

ADDITIONS AND SUBTRACTIONS TO SOLVE A COMPLEX EQUATION



CITY AND STATE LIBRARY POTSDAM, GERMANY

Nestled in the historic centre of Potsdam, this six storey library is an excellent example of the modular, pre-cast building style that was characteristic of 1970s East German architecture. The refurbishment brought the facility up to the highest contemporary standards, optimising the space to create an additional 7,500m² that houses a new adult education centre and knowledge area.

Appointed as structural engineers, the BuroHappold Engineering team developed ways to incorporate modern additions to the building into the existing structure, preserving the integrity of the shell to ensure the project's stability and sustainability. Initially, we strengthened the existing pile foundations by reinforcing them with additional piles as necessary.

By introducing new lightweight slabs that could support the new spaces without impacting on the original modular ones, we were able to reduce the weight of the building and the load acting on both the old and new foundations.

In order to optimise the shading and heating of the new roofed courtyard we also carried out a series of thermal simulations, resulting in a comfortable, energy efficient environment.

With careful planning, our team was able to integrate a new transparent facade, new courtyard roof, auditorium and an elegant spiral staircase that compliments the existing structure while improving its usability.

By understanding both the constraints and opportunities provided by this project, our team was able to harness the benefits offered by the original structure and amalgamate them with new features to create an accessible library facility. Today, the library is known in Potsdam as the 'smartest house in the city' and is thriving as a hub of lifelong learning.

CLIENT
KIS Potsdam

ARCHITECT
B+P Reiner Becker GmbH

PROJECT VALUE
€17 million

DURATION
2009 – 2012

SERVICES PROVIDED BY
BUROHAPPOLD
Structural engineering (German HOAI Stages LP 2–6, 8), building physics and simulation