City Campus at the Weser

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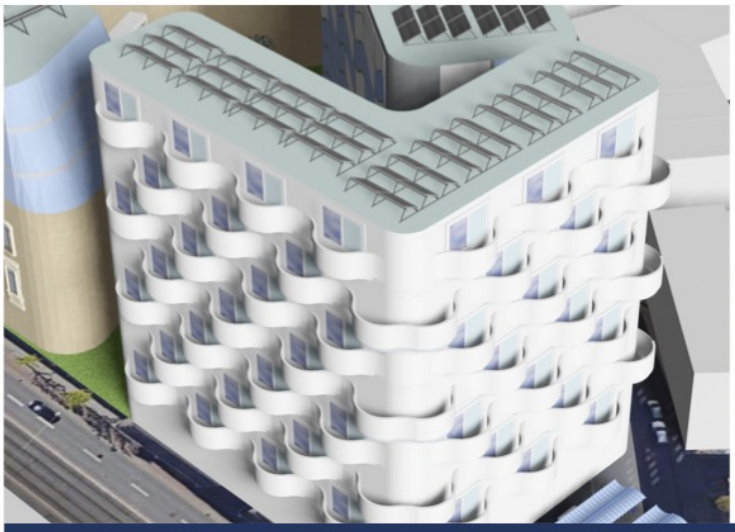
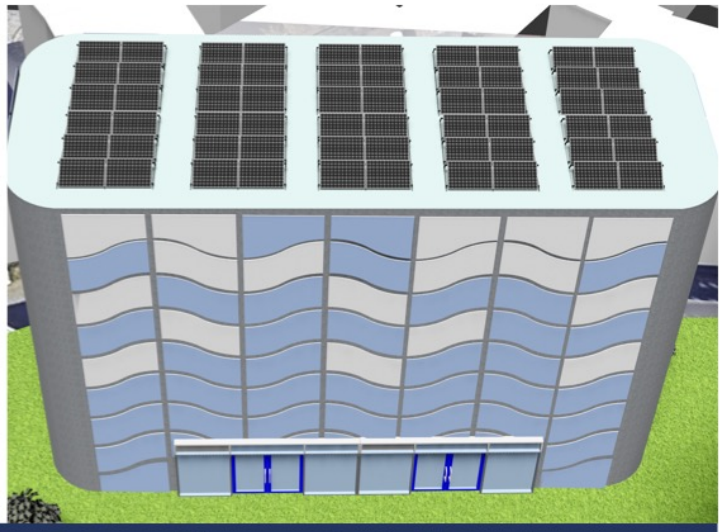
Overview of the Campus



Student Dormitory



Library & Cafeteria

Terrace

Bicycle Parking

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Project background

This project aims to facilitate the future growth of the city of Bremen and the development of educational and research facilities in the town. By the end of 2020, the former Sparkasse bank headquarters in Am Brill relocated to the Technology Park. After that, the historic Sparkasse bank property at Am Brill became the focus of the University of Bremen's City Campus. The new City Campus should be able to accommodate roughly 5000 students. In order to reestablish Sparkasse Am Brill site as a city campus, we believe that the most important motto is to revitalize Bremen city centre while over 5000 students study there. Therefore, we decided to use the image of the Weser River, which is historically associated with Bremen. This design is based on the notion that Bremen city centre would become more dynamic in the future, just like it has developed along with the Weser.

Furthermore, we design three major complexes for multiple purposes, including main academic building, dormitory, library and cafeteria. The curved corners of each building will minimize the effects of wind, so that wind will not have a significant impact on the campus due to its location near the river. In addition, solar panels will be installed on the roofs of each building to generate eco-friendly energy, and terrace with trees and lawns will provide a space for students to relax and enjoy nature in campus.

The technique and functionality of the individual buildings

In our design, we chose the B-spline curve among various kinds of curves. The B-spline curve is the smoothest curve accessible and is a free-form curve composed of Bézier curves of the same degree joined at their ends. B-splines exist piecewise within the convex hull of underlying implicit Bézier control polygon, and they have absolute local control. Each building's edge is curved with a B-Spline curve. The ancient Sparkasse building remains the main building, with new floors gradually curving above it and for classrooms, laboratories, and offices. To symbolize the rive, B-spline curves are used for the balconies of the dormitory, the roof of the bicycle parking, and the windows of the cafeteria and library building. The cafeteria and library building will contain the cafeteria on the first and second floors, study rooms on the third, and the library on the fourth and fifth. The parametric wave design of the windows will separate the environment by making the first three floors transparent and the upper two floors less transparent. The residence building will be the tallest building on campus, maximizing the number of students who may live on campus to energizing Bremen downtown.

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