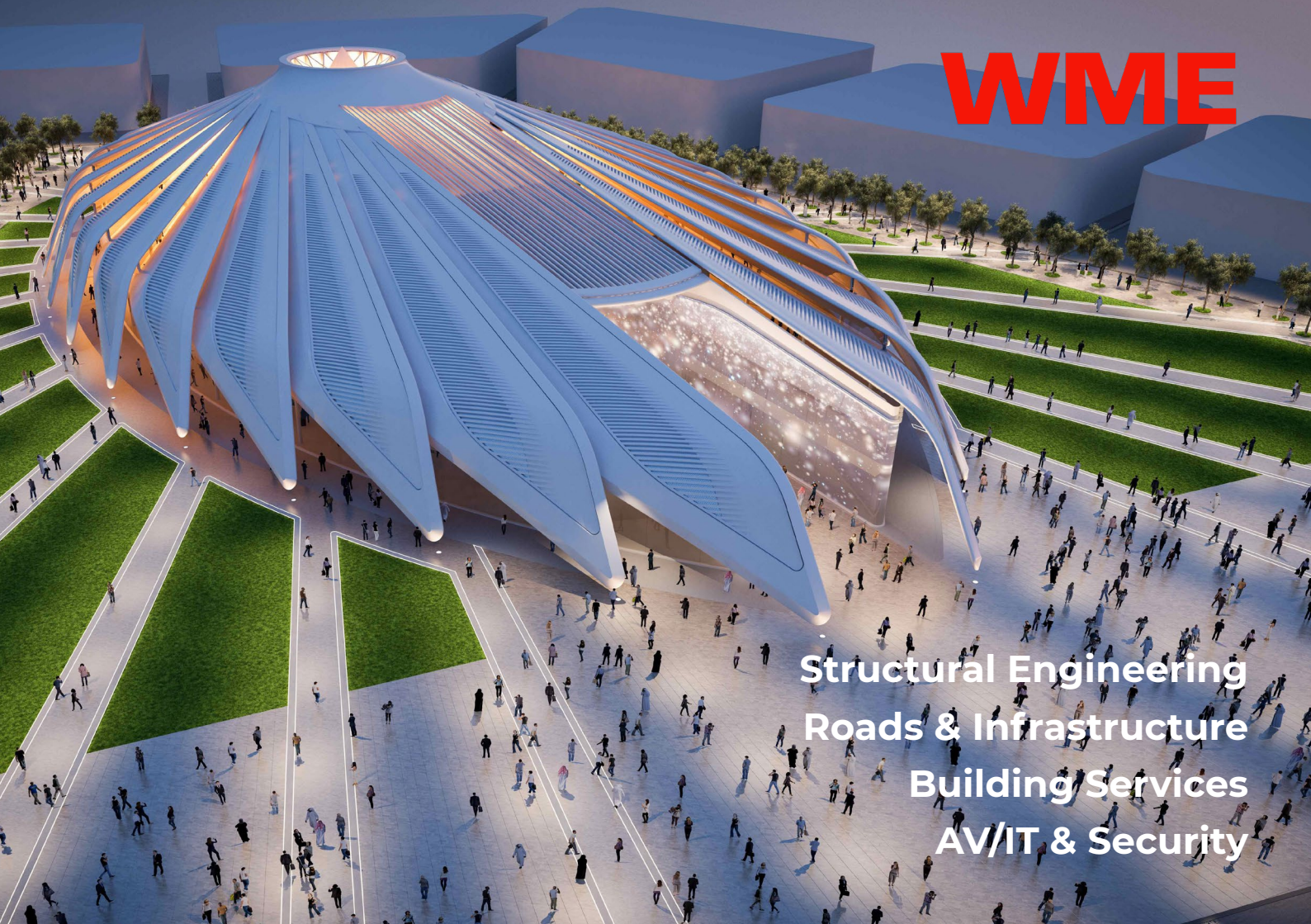

WME
Structural Engineering
Roads & Infrastructure
Building Services
AV/IT & Security

One Company, One Vision,

Multiple Locations.

WME is a leading global engineering design consultancy.

We are 350 structural, building services and infrastructure engineers, specialist consultants and support staff located in 4 countries and 8 offices. Our geographic diversity allows us to provide design services to clients and projects anywhere in the world.

Our aim is to deliver exceptional and sustainable design solutions on building and infrastructure projects for our clients. To do this we apply our vast project delivery experience holistically and ensure that the original aims are delivered throughout the lifetime of the asset.

We are not an organisation that is just reactive in the design process and we do not, for instance, take the view that our role in a project is to 'retrofit' structure and building services into an architectural design. Our intention is to work actively and collaboratively with clients, architects and other design team members from project inception to maximise the opportunities for successful delivery of all our projects.

Our commitment to the principles of environmental design and the Soft Landings Framework is a reflection of our wish to minimise the impact of what we do whilst also minimising post completion defects and providing our clients with value for money.

Peyman Mohajer
Group Managing Director

Working With

International Architects.

How?

We aim to deliver a high level of engineering with our partners across the globe. Communication is key to delivering any project and in this modern world there are no limitations of how this can be done. We aim to ensure coordination, integration & communication on projects through an array of mediums including but not limited to the following:

- Microsoft Teams, Goto meetings, ZOOM;
- We-Transfer, The Cloud;
- Work Sharing;
- BIM 360;
- Aconex, Conject;
- Face-to-face via our local offices

Why?

WME is a well established international engineering practice and as such we look to work with global developers and architects to work on cutting edge project through all of our global offices. The projects and opportunities that we are presented with are delivered by a number of experts across the globe and as such we have aligned ourselves to deliver these projects as the engineer of choice.

By unraveling the limitations of distance we can select the best expertise globally to work on any projects regardless of scale, distance and time.

Who?

WME have worked with international architects remotely on many projects such as:

- UAE Pavilion (Calatrava- Zurich),
- Lapita Hotel (CRTKL - London),
- Mekkah Teckno Valley (HOK - Hong Kong),
- Design District 3 (Fosters – London),
- Solitaire Retail Mall (Benoy- London),
- Sky City Mumbai (EcoID – Singapore),
- Piramal Mumbai (CRTKL Seattle) to name just a few.

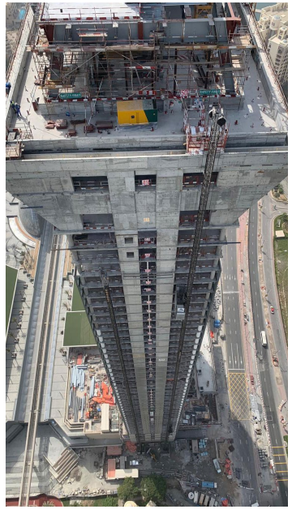
Structural Engineering

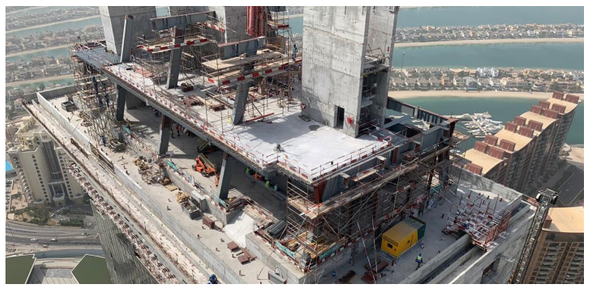
Our structural engineers are experts in the design and construction of all types of structures — from individual small buildings to multi-unit developments, and low-rise long-span buildings to super high-rise towers. We work closely with architects, project developers, building owners and contractors to achieve the collective vision for a project, delivering effective structural solutions. Whatever the sector, scale, location or structural material, we provide a practical coordinated service, designed to maximise value and minimise construction time.

Our structural engineering teams include experts from many countries, with experience in working in dynamic, challenging and complex built environments. We offer a depth of experience, with the ability to find solutions to complex challenges and the flexibility to work with new technologies and design approaches.

Particular areas of expertise include the design of long-span and high-rise structures, designs for seismic zones and the integration of structures, building services and sustainability measures in all building types. A key aspect of our approach is working with architects and designers at the concept stage of a project, when structural advice and option development can help define architectural intent, realise spatial qualities, increase net lettable areas and improve layout flexibility whilst reducing capital costs, maximising construction efficiency and helping to build-in future adaptability.

Our team works closely with architects and external experts such as geotechnical, facade and fire engineering consultants to ensure delivery of our clients vision. During the optioneering stage of the project and to ensure coordination between our in-house and the external teams we utilise the latest building information software techniques.





Infrastructure

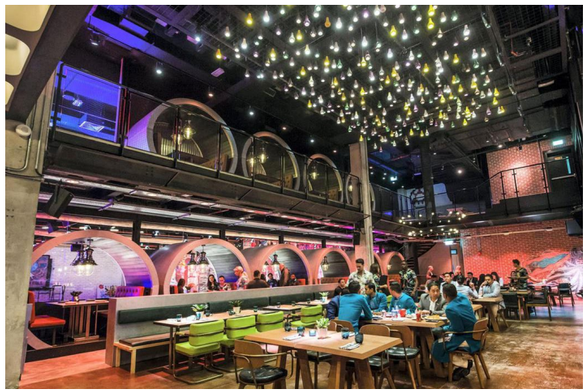
We provide infrastructure engineering design services for individual construction projects of all sizes, as well as large-scale municipal and government capital works schemes.

Our highly experienced infrastructure teams support projects through all phases of delivery, from planning to concept and detailed design, construction site supervision and commissioning. We deliver effective, economic and sustainable solutions. We also have the expertise to review and analyse projects at a high level, enabling us to meet the demands of designing and delivering large-scale infrastructure.

Our experts have in-depth experience in the design of roads, intersections and utility services such as trunk water mains and sewers, sewage pumping stations and subdivision infrastructure. We work on multi-disciplinary development and environmental projects around the world.

Our comprehensive range of services includes:

- Road, cycleway and pedestrian route design
- Intersection improvements and pavement design
- Ground improvement and road reconstruction
- Development of grading plans and earthwork calculations
- Storm water management, analysis and design of storm water drainage systems
- Water distribution network design for potable water, fire-fighting and irrigation
- Chilled water distribution systems
- Gravity and pressurised systems for wastewater collection and transmission
- Design and co-ordination of power and telecommunications infrastructure
- Street lighting design



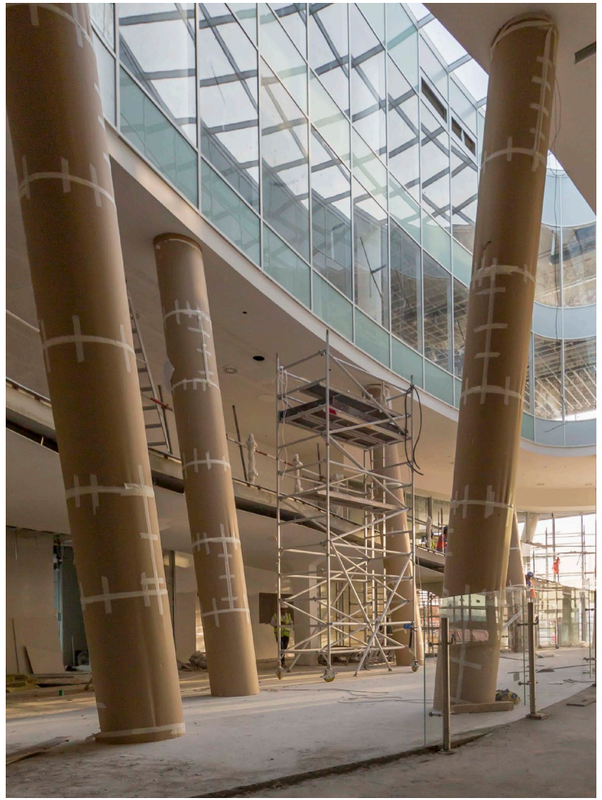
Building Services

We provide building services engineering design for a wide range of building types, scales and climatic conditions, focusing on people-friendly low energy cost-effective solutions.

Our engineers are highly experienced in the design of mechanical, electrical and plumbing systems for office and workplace environments, for residential projects such as high specification villas and high-rise accommodation, and for large commercial developments such as shopping centres and hotels — where we combine sensitivity to the requirements of individual users with those of building management.

Our approach is client-focused, fast-track and climate-responsive. We optimise building services design, working towards the most efficient solutions for a particular project and its environment. Close attention to how a building will react to internal use and external conditions enables our engineers to design the most appropriate cooling/heating, air handling, lighting, ventilation, water distribution and water use systems to achieve a low energy outcome. We are particularly experienced in the design of low energy solutions for hot climates.

To achieve an integrated design, we work closely with clients, architects, contractors and our engineering colleagues, such as structural and AV-IT engineers. We use the latest building information software techniques in the development of options to enable informed decision-making, and for the co-ordination of project documentation.



AV/IT Security Engineering

Our AV/IT specialists provide an independent cost-efficient service for the design of audio-visual, IT and security systems. Working closely with clients and project teams, we ensure seamless project integration.

Our engineers bring technical expertise and in-depth international experience to the design of AV/IT and security infrastructure, the selection of appropriate hardware and the commissioning of systems.

Projects include solutions for individual residences and residential communities, commercial and mixed-use buildings of all scales, data centres and local authority IT infrastructure works.

We deliver value for money by providing an independent, client-focused service. We are not tied to particular products or systems, which means our evaluation of systems remains objective, cost-effective and free from supplier pressure.

Our specialists have particular expertise in the design of home automation systems, power (and lighting) delivery using Ethernet (PoE) and specifications for the use of Cloud technologies.

AV Services

- Audio visual and multi-media system design and selection
- Home automation systems
- Intelligent Building Systems
- Delivery of IP TV over data networks
- IP networks for environmental control protocols
- IP integration with building services
- Smart Building Technology

Security Services

- Development of security policies and plans
- Design of CCTV systems and integration with IP networks
- Design of access controls and integration with IP networks
- Intruder alarm systems
- Integration of building systems such as fire alarms, access control, etc
- PoE systems

IT Services

- Infrastructure for voice and data service solutions
- Wide area network (WAN) and local area network (LAN) design
- Design of IP telephony
- Wireless access point (WAP) heat mapping
- Equipment selection
- Data room and data centre design, and tier classification advice
- Structured cabling
- Site-wide infrastructure design
- Cost benefit analysis of available systems

Lead Design Consultancy

WME has successfully provided Lead Design Consultancy (LDC) services on multiple projects in the Middle East Region.

WME consistently represent what it is to be an exemplar Lead Consultant, through understanding of each client's key requirements, presenting clear direction at design stages and positively driving the team forward to achieve results. It's not a straightforward role as one is to ensure that all the various mechanisms come together and work in unison but there is a sense of achievement when all the different components of a project fit together like a puzzle.

LDC is about effectively coordinating all disciplines to provide the best result for the client. As a Lead Consultant, we understand and appreciate what each contributor is doing, and how we can make sure they are able to produce work in a unified and productive manner that will achieve the best overall outcome for the project. A good Lead Consultant is an effective problem solver and a confident provider of informed and considered design decisions, allowing the other consultants to move forward with clear direction.

The LDC is the project guardian, who is at the forefront of the design coordination but always safeguarding quality and ensuring the programme is regularly tracked and the agreed milestones are met.

The Lead Design Consultant role includes:

- Directing the design of the consultant team
- Being the main point of contact for communication between the client and the consultant team
- Coordinating, monitoring and reviewing the work of the consultant team (including specialist designers and specialist contractors as required)
- Arranging consultant team meetings and planning work stages
- Preparing programmes and progress reports
- Seeking instructions from the client
- Advising the client on the choice of procurement routes that best suit the client's programme or budget
- Advising the client on the need to appoint additional advisers, consultants or specialist designers
- Establishing change control procedures at key stages · Arranging value management exercises
- Assisting the client in defining the technical selection criteria for contractors and preparing the technical pre- qualification questionnaires
- Assisting in the technical review of tenders

Sustainability Consultancy

Our approach to low impact and energy buildings encompasses all aspects of a site, building and development from their orientation through to occupancy control. Having a low carbon footprint must be captured across the board and is in our DNA. Making small steps in making the right choices and implantation makes a huge difference to our environment.

As a provider of design services we recognise that our actions could have a profound impact on the environment and its long-term sustainability. We passionately believe that our responsibility is to help our clients to deliver buildings and developments that have lower environmental footprints whilst still delivering social and economic benefit. We do not believe that this is achieved by just carrying out box ticking exercises, or talking about how new technology could be implemented, but by embedding a responsibility and mindset in our staff and collaborators that results in measurable environmental benefits.

Our team has delivered many projects that have been assessed against recognised environmental and sustainability standards. These have included the UAE Pavilion for EXPO 2020 and SRG Tower (LEED Platinum), Saadiyat Beach Villas (Estidama 2 Pearl), Swiss International School Dubai (Minergie).

MINERGIE

BREEAM®

U.S. GREEN BUILDING COUNCIL PLATINUM USGBC

Case Study - Swiss International School, Dubai, UAE

Swiss School was the first Middle Eastern project to receive a Minergie certification. This is a low energy operation certification, given to projects that achieve energy consumption under 38kwh/sq.m/annum, which originated in cold climate regions. Our school project reached 36kwh/sq.m/year which is one of the lowest energy usage buildings in the Middle East.

The project is audited annually to confirm that the low energy systems continue to perform as intended and the building meets the sustainability criteria. We worked with the end users on occupancy profiles and layouts, which then led to a decision to locate those activity rooms subject to high usage in peak times being on the north side of the building. The clients investment in local building materials with a better U-value brought huge rewards to the output of the energy model.

Selection of energy efficient and low energy plant, and use of modularised equipment which allowed for more precise energy use, meant we were able to eliminate over provision of cooling and power. In addition, the introduction of building occupancy control sensors allowed for summer usage to be kept to a minimum at the time of highest temperatures and meant that our simultaneous peak load was based on the environmental condition in May, rather than July. Renewable energy in the form of solar water collectors, energy recovery wheels, photovoltaics, water recycling and harvesting all reduced the overall energy requirements to allow for a very low energy and water usage building.

"WME have led the KPIs set to the team to achieve a low energy; Minergie building which has been delivered on budget and on time, adhering to the high level of functional requirements set out. We are happy to recommend them for futurework and the future phases of our school" - Omar Danial, SISD

Building Information Modeling

Building Information Modeling (BIM) is an evolving process that is becoming essential to project success rather than a competitive advantage. WME Boom Collective use the latest BIM technology for structural and building services design and have been proactive in the development of BIM and implementing it on our clients' projects. We have several years of experience in realized BIM projects with proficiencies in many of the leading BIM software tools, which are supported by strong developments in BIM processes and deployment.

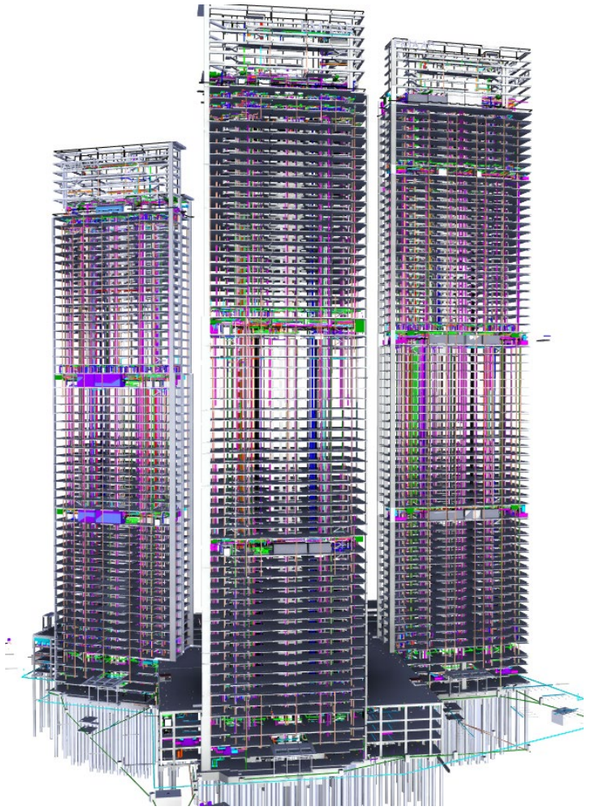
Building Information Modelling affords numerous benefits to the design, construction and operation of a facility. The degree to which these benefits are realised is dependent on the suitability of the technology deployed, the competency of the operators and the effectiveness of the execution processes. We develop a unique BIM Execution Plan for each project undertaken, this is supported by a carefully selected project team and software that is fit for purpose and best in class. Following this methodology, the benefits of BIM are more readily achievable as listed below.

Coordination

- Earlier conflict and error detection
- Consolidated building information from all disciplines in a single repository
- Modifications are tracked by time and user in aversion-controlled context

Quality

- Improved quality through enhanced geometric control gives higher building quality
- 3D and virtual reality design reviews
- Verify fitting and installation requirement in advance, through complete 3D information
- As-built verification & deviance mitigation



Time Reduction

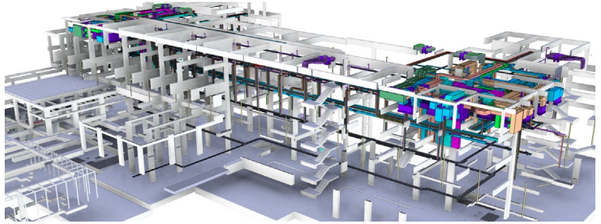
- Faster project delivery
- Accelerated communication through real-time BIM collaboration system
- Construction sequence simulation for optimisation and on-site layout planning
- Installation process clarified through explicit work package design in 3D BIM Model
- More accurate planning of temporary works through explicit 3D modeling of works, cranes, and installation sequencing

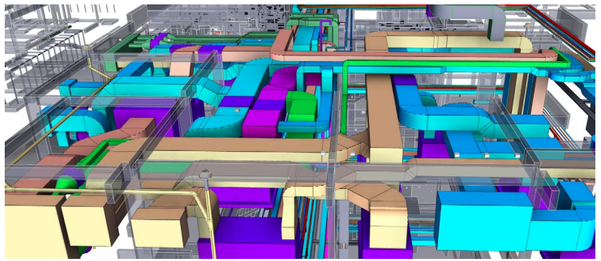
Cost Control

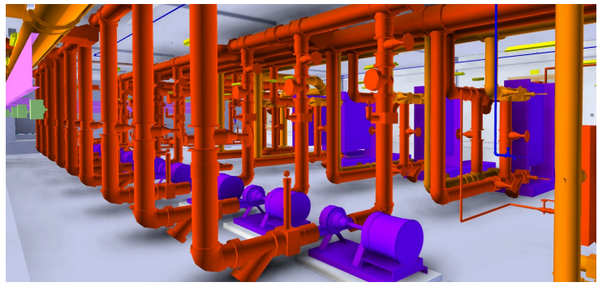
- Improved budget reliability
- More accurate quantity extractions and cost estimates at any stage of the design process
- Extraction of precise geometric information required for specialty fabrication

BIM Capabilities

Our BIM Team develops models in line with UK BIM Level 2 requirements, leveraging the virtual experience and know how to optimize the project. One of the most accessible and beneficial areas of our BIM deployment plan is for structure and building services coordination. This enables contractors to visualize potential constructability and accessibility issues before going to site and, thus, reduce the number of requests for information (RFI) during construction. Models developed by our team can be easily be further developed to UK BIM Level 3 Construction Models.







Nakheel Mall

We are lead engineer for Nakheel Mall providing building services, fire and structural engineering, plus sustainability, AV/IT consultancy and Roads & Infrastructure. The 450,000^{sqm} concrete-frame project is located in the 'trunk' of Dubai's Palm Island and occupies three basement levels, three floors and a roof level. Its flat slabs and column-free spaces are supported on existing piles, requiring close coordination with geotechnical consultants. The number of cores in the building have been minimised, and escalators provide circulation. The plant is housed on a 25,000^{sqm} mezzanine located below roof level, and connected to the facade for air handling. The restaurant areas at roof level are separately serviced.

Location: Dubai, UAE
Architect: RSP Architects
Developer: Nakheel

Vida Residences Dubai Marina

Emaar's Vida Group has been set up to operate hotels, resorts and apartments in Dubai and further afield. WME is contributing building services and security engineering to the design development and documentation phases of the group's hotel and residential project at Dubai Marina, on the site previously occupied by the Dubai Marina Yacht Club. The project complex consists of a waterside tower with three basement levels, five levels of hotel accommodation, 42 floors of serviced apartments and one level of associated plant. The apartments are 1-4 bed, plus penthouse suites, and are supported by amenities, and retail and food outlets.

Location: Dubai Marina, Dubai, UAE
Architect: Killa Design
Developer: Emaar

Kings College Hospital & Clinics

WME was appointed to deliver a full range of engineering services for the first full-scale Kings College Hospital to be constructed outside the UK, along with three polyclinics. The specialist hospital accommodates 180 beds, 20 outpatient clinics, an intensive care unit, a radiology department, five operating theatres and a specialist oncology treatment centre. We also worked on the roll-out of the polyclinics at various sites in Dubai, providing outpatient services. Our services included structural, building services, AV/IT, roads and infrastructure engineering, plus fire, vertical transport, lighting, facade and sustainability engineering.

Location: Dubai, UAE
Architect: Perkins + Will
Developer: Ashmore Healthcare

The Swiss International School

The Swiss International Scientific School Dubai (SISD) occupies a campus of eight new concrete frame structures. The primary (first phases) and secondary school buildings were the first in the Middle East to be low-energy certified by the MINERGIE Association, Switzerland.

WME provided a full range of engineering services, including structural, building services, fire, infrastructure and traffic engineering, plus sustainability consultancy. All eight buildings in the complex have been designed to be as energy efficient as possible.

Location: Dubai, UAE
Architect: Archilab – Gabriele M Rossi, with DSA Architects
Developer: Confidential

Kings College Hospital
Dubai, UAE

The Address Fountain Views
Dubai, UAE

La Reserve

The La Reserve residential project will deliver 82,000^{sqm} of high specification living space and retail units in an 11 storey concrete frame over two building structures. WME is providing a range of engineering services and acting as architect of record. The site includes a pre-existing 8m deep shored excavation. Our building services engineers are designing a diversified cooling system to suit the limited local availability of district cooling. The design includes complex cantilevered balconies and these require services coordination in running the drainage system for each back into the building envelope.

Location: Dubai, UAE
Architect: RSP Architects
Developer: Nakheel

Sudair Commercial Spine

The "Commercial Spine" project is situated on a plot area of 442,000^{sqm} within the 'Start-Up' phase of the Industrial City Development. The project is adjacent to Riyadh – Qaseem Highway. WME has been retained to provide infrastructure master planning for the project, as well as infrastructure & road design services executed in two main Stages: Concept & Detailed Design. WME scope included: site grading & earthwork analysis, storm water management, design of underground utility services, power distribution network, ELV & telecommunications ducting infrastructure (cabling by telecoms providers), street lighting, surface grade parking design, roadways design etc.

Location: Dubai, UAE
Architect: Dewan Architects
Developer: MODON

DIFC Coffee Zone

The DIFC Coffee Zone project encompasses the rearrangement and extension of the retail section of the DIFC development.

WME carried out full engineering and supervision scopes as well as the architect of record role. This was a fast track project with live buildings, utilities and road enhancements which made planning paramount to ensure the process didn't hinder this central business centre. Working closely with the contractor to obtain the on-site conditions in parallel to rolling out the design ensured coordination was robust and the timelines were met.

Location: Dubai, UAE
Architect: 10 Design
Developer: DIFC

AWR Business Bay Five Star Hotel

The development is a prestigious five-star hotel building located on Sheikh Zayed Road in the Business Bay area. It is 474 meters high and is comprised of seven basement levels, ground floor, 3 podium and 98 floors. The tower is considered predominantly a residential building (hotel and hotel apartments).

The basements house car parking and MEP areas while the podiums have exclusive Restaurants, Banqueting and Recreational facilities. The remaining 98 floors are hotel and hotel apartments. There are four intermediate plant levels along the height of the tower.

Location: Dubai, UAE
Architect: Arif & Bintoak
Developer: AWR

Borivali Sky City

WME was appointed as structural consultants by Oberoi Realty to undertake full design of this project, seeking opportunities to maximise structural efficiency of the repeat elements for the Oberoi Borivali Sky City development at Mumbai, India.

The development consists of a cluster of towers typically 66 storeys tall over a shared ten storey parking structure (three basements plus seven levels above ground).

Location: Mumbai, India
Architect: Eco ID, Singapore
Developer: Oberoi Realty

SRG Tower

The SRG tower, with 105 floors, is one of the slenderest and most ambitious towers ever envisaged. The client, SRG Properties, aimed to create a cutting-edge iconic super-tall building which, once complete, will be yet another high-profile addition to the already iconic skyline of Dubai. The strategies followed in this challenging project represent innovative and state-of-the-art engineering techniques. The diagrid solution adopted will give this 462m tall tower a unique appearance while playing a fundamental role in structural stability and architectural character of the tower. The double wind turbine configuration at the top of the tower, which at peak levels will generate 500KW energy, is not only a dramatic aesthetic statement but also a significant step further in achieving sustainability goals and aspirations in harnessing renewable energies.

Location: Dubai, UAE
Architect: Killa Design
Developer: SRG Properties LLC

The Palm Tower

The 45-storey concrete frame Palm Hotel will occupy a section of the Nakheel Mall site in the 'trunk' of the man-made Palm Jumeirah island complex in Dubai. Our structural, building services, fire engineers, sustainability and AV/IT consultants will take the project from concept stage to tender and supervision. Completion is due in 2019. The tower will deliver 300 hotel rooms and 200 serviced apartments, and is surrounded by the mall, roads and older residential developments-making it 'land-locked' from a building services point of view. In addition, it's location means that installations such as plant need to be protected from the harsh salty sea air.

Location: Dubai, UAE
Architect: RSP Architects
Developer: Nakheel

The Address Fountain Views

Our structural and building services engineers are working on the detailed design of four super-high rise towers in Downtown Dubai, the highest of which is The Address Hotel, which will stand at 315m. The concrete frame towers share a podium that accommodates three basement levels, retail areas and 11 parking floors, as well as building services installations. The podium links to the adjacent Dubai Mall.

The complex will be connected to the local district cooling network and, as the towers are so high, ensuring that returning water temperatures are at acceptable levels is a challenge.

Location: Dubai, UAE
Architect: DP Architects, Atkins, Dewan
Developer: Emaar

La Ville Hotel
Dubai, UAE

Swiss International School
Dubai, UAE

Holiday Inn & Staybridge Suites

The Holiday Inn & Staybridge Suites development combines two similarly sized buildings, one for 4-star hotel accommodation and the other for residential use. They comprise of two basement levels for parking, a ground level, mezzanine and seven upper floors, served in common by centralised infrastructure.

Swimming pools are located on level one of the hotel building and level four of the serviced apartments. Both buildings are concrete frame, with a flat slab floor system supported on concrete walls and blade columns. The aims of the structural design included minimising floor depths and maximising form work reuse.

Location: Dubai, UAE
Architect: RMJM Architects
Developer: Ishraq Dubai LLC

Nikki Beach Hotel & Resort

Off the coast of Dubai on the reclaimed island of Pearl Jumeirah, Meraas developed a new beach resort complex and residential area. The first phase was completed in March 2016, with the second phase following in mid 2016.

We used Building Information Modelling to deliver civil, structural, building services, infrastructure and AV/IT engineering for the whole project, as well as undertaking site supervision. Included in the resort are villas, bungalows, residences, a hotel and a beach club providing sports, entertainment, dining, retail and leisure facilities. The design is contemporary, using slim line structures that help keep views clear.

Location: Dubai, UAE
Architect: DSA Architects
Developer: Meraas

La Ville Hotel

An 86-room hotel, with 68 serviced apartments, to be operated by Marriott. It is located near the World Trade Centre in Dubai. WME were appointed to undertake the preparation of a tender package over a 10-week period for the construction of this eight-storey hotel, the design of which had already reached schematic stage.

We provided structural, building services, vertical transport and acoustic engineering, starting with a peer review of the existing scheme, value engineering and taking the project to completion. An enabling works package was also prepared so that a contractor could join the team at an early stage.

Location: Dubai, UAE
Architect: Woods Bagot
Developer: Meraas

Jeddah Pearl Hotel & Serviced Apartments

Jeddah Pearl Client Development in Jeddah, KSA consists of 5 star hotel tower, residential/ serviced apartment tower and five levels of podium.

The hotel consists of basement parking, ground floor front of house areas and 24 levels of guest rooms, amenities & conference rooms. The serviced apartments and the residential are in a separate tower. All are served with two levels of car parking. The hotel royal suite is serviced with blast proof enclosures and 100 backup systems. The high end Façade is key to the clients vision therefore integration of the MEP systems into the Façade is fundamental within the design. The project is LEED Silver.

Location: Kingdom of Saudi Arabia
Architect: DSA Architects
Developer: Confidential

Saadiyat Beach Villas

The Saadiyat Beach Villas complex is located on the north-west shore of Saadiyat Island, Abu Dhabi. WME is delivering the scheme design for phase 2, providing structural, building services and AV/IT engineering.

In the second phase of development, 83 villas and town houses, plus a community centre, are being configured to make the most of the completed infrastructure and utilities installations that were based on an earlier master plan. Working closely with DSA Architects and our client, TDIC, our consultants are helping ensure that the most successful layouts and systems go forward. The buildings are concrete frame, tailored to the open architectural forms.

Location: Abu Dhabi, UAE
Architect: DSA Architects
Developer: TDIC

Dubai Hills Villas

Working with lead consultant RSP Architects, our structural and building services engineers have completed the schematic design of the prototype villas that will be sold from plan for the exclusive Dubai Hills project.

The six concrete frame designs feature 4-9 bedrooms, column-free living areas, cantilevered balconies, fully glazed façades and outdoor swimming pools. MEP services are fully integrated, with full user control in each room. Robust AV/IT and security systems are included, and all the villas are Dubai Green Building compliant.

Location: Dubai, UAE
Architect: Arif & Bintoak
Developer: AWR

Al Fahid Island Development

Al Fahid Island, located off Saadiyat Highway Abu Dhabi is made up of residential, and a mix of parking and retail/F&B at ground level and podium 1, 2 and 3 levels.

The residential is split over a mixture of 11buildings above the podium parking areas and villas split around the podium 1, 2 & 3 Levels. WME is delivering civil, structural and building services engineering.

Location: Dubai, UAE
Architect: JLA Architects
Developer: Emirates Land Group

Dubai International Finance Centre Retail Spine

The Dubai International Finance Centre (DIFC) is an established economic development zone of approximately 45 hectares in central Dubai. Its master plan includes a central retail spine, linking already-developed plots with ones currently under development. WME was appointed to deliver structural, building services and infrastructure engineering for the spine, under lead designer RMJM Architects. We also acted as the architect of record (AOR). We have worked closely with the client and the architect to review and document the extant services provision and foundation works. The idea is to ensure that the new 60,000^{sqm} mixed retail and food/beverage scheme gets the best value from retention of the installations, which will be developed further as required.

Location: Dubai, UAE
Architect: RMJM
Developer: DIFC


Four Seasons Hotel
Jeddah, KSA


DIFC Gate Avenue
Dubai, UAE

Dubai Festival Mall

In a phased construction project at Dubai Festival City Mall, during which the complex remained operational, our structural engineers delivered design and supervision services for the building's remodelling and expansion, including the creation of the centrepiece Festival Square.

Starting with a condition survey of the existing building and its modelling in Revit software, works included deconstruction of 12,000^{sqm} of its area, followed by phased integration of new lighter-weight structure to achieve a net increase of 41,435^{sqm} of new retail space-an increase of one third on the mall's former retail area (total new build 57,000^{sqm}).

Location: Dubai, UAE
Architect: HOK
Developer: Al Futtaim Group

The Reem Mall

The new regional super-mall to be constructed on Al Reem Island close to the heart of Abu Dhabi will be a major retail and entertainment destination for the city. Planned are more than 450 stores, 85 restaurants, cinemas, leisure facilities and family entertainment complexes such as a snow park-plus one of the largest hypermarket spaces in the region.

More than 190,000^{sqm} of retail space and associated parking will be housed on three levels, two of which are basement storeys. Services installations, storage and goods access are focused on the lower levels. WME has delivered civil, structural and building services engineering for the concept design.

Location: Abu Dhabi, UAE
Architect: RTKL Associate/DEWAN
Developer: Al Farwani

Dubai Hills Business Park

WME is engineering a fast-track shell and core business park development for Emaar's Dubai Hills project in the UAE. The design and build contract is being executed by Sharpoorji Contracting, and will deliver 26,000^{sqm} of Grade A office space in four buildings. We are working with RSP Architects to realise the construction time frame and provide maximum flexibility for tenancies. The flat slab construction system includes 'soft spots' for future openings. The office buildings are seven-storey plus ground level, with parking provided in a fifth building over six floors. In all, the built area of the project is 150,000^{sqm}. Storm water dispersal has proved a particular challenge, and we have developed an on-site strategy using underground tanks to store water for landscaping.

Location: Dubai, UAE
Architect: RSP Architects
Developer: Sharpoorji Contracting for Emaar

Proton Clinic

WME have been appointed as the engineers under H+A for the first Proton clinic in the UAE. The clinic is within the expansion of the existing Gulf International Cancer Centre, GICC, and is derived of an additional 3000^{m2} of built up area over 2 floors. The projects complexities are set around the requirements of the cyclotron machines which weigh 60 tonnes and have a number of pre-requisite requirements. The construction of the Proton bunker requires the installation of specialist shielding around the Cyclotron machine and gantry. The proposed shielding system is the VeriShield VPAC system which consists of individual block modules that are assembled into stackable packs and are craned into position.

Location: Dubai, UAE
Architect: H+A
Developer: Gulf International Cancer Centre

Wavehouse Atlantis

WME was commissioned to create a dedicated family entertainment destination in the heart of Dubai's renowned Atlantis The Palm hotel. The brief from the hotel brand and hospitality heavy-weights Solutions Leisure envisaged the entity to become a first for the region, if not the world, as the venue would become a collective of spaces which would seamlessly morph into each other. Wavehouse occupies both ground and mezzanine levels, encompassing uninterrupted sight lines throughout which culminate with the incorporation of an active wave machine – accessible from the Atlantis aqua park.

Location: Dubai, UAE
Architect: Bishop Design

Developer: Atlantis

Arabian Ranches III

Arabian Ranches III will comprise a selection of three and four-bedroom town-houses spread around a lush community.

The Emaar development is a new gated town-house community with a central park spanning an area of over 30,000 square metres, a 4km long boulevard, parks with play areas for children, as well as wellness and sports facilities.

The neighbourhood also features a lazy river, cycling tracks, a retail strip, a clubhouse and community centre, a mosque, as well as schools and healthcare facilities in close proximity.

Location: Dubai, UAE
Architect: U+A

Developer: Emaar

Four Seasons Hotel

WME, in partnership with DSA, were appointed to redesign the 600 key hotel and branded apartments located in Jeddah Corniche.

The project was designed in 2016 and the client has faced issues with technical compliance and coordination. The client wanted to incorporate some substantial value engineering to the project, ensuring the project was both buildable and viable.

The value engineering ensured the savings could be used for guest experiences which are essential in a 5-star hotel.

Location: Jeddah, KSA

Architect: DSA Architects

Cleantech 3

The development consists of two (2) blocks of 7/8-storey multi-users research and development building with multi-function hall, retail and restaurants at 1st and 2nd storey and one (1) block of 9-storey office building with a basement carpark.

The development adopted precast panel façade to improve the productivity with shortened construction duration. WME provide structural engineering support to the specialist contractor on precast design, fabrication and installation.

Location: Singapore
Architect: Architects 61 Pte Ltd

Developer: JTC Corporation


Arabian Ranches III
Dubai, UAE


Piramal Agastya
Office Phase 2

Dubai Mall Perfumery Fit-Out

The Dubai Mall, in the Downtown area of the city, is thought to the largest retail mall in the world by total area.

Its second phase of development was completed in 2017, and we are working on a new fit-out project for developer Emaar that will be located in the extension. Emaar is bringing new luxury brands to Dubai for its high end beauty destination — a perfumery. WME is delivery the building services for the project, which will occupy a series of open and private spaces, with varied tenancy requirements. We are working closely with Emaar and Kinnersley Kent Design to streamline the services to each tenancy, and ensure that the building services are closely and invisibly integrated with the interior finishes.

Location: Dubai, UAE **Developer:** Emaar
Architect: Kinnersley Kent Design

MAG Wellness Residences

The high end mixed-use project developed by MAG Property Development's is located in Healthcare City. In encompasses two apartment blocks, 13 luxury villas, a boutique hotel and a wellness next to Dubai Creek. There is a total built up area of 86,000m2 across all of the buildings. WME provided structural, building services and infrastructure engineering. Flexibility has been key to the engineering of the hotel element, as no operator was in place during the design phases alignment with the standards of international hoteliers had to be ensured. For the villas, high standards also had to be met, these include fully integrated smart home systems, controlling everything from door access to audio in each room.

Location: Dubai, UAE **Developer:** MAG Property Development
Architect: VE Experts

West Coast Vale

The development consists of two (2) blocks of 36-storey apartments with landscaped deck, two (2) basement carparks, and communal facilities at West Coast Vale. The development adopted Prefabricated Prefinished Volumetric Construction (PPVC) method to improve productivity and shorten the construction period.

WME provide structural engineering support to the specialist contractor on fabrication and installation of PPVC.

Location: Singapore **Developer:** Projalma Sdn Bhd
Architect: ADDP Architects

Jameel Arts Centre

November 11, 2018 marked the opening of Jameel Arts Centre, one of the first contemporary arts institutions in Dubai. Located at the tip of Jaddaf Waterfront, on the Dubai Creek, the Centre's multiple gallery spaces are home to curated commissions, projects, and solo and group exhibitions, drawn both from the Art Jameel Collection and through regional and international collaborations. The building itself is a specially-commissioned, three-storey, multi-disciplinary space designed by UK-based practice Serie Architects, who conceived it as a series of boxes of varying dimensions that are bound together by a one-storey-high colonnade. WME provided; Building Services, AV/IT engineering support, including Sustainable Design. WME are also acting as Architects and Engineers of Record.

Location: Dubai, UAE **Developer:** Jameel Arts Centre
Architect: Serie Architects

Borivali Sky City Mall & Hotel

WME was appointed as multi-disciplinary consultants by Oberoi Realty in 2018 to undertake full design of this project, including Construction Administration services. The project is shopping mall developed by Oberoi Realty Limited (ORL) at Goregaon East.

Retail Areas, approximately 65,000 sqm, 4 Levels

Hotel Tower, approximately 20,000 sqm, (i.e., assumed that 12 story hotel block with 20,000 sqm area)

Basement / Parking levels, approximately 57,000 sqm

Location: Mumbai, India
Architect: Benoy Architects, Hong Kong
Developer: Oberoi Realty

Piramal Mahalakshmi Residential Towers

WME was appointed as multi-disciplinary consultants by Piramal Realty in March 2018 to undertake full design of this project, including Construction Administration services.

The proposed project comprises three residential towers (70 storeys+) with a large podium structures (parking and amenities).

Location: Mumbai, India
Architect: CRTKL Architects
Developer: Piramal Realty

Snow Park, Reem Mall

The Reem Snow Park forms the centre-piece of the Reem Retail Mall in Abu Dhabi.

The 11,600m² facility is themed around a snow-covered enchanted forest and delivers experiences such as sledging, zorbing and zip-lining, across several distinct zones

As lead design consultant, WME ensured the interface between the specialist theming consultant (thinkwell) and the snow making consultant (Adereast) where encompassed/Designed and coordinated into a fully integrated design package.

Location: Abu Dhabi, UAE
Architect: BDP Architects
Developer: Update Group for ALJ

Amaala Luxury Resort

Amaala is a transformational project which incorporates a seven-star luxury hospitality experience on the Red Sea and is set to become a flagship of 'contemporary KSA', an aspiration strategy which is in line with the Saudi Vision 2030.

Essentially, the project consists of three luxurious new resort destinations; Triple Bay, The Island and Miraya.

Location: Red Sea, Saudi Arabia
Architect: DSA Architects
Developer: PIF

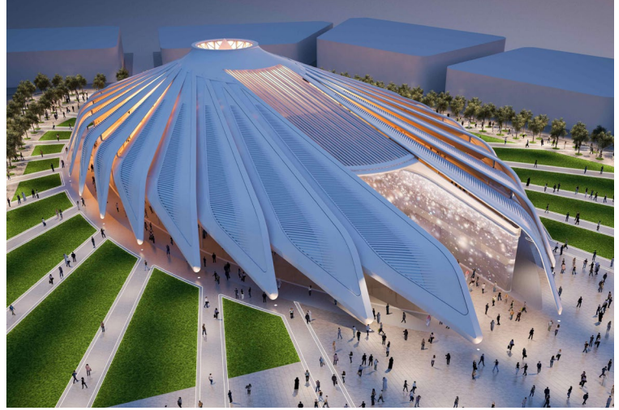
Austria Pavilion, Expo 2020

WME Global have been selected as engineering consultants for the Austrian Pavilion at Expo 2020. The Viennese architecture office Querkraft are responsible for the design of the Pavilion in Dubai. The design combines traditional building materials with modern techniques to present Austria as a centre of innovation.

WME is providing Building Services, AV/IT engineering support, including Sustainable Design. WME are also acting as Architects and Engineers of Record.

Location: Dubai, UAE
Architect: Querkraft

Client: Austrian Government



UAE Pavilion, Expo 2020

The National Media Council has selected architect Santiago Calatrava's design for the UAE Pavilion for Dubai World Expo 2020. Located facing the Al Wasl Plaza, which lies at the centre of the 200-hectare exhibition zone, the UAE Pavilion – whose design will be inspired by a falcon in flight – will represent the UAE to the 25 million visitors and participants from over 180 nations who are expected to visit the Expo from October 2020 to April 2021. WME is providing Building Services, AV/IT engineering support, including Sustainable Design. WME are also acting as Architects and Engineers of Record.

Location: Dubai, UAE
Architect: Calatrava International

Client: National Media Council

Luxembourg Pavilion, Expo 2020

The Luxembourg Pavilion will be a unique project which will include large open spaces and a courtyard with an aesthetically intricate façade that will envelope the central structure. The project will also involve a complicated de-construct phase after the Expo as it will be transferred to another location either local or international.

WME is providing building services and AV/IT engineering support, including sustainable design. We are also acting as architect and engineer of record.

Location: Dubai, UAE
Architect: Metaform

Client: Luxembourg Government

Emirates Pavilion, Expo 2020

The Emirates Pavilion will exemplify Emirates' spirit of sustainability, while at the same time provide a flavour of 'Seeding the future' experience for Dubai Expo 2020. The pavilion will demonstrate the principles of flight and also provide a sneak-peek into the future of aviation. The project will demonstrate the very best use of technology and sustainability to create a low energy, low environmental impact building.

WME is providing structural, building services and AV/IT engineering support services, including sustainable design. We are also acting as architect and engineer of record.

Location: Dubai, UAE
Architect: Tait Armour

Client: Emirates

VOX City Centre Al Zahia

VOX Cinemas City Centre Al Zahia will be a new 7500sqm 16 Screen cinema. This Cinema comprises 4DX, MAX, Kids 3No VIP Gold Class and 10No Multiplex screens.

The Cinema within a New Majid Al Futtaim City Centre Mall in Sharjah UAE is under construction and due for completion Q1 2020.

As lead consultants we require to co-ordinate and manage the design process including the Landlord, design team and client direct items. WME are providing the lead consultancy design and site supervision for MEP, Structural, AV/IT, Security, AOR, FLS and Acoustics.

Location: Sharjah, UAE **Client:** MAF Ventures

VOX Kingdom Tower

VOX Cinemas Kingdom Centre will be VOX's KSA flagship cinema within Riyadh's iconic Kingdom Tower. This 'One off' design is an all VIP Gold Class 8 Screen Multiplex Cinema which will be finished in the most luxurious of Interior Design standards. The project is complex as it is being fitted into an existing mall and former department store. Existing information was limited and floor to floor heights are low. Services for the Auditorium and Industrial F&B Kitchens have to avoid disruption of the below level high end retailers. WME are providing the lead consultancy design and site supervision for AOR, MEP, Structural, AV/IT, Security, FLS and Acoustics.

Location: Riyadh, KSA **Client:** MAF Ventures

VOX Ariac The Roof

VOX Cinemas Ariac The Roof is the first cinema in KSA in partnership with Lulu Malls. The 3400sqm multiplex cinema is located on the roof of a New Mall in Riyadh.

The cinema will provide 8 Screens with seating for 550 people. The Auditorium is a mix of Kids, Standard, VIP and Gold Class. WME are providing the lead consultancy design and site supervision for MEP, Structural, AV/IT, Security, AOR, FLS and Acoustics.

Location: Riyadh, Saudi Arabia **Client:** MAF Ventures

VOX Cinema & Bowling Complex

VOX Cinemas Jeddah Park is a new 7600 sqm 18 Screen cinema, Bowling and Entertainment complex within a new mall in Jeddah. The Cinema comprises 1No MAX, 1No Kids, 4No VIP Gold Class and 12No Multiplex screens. The Bowling will comprise a multi lane bowling alley, putting and entertainments complex.

WME are lead consultants. We require to co-ordinate and manage the design process including the Landlord, design team and client direct items. WME are providing the lead consultancy design and site supervision for MEP, Structural, AV/IT, Security, AOR, FLS and Acoustics.

Location: Jeddah, Saudi Arabia **Client:** MAF Ventures

Peyman Mohajer

MSc, BSc, CEng, FICE, FIStructE

Group Managing Director

E: p.mohajer@wmeglobal.com
T: +971 4 388 1616

Peyman Mohajer is highly experienced in the design and delivery of construction projects in a diverse range of global markets, including the commercial, hospitality and residential sectors. In his 30 years' experience — 21 years in the Middle East — he has worked on many challenging high rise structures that feature complex geometry. Examples include UBORA and Damac Towers in Dubai.

Peyman was regional managing director for the Middle East of UK multidisciplinary consultancy Whitby & Bird, and later for Ramboll post-merger. He oversaw both practices' exponential growth in the region for high-quality robust engineering services. In 2010, he founded WME on the back of his previous leadership and delivery roles in the region.

Mike Whitehurst

BEng(Hons) C.Eng MCIBSE

Director - WME Boom

E: m.whitehurst@wmeboom.com
T: +971 4 388 1616

As a Director at WME, David provides a combined role acting as Project Director on complex multi-discipline builds, upholds overall responsibility for WME site supervision and post-contract services teams, as well as retaining cross discipline responsibility for negotiating and overseeing the implementation of contracts within the business in the region.

He delivers high-level project leadership and management on his projects. With his attention to detail, he maintains a continual personal involvement in each project, from initial bidding process right through to final delivery on site. Through close liaison with the Client and his deep understanding of cross-discipline design requirements, he ensures timely delivery of a high-quality, coordinated design product.

James Warne

BEng(Hons) C.Eng MIE

Director - WME Boom

E: j.warne@wmeboom.com
T: +971 4 388 1616

James' extensive experience has led to his development of exemplar design solutions across numerous schemes and his passion for truly integrated design is spread through the industry by his educational work at the Centre for Alternative Technologies (CAT), the University of Portsmouth and his involvement with BSRIA.

James leads the industry through active participation in working groups such as Softlandings (where he sits on the Executive Committee and the User Group) and BIM (where he is in BSRIA and CIBSE working groups), seeing a route to better practice and more intelligent design through smarter working.

James is a Design Council's CABE registered Built Environment Expert (BEE) specialising in Sustainability, Environmental Engineering and Masterplanning.

Raghunath Murthy

B-Tech , Civil

Operations Director - India

E: r.murthy@wmeglobal.com
T: +91 80 26660699

Raghunath Murthy possesses over 18 years of experience in the field of Integrated Design Engineering for Structural, MEP and Architectural services. This experience contributes to the company's efforts in the execution of Commercial, Residential, Hotel and Institutional Projects within the region, the Middle East and Asia.

Raghu leads the overall design process to make sure all liaison inputs and constraints are incorporated in the development of each project. He has extensive experience in conceptualizing and implementing integrated design management processes, designing and developing systems/procedures.

Wijaya Wong

BEng, MSc, PE, ACPE, MSIArb, DfSP, MIStructE, CEng, Anggota HAKI

Regional Director - Singapore

E: w.wong@wmeglobal.com
T: +65 9786 2278

In line with the ambition of a strategically global footprint, WME announced the appointment of Wijaya Wong as the Regional Director of the WME Singapore office in 2017. The appointment was the beginning of a phase of expansion that helped spearhead the company's continued growth across the globe.

Wijaya is a passionate Structural Engineer who brings with him more than 20 years of experience in design and project delivery of prestigious projects throughout the region. His experience includes commercial, retail, residential, industrial and institutional projects in the South East Asia region including Singapore, Indonesia, Malaysia, Hong Kong and China.

Gary Sneddon

BSc MIET ACIBSE, IEng, CDCDP

Director - Dubai

Gary is a professional MEP & IT Engineer with more than 30 years of experience in Building Services with a passion for quality and high standards in all aspects of the industry. As Director for WME Saudi Arabia and Departmental Director for the AV/IT Solutions, he is responsible for the everyday design operations, and Business Development in the UAE and KSA. A particular focus is on the Mission Critical , Commercial and Hospitality sectors. Gary has a comprehensive knowledge of designing and developing, Electrical, IT and Data Centre systems and components to professional certified standards.

Trained in Edinburgh and Leeds, Gary has worked extensively throughout the UK and Europe and has been based in the Middle East for over 4 years. Gary has a wide experience as lead design consultancy in large building projects, throughout the UAE, UK, France and Saudi Arabia.

Nizar Al Sayed

MUP B.Arch

Director - Saudi Arabia

Nizar is a highly competent Urban Planner with more than 25 years experience in Saudi Arabia and overseas. He has a proven track record across many global sectors including, retail, residential, tall buildings, healthcare, education and hospitality/leisure. Having spent six years as Urban Planner & Architect at the Ministry of Municipal and Rural Affairs (MOMRA), Nizar has considerable experience in developing and leading masterplanning and urban planning teams. This extensive experience, together with managing and directing a wide variety of successful business and project activities makes Nizar a pioneering figure across all built environment sectors.

David Barley

BEng (Civil & Str) CEng MIStructE

Director - Structures

As a Director at WME, David provides a combined role acting as Project Director on complex multi-discipline builds, upholds overall responsibility for WME site supervision and post-contract services teams, as well as retaining cross discipline responsibility for negotiating and overseeing the implementation of contracts within the business in the region.

He delivers high-level project leadership and management on his projects. With his attention to detail, he maintains a continual personal involvement in each project, from initial bidding process right through to final delivery on site. Through close liaison with the Client and his deep understanding of cross-discipline design requirements, he ensures timely delivery of a high-quality, coordinated design product.

Murali Guruvappan

BE Civil, M.Eng, CEng, MIStructE

Director - Structures

Murali has more than 17 years of experience in civil and structural design for multi-story residential towers, commercial buildings, hotel/leisure centres, retail shopping malls, schools, culture, building restoration, parking garages, and healthcare sectors.

Murali has significant experience in analysis and design of various structural systems for low/mid/high rise building structures. He is skilled in the design of buildings for hurricane winds and seismic activity.

Nicholas Bycyznski

MEng, CEng, FCIBSE

Director - MEP

Nicholas is a highly experienced Chartered engineer and Fellow of CIBSE with over 10 years' experience in the Middle East leading the MEP teams in the design of high value projects across a range of sectors, particularly Hospitality, Residential, public amenities and Retail.

Reporting to the Managing Director, Nicholas has responsibility for the management and delivery of the MEP team at WME focusing on technical excellence in design and energy efficient building services.

Nicholas has extensive experience managing large teams in multiple geographical locations with experience in the delivery of diverse projects from a 500,000m2 Hospital project involving teams across the globe to signature buildings at the Expo 2020 site.

He is experienced in dealing with international clients and architects and operating as Project Manager on multi - disciplinary design works outside of the Building Services field.

Dimitre Azmanski

MSc P.Eng

Director - Infrastructure & Roads

Dimitre Azmanski is a registered Professional Engineer in the province of Ontario, Canada and an affiliated member of the Society of Engineers in UAE.

He has extensive experience in design and project management bringing a project from vision through the planning, funding, design and execution. Dimitre has more than 27 years of continuous international experience from Europe, North America, and the Middle East, working on variety of prestigious multi-disciplinary projects.

Kenneth Heney

BEng (Hons) CEng MIET

Technical Director - MEP

Kenneth has over 1 years of experience working within building services engineering consultancies, with a strong sense of commitment and responsibility and good interpersonal skills developed through a range of management positions.

Kenneth achieved Chartered Engineer early in his career and now actively mentors and encourages colleagues in their own CPD. He enjoys working in a team and problem solving and uses these and many other skills to confidently deliver quality design and effectively project manage complex developments.

Philip Dobson

MEng, CEng, MCIBSE

Technical Director - MEP

Philip is a professional Mechanical Design Engineer with more than 15 years of experience with a passion for quality and high standards in all aspects of the industry.

Philip is proficient with thermal modeling software, IES, Hevacomp Design software, HAP, AutoCAD and Solidworks. Desktop software, Microsoft Works and Adobe suite of programs.

Nick Perandin

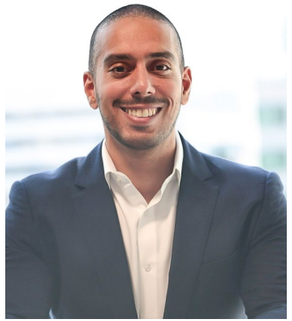
BSc Civil/Structural Engineering

Associate Director - Structures

Nick has over 14 years experience as a structural engineer and is responsible for managing and running the engineering team based in London.

Nick's role spans from reviewing the team's work, running projects technically and financially and part of the company management team. Nick's experience and understanding of complex projects spans from large structures to small boutique projects, residential, retail and commercial.

Nick's international construction experience also includes working on award winning pro-bono projects in Ladakh and Africa as lead project engineer and project manager both based in London and on secondment on site. Working closely with client, design team and local communities, Nick developed a truly holistic approach to design.



Kareem Ruhi

Bsc, IEng, MIET

Associate Director AV/IT

Kareem demonstrates impressive project management skills which leads to successful end results and satisfied clients. Throughout his 12 years of experience, he has developed great wisdom in allocating time spent on specific design elements during various design stages, thus, avoiding abortive works by the design team, without compromising the output quality.

He has been involved in many BIM projects at which he managed, led design teams, hands-on designed and coordinated between different disciplines and companies.

Marie Griffith

BEng (hons), MASHRAE, MCIBSE

Projects Manager

With over 20 years of experience in the construction industry both in the UK and across the Middle East, Marie has a wealth of project experience from bidding through to execution and closeout.

Marie is at the forefront of WME's Lead Design Consultancy services and her exceptional skills from working on both the client and consultancy side of project delivery are second to none. Her ability to streamline projects through established processes, communication, and integration provides outstanding results.


WME
Dubai - Abu Dhabi - Singapore - Mumbai - Bangalore - London - Riyadh
www.wmeglobal.com
info@wmeglobal.com