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COPENHAGEN  
CLEANTECH CLUSTER

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# BE PART OF COPENHAGEN CLEANTECH CLUSTER



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**CLEAN  
TECHNOLOGIES  
ARE ALL ABOUT  
COLLABORATING.  
SO LET'S MIND  
EACH OTHERS  
BUSINESS**

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## Welcome to Copenhagen Cleantech Cluster

As Chairman of the Board of Copenhagen Cleantech Cluster, I am proud to introduce you to our cluster.

Since the world's first Minister of the Environment was appointed in 1971, Denmark has been at the forefront of the global cleantech agenda. Throughout the 1980s, our government invested heavily in wind energy, producing world-class research and fostering a highly successful industry. Today, Danish cleantech export accounts for the highest percentage of national GDP in the world.

It is a well-known fact that mankind now faces one of the largest threats to our continued existence – global warming – and what is unique about the Danish approach to this threat is our ability to turn environmental concerns into business ventures.

That is why companies, universities and public institutions have joined forces in a concerted effort to sustain and expand our world-class cleantech competencies.

I hereby invite you to be part of Copenhagen Cleantech Cluster

Anders Eldrup  
Chairman of the Board and CEO  
of Dong Energy A/S

For the past 40 years, Denmark has been developing renewable sources of energy. The cleantech sector is the fastest growing sector in Denmark, which today counts 720 companies, employing 120,000 people and accounts for a turnover of 40 billion Euros.



Copenhagen Cleantech Cluster is an initiative launched by Danish cleantech companies, research institutions and public organisations to sustain and develop world-class cleantech competencies.

### What is Copenhagen Cleantech Cluster

#### Vision

Copenhagen Cleantech Cluster's vision is to develop one of the world's leading and most renowned cleantech clusters, creating superior value for the cluster companies and research environments and to differentiate itself by tying cleantech technologies and communities together across sectors and value chains.

#### Mission

- To create continuous growth for existing cleantech companies
- To support and assist new cleantech companies
- To attract more foreign cleantech companies to the region

Copenhagen Cleantech Cluster work to meet the following objectives:

- Creation of 1,000 new jobs
- Attraction of 25 foreign companies to the cluster
- Creation of 30 new research- and innovation collaborations between companies and research institutions, for example start-ups or joint research applications/projects
- Establishment of collaborations with 15 international cleantech clusters
- Creation of a unifying and self-supporting organisation with minimum 200 members
- Securing the growth and momentum of 25 entrepreneurs
- Hosting a minimum of 200 events

Copenhagen Cleantech Cluster is based on a triple helix model. This model focuses on university-industry-government interactions and it has been recognised as a key to innovation in knowledge-based societies.

### Who are Copenhagen Cleantech Cluster?

A unique group of partners are behind Copenhagen Cleantech Cluster. The partners represent the entire value chain of the Danish cleantech industry

### Research institutions

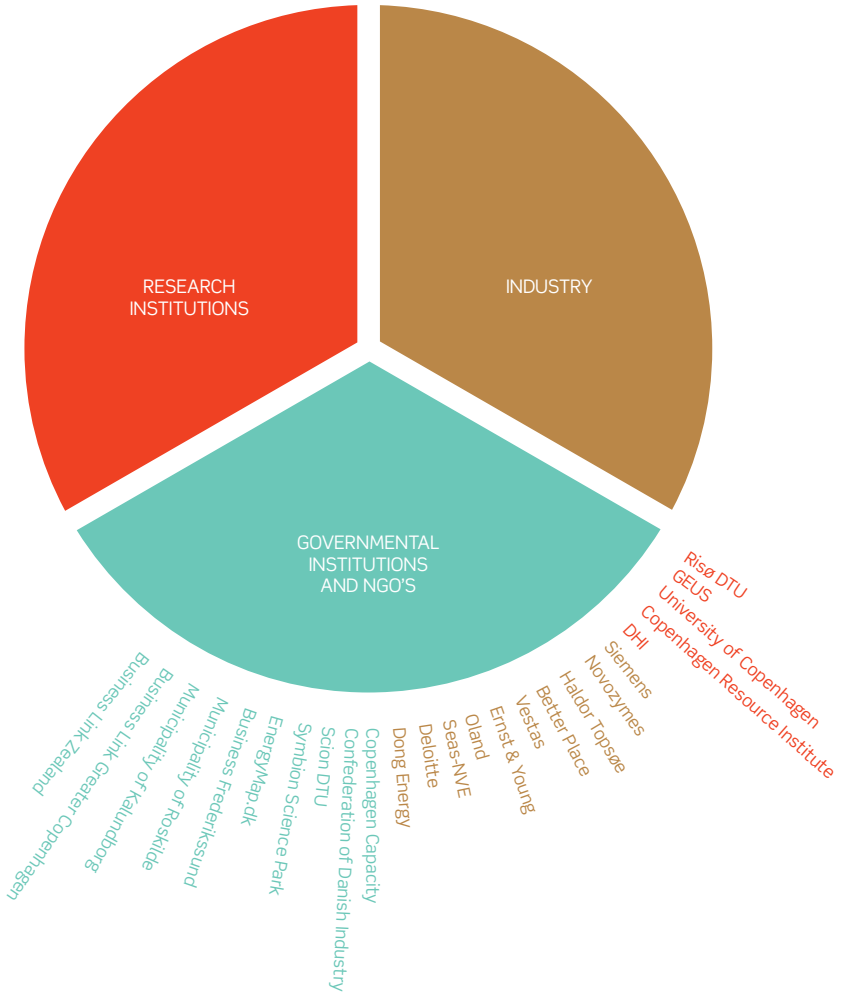
DHI | Risø DTU | University of Copenhagen | Copenhagen Resource Institute | GEUS

### Industry

Siemens | Novozymes | Haldor Topsøe | Better Place | Vestas | Ernst & Young | Oland | Seas-NVE | Deloitte | Dong Energy

### Governmental institutions and NGOs

Copenhagen Capacity | Confederation of Danish Industry | Scion DTU | Symbion Science Park | EnergyMap.dk | Business Frederikssund | Municipality of Roskilde | Municipality of Kalundborg | Business Link Greater Copenhagen | Business Link Zealand







Copenhagen Cleantech Cluster carries out projects within five focus areas, each specifically designed to meet the needs of an ever-changing cleantech industry.

### What do we do?

The focus areas are:

#### Test & Demonstration

- access to comprehensive research and full scale demonstration facilities

[cphcleantech.com/demo](http://cphcleantech.com/demo)

#### Matchmaking

- facilitating connections between organisations and people

[cphcleantech.com/matchmaking](http://cphcleantech.com/matchmaking)

#### International Outreach

- connecting Copenhagen Cleantech Cluster with clusters around the world to ensure knowledge transfer and collaboration

[cphcleantech.com/outreach](http://cphcleantech.com/outreach)

#### Innovation & Entrepreneurship

- turning green ideas into successful business ventures

[cphcleantech.com/innovation](http://cphcleantech.com/innovation)

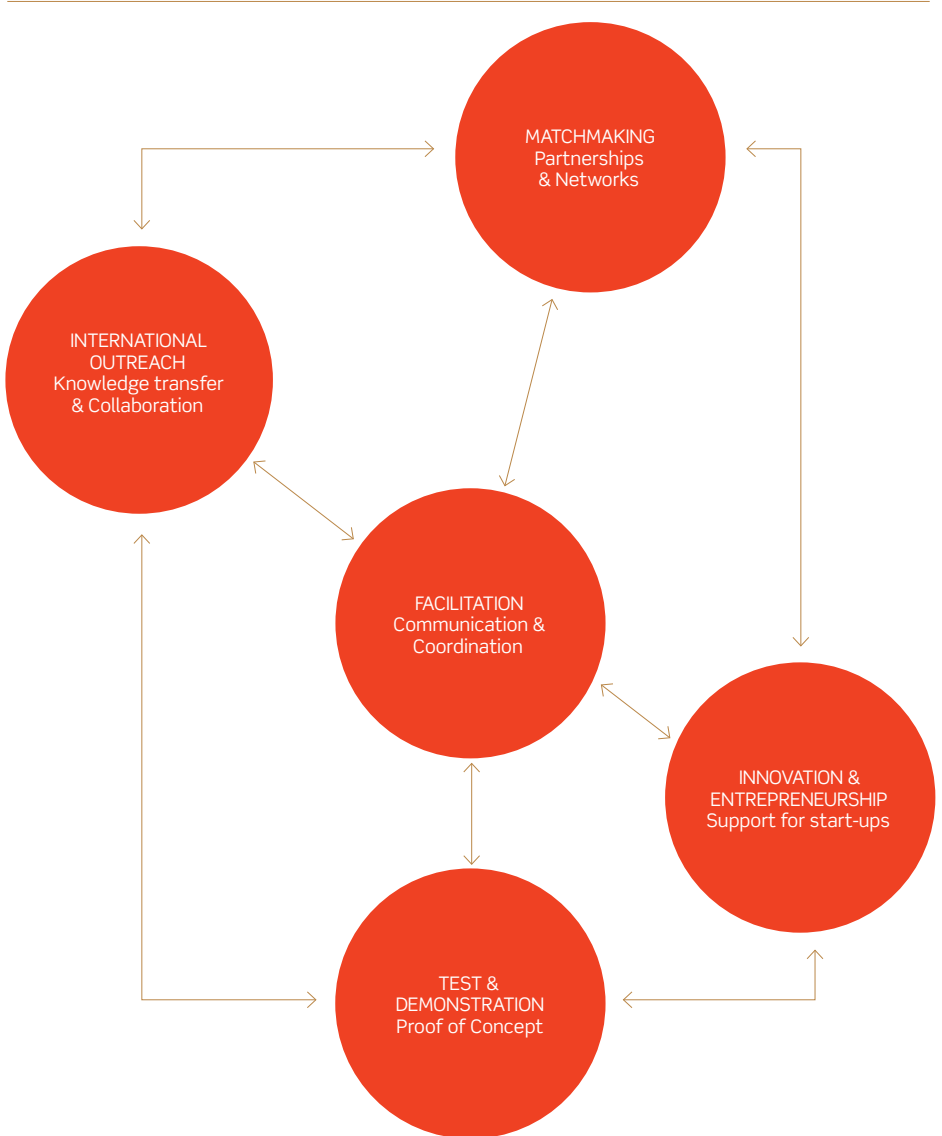
#### Facilitation

- communicating the projects and keeping members of CCC up-to-date on cleantech news

[cphcleantech.com/facilitation](http://cphcleantech.com/facilitation)

All the projects mentioned in this folder are constantly being developed, and we hope that your organisation will get involved in one of them.

On the following pages you can read about our current projects and what our partners are doing within each focus area.



**COPENHAGEN  
CLEANTECH  
CLUSTER  
WILL BE THE  
NUMBER ONE  
LOCATION FOR  
COMPANIES  
TO TEST AND  
DEVELOP THEIR  
CLEANTECH  
IDEAS**

The ability to thoroughly test and demonstrate new cleantech technologies and products all the way from the initial idea to a full scale demonstration is central to our cluster. Our projects within this focus area aim to link the research community with relevant partners from the industry.

### **Test & demonstration**

In Copenhagen Cleantech Cluster, the projects aiming at supporting and building better test and demonstration facilities are highly diverse. They range from the construction of Copenhagen Cleantech Park to Risø DTU, where full scale commercial demonstration plants and new technologies can be displayed and tested.

Our main objective is to create a framework for testing and demonstration, which is attractive to both foreign and national cleantech companies.

Analyses suggest that the cleantech industry lack full scale demonstration projects and sites to test and showcase new technologies to interested parties.

### Copenhagen Cleantech Park

Focus area:  
**Test & Demonstration**

Responsible partner:  
**Business Frederikssund**

The Copenhagen Cleantech Park is a new city development project in Northern Zealand. The future city is expected to have 14,000 inhabitants, 6,000 jobs and 6,000 homes. The Cleantech Park's buildings and infrastructure will be positioned to make the best possible use of state-of-the-art energy and environmental technologies.

The power supply of the estate will be based on renewable energy such as thermal heat systems, wind power, solar cells etc. Businesses are to reutilize waste products in other local processes minimizing the overall energy consumption as much as possible.

Copenhagen Cleantech Park offers several advantages to stakeholders in the cluster:

- A possibility for the Danish industry to showcase cleantech products and solutions
- Gather knowledge about the challenges of implementation and deployment of cleantech technologies in an urban development project
- Gain practical knowledge of funding models, including public private partnerships

Risø DTU will be opening a large “demonstratorium” where companies can test and develop their cleantech ideas and take advantage of the broad range of research activities that Risø DTU undertakes.

Focus area:  
**Test & Demonstration**

Responsible partners:  
**Risø DTU and University  
of Copenhagen**

### **Demonstratorium**

Risø DTU is the Danish National Laboratory for Sustainable Energy of Denmark and possesses world class competencies within the field of cleantech. Risø DTU is currently working on establishing a physical platform where companies, in close collaboration with the research staff, can set up and thoroughly test new technologies. Technologies can be tested both as standalone as well as integrated systems.

The demonstratorium is supplemented with a mapping of relevant research facilities, equipment and skills at DTU and the University of Copenhagen.

The demonstratorium is designed in close dialogue with the Municipality of Roskilde, which will establish Risø Park, a business park designed to complement Risø DTU's facilities in general and the demonstratorium in particular.

The demonstratorium offers several advantages:

- Physical link between the research community and the companies and thus the basis for further, joint research and development projects
- Increased visibility such as a showroom for potential or current customers
- Products will, after professional testing and documentation in the demonstratorium, enjoy higher credibility
- Linkage to students and thus better opportunities for recruiting qualified employees





Introducing you to the right people and projects is a cornerstone of Copenhagen Cleantech Cluster. Over the next five years the cluster will facilitate matchmaking between research institutions and companies and build networks with relevant stakeholders.

### Matching cleantech competencies

Focus area:  
Matchmaking

Responsible partner:  
Copenhagen Capacity

The competitiveness of the cleantech industry depends on companies' ability to be innovative and productive. Analyses have shown that companies in networks and clusters are more likely to be successful compared to those outside a cluster. Presence of several companies within the same industry at the same place creates a number of spill-over effects, for example in terms of knowledge sharing, use of research-based knowledge as well as access to highly skilled labour.

The ability to see competitors as partners and create strong networks is central to advancing more innovative solutions from the cleantech industry.

The business networks aim to introduce businesses that work within the same fields as each other and to provide them with the benefits of being part of a cluster including access to a pool of tacit knowledge.

Cutting edge cleantech companies need the latest and most specialised research to stay ahead and the research institutions need a close link to the industry to stay in touch with market trends and product partnerships. The Research-To-Business project aims at facilitating this interdependent need for sharing knowledge.

The goal for the matchmaking activities is to develop innovative partnerships between researchers and companies, which build on existing competencies within the companies. The specific themes and framework for the matchmaking activities are planned and implemented in close dialogue with the relevant stakeholders.

### Research-To-Business

Focus area:  
Matchmaking

Responsible partners:  
Risø DTU, Scion DTU  
and University of  
Copenhagen

Increased interaction between knowledge institutions and the industry can increase the proportion of research developed into actual products. The new technological and commercial opportunities that businesses gain from the relationship will enhance their global competitiveness and growth potential.

Whether companies need a continuous dialogue with research institutes or a full scale partnership this initiative aims to bridge the gap between research institutes and companies.

**BRINGING NEW  
SOLUTIONS TO  
THE GLOBAL  
MARKET IS  
OF UPMOST  
IMPORTANCE  
TO COPENHAGEN  
CLEANTECH  
CLUSTER**

A key part of Copenhagen Cleantech Cluster's objectives is to create the best conditions for fostering new business ventures by supporting new ideas within existing companies as well as start-ups.

### **Innovation & entrepreneurship**

To facilitate this process, four projects are currently underway:

#### **Cleantech Accelerator**

- Helps bring ideas to market more quickly

#### **Facilities**

- Establishing the best possible facilities for cleantech companies

#### **Tech Trans**

- Helping university ideas overcome the dreaded "valley of death"

#### **Spin-Offs**

- Assisting existing companies commercialising new ideas in spin-offs

The Cleantech Accelerator aims to provide much needed assistance to newly established companies.

Focus area:  
**Innovation &  
Entrepreneurship**

Responsible partners:  
**Symbion & Scion DTU**

### **Boost your cleantech start-up**

The Cleantech Accelerator programme ensures that start-ups get on the fast track to knowledge, skills and relevant players.

There are four focus areas of the Cleantech Accelerator programme:

#### **Products & technology**

- Helping companies identify customer value and ways of differentiation

#### **Market insights**

- Providing the start-up with relevant knowledge and an overview of the market

#### **Business modelling**

- Assistance in modelling a profitable business

#### **Resources**

- Aiding companies in effective ways to manage scarce resources

Start-ups are assisted in establishing a strong cleantech network as well as in testing their products.

Interested parties looking to establish a cleantech company are invited to “start-up camps”, where these topics are taught. Furthermore, companies are provided with a contact person to help put camp lessons into action.

The right facilities are paramount to cleantech companies of all sizes and products, but the need for research facilities differs from one company to another. Copenhagen Cleantech Cluster aims to gain more knowledge about the specific needs of cleantech companies and provide the right facilities to cover every business need.

### **The right facilities at the right time**

Focus area:  
**Innovation &  
Entrepreneurship**

Responsible partner:  
**Scion DTU**

Copenhagen Cleantech Cluster is constantly monitoring the needs of start-ups, small businesses and global companies. This information is used to create specialised environments with relevant services and network offerings.

Thus, Copenhagen Cleantech Cluster aims to help companies find the right location whether looking for test facilities, research facilities, offices or one place to do it all.





Many of the best cleantech solutions are developed at universities and research institutes. Copenhagen Cleantech Cluster's Tech Trans initiative aims to help these ideas pass the steep "Death Valley", primarily by gap funding.

### **Funding the gap - from research to commercialisation**

Focus area:  
**Innovation &  
Entrepreneurship**

Responsible partners:  
**University of Copenhagen  
& Risø DTU**

A large proportion of university research is never picked up by the industry and transformed into actual products to be marketed.

The research conducted at universities usually centres around early stage technologies, and the government funding is often limited to this stage. Typically, funding comes to a halt when a research project reaches a point of commercial, potential as industry partners and venture funds frequently find technologies at this stage too risky to take on.

This "gap" between research funding and commercial funding is often referred to as "Death Valley". Because of the gap, many of the, potentially groundbreaking, solutions are never picked up by the industry or get to form the basis for a new promising business venture.

### **The gap funding initiative**

The purpose of the gap funding initiative in Copenhagen Cleantech Cluster is to timely identify potential projects and aid the process of commercialisation.

As such, the funding is earmarked for university research projects, and allows for researchers from the University of Copenhagen and DTU to apply for additional funding to further develop promising research projects until these are ready to be adopted by the industry, may it be as a spin-off, spin-out, or as a new start-up. This also entails forming a closer relationship between research institutions and the cleantech industry.

Existing companies are a hotbed for new ideas. Due to their established resources they are often a great support for new ventures. However, a new idea from an established company might be best accommodated for outside of the parent company in the form of a spin-off company.

### Spin-off your technologies

Focus area:  
Innovation &  
Entrepreneurship

Responsible partners:  
DHI and Scion DTU

Analyses have shown that spin-offs are more likely to survive compared to entrepreneurial firms that are not backed by a parent company.

If supported properly, spin-offs can enjoy the help of their parent company as well as the flexibility of being a small player. Copenhagen Cleantech Cluster is devoted to help companies and start-ups strike this balance and support them through their transition from start-up to success. This is done through workshops and the development of a platform for communication among others.

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**THE PURPOSE  
OF THE  
INTERNATIONAL  
CLEANTECH  
NETWORK IS  
TO ATTRACT  
SKILLS AND  
KNOWLEDGE TO  
THE CLUSTER  
THROUGH  
INCREASED  
DIALOGUE**

Copenhagen Cleantech Cluster's vision is to be a highly connected international cluster. Copenhagen Cleantech Cluster establishes real working relationships with leading cleantech clusters around the world.

### A network of clusters

Focus area:  
International outreach

Responsible partner:  
Copenhagen Capacity

International outreach means doing business and collaborating with cutting edge clusters and their members and research institutes abroad.

In order to develop international collaborations between cleantech clusters around the world, Copenhagen Cleantech Cluster has initiated the International Cleantech Network.

The International Cleantech Network is focused on giving and sharing knowledge, competencies and best practice guidelines between the clusters. The network also focuses on creating visits and matchmaking for key stakeholders, joint conferences, and access to demonstration facilities.

Shared characteristics of the clusters participating in the International Cleantech Network are that they all possess world leading competencies within the fields of cleantech. The International Cleantech Network will have a strong focus on visualising business opportunities across stakeholders from the different clusters.

**THE ONE STOP  
SHOP IS THE  
KNOWLEDGE  
CENTRE THAT  
TIES ALL THE  
PROJECTS  
AND PARTNERS  
TOGETHER**

Copenhagen Cleantech Cluster operates a “One Stop Shop” where you can gain an overview and access to the cleantech cluster.

Focus area:  
Facilitation

Responsible partners:  
Copenhagen Capacity,  
Confederation of Danish  
Industry & EnergyMap

### One Stop Shop – our center of knowledge

The One Stop Shop is the centre of knowledge in Copenhagen Cleantech Cluster. The knowledge centre ensures that the cluster’s stakeholders have access to relevant information, advice, materials and activities.

The One Stop Shop provides an overview of players and initiatives and generate analyses that identify new opportunities, challenges and needs within the cleantech sector.

Connecting all of the players in the cleantech cluster across value chains, projects and competencies means increased productivity and innovation – but most of all it ensures quality.

The One Stop Shop will have a lot to offer. For example:

- Analyses of barriers
- Surveillance of framework conditions

- Establishment of partnerships
- R&D projects
- Identification and start-up of new partnerships

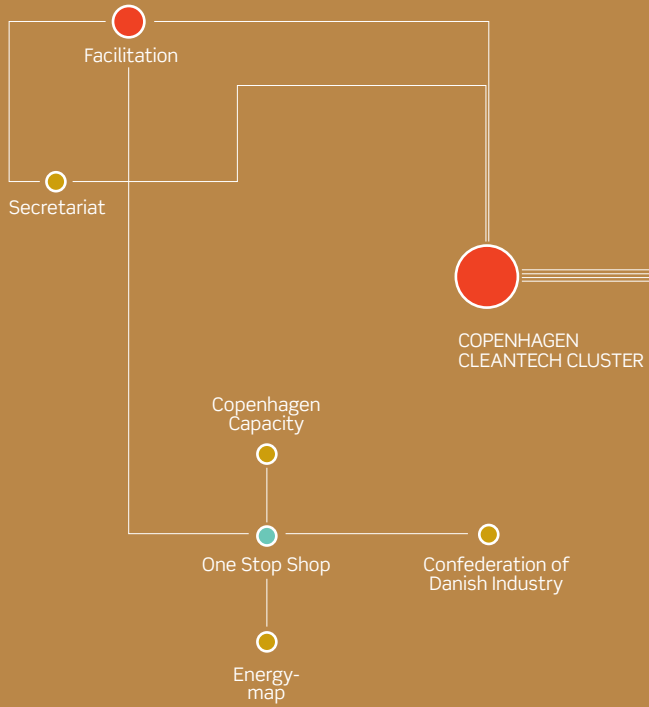
### Public Private Partnerships

The Danish economy is characterised by a strong public and private sector, both of which are highly focused on cleantech.

To ensure that the distance between the public and private organisations is never too far, Copenhagen Cleantech Cluster assist the dialogue between the public and private sector.

Assisting in this dialogue also includes mapping of the public sector’s needs for new solutions and technologies and making these needs visible via an electronic portal, EnergyMap offers an overview of the cluster with regards to companies, research institutions, public stakeholders, initiatives and events within the cleantech sector.

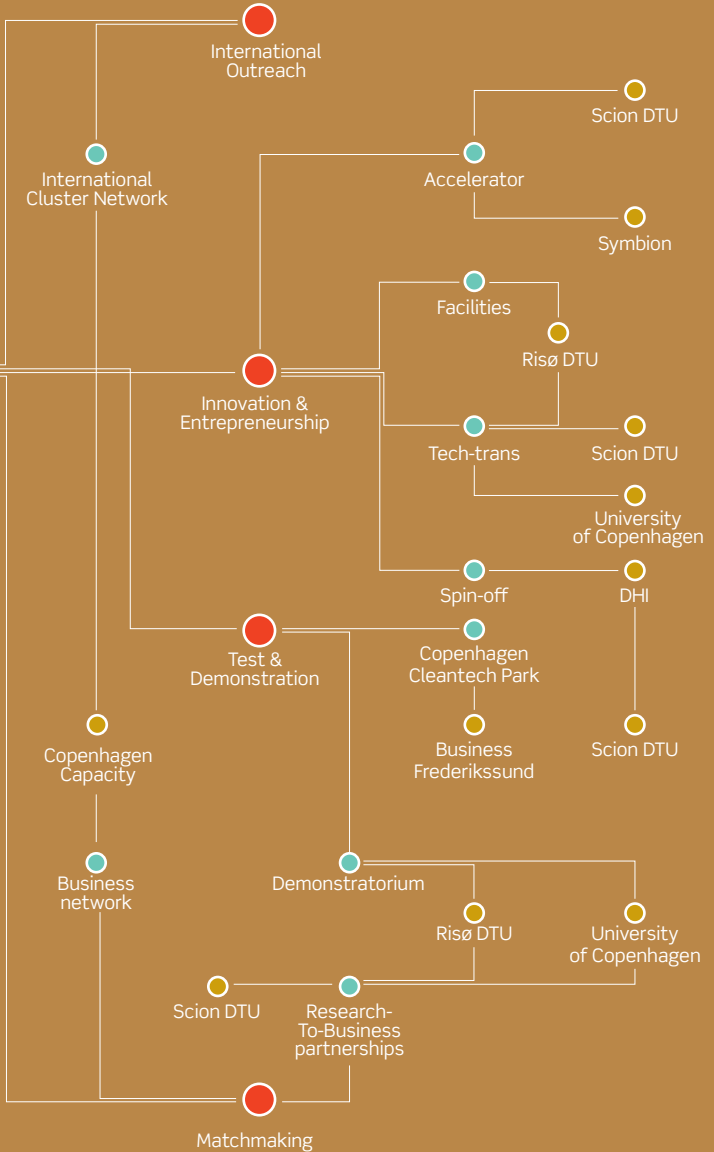
Copenhagen  
Cleantech Cluster



- Focus areas
- Activities within focus areas
- Responsible partners

Copenhagen Cleantech Cluster is a network of partners and projects, all linked to form a strong cluster.

Your organisation can also be a part of Copenhagen Cleantech Cluster!



Copenhagen Cleantech Cluster has a large and diverse body of partners and stakeholders. They all contribute to the development of the cluster and to ensure that the initiative reaches the goals set out.

### **Copenhagen Cleantech Cluster's stakeholders**

One of Copenhagen Cleantech Cluster's goals is to build a strong network of stakeholders within the cleantech industry in Denmark. Therefore, we are constantly adding new stakeholders to Copenhagen Cleantech Cluster.

Be part of Copenhagen  
Cleantech Cluster at  
[cphcleantech.com/membership](http://cphcleantech.com/membership)

#### **DI**

the Confederation of Danish Industry. Premier lobbying organisation for Danish businesses on national and international issues.  
[www.di.dk](http://www.di.dk)

#### **Scion DTU**

Scion DTU Science Park helps innovative individuals and companies realise and commercialise their high-tech ideas.  
[www.sciondtu.dk](http://www.sciondtu.dk)

#### **Risø DTU**

the Danish National Laboratory for Sustainable Energy.  
[www.risoe.dk](http://www.risoe.dk)

#### **University of Copenhagen**

The largest institution of research and education in Denmark.  
[www.ku.dk](http://www.ku.dk)

#### **Copenhagen Capacity**

The Danish Capital Region's official inward investment agency.  
[www.copcap.com](http://www.copcap.com)

#### **EnergyMap**

EnergyMap is the national Danish internet portal for energy and climate related solutions.  
[www.energymap.dk](http://www.energymap.dk)

#### **Business Frederikssund**

The organisation for businesses and tourism in Frederikssund.  
[www.frederikssunderhverv.dk](http://www.frederikssunderhverv.dk)

#### **Symbion**

The largest science park in Denmark creating the framework for a dynamic environment where research meets business.  
[www.symbion.dk](http://www.symbion.dk)

**DHI**

An independent, international consulting and research organization focused within the fields of water, environment and health.  
[www.dhigroup.com](http://www.dhigroup.com)

**Siemens Danmark**

One of the world's largest electronics and engineering conglomerates.  
[www.siemens.dk](http://www.siemens.dk)

**Novozymes**

World leading biotech company within enzymes and microorganisms.  
[www.novozymes.com](http://www.novozymes.com)

**Haldor Topsoe**

Topsoe is market leading in heterogeneous catalysis.  
[www.topsoe.com](http://www.topsoe.com)

**Better Place**

US-based transportation infrastructure company for electric vehicles.  
[www.betterplace.com](http://www.betterplace.com)

**Vestas**

The world's largest manufacturer, seller, installer, and servicer of wind turbines.  
[www.vestas.com](http://www.vestas.com)

**DONG Energy**

The largest Danish utility company.  
[www.dongenergy.com](http://www.dongenergy.com)

**Copenhagen Resource Institute**

A non-profit consultancy within the field of sustainable consumption and production.  
[www.cri.dk](http://www.cri.dk)

**Ernst & Young**

Global professional services firm.  
[www.ey.com](http://www.ey.com)

**Deloitte**

Global professional services firm.  
[www.deloitte.com](http://www.deloitte.com)

**GEUS**

Independent sector research institute under the Danish Ministry of Climate and Energy.  
[www.geus.dk](http://www.geus.dk)

**Oeland**

Scandinavia's leading vendor of complete ventilation components.  
[www.oeland.dk](http://www.oeland.dk)

**SEAS-NVE**

Denmark's largest consumer-owned energy company.  
[www.seas-nve.dk](http://www.seas-nve.dk)

**Business Link Greater Copenhagen**

Portal for entrepreneurs and start-ups in the Capital Region.  
[www.startvaekst.dk/vhhr.dk](http://www.startvaekst.dk/vhhr.dk)

**Business Link Zealand**

Portal for entrepreneurs and start-ups in the Region of Zealand.  
[www.startvaekst.dk/vhsjaelland.dk](http://www.startvaekst.dk/vhsjaelland.dk)

**Roskilde Municipality**

[www.roskildekom.dk](http://www.roskildekom.dk)

**Kalundborg Municipality**

[www.kalundborg.dk](http://www.kalundborg.dk)

**Region of Copenhagen**

[www.regionh.dk](http://www.regionh.dk)

**Region of Zealand**

[www.regionsjaelland.dk](http://www.regionsjaelland.dk)



Vækstforum  
Hovedstaden

REGION  
S JÆLLAND



### **Whom to contact?**

The Secretariat handles the daily operations, drive the development of Copenhagen Cleantech Cluster and act as a unifying coordinator and communicator for actors engaged in Copenhagen Cleantech Cluster.

Please contact us for further information about Copenhagen Cleantech Cluster.

[www.cphcleantech.com/contact](http://www.cphcleantech.com/contact)



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