The Mermaid's Forest

Capture energy from nature: The Eco-warehouse

MF879344

A XXI century Eco-warehouse inspired by Danish industrial history.

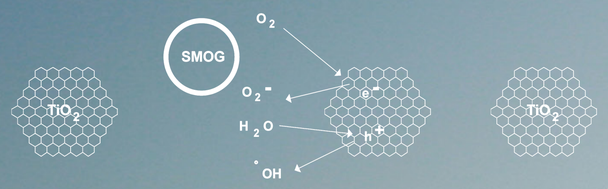
A new meeting place to attract Locals and Tourists

3456 wind power panels

Benefit from the prevailing winds to produce wind energy via the facade panels.A modular design, where the movement of panels/ blades is translational with respect to wind, as opposed to rotating blades of current wind turbines

5544 air cleaning panels

Smog eater panels- Titanium dioxide coating: the panels will help clean the air via a superficial non-toxic chemical treatment.The generated free radicals attack and break down the NOx in smog to a harmless nitrate.



AN ATTRACTIVE, CLIMATE-ADAPTED CITY

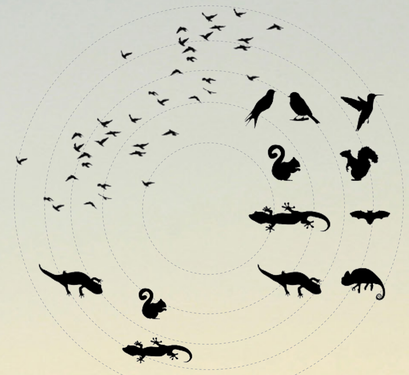
Climate considerations: Copenhagen is in the oceanic climate zone (Köppen: Cfb).Its weather is subject to low-pressure systems from the Atlantic which result in unstable conditions throughout the year.Apart from slightly higher rainfall from July to September, precipitation is moderate. While there can be snow from late December to early March, there can also be rain with average temperatures around the freezing point.The eco-warehouse interior Forest: Forests can help us address climate change by reducing the amount of greenhouse gases in the atmosphere.They do this by absorbing carbon dioxide (CO_2), using the carbon (C) to produce sugars for tree growth and releasing the oxygen (O_2) back into the air. As trees grow, they store carbon in their leaves, twigs and trunk, and in the soil around them.National forest such as: Silkeborgskovene,Rold Skov,Klosterheden,Gribskov or Almindingen are great examples.We aim to sensibilize people of this fact by creating an artifitial forest by symbolically using vertical eco-poles.

5532 Photovoltaic panels

The South facade will produce PV energy to be stored, transformed and transmit the electrical power to a grid connection point

Photovoltaic production: estimate of the annual kWh (kilowatt-hours)generated by the South Facade

PV module typology	0,200 Polycrystalline
Number of modules	5532
Orientation	South
Inclination	45°
Annual production	933179 kWh/year
C02 annual savings	650 Tons/year



Daylight and Ventilation

Ecology + Biodiversity

The **waterfront experimental garden** as a new floating and floodable area which will allow citizens to experience by themselves new types of aquaponic systems (aquaculture+hydroponics), which can contribute to the city future food supply demands.On the interior forest space, different panels will be used to inform citizens about the City Climate plans and on how their city measures the risk of flooding from stormwater and sea-water.