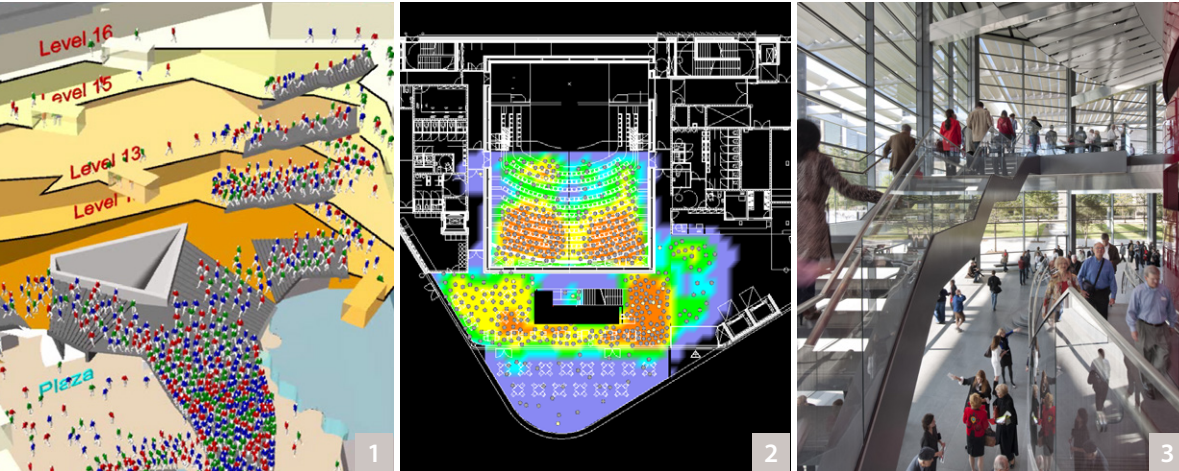


## SMART SPACE | CULTURAL VENUES

Enhancing visitor experience.



1. Elbphilharmonie, Hamburg, Germany
2. HOME, Manchester, UK
3. Winspear Opera House, Dallas, TX, USA

Image: Nigel Young / Foster+Partners

BuroHappold Engineering believes in designing buildings and spaces that put people at the heart of the design process: quality environments where people feel comfortable and secure, and which are convenient and accessible to everybody. The result is an efficient and effective circulation space that is crucial to the experience of the visitors and also to revenues and profit.

Working closely with architects and planners, we devise elegant and economical solutions that meet the needs of visitors while providing best value for our clients. Our local, national and international projects range from exciting new arts centres, galleries, libraries and theatres to the refurbishment of existing and historic cultural buildings.

**Design optimisation** – Our key aim in the design of cultural venues is to help develop a design that is vibrant, comfortable and safe and works with the minimum of operational intervention. It will also help ensure that flexibility in operation can be planned and designed in. To deliver the most efficient design we utilise a number of our specialist technical services. Data produced by our people flow, disability design and security teams is fed back into the overall design to optimise circulation and create a safe, controlled environment for all visitors.

**Data assessment** – Using latest people movement simulation technologies our work focuses upon rapid modelling and assessment of the circulation provisions in the venue (layout, circulation widths, stairs/escalators, door locations/widths, mobility assistance, toilet provisions/locations, etc) in relation to congestion levels, queuing, travel distances and overall

comfort. We take into account potential social, cultural and community users to provide an environment suitable for diverse user groups.

Our range of experience in the cultural sector includes Royal Opera House London, First Street Cultural Manchester, Imperial War Museum London, Winspear Opera House Dallas, Cairo Expo City Convention and Exhibition Centre, The Louvre Abu Dhabi, Wellcome Collection London, Kings Waterfront Liverpool, Hotel America (Dubai), and a major cultural district development in Abu Dhabi.

### SMART SPACE SERVICES INCLUDE:

- Circulation design for visitors and staff
- Space planning for masterplanning and design development
- Journey analysis to enhance throughputs and footfalls
- Process and staffing analysis (e.g. ticketing, guidebooks, retail)
- Exhibition layout optioneering and optimisation
- Wayfinding strategy
- Crowd flow surveys
- Fire evacuation analysis
- Operational management and planning for special events