horizon 2020 Energy organizations will be able to conduct international research projects in support of EU policies for transportation, energy and environment. Funding may be awarded to research, development and demonstration projects. The grant amount is 1-5 M €
TRANSNATIONAL DIMENSION	EU grant for international projects
TYPE OF FINANCIAL INSTRUMENT	GRANT
NAME FINANCIAL INSTRUMENT	<b>SME Instrument</b>
DESCRIPTION	The SME instrument offers excellent opportunities for SMEs to conduct R&D projects - alone or with partners. Grant amount 0.5-2.5 M €
TRANSNATIONAL DIMENSION	Applicants may come from across the EU
TYPE OF FINANCIAL INSTRUMENT	GRANT
NAME FINANCIAL INSTRUMENT	<b>Eurostars</b>
DESCRIPTION	With support from Eurostars companies can conduct international high-tech and knowledge intensive R&D projects with large market potential. Funding is offered for projects within all areas of technology. The coordinating entity must be an SME, which spends a minimum of 10% of turnover or personnel on R&D activities. Grant amount 0.3-1.3 M €
TRANSNATIONAL DIMENSION	Eu grant for international projects
TYPE OF FINANCIAL INSTRUMENT	GRANT
NAME FINANCIAL INSTRUMENT	<b>Nordic Innovation</b>
DESCRIPTION	Nordic Innovation was established in order to help make Nordic businesses competitive and innovative. Nordic Innovations aims to generate increased value creation through cross-border co-operation. The goal to create partnerships between leading Nordic public and private sector institutions in the fields of trade and innovation. Grant amount 0.3-2 M €
TRANSNATIONAL DIMENSION	Grant available to applicants from Nordic countries; focus on cross-border projects
TYPE OF FINANCIAL INSTRUMENT	GRANT
NAME FINANCIAL INSTRUMENT	<b>EUDP</b>
DESCRIPTION	With support from the energy technological development and demonstration program (EUDP), you will be able to conduct projects with experimental development and testing of a technology, system or method under reality-like conditions and thereafter introducing it to market. EUDP offers funding for the

	development and/or demonstration of all types of energy technology contributing to the goals of the energy policy including: Wind Power, heating, energy efficiency, bioenergy, smart energy and system integration, and oil and gas.
TRANSNATIONAL DIMENSION	Lead partner must be based in Denmark but other partner may be based outside Denmark
TYPE OF FINANCIAL INSTRUMENT	GRANT
NAME FINANCIAL INSTRUMENT	<b>MUDP</b>
DESCRIPTION	The Environmental Technology Development Program (MUDP) supports the development of technologies, processes and/or services within environmental technology. MUDP supports projects within eight primary areas: Water, climate adjustment, circular economy and the reuse of resources in waste, cleaner air, less noise, fewer problematic chemicals, industrial environmental efforts, and ecological construction.
TRANSNATIONAL DIMENSION	Open for applications for projects inside and outside of Denmark
TYPE OF FINANCIAL INSTRUMENT	GRANT
NAME FINANCIAL INSTRUMENT	<b>Danish Maritime Fund</b>
DESCRIPTION	The purpose of The Maritime Fund is to strengthen and develop the shipping and ship building industries with the aim of creating new jobs and strengthening the companies in the industry.
TRANSNATIONAL DIMENSION	Focus on the Danish maritime sector; projects should support job creating in Denmark

#### COMMENTS AND EXPERIENCE

A number of financial instruments are available to companies in Denmark; some instruments are also available for companies outside Denmark. At [www.techfunding.eu](http://www.techfunding.eu) applicants can be guided on whether their projects is suitable for a given funding instrument.

#### SME-ORIENTED INCUBATOR SUPPORT



NAME	Innofounder
MAIN TOPICS	Hosted by the Innovation Fund Denmark, InnoFounder is a one-year incubator program with advising and funding for new graduates with an innovative and scalable business idea. The InnoFounder incubator is targeting very recent graduates or to-be graduates from Danish higher education institutions. Application deadline multiple times a year; for 2018: November 6th. Besides guidance and funding for 12 months, InnoFounders receives monthly and specials grants, access to co-working spaces, a mentor, access to workshops and communities. Innovation Fund Denmark works within 6 areas of interest: 1) Bioresources, food and lifestyle; 2) Trade, service and society; 3) Energy, environment and climate; 4) Production, materials, digitization and IKT; 5) Infra structure, transport and construction; 6) Biotech, medico and health.
ADDRESS	ØSTERGADE 26 A, 4. SAL 1100 KØBENHAVN K
WEBSITE	<a href="https://innofounder.dk/">https://innofounder.dk/</a>



NAME	Preseed Ventures
MAIN TOPICS	Preseed ventures is based in kongens lyngby north of copenhagen and invests in promising danish startups across denmark. Preseed ventures invests in all industries as long as the start-ups are innovative and attractive.
ADDRESS	Diplomvej 381, 2800 kongens lyngby
WEBSITE	<a href="http://www.preseedventures.dk">Www.preseedventures.dk</a>



NAME	Syddansk innovation
MAIN TOPICS	Robotics, industry 4.0, welfare tech, IT, industry
ADDRESS	Cortex park 26, 2 5230 odense m
WEBSITE	<a href="http://www.syddanskinnovation.dk">Www.syddanskinnovation.dk</a>

## PROTOTYPING AND LABORATORY/TESTING INFRASTRUCTURE AND CO-WORKING SPACES



NAME	Force technology
TYPE OF TECHNOLOGY	Oil and gas, maritime, infrastructure, energy
FACILITIES	Laboratories, simulators, test tanks, environment test rooms, wind tunnels, test benches.
TRL LEVEL	All
WEBSITE	<a href="https://forcetechnology.com/en/service-sector/facilities">Https://forcetechnology.com/en/service-sector/facilities</a>



**DANISH  
TECHNOLOGICAL  
INSTITUTE**

NAME	Teknologisk institut – danish technological institute
TYPE OF TECHNOLOGY	Energy, chemistry, food, construction, hardware etc.
FACILITIES	Laboratories
TRL LEVEL	All
WEBSITE	<a href="https://www.dti.dk/testing/">Https://www.dti.dk/testing/</a>



NAME	Danmarks teknologiske universitet – technical university of denmark
TYPE OF TECHNOLOGY	Wind energy
FACILITIES	Test centres for wind turbines, wind tunnels, laboratories
TRL LEVEL	-
WEBSITE	<a href="https://www.vindenergi.dtu.dk/english/test-centers">https://www.vindenergi.dtu.dk/english/test-centers</a>



NAME	Uas denmark – international test center & cluster (for drone technology)
TYPE OF TECHNOLOGY	Drones
FACILITIES	Airspace
TRL LEVEL	-
WEBSITE	<a href="https://www.uasdenmark.dk/uas-denmark-international-test-center-and-drone-cluster">https://www.uasdenmark.dk/uas-denmark-international-test-center-and-drone-cluster</a>



NAME	Lorc
TYPE OF TECHNOLOGY	Wind energy (nacelles)
FACILITIES	Nacelle test facilities: function test facility and halt test facility
TRL LEVEL	-
WEBSITE	<a href="http://www.lorc.dk/test-facilities">http://www.lorc.dk/test-facilities</a>



NAME	Polytech
TYPE OF TECHNOLOGY	Wind energy, offshore, aircraft, automotive and other
FACILITIES	Laboratories, mechanical testing, weathering testing
TRL LEVEL	-
WEBSITE	<a href="https://www.poly-tech.dk/test/">https://www.poly-tech.dk/test/</a>

#### COMMENTS AND EXPERIENCE

A number of test facilities and laboratories can be found in Denmark; some are specific to certain objects/structures or industries while others span more widely. The ones listed above are some of the test facilities which relates to the blue industries.

## LITERATURE LIST

- Danish Maritime Authority. (n.d.). Retrieved January 16, 2019, from <https://www.msp-platform.eu/countries/denmark>
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- The Ministry of Industry, Business and Financial Affairs. (2018). Maritime Denmark, a global maritime power hub. Retrieved from [https://eng.em.dk/media/10568/bluedenmark\\_uk\\_final\\_web.pdf](https://eng.em.dk/media/10568/bluedenmark_uk_final_web.pdf)
- Danish Ministry of Energy, Utilities and Climate. (2018). Energy agreement. Retrieved from <https://en.efkm.dk/media/12307/energy-agreement-2018.pdf>
- European MSP platform. (2018, October 11). [Maritime spatial planning in Denmark]. Retrieved January 18, 2019, from <https://www.msp-platform.eu/countries/denmark>

