



DAR

Innovative Designs. Visionary Approach.

We provide tailor-made solutions to clients on projects that impact human lives and communities positively. Every project we undertake presents us with a unique opportunity to implement our skillset and respond to the needs of people and the environment.



The MASAR Project - Makkah, Saudi Arabia

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Architecture

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Profile

DAR is globally recognized for providing innovative Design and Engineering solutions that transform landscapes and create a positive impact on human lives and communities. Our client-focused approach, unwavering commitment to quality, and ability to be agile makes us the preferred partner on projects.

DAR has offices across Saudi Arabia and fetches strategic support and acceleration from its offices in India, Egypt, Pakistan, United Kingdom and Portugal. We have a passionate and dedicated team of over 1000 engineers, architects, and design professionals to fortify and lead our efforts.

Our differentiation is derived from pivoting around a comprehensive range of integrated services including Architectural and Engineering Design, Project Management, Construction Supervision Services, and Specialized Studies across Infrastructure, Buildings, Healthcare, Energy, and Power sectors.

Our services can be availed at every stage of the project lifecycle from initiation to project handover. We have extensive experience in working with the Government on various strategic projects in KSA and our private clients include some of the leading names in Middle East, Central Asia, and Africa.

DAR is an ISO 9001:2015, ISO 45001:2018, and ISO 14001:2015 certified company implementing general safety rules while executing projects in compliance with our accredited Quality Management System.

We work on the principle that each project is unique and can create a positive enduring change. By combining technology, proprietary data, and subject matter expertise we ensure quicker and more impactful solutions for our clients.

1,000

**ENGINEERING AND DESIGN
PROFESSIONALS**

20

LANGUAGES

19

COUNTRIES

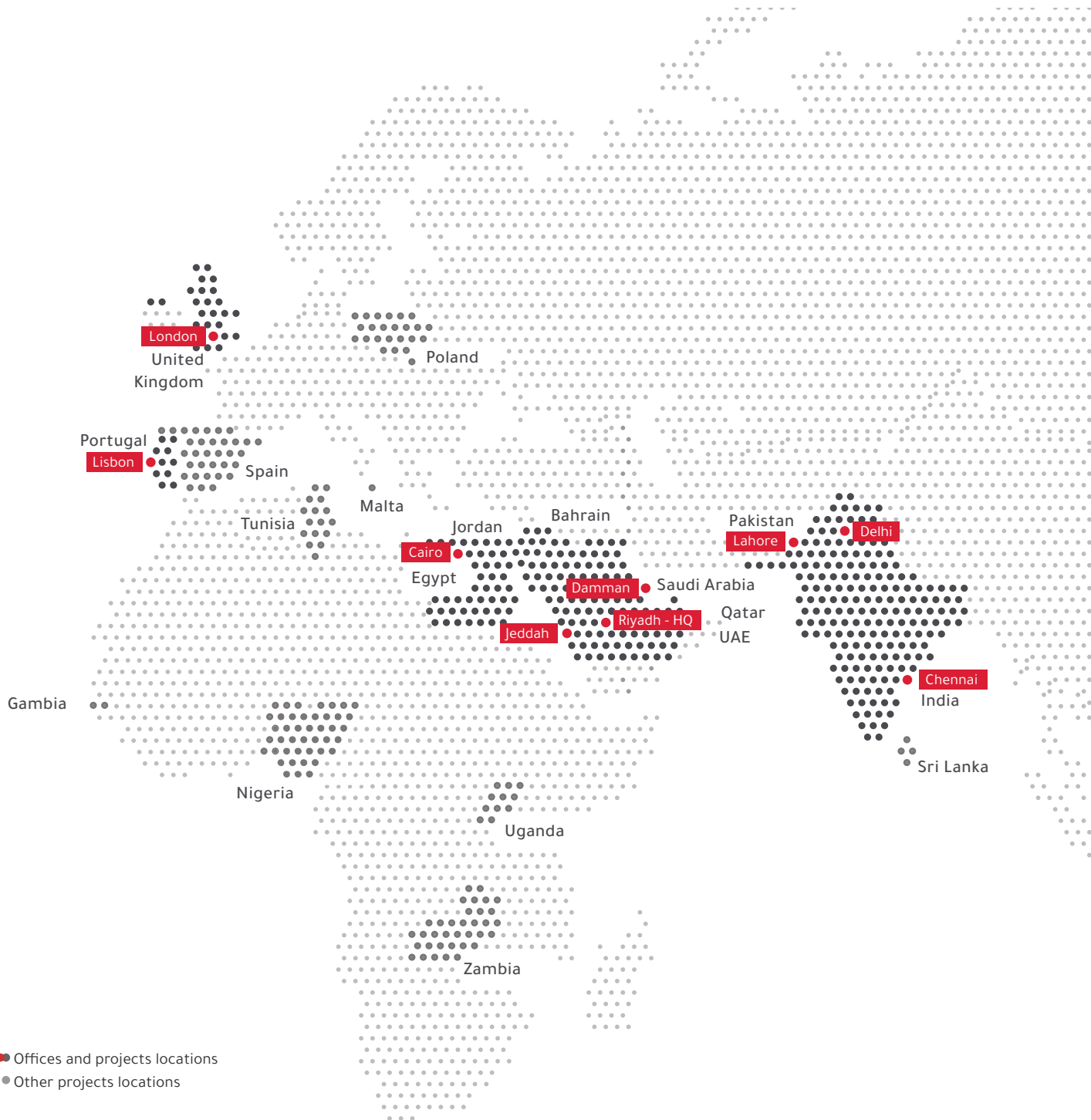
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NATIONALITIES

1

TEAM

Global Presence



Vision

To transform landscapes globally through innovative design and engineering solutions.

We are passionate about design and understand the impact it can have on human lives. Our team strives to make a positive impact by providing innovative and sustainable design solutions. While we work towards realizing our client's vision, we continue to add value to the communities around us which gives us immense satisfaction.

As a multidisciplinary design and engineering solutions provider, DAR has established itself as a prominent partner to numerous clients in Healthcare, Power Generation, Transmission and Distribution, Education and Infrastructure segments by providing a wide range of services.

We approach every project through an intricately structured design and construction process that blends our technical expertise, dedication, and experience of a passionate team of professionals. Our holistic approach to projects helps us in delivering successful design solutions.

We have extensive experience in the power and energy sectors which enables us to deliver sustainable solutions. We have been associated with some of the most complex infrastructure and building projects that have become landmarks today. However, winning our client's trust is our best achievement through this journey.

Core Values

We attribute our success to our core beliefs and values, which makes make us stay ahead of the competition.



PEOPLE

Our people are our greatest assets. We ensure that they have the desired technical knowledge and skill set to demonstrate the highest professional standards in all areas of our operations. Our focus is to work together and exceed client expectations by providing sustainable solutions which meet their business requirements.

Safety, environment, sustainability and accountability are of paramount importance to us and our team strives to achieve these objectives in all the projects.



SAFETY



TECHNOLOGY

Our subject matter experts are adept at implementing technologies that enable us to spearhead innovative designs and policies.

Our well-drafted QMS policies enable us to deliver superior quality of work. Client satisfaction is at the core of any work we undertake and continue to gain their trust through sustainable and efficient designs.



QUALITY

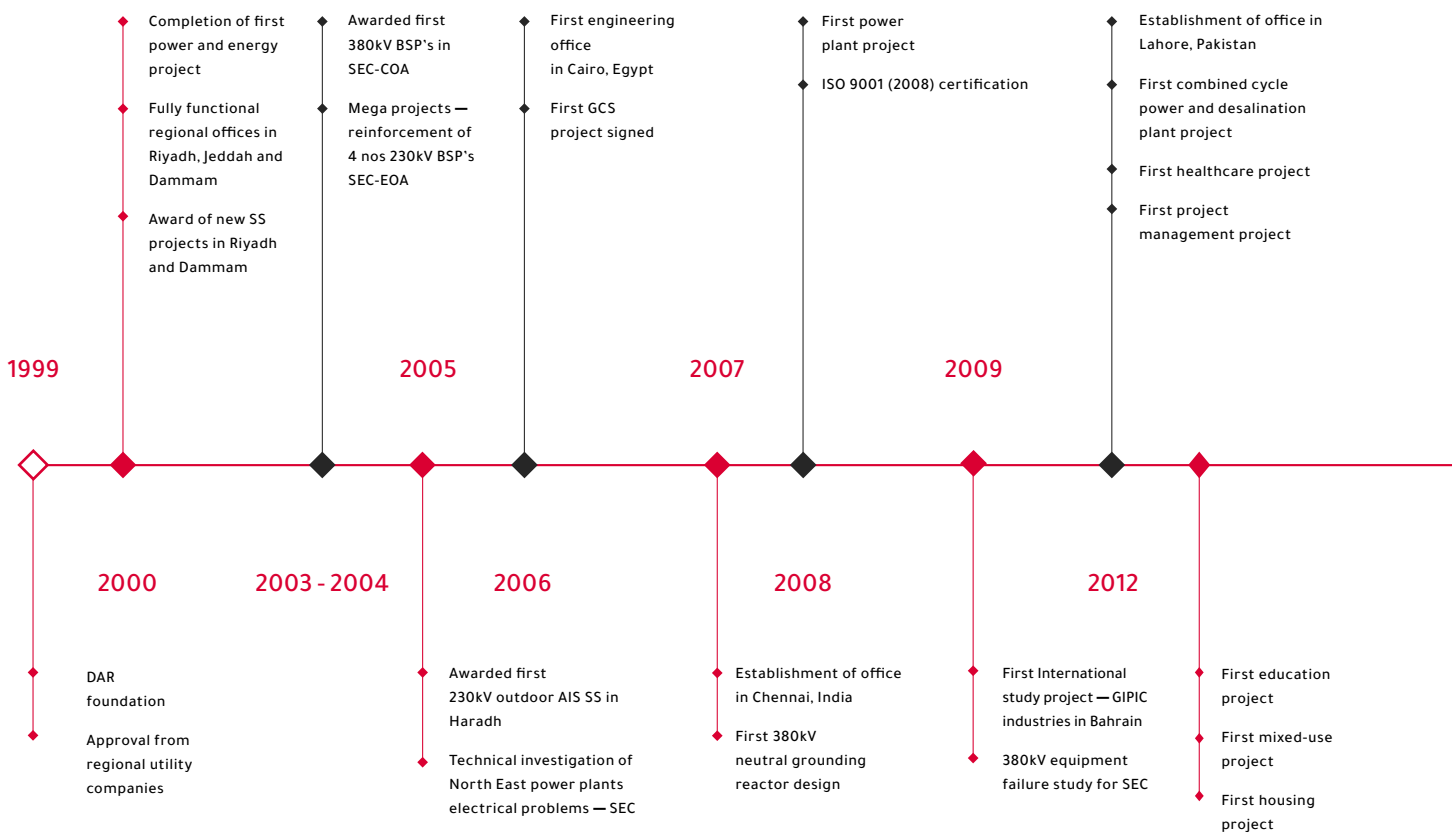


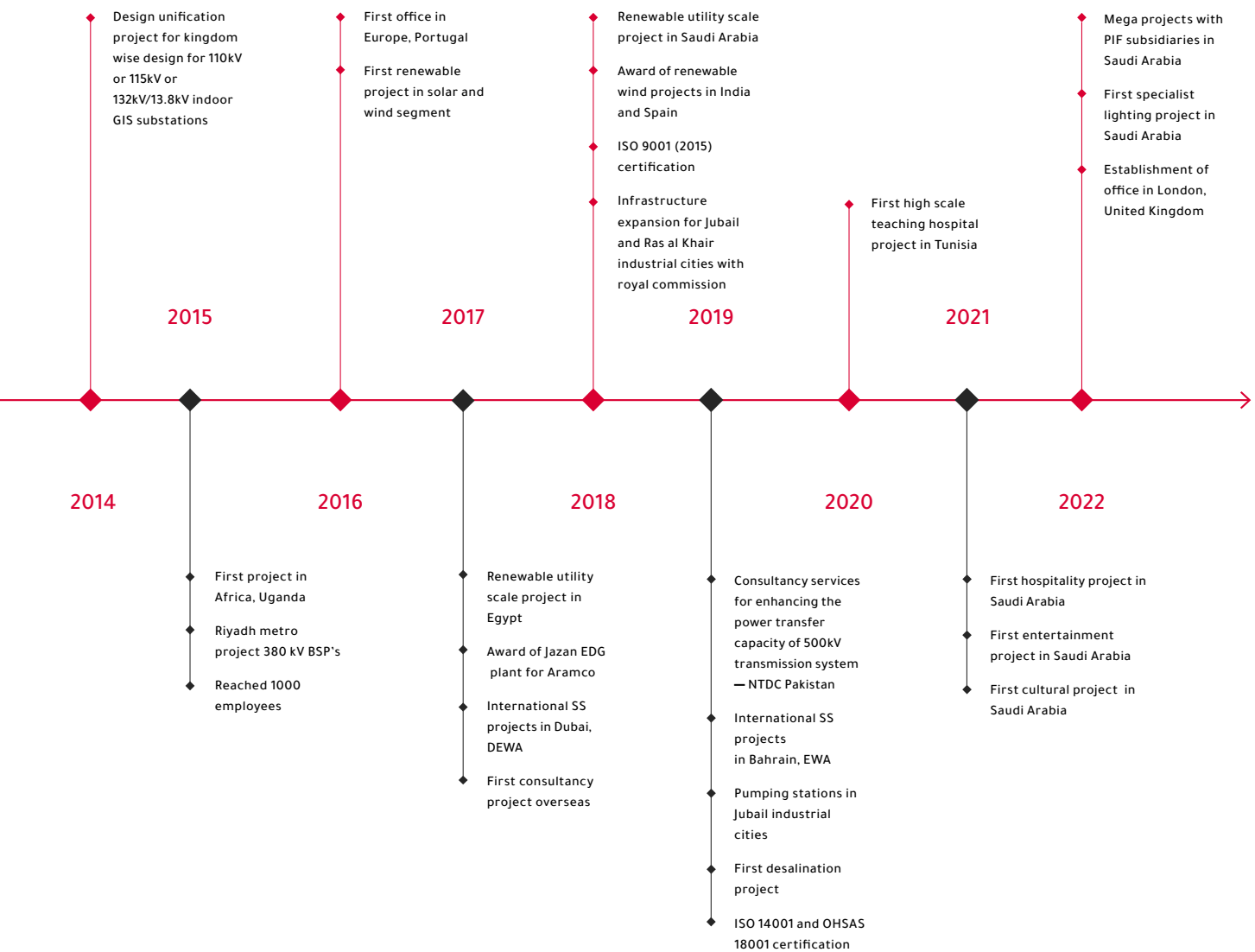
DELIVERY

Our motto is to exceed client's expectations within the stipulated timelines. We strategize and plan our approach in a structured manner to meet the delivery schedules.

Transforming Client's Ambition into Action

Important Milestones





Our Segments

We are a team of innovative professionals with diverse skill sets and our aim is to exceed client expectations.

Architecture



Healthcare



Hospitality



Education



Commercial and Real Estate



Civic and Culture



Urban and Master Planning

Engineering



T and D



Power System Studies



Infrastructure



Renewables



Power Generation



Plants and Industries

Specialty Services



Facade Design



Energy and Sustainability



Acoustics



Specialist Lighting Design



Traffic Impact Assessment



Cost Consultancy



Healthcare Portfolio



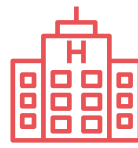
100+

Primary Healthcare
Centers



50+

Laboratories
and Clean Facilities



34

General
Hospitals



29

Medical Sites
Adapted



22

Specialty
Hospitals



07

Long Term
Care Centers



06

Medical
Cities



04

University
Hospitals



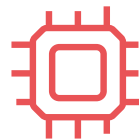
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Rehabilitation
Centers



03

Proton Therapy
Hospitals



01

Cochlear Implant
Hospitals

Power Utilities Portfolio



9,900 MW

Power Generation
Plant Projects



1,000 MW

Wind Energy
Delivery



500 MW

Solar PV
Delivery



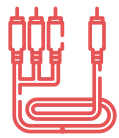
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Power Generation
Projects



3,000 KM

Overhead
Transmission Line



650 KM

Underground Cable
Projects



307

Distribution Substations
Projects



150

Substation
Projects



350

EMTP Power System
Studies



55

Power System
Studies (Utilities, OandG)



15

Water and
Industrial Projects

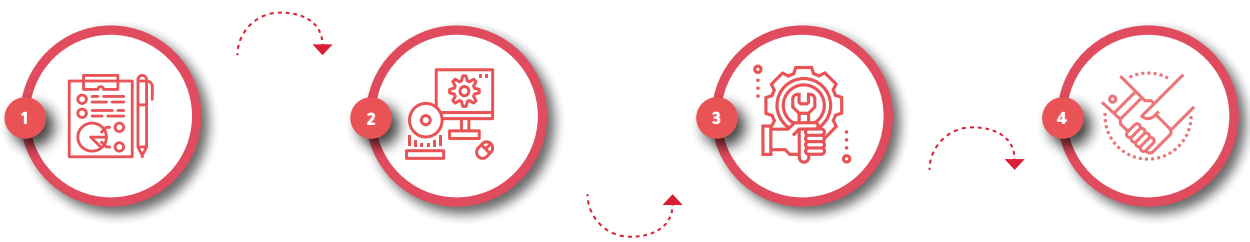


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Construction
Management
Site Supervision Projects

Partner from Inception to Handover

DAR offers a wide range of consultancy services to utilities, government entities, industries, and developers covering complete project life cycle.



Data Collection and Validation

- › Site evaluation and selection
- › Technology and equipment evaluation
- › Studies and simulations
- › Feasibility studies and simulations
- › Preliminary plot plan development
- › Concept design and tender package
- › Cost and schedule models
- › Review of regulations
- › Permits, code, and environmental compliance

Design and Engineering

- › Basic, preliminary and detailed design in all engineering disciplines
- › Facility system integration
- › Construction stage services
- › Building information modeling
- › Permits, code, and environmental compliance
- › Value engineering and cost optimization
- › Early package development

Construction Stage

- › Project management
- › Commercial management
- › Design management
- › Construction management
- › Construction supervision
- › Start-up and commissioning
- › As-built documentation
- › Warranty management
- › Technical staffing

Close-out

- › Performance testing
- › Handover



Project Life Cycle

Company Responsibilities

- › Procurement and management of services and equipment according to the agreed and devised strategy. Advising on optimizing the procurement, acting as the owner's agent in procurement scheduling, and progress follow-up.
- › Engineering and operational management within all disciplines.
- › We are the owner's representatives at the construction site and perform site supervision, coordination, scheduling, project reporting, health and safety management, quality management, commissioning to handover and warranty management under construction management.
- › Our resources and energy are focused on responding to and meeting the needs of our customers over the long-term and thereby creating value for all stakeholders.

1. Planning

1.1 Basis of Design Report

Siting study, fuel logistics, power system study, pre-feasibility study, detailed project report, due diligence, environmental studies, permits and clearances, financial modeling, financial closing, plot plan, and ga.

2. Design and Tender

2.1 Tender Level

Process (P and ID), SLD, tender documentation, shift plot plan, and ga to planning, 3D modeling, detailed drawings, section, and details.

2.2 Tendering

Evaluation, EPC selection.

2.3 Vendor documentation review detail design

Mechanical, civil, electrical, I and C, BOP, architecture.

3. Procurement

Purchase specification, vendor pre-qualification, bid process, technical and commercial bid evaluation, finalization of purchase orders, preparation of purchase orders.

4. Construction

Project planning, scheduling, cost control, communication management, contract administration, liaison with statutory authorities, inspection and expediting, construction supervision, commissioning supervision, performance tests, and as-built drawings.

5. Operations and Maintenance

OandM documentation, plant simulation, optimization studies, reverse engineering, refurbishment, and asset evaluation are some key challenges that the industry faces today.

To fast-track social, industrial, and tourism infrastructure development, utilities are including more projects in a package thereby exerting pressure on enterprises to commission all the projects together. The need of the hour is to formulate a model that will help companies weather out challenges and offer timely deliveries.

DAR is proud to have proactively developed its human resources, quality systems, design management techniques, and application of technology and infrastructure to meet such challenges. We provide EPC contractor or utility with the required support for the successful implementation of mega projects.

We have in house capabilities to provide a complete suite of EPCM services, right from planning and feasibility studies through detailed engineering, procurement, and construction management. We provide EPCM services for owners, developers and EPC contractors.

Scope of Services

General Capabilities

Architecture

- › Architectural design
- › Master planning
- › Urban planning
- › Landscape design
- › Interior design
- › Medical and equipment planning
- › Life and safety
- › Wayfinding and signage
- › Graphics and communications design
- › 3D visualization and animatronics
- › Design for fabrication
- › BOM and cost estimation
- › Drafting, BIM, and parametric design

Civil and Structure Solutions

- › Site infrastructure
- › Roads, bridges, and foundations
- › Steel and concrete building
- › Wet and dry structures
- › Tank steel structural design and foundation
- › Rotary and static equipment foundation design
- › Pipe racks and cross-over bridges structure and foundation
- › Crane and hoist structure design
- › BOQ, MTO, and cost estimation
- › Construction sequence and method of statements
- › Site support and reply to technical queries
- › Risk assessment and long lead item plan

Process Engineering

- › Concept development
- › Feasibility study
- › Due diligence study
- › Detailed project report
- › Process flow diagram
- › Piping and instrumentation diagram
- › Material balance
- › Mass and energy balance
- › Utility diagrams
- › Process simulation
- › Sizing and selection of equipment
- › Process description
- › Material compatibility / corrosion engineering
- › Process safety and HAZOP studies
- › Utility system evaluation
- › Technical specification and data sheets
- › Value engineering
- › Control philosophy
- › BOM/material take-offs
- › MTO and specifications

Mechanical and Piping

- › Piping systems design
- › Piping stress analysis
- › Pipe support engineering
- › Pipe layouts including isometrics
- › Static equipment design (vessels, tanks, etc.)

- › Rotary equipment specifications
- › Hazardous area classification
- › Packaged systems specifications
- › Specifications for pipes, valves
- › Detailed engineering drawings
- › Layout design (includes plot plan, plant, and building general arrangements, equipment layout)
- › Equipment test procedures
- › Building services design (HVAC, PI, FF)
- › BOM and cost estimation
- › Drafting and 3D modeling

Electrical Solutions

- › Electrical power system studies
- › Electrical primary system design
- › Control and protection system design
- › Lv/mv distribution system design
- › Overhead transmission line design
- › Underground cable design
- › BOM and cost estimation
- › Drafting and 3D modeling

Building Service (MEP)

- › HVAC
- › Plumbing design
- › Sewer system design
- › Fire protection
- › Electrical - power
- › Electrical - low current
- › Building management systems
- › Medical gases
- › BOM and cost estimation
- › Drafting and 3D modeling

Data and Technology Solutions

- › Field instrumentation design
- › System design
- › Scada
- › ICT system design
- › Public address system design
- › Electronic security system design
- › Telecommunication systems
- › Cost estimation
- › Drafting and 3D modeling

Power System Studies

Generation and Transmission

- › Complete power plant electrical studies
- › Conventional/renewable (solar pv and wind farm) energy
- › Transient stability analysis
- › Bus transfer and pss tuning
- › Generation rejection
- › Power plant auxiliary system analysis
- › Protection relay setting including pole slip, stator protection, loss of field, rotor protection, and transformer protection
- › Generator capability for transmission lines auto reclose
- › Islanding study
- › Black start

Transmission and Distribution

- › Load flow/short circuit
- › Transient stability
- › Insulation coordination/ferro-resonance
- › HVDC/FACTS
- › Shunt reactor/ngr sizing
- › Out-of-step study
- › Load shedding
- › Harmonic analysis and pq analysis
- › Capacitor bank study/filter design
- › Protection setting and coordination
- › Transient recovery voltage (TRV)
- › Auto reclose
- › Sub-sea cable reactor compensation study
- › Grid islanding and load shedding study

Industrial / Oil and Gas

- › Load flow/short circuit study
- › Power factor correction study
- › Relay setting and coordination study
- › Arc flash study
- › Harmonic measurement and power quality study
- › Dynamic motor starting study
- › Automatic bus transfer study
- › Induced voltage study on pipeline
- › Electrical equipment failure analysis
- › Reliability study

- › Dg and equipment sizing
- › Grid islanding and load shedding study
- › Grounding grid design
- › Regenerative drive studies

Industrial, Water and Infrastructure Projects Services

Detailed Design Stage

Detailed engineering for pumping stations, wet and dry utilities transmission, pipelines, water, and waste water treatment plants.

- › Detailed hydraulic study and process engineering
- › PFD's and P and ID's preparation
- › Plant civil, architectural, and structural engineering
- › Overall layout, piping plan, and equipment general arrangement
- › Pipe stress analysis engineering
- › Isometrics and MTO's
- › Rotating / static equipment sizing and data sheets
- › Tie-in schedules and utilities interface engineering
- › Process control narratives and operation philosophy
- › Cause and effect charts
- › Instrument hook ups, loop and interconnection diagrams
- › Plant control system architecture
- › Plant instrumentation and control automation design
- › Plant electrical systems design and distribution engineering
- › Procurement support and FAT/SAT participation
- › Technical specifications, bid evaluations, and vendor document review
- › Plant electrical systems design and distribution engineering
- › Plant instrumentation and control automation design
- › Procurement support and FAT/SAT participation
- › Construction sequence and schedule
- › Project management services

Planning and Feasibility Stage

- › FEED
- › Geo-technical studies and design
- › Hydraulic and transient analysis study
- › Plant civil, architectural and structural engineering

- › PFD's and P and ID's preparation
- › Pipe stress analysis engineering
- › Layout and equipment general arrangement
- › Isometrics and MTO's
- › Technical specifications and data sheets
- › Plant operation and control philosophy
- › Preliminary HAZOP, constructability, and risk assessment reports
- › Plant electrical systems design and distribution engineering
- › Plant control system architecture
- › Plant instrumentation and control automation design
- › Hook ups and block diagrams
- › Cost estimation
- › Project management and owners engineering services

Power Generation: Conventional/Renewables

Detailed Design Stage

Detailed engineering for PV Solar, WTG, Thermal, CCPP, CHP, and EDG Land assessment and site selection.

- › Thermal simulation and process engineering
- › Yield and layout optimization for renewable projects
- › Long lead equipment finalization, and configuration of inverter, tracker, modules, etc
- › HMBD's, PFD's, P and ID's, and SLD's
- › Pipe stress engineering
- › Plant civil and structural engineering
- › Plant instrumentation and control automation design
- › Plant layout, equipment technical specification, and data sheets.
- › BOQ and detailed cost estimation
- › Project management services

Planning and Feasibility Stage

- › Land assessment and site selection
- › Energy yield assessment
- › Rooftop PV potential assessment
- › Waste management study
- › Plot development study
- › Reliability study
- › Power evacuation study
- › Financial modeling

- › Tender documentation for EPC bidding (specifications, drawings, simulation and calculations)
- › Cost estimation ($\pm 30\%$)

Transmission and Distribution

Substation

- › Electrical design primary engineering
- › Electrical design secondary engineering
- › Mechanical design
- › Civil and structural design
- › Architecture design
- › Project management and construction management services
- › DER's / ADMS
- › Smart grid
- › EV infrastructure
- › BIM

Overhead and Underground Transmission Line

- › OHTL design
- › UG cable routing design
- › Tower design
- › Civil and structural design
- › Project management/construction management services
- › Environmental compliance
- › Subsea cables

Architecture

Healthcare

King Salman Bin Abdul Aziz Specialized Hospital

Location	Lusaka, Zambia
Sector	Healthcare
Date	2021
Area	59,047 sqm
Beds	800 beds
Design Assignment	Design and Supervision
Professional Services	Project Management Construction Management Architectural Design Medical Planning Life Safety Design Landscape Design Interior Design Structural and MEP Design Medical Equipment Planning.





King Faisal Medical City (KFMC)

Location	Abha, Saudi Arabia
Sector	Healthcare
Date	2021
Area	360,000 sqm
Beds	1350 beds
Design Assignment	Concept to Tender Design
Professional Services	Architectural Design Medical Planning Life Safety Design Landscape Design Interior Design Structural and MEP Design Medical Equipment Planning Authorities Approval.





King Salman Bin Abdul Aziz University Hospital

Location	Kairouan, Tunisia
Sector	Healthcare
Date	Ongoing
Area	Site area: 150,000 sqm Total BUA: 62,000 sqm
Beds	500 beds
Design Assignment	Design and Supervision
Professional Services	Design and Engineering Construction Supervision Services.





Prince Mohammed Medical City (PMMC)

Location	Al Jouf, Saudi Arabia
Sector	Healthcare
Date	2021
Area	161,200 sqm
Beds	1000 beds
Design Assignment	Concept to Tender Design
Professional Services	Architectural Design Medical Planning Life Safety Design Landscape Design Interior Design Structural and MEP Design Medical Equipment Planning Authorities Approval.





Dr. Soliman Fakeeh Hospital

Location	Al Madinah, Saudi Arabia
Sector	Healthcare
Date	2019
Area	65,743 sqm
Beds	200 beds
Design Assignment	Concept to Tender Design
Professional Services	Master Planning Medical Planning Architecture Design Interior Design Landscape Design Engineering Design Quantity Survey Medical Equipment Planning Authorities Approval.





Al Moosa Rehab and Long-Term Care Hospital

Location	Al Ahsa, Saudi Arabia
Sector	Healthcare
Date	2018
Area	67,000 sqm
Beds	288 beds
Design Assignment	Detail to Tender Design
Professional Services	Interior Design Complete Engineering Design Medical Equipment Planning Life Safety Design.





Umm Al Qura Medical Spine University

Location	Makkah, Saudi Arabia
Sector	Education and Healthcare
Date	2017
Area	932,000 sqm (College of Medicine), 55,844 sqm (College of Nursing), 80,057 sqm (College of Dentistry), 49,591 sqm (College of Pharmacy), 65,043 sqm (College of Public Health and Health Informatics), 60,235 sqm (College of Applied Medical Sciences)
Design Assignment	Concept to Tender Design
Professional Services	Masterplan Architectural Design Interior Design Complete Engineering Design Landscape Design Life Safety Design Medical Equipment Planning.





King Saud Medical City (KSMC)

Location	Riyadh, Saudi Arabia
Sector	Healthcare
Date	2016
Area	1,663.370 sqm
Beds	1400 beds
Design Assignment	Concept to Tender Design
Professional Services	Master Planning Architectural Design Medical Planning Life Safety Design Landscape Design Interior Design Structural and MEP Design Medical Equipment Planning.





Neuroscience, Cancer and Proton Therapy Centre

Location	Riyadh, Saudi Arabia
Sector	Healthcare
Date	2012
Area	50,000 sqm
Beds	300 beds
Design Assignment	Full Scope Design
Professional Services	Architectural Design Medical Planning Life Safety Design Structural and MEP Design.





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Specialized Medical Center Hospital II

Location	Riyadh, Saudi Arabia
Sector	Healthcare
Date	2016
Area	70,900 sqm
Beds	300 beds
Design Assignment	Concept to Tender Design
Professional Services	Medical Planning Space Programming Architectural Design Interior Design Landscape Design Complete Engineering Design Medical Equipment Planning Life Safety Design Testing and Commissioning.





Hospitality

Masar Project - Package A and B

Location	Makkah, Saudi Arabia
Sector	Hospitality
Date	Consultancy Commencement Date: MASAR-1 24th July 2022 (Duration 42 months from commencement) MASAR (Package B) 24th July 2022 (Duration 42 months from commencement)
Area	MASAR-1 (BUA 285,025 sqm) MASAR (Package B) - (BUA 122,682 sqm)
Design Assignment	Construction Supervision
Project Information	5-star hotel tower (Kempinski Hotel) (70,437 sqm BUA), Luxury residential tower (Grade A) / Serviced Apartment units (Kempinski Residence) (76,729 sqm BUA), 5-star hotel tower (Taj Hotel) (56,145 sqm BUA), 4-star hotel tower (Embassy by Hilton) (65,483 sqm BUA), Upscale retail/shopping center (mall) (53,372 sqm BUA), Upscale retail/shopping center (mall) (31,619 sqm BUA), Service Building (5,659 sqm BUA), Bus Rapid Transit (BRT) terminal (3,962 sqm BUA), Hilton Garden Inn (Plot Area - 5009 sqm (46,174 m2 GFA, 79,262 m2 BUA) Hilton Garden Inn (Plot Area -2859 sqm (25,224 sqm GFA, 43,420 sqm BUA)
Professional Services	Review Schedule I Progress Monitoring I Quality Management I Communication and Chairing Meetings I Distributing Minutes of the Meeting I Reporting to PMC/Owner's Representative I Submittal Review I Document Control I Assisting PMC in co-ordination with Stakeholders I Review Insurances, Bonds and Guarantees I Payment and Cost Control I Assisting in Change Management I Monitor HSE I Site Inspection /Supervision I Witness Quality Testing I Testing and Commissioning I Defects Liability and Maintenance I Review and Recommend the Contractor's Final Payments.





Commercial and Real Estate

Riyadh Township Sedra Phase 1A and 1B Development

Location	Riyadh, Saudi Arabia
Sector	Commercial and Real Estate
Date	2022
Professional Services	Supervision





Mixed Use Development

Location	Jeddah, Saudi Arabia
Sector	Mixed Use
Date	2013
Area	48,800 sqm
Design Assignment	Concept to IFC Package
Professional Services	Complete Engineering Design Life Safety Design Landscape Design Interior Design Structural and MEP Design.





Education, Science and Technology

Faculty of Medicine, Sabaragamuwa University of Sri Lanka

Location	Colombo, Sri Lanka
Sector	Education and Healthcare
Date	Ongoing
Area	55,000 sqm
Design Assignment	Pre-Concept to Tender Documentation and Construction Supervision
Professional Services	Design Services and Construction Supervision.





Veterinary Teaching Hospital

Location	Al Ahsa, Saudi Arabia
Sector	Education and Healthcare
Date	2014
Area	55,167 sqm
Beds	800 beds
Design Assignment	Concept to Tender Design
Professional Services	Architectural Design Interior Design Landscape Design Complete Engineering Design Life Safety Design Medical Equipment Planning.





Punjab Agriculture, Food and Drug Authority

Location	Lahore, Pakistan
Sector	Science and Technology
Date	2017 (Under Construction)
Area	25,207 sqm
Design Assignment	Concept to Tender Design
Professional Services	Consultancy Services for Construction Architectural Design Interior Design Landscape Design Complete Engineering Design Life Safety Design.





Project Management Services for Schools

Location	Jordan
Sector	Education
Date	2023
Services Offered	Project Management



Regional Lab and Headquarters for the Saudi Food and Drug Authority

Location	Jeddah, Saudi Arabia
Sector	Science and Technology
Date	2017
Area	37.899 sqm
Assignment	Design
Professional Services	Architectural Design Lab Planning Life Safety Design Landscape Design Interior Design Structural and MEP Design Lab Equipment and Furniture Planning Authorities Approval.



Engineering

Power Generation and Plants

Yanbu III Power and Desalination Plant

Sector	Generation: Conventional
Client	Empresarios Agrupados
End Client	Saline Water Conversion Corporation
Location	Yanbu, Saudi Arabia (Phase III)
Project Description	Power Plant: KSA's First Supercritical Power Plant to Operate on Heavy Fuel Oil. Desalination Plant: Multistage Flash (MSF) Technology to Desalinate and Supply Freshwater, Six Huge Plug-N-Play Mfd Evaporators Plant capacity - 5 x 600 MW STG units and 550,000 Cu.m/day of water
Status	Completed
Services Offered	Civil Engineering, Third-Party Verification for All Civil Structural Design: Buildings and Foundations In Power Block Area Including Turbine Building. Foundation: Steam Turbine, Chimney, Steam Generator, Transformers, Fuel and Water Tanks, Silos, Other Processes, and Mechanical Equipment Steel Structures: Boiler, Ggh, Pipe Racks, ESP and Absorber Structures and Foundations Electrical: Power Supply Distribution, Illumination System, Earthing System, Lightning Protection System Communication: Plant Buildings and Plant External Areas.

Yamama Cement Plant

Sector	Industrial: Process Plant
Client	Thyssenkrupp, Germany
End Client	Yamama Saudi Cement
Location	Al Kharj, Saudi Arabia
Project Description	Plant configuration: 2 x 10,000 TPD clinker production
Status	Completed
Services Offered	Engineering and Detail Design of the Main Central Control Building and 18 — Non-Process Buildings. Detail design for Civil architectural/structural and MEP works 3D Modeling Compliance to Local Standards Procurement Support Services.

PP14 Power Plant

Sector	Generation- Conventional
Client	SEPCO III
End Client	Saudi Electricity Company
Location	South East of Riyadh, Saudi Arabia
Project Description	Two power blocks (6GTG and 2STG) of combined cycle power plant of total capacity 1850 MW (approx)
Status	Completed
Services Offered	Architectural MEP and Civil Design: Buildings And Foundations Design for Turbine And Process Buildings Steel Structures: Turbine Building, Pipe Racks, and Other Structures Electrical: Power Supply Distribution, Illumination System, Earthing System, Lightning Protection System and Cabling System, The Mechanical Design of HVAC and Plumbing for all Buildings 3D Modeling.



PP14 Power Plant - South East of Riyadh, Saudi Arabia

Marafiq Power Desalination Plant

Sector	Industrial: Process Plant
Client	Marafiq
End Client	Marafiq
Location	Yanbu, Saudi Arabia
Project Description	Plant Configuration: Nine Nos Gas Turbine Units having total capacity of 517.9MW and Turbine Units having total capacity of 382.5MW.
Status	Completed
Services Offered	Dynamic Modeling of the Power and Desalination Plant Piping Review — Steam, Condensate, including Various Headers, Make Up Water System Equipment — Dynamic Analysis, Review of Various Upset Conditions Recommendation and Report.

Combined Cycle Power and Desalination Plant

Sector	Generation: Conventional
Client	SEPCO III
End Client	Saline Water Conversion Corporation
Location	Ras Al Khair, Saudi Arabia
Project Description	Ras Al Khair combined cycle power and desalination
Status	Completed
Services Offered	Detailed design for Civil I MEP for Plant and BOP Buildings; Detailed design 380kV BSP and Transmission Line

IGCCPP and Refinery

Sector	Generation: Conventional
Client	SEPCO
End Client	Saudi Aramco
Location	Jazan, Saudi Arabia
Project Description	Plant configuration: 8 x 2.5 MW DG units
Status	Completed
Services Offered	Pre-bid and detail engineering of 8 Nos of 2.5MW, Emergency Diesel Generators, and 13.8kV Substation I Disciplines Involved: Civil, Electrical, MEP, Process and I and C.



IGCCPP and Refinery - Jazan, Saudi Arabia

Transmission and Distribution

Unification of Substation Design National Grid

Sector	Transmission and Distribution: Substation
Client	National Grid, Saudi Arabia
End Client	National Grid, Saudi Arabia
Location	Saudi Arabia
Project Description	Design Unification project for kingdom wise design for 110kV or 115kV or 132/13.8kV Indoor GIS Substation
Status	Completed
Services Offered	Design Unification and Development of Detailed Engineering and Design Package I Complete Design and Engineering Services for Civil Architectural, Structural, Electrical and Mechanical Works including Calculations, Drawings, Sketches, Submittals and Materials BOQ Preparation of construction scope of work and Technical Specification Advisory support Participation in meetings with the Client.

Technical Services Provider (Transmission) for NEOM Green Hydrogen Project

Sector	Transmission and Distribution - Substations
Client	Air Products Middle East
End Client	NEOM Green Hydrogen Company
Location	NEOM, Saudi Arabia
Project Description	The project will be responsible for generating all the power used to generate Ammonia from renewable resources - a wind farm, a solar farm, and transmission of generated power to the load Substations are part of this project's scope
Status	Ongoing
Services Offered	Owner's Engineer I Detailed Design Review of EPC I Contractor submittals related to the transmission element of this project which covers 380kV BSP's, 380kV Transmission Line, 380kV STATCOM SS and Electrical Power Management System (EPMS).

Design and Supervision work for the Electricity Network Enhancement Project in the Republic of the Gambia

Sector	Transmission and Distribution: Substations
Client	National Water and Electricity Company Ltd-NAWEC
End Client	National Water and Electricity Company Ltd-NAWEC
Location	Gambia
Project Description	Supply and Installation of NAWEC Primary Substations and Rehabilitation/Upgrading of Transmission Network within OIC Concentrated Area
Status	Ongoing
Services Offered	Owner's Engineer I FEED Design I Preparation of Tender Documentation I Procurement Support I Project Management I Design Review I Construction Supervision I Support during the warranty period.

Makkah Central BSP

Sector	Transmission and Distribution: Transmission Line
Client	Alfanar
End Client	Saudi Electricity Company — WOA
Location	Makkah, Saudi Arabia
Project Description	380kV Underground Cable Works associated with Interconnection of Makkah Central BSP
Status	Completed
Services Offered	Complete Detailed Design and Engineering Services for 380kV Underground Cable Circuits Along with Fiber Optic Cables.

Ma'aden · Manifa · Safaniyah

Sector	Transmission and Distribution: Transmission Line
Client	LandT
End Client	Saudi Electricity Company — EOA
Location	Ma'aden, Manifa and Safaniyah, Saudi Arabia
Project Description	380kV OHTL between Ma'aden — Mainfa — Safaniyah Interconnection
Status	Completed
Services Offered	Complete Design and Engineering Services for Transmission Line works.

500kV HVDC-OHTL Saudi-Egypt Interconnection

Sector	Transmission and Distribution: Transmission Line
Client	Saudi Electricity Company
End Client	Saudi Electricity Company
Location	Saudi Arabia
Project Description	+500kV HVDC(Bi-polar Scheme) Overhead Transmission Line between converter station at Madinah and Tabuk (641km) and between Tabuk and Aqaba Gulf transition station (215.6km) in the Western Region of Kingdom of Saudi Arabia.
Status	Ongoing
Services Offered	Construction Management Services and Design Review for 500kV HVDC-OHTL Saudi-Egypt Interconnection

230kV to SATORP

Sector	Transmission And Distribution: Transmission Line
Client	MOHAMMED AL-OJAIMI EST.
End Client	Saudi Electricity Company — EOA/RC
Location	Al Jubail, Saudi Arabia
Project Description	230kV underground cable and protection works
Status	Completed
Services Offered	Complete Detailed Design and Engineering Services for 230kV Underground Cables along with Associated Fiber Optic Cables.

Consultancy Services for (Tendering and Implementation) of Construction and Upgrading of EEHC DCC's Project

Sector	Transmission and Distribution - Automation
Client	South Cairo Electricity Distribution Company (SCEDC) Egypt
End Client	Egyptian Electricity Holding Company - EEHC
Location	Egypt
Project Description	Construction and Upgrading of EEHC Distribution control centers at two locations - 6th October and Dokki
Status	Ongoing
Services Offered	Owner's Engineer FEED Design Preparation of Tender Documentation Procurement Support Project Management Design Review Construction Supervision Support during the warranty period.

Jubail Residential BSP

Sector	Transmission and Distribution: Substation
Client	MEEDCO (Hyundai)
End Client	Saudi Electricity Company — EOA
Location	Al Jubail, Saudi Arabia
Project Description	New Jubail residential 380/230/115kV BSP
Status	Completed
Services Offered	Complete Design and Engineering Services for Civil, Architectural, Structural, Electrical Works, Protection, Mechanical Works Insulation Co-ordination Study.

Waad Al Shamal City Development Project

Sector	Transmission and Distribution: Substation
Client	Alfanar
End Client	Saudi Electricity Company — NEOA
Location	Waad Al Shamal, Saudi Arabia
Project Description	380/132/33/13.8kV BSP — Waad Al Shamal, Arar, Tabarjal, Qurayyat, Al Jouf — 5 BSP's
Status	Completed
Services Offered	Complete Design and Engineering Services for Civil, Architectural, Structural, Electrical Works, Protection, Mechanical Works Insulation Co-ordination Study.



Waad Al-Shamal City Development Project - Waad Al-Shamal, Saudi Arabia

Consultancy Services for the Construction of Simple Cycle and Combined Cycle Power Plant and 380/132kV Substation at DUBA

Sector	Industrial
Client	Tractebel
End Client	Saudi Electricity Company
Location	Western Region, Saudi Arabia
Project Description	Combined Cycle 550MW Gas Turbine (1x GE F7.04+1xF7.05)
Status	Ongoing
Services Offered	Construction Supervision, Assistance to Commissioning and Project Management.

Haramain High-speed Rail

Sector	Transmission and Distribution: Substation
Client	Alfanar
End Client	Saudi Electricity Company — WOA
Location	Saudi Arabia
Project Description	New Haramain (HHR) 380/110/33/13.8kVBSP, Construction of 6 BSP's
Status	Completed
Services Offered	Complete Design and Engineering Services for Civil, Architectural, Structural, Electrical Works, Protection, Mechanical Works Insulation Co-ordination Study.

DEWA 400/132kV Substation

Sector	Transmission and Distribution: Substation
Client	Alfanar
End Client	Dubai Electricity and Water Company
Location	Dubai, United Arab Emirates
Project Description	Dubai Shamal (DXBSHMAL) 400/132kV substation
Status	Completed
Services Offered	Complete Design and Engineering Services for Civil, Architectural, Structural, Electrical Works, Protection, Mechanical Works Insulation Co-ordination Study.



Power System Studies

Study of reducing financial costs by optimizing the consumption of electrical energy for the SHOAIBA water transmission system

Sector	Power System Studies: Water and Energy
Client	WTTCO
End Client	WTTCO
Location	Shoaiiba, Saudi Arabia
Project Description	To Improve the Efficiency of the Cost of Transmitting the Water from the Production Plants up to Distribution Perform Power Factor Correction at SEC Interconnection Point Improve Power System Reliability of the Existing Distribution Network.
Status	Ongoing
Services Offered	Energy Audit Power Factor Correction Power System Reliability.

King Salman Energy Park — SPARK

Sector	Power System Studies: Water and Energy
Client	Energy City Development Company
End Client	SPARK
Location	Dammam and Al Hasa, Saudi Arabia
Project Description	Review and validation of Electrical Power Supply and Distribution Network
Status	Ongoing
Services Offered	Distribution Network Planning Network Reliability Study Load Flow Short Circuit Motor Starting Relay Coordination and Arc Flash Studies.

Electrical Distribution Platform Safaniya NGL

Sector	Power System Studies: Industrial - Oil and Gas
Client	MMEI
End Client	Saudi Aramco
Location	Safaniya, Saudi Arabia
Project Description	Power system studies for 115/13.8kV EDP and its associated platforms in Safaniya Field
Status	Completed
Services Offered	Load Flow Short Circuit and Harmonic Analysis Relay Coordination and Arc Flash Studies Switching Transient Studies covering Temporary Over Voltage (TOV) Switching Over Voltage (SOV) Fast Transient Over Voltage (FTO) Very Fast Transient Over Voltage (VFTO) Ferro-Resonance Transformer Energization Transient Recovery Voltage (TRV).

Al-Khafji Joint Operations Project – Interconnection Studies of KJO Generation with National Grid KSA

Sector	Power System Studies: Power Generation and Oil and Gas
Client	JGC
End Client	Khafji Joint Operation (Saudi Aramco)
Location	Khafji Area, Saudi Arabia
Project Description	Grid Interconnection Studies of KJO Generation with National Grid KSA
Status	Completed
Services Offered	Load Flow Short Circuit Transient and Dynamic Stability Study Auto-Reclose Study Control Interaction Study Harmonic Measurement and Study Development of New User-Defined Model in PSS/E, PSCAD and SSAT Software Conversion of SVC Model in PSS/E into PSCAD and SSAT Software Grid Opertability Study Generator Protection Setting Review Relay Coordination Study.

Power Quality Assessment

Sector	Power System Studies: Industrial
Client	Arab Steel
End Client	Arab Steel
Location	Dammam, Saudi Arabia
Project Description	Power quality and harmonic measurements at grid interface points DC electric ARC furnace modeling and AC ladle furnace modeling Studies to assess the harmonic and voltage flicker levels at PCC Proposals for mitigation measures to suppress the harmonics and voltage flicker problems Validation of STATCOM design and specifications Review of steel plant MV network configuration Motor starting impact analysis preparation of scheme..
Services Offered	Load Flow Short Circuit Motor Starting Studies Harmonic Studies Voltage Flicker Studies.

SEC Total Network Out-of-step Study

Sector	Power System Studies: Transmission/Distribution
Client	Saudi Electricity Company
End Client	Saudi Electricity Company
Location	Dammam, Saudi Arabia
Project Description	Defining Out-Of-Step protection settings for 380kV Connection line between SOA, WOA, and COA transmission systems (complete SEC transmission network)
Status	Completed
Services Offered	PSS-E Studies Load Flow Short Circuit Transient Stability Contingency Studies Out-of-step Protection Setting Calculations.

Bushing Failure Analysis

Sector	Study-Transmission and Distribution
Client	Saudi Electricity Company
End Client	Saudi Electricity Company
Location	Riyadh, Saudi Arabia
Project Description	Root Cause analysis for 380kV Transformer Bushing failure
Status	Completed
Services Offered	380kV Bushing opened at Site and noticed Flashover Mark I Tan Measurement performed at the Site I Bushing Oil Test performed I Performed EMT studies and identified the root cause.

Auxiliary Transformer Failure

Sector	Study-Transmission and Distribution
Client	Alstom
End Client	Saudi Electricity Company
Location	Jubail, Saudi Arabia
Project Description	Root cause analysis for repeated failure of Aux Transformer in HVDC converter station
Status	Completed
Services Offered	Six Auxiliary Transformer Testing I Waveform Measurements and Power Quality Assessment At 34.5kV and 400V levels I Power System Modeling Using PSCAD Software I Ferro-Resonance and Switching Transient Studies I Root Cause Investigations for the Failure of the Transformer.

Investigation for Ferro-resonance Occurrence during the Energization of a New 69kV Substation of Hydrocarbon Plant

Sector	Study-Transmission and Distribution
Client	Saudi Aramco
End Client	Saudi Aramco
Location	Abqaiq, Saudi Arabia
Project Description	Root Cause Analysis for occurrence of High Voltage
Status	Completed
Services Offered	Field Investigations and Collection Of Design Data I Operating Parameters I Test/Event Records I Analyze the possibility of Occurrence of Ferro-Resonance for Different Operating Scenarios I Provide Mitigation Measures to Overcome Ferro-Resonance in the 115/69kV Network I Provided Solution to the Ferro Resonance Issue

Electrical Power Distribution and Grid Interconnection for IGCC Power Plant

Sector	Power System Studies: Power Generation and Oil and Gas
Client	Saudi Aramco
End Client	Saudi Aramco
Location	Jazan, Saudi Arabia
Project Description	Power System Studies for Generation Grid Interconnection and Islanding Mode of Operation, Power System Stability Assessment for Grid Disturbances, Electrical Power Distribution Reliability Assessment, Power System Stabilizer Assessment.
Status	Completed
Services Offered	Load Flow Short Circuit Transient Stability PV/QV Analysis Motor Starting Studies Insulation Co-ordination Ferro-Resonance Transfer Surge Analysis Circuit Breaker TRV studies PSS Tuning Study Black Start Study Integration of all the EPC packages ETAP models with the EPC-4 package Auto Reclose Study Sub Synchronous Study.

Replace Electrical Equipment — Abqaiq, Aindar, Shedgum and Uthmaniyah GOSP's

Sector	Power System Studies: Industrial - Oil and Gas
Client	KBR
End Client	Saudi Aramco
Location	North Ghawar and South Ghawar Saudi Arabia
Project Description	Power System Studies for Nine GOSP's
Status	Completed
Services Offered	Load Flow Short Circuit and Motor Starting Study Relay Coordination and Arc Flash Study Power Factor Correction Study Harmonic Analysis Sizing of Capacitor Bank De-Tuning Reactor Switching Transient Studies covering Temporary Over Voltage (TOV) Switching Over Voltage (SOV) Fast Transient Over Voltage (FTO) Ferro-Resonance Transient Recovery Voltage (TRV).

NTDC'S 500kV Transmission System

Sector	A planning study
Client	NTDC, Pakistan
End Client	NTDC, Pakistan
Location	Pakistan
Project Description	Feasibility study for enhancing the transmission capacity of NTDC's 500kV Transmission System by applying series compensation
Status	Ongoing
Services Offered	Load Flow Short Circuit Transient Stability Small Signal Stability Insulation Co-ordination Sub-Synchronous Resonance Impact of introducing facts devices to increase Transmission Capacity from Generation Preparing the Generic Functional and Performance Specifications for the proposed Facts Devices.

Renewables

300MW Solar PV Plant

Sector	Generation: Renewables
Client	Mahindra Susten Private Limited
End Client	ACWA/SEC
Location	Sakaka, Saudi Arabia
Project Description	300 MW Sakaka IPP photovoltaic (PV) solar project is the first ever utility scale renewable energy project under the National Renewable Energy Program of Saudi Arabia.
Status	Completed
Services Offered	Detailed Design Review (Civil, Electrical and Mechanical) as Per Statutory Compliance and Local Codes Review of Technical Assessment and Design Optimization Advice.

3.9MW Solar PV Rooftop

Sector	Generation: Renewables
Client	Alfanar
End Client	Alfanar
Location	Alfanar Industrial City Riyadh, Saudi Arabia
Project Description	Owner's Engineering services of 3.9MWp Roof Top (PV) Project for Alfanar Energy in Alfanar industrial city and Labor compound utilities area in Riyadh, Saudi Arabia
Status	Completed
Services Offered	Feasibility Study Detailed Engineering Services Vendor Document Review Site Supervision Construction Management.

50MW Wind Project

Sector	Generation: Renewables
Client	Alfa Solar
End Client	Alfanar
Location	Ras Ghareb, Egypt
Project Description	50MW Wind Farm at Ras Ghareb.
Status	Completed
Services Offered	Assessment Studies Feasibility Studies Pre-Bid Design and Estimation Cost Analysis Operation and Maintenance Proposal Financial Modeling.

Benban Aswan Solar PV

Sector	Generation: Renewables
Client	Alf-Solar
End Client	Alfanar
Location	Aswan, Egypt
Project Description	Benban Solar PV Park is a ground-mounted solar project which is spread over an area of 0.973 km ² . The project consists of 189,200 modules, each with 320W nameplate capacity.
Status	Completed
Services Offered	Initial Assessment Of Site Energy Resource Energy Yield Analysis Feasibility Study Construction of Geographic Information Concept Design Cost Analysis Detailed Design Services Project and Construction Management Warranty Period Services



Infrastructure

Jubail and Ras Alkhair Industrial Cities Infrastructure Development Projects

Sector	Infrastructure
Client	Royal Commission
End Client	Royal Commission
Location	Jubail and Ras Al Khair, Saudi Arabia
Project Description	Utility Infrastructure Expansion for Jubail and Ras Al Khair Industrial Cities
Status	Ongoing
Services Offered	Planning/Concept Studies Concept Design Detailed Design Tender Documentation LEED Certification Project Management Construction Supervision Services Domain Utilities and Infrastructure Design Architectural Design Landscape Design Life Safety Design Interior Design Structural Design Electrical Design Mechanical Design Preparation of Technical Specifications/BOQ.

City Center Infrastructure Phase 2

Sector	Infrastructure
Client	Royal Commission
End Client	Royal Commission
Location	Jubail, Saudi Arabia
Project Description	Project scope covers Potable and Fire Water Sanitary Sewer Storm-Water and Irrigation Water Systems Roads, Traffic Control Grading, Landscaping/Hardscaping Areas Chilled Water Piping System Electrical and Telecommunications Works.
Status	Completed
Services Offered	Feed and Landscape Services for the balance of the City Center (Except For Al Gurmah Island).

P and C of Shared Services Network

Sector	Infrastructure
Client	Royal Commission
End Client	Royal Commission
Location	Jubail, Saudi Arabia
Project Description	Infrastructure utilities for Plaschem Area Lot-11 and Lot-13 - Jubail
Status	Completed
Services Offered	Detailed Engineering Design upto IFB and IFC drawings for Fire Water Storage and Distribution Enhancement Medium-Pressure (20 Bar) Steam Network (Pipes Only, No Steam Generation) Seawater Cooling Network Extension in Lot 11 Iww Network Extension in Lot 11 Pipeline Corridor (Sleepers and Turning Structures) Extension from existing Pipeline Corridor to Individual Lot Frontages via the Existing Culverts under the Plaschem Roads Additional Utility Connections to facilitate "Plug-And-Play" connectivity for Investors Addition of two 25mva each power loops in lot 13 sourced from Substation 4.

Sea Water Cooling System Extension in Jubail 2, Stage 4, Phase 1

Sector	Infrastructure - Water
Client	Royal Commission
End Client	Royal Commission
Location	Jubail, Saudi Arabia
Project Description	Jubail 2 Seawater Cooling Network Extension
Status	Completed
Services Offered	Detail design package for the Jubail 2 Seawater Cooling Network Extension (Approximately 3.0 Km) from the 30% Feed to 90%, 100% and IFB Stages I Detail design is supported and verified by the hydraulic model with further updates incorporating any updated essential information received post 30% feed along with the 3D Model.

PandC of Gas Network for Jubail 2, Stage 4 - Phase I

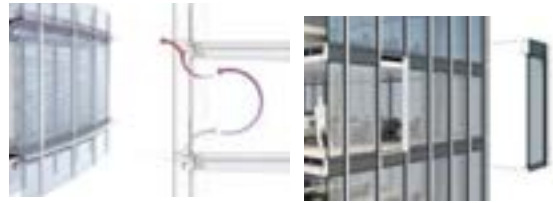
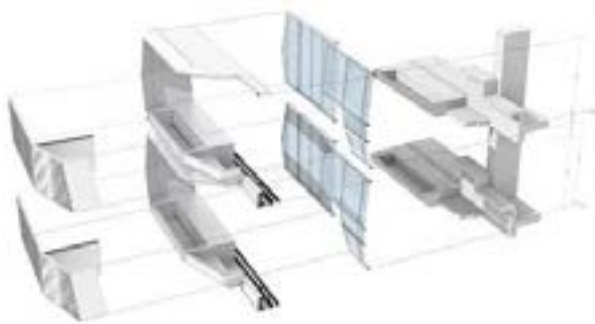
Sector	Infrastructure - Gas
Client	Royal Commission
End Client	Royal Commission
Location	Jubail, Saudi Arabia
Project Description	Extension Of existing Fuel Gas (Methane) and Ethane Network Systems (Approximately 3.0 Km) to support the new investor (Amiral) in Jubail 2, Stage 4 (Lot 15), and provisions for future extension to lot 14 and west of Abu-Hadriyah highway
Status	Ongoing
Services Offered	Detailed design for the extension of existing fuel gas (Methane) and Ethane Network Systems (Approximately 3 km) in Jubail I Scope of work includes performing all activities necessary to provide detailed design work (Inclusive of Civil, Electrical, Instrumentation, Process, Mechanical, Structural, and Telecommunication), Design Calculations, Hydraulic Models, Stress Analysis, Drawings, Specifications, BOQ's, Materials Take-Off (MTO), Cost Estimate, Pay Items descriptions.

Specialty Services

Facade Design

Façade Engineering is the art of resolving aesthetic, environmental and structural issues to achieve the enclosure of habitable space. With the ever-increasing complexity and performance demands on buildings, there is a need to accurately validate the design and communicate the client and designers' intentions to those who have responsibility for executing the façades of modern buildings.

Our facade design process provides a tailored service to every client, from concept inception through to operational use. Independent, technical advice and robust engineered solutions are delivered to provide clarity to architectural designs, and confidence in project costs.



Façade Engineering Services

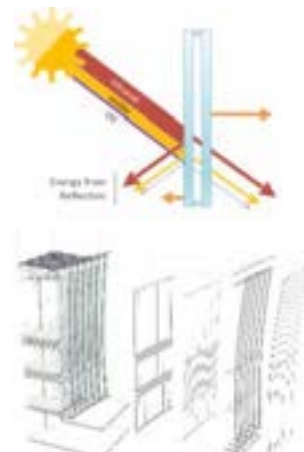
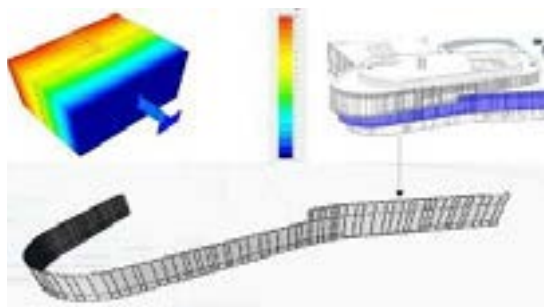
- > Concept design
- > Thermal modeling and analysis
- > Parametric design
- > Façade design and analysis
- > Façade structural design
- > Compliance
- > Design analysis and review
- > Design for non-combustibility
- > Façade glazing, cladding, sealant, and material analysis
- > Specialists in heritage buildings and structures
- > Façade waterproofing and remedial diagnostics

Facade Design Development

- > Design team collaboration
- > Specifications
- > Performance specification and documentation
- > Architectural design
- > Compliance design
- > Value engineering
- > Feasibility and buildability

Facade Design Management

- > Quality management and review
- > Implementation
- > Construction stage co-ordination
- > On-site inspections
- > Progress monitoring
- > Monitoring testing and witnessing
- > Defect rectification
- > Operation and maintenance



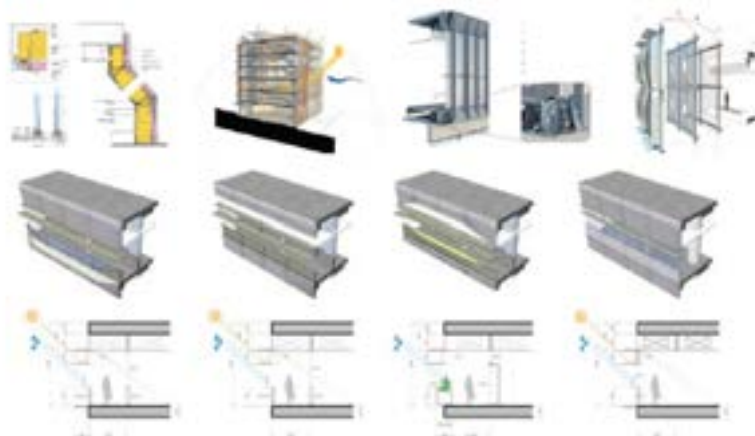
Benefits

Reduce the heat gain in the external skin of the building to reduce the long-term cost of conditioning. Provide the necessary access provisions for cleaning, general maintenance, repairs, and glass replacement that will facilitate the avoidance of unnecessary challenges during the life of the building.

Value add to the clients

Façades represent the manifestation of the Architect's expectation of the external appearance of a building.

The façade is one the most complex components of a building. It directly impacts the aesthetic appeal of the structure, and is also heavily integrated with other major disciplines. Hence it plays a significant role in determining the overall value, performance, safety, and sustainability of a building.



We understand that each client requires a bespoke and tailored engineered solution. Our facade process does just that! Independent, technical



Energy and Sustainability

Our Sustainability Solutions

One stop solution for all building related sustainability matters concerning to built environment. Design and Construction sustainability incorporates the combined approach to address the three pillars of sustainability.



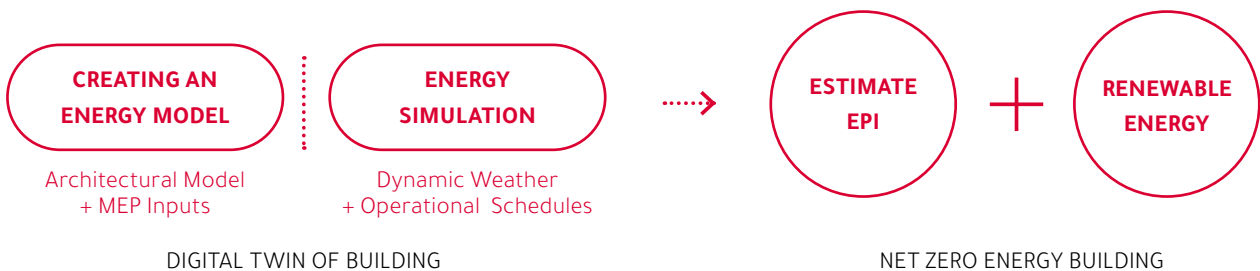
Concept Phase

Building massing optimization
Solar insolation analysis

Façade effectiveness study
Shading design optimization

Design Phase

Building Energy Consultancy



Lighting Consultancy

Daylight Analysis

- > Instant lux levels
- > Annual sunlight levels
- > Glare and Comfort

Electric Light Analysis

- > Interior lighting comfort
- > External lighting
- > Daylight Integration

CFD Consultancy

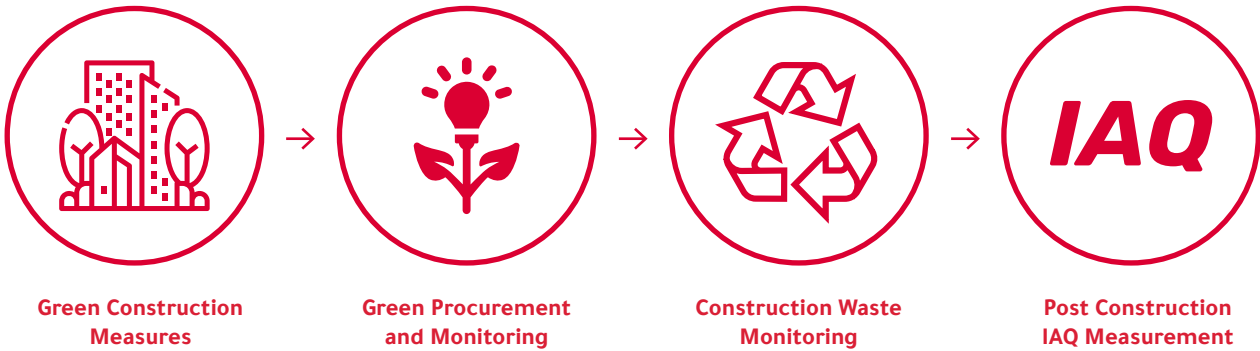
- Fire and Smoke simulation
- Ventilation simulation
- Data Centre rack cooling simulation

External thermal comfort

- Estimate microclimate for urban planning schemes
- Evaluate outdoor thermal comfort for pedestrians

Construction phase

Building decarbonization consultancy
 Site management consultancy



Whole Project Life Cycle

Green Building Project Management

- > Net Zero buildings
- > LEED certification
- > WELL certification
- > EDGE certification
- > MOSTADAM certification
- > Sustainability feasibility and compliance studies

Green Building Project Management

PRE - COMMISSIONING		SYSTEM COMMISSIONING			ENVELOPE COMMISSIONING		
OPR AND	DPR AND	HVAC Systems	Electrical Systems	PHE Systems	Air Filtration	Water Infiltration	Thermal enclosure Testing

Acoustics

Environmental

- › Noise survey
- › 2D noise map contours
- › 3D noise survey and mapping
- › Environmental noise impact assessments

Architectural

- › Noise ratings
- › Noise criteria levels
- › Background noise in DBA
- › Impact isolation class - IIC
- › Sound transmission class - STC
- › Sound reduction index - SRI/RW values

Room Acoustics

- › Speech intelligibility
- › Crosstalk attenuation
- › Noise reduction coefficients - NRC
- › Room reverberation time - RT60 in seconds

Building Services

- › Noise rating
- › Noise criteria
- › Acoustic panels
- › Acoustic louvers
- › Acoustic enclosures
- › Air-borne acoustics
- › Duct sound attenuators
- › Generator room acoustics
- › Plantroom noise break-out control
- › Chiller yard and pump room acoustics

Benefits/Value Add to the Clients - Advantages

- › Proper implementation of architectural design.
- › Providing perfectly beautiful architectural ID creation.
- › The right way in addressing unwanted ambient noise climate.
- › Both interior and exterior noise mitigation and audio enhancement.
- › Study shows necessary things need to be considered for guaranteed design.
- › Study looks at related solutions and recommendations based on the proposed design.
- › Growing concern to reduce and contain noise for a healthier and more effective life.
- › Client or tenants can live or work safely away from noisy equipment or environment with happiness and productivity.

Focused Projects

Room Acoustics

- › Worship places
- › High-tech theatres
- › Classroom acoustics
- › Hotel room acoustics
- › High-tech auditoriums
- › Lecture hall acoustics
- › VIP luxury theatres
- › VIP auditoriums and banquet halls

Building Acoustics

- › Public libraries
- › Heritage village
- › School and college
- › National museums
- › Administration buildings
- › Hospital complex
- › Medical universities
- › Government buildings
- › Hypermarkets and retails
- › 5 Star and 7 star hotels / resorts
- › Entertainment and commercial complex

Industrial Projects

- › Workshops
- › Steel plants
- › Power plants
- › Cement plants
- › Food industries
- › Production units
- › Automotive plants
- › Oil and Gas refineries
- › Petrochemical plant

Infrastructural Projects

- › Highways
- › Airports and seaports
- › Township master plannings
- › Industrial and commercial packages
- › Master project noise plan developments

Specialist Lighting Design

- › We provide creative architectural lighting design consultancy.
- › Our illuminated designs are grounded in crafting light, exploring art, science, and innovation in technology, and aimed at making businesses flourish.
- › We believe successful lighting schemes foster atmospheric moods, engaging spaces that create visually enhanced experienced and spatial journeys.
- › Our philosophy is to encourage human experiences, and emotional connections with the natural and built environment through light by enhancing the ergonomics of a building.



Benefits

- › We provide bespoke and tailored services to each project, ensuring every lighting element aligns with the brief and project requirements.
- › Our creative and technical designers work as part of a project design team.
- › As professional lighting designers, we bring solid technical acumen and sensitive design techniques to architectural and landscape projects.
- › The value-added services we provide can make or break the success of a project and, therefore, outweigh, the impact of chargeable service fees.

Projects

- › We work internationally across multiple hospitality, heritage and culture, commercial and retail.



Traffic Impact Assessment

We provide the below services for our clients.

Transport Planning

- › National transport planning
- › State-wide intermodal and multimodal planning
- › Traffic impact assessment studies
- › Travel demand forecasting
- › Modelling, calibration and software interface
- › Capacity and circulation analysis
- › Environmental impact assessment studies
- › Logistics and goods movement studies
- › Economic analysis and BoT studies
- › Urban transport planning studies
- › Private vehicles
- › Public transport (BRT, LRT, etc.)
- › Rail transport (fast track rail systems, metro lines systems, tram lines systems)

Traffic Engineering

- › Data collection
- › Traffic studies
- › Operational analysis
- › Design of interchanges, intersection and highways and freeways
- › Design of vehicle signal heads, pedestrian signal heads, signal poles, and audible pedestrian signals
- › Planning and designing traffic signal operations, timings and phasing
- › Sign and marking design
- › Sign inventory and management systems
- › Parking design

Intelligent Transport Systems (ITS)

- › Adaptive control systems
- › Traffic enforcement systems
- › Advanced parking systems
- › Passenger information systems
- › Toll systems
- › Intermodal communications
- › Traffic signals systems
- › Traffic counting systems

Roads Design and Supervision

- › Highways and road design
- › Urban streets design
- › Interchanges and junction design
- › Highways maintenance management system
- › Pavement design
- › Marking and signage design
- › Highways and road supervision
- › Road supervision quality control
- › Geotechnical engineering.
- › GIS, GPS and surveying



Cost Consultancy

We have two decades experience in providing Cost Consultancy services to different industries including healthcare, education, hospitality, residential, offices, industrial, power, and energy sectors. We maintain up-to-date cost benchmarking in all areas of operations, and keep up with the latest trends and technologies such as BIM/ Revit 3D.

Leveraging our expertise, extensive experience, and network within the region by providing inter-office support, we work to stay ahead by building and sharing insights across sectors and regions facilitating to pioneer best practices in cost management and quantity surveying. With best resources, right knowledge, extensive experience, and worldwide reach, we continue to achieve tangible benefits that inspire confidence and maximise the return on investment for our clients while curtailing the associated risks.

Feasibility Studies

We establish project viability with a clear, robust baseline. Our feasibility studies enables clients to assess the viability of the project them to make informed decisions.

Our cost benchmarking data, together with cost modeling, is used as a dynamic tool to evaluate alternative design options and identify the most cost-effective within the parameters of the design brief.

Cost Planning and Estimation

We work along with the engineering team to ensure the budget is accurate.

We optimize cost performance at every stage through our proven methodologies, cost models, cost data, assurance approach and market intelligence. This allows us to actively monitor the project cost against the evolving design and give immediate feedback as per the budget. All forthcoming changes are monitored against the approved/signed-off cost plan and considered in the change management process.

Our Services include

- › Preparation of estimate based on preliminary designs
- › Preparation of detailed estimates and cost planning advice through design development
- › Estimating building services
- › Cashflow management
- › Cost control
- › Value engineering
- › Change management
- › Risk management

Tender Preparation and Procurement Advice

Our expertise is drawn from diverse backgrounds and experiences and includes all the traditional services such as preparing tender for clients, including advising them on the most appropriate procurement method and form of tender.

Our services include

- › Preparation of bills of quantities or schedule of rates
- › Preparation of tender documents
- › Advice on project procurement and tendering
- › Advice on the prequalification of contractors
- › Advice on selecting the appropriate procurement system.
- › Tender evaluation

Contract Management

With our expertise and experience in the region, we are committed to providing contract management methodologies that enable us to provide early advice on how contracts can be set up and managed to avoid claims, and also how to deal with claims when they do occur, and we have a track record of efficiently providing such advice for all stages of a project.

Our aim is to deliver high quality services that help our clients achieve operational and commercial goals and boost their profitability.

Our Services include

- › Contractual and financial risk analysis
- › Preparation and reviewing the contractual documents
- › Writing of contractual letters, claims, and contract variations
- › Claim analysis and negotiation process support
- › Project close-out





DAR International for Engineering Consultancy

P.O Box 87236, Riyadh 11642,
Kingdom of Saudi Arabia
+966 11 494 5354

For further details write to us on dar@dar-engineering.com

 DarEngineeringConsultancy  darengineering  DarEngineering