

### \* \* \* \* $\star$ \* **EUREF** Campus ★ Düsseldorf $\star$ \* \* \*

# A place of the future for research and work on subjects

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to renewable energy,

future mobility, nergy efficiency for

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# Innovation campus and real-world laboratory

#### SHOWCASE OF THE SHIFT TO RENEWABLE ENERGY AND FUTURE MOBILITY

With EUREF-Campus Düsseldorf, EUREF AG has set up an international showcase for the shift to renewable energy. It is the second innovation campus of its kind in Germany. Around 2,500 employees from established companies and start-ups as well as science and research will be working in close collaboration and in an inspiring environment on the future subjects of energy, mobility and sustainability.

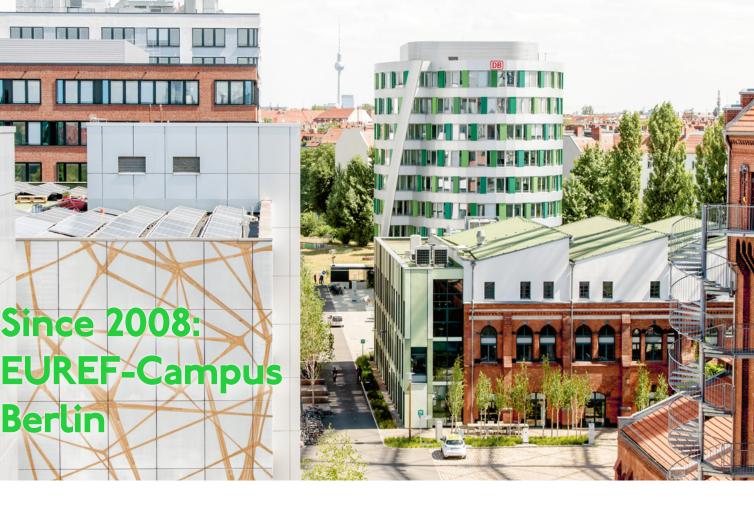
EUREF-Campus Düsseldorf will be a place where ideas are created, implemented and tested for feasibility. By means of intelligent architectural approaches, the use of regenerative energy media, new forms of energy storage and consistent networking of state-of-the-art technology, a highvisibility place of the future will be created as a model which can be implemented in many of the world's major cities.

"In Düsseldorf, we would like to demonstrate that the shift to renewable energy is possible and affordable. EUREF-Campus Düsseldorf will be a place of the future."

> REINHARD MÜLLER CEO EUREF AG



EUREF-Campus Düsseldorf meets the German Federal Government's CO<sub>2</sub> climate protection targets for the year 2050



#### **3.500 PROTAGONISTS AT WORK ON** FUTURE SUBJECTS

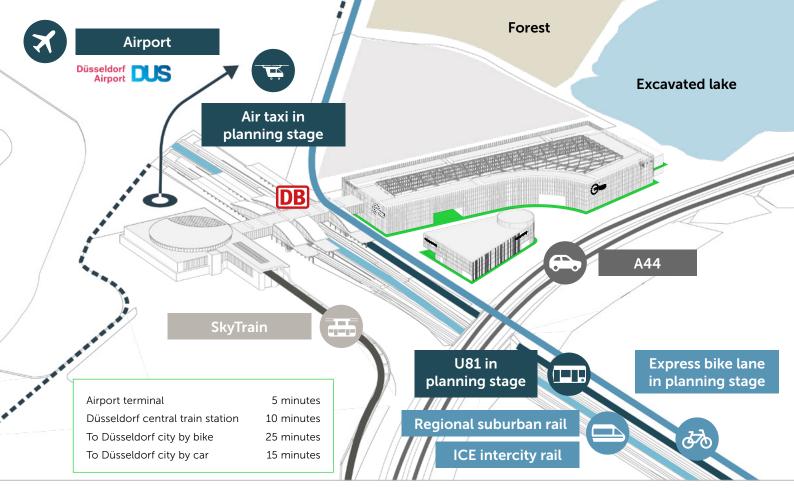
**Since 2008:** 

Berlin

EUREF-Campus Düsseldorf will be the second of its kind. Some ten years ago, Reinhard Müller, architect and CEO of EUREF AG, had the idea for a European energy forum for the subjects of mobility and the shift to renewable energy. Since 2008, the EUREF stars have been shining on the "Gasometer" (Gasholder) of the former Schöneberger gas works in Berlin.

EUREF-Campus Berlin measures 5.5 hectares. The buildings were modernized as heritage sites and renovated for gastronomy and as a platform for electric mobility. Energy-efficient and intelligent buildings were newly constructed. Today, they are home to over 150 companies from the commercial sector as well as science and research. Experiences have already been made here with autonomous shuttle buses and cleaning vehicles. A highly technologized energy hub generates heat, cooling and power in an environmentally-compatible manner.

About 3,500 protagonists are at work at EUREF-Campus Berlin on the subjects of the future such as energy management, mobility and climate protection. It is a reference site for the smart city strategy of the State of Berlin.



# Connected innovation

#### CONVENIENT FOR TRANSIT

Located adjacent to Düsseldorf's international airport, right next to the Autobahn and the Düsseldorf airport train station, with connections to local, regional and intercity transit, the site of EUREF-Campus Düsseldorf is extremely convenient. There is direct access to the train station and SkyTrain with connections to the airport terminal. The transit hub will be further extended in the years to come. For example, an extension of the U81 is planned. And a new express bike lane will pass right by the Campus. In addition, there is to be a landing pad for air taxis in the future.

# EUREF-Campus: The concept

#### INNOVATION AND MOBILITY OF THE FUTURE

In Düsseldorf, a further development of EUREF-Campus Berlin in terms of strategy and content is taking shape. The construction of two buildings with 40,000 square metres of rentable space is planned. The proximity to the airport, railway and motorway requires a special kind of architecture which still promotes creativity and offers high levels of living and workplace quality.

EUREF AG rises to this challenge: thus, a building in the form of a green innovation campus is planned with open courtyards which are covered by a translucent solar glass roof, resulting in a green atrium. Plants help create a good climate, in conjunction with the roof construction and special ventilation technology. The air for the building is ionized by means of a innovative process which does not generate ozone – clean air for a pleasant working climate.

In the second new building, a Mobility-Hub is set up as a testing and founding platform for the mobility of the future: e-mobility, sharing models for e-cars, e-bikes, e-scooters and autonomous driving can be developed and tested.

EUREF-Campus Düsseldorf provides room for ideas: in addition to Schneider Electric with its Germany headquarters, the anchor tenant, start-ups, companies doing regional and international business in the fields of energy, mobility and environmental protection as well as climate protection technology will find their place here.



### Campus concept and building structure

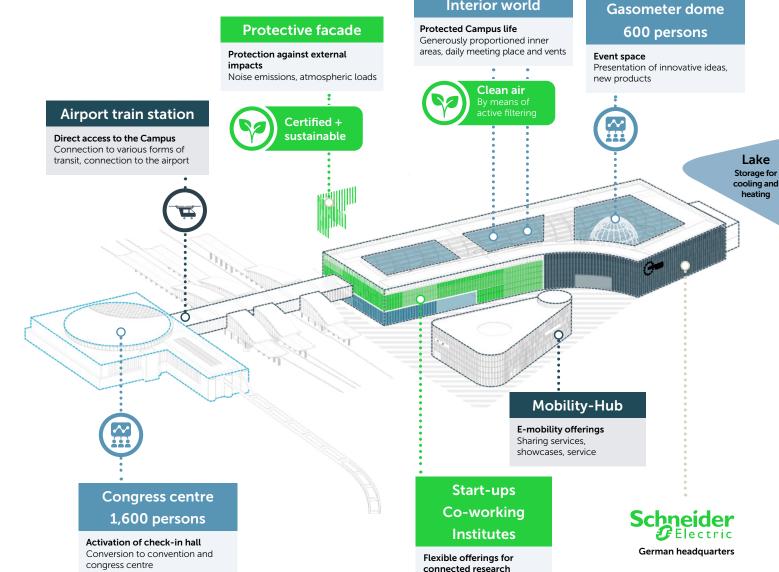
#### **Translucent**

glass roof

Interior world

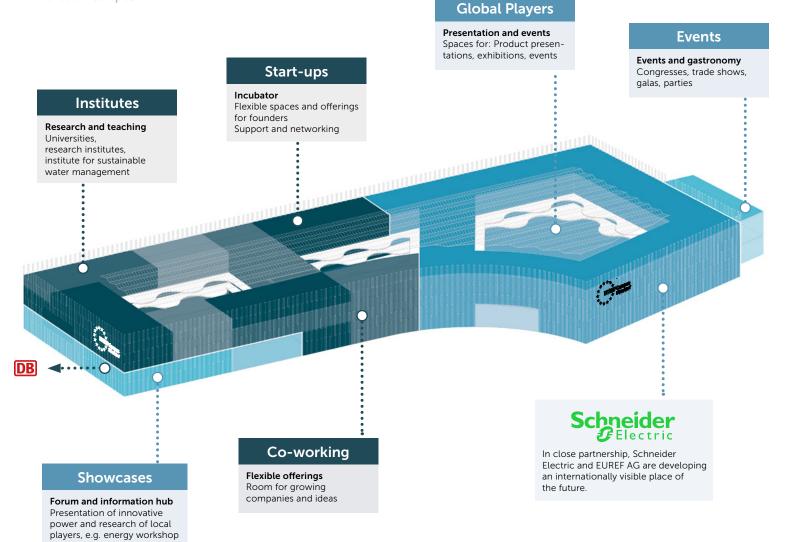
Room for varying companies

and ideas



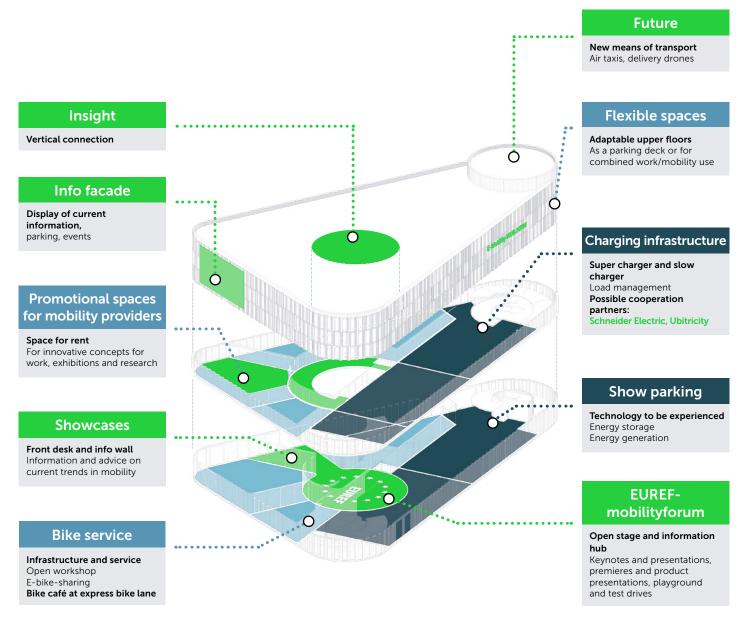
### Usage concept

In addition to Schneider Electric with its Germany headquarters, start-ups, companies doing regional and international business are finding their place at the innovation campus.

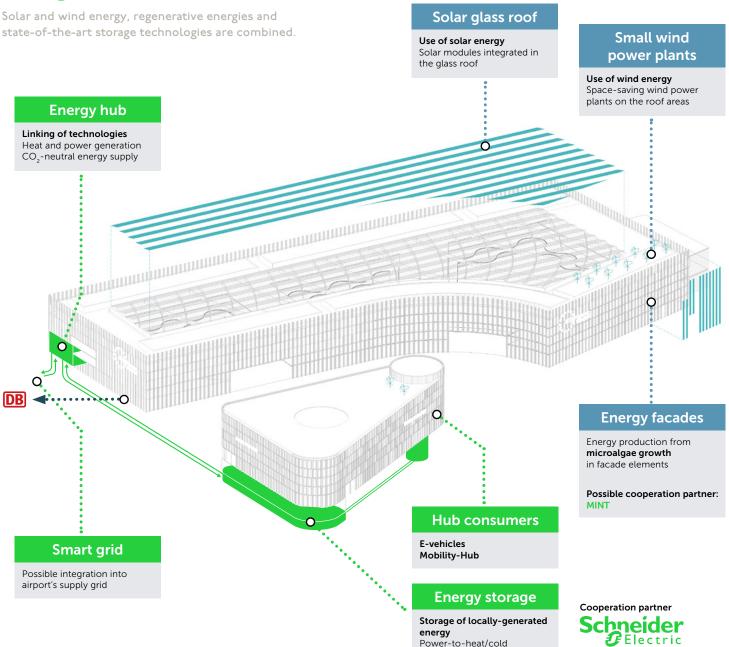


### Spaces in the Mobility-Hub

A real-life laboratory and testing grounds for e-mobility



### Energy concept



Power-to-fuel/power

# EUREF-Campus Düsseldorf

Indoor garden with trees and agricultural crops these provide a favourable climate and a high-quality living space

#### **Global players**

Gasometer dome Space for presentation, innovative ideas, new products

#### **Events**

Spaces for various events Congresses, trade shows Lectures, presentations Galas, parties

tereter.

#### Showcases

Public spaces Gate to the Campus Distributor function to train station and Ahrensplatz



**Communication space for founders and research** New work typologies Gastronomy and leisure



# Dome

"JAUCH" DOME FOR 600 GUESTS

Günther Jauch made it famous: in 2011 he started his political talk show in the glass dome, which was broadcast from EUREF-Campus Berlin. In 2006, the dome was designed for events for the Football World Cup and its form was based on the dome of the "Reichstag". Now it is coming to Düsseldorf.

Subject-matter of the future

### Subject-matter of the future Mobility

#### SHOWCASE OF E-MOBILITY

The mobility hub is designed as a research campus for intelligent mobility concepts and as a showcase for electric mobility. Research is also conducted on other drive systems, e.g. hybrid and hydrogen, as well as on inductive charging options.

The hub is being developed in collaboration with the City of Düsseldorf, Flughafen Düsseldorf GmbH and partners including Deutsche Bahn. There are showrooms, trade fairs and exhibitions on e-mobility. The hub simultaneously serves as a transit zone for commuters and airline passengers. Sharing models, e-bikes and small e-scooters are provided for getting to and from work or for the "last mile". With everything connected on a neighbourhood app.

The batteries of the e-cars serve an additional purpose: the charging stations can be operated bi-directionally. The connected cars help stabilize the entire power grid of the Campus.



Germany's largest solar charging station is at EUREF-Campus Berlin.

©inno2grid\_ Vipul Toprani

### Shift to renewable energy ENERGY HUB AS THE HEART

The shift to renewable energy is something tangible, with power and heat generated in an environmentallyfriendly way. The aim is a  $CO_2$ -neutral supply of the Campus. Thanks to a highly technologized energy hub and the use of solar power, wind power and renewable energies, the  $CO_2$  climate protection targets for 2050 are achieved even before commissioning – and at the same price as conventionally generated energy.

This is made possible, by means of a solar glass roof on the innovation campus and rooftop wind power plants. Bioreactors with algae growing inside are installed on the facades for energy production. Algae consumes  $CO_2$  and produces oxygen and heat. The back-up is a combined heat and power plant which runs solely on biomethane. Renewable energies are stored using power-to-heat and power-to-cold.

EUREF-Campus Düsseldorf is smart in terms of energy: it will be part of a network of environmentallycompatible energy generators and storage providers in the region.





**Bioreactors on the** 

## Research

#### **BIGGEST EV-CHARGING STATION IN NRW**

EUREF-Campus Düsseldorf will be an incubator for researching new technologies and applications. Autonomous vehicles and innovative charging technologies will be tested; this is to be home to the biggest ev-charging station in North Rhine Westphalia. Future mobility forms will be developed, like the use of drones for transporting goods or air taxis for day-to-day use.

With the indoor garden, a model is evolving for researching and perfecting the interplay of architecture, air-conditioning and ventilation technologies on a "living site", in addition to exploring new approaches. Sustainability and climate protection are the research areas. Disciplines such as sustainable water and rainwater management are integrated. and recycling management and recycling economy specialists are involved.



Subject-matter of the future

#### ENJOYING THE INDOOR GARDEN

EUREF-Campus Düsseldorf constitutes a unique platform in terms of its topics. It offers guests from political, commercial and scientific arenas as well as the general public a broad space for discourse, information exchange, trade shows and events. The glass dome is available for all of these events, and more.

Campus life will unfold especially in the indoor gardens. In the green courtyard, not only can one relax and reenergize, but also find novel spaces for teamwork and creativity. On the ground floor of the innovation campus, there will be restaurants with regional cuisine and bistros. The former check-in hall could be used for events and converted into a convention and congress centre for 1.600 participants.

Events. trade shows and inspiring gastronomy

FutureMobility



climate.

The research on plants contributes to creating a good



### Schneider Electric as the anchor tenant at EUREF-Campus Düsseldorf

Schneider Electric is a global specialist in the energy sector, primarily in the area of energy management and automation. Schneider Electric with its German headquarters will be the so-called anchor tenant at EUREF-Campus Düsseldorf. 750 employees will be working here initially; with more than 1,000 expected in the future. On the Campus premises, together with other companies, Schneider Electric will be demonstrating how a smart grid works in actual operation. "It is my conviction that access to safe and sustainable energy is a basic human right. And at the same time we all know that the way we use energy today is not sustainable. EUREF-Campus proves that a solution to the energy paradox is possible today."



JEAN-PASCAL TRICOIRE Chairman & Chief Executive Officer Schneider Electric

# **EUREF-Campus**

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40,000 sqm of office space

2,500 people are employed in the real-life laboratory of the shift to renewable energy

RW-Mobility HUE

EUR 200 million in investments

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