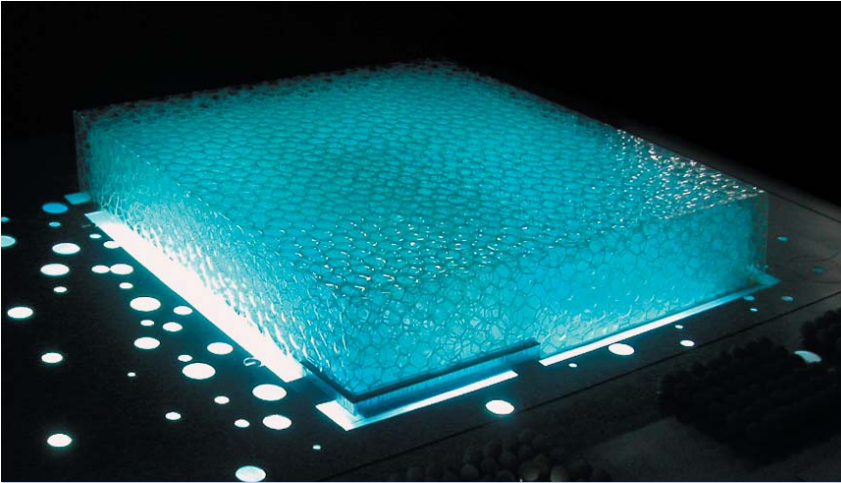


Fire engineering



Beijing National Swimming Centre, China

Performance-based fire engineering allowed the innovative steel structure, an integral part of the architecture, to be designed without the addition of fire protection, maintaining the visual appeal of the structure. With 68 000m² of steel, this solution also saved the client significant construction costs and build time.



Federation Square, Melbourne, Victoria

Over six years, the team worked closely with project stakeholders devising a fire strategy that achieved the architects desire for building form and function. Through Arup's work a reduction of 4-5 per cent in construction costs was achieved.

Arup adds value by:

- maximising flexibility for future development
- providing proactive input at early concept stage
- allowing flexibility of architectural design
- meeting client requirements for property protection, business continuity, security and ESD
- minimising risk and time for approval processes
- providing project management of the fire safety strategy, from design to construction and commissioning

Arup fire safety design specialists deliver performance-based solutions that achieve effective results for clients and end users.

Our differentiating factor is the ability to integrate fire safety with all elements of building design. This is particularly valuable when clients work with Arup from project concept stage.

With input at concept stage, we can maximise cost-effective fire safety solutions and incorporate into the structural and architectural design. Arup's sound understanding of the fundamentals of fire science combined with extensive international experience ensures that fire safety systems are flexible to allow future developments to occur.

We achieve this through the use of performance-based design. The methodology is highly interactive and enables us to design for the facility use and services, architectural image, and the needs of the end user. Solutions can be tailored to meet the specific needs of clients and projects.

Arup can use advanced computer modelling techniques to calculate and simulate the behaviour of fire, smoke and people as part of the development of fire strategies for facilities. Models and rendering techniques in 3D can help explain and illustrate complex building forms and analysis techniques.

Fire specialists come from a variety of backgrounds with the ability to fully address all aspects of fire safety. Arup's fire skill network allows specialists to draw on the vast and internal technical resources available globally.