



Engineering the World

100,000+
projects awarded

45
offices worldwide

4,300+
professionals

consult annually
on around
\$ 20 Billion
worth of projects

fully integrated &
multi-disciplinary
capabilities

start-to-end
seamless delivery

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myanmar@meinhardt.net

www.meinhardt.net

worldwide operations

Since 1955, we have led the way in delivering innovative and highly buildable design. Strong working partnerships have resulted in the completion of some of the largest and most complex building and infrastructure projects in the world.



Three Sixty West
(residential tower)
Mumbai, India
385.5 m.

services:
MEP engineering



IEC Project Wu Xi
China
342 m.

services:
MEP engineering
Façade engineering



Landmark Waterfront
Bangkok, Thailand
305 m.

services:
C&S engineering
MEP engineering
Façade engineering



Ocean Heights
Dubai, UAE
304 m.

services:
C&S engineering



Nairobi Tower
Nairobi, Kenya
300 m.

services:
C&S engineering



One Island East
Hong Kong
298 m.

services:
MEP engineering



Petronas Tower 3
Kuala Lumpur, Malaysia
265 m.

services:
C&S engineering
Façade engineering



Thamrin Nine
Jakarta, Indonesia
304 m.

services:
C&S engineering
MEP engineering
Façade engineering



Marina Bay Financial Centre
Singapore

services:
C&S engineering
MEP engineering
Project Management



Tornado Tower
Doha, Qatar
200 m.

services:
C&S engineering



145 City Road
London, United Kingdom
136 m.

services:
Façade engineering



Vietcombank Tower
Vietnam
206 m.

services:
C&S engineering
Façade engineering



Prima Pearl Tower
Melbourne, Australia
244 m.

services:
C&S engineering
MEP engineering



Aladdin City
Dubai, UAE

services:
Environmentally Sustainable Designs
Façade engineering
Integrated Design Management
MEP engineering
Specialist Lighting
Structural engineering



Dakar Congress Center
Senegal

services:
Lead consultancy
C&S engineering



Marriott Victoria Island
Nigeria

services:
Fire Performance engineering
Project Management
Structural engineering



Landmark
Yangon, Myanmar

services:
C&S engineering
MEP engineering
Transport engineering
Lighting design

meinhardt thailand

Meinhardt (Thailand) Ltd. was established in 1991 after successfully working on several major projects in the 1980s. The Thailand office provides engineering consultancy services in Civil, Structural, Electrical, Mechanical, Sanitary, Façade, Lighting, Traffic Engineering, and Building Physics. Our engineers work in a multi-disciplinary environment and have gained a high appreciation for the interfacing requirements between structure, civil works and mechanical and electrical services. Consequently, our designs incorporate multi-disciplines as an inherent part of the design philosophy.

Meinhardt Myanmar Co., Ltd. was established in 2012. It is ready to serve the rapidly expanding Myanmar market. Both offices provide engineering consultancy services in Civil, Structural, Mechanical, Electrical, Plumbing, Project Management, Construction Management, Environmentally Sustainable Design, Transport Planning, Façade Design, Lighting Design and Building Information Modeling.

Meinhardt (Thailand) Ltd. carries professional indemnity insurance and has registered engineers to make all building Authority Submissions. We will continue to focus on acquiring, training and retaining the best talent in the industry to sharpen our competitive edge, whilst delivering client-focused and powerful engineering solutions that are sustainable and highly efficient.

The Thailand Office is Certified to ISO 9001 : 2008, ISO 14001 : 2004, OHSAS 18001 : 2007.



meinhardt
.net

2,500+
projects awarded

20+
team leaders

350+
professionals

part of the
meinhardt group's
45+ offices worldwide

fully integrated &
multi-disciplinary
capabilities

start-to-end
seamless delivery

sectors

■ Buildings

Arts & Culture
Hotel & Leisure
Mixed-use
Offices
Convention Centres
Residential
Retail
Parking Structures
Educational Facilities
Hospitals & Healthcare
Sports Facilities
Institutional / Public Buildings

■ Industrial

Distribution Centres
Industrial
Warehouses
Pharmaceutical

■ Transportation

Airports
Bridges
Highways
Ports
Railways
Tunnels

■ Urban Land Development

Urban Regeneration
Urban Infrastructure
Conservation and Restoration
Built Environment

■ Information Technology & Communications

Telecommunications
Data Centres
Power Systems

■ Infrastructure

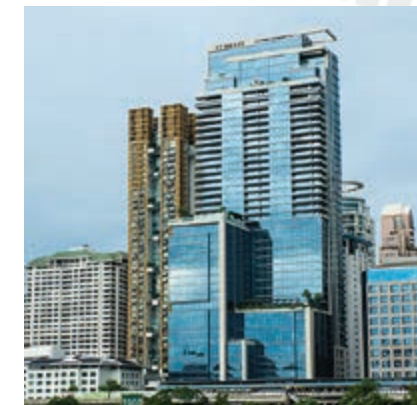
Environmental Management
Waste Management
Water and Wastewater
Energy Generation / Distribution

■ Sustainability / ESD

Green Buildings
Energy Audits / Conservation
LEED

■ Civic

Defence
Education
Public
Healthcare



capabilities

Meinhardt offers a full scope of services that encompasses every phase of a project's construction cycle.

civil & structural

Civil and Structural extensive experience & specialist expertise delivers effective and efficient solutions for a vast range of civil & structural engineering projects. Regular internal co-ordination with specialists across other divisions produces structural solutions often overlooked in a single disciplined operation.



esd

Our Environmentally Sustainable Design team consists of accredited Green Mark & LEED Professionals who are able to assist our clients in designing & constructing green buildings. We design for and promote environmentally beneficial solutions & technologies that optimise energy & resource utilisation.



bim

Meinhardt has recognized the many advantages of the Building Information Modeling (BIM) process. This information is presented in a variety of ways such as plans, elevations, 3D views, rendering, details, & schedules.



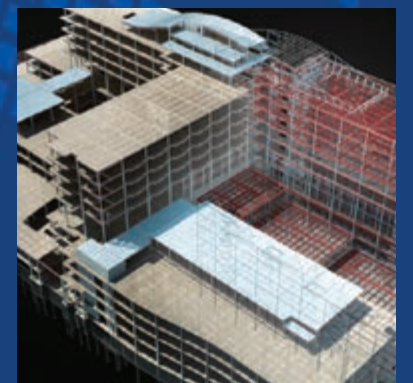
mep

Mechanical, Electrical & Plumbing services (MEP) are our team within a team, delivering a combination of specialist services, creativity, and the most current technological advances. Our focus is on providing the optimum solutions and best value outcomes.



transportation

The Meinhardt Transport Planning and Engineering team provides expert advice to development & transport-led projects to facilitate integrated, successful & sustainable solutions to modern day transport problems.



pm/cm

Seamless integration from start to finish with quality outcomes and a flexible attitude. Our Project Management & Construction Management capability brings it all together.



façade

We have a strong team of Façade engineers, specializing in Façade design & engineering, materials, specification, testing, Façade construction, maintenance, & remedial Façade consulting.



lighting design

Meinhardt provides Interior Lighting design for private residences, resorts, retail & commercial buildings. Externally, our Lighting design input can enhance the appearance of hard & soft landscaping, facades & building features.



civil & structural solutions

Our multi-disciplinary approach ensures innovation and efficiency. With so much intellectual property in-house, we think big, yet deliver in detail.

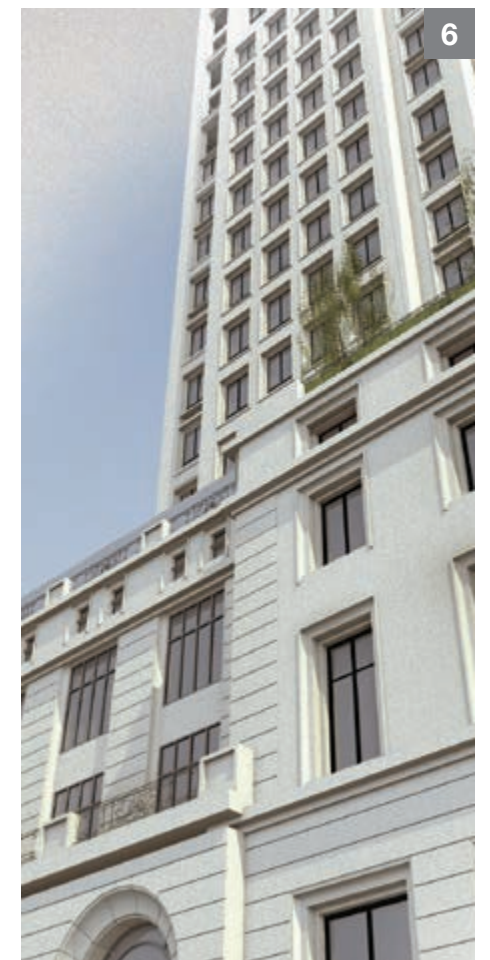
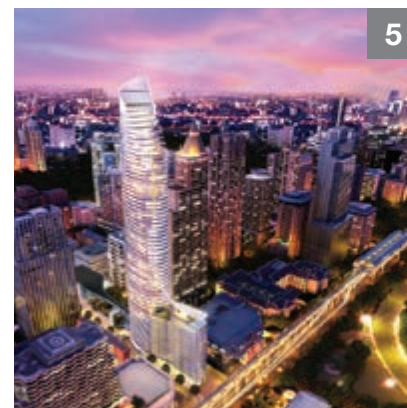
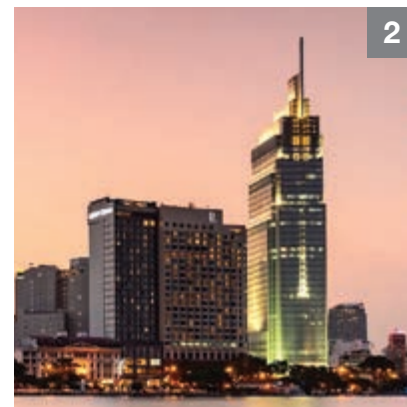
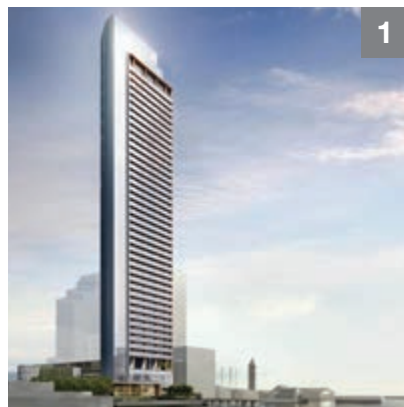
Unlike other consultants that outsource specialist design, Meinhardt is able to tap into our vast wealth of extensive experience and specialist expertise.

Regular co-ordination with specialists across other divisions produces civil and structural solutions that are often overlooked in a single-disciplined operation.

Global support from Meinhardt senior credentialed experts creates a seamless integration of highly skilled engineering and design while locally, every office is authorized to process approvals, creating vital thinking space for alternative processes.

Meinhardt has the internal resources to address any civil and structural challenge and deliver cost-effective and efficient solutions across a growing range of civil and structural engineering projects.

- Structural and civil engineering
- Construction phase services
- Due diligence and condition surveys
- State-of-the-art analysis and design
- Value added services



1) NRDD Chaopraya, Thailand

This project is located on a 5 Rai site in Khlong San adjacent to the Chaopraya river. The 50 storey residential tower makes use of the existing foundations of a previously incomplete project. Meinhardt (Thailand) Ltd. is providing Civil and Structural and MEP engineering design for the project.

2) Vietcombank Tower, Vietnam

Meinhardt (Thailand) Ltd. provided Civil and Structural engineering design as well as Façade design for this 60,000 m² landmark retail banking complex and office development in Ho Chi Minh City. Located next to the Saigon River, the 35 storey office development provides grade A office space to Vietnam's largest bank, Vietcombank as well as office space for private tenants. The building also features a 4 level basement and 5 level podium.

3) Sansara at Black Mountain, Thailand

This project has been planned as a luxury resort than a retirement village. Located adjacent to the Black Mountain Golf Course in Huahin, Prachuap Khiri Khan. The project is being developed in three phases over an area of approximately 50 Rai. A number of innovative design solutions are incorporated into the project to cater for the lifestyles of the young at heart.

4) STS Hospital, Chittagong, Bangladesh

Meinhardt (Thailand) Ltd. is providing Civil and Structural, MEP and Fire Protection engineering design for this 375 bed high end tertiary hospital with a total GFA of 38,000 m². This hospital is being designed to meet international standards such as JCI Accreditation Standards, AIA Space Standards, ASHRAE, NFPA, HTM 2022 and etc.

5) Magnolia Ratchadamri Boulevard, Thailand

Meinhardt (Thailand) Ltd. provided Civil and Structural and Façade engineering design for this 60 storey iconic tower. Standing 200 m above the ground with 3 basements of parking and back of house M&E plant. The 110,000 m² project includes retail and hotel amenities in the podium area and a ultra luxury condominium residence and a 5 star hotel within the main tower.

6) 98 Wireless, Thailand

This luxury residential project is situated at the top end of Wireless Road next to the American Ambassador's residence, with a total GFA of 32,910 m² and features a 54 m road frontage. The project comprises 33 storey with 4 basement levels. The residential units also include a Penthouse; each with Private access. Meinhardt (Thailand) Ltd. provided Civil and Structural, MEP, Traffic, Façade engineering design, LEED Administrators, including LEED Energy Modeling and Commissioning Authority (CxA).

Landmark Waterfront

This unique site is located on one of the last remaining plots for riverside development. The project comprises of a 73 storey residential tower which is designed to elevate waterfront living to new heights. Featuring unobstructed panoramic river views, the Four Seasons Private Residence is designed to become the most exclusive residential address in Bangkok. Within the 14 acres of prime land are located the Capella and Four Seasons Hotels. Meinhardt (Thailand) Ltd. is undertaking Civil and Structural and MEP engineering design for the project.



total height
305 metre

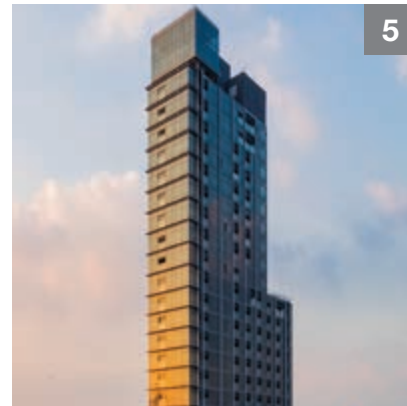
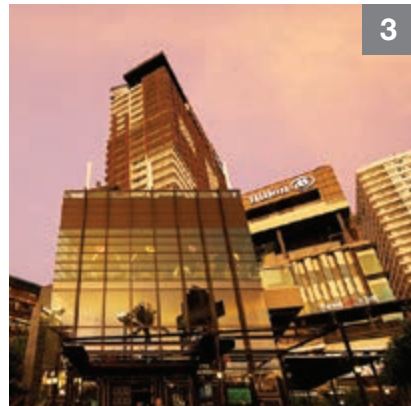
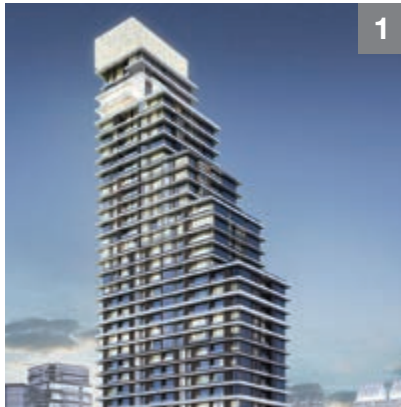
total GFA
260,000 sq.m.

73 storey
Four Seasons
private residential
tower

12 storey
super luxury
Capella Hotel &
Four Seasons Hotel

11.6 Billion Baht
project located
along the Chao
Phraya River

mep



we take a team approach to mep

Mechanical, electrical, and plumbing services are a team within our team. At Meinhardt, they work towards a common goal: integration of building systems and technology.

Mechanical, Electrical, and Plumbing services literally breathes life into buildings; energizing and revitalizing the places that we work, live, and play. At Meinhardt, we work towards a common goal: integration of building systems and technology.

Meinhardt continually works towards an indoor environment that provides occupant comfort and optimum efficiency. We utilise a multi-disciplinary approach that builds economic, environmental and social sustainability into all MEP operations.

Our focus is on providing the optimum solutions and best value outcome for every client; and we deliver that through the extensive use of in-house project teams with dedicated design leaders.

- In-house MEP engineering design and consultancy services
- Design innovation including 3D modeling using Revit and other BIM softwares
- Energy Modelling and Building physics
- CFD-assisted thermal modeling
- Wind Engineering, shadow analysis and natural daylight design
- Compliance with local and international energy efficiency codes
- Construction phase services and site management
- Quality management system and procedures
- Life cycle cost study

1) Saladaeng One, Thailand

Saladaeng One is the first Super Luxury Condominium grade developed by SC Asset PCL, located at the rare land plot for developing condominium in the heart of Bangkok CBD, with exclusive view to Lumpini Park. The project comprises 180 units in 35 storey high with 3 basements buildings, standing 133 m above ground. Amenity floor of this condominium is located at the 33rd floor with sky swimming pool and fitness. It also comprises 2 exclusive Villas with 300 m² each unit with private pools and parking.

2) Niyama Maldives, Maldives

Niyama Maldives comprises two islands, linked by a bridge, 120 beach villas and over the water bungalows with private pools, and guest amenities including an underwater nightclub. Energy and water efficiency is essential in isolated developments such as this; power and water (from sea water by reverse osmosis) has to be generated on site. Innovative design features include steam and hot water generation by heat recovery from the diesel generators, recycling of waste water for irrigation and WC flushing, and rain water harvesting.

3) Hilton Central Festival Pattaya, Thailand

The Central Festival mixed use development is a beachfront landmark in the resort city of Pattaya. The development comprises 280,000 m², a 8 level shopping mall podium, and a 300 key Hilton Hotel tower; serviced by a centralized (district cooling) chilled water system. The Hilton Hotel won four prestigious awards from the Asia Pacific Hotel Awards 2011 (in association with Bloomberg Television) including Best New Construction & Design.

4) Bumrungrad International Hospital, Thailand

Bumrungrad International Hospital plans to construct a new Healthcare Facilities and Car Parking services on 4 Rai land plot on Sukhumvit Soi 1. The facilities may include Renal Dialysis, Laboratory, MRI's, Outpatient Physical Therapy, Rehabilitation, Cyclotron, offices, support facilities and car parking. Refer to the latest concept design, the project consists of 3 buildings with the total GFA of 22,465 m².

5) Circle Living Prototype, Thailand

55 storey Residential Tower, on top of a 5 storey Podium with the GFA of 54,000 m², 500 keys, plus penthouse and villa units, and resident leisure amenities. Sustainable design features strongly at this trend setting condominium, such as Solar Photovoltaic Panels, pre-heated domestic hot water from an A/C heat recovery system, and waste water recycling for irrigation. The project was designed using 3D REVIT Design and Documentation system.

6) UOB Headquarters Building, Thailand

Flexibility, resilience and energy efficiency define this building's MEP systems. The building is equipped with raised access flooring, N+1 redundancy for both electrical and mechanical systems, dual power supply, and a VAV air conditioning system delivering 0.6kW/Tr of cooling. The development includes VIP banking facilities; a trading floor, training and exhibition center, and 32 floors of Grade A office space. Revit modelling (BIM LOD 300) assures optimized spatial efficiency and maintainability.

AIA Capital Centre

Standing 154 m tall, the multi-award winning 110,000 m² mixed use development includes a 35 storey Grade-A column free Office tower, a 3 storey retail plaza, and a 9 storey car parking building. The project is LEED Gold® in 2014. The MEP systems include a waste water recycling system and high efficiency MEP engineering design, reducing water consumption by 49% and energy by 17% respectively. The project won “Best Commercial Development” in the 2014 Property Awards.



total height
154 metre

total GFA
110,000 sq.m.

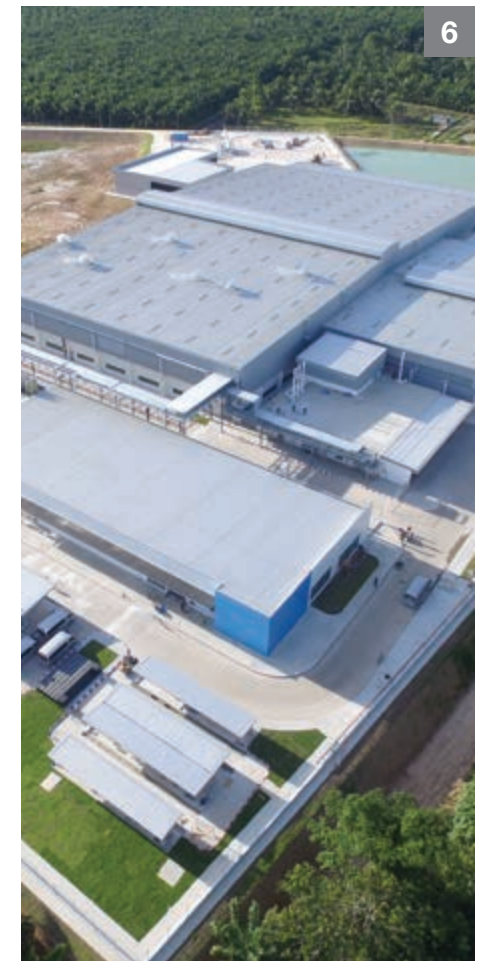
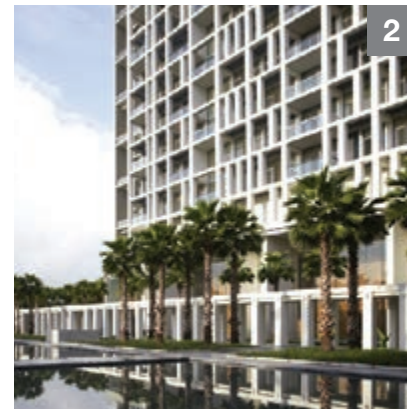
35 storey
A-Grade office

3 metre
ceiling height

LEED Core & Shell
LEED Gold®

The LEED® certification trademark is owned by the U.S. Green Building Council and is used with permission.

pm/cm



project & construction management

Seamless integration from start to finish with quality outcomes and a flexible attitude. Our project management and construction management capability brings it all together.

1) La Stella Resort, Khao Lak, Thailand

La Stella is a new signature hotel and resort project of Star home beach resort Co.,Ltd. located in Khao lak, Pang Nga. The project has a total GFA of 26,000 m² with 181 keys, 5 storey Guessroom buildings, a 2 storey lobby building, and a single storey beach club building. Meinhardt (Thailand) Ltd. is providing Project Management and Construction Supervision.

2) The Sukhothai Residence, Thailand

Meinhardt (Thailand) provided Civil and Structural, MEP engineering design and site supervision services for the 42 storey "The Sukhothai Residence", located on a site immediately adjacent the "The Sukhothai Hotel" on South Sathorn Road, Bangkok. The project has set a new bench mark for 7 star luxury living and features many unique design details that will ensure that it gets much attention amongst those seeking out the very best on offer.

3) MM Mega Market, Thailand

Meinhardt (Thailand) Ltd. provided full engineering services including Civil and Structural, MEP engineering design and Project and Construction Management for this new brand of Hypermarket of TCC group. This first project is located in Nongkhai province, near the frontier next to Laos. The second one is in Aranyaprathet, near the frontier of Cambodia. MM Mega Market is a new business unit of TCC group and is expected to expand its branches rapidly in the near future.

4) Café Amazon Roasting Plant, Thailand

Café Amazon Roasting Plant project is a mixed-used project located in the research center of PTT Public company limited in Wangnoi, Ayutthaya, Thailand. The project consists of factory building, office building, canteen, and conference room and exhibition area. Meinhardt's commission includes project management, construction management and site supervision of the 3 buildings. In the Project Management and Construction Site Supervision, Meinhardt (Thailand) Ltd. has had to push the best effort of the contractor in executing the project construction.

5) IKEA, Thailand

Meinhardt (Thailand) Ltd. provided Construction Supervision services for IKEA's first Store in Thailand. The construction of this store mostly used precast components such as 16 m long span hollow slabs, precast beams and columns in order to meet a very short construction program. Other highlights of the project included the construction of a very flat floor constructed by using Laser Screedor and the 80 m high signage tower using slip forms.

6) Nestlé South Greenfield, Thailand

The project is a Nestle Group's latest Greenfield plant in Surat Thani, Thailand. The site is approximately 179,200 m² or 112 Rai. The 1st Phase of the project have over 30,000 m² of pavement and a total GFA of 15,000 m² of usable building space including: Utility Building; Office, Meeting Rooms and Social Block; Production and Warehouse Building; 4 Deep Wells houses; Water Treatment; Car and Truck Parking; Guard House; Roads, Fences and Ponds.

Meinhardt provides a true 'one-stop shop' for project delivery, to whatever scale you require. We can manage a single complex project or a complete programme of capital investment. We can draw on our in-house technical capability to provide a comprehensive service for our clients.

We ensure that a right Project Management and Construction Management team is selected to match our clients' unique needs and expectations. Our Project Managers and Construction Managers all have local knowledge and are supported by our group-wide skills, systems and procedures.

In fact, Meinhardt brings such a high level of expertise to decision making that many clients now rely on us to manage the entire process from making the project business case to project completion and ongoing asset management.

- Total project capabilities under one roof
- Management services
- Fast, responsive and innovative
- Able to integrate with client systems
- Applying high-level rigour on project feasibility and risk analysis
- Services clients' needs beyond construction to asset management

PepsiCo Greenfield Project

The project is located in the 100 Rai greenfield site in Nongkhae Industrial Estate, Saraburi. The total construction area of Phase 1 excluding water tank, pump room, WWTP and external waste storage Building is 28,000 m². There will be the expansion in the future with the total construction area of 80,000 m², approximately.

The project comprises of the main manufacturing building (sugar and raw ingredient warehouse, mixing and filling process area, packaging area, packaging material warehouse, finish good warehouse) office building, utility and facility building.

The project is designed and constructed following the FM Global requirements. The project is also LEED Silver® in 2016.



The LEED® certification trademark is owned by the U.S. Green Building Council and is used with permission.

FM Global
requirements
standard

total GFA
28,000 sq.m.

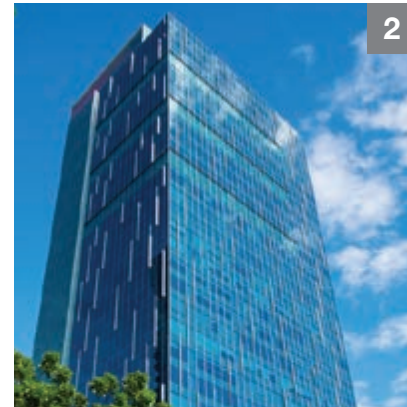
located in the 100
Rai greenfield site

LEED
New Construction
LEED Silver®

1,000 Million Baht
building construc-
tion cost





esd



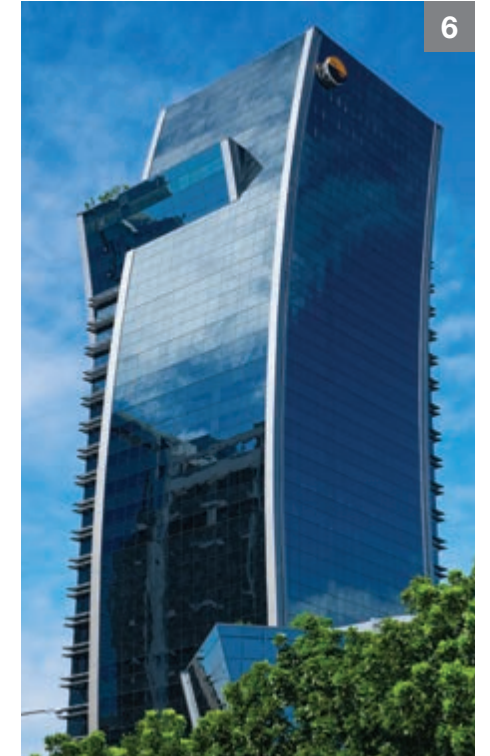
Our environmentally sustainable design team consists of accredited Green Mark & LEED Professionals who are able to assist our clients in designing & constructing green buildings. We design for and promote environmentally beneficial solutions & technologies that optimise energy & resource utilisation.

We endeavor to always pursue the best practice with respect to green strategies by providing innovative alternatives. We embrace the 'triple bottom line' principle of 'people, planet, profit'; in order to be sustainable, a project must not compromise occupant comfort or business critical activities; it must minimize the impact on (or even restore) the natural environment; and it must be financially feasible by not placing an unreasonable burden on project budgets.

Building green is the practice of bringing building form together with energy efficiency, HVAC optimization, intelligent lighting designs, high performance façade techniques, eco friendly materials and smart water management. The result is state of the art Green Buildings that consume less energy, have a reduced carbon footprint, and provide healthier and more comfortable living environments to their occupants while improving employee retention and productivity.

LEED®, and its related logo, is a trademark owned by the U.S. Green Building Council® and is used with permission.



1) BCP Headquarters, Thailand

Meinhardt (Thailand) Ltd. provides Project and Construction Management, Quantity Surveyor and LEED Certification Services for the interior development of Headquarters for Bangchak Petroleum Public Company Limited (BCP) at a newly constructed M-Tower Building, Sukhumvit 62 Bangkok.

2) AIA Capital Centre, Thailand

35 storey Grade A Office tower has a column free design and a typical floor plan of 2,200 m². The standing 154 m above ground. There is an adjoining 3 storey retail plaza and a 9 storey car parking building. The project encompasses a gross floor area of 110,000 m² and includes a multi-level car park, retail and F&B facilities. The building is LEED Gold® in October 2014.

3) IKEA Westgate, Thailand

The IKEA Westgate project is aiming to achieve Platinum Level certification of the LEED 2009 for New Construction – Retail rating and also Platinum Level certification of BCA Green Mark rating (Singapore). Meinhardt (Thailand) Ltd. has been engaged to provide Sustainable Design consulting, LEED Project Administration, Green Mark Project Administration, and Energy Simulation services for the project.

4) Schlumberger OFS Facility, Thailand

Meinhardt (Thailand) Ltd provided Civil and Structural and MEP engineering design for this project. The functioned areas include main workshop, LABS under the metal roof structure and office concrete building at the front by designed basis will be compliant with FM Global and local/international code requirement. The project is registered with the certification goal of LEED certified®.

5) Malikha Condominium, Myanmar

Malikha Condominium project is suited on 3,621 m² land and comprises 3 separate buildings including one apartment building, and 2 owner residence buildings. Meinhardt (Thailand) Ltd. was engaged to undertake a technical study of feasibility to implement "LEED for Homes multifamily mid-rise (2010)" on the apartment building in the context of the developing property market in Yangon.

6) The Head Office of The Stock Exchange of Thailand

The building has 29 floors, 1 basement and 13 floors of car parking that can service up to 476 cars located on Ratchadapisek Road in Bangkok. The total GFA measures 59,400 m² on a land area of 5.24 Rai. The building encompasses many features for energy conservation and sustainability and is LEED Gold®.

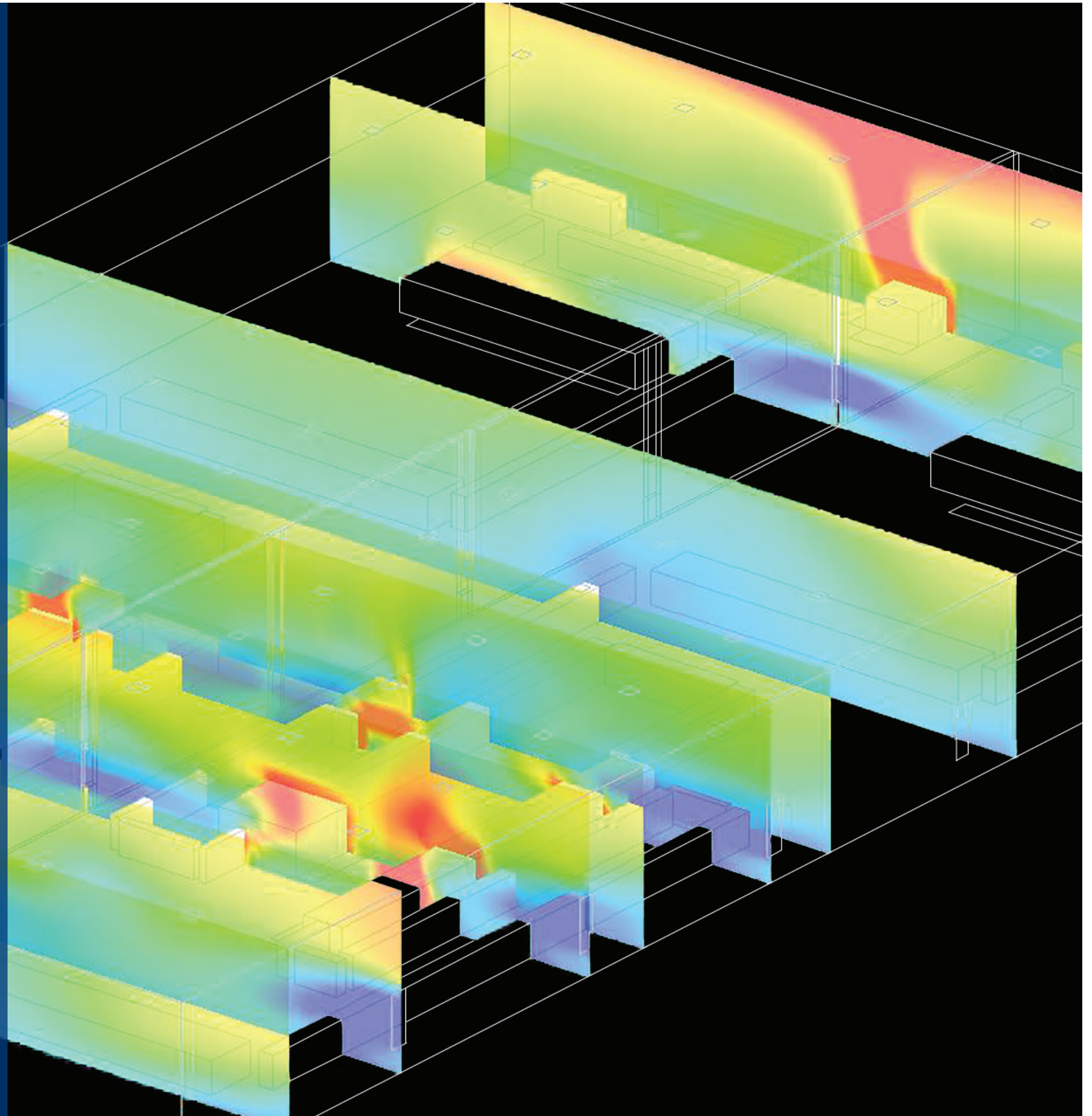
Computational Fluid Dynamic (CFD)

Internal or External air flow simulation modelling and analysis.

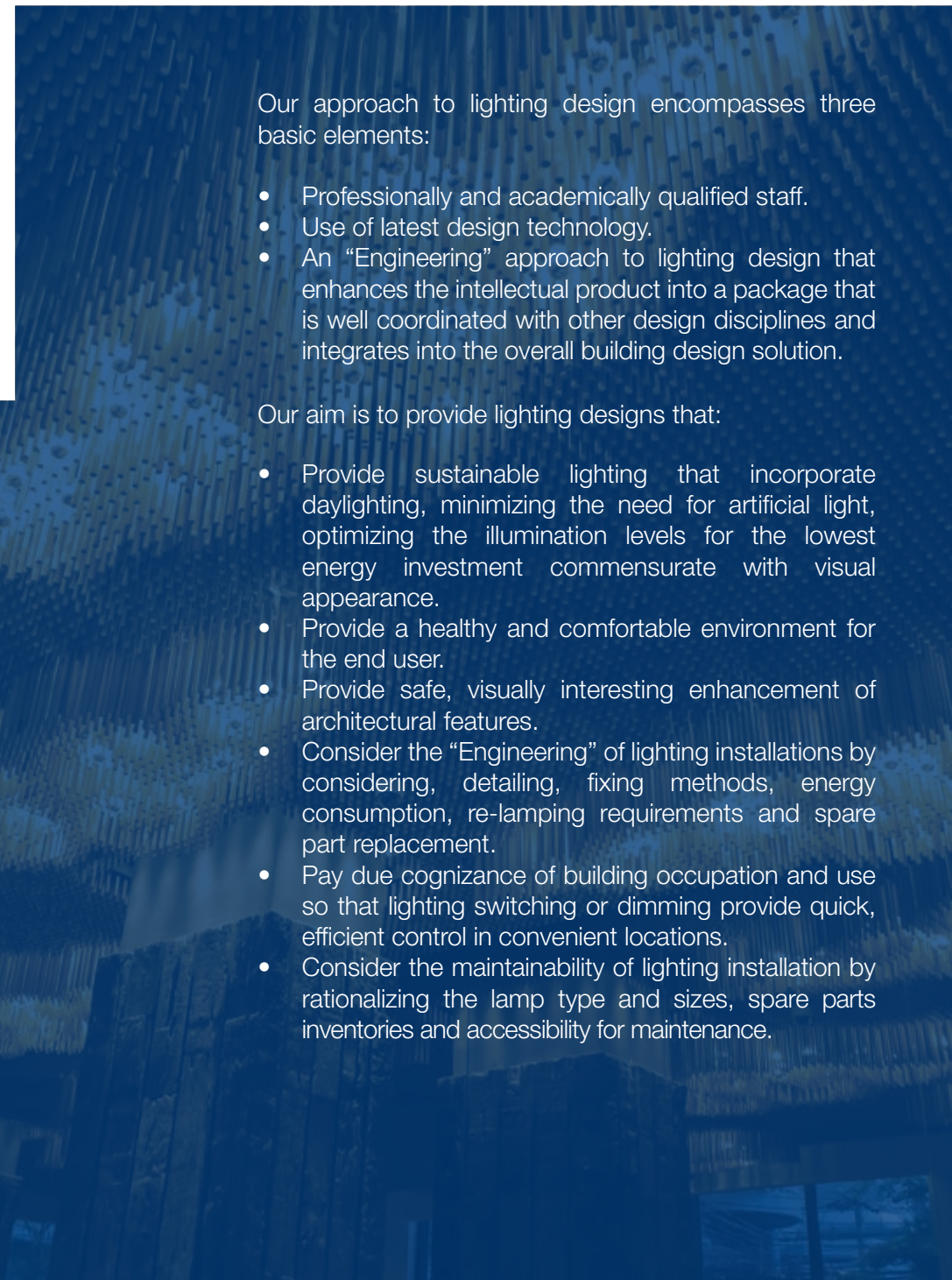
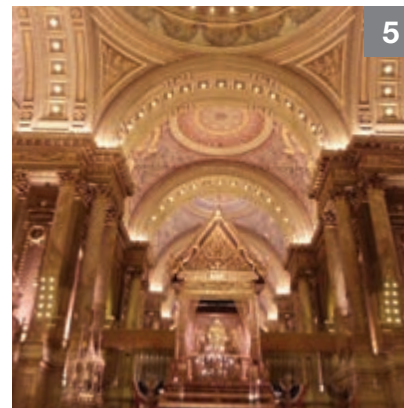
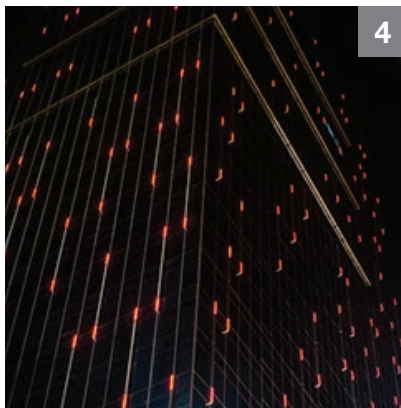
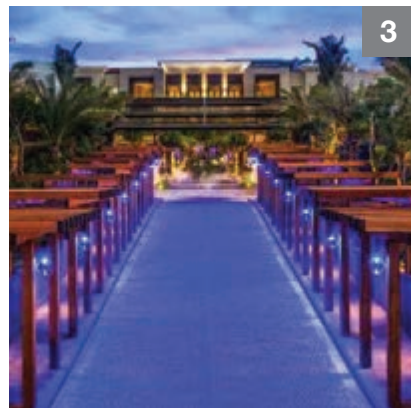
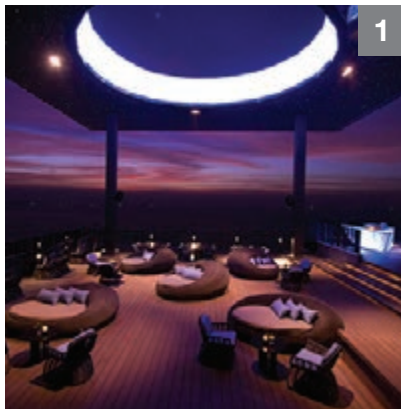
The CFD simulation provides information on air temperatures, velocities, and pressures that possibly occur through a predefined air volume in or around building spaces. The CFD modelling takes into account boundary conditions which may include the effects of climate, HVAC systems, and internal heat gains.

Key applications of CFD includes;

- Natural or Mechanical ventilation study for optimal thermal comfort
- Age of air (LMA) and Air change effectiveness (ACE) analysis as per ASHRAE 62.1
- Ventilation study around data centre server isles.
- Optimal placement of HVAC supply and return grilles
- External wind analysis for pedestrian comfort
- External wind pressure investigation for positioning HVAC supply and extract grilles



lighting



architectural lighting

Meinhardt provides interior lighting design for private residences, resorts, retail & commercial buildings. Externally, our lighting design input can enhance the appearance of hard & soft landscaping, facades & building features.

Our approach to lighting design encompasses three basic elements:

- Professionally and academically qualified staff.
- Use of latest design technology.
- An “Engineering” approach to lighting design that enhances the intellectual product into a package that is well coordinated with other design disciplines and integrates into the overall building design solution.

Our aim is to provide lighting designs that:

- Provide sustainable lighting that incorporate daylighting, minimizing the need for artificial light, optimizing the illumination levels for the lowest energy investment commensurate with visual appearance.
- Provide a healthy and comfortable environment for the end user.
- Provide safe, visually interesting enhancement of architectural features.
- Consider the “Engineering” of lighting installations by considering, detailing, fixing methods, energy consumption, re-lamping requirements and spare part replacement.
- Pay due cognizance of building occupation and use so that lighting switching or dimming provide quick, efficient control in convenient locations.
- Consider the maintainability of lighting installation by rationalizing the lamp type and sizes, spare parts inventories and accessibility for maintenance.

1) Horizon Restaurant at Hilton Pattaya, Thailand

Fiber optics were used throughout the area as a connection element/theme. Dimmable adjustable-downlights were arranged in grid line system, to provide focal light on each table. Pin hole and deep cone reflector downlights were selected to make it disappear with the ceiling. Feature elements of the outdoor area are round opening void at the ceiling and outdoor glass bar. Both elements have synchronized RGB LEDs color changing system. Starry Fiber Optic language also continues to this outdoor ceiling.

2) Terminal 21, Thailand

Terminal 21 is a one floor one concept theme shopping mall with market streets of the world concept. The mall's longest escalators in Thailand (up to 36 meters) are integrated with custom-made blue LEDs. The cover walk way link to BTS are fully lid by LEDs light, for energy-efficient and to provide dynamic light that plays along with music. The dancing light will be active hourly which also serves as an hourly clock for the space.

3) St. Regis, Langkawi, Malaysia

The hotel's “Water” and “Fire” lighting concept features throughout the various spaces adding a sense of calm, warmth and mood to both the interiors and lush external landscape. All lights used in the project are LEDs, to save energy and to minimize maintenance. Lighting colour temperature were set to enhance the interior ivory coloured finishes. Lobby lighting scene transition between 3 scenes (morning, afternoon and evening), to respect the day light which comes through 6 meter high windows which faces West.

4) AIA Capital Centre, Thailand

The façade Lighting concept mirrored the Architect's concept of Matrix, Analyzing, De-Coding. The outcome is a clean and sophisticated look for daytime and a digital processing/de-coding look during nighttime. Custom-made RGB LEDs were integrated, each one of which has its own address to support De-Coding concept and allow a moving active display.

5) Anantasamakhom Throne Hall, Thailand

The Ananta Samakhom Throne Hall is a former reception hall within The Dusit Palace in Bangkok, Thailand. It now serves as a museum and is from time to time employed for state occasions. Meinhardt Light Studio's scope of work was for lighting design in the exhibition space on the ground and second floors. Due to the delicate nature of the exhibited items, 99% of the lights in the project selected were LEDs. The other lights systems selected were fiber optics which do not emit any heat to the artworks.

6) ICONSIAM, Thailand

ICONSIAM project comprises 2 high rise residential towers and 1 shopping mall. Meinhardt Light Studio is responsible for both towers Façade lighting, Interior lighting and Landscape lighting. Most of the lights are LEDs, beside that is Fiber Optic System which is selected to use at the areas where it is difficult to do the maintenance.

AIA Training Centre

The AIA training center is a state of the art training facility set up for the purpose of orientating and training AIA management and staff. The fit-out is spread over two floors and includes a reception & arrival hall, theatre & pre-function area, training rooms, and seating & break out areas.

At Pre-function and break out areas, colour changing LEDs were selected to support training subjects and themes. For Main Stair, almost 3,000 Custom made RGB LEDs Triangle shape downlights are individually controlled by DMX system. They perform as stars.

Scene setting & Lighting control

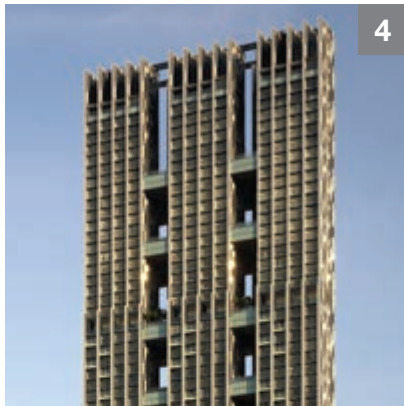
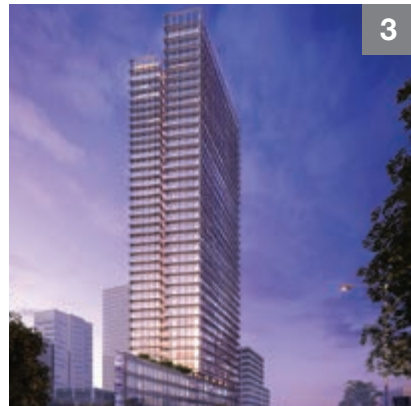
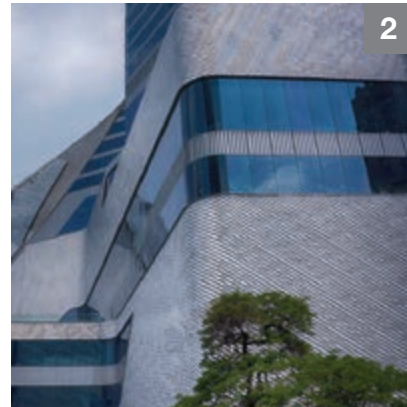
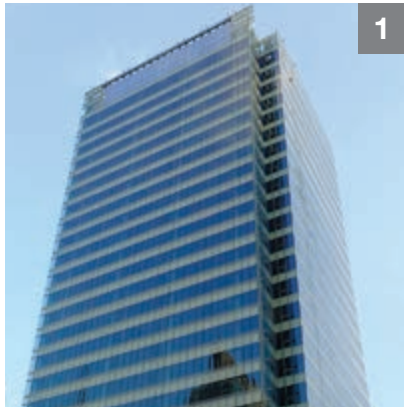
Time clock by Helvar Control System

DMX Lighting Control System

DALI (Digital Addressable Lighting Interface) Technology

Almost 3,000 Custom-made Tri-Angle RGBW LEDs

façade



façade engineering

From design to construction and post-completion assessment, our team provides an integrated approach to all aspects of Façade engineering.

Our emphasis on being actively involved early in the development process allows our clients greater scope to customise Façade designs and solutions to their particular needs

Our Façade engineering team is professionally qualified in an engineering or architectural discipline and fully appreciates the importance of consistent design thinking across all touch points of the project.

We provide a full range of services for all types of building envelopes from conventional materials like curtain walls to modern designs using glass as a structure, tensioned fabrics and photovoltaics:

- Concept design
- Detailed design
- Tendering
- System design and engineering
- Design and engineering certification
- Materials and system testing
- Fabrication and assembly
- Site installation

1) AIA Sathorn Tower, Thailand

35 storey Grade A Office tower has a column free design and a typical floor plan of 2,200 m². The standing 154 m above ground. There is an adjoining 3 storey retail plaza and a 9 storey car parking building. Meinhardt (Thailand) Ltd. provided full Façade Consultancy services, including production of design details and technical specification, tender assessment, shop drawing and calculation reviews, performance testing, fabrication inspections, site inspections and BMU consultant.

2) Central Embassy, Thailand

Meinhardt (Thailand) Ltd. provided full Façade Consultancy services for Central Embassy building which is located on the old British High Commission site. The building is a unique "infinity" layout in plan; it consists of an 8 storey high end retail podium and a 6 star hotel tower (25 storey). The external cladding of the building will be extruded the aluminum shingles that will provide a unique moiré effect.

3) Viet Capital Centre, Vietnam

Meinhardt (Thailand) Ltd. provided full Façade Consultancy services, concept design, tender drawings and technical specification, tender, shop drawing review, material submissions, prototype testing, manufacturing inspections, site installation inspections and BMU consultant.

4) The Met, Thailand

This high-end condominium has been acknowledged as an outstanding example of high-rise architecture by the world architectural community and was a finalist in the world awards. Landscaped zones have been carefully integrated into the external façade systems to allow shading of the windows in providing sustainable energy design.

5) Magnolia Ratchadamri Boulevard, Thailand

At the heart of a country held in the highest regard as a place to live, at the heart of a dream city for international travelers, there is a prestigious boulevard that is a crossroads of the city's life and spirit. Meinhardt (Thailand) Ltd. provided full Façade Consultancy services, including production of design details and technical specification, tender assessment, shop drawing and calculation reviews, performance testing, fabrication inspections, site supervision and BMU consultant.

6) Vietcombank Tower, Vietnam

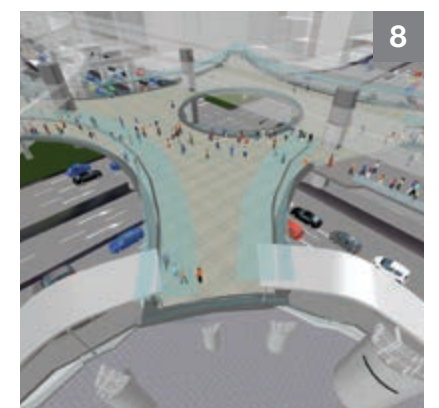
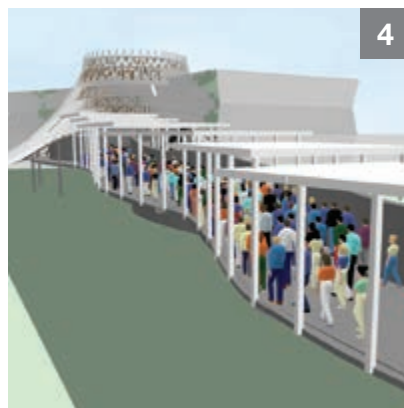
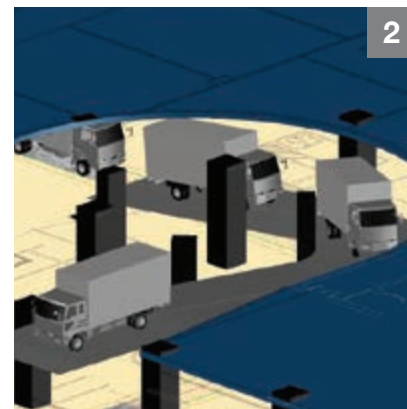
35 storey corporate office building for the Vietcombank Tower of Vietnam. Meinhardt (Thailand) Ltd. provided full Façade Consultancy services, concept design, tender drawings and technical specification, tender, shop drawing review, material submissions, prototype testing, manufacturing inspections, site installation inspections.

Rosewood Bangkok

34 storey high-end luxury hotel. Meinhardt (Thailand) Ltd. provided full Façade Consultancy professional services, concept design, tender drawings and technical specification, tender, shop drawing review, material submissions, prototype testing, manufacturing inspections, site installation inspections.



transport



transport planning & engineering

The Meinhardt Transport Planning & Engineering team provides expert advice to development and transport-led projects to facilitate integrated, successful and sustainable solutions to modern day transport problems.

Our services include:

Traffic Impact Assessment - traffic analysis of new developments including reports for Authority and EIA submission.

Traffic and Transport Review of Master Plans - review and design of all traffic and transport aspects and facilities of new and existing developments.

Due Diligence - assist developers with the selection of development sites by identifying key traffic and transport constraints and opportunities.

Vehicle and Pedestrian Micro Simulation using VISSIM and VISWALK microscopic animation tools to intelligently simulate actual movements of pedestrians and traffic for existing and proposed schemes.

Traffic Management Solutions to overcome existing traffic problems, manage change and growth in travel demand, and provide safer facilities for all road users including cars, trucks, pedestrians, cyclists and public transport users.

Feasibility of Transport Projects - input to feasibility studies for proposed traffic and transport projects such as new/improved road schemes and future rail, metro and bus routes.

Sustainable 'Green' Travel Planning - developing a strategy to manage the travel generated by an organization and provide employees and users of a development more travel choices and influence the use of more sustainable modes.

1) Master Planning: 11th km, SRT Development, Thailand

Meinhardt (Thailand) Ltd. provides comprehensive review and design all transport aspects and facilities to develop a successful development e.g. site access design, traffic circulation, parking, drop-off, connections to surrounding public transports, etc.

2) 3D Swept Path: SYM (Samyan) Development, Thailand

3D swept path is an advanced technique of traditional 2D swept path test. 3D swept path gives full aspects of vehicle maneuvering including height which is useful for parking ramp and clearance design in addition to length and width from 2D swept path test.

3) Vehicle Simulation: Landmark Yangon, Myanmar

Meinhardt (Thailand) Ltd. uses microscopic simulation software, PTV VISSIM, to create traffic simulation. A simulation provides greater visualization of vehicle movements at a development such as comparing existing and proposed schemes. Simulation model also analyzes network performance, for instance, level of service, delay, queue, etc.

4) Pedestrian Simulation: Milan Expo, Italy

Pedestrian Simulation: Review and make recommendations to create an efficient multi storey car park to serve this city centre International Pedestrian Simulation - Similar with vehicle simulation, Meinhardt (Thailand) Ltd. provides pedestrian simulation study using PTV VISWALK. A simulation can measure network performances such as density, speed, travel time, etc.

5) Traffic Impact Assessment (TIA): Bumrungrad International Hospital Phetchaburi, Thailand

Meinhardt (Thailand) Ltd. provides technical Traffic Impact Assessment (TIA) study as part of Environmental Impact Assessment (EIA) for new developments. TIA studies impacts generated by a new deployment to its surroundings. A study includes traffic survey, intersection capacity analysis, mitigation proposals, etc.

6) Authority Submission Documents: Residence on Sathorn, Thailand

In addition to technical study and supports on TIA study, Meinhardt (Thailand) Ltd. provides service on preparing Authority Submission Documents e.g. reports, drawings, etc. and attend meeting as required to ensure approval permits proceeded smoothly.

7) Signage: IKEA Phuket, Thailand

Part of a successful development is that it is easily reachable by targeted customers. Signage is one of the most important parts of that. Meinhardt provides service of directional signage design externally and internally (e.g. within development) to ensure customers can reach a development efficiently.

8) Travel Behavior Study: Patumwan, Thailand

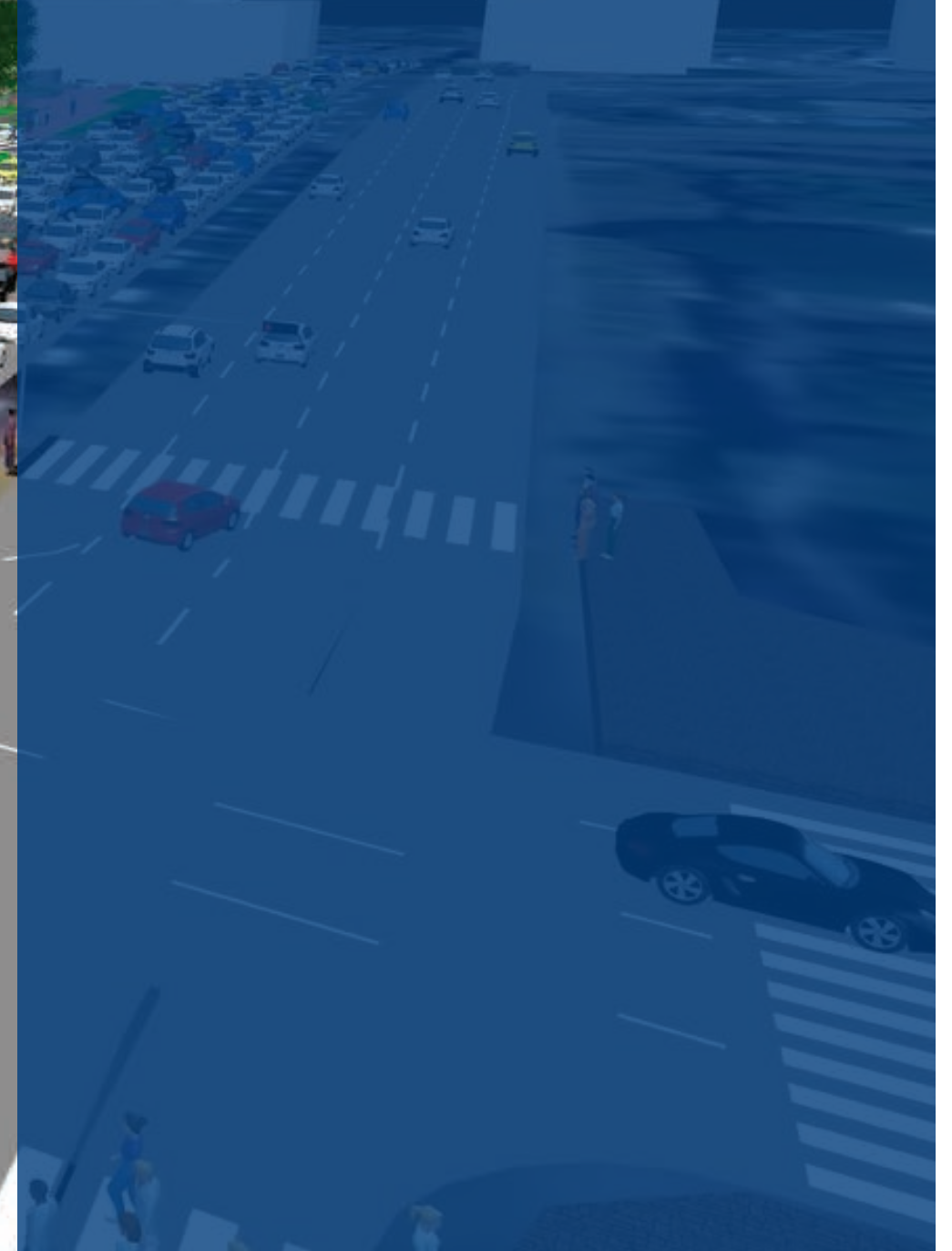
Meinhardt (Thailand) Ltd. also provides travel behavior study using, for example, questionnaire survey to reflect travel behavior or determine respondents' perceptions toward existing or proposed transport facilities.



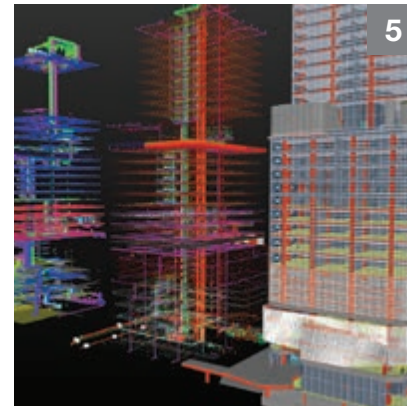
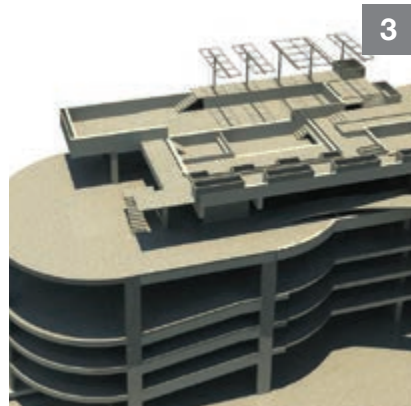
Landmark

Mixed use development comprising approximately 80,000 m² office use, two hotels plus five star residence, serviced apartments and retail mall in central Yangon, Myanmar.

Meinhardt (Thailand) Ltd. provided Traffic and Transportation review and recommendations to develop a successful design for the new development located in Yangon. This includes recommendations on access, car parking, circulation, ramps, parking management, service vehicle access and pedestrian movement. More importantly, external road network and integration of the development with the surrounding transport system were analyzed.



bim



building information modelling (BIM)

A great deal of intelligence at your fingertips.

1) Diamond Parami, Myanmar

Meinhardt (Thailand) Ltd. provided MEP engineering design for this 5,000 ft² White Space Data Centre, using Autodesk Revit 2013 Models for Multi Services Coordination, Materials Take Off and Navisworks Manage 2013 for interference check and multimedia presentations.

2) Southpoint Pattaya, Thailand

High-end quality condominium comprises of two towers 30 and 20 floors each with 431 and 224 units respectively. Meinhardt (Thailand) Ltd. provided Civil and Structural and MEP engineering design for this project, using extensively Autodesk Revit 2014 Models for Multi Services Coordination, Materials Take Off and Navisworks Manage for 5D Simulation and multimedia presentations.

3) Circle Living Prototype, Thailand

Eco Innovative high rise residential tower complete with car park podium and leisure facilities in a total GFA of 54,000 m². Meinhardt (Thailand) Ltd. provided Civil and Structural and MEP engineering design using Autodesk Revit 2014 for 3D modelling and documentation along with Navisworks Manage 2014 for spatial coordination.

4) Plum Condo Pinklao Station, Thailand

A fully pre-cast high rise condominium building comprised of 4,964 units distributed over 22 floors. Meinhardt (Thailand) Ltd. provided Structural engineering design using Autodesk Revit 2016 for 3D Modelling and integration with panels fabrication CAM/CNC machinery. Navisworks Cache Models were also supplied for coordination with other disciplines.

5) Gaysorn 2, Thailand

Mixed use high rise building with a total of 63,000 m² office space and 7,000 m² retail space. Meinhardt (Thailand) Ltd. provided MEP engineering design for this project, using Autodesk Revit 2015 for documentation and quantity take off on all disciplines. Navisworks Manage 2015 was widely used for interference check and spatial coordination.

6) YLP Residence, Thailand

Super luxury class high rise condominium building comprising 132 penthouse units, leisure facilities and 156 car parking spaces. Meinhardt (Thailand) Ltd. provided Civil and Structural and MEP engineering design using Autodesk Revit 2016 for 3D modelling and documentation along with Navisworks Manage 2016 for interference check, spatial coordination and multimedia presentations.

Meinhardt has long recognized the advantages of BIM and how it can drive time and budget savings for building and infrastructure projects. The model-based design increases efficiency within the organization and truly shines during the coordinated project delivery.

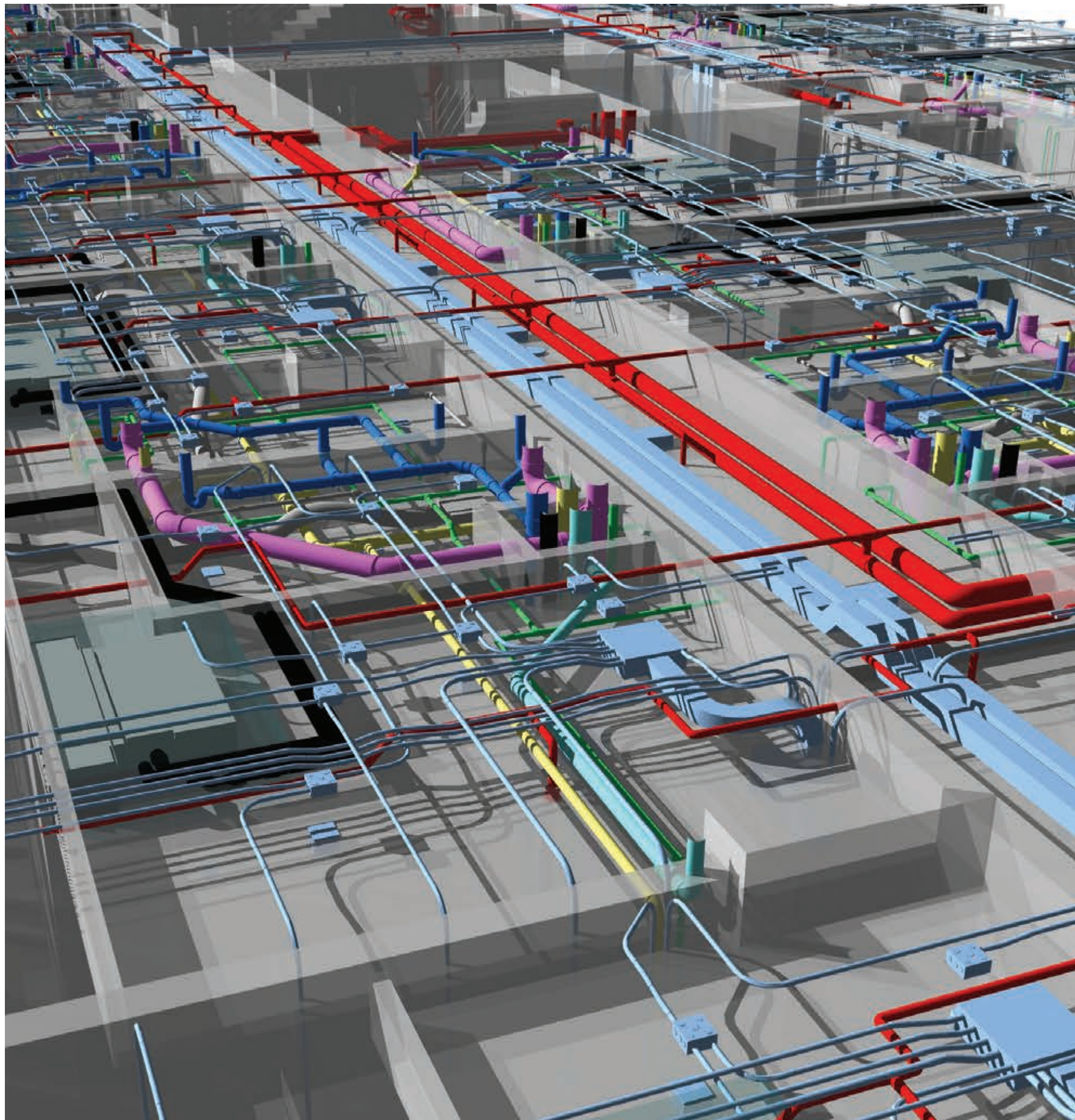
There are an increasing number of tools such as Autodesk Revit, that allow designers to visualize, simulate, quantify and calculate building performance aspects. These software packages apply rules that are based on physics and industry best practices providing a valuable complement for Meinhardt engineers condensing knowledge into services that can run with the click of a button.

Meinhardt's BIM toolset helps automate clash detection reducing costly on-site clashes and ensuring a perfect fit of off-site manufactured elements. Simultaneously using BIM streamlines items count and quantity takeoffs, as these are updated automatically as the model progresses.

Meinhardt 3D digital design models become the ultimate communication tool for project related information whether that's done using traditional paper drawings or using Virtual and Augmented Reality. Using 3D digital models also means extended possibilities for Facilities Management.

Complete with animations, Meinhardt federated models facilitate construction synchronisation processes, delivering a predictable path to the expected outcome, sequencing steps, materials, and helping onsite crew deliver more efficient construction progress.

Meinhardt takes full advantage of technology using the cloud as a models repository allowing its clients to access project details from anywhere, anytime on any device.



building information modelling