



SOGREAH GULF (ARTELIA GROUP)

Serving our clients around the world

A presence in
over **40 countries**

Projects in
over **100 countries**

5 900 employees



Our Middle East Network



SOGREAH Gulf was established in 2003, as a subsidiary of Artelia International U.A.E.



Main office located in Dubai; Branch offices in Abu Dhabi since 2008 and Qatar since 2009





TECHNICAL CAPABILITIES



SOGREAH GULF: ACTIVITIES & SERVICES

Civil & Marine Works	Design of Marine structures, Breakwaters, Dredging & Land Reclamation
Coastal Studies	Hydraulic Numerical Modeling and Hydraulic expertise
Ports & Marinas	Planning & Design of Ports/Marinas, and Water Transport Studies
Geotechnics	SI campaigns, Geotechnical stability, Earthworks, Piles, Retaining Structures, Liquefaction, and Design Recommendations
Infrastructure	Water Supply & Sanitation
Environmental Studies	Environmental Impact Assessments
Management & Supervision	Contract Management & Construction Works Supervision



MARITIME



Engineering & Design

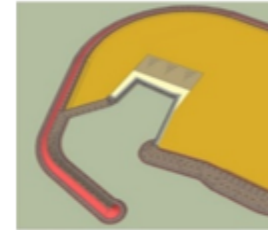
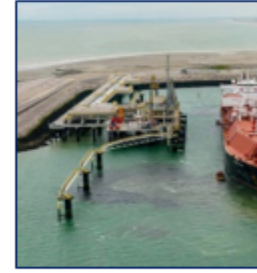
- Specification for site surveys
- Numerical and Physical modelling
- Feasibility studies, Basic and Detail design
- Applications for permits
- Drawings and specifications
- Bill of quantities and cost estimates
- Tender documents
- Health & Safety

Project Management

- Client's representative
- Project planning and Scheduling
- Budgeting, cost management and value engineering
- Contractor pre-qualification
- Preparation of tender documents
- Bid comparison and analysis
- Contract preparation
- Project control and reporting

Construction Management

- Works Supervision and co-ordination
- Construction monitoring & technical inspections
- Check and approval of supplies
- Check and approval of work progress certificates
- Health & Safety supervision
- Assistance to start up
- Acceptance tests and commissioning
- Assistance in obtaining statutory certificates & approvals

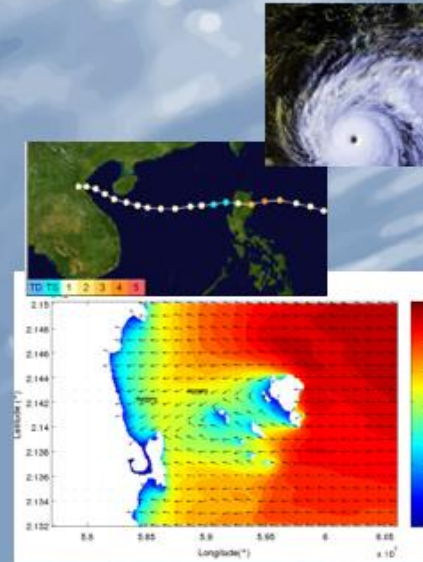
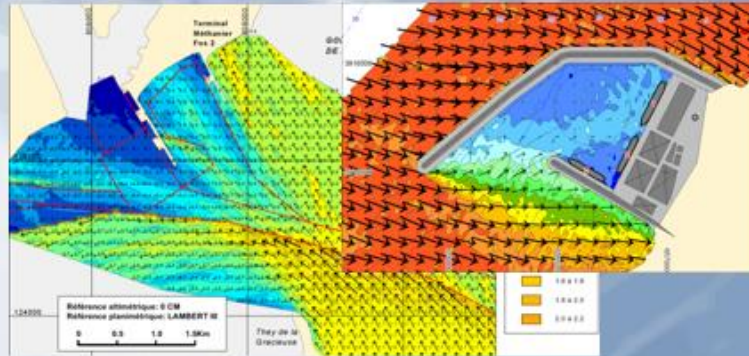


COASTAL & METOCEAN MODELLING

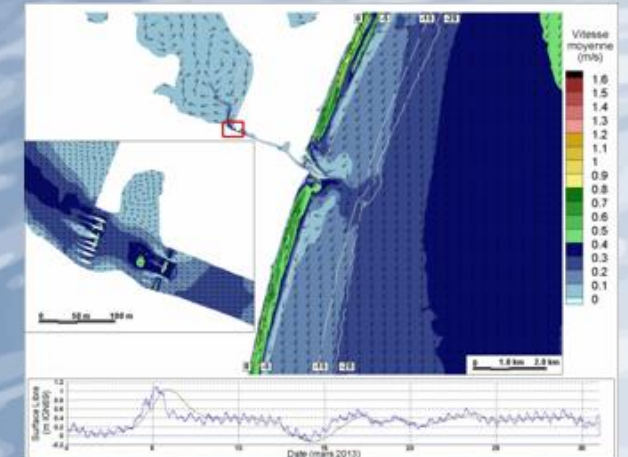
Scope of Services

DEFINITION OF WAVE CONDITIONS

- Elaboration of offshore sea states database
- Reconstitution of historical cyclones
- Wave propagation to site & wave agitation



CURRENT MODELLING



- **Elaboration of offshore sea states climate** (reconstitution of 20 to 30 year time-series of offshore wind and wave conditions by combining large scale and local atmospheric models & satellite data assimilation).
- **Cyclonic study** (determination of cyclonic design waves and surge)
- **Wave propagation to the site** (taking into account bathymetry features, wave refraction, shoaling and breaking)
- **Wave agitation study** (analysis of the wave agitation within a port to confirm and optimise breakwater layout)
- **Hydraulic (current) modeling** (taking into account tide effects, streams and nearby rivers, rain ... including global to local models taking into account detailed features of the site topography and bathymetry) .

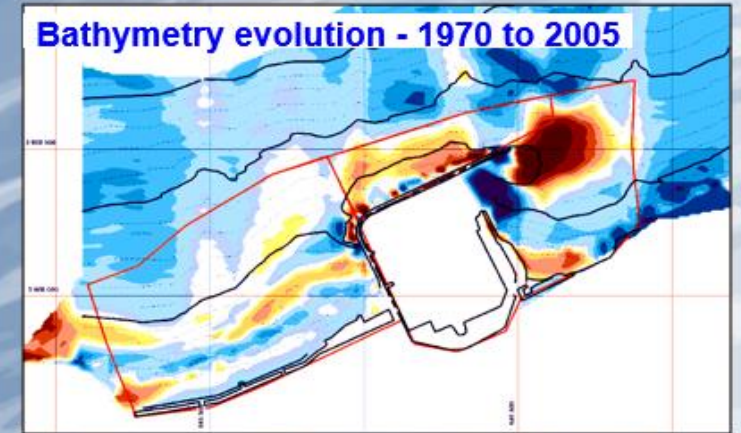
EVALUATION OF IMPACTS – DREDGE PLUME AND HYDRO-SEDIMENTATION STUDIES

Scope of Services

DREDGING WORKS – SEDIMENT PLUME MODEL



HYDRO-SEDIMENTOLOGICAL STUDIES

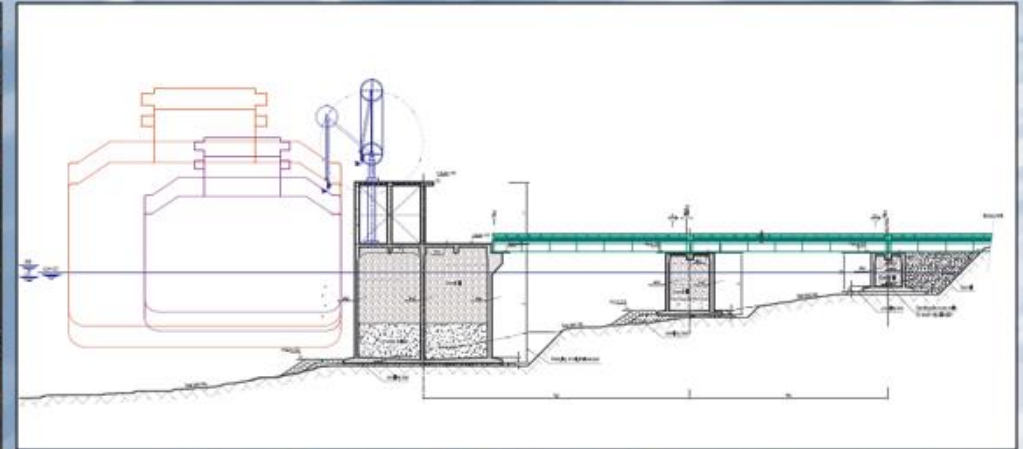


- **Sedimentation in dredged channels** (forecast of maintenance dredging)
- **Coastal morphodynamics**
- **Impact of a project over the nearby shoreline** (erosion or sediment deposits along the shore line, shore protection)
- **Environmental impact of dredging works** (turbidity plume modelling)

... ARTELIA has built expertise over a large range of projects worldwide, in combination with numerical and physical models and tools: TELEMAC 2D and 3D (current modeling, water quality and thermal plume dispersion), GENESIS, SMC (coastal morphodynamics) ...etc.

DESIGN OF QUAY WALLS

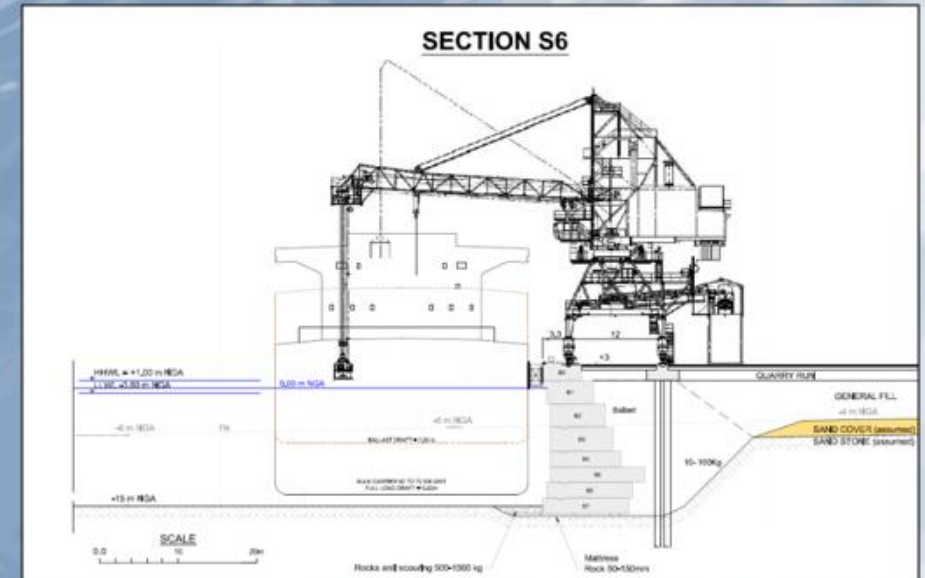
Scope of Services



A strong team of structural and civil engineers and technicians and specific software tools: ROBOT, ANSYS, RDM6, KREA, FOXTA ...

Conceptual to detail design of marine concrete structures:

- **Concrete Gravity Base Structures**
- **Concrete caisson breakwaters**
- **Concrete block quay walls**
- **Diaphragm walls**



DESIGN OF BREAKWATERS

Scope of Services



- Optimisation of breakwater length – comparison of typologies (rubble mound, concrete caissons)
- Definition of design conditions (design waves, extreme water levels)
- Conceptual to detailed design and physical model tests
- Construction specifications & supervision of works on site

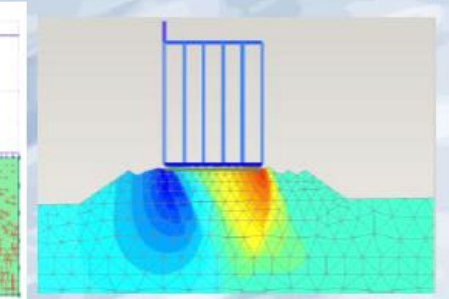
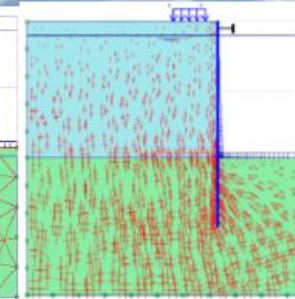
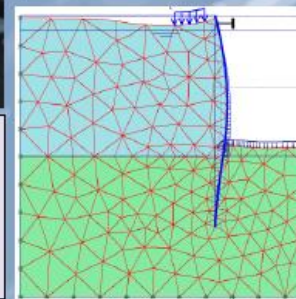
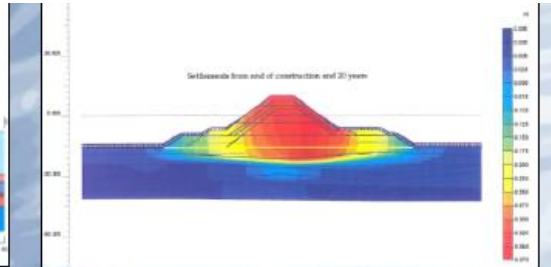
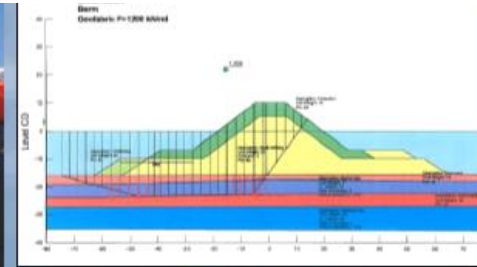


GEOTECHNICAL DESIGN AND MARINE STRUCTURES FOUNDATIONS

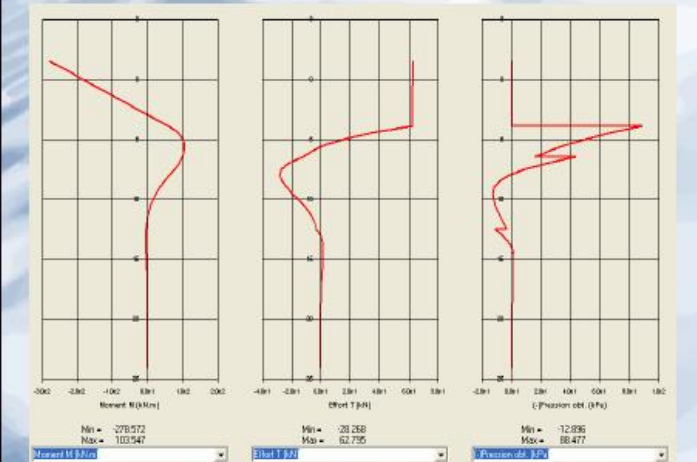
Scope of Services



A team of 12 geotechnical engineers and geotechnical experts and specific software tools: TALREN, GEOSLOPE, FOXTA, KREA, PLAXIS, FLAC 2D & 3D ...

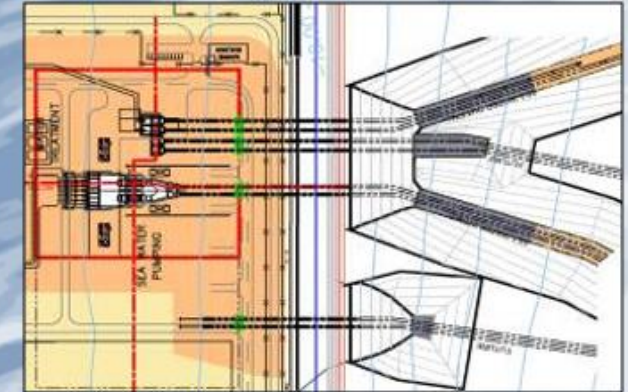
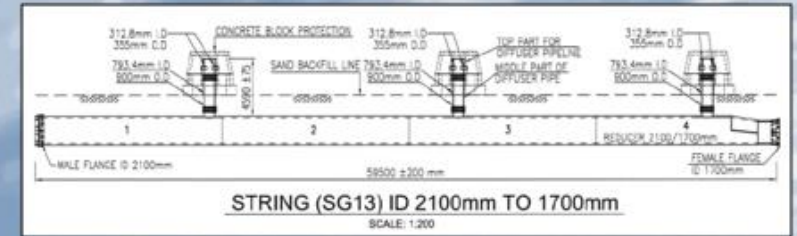


- Specification and supervision of geotechnical and geophysical site surveys
- Interpretation and analysis of site survey data
- Design of piled foundations (Eurocodes – API ...)
- Slope stability analysis
- Finite element analysis of soil/structure interaction
- Seismic design

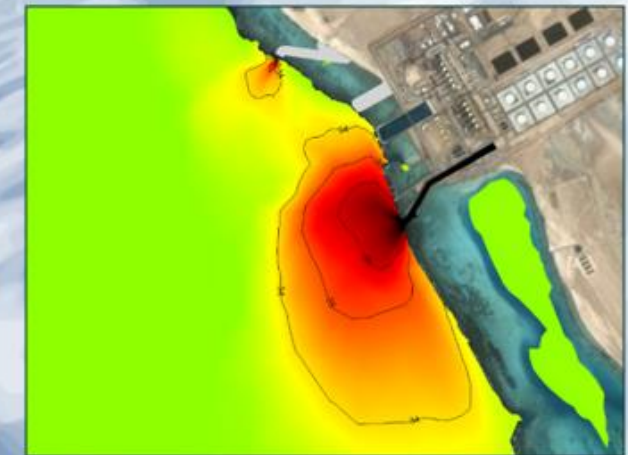


DESIGN OF SEA WATER INTAKES, OUTFALLS AND PUMPING STATIONS

Scope of Services



- Thermal recirculation and dispersion modelling studies
- Comparison of various typologies and selection according to site specificities
- Full design of sea water intakes, pumping station and outfall systems (civil works, mechanical, electrical ...etc)
- Construction specifications and work supervision on site



SELECTED PROJECTS

Key Projects in Dubai

- Design & Supervision
- Supervision
- Impact Assessment



TRIPLE BAY MARINA PROJECT

Early Contractor
Involvement
Services

2020-Present

Kingdom of Saudi
Arabia

CLIENT

- ALSAAD (Contractor) for AMAALA

BUDGET

- 1.2 million AED

SCOPE OF SERVICES

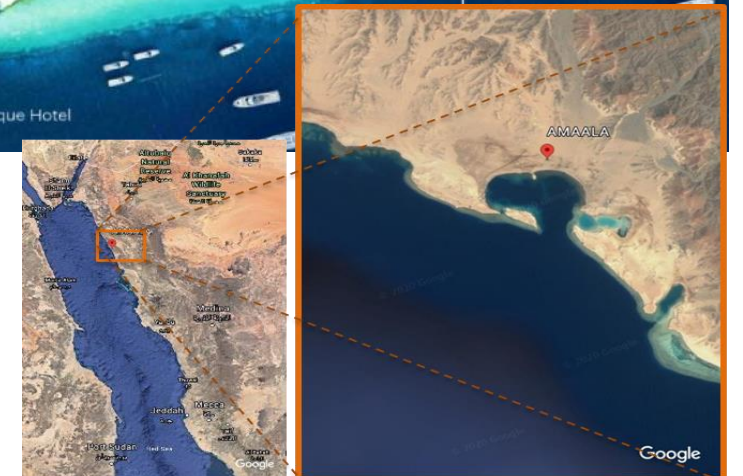
- 12 weeks Design Competition + bid for D&B phase

STARTED:

- 21st June 2020 – 12 weeks

CURRENT PROGRESS:

- On going – Subcontract Agreement signed



DUBAI HARBOUR

Marine Works –
Design, Site
Supervision, Cost
Consultancy

2017-2018

Dubai, United Arab
Emirates

CLIENT

- North 25 Project Management

SCOPE OF SERVICES

- Project Management
- Site Visit & Data Compilation
- Master Planning Advise
- Field Survey Works
- Coastal Studies
- Marine Risk Assessment
- Marina Design
- Cruise Terminal Planning
- Concept Design of Marine Structures
- Schematic & Detailed Design
- Cost Estimates of Marine Structures
- Tender Packages & Tender Support
- Design Permits/NOCs
- Construction Documentation Package & Final BOQ
- Site Supervision Services



PORT DE LA MER

Marine Works –
Consultancy and
Site Supervision
Services

2015 – On-going

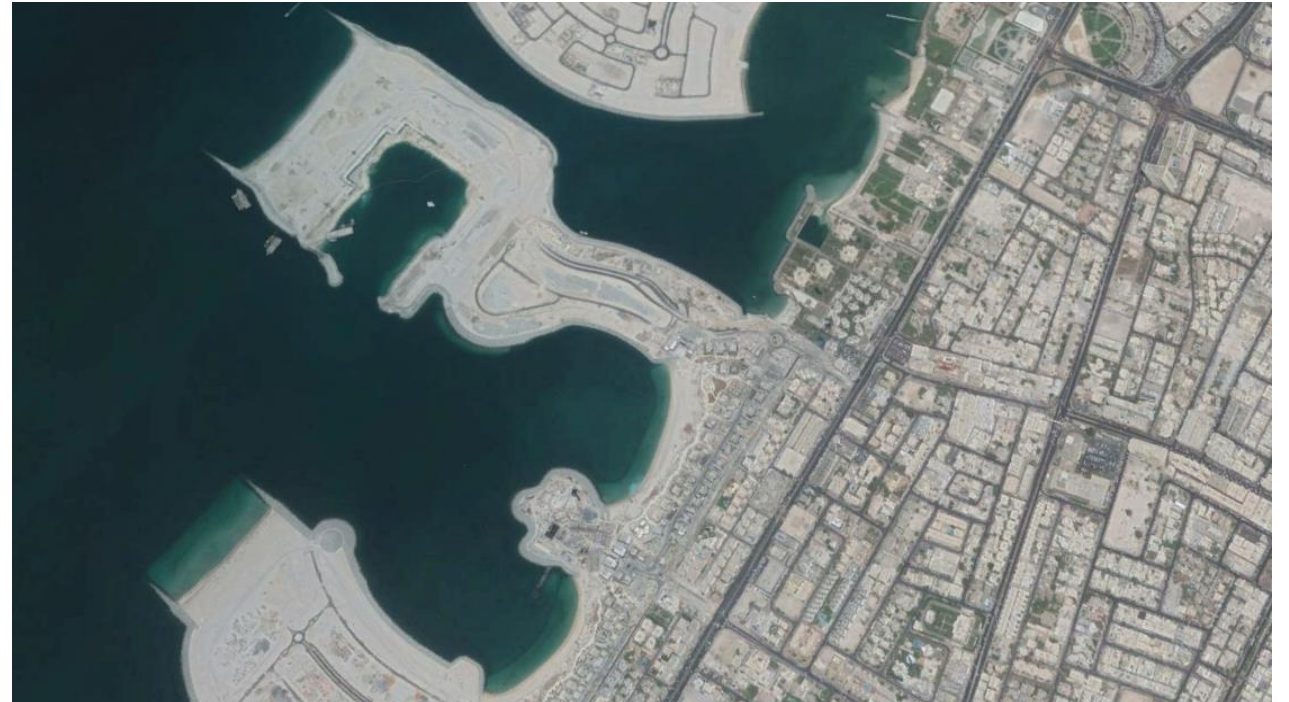
Dubai, United Arab
Emirates

CLIENT

- Meraas Development

SCOPE OF SERVICES

- Field Survey Works
- Final Geotechnical Assessment Report
- Marina Market Study
- Coastal Studies
- Schematic & Detailed Design
- Tender Packages & Tender Support
- Acquisition of Design Permits/NOC's
- Construction Documentation & Final BOQ
- 3D Physical Modelling
- Project Management



LA MER (JUMEIRAH OPEN BEACH)

Marine Works –
Consultancy and
Site Supervision
Services

2014-2016

Dubai, United Arab
Emirates

CLIENT

- Meraas Development

SCOPE OF SERVICES

- Field Visit & Field Survey Specification
- Geotechnical Report
- Master planning Advise
- Coastal Studies
- Concept Design
- Detailed Design
- Tender Packages
- Acquisition of Design Permits/NOC's
- Marine Engineering Supervision Services



MALDIVES RESORT DEVELOPMENT

Coastal Engineering
Consultancy &
Construction
Supervision

2016-2018

South Mall Atoll,
Maldives

CLIENT

- Vita Heights Company

SCOPE OF SERVICES

- Coastal Numerical Modelling Studies
- Marine Engineering Design:
 - Beaches
 - Groynes
 - Revetments
 - Dredging/Reclamation
- Tender Documents
- Construction Supervision



BLUEWATERS DEVELOPMENT

Marine Consultancy
Services & Marine
Supervision Services

2012-2014

Dubai, United Arab
Emirates

CLIENT

- Meraas Development

SCOPE OF SERVICES

- Site Visit & Geotechnical Report
- Coastal Studies
- Concept Design
- Tender Packages
- Acquisition of Design Permits/NOCs
- Marine Supervision Services





**WATER, ENERGY, AND
URBAN DEVELOPMENT**



Areas of Expertise

- **Water Treatment**
- **Water supply and distribution**
- **Wastewater collection and conveyance**
- **Wastewater Treatment**
- **Storm Water Collection and Management**
- **Landscape Irrigation**
- **Fire Fighting, protection**
- **Power Supply, Electrical, Street Lighting**
- **SCADA, Control, Telecommunications**
- **Building MEP, Mechanical, HVAC, Process**

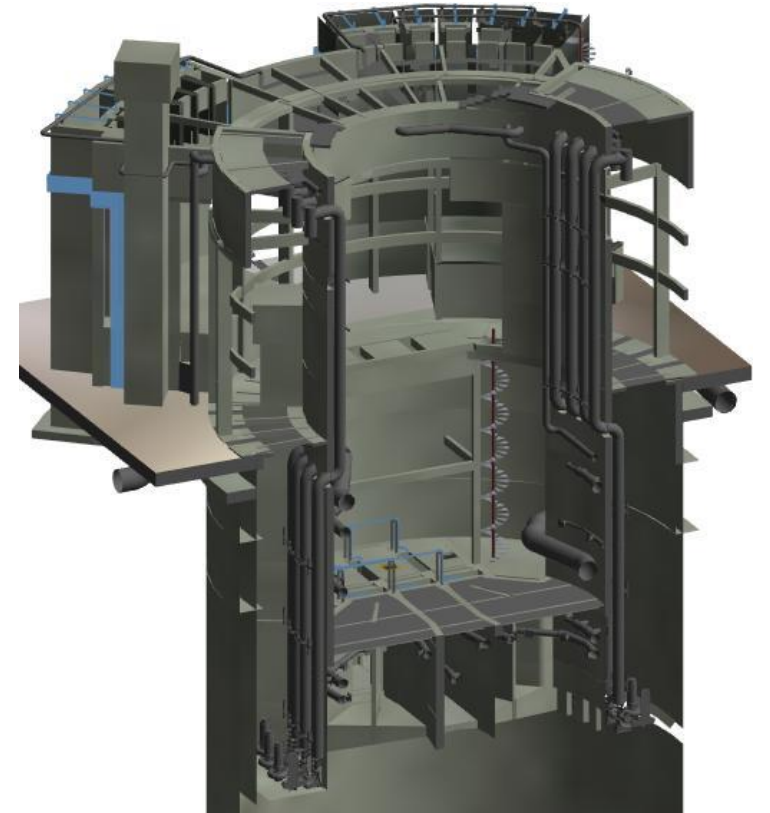


Scope of Services

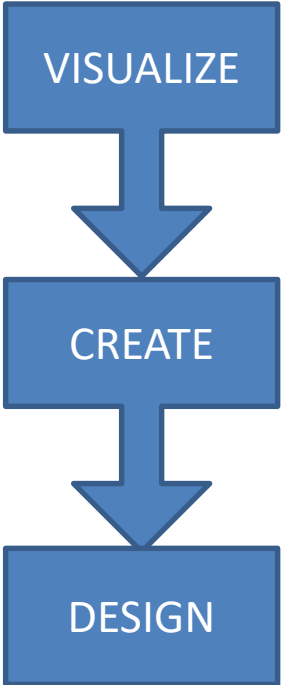
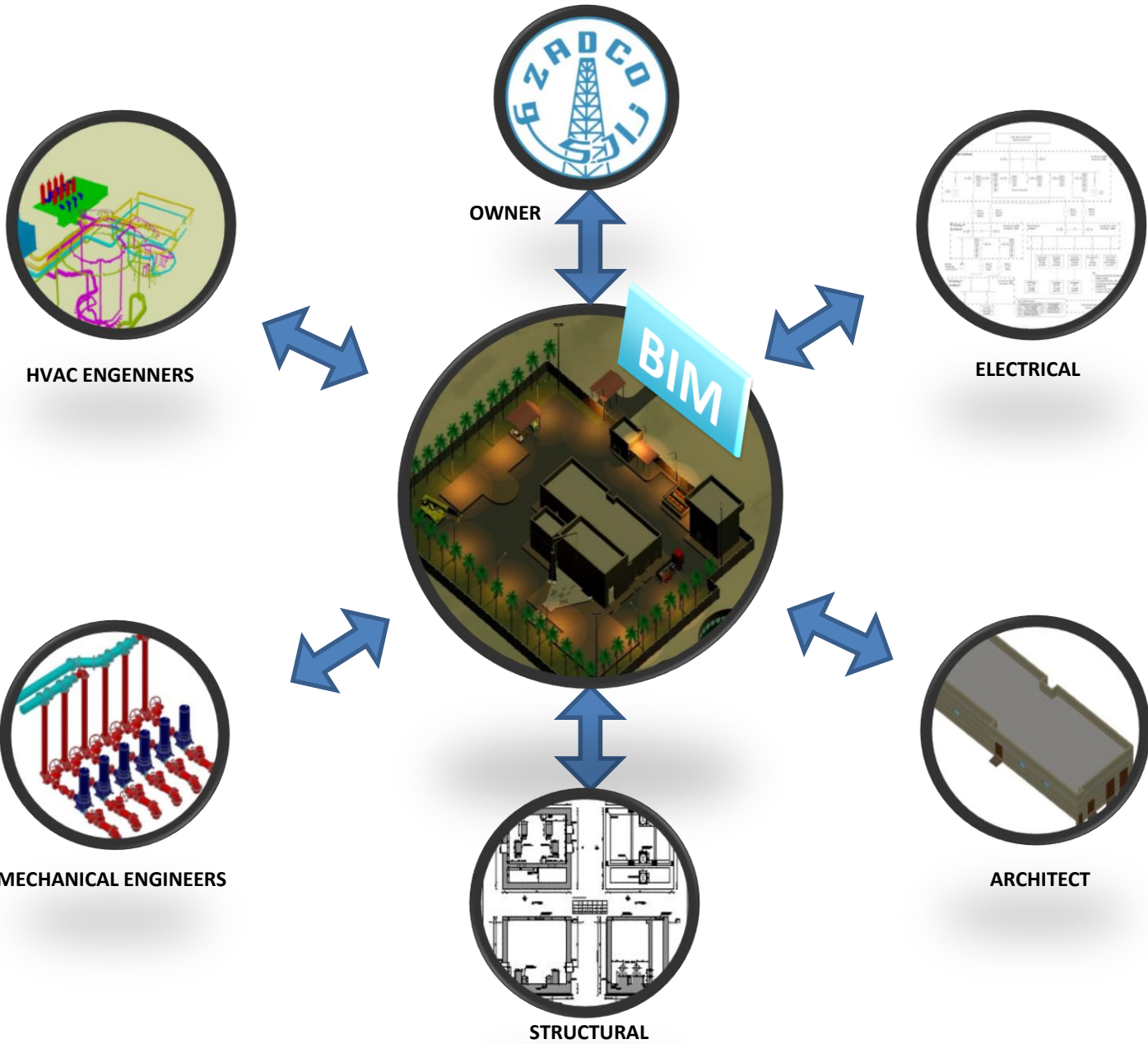
- **Feasibility Studies**
- **Engineering & Design**
 - Concept Design
 - Preliminary Design
 - Detailed IFC Design
 - Preparation of Tender Documents
- **Project Management**
 - Project planning and scheduling
 - Value engineering
 - Contract preparation
 - Project control and reporting
- **Construction Supervision**
 - Design review
 - Construction management
 - Supervision of Testing and Commissioning



- 3-D Design
- Computational Fluid Dynamics (CFD)
- Physical Modeling
- GIS
- Hydraulic Models
- BIM for Mega Projects



Building Information Modeling for Major Projects (BIM)



SELECTED PROJECTS

DAMMAM INDEPENDENT SEWAGE TREATMENT PLANT (ISTP)

Owner Engineer
and Design Review
Services

2019 - Ongoing

Kingdom of Saudi
Arabia, Dammam

CLIENT

- Dammam West Company for Water LLC

SCOPE OF SERVICES

- Hydraulic Design
- Instrumentation and Control Design
- Process and Hydraulic Design
- Process and Non-process Piping Design
- Process Mechanical, Building Services Mechanical & HVAC Design
- Process Electrical & Building Services Electrical Design
- Structural Design for Process and Non Process Buildings/Structures
- Architectural Design for Process and Non Process Buildings/Structures
- Site Civil Works Design (Site Grading, Roads, Storm Network, Drainage Network, Irrigation Network, Potable Water Network, Service Water Network, Street Lighting, Telecom, Site piping and Cables)



DHAHRAN WWTP (110,000 M3/DAY)

Detailed
Architectural,
Structural, Civil &
External Piping
Design

2017 - 2019

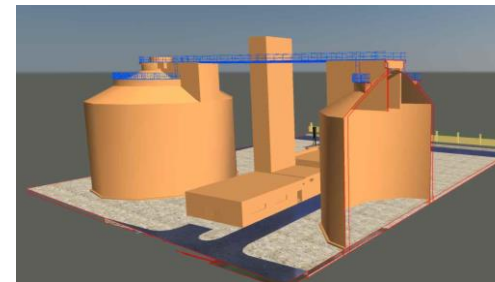
Kingdom of Saudi
Arabia, Jeddah

CLIENT

- Aziz Company for Contracting & Industrial Investment

SCOPE OF SERVICES

- Detailed design (Architectural, Geotechnical, Structural, civil) of different project elements
- All Project Buildings & Structures;
- Grading and Road Works;
- Yard Process Piping and ducting;
- Approximately 3Km Sea Outfall Design Including Hydraulic Design & Terminal Chamber.



JUBAIL INDUSTRIAL CITY (JIC) EXPANSION OF SWTP NO.9 (STAGE 6 – PHASE 1)

Detailed Design of
Phase 1 (220,000
m³/day)

2016 - 2017

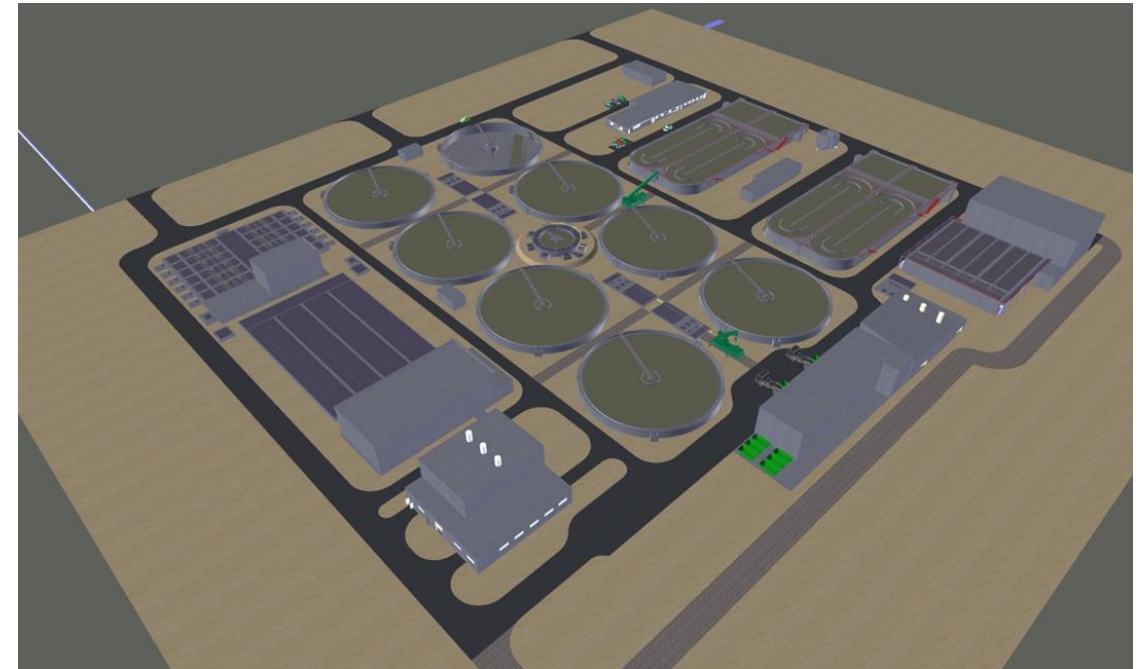
Kingdom of Saudi
Arabia, Jubail

CLIENT

- Royal Commission for Jubail & Yanbu

SCOPE OF SERVICES

- Process Feasibility and selection.
- Developing Treatment Works Layout.
- Detailed Process Design.
- Detailed Mechanical Design.
- Detailed Electrical Design.
- Detailed Control Design.
- Detailed Civil Design.
- Preparation of Tender Documents.



ZAKUM ISLANDS

SEA WATER INTAKE & OUTFALL STRUCTURES

Design Consultancy
Services for Sea
Water Intake and
Outfall Structures

2013 - 2017

United Arab Emirates,
Abu Dhabi

CLIENT

- PETROFAC Emirates LLC

SCOPE OF SERVICES

- 4 different seawater intakes, 1 process outfall, 7 storm water outfalls, 4 dissipation chambers.
- FEED Verification & endorsement of location;
- Conceptual study of FEED and In-situ Construction Options,
- Geotechnical Studies;
- Review of Subcontractors Construction Methodology;
- CFD Modeling;
- Physical Modeling;
- Detailed Engineering;
- Engineering Support for Construction.



DILMUNIA ISLAND

DILMUNIA GRAND CANAL & MARINA

Detailed Design
2014 - 2016

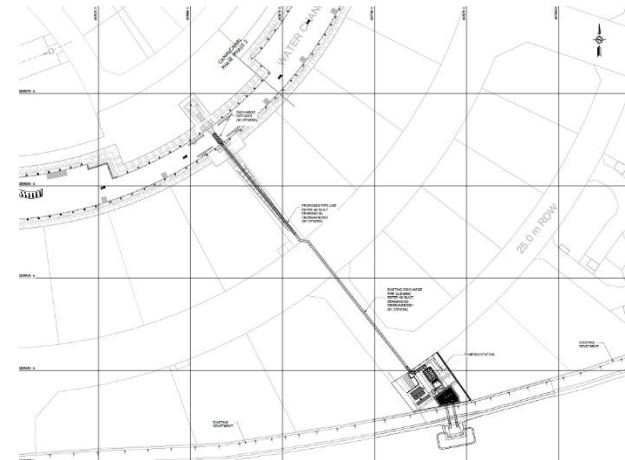
Kingdom of Bahrain,
Muharraq

CLIENT

- Ithmaar Development Company

SCOPE OF SERVICES

- Project Management
- Site Visit & Data Compilation
- Master Planning
- Field Survey Works
- Coastal Studies
- Canal Design (including MEP / utilities)
- Pedestrian Bridges Design
- Marina Design
- Pumping Station Design
- Water Features / Fountains Design
- Promenade Design
- Waterwalls Design
- Seawater pipelines Design
- Seawater intake /Pumping Station Design
- Concept & Detailed Design
- Tender Packages & Tender Support
- Construction Documentation Package.



MUSSAFAH EXPANSION OF ESNAAD JETTY

Detailed Design
2014 - 2016

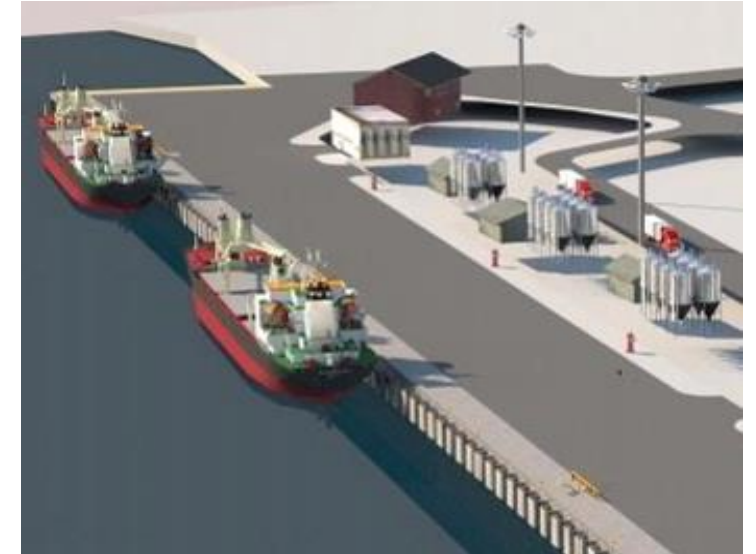
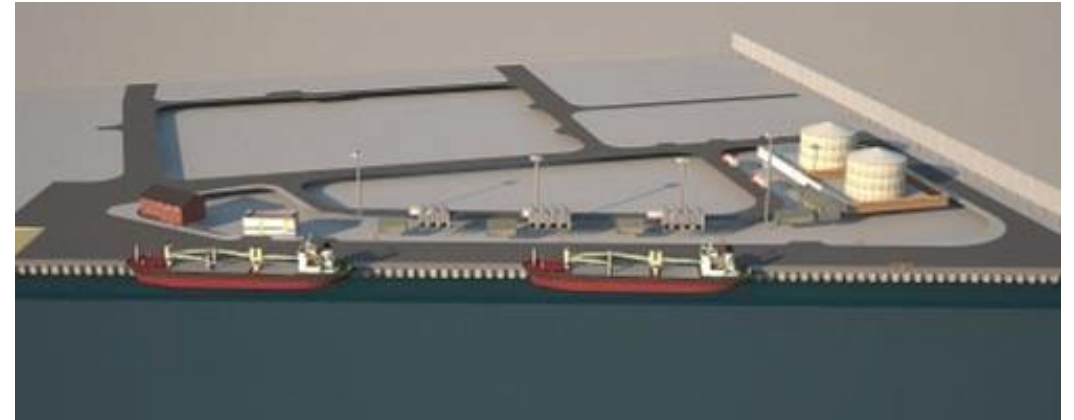
United Arab
Emirates, Abu Dhabi

CLIENT

- ADNOC

SCOPE OF SERVICES

- Project Management
- Site Visit & Data Compilation
- Survey Works
- Modeling studies
- HAZID/ENVID/OHID studies to identify and assess the potential HSE hazards and threats
- Design infrastructure for all marine structures, and buildings related to the Base.
- NOCs and Permitting.
- Infrastructure Scope:
 - Potable water supply with water Tanks
 - Waster, chemical and Diesel bunkering systems.
 - All above ground and underground service including firefighting systems.





www.arteliagroup.com