



**COPENHAGEN
SCIENCE
CITY**

Sharing
knowledge

TOWARDS A WORLD CLASS INNOVATION DISTRICT



CONTENT

Executive Summary	4
Organisation	6
Map	8
Value propositions	10
Strategic focus areas	
1. ATTRACTION	12
CASE Quantum computers: research hotspot attracted Microsoft	14
2. INNOVATION, EDUCATION AND ENTREPRENEURSHIP	16
CASE The innovation ecosystem in action	18
CASE Boosting life science business	20
3. PHYSICAL FRAMEWORK	22
A district built for collaboration	24
About innovation districts	26



EXECUTIVE SUMMARY

Copenhagen Science City is one of Europe's strongest innovation districts. It is located in the heart of Copenhagen – one of the world's most liveable cities. It has a unique concentration of some of the best and brightest minds, highly educated students from all continents and a cluster of innovative companies based in inspiring co-working spaces and innovation hubs. Access to state-of-the-art research and transport infrastructure is abundant. Some of Denmark's most attractive residential areas and recreational activities are nearby. Everything and everyone is within easy reach on foot or by bike.

These are the central components of Copenhagen Science City's innovation ecosystem which has a truly exceptional potential to make a positive impact on those within the ecosystem and on society as a whole.

In 2011, we established the Development Council of Copenhagen Science City – a high-level, strategic partnership of knowledge institutions, companies, innovation hubs and public authorities – to further develop the innovation ecosystem and bring it into play.

Copenhagen Science City has come a long way to fulfil its potential. Several companies, talents and innovation hubs have joined and reinforced the innovation ecosystem, networks for collaboration have been created and new buildings and transport infrastructure have been built.

Building on past results, this strategy sets out the objectives for the development of Copenhagen Science City towards 2024.

We invite you to join us.

On behalf of the Development Council of Copenhagen Science City



Thomas Bjørnholm

*Chairman of the Development Council of Copenhagen Science City
Prorector for Research and Innovation, University of Copenhagen*

OUR VISION

By 2024, Copenhagen Science City is a world class innovation district where people develop their full potential and where bright ideas are transformed into growth, jobs and new solutions to national and global challenges

OUR MISSION

Together with our collaborators we will:

- Attract companies, talent and investments that reinforce our innovation ecosystem
 - Facilitate collaboration between knowledge institutions, innovation hubs and companies to promote knowledge-sharing and commercialisation
 - Strengthen transport infrastructure and create space for urban life, companies and other relevant actors to make the innovation district even more attractive
-

THE DEVELOPMENT COUNCIL OF

ORGANISATION

The development of Copenhagen Science City is led by the Development Council. The Council is supported by a management team and operational working groups.



THOMAS BJØRNHOLM
Prorector, University of Copenhagen
Chairman, Copenhagen Science City



PER CHRISTIANSEN
CEO
Rigshospitalet



STEFAN HERMANN
Vice Chancellor
Metropolitan University College



SØREN TEGEN PEDERSEN
Director
The City of Copenhagen



CITY OF COPENHAGEN



CHRISTIAN BRUHN RIEPER
Director (Acting)
The Capital Region of Denmark



COPENHAGEN SCIENCE CITY



JØRGEN BARDENFLETH

Chairman
Symbion



MORTEN MØLGAARD JENSEN

CEO
Copenhagen Bio Science Park



LAILA PAWLAK

CEO & Co-founder
SingularityU Denmark



BO RYGAARD

CEO
The Dreyer Foundation



KRISTIAN LYK-JENSEN

Director (Acting)
The Danish Building & Property Agency



PETER KURTZHALS

Senior Vice President & Head of
Global Research
Novo Nordisk



COPENHAGEN SCIENCE CITY



Symbion

Office community for innovative start-ups, entrepreneurs and growth companies

Haraldsgade district

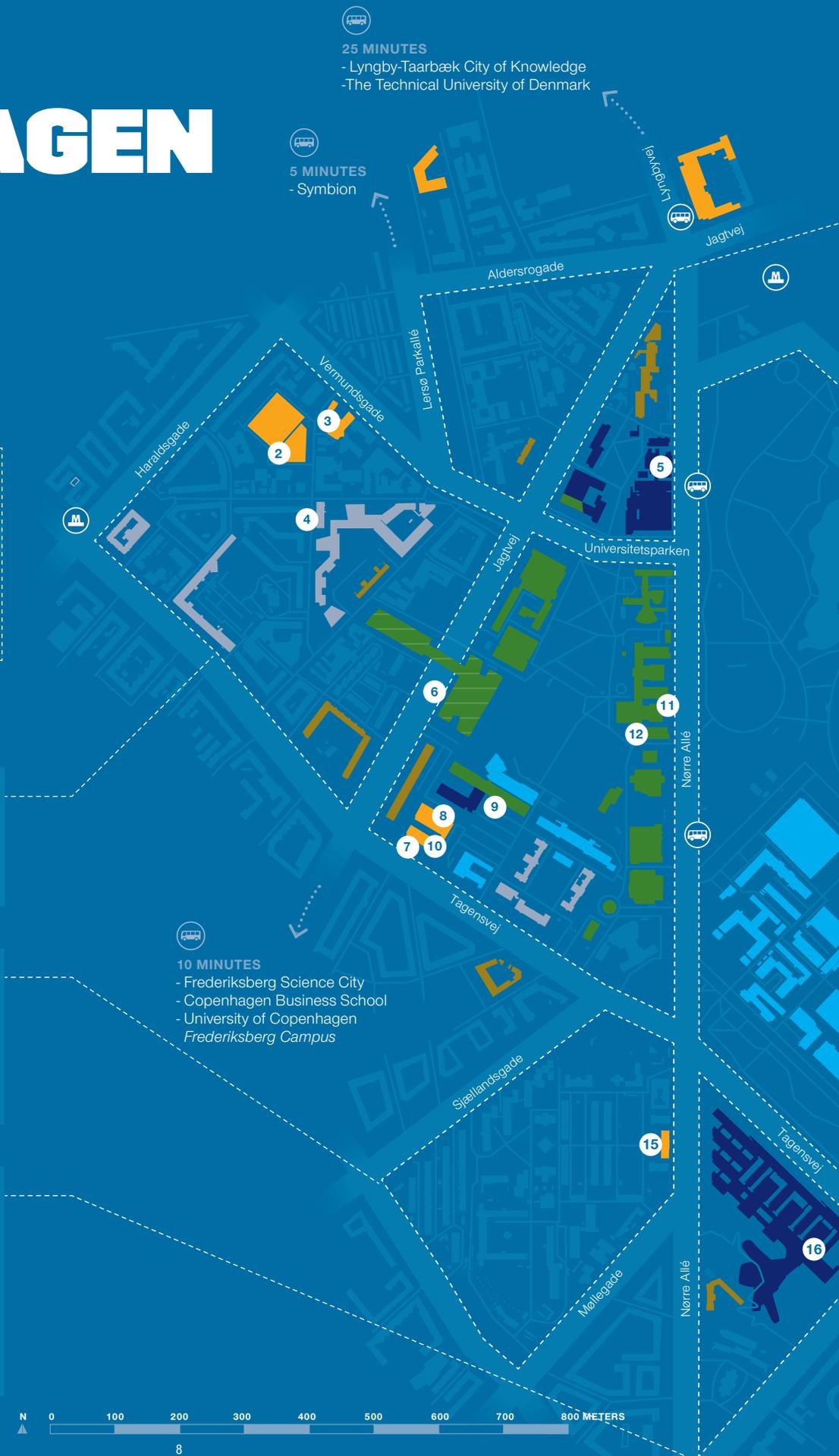
Home of the Metropolitan University College, several commercial tenancies and the start-up and accelerator environments SingularityU Denmark and DARE2mansion

De Gamles By

Sund Vækst Huset is home to a cross-sectorial partnership of Copenhagen Health Innovation, the research group CopenRehab, the City of Copenhagen's Center for Welfare Technology and SUND Hub, where entrepreneurial students develop novel health solutions

Panum

Research and education in health and medical sciences. Novo Nordisk Foundation centres for Protein Research, Basic Metabolic Research and Stem Cell Biology. Coordination of the University's partnership in the European knowledge innovation community, EIT Health and cross-institutional collaboration through Copenhagen Health Science Partners



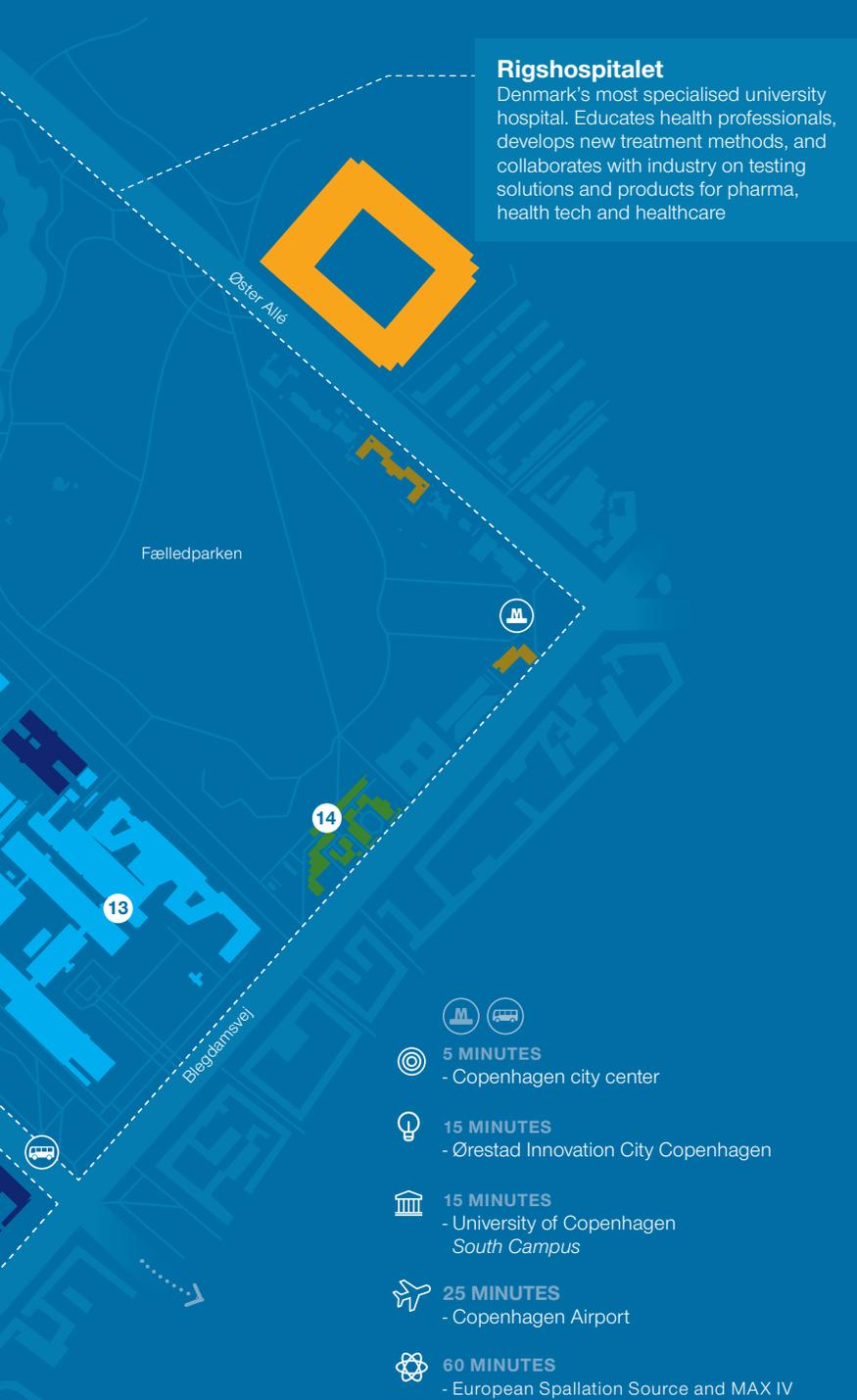
INNOVATION DISTRICT

Universitetsparken

Research and innovation in fields such as pharmacology, nano-science, quantum computing, chemistry, physics and biology. Companies and commercialisation in Copenhagen Bio Science Park, BioInnovation Institute, SCIENCE Innovation Hub and the GTS Institute Bioneer.FARMA

Rigshospitalet

Denmark's most specialised university hospital. Educates health professionals, develops new treatment methods, and collaborates with industry on testing solutions and products for pharma, health tech and healthcare



RAPID BUS LANE



METRO STATION

- **FACULTY OF HEALTH AND MEDICAL SCIENCES**
UNIVERSITY OF COPENHAGEN
- **FACULTY OF SCIENCE**
UNIVERSITY OF COPENHAGEN
- **METROPOLITAN UNIVERSITY COLLEGE**
- **RIGSHOSPITALET**
UNIVERSITY OF COPENHAGEN
- **SCIENCE PARKS, HUBS AND OFFICE HOTELS**
- **STUDENT RESIDENCIES**

- 1 Symbion
- 2 SingularityU Denmark
- 3 DARE2mansion
- 4 House of Practice and Innovation
- 5 Pharma Science Building
- 6 Niels Bohr Building *Under construction*
- 7 Copenhagen Bio Science Park
- 8 ESS Data Management & Software Centre
- 9 Copenhagen Biocenter
- 10 BioInnovation Institute
- 11 Nano-Science Center
- 12 Station Q and Qubiz
- 13 Clinical Research
- 14 Niels Bohr Institute
- 15 Sund Vækst Huset
- 16 Basic Biomedical Research

THE VALUE PROPOSITIONS OF COPENHAGEN SCIENCE CITY



CO-LOCATE

– Where knowledge is just a walk away



Three leading knowledge institutions: The University of Copenhagen, the University Hospital Rigshospitalet and the Metropolitan University College



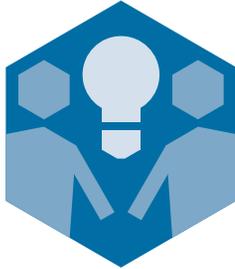
350 innovative companies



160,000 m² in attractive innovation hubs, research parks and office buildings



Attractive residential areas, parks, cafés and restaurants in one of the most liveable cities in the world



CO-CREATE

– Where knowledge transfer is easy



42,000 students, researchers and staff



Highly specialised test facilities and research infrastructure



One point access to university and hospital intellectual property



Leading business accelerators and mentoring programmes



CONNECT

– Where inventors meet investors
*World-class research with international investment potential**



BACTERIOLOGY
Biofilm build-up prevention and antibiotics resistance



METABOLISM AND DIABETES
Drug discovery, prevention, hormones and functional foods



PROTEIN AND BIOINFORMATICS
Drug design, structural analysis, preclinical testing, medicine and glycomics



CANCER
Diagnostics development, clinical testing and novel therapies



NANO-SCIENCE
Molecular electronics, catalytic compounds, advanced materials and surfaces



QUANTUM TECHNOLOGY
Manufacture and design of photonic and electronic quantum components

*IRISgroup & Lauritsen Consulting, Research strengths of Greater Copenhagen with investment prospects, November 2016

Strategic focus area



ATTRACTION

The number of innovative companies in Copenhagen Science City has grown to more than 350 in recent years. Many recruit from and co-create with the knowledge institutions in the area. All in all these have 34,000 researchers, students and staff and state-of-the-art test facilities.

We have established excellent relations with a number of collaborators who proactively use the value propositions of Copenhagen Science City to attract even more companies and talent to the area.

Beijing Genomics Institute, the European Spallation Source Data Management & Software Centre and SingularityU Denmark are all examples of companies and institutions that have joined our innovation ecosystem and created new jobs. Estimates show that over the next 15-20 years, Copenhagen Science City will need an additional 100,000 m² for commercial purposes, corresponding to 5,000 jobs, in order to meet the

demand, including from international companies and research and innovation centres.

Our innovation ecosystem has also stirred the interest of international research parks, knowledge institutions and other relevant actors, who wish to establish a presence in Denmark.

In order to realise our potential we need to expand our network with relevant collaborators and increase awareness of what Copenhagen Science City has to offer.

Goal 2024

- Copenhagen Science City is home to one of Europe's strongest clusters of innovative companies
- Copenhagen Science City is known locally, nationally and internationally as a world-leading innovation ecosystem

WE WILL:

- ◆ Further develop the narrative about the unique strengths and value propositions of Copenhagen Science City
 - ◆ Strengthen partnerships with key stakeholders involved in attracting companies, talent and investments
 - ◆ Ensure that the development of Copenhagen Science City is aligned with the development of Greater Copenhagen and other innovation districts within the region
-

SEE CASE ABOUT
QUANTUM COMPUTERS
ON NEXT PAGE





The critical pillars for successful and productive quantum research already exist at the University of Copenhagen

David Pritchard, Microsoft

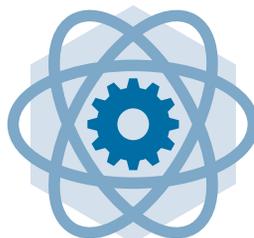
QUANTUM COMPUTERS: RESEARCH HOTSPOT ATTRACTED MICROSOFT

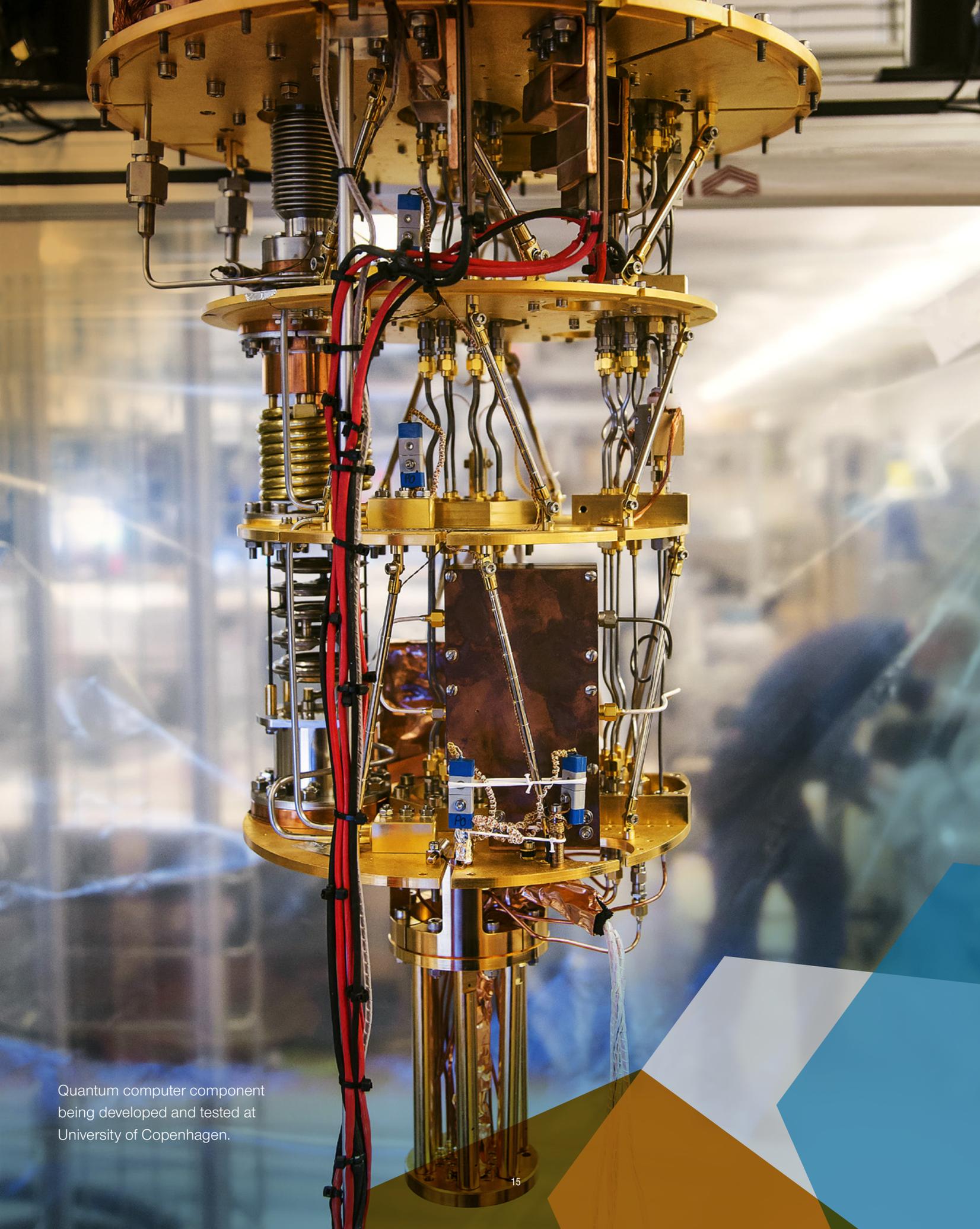
In 2017, Microsoft and the University of Copenhagen signed a long-term collaboration agreement to develop and build the world's first quantum computer. Microsoft employees will be working closely with researchers at the Niels Bohr Institute in Copenhagen Science City in a multi-million dollar project which opens up tremendous new opportunities for science and technology.

"The critical pillars for successful and productive quantum research already exist at the University of Copenhagen (...) an exceptional team of top

quantum researchers, a broad and deep pool of post doctorate and student talent, and a solid baseline of facilities and equipment dedicated to quantum research. We look forward to harnessing this to make impressive advancements in the research and development of a useful, scalable quantum computer capable of transforming the global economy and solving the world's hardest problems".

David Pritchard, Chief of Staff for the Artificial Intelligence and Research division at Microsoft





Quantum computer component being developed and tested at University of Copenhagen.

Strategic focus area

2 INNOVATION, EDUCATION AND ENTREPRENEURSHIP

Copenhagen Science City is a thriving environment for the commercialisation of knowledge. The innovation district houses strong research capacities with extensive experience in collaborating with businesses. Many of the area's innovative companies have been established by or in collaboration with entrepreneurial researchers and students from the knowledge institutions in the area.

Students, graduates and researchers are often employed by the companies in Copenhagen Science City. Most of these are housed by some of Denmark's leading innovation hubs and research parks located in the innovation district: Copenhagen Bio Science Park, DARE2mansion, the Metropolitan University College's House of Practice and Innovation, SingularityU Denmark, Symbion and two innovation hubs at the University of Copenhagen. The innovation district is also home to BiolInnovation Institute, a 50 million Euro research, acceleration and incubation centre for life science businesses, funded by Novo Nordisk Foundation and to Accelerace – Europe's number one seed-accelerator.

Copenhagen Science City is optimally suited to become a world class innovation district with a leading cluster of innovative companies. But we need to

make it easier to find and use research and test facilities within the area and to support networks between knowledge institutions, companies and innovation hubs. We also need to strengthen the incubation environment for researchers who wish to work with the maturation of ideas in a commercial environment. For this purpose we need a better physical framework where investors can arrange events and meetings with young companies and promising inventors.

Goal 2024

- Our innovation ecosystem includes all functions needed for the successful commercialisation of knowledge and is one of the best places in Europe to start or grow an innovation-based company
- Collaborating and sharing knowledge between companies, students and researchers across knowledge institutions is easy and attractive in Copenhagen Science City
- Our strong internal partnership makes us attractive to external collaborators
- The innovation district is part of a shared identity and is used by local stakeholders to promote their interests

WE WILL:

- ◆ Identify and attract relevant functions to support the commercialisation of knowledge
- ◆ Identify potential synergies and connect collaborators including students, researchers and companies
- ◆ Increase awareness of the area's innovation and test facilities and the opportunities for collaboration they offer
- ◆ Establish a network for local innovation hubs and science parks to facilitate knowledge-sharing, joint events, co-branding and the development of joint projects

SEE CASE ABOUT **THE INNOVATION ECOSYSTEM IN ACTION** ON NEXT PAGE



66

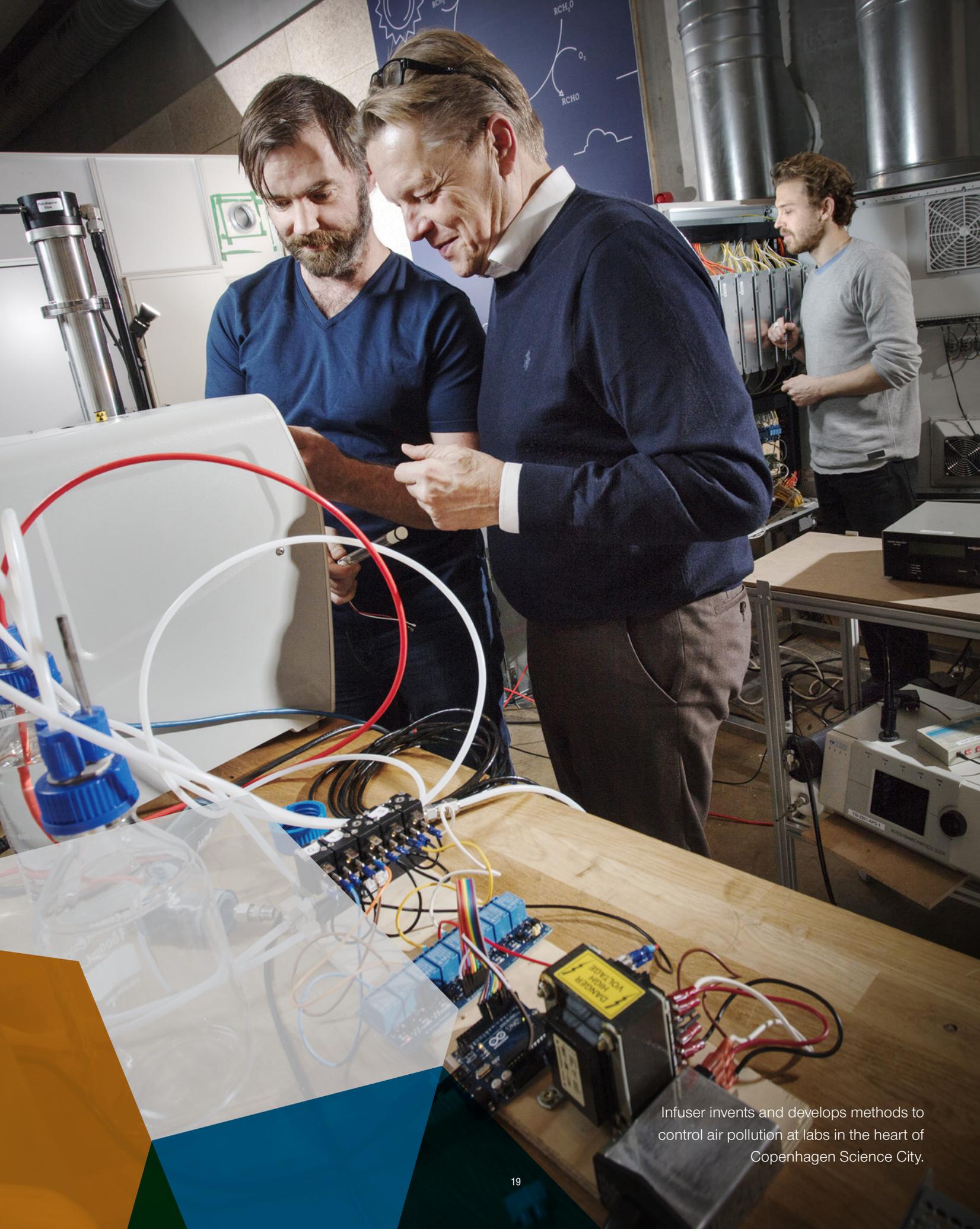
We've created new jobs in Copenhagen Science City thanks to a close collaboration between research and industry

Lars Nannerup, CEO, INFUSER

THE INNOVATION ECOSYSTEM IN ACTION

Air purification company INFUSER takes full advantage of the innovation ecosystem in Copenhagen Science City. Their founding technology is a University of Copenhagen patent. They have employed researchers, graduates and students from the innovation district, and INFUSER works in close collaboration with the Metropolitan University College and the University Hospital Rigshospitalet to further develop their air purification solutions. INFUSER has been awarded the City of Copenhagen's Innovation Prize.





Infuser invents and develops methods to control air pollution at labs in the heart of Copenhagen Science City.

66

We support researchers with knowledge, expertise and risk capital at an early and decisive time.

Birgitte Nauntofte, CEO, Novo Nordisk Foundation

BIOINNOVATION INSTITUTE: BOOSTING LIFE SCIENCE BUSINESS

Research and ideas from the life sciences have the potential to combat disease, improve health or conserve natural resources to benefit people and society as a whole. In order to help more ideas make it from lab to market, the Novo Nordisk Foundation established the BioInnovation Institute in January 2018 with an initial grant of €52m to cover the 3-year establishment phase. It is a nation-wide discovery, acceleration and incubation initiative with an international outreach that will help the most talented researchers and entrepreneurs in developing and maturing research projects to a point at which they can attract capital from Danish and international investors on market terms. Located at Copenhagen Bio Science Park, the BioInnovation Institute is a central component of the innovation ecosystem in Copenhagen Science City.

“Our role will be to help to build the bridges between research and new discoveries and solutions that can benefit people. We support researchers with knowledge, expertise and risk capital at an early and decisive time”

Birgitte Nauntofte, CEO, Novo Nordisk Foundation

The first step to commercialisation
is excellent research.



Strategic focus area

3 PHYSICAL FRAMEWORK

The physical framework underpinning the innovation ecosystem in Copenhagen Science City is exceptionally strong.

Research and educational facilities

Over the last few years, more than one billion Euro has been invested in award-winning state-of-the-art research and educational facilities most of which are already in use by the three knowledge institutions.

The buildings and their facilities are an important part of the value propositions of Copenhagen Science City.

Co-working spaces and networking facilities

Companies looking to co-locate can choose from among 160,000 m² of offices, co-working spaces, start-up communities and lab-facilities. We need to accommodate the growing demand from a range of companies that wish to join our innovation ecosystem. We also need a broader range of facilities for networking and meetings as well as temporary accommodation for international talent on short stays.

Transport infrastructure

Getting around in Copenhagen Science City is easy. We have connected the area with bicycle and pedestrian paths, tunnels and bridges and a new rapid bus service has been established. The innovation district will soon be linked to Copenhagen's driverless metro system and Copenhagen Airport is a mere 25 minutes away. We need to ensure that our new buildings, innovation hubs and metro stations are well connected to our transport infrastructure and continue to promote easy access to external collaborators and facilities.

Urban life

Copenhagen Science City is alive and buzzing. Situated in the heart of the Danish capital, around 42,000 students, researchers and other employees enjoy the area. Parks, recreational areas, eateries and cafés are abundant in and near the innovation district and form an attractive backdrop for meetings, networking, relaxation and sport activities. We need to increase awareness of what is already on offer and strengthen the urban qualities of the area to further enhance its appeal.

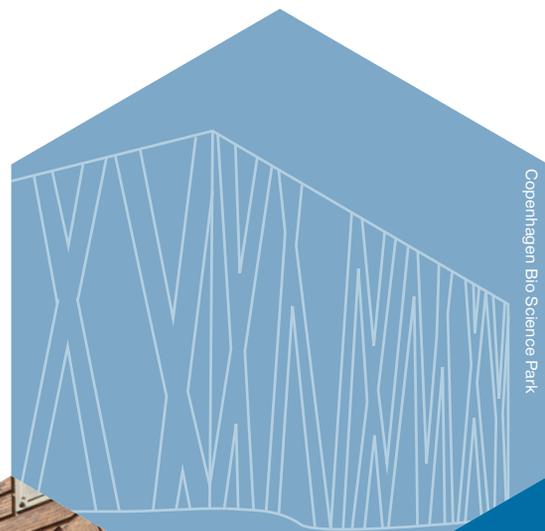
WE WILL:

- ◆ **Establish a network for stakeholders involved with developing the physical framework of Copenhagen Science City**
 - ◆ **Further strengthen the area's urban qualities and transport infrastructure**
 - ◆ **Create more space for companies and other actors who can strengthen our innovation ecosystem**
-

Goal 2024

- Copenhagen Science City is a cohesive, vibrant and open innovation district with excellent connections to surrounding areas. The new metroline, "Cityringen", is up and running and new urban functions have emerged around the central transport infrastructure anchored in a knowledge city network
- The area's physical framework promotes knowledge-sharing and cross-sectorial collaboration among the local knowledge institutions, hubs and companies
- The buildings, facilities and urban spaces are beacons branding the innovation district both locally and internationally
- Copenhagen Science City has the capacity to accommodate innovative companies of varied sizes as well as other stakeholders who can reinforce our innovation ecosystem

SIX NEW BUILDINGS WITH
250,000 M² OFFERING
OUTSTANDING FACILITIES
 FOR RESEARCH, EDUCATION,
 TESTING AND TRIALS



Copenhagen Bio Science Park



Metropolitan University College,
 "House of Practice and Innovation"



University of Copenhagen, "SUND Hub"



House of Practice and Innovation
 Metropolitan University College



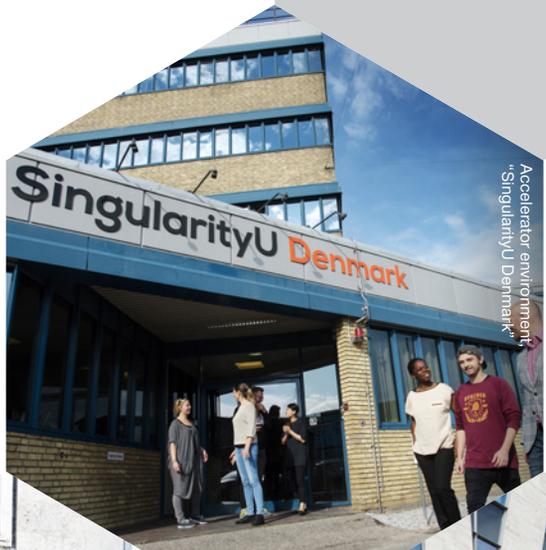
Startup lab "DAREmansion"

A DISTRICT
BUILT FOR
 COLLABORATION



Niels Bohr Building
 University of Copenhagen

INNOVATION HUBS
 SCIENCE PARKS
CO-WORKING SPACES
 ACCELERATORS
 INCUBATORS



Accelerator environment
 "SingularityU Denmark"



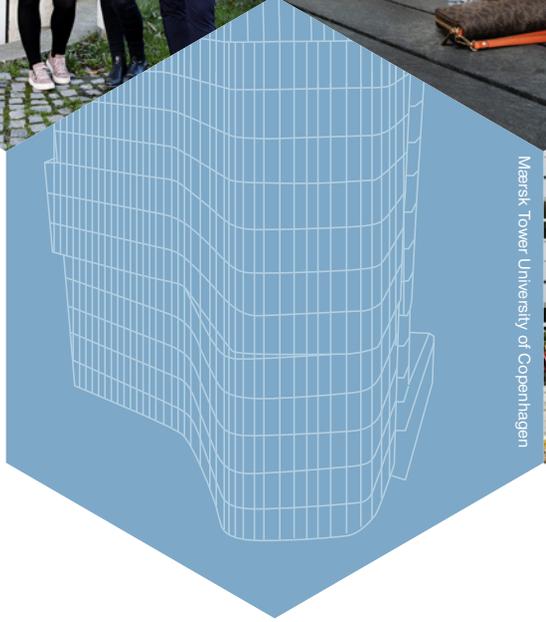
The North Wing Rigshospitalet



University of Copenhagen
 "SCIENCE Innovation Hub"



Pharma Science Building University of Copenhagen



Maersk Tower University of Copenhagen



Office community "Symbion"

ABOUT INNOVATION DISTRICTS



MAP DATA © OPENSTREETMAP CONTRIBUTORS

Innovation districts are a widespread international phenomenon. There are approximately 400 innovation districts and science parks worldwide, of which most are located in the US, China and Japan.

Silicon Valley, one of the better-known examples, was established almost 70 years ago with Stanford University as its 'anchor institution'. In Europe, the development of innovation districts has also come a long way. Copenhagen Science City is one of several innovation districts within Greater Copenhagen, which supports the development of the entire region.

ESS & MAX IV LABORATORY

🚗 1:10 🚚 2:00

LUND

In Frederiksberg Science City and Lyngby-Taarbæk City of Knowledge research strongholds with potential for international investments include acoustics and ultra sound, bioenergy, foods and fermentation, quantum technology, Nano-Science as well as wind and energy storage.*

Innovation districts are geographically defined areas with a particularly high concentration of resources, in terms of knowledge institutions, companies and talent as well as attractive research and transport infrastructure and office facilities.

In well-functioning innovation districts, resources are interconnected into an innovation ecosystem which facilitates collaboration between companies and knowledge environments.

*IRISgroup & Lauritzen Consulting, *Research strengths of Greater Copenhagen with investment prospects*, November 2016



**COPENHAGEN
SCIENCE
CITY**

Sharing
knowledge

www.copenhagensciencecity.dk



Kristoffer Klebak

Head of Secretariat

kk@copenhagensciencecity.dk

+45 35 33 49 83 / +45 22 56 83 88