

THE WORLD'S LARGEST TERMINAL BUILDING



## BEIJING NEW AIRPORT BEIJING, CHINA

BuroHappold was part of the consortium tasked with designing the Beijing New Airport. The concept is for an impressive 700,000m<sup>2</sup> terminal that is user focused, energy efficient, and built with the flexibility to sustain future growth.

It was essential to deliver a design that allowed passengers to move easily and intuitively around the vast new terminal. Adaptability and sustainability were also key drivers, as the airport will accommodate 45 million passengers per year on opening, rising to 75 million over the next few years. Our client also wanted to ensure the terminal was a welcoming and inspiring place for passengers, characterised by open and expansive interiors.

We worked extremely closely with the architect to integrate the engineering design into the architectural form, allowing us to render the spacious areas desired by our client and resulting in a terminal that is at once highly functional and aesthetically beautiful.

Environmental drivers played a key role in the development of our concept. We incorporated numerous passive elements into the design, including shading strategies, high performance glazing, and carefully placed roof lights that optimise the energy performance of the terminal. These solutions will result in a predicted 50% reduction in overall energy consumption and CO<sub>2</sub> emissions.

The radial design of the terminal features a central hub from which six curved spokes extend, which reduces the distance passengers will need to travel to reach their gate to a maximum 600 metres and ensures this huge building is easy to navigate.

The strength of the collaboration between our engineers and the architect allowed us to take a highly creative approach to the brief, developing a design for Beijing New Airport that delivers added value to our client, and an iconic aviation facility for the city.

**CLIENT**  
Capital Airports Holding Co

**ARCHITECT**  
Zaha Hadid Architects

**PROJECT VALUE**  
\$11.2 billion

**DURATION**  
2011 - 2015

**SERVICES PROVIDED BY  
BUROHAPPOLD**  
Civil and structural engineering, facade engineering, building services engineering, sustainability consultancy, acoustic engineering, fire engineering, passenger modelling, capacity analysis and simulation studies