

COMPLEX GLAZING THAT CAN TAKE THE HEAT



## HAMAD INTERNATIONAL AIRPORT DOHA, QATAR

Opened in 2013, Hamad International Airport serves as the official gateway to the Middle East and has set the benchmark in airport service standards, efficiency and passenger convenience. It has the capabilities to handle 50 million passengers, 2 million tonnes of cargo and 320,000 aircraft each year.

BuroHappold Engineering provided both base design and structural engineering services for the airport facade and skylight glazing systems, as well as a stunning 32,000ft<sup>2</sup> interior chandelier. With vertical glass facade elements in excess of 80ft, we incorporated specialty structures that could support both unitized and point-supporting glazing systems.

The facades were not only complex in their design and geometry, but had to perform efficiently against the harsh environmental conditions posed by the Middle Eastern climate. To analyse the extent of the systems needed to optimize the performance of the facades, we undertook extensive computer

modelling using a pantheon of tools including non-linear analysis, parametric design and visualization software. In addition, we provided consulting services for the design and construction of the symbolic mosque dome and 30,000ft<sup>2</sup> rainscreen wall.

Our final role was to coordinate and oversee the construction of the vast 1,000,000ft<sup>2</sup> curtain wall in the main terminal and concourse, which proved to be no small feat of engineering. We tackled it with the same can-do attitude, careful planning and meticulous attention to detail that we had applied across the rest of our work, enabling us to complete this final elegant piece in the Hamad International Airport jigsaw.

### CLIENT

New Doha International Airport Steering Committee

### ARCHITECT

HOK

### PROJECT VALUE

\$1.2 billion

### SERVICES PROVIDED BY

BUROHAPPOLD

Structural engineering, facade engineering

### PPA

50 million