

Maersk Tower EXTENSION OF THE PANUM COMPLEX AT THE UNIVERSITY OF COPENHAGEN



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Maersk Tower

The Maersk Tower is a state-of-the-art research building whose innovative architecture creates the optimum framework for world-class health research, making it a landmark in Copenhagen. It aims to contribute positively by linking the University of Copenhagen with the surrounding neighbourhoods and wider city.



FACTS

Address: Nørre Campus,

Blegdamsvej, Copenhagen, Denmark Client: The Danish Property Agency for the University of Copenhagen; supported by the A.P. Møller Foundation Architect: C.F. Møller Architects

Landscape architect: SLA

Innovation Lab **Size:** 42,700 m² (24,700m² laboratories, offices and shared facilities and 18,000 m² foyer, canteen, auditoria, classrooms, plant)

Collaborators: aggebo&henriksen,

Cenergia, Gordon Farquharson,

Year: 2010-2017

Engineer: Rambøll









The Tower is an extension of Panum, the University of Copenhagen's Faculty of Health and Medical Sciences, and contains both research and teaching facilities, as well as a conference centre with auditoriums and meeting rooms, connected to the latest technology. With its easily identifiable and dynamically curved shape, the 15 storey research tower stands as a sculptural linchpin for the University's Faculty of Health Sciences, whilst equally forming a visible link between the city and the North Campus.

In order to create architecture for world-class health research, it is important to design a venue which encourages many opportunities for coming together, transcending different disciplines, from the general public to the research community. This helps to communicate ongoing research activities, leading to knowledge sharing and inspiration for new and groundbreaking research.



Transparent and Welcoming





The Tower rests on a low star-shaped base that reaches out into the landscape towards the city. It contains shared and public facilities, such as lecture halls, classrooms, the canteen, show lab, conference rooms and the book café. The foyer can also be found in the base, where the entrance staircase stands like a piece of furniture in the room, with its warm wooden surface inviting you to pause on the elevated seating steps.

The base connects the functions of the existing Panum complex with the Maersk Tower. The central space of the base forms an open and dynamic gathering place where researchers, students and guests meet and cross paths while heading to and from their activities. A deliberate layout of the functions of the base ensures short distances from the central space, creating a bigger interface between researchers and students as they move around between the base's various facilities. The proportions of the base are carefully adjusted to the lower buildings of the existing Panum complex, which the Maersk Tower connects to. The existing Panum complex, built in the 1970s, is considered to be a Brutalist masterpiece, and the Maersk Tower looks to refer to it clearly both in terms of colour and façade rhythm. But unlike the existing Panum complex, which appears introverted, the base of the Maersk Tower embraces the city and invites the public in.

With its transparent façade, the entire base appears open and welcoming, and from Campus Park, you can follow the many activities going on in the base. At the same time this transparency allows the interior of the building to blend in with the external green landscape.





Optimal Conditions for Innovative Research



The Tower itself holds all research facilities, in innovative and modern laboratories. A considerable focus on visibility and transparency in research is underlined by the use of glass in the interior décor while plug-and-play functions ensures both scientific innovation and flexibility. On each floor the Tower's functions are linked together in an efficient loop, which provides shorter travel distances and strengthens opportunities for teamwork.



A continuous sculptural spiral staircase visually and physically connects the open fifteen floor atrium, creating an extensive three-dimensional sense of space. Close to the staircase on each floor there is an open and inviting "Science Plaza", which serves as a natural meeting and communal space for the many employees. A large vertical shard of glass in the copper shutters of the façade, makes the spiral staircase and the Science Plazas visible externally and ensures, together with the open base, visibility in relation to the activities of the tower as well as a spectacular and inspiring view over Copenhagen.

Innovative Façade







Isometric detail of facade shutters 1:125

The façade of the Tower is divided into a relief-like grid structure of storey-height copper-covered shutters. The copper coating indelibly references to Copenhagen's many copper church steeples, which, together with the Tower, poke up amidst the homogeneous cityscape. The shutters provide a deep relief effect to the facade, breaking down the considerable scale of the Tower. In their expression, they also offer a sense of fineness and verticality.

The shutters of the façade function as movable climate shields, that automatically opens or closes according to direct sunlight, ensuring direct heat gain in the laboratories is kept to an absolut minimum. The shutters primarily shield against direct sunlight yet also allow daylight to filter through its fine-meshed perforations.

The Tower's form and shutter design contribute positively to removing the wind turbulence that can occur around tall buildings, ensuring a pleasant microclimate in the park landscape at the base of the Tower.

The Campus Park



By selecting a tower typology, there is greater allowance for a green and urban campus park, which is open to everyone and therefore involves and develops the surrounding neighbourhood. With the Campus Park, the University opens itself to the local area in an attractively designed and varied green urban space, open to everyone. The Campus Park offers outdoor study and a recreational space for researchers and students, as well as a new public park.



From Blegdamsvej, Campus Park is accessed via a landscaped apron with a grassy slope. The apron is designed so that it can cope with future climate change. Excess water seeps down between the tiles, where it is collected in a large reservoir. The rooftop gardens of the low buildings can also absorb extreme downpours. The surplus rain water from the park is used for example for the irrigation of the park and to flush the toilets in the building.

A unique element of the new Campus Park is the zigzagging 'floating path' that leads pedestrians and cyclists across parts of the Maersk Tower. This allows the public the opportunity to get up close to the building and the researchers while at the same time, creating a new connection between Nørre Allé and Blegdamsvej. Similarly, researchers and students can cycle directly to work or school via a cycle path that feeds into a bicycle cellar, where the gate automatically opens as a cyclist approaches. In addition, there are plenty of outdoor bicycle parking spaces.

Sustainability

The Maersk Tower hosts Denmark's most energy-efficient laboratories, where waste energy is recycled to a hitherto unprecedented level. This in combination with the movable heat shielding of the façade and other energy-saving measures, makes the building a pioneer of energy-efficient laboratory construction with a maximum primary consumption of only 40 kWh/m². This corresponds to a halving of a traditional laboratory building.



Sustainability section





Company Profile

C.F. Møller Architects is one of Scandinavia's leading architectural firms, with 90 years of award-winning work in the Nordic region and worldwide.

Every day we create architectural quality based on innovation, experience and Nordic values. This assures sustainable and aesthetic solutions with lasting value for clients, occupants and society.

A UNIQUE DESIGN APPROACH

Our design solutions are methodically and holistically created following a rigorous analysis of the local context. We look to set new global standards by fostering a design approach which uniquely integrates urban planning, landscape, architecture and design of specific building components.

We regard environmental concerns, resource-consciousness, healthy project finances, social responsibility and good craftsmanship as essential elements of our work. This ethos is fundamental to all our projects, a thread which runs from masterplanning to detail design.

Since our founding in Denmark in 1924, we have contributed significantly to the development of welfare societies in Scandinavia and the rest of the world. We are continuously recognised and awarded internationally for setting new architectural standards, due to our strong focus on the functional, artistic and social value of architecture.

Today C.F. Møller has app. 300 employees. We have offices in Aarhus, Copenhagen, Aalborg, Oslo, Stockholm, Malmö, London and Berlin.



Core Values

VISION

Our vision is to improve life for people and planet.

MISSION

Our mission is to holistically create solid, quality solutions based on Nordic values adapted to future global challenges.

ASPIRATION

We aspire to be global influencers by caring for the local context based on innovation, quality and sustainability.

PROMISES

We promise longevity and clever solutions in everything we create by delivering design that can pass the test of time and serve both clients and users with great value from start to finish.

SPIRIT

Our company team spirit is based on simplicity, clarity, honesty, openness and passion.

VALUES

Our values are strongly focused on professionalism, credibility, quality, innovation, agility and loyalty.



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The Maersk Tower is a state-ofthe-art research building whose innovative architecture creates the optimum framework for world-class health research.

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