

Arup in Thailand

Delivering global expertise locally



Shaping a sustainable future

Dedicated to sustainable development, Arup is a collective of designers, consultants and experts working globally. Founded to be humane and excellent, we collaborate with our clients and partners using imagination, technology, and rigour to shape a better world.

Established in

1946

18,000+

specialists

90+

disciplines

Projects in

140+

countries and locations

93

offices



1



2



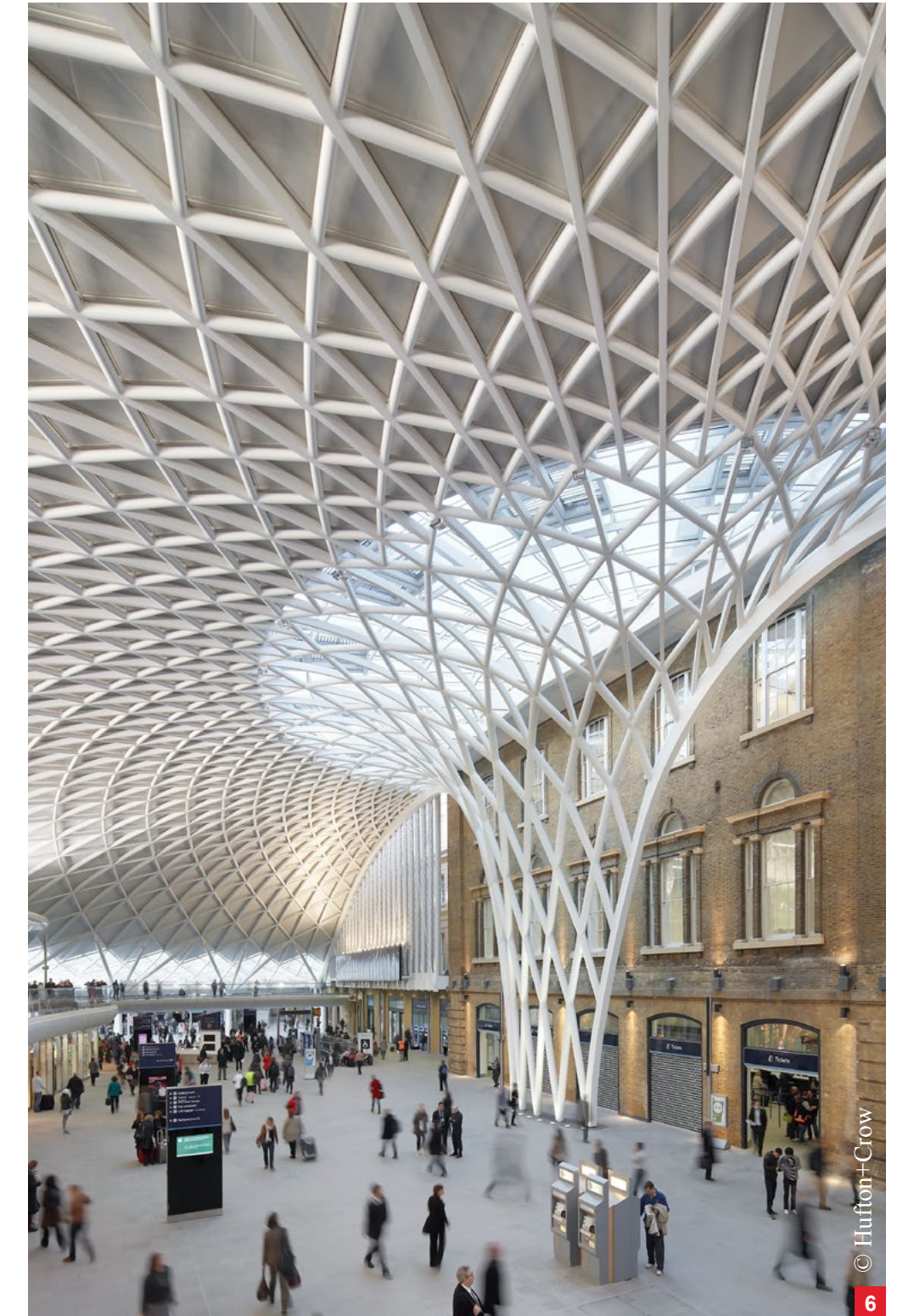
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6

1. Bird's Nest, Beijing 2. Water Cube, Beijing 3. Marina Bay Sands Singapore 4. ICC and IFC, Hong Kong 5. Little Island, New York 6. King's Cross, London

Driving Thailand's development

Arup has been contributing to Thailand's development since 1969, and in 1998 we formally established the Bangkok office. We offer a core set of the firm's multidisciplinary services locally, covering high-rise condominium, luxury resorts and hotels and large-scale infrastructure projects.

Our Thailand operation enjoys a supportive relationship with other offices in Asia and draws upon global resources to deliver leading-edge technical solutions aligned with local conditions, regulations and markets.

We provide a wide range of consulting services, from core offerings such as building services, project management and advisory to specialist advice in areas such as acoustics, façade, economics, fire safety design, decarbonisation and resilience. Our involvement spans the entire project lifecycle, from feasibility and planning to design, implementation and asset management.

Our most notable projects include three separate MRT metro detailed design commissions for the Initial Line, Blue Line Extension and Orange Line East; the 77-storey MahaNakhon building; façade and lighting design for Iconsiam; and more recently project management office and client advisory services for a large-scale mixed-use development in Bangkok.

We aim to provide consistently excellent multidisciplinary services which also incorporate our concern for the environment. We are committed to sustainable design, its increasing incorporation in our projects and industry-wide sustainability initiatives.

Bangkok office established in

1998

310+

projects delivered

Projects cover

infrastructure, rail, residential, retail, hotels & leisure, arts, data centres and manufacturing sectors

Services include

acoustic consulting, BIM, civil engineering, infrastructure design, façade engineering, programme and project management

Total design

We adopt a holistic approach to any project, which enables us to offer an integrated ‘Total Design’ service to our clients.

Introduced by our founder, Sir Ove Arup, the ‘Total Design’ concept requires the involvement of all professional design and engineering disciplines in the design process, in which all design aspects are considered thoroughly and integrated into a whole. We are renowned for our multidisciplinary skills from planning and architecture to building design incorporating structural, civil, MEP engineering and other specialist skills.

Advisory services

Assets and operations
Finance and economics
People and organisations
Programmes and projects
Strategy and insights
Sustainable development advisory

Buildings

Accessible environments
Architecture
Building design
Building envelope and façade design
Building information modelling
Building physics
Building retrofit
Building services engineering
Commissioning and building performance evaluation
Electrical engineering
Facilities management
Fire engineering

Mechanical engineering
Public health, hydraulics and plumbing
Smart buildings
Structural engineering
Sustainable building design
Vertical transport design

Climate & sustainability

Adaptation and resilience
Circular economy
Decarbonisation
Integrated nature solutions
Strategy and reporting
Sustainability consulting

Digital

Data in the natural and built environment
Digital asset management
Digital consulting
Digital design
Digital for sustainable development
Emerging technologies

Infrastructure

Airport planning
Bridge engineering
Civil engineering
Infrastructure design
Maritime engineering
Rail engineering
Sustainable infrastructure
Tunnel design
Waste management strategies
Waste to energy solutions
Water engineering

Planning

Economic planning
Environmental consulting
Flood risk management
Landscape architecture
Masterplanning
Planning policy advice
Resilience security and risk
Smart cities
Town planning

Technical consulting

Acoustic consulting
Audio visual and multimedia
Fluid dynamics
Geospatial services
Geotechnics
Hydrogeology
ICT infrastructure design
Lighting design
Materials
Process engineering
Product design
Quantity surveying
Seismic design
Software products
Technology operations and project management
Theatre consulting
Transport consulting
Vibration engineering
Wind engineering

Our key projects



MRT Orange Line East section, Bangkok

The MRT Orange Line connects the city centre to the east districts and addresses traffic congestion. Arup worked on the detailed design of the section between Hua Mak and Khong Ban Ma stations, which included approximately 4km long twin bored tunnels with three underground stations, three ventilation shafts and a cut-and-cover tunnel. The alignment runs through the city's busiest roads, passes beneath a myriad of canals and one of the three stations is located underneath a flyover. Arup's design ensured smooth and efficient construction.

4km

long twin bored tunnels



MRT Blue Line and its extension, Bangkok

The MRT Blue Line, Bangkok's first subway network, began operating in 2004. In 2019, an extension was added to complete the city's orbital rail network. The works involved constructing 10km of twin bored tunnels, 1km of cut-and-cover tunnels and nine underground stations for the Blue Line; and building two underground stations and two intervention shaft structures for the extension. As the lead consultant, Arup provided full multidisciplinary services for structural, civil, geotechnical, building services, alignment and tunnelling. Given the surrounding highly dense developments with cultural heritages, Arup played a crucial role in ensuring the protection of existing buildings during the project's implementation.

26m+

deep underground station, one of the deepest in Bangkok



25

sets of rolling stock

SRT Red Line, Bangkok

The 41km-long State Railway of Thailand Red Line is a vital commuter rail system serving the Bangkok Metropolitan Region, enhancing connectivity between the city centre and suburban areas. Arup provided engineering services for the signalling system of the entire line, based on European Train Control System Level 1 technology. Our scope of work included systems assurance, technical advice on signalling engineering and overall management of the whole testing and commissioning process for the line.

Iconsiam, Bangkok

Located on the banks of the Chao Phraya River in Bangkok, Iconsiam is a 9-storey luxury shopping mall and pavilion that transforms the Bangkok riverfront into a new global attraction for Thailand. Arup provided comprehensive building envelope consultancy for the façade, building physics analysis and façade lighting from concept design to tender. We helped to realise the impressive design, which was inspired by traditional Thai lanterns, known as ‘krathong’, floated on the water during the Loi Krathong festival.

300m

long glass wall façade



King Power Duty Free area at Suvarnabhumi Airport, Samutprakarn

King Power Duty Free at Bangkok Suvarnabhumi International Airport provides world-class luxury shopping and premium service. It covers around 34,200m² across multiple levels of the terminal and concourse building. Arup was responsible for the development and delivery of the building services designs for the retail and commercial fit-out, providing detailed MEP and fire protection system services. The goal was to create a world-class airport shopping experience.

34,200m²

retail area



King Power Mahanakhon Tower, Bangkok

MahaNakhon is a 77-storey, high-rise complex in Bangkok's Central Business District. The development is the most ambitious complex of contemporary architecture and urbanism in Thailand, including the tallest building in Bangkok. The unique architectural form and the slender nature of the structure presented a major design and engineering challenge. A solution was needed that retained the architect's intent while maintaining an economic and repetitive form where possible. By adjusting the structural solution, Arup's engineers maximised the use of local concrete without compromising the daring skybox protrusions.

310m
tall tower

The Barai, Hyatt Regency, Hua Hin

The Barai is a luxury residential spa at Hyatt Regency Hua Hin, featuring eight residential spa suites with 18 private spa treatment suites, a tranquillity court and pool for relaxation, yoga and meditation sessions and McFarland House - an elegant beachfront casual dining area. Arup was responsible for the mechanical and electrical system design for the site utilities and infrastructure as well as building and associated facilities. The project was built on a fast-track programme of 28 months.

18

spa treatment suites



© Hyatt Regency

Six Senses Forestias Hotel, Bangkok

The Six Senses brand's first branch in Bangkok is situated in the site of The Forestias, a community of intergenerational residences and green spaces within the city limits of Bangkok. The 18-storey building features 60 guest rooms and 36 residences. Arup provided fire engineering consultancy, from the design stage up to building handover to the hotel operator. On top of the local fire code, our fire safety design follows the international standard NFPA 5000 to ensure a high level of safety at a global level.

18

storeys





Yannawa Wastewater Treatment Plant, Bangkok

The Yannawa Wastewater Treatment Plant is part of the Thai Government's initiative for collection and treatment of sewage in central Bangkok. The 4-storey plant has a treatment capacity of 2,000,000m³/day for phosphate and nitrate removal, serving a 30km² area of central Bangkok with a projected population of 1.8 million. Arup was appointed to provide bid, and subsequently, detailed design services for the design, construction, initial operation and maintenance of the works.

2,000,000m³
treatment capacity per day

Opel Car Plant, Rayong

The Opel General Motors Manufacturing Plant is a major manufacturing facility that enables production output to expand from 90,000 to 150,000 cars per year. As the general facilities designer of this plant and another in Poland, Arup provided multidisciplinary engineering design and construction management services for both plants simultaneously. The challenge was to tailor the plant designs to fit the local setting under a tight schedule.

80,000m²
plant





Circular economy opportunities for sustainable growth in Thailand

The circular economy is a central part of Thailand's growth strategy, offering a more environmentally sustainable and efficient approach to economic production. Arup worked with the International Finance Corporation to study the possibilities of the circular economies across three strategic sectors: food and agriculture, electrical and electronic equipment and construction. We developed a report that contains recommendations and high-impact opportunities through data and stakeholder insights. The findings showed billions of dollars of potential revenue generation and cost savings and significant positive environmental impact. It also identified the constraints Thailand must overcome to realise these opportunities.



Impact Arena, Nonthaburi

Impact Arena is one of the largest event venues in Bangkok, offering state-of-the-art facilities and services that make it ideal for hosting a wide range of events, from conventions and exhibitions to massive live concerts. Thanks to Arup's expert acoustics consultancy services, Impact Arena is equipped with cutting-edge acoustic solutions that enhance the quality of sound and ensure an immersive experience for audience. With its versatility and dynamic capabilities, Impact Arena has truly realised its potential as a multifaceted and world-class event space.

© Impact Muang Thong Thani

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