



## ASTANA RAIL STATION KAZAKHSTAN

The Astana Rail Station project consists of approximately 30,000m<sup>2</sup> of terminal building, 20,000 m<sup>2</sup> of retail and office space and 50,000 m<sup>2</sup> of carpark; a total of approximately 100,000m<sup>2</sup> of mixed use complex, connecting the city with the rest of the country and responding to the needs of a growing capital city. Buro Happold's Smart Space team were appointed to build an overall picture of people movement within the railway station intergrating design and operational solutions to potential congestion issues. The team has provided high level design advice at the preliminary stages of this project and is familiar with early stage concept designs. The comfort, safety and ease of movement of passengers is fundamental to the success of any railway station. By collaborating efficiently with local city authorities, BuroHappold have developed a strategy for movement of people, vehicles and goods to and from the station that accommodate the flow levels of 38,000 people per day with a greater reserve capacity for future

resilience. BuroHappold Smart Team has provided pedestrian dynamic modelling in response to operational scenarios that has been established with Kazakh Rail Authority to enable maximum passenger comfort while achieving efficient movement within the rail station. Advanced simulation tools such as Legion Spaceworks and our in-house tools SmartMove and SmartSpaceAnalyser help us assess the functioning of transport hubs in diverse critical scenarios e.g. embarkation, disembarkation, waiting, shopping, transiting to onward transport modes, and emergency evacuation. Testing of the design against real-world scenarios helps optimise the design by maximising throughput with available space and appropriate management. SmartMove's capability for rapid modelling of passenger flow is particularly valuable for early stage assessment and design optioneering.

### CLIENT

Sembol Construction

### ARCHITECT

Tabanlıoğlu Architects

### PROJECT VALUE

Confidential

### DURATION

Ongoing

### SERVICES PROVIDED BY BUROHAPPOLD

Structures, façade and façade access, smart space - people flow and space analysis, security, traffic, sustainability, waste management, vertical transportation.