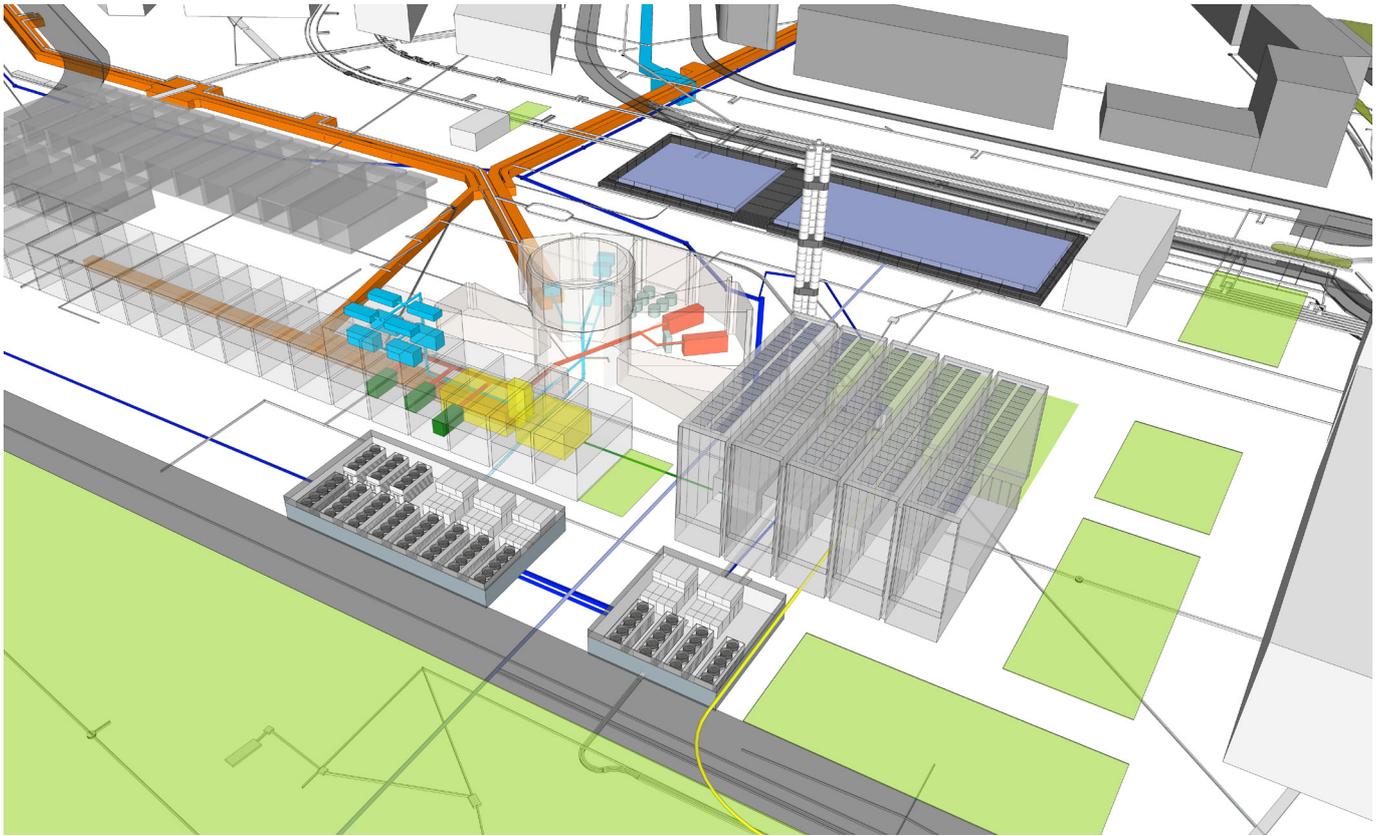


INTELLIGENT INFRASTRUCTURE TO SUPPORT A SMART CITY



TEGEL ENERGY CENTRE BERLIN, GERMANY

Berlin's former main international airport, Flughafen Tegel (TXL), is to be redeveloped into a smart city designed to meet the capital's future needs and aspirations. The Urban Tech Republic will feature an industrial park with the capacity for 800 companies employing 17,500 people, as well as a university campus with research facilities for 5,000 students. There are also provisions within the wider site to provide up to 5,000 carbon neutral apartments.

BuroHappold Engineering was appointed to deliver a long-term strategy to support the site's transition from airport to its new incarnation as Germany's first smart city. We developed an integrated infrastructure scheme, including plans to upgrade the existing energy centre at the TXL site. As it was to power one of the most cutting edge developments in Europe, our client expected the revamped energy centre to demonstrate innovation and technological prowess. Our team had to find an integrated approach that identified and responded to users, usage requirements and spatial conditions.

To meet these demands, our team created a modular scheme to phase out the obsolete technology being used on site, which we will replace with innovative concepts such as Organic Rankine Cycle (ORC) and Power to Gas (P2G) technology. Alongside these technological and strategic elements, there will be an information centre on technology aiming to teach a wider audience about the benefits of low-energy concepts.

Our design is a functional and forwardly integrated urban design concept. It responds intelligently and saves resources to meet the needs of the site and its various demands, and the new district will serve as a flagship for pioneering urban technologies. We went above and beyond our brief, creating the framework for the National Centre for Energy Transition and establishing implementation costs for the entire project.

CLIENT
Tegel Projekt GmbH

ARCHITECT
Gerkan, Marg and Partners

PROJECT VALUE
€21m

DURATION
2015 -2017

**SERVICES PROVIDED BY
BUROHAPPOLD**
Strategic planning, BIM and data management, design project management, energy consulting, infrastructure and utilities engineering, smart space