



Profile

AVANTIS is a multi-disciplined **Engineering** and **Design** firm specialized in Electrical, Power, Mechanical, Piping and Telecommunication projects.

Since 1998, AVANTIS' high skilled engineers offer an extensive **technical expertise** with a clear management vision in mechanical HVAC, plumbing, electrical, low current engineering and design services.

Our organization is structured to meet the challenges of projects of different sizes and complexities across the **Middle East** and **Africa**.

Our practice is built upon:



The **quality** of our skilled people



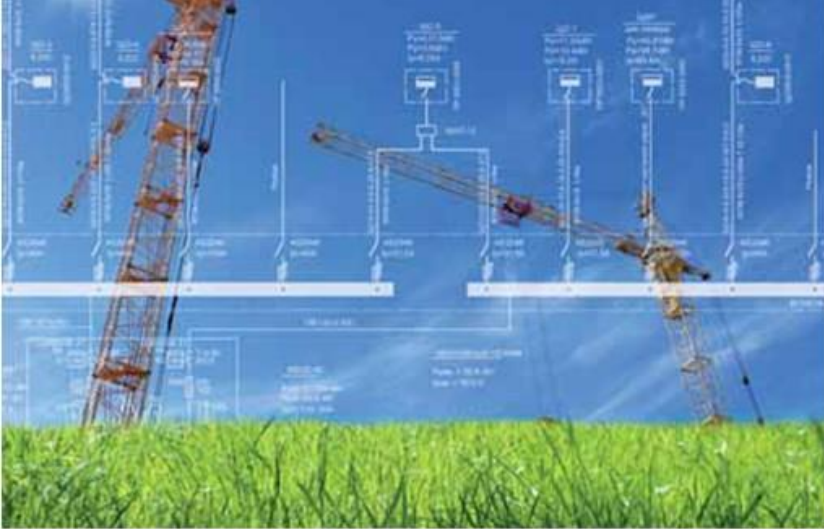
The **depth** of our client base



The **strength** of our relationships



The **diversity** of design experience



C ompetence and Expertise

We strive

◆ to build and maintain good and long standing business relationships with all our clients.

We believe

◆ in teamwork, communications and partnering to make a relationship successful.

We value

◆ every client, and tailor our designs to respond immediately to all their needs through the skills and talents of our staff.

We offer

◆ consultancy to deliver reliable results, including a sound and efficient site engineering supervision and approval.

We are

◆ a customer focused organization.

We ensure

◆ the use of creativity to solve complex problems.

We focus

◆ on the highest level of excellence and quality in engineering and services for all our projects.



We Are Committed to our Goals & Policies

Our goal is your satisfaction.

Our success has come from listening, understanding and responding to the needs of our clients.

Our focus is the relationship, not simply the project.



S ervices

Electrical & Mechanical
Design and Shop Drawings



Electrical Deliverables

- n List of drawings
- n Legend and notes
- n Layout plans
- n 3D modeling services (REVIT)
- n Installation details
- n Single line diagrams
- n Load schedules
- n Calculation notes
- n Technical schedules
- n Specifications
- n Bill of quantities
- n Project description report
- n Operating and maintenance manuals



Electrical Deliverables

Systems

n Lighting system

Conventional lighting systems • Intelligent lighting systems (KNX, DALI, etc,...) • Stage and theaters lighting system • Emergency lighting system • Software simulation and scenes

n Power system

Medium voltage switchgears and protections • Feeders/cabling sizing • MV, LV transformers • Back up supply for critical loads • Diesel generators • Gas turbines • Panel boards and motor control centers • Low voltage distribution system including short circuit and voltage drop

- Earth system • Lightning protection system

n Data centers

Tiers 1, 2, 3, 4 type • Structured cabling • Power systems • Cooling systems • Security systems • Environmental monitoring systems

n Fire alarm system

Fire alarm and detection system • F&G system for power plants • Cause and effect matrix

n Low current system

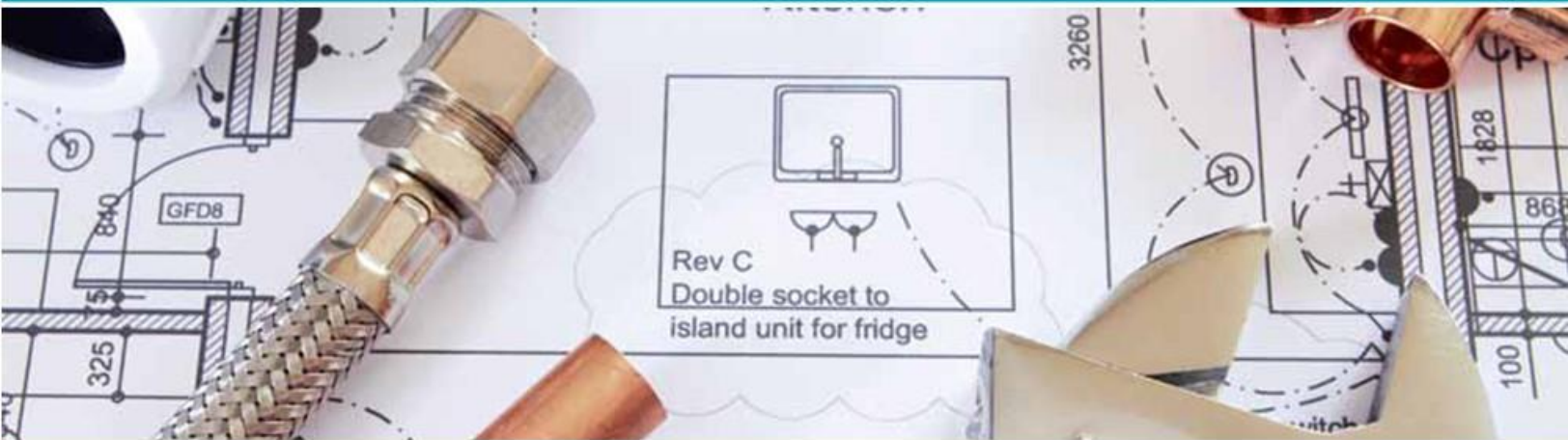
Structured Cabling Network (SCN) • Telephone system • Intrusion and access control system • Building management system • Closed Circuit Television system (CCTV) • Parking management system • Public Address (PA) • Audio Visual (AV) & Multimedia Information system • Master Antenna & Community Distribution TV (SMATV & CATV)

- Digital Clock system • Nurse Call system • Hotel Intelligent system • Vertical transport calculation



Mechanical Deliverables

- n List of drawings
- n Legend and notes
- n Layout plans
- n 3D modeling services (REVIT)
- n Installation detail
- n Schematic diagrams
- n Enlarged layouts (Technical areas, shaft details)
- n Calculation notes (Design briefs)
- n Load & heat dissipation calculations
- n Thermal modeling
- n Computational Fluid Dynamics (CFD)
- n Hydraulic calculations
- n Schedule of equipment
- n Specifications
- n Bill of quantities



Mechanical Deliverables

Plumbing Systems

- n Gravity/direct boosting domestic water distribution
- n Centralized/decentralized hot water systems
- n Solar/steam hot water systems
- n Domestic water treatment station
- n Sanitary waste and vent
- n Storm drainage network
- n Grey water system
- n Sewage treatment plant
- n Medical gazes system (Compressed air, CO₂, nitrogen, oxygen, argon, vacuum, helium, natural gas, nitrous oxide, waste anesthetic gas disposal)



Mechanical Deliverables

Heating, Ventilation and Air Conditioning System - HVAC

- n Chilled water system (Water cooled chillers, air cooled chillers, primary and secondary closed loop system)
- n Variable Refrigerants Flow (VRF)
- n Variable Air Volume (VAV)
- n Air handling units, fan coil units (Two or four pipes system)
- n Energy recovery wheel system
- n DX-Split units systems
- n Under floor treatment systems
- n Totally fresh air cooling system
- n Low temperature/humidity system
- n Hot water boilers, steam boilers, heat exchangers



Mechanical Deliverables

Fire Protection System

- n Design of sprinkler system
- n Design of fire suppression systems (FM 200, CO2, dry powder)
- n Stand pipe class-I (Landing valve)
- n Stand pipe class-II (Fire hose cabinet)
- n Stand pipe class-III (Combined system)
- n Smoke management system

Building Management System - BMS

- n Integration of different building utility systems into one platform that helps for a centralized monitoring and controlling of the distributed systems from one location
- n Understanding the client's and projects requirements for the BMS system
- n Identifying the design criteria
- n Generating the documents to capture the required BMS system
- n Developing the I/O list and network
- n Production of layouts details and schematic diagram

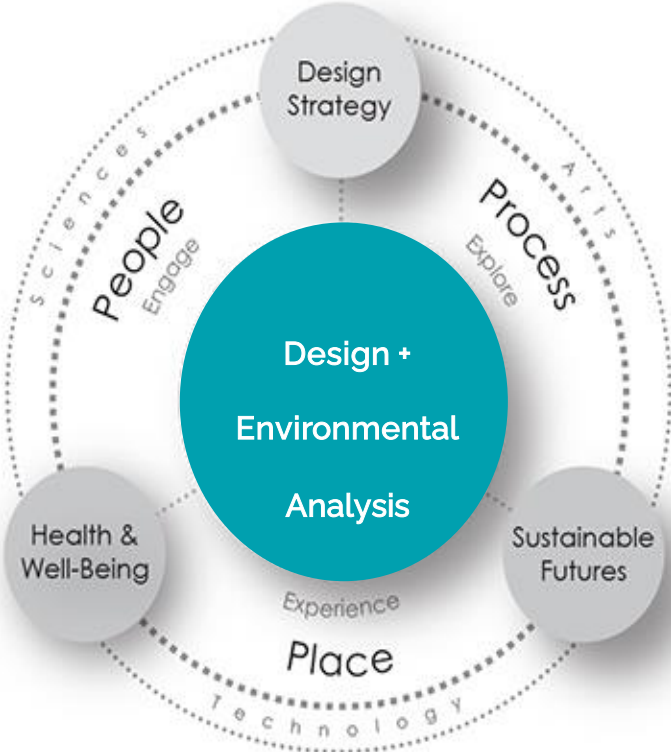


Sustainable Design

As epic environmental and economic challenges converge, we are presented with a unique opportunity to advance green technologies for the 21st century. Sustainable design transforms the built environment into one that is both environmentally responsible and economically advantageous. MEP Designs brings the benefits of green building to our communities and businesses to unite the built world and natural environment.

Leadership in Energy and Environmental Design (LEED) Accredited

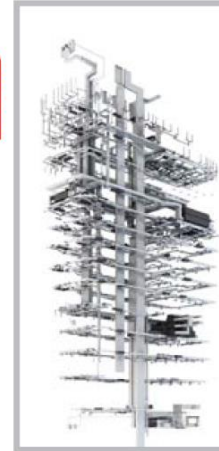
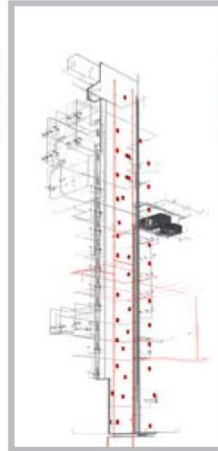
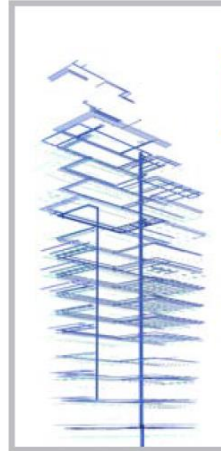
Our LEED-accredited professionals are distinguished by their knowledge and insight in green building practices, to successfully steward LEED-certified projects, and champion high performance, sustainable design.



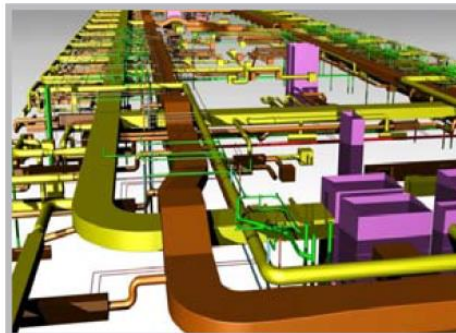
Building Information Modelling - BIM

Our BIM department at Avantis supports these developments by playing a prominent role in the field of 3D / BIM models throughout the entire construction process. We supply these BIM services to the projects of the Mechanical, Electrical, Plumbing and Fire Fighting disciplines.

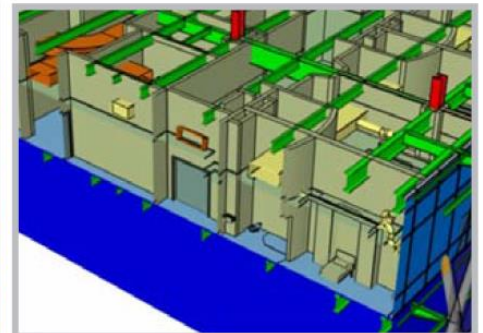
- BIM Modeling up LOD 500
- BIM Management (BS1192:2007 and PAS1192 part 2:2013).
- Virtual Reality - VR Model generation



- Clash detection Reports
- 3D, 4D & 5D modeling services
- Building performance analysis



MEP Services for a typical floor



Multi-discipline coordination for a typical floor



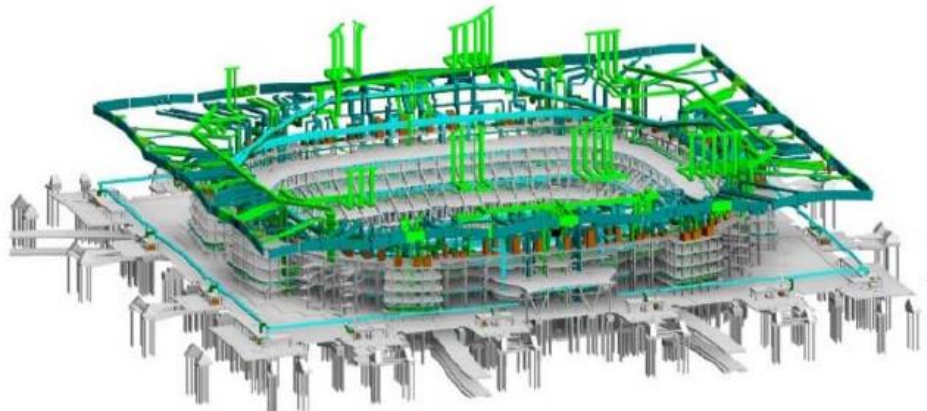
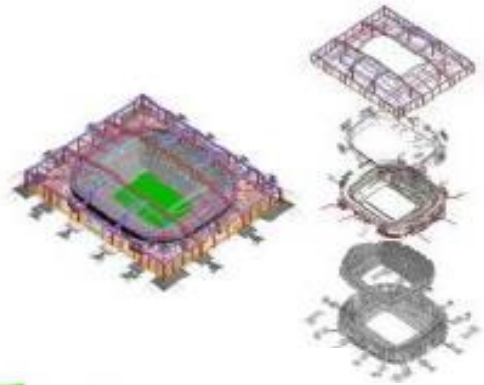
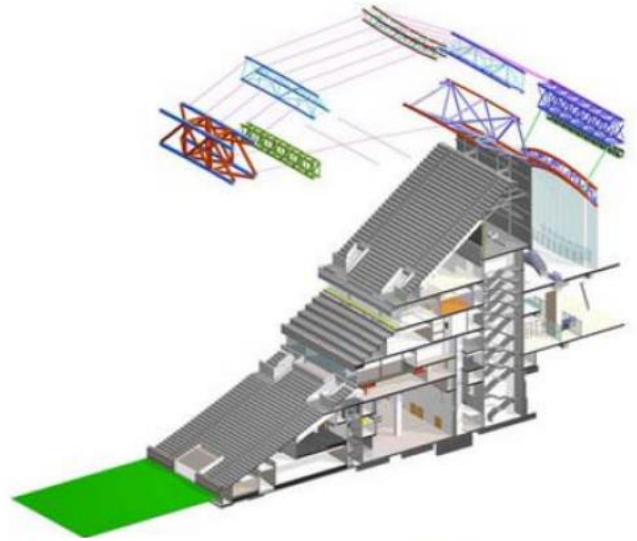
Sample BIM Projects:



Al Bayt stadium - Qatar

BIM is seen as a Virtual Construction:

- You can Dream it, before seeing it.
- By building the project virtually, it enables us gain unprecedented know-how and optimization the project.
- Also leveraging the virtual experience onsite.



Specialized Technical Consultancy for Hostelry Industry

- n Laundry and dry clean facility design
- n Main kitchen design
- n Staff canteen design
- n Freezers storage and cold rooms areas design
- n Bar(s) system design and storage facility
- n Self service islands design
- n Bakery and pastry design
- n Steam boiler room design
- n Hot water heat exchangers and calorifiers design

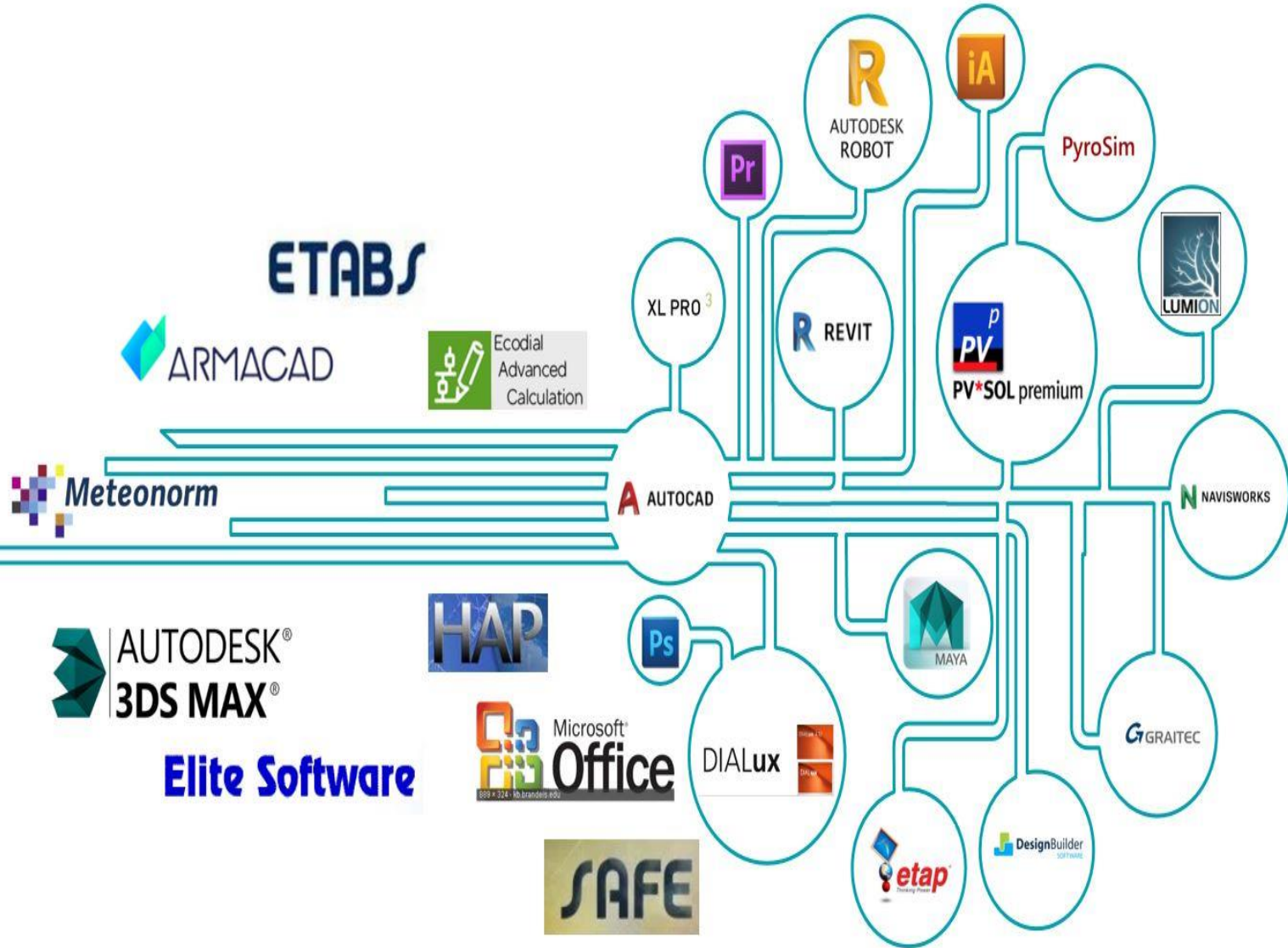
Regulation and Codes

AVANTIS designs are in accordance with the following standards, codes and regulations:

- n **ASHRAE** American Society of Heating, Refrigeration and Air Conditioning Engineers
- n **SMACNA** Sheet Metal and Air Conditioning Contractors National Associates
- n **NFPA** National Fire Protection Association
- n **National Plumbing Code**
- n **EN, BS, DIN, NF, IEC, IEE, ...** european norms and standard
- n **ICC** International Codes Council
- n **LEED** standards and methods



Softwares & IT



Our Projects

IOF Office Building - *Nigeria*

Consisting of 38,000 sqms, 18th floors
office building.

*SOW: MEP Value Engineering & Re-
Design*



HODA Office Building - *Ghana*

Consisting of 31,000 sqms, 20-
story building.

SOW: MEP Design



Lekki Mall & Office Building - *Nigeria*

Consisting of 8 floors office building and a line
shops mall, with total built-up area of 31,000 sqms.

SOW: MEP Design



Atlantic Gate – Ghana

Consisting of 65,000 sqms, 13-
story floors office building &
residential complexes

SOW: MEP Design

Central SD DRCC – Egypt

Consisting of a Tier 4 Data
Center with total built up area of
6,000 sqms

SOW: MEP Design



FIAPADE Apartments - *Ghana*

Consisting of 35,000 sqms, 15-Story
Furnished apartments.

SOW: MEP Design



Mall & Office Building - *KSA*

Consisting of a Mall & 26 Floors of Offices, with total built-up
area of 65,000 sqms.

SOW: MEP Design



Office Building –Ghana

Consisting of 25,000 sqms, 13-Story office building.

SOW: MEP Design

Ondo Estate Church - Nigeria

Consisting of a church with 500 sets, with total built-up area of 10,000 sqms.

SOW: MEP Design

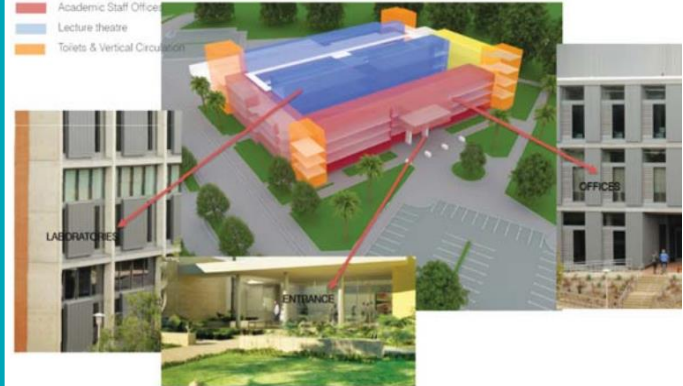


Jaber City Center - Syria

Consisting of a mixed-use building, offices, mall, restaurants and a cinema, with total built-up area of 25,000 sqms

SOW: MEP Design

- Classrooms & Laboratories
- Academic Staff Office
- Lecture Theatre
- Toilets & Vertical Circulation



Trinity University (Expansion) - Nigeria

Consisting of 5 levels building, with total built-up area of 21,000 sqms.

SOW: MEP Design

Hotel 2 Fevrier Lome - *Togo*

Consisting of a mixed-use building,
offices, Parking, total built-up area of
20,000 sqms

SOW: MEP Design



Afren Tower - *Nigeria*

Consisting of 28,000 sqms, 15-
Story office building.

*SOW: MEP Value Engineering & Shop-
Drawings*



Eagle Hospital - *Nigeria*

Consisting of 110 Bed General Hospital

SOW: MEP Design

Smart Private Villa – *Nigeria*

VIP Private Residence, with total built-up area
of 4,500 sqms.

SOW: MEP Design



EKO II Multidisciplinary Building - *Nigeria*

Consisting of 45,000 sqms, 25
floors building : 150 rooms hotel,
Restaurants and 2 floors hospital.

*SOW: MEP Value Engineering &
Shop-Dawings*



Smart Private Villa – *Lebanon*

VIP Private Residence, with total built up area of 2,500 sqms.

SOW: MEP Design

EDEN Park - *Nigeria*

Consisting of 84 Smart Luxurious apartments, Spa, restaurants, lazy river, swimming pool and an underground parking with a total built-up area of 50,000 sqms

SOW: MEP Design



Amara Office Building - *Lebanon*

Consisting of 15,000 sqms, 10 floors office building and 3 underground parking

SOW: MEP Design



Youpogon Boutique Hotel - *Ivory Coast*

Consisting of 50 guestrooms, 2 restaurants and swimming pool, with total built-up area of 6,000 sqms.

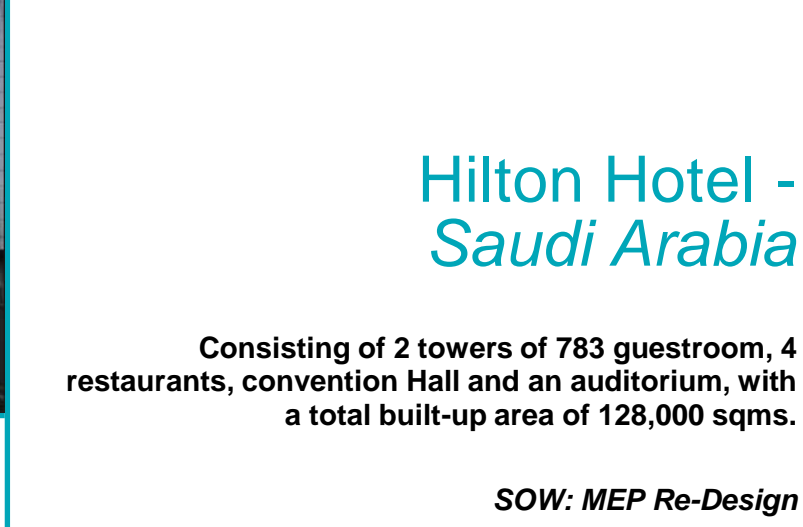
SOW: MEP Design



Radisson Blu Hotel - Nigeria

Consisting of 150 guestrooms, 2 restaurants and swimming pool, with a total built-up area of 32,000sqms

SOW: MEP Re-Design (VAC, ELV, WTP, STP, Power)



Hilton Hotel - Saudi Arabia

Consisting of 2 towers of 783 guestroom, 4 restaurants, convention Hall and an auditorium, with a total built-up area of 128,000 sqms.

SOW: MEP Re-Design



Proposed Hotel - Nigeria

Consisting of 200 guestrooms, 3 restaurants, Banquet hall, Roof swimming pool, Industrial Laundry, Industrial Kitchen and an underground parking with a total built-up area of 18,000 sqms.

SOW: MEP Design

Marriot Hotel - Saudi Arabia

Consisting of 2 towers of 426
guestrooms and 3 restaurants,
with a
total built-up area of 80,000
sqms .

*SOW: MEP Value Engineering &
Re-design*



Twin Lakes Mall - Nigeria

Consisting of a 48,000 sqms shopping mall.

SOW: MEP Design



Dolphin Central Mosque - Nigeria

Consisting of a 3 levels mosque, for 500 people

SOW: MEP Design





Commercial Office Building - Ghana

Consisting of a 8-story office building with a total built-up area of 7,500 sqms.

SOW: MEP Design

Bloom Residential Development - Nigeria

Consisting of 6,000 sqms, Residential project

SOW: MEP Design



Al Jazeera Hotel Tower - Qatar

Consisting of 350 guestrooms, 4 restaurants and 2 swimming pools, with a total built up area of 60,000 sqms.

SOW: MEP Design



Accor Hotel Standards - Nigeria

Consisting of 130 Guest rooms, 2 restaurants, swimming pool and a basement with a total built up area of 12,000 sqms

SOW: MEP Design

Marriott Standard Hotel - Nigeria

Consisting of 205 guestrooms, 3 restaurants, Banquet hall, Swimming pool, Industrial Kitchen, Industrial Laundry and an underground parking, roof with a total built-up area of 40,000 sqms.

SOW: MEP Design



La Pointe Supermarket - Nigeria

Consisting of a 2 floor Supermarket Store along with Preparation rooms and cold storages with a total built-up area of 4,000 sqms

SOW: MEP Design



Private Residence - Nigeria

Smart Private Villa, with total built-up area of 5,000 sqms.

SOW: MEP Design

UBN bank Branches - *Nigeria*

UBN Marina (HQ) – UBN Oil Estate – UBN
Yaba – UBN Ibadan – UBN MMA2

SOW: MEP Design



Crystal Tower - *Lebanon*

Consisting of 18-Story office building with
total built-up area of 20,000 sqms.

SOW: MEP Design

Factory - *Nigeria*

Consisting of 4-story offices with total built-
up area of 6,200 sqms

SOW: MEP Design

Hilton Furnished Apartments Hotel - Qatar

Consisting of 445 furnished apartments,
with a total built-up area of 103,000
sqms.

SOW: MEP Value Engineering



Acenta Mall – Ghana

Shopping mall with a total Built-up area of 20,000
sqms

SOW: MEP Design



St. Savior School - Nigeria

Consisting of a School expansion with additional Theaters,
classrooms and teacher accommodation buildings

SOW: MEP Design



Almaza Brewery - Lebanon

Consisting of a factory extension works

SOW: MEP Design

Commercial Office Building - Ghana

Consisting of a 8-story mixed used building with
a total built-up area of 8,500 sqms.

SOW: MEP Design



Lycee Verdun School - Lebanon

Consisting of a school premises
over a built-up area of 10,000
sqms

SOW: MEP Design



Pepsi-Co Factory- Lebanon

Consisting of a Factory Extension

SOW: MEP Design



Commercial Office Building - Nigeria

Consisting of an Office Building with built-up area of 6,500 sqms.

SOW: MEP Design



Private Residence - Nigeria

Smart Private Villa, with total built-up area of 5,000 sqms.

SOW: MEP Design

Mixed-Use Facility - Ghana

Consisting of an Office Building, Car Showroom, Servicing Facility, Steel Metal Works over a built-up area of 8,500 sqms.

SOW: MEP Shop-Drawings



Convention Center - Qatar

convention center with total built-up area of 40,000 sqms

SOW: MEP Value Engineering & Re-Design



Mixed-Use Mall - Lebanon

SOW: MEP Value Engineering and Power Plant Re-design.



Academy - Qatar

Consisting an academic building with total built-up area of 35,000 sqms

SOW: MEP Design



Student Housing - Qatar

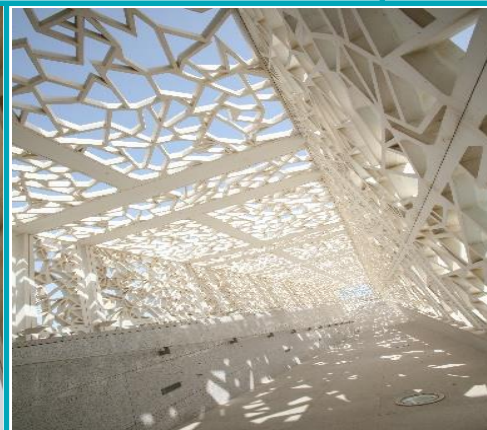
Consisting of 10 buildings of three stories each, with a total built-up area of 70,000 sqms.

SOW: MEP Design

West Car park QF - Qatar

Consisting of a car park building with total built-up area of 50,000 sqms.

SOW: MEP Design



Ceremonial - Qatar

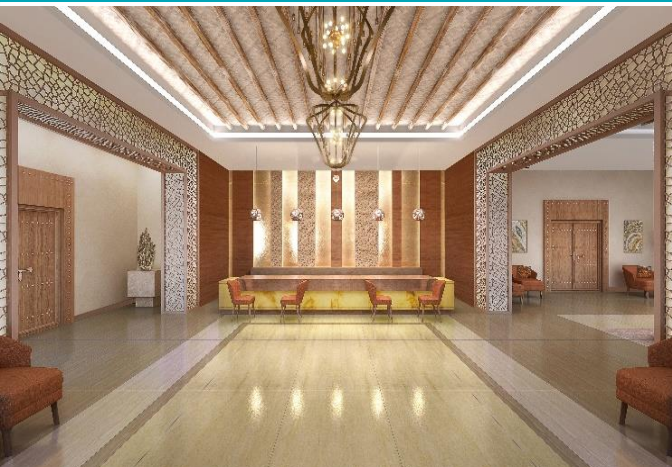
Consisting of state of the art building with total built-up area of 12,000 sqms.

SOW: MEP Design

Al Wakrah Hotel – Qatar

Qatar traditional hotel renovation

SOW: MEP Design



Pearl Residence - Qatar

South Bahri VILLA -17

SOW: MEP Design





Private Majliss - Qatar

A private Majlis consisting with a built-up area of 5000 sqms.

SOW: MEP Design



Liberal Arts & Science Building - Qatar

Consisting of 2 stories building with total built-up area of 15,000 sqms

SOW: MEP Design



Central Library – Qatar

SOW: MEP Design



Saudi Canadian Medical City - KSA

A Medical City comprising of hospitals, residential and commercial buildings over an area of 2,000,000 sqms

SOW: MEP Design





TOTAL VILLAGE PORT HARCOURT

SOW: MEP Value Engineering & Shop-Drawings





Tirana International Airport - *Albania*

Consisting of an Airport Urban
Development

SOW: MEP Design

Boutique Hotel - *Nigeria*

Consisting of 75 Large Guestrooms,
banquets and a Swimming Pool over a
built-up area of 9,200 sqms

SOW: MEP Design





Evercare Hospital Development - *Nigeria*

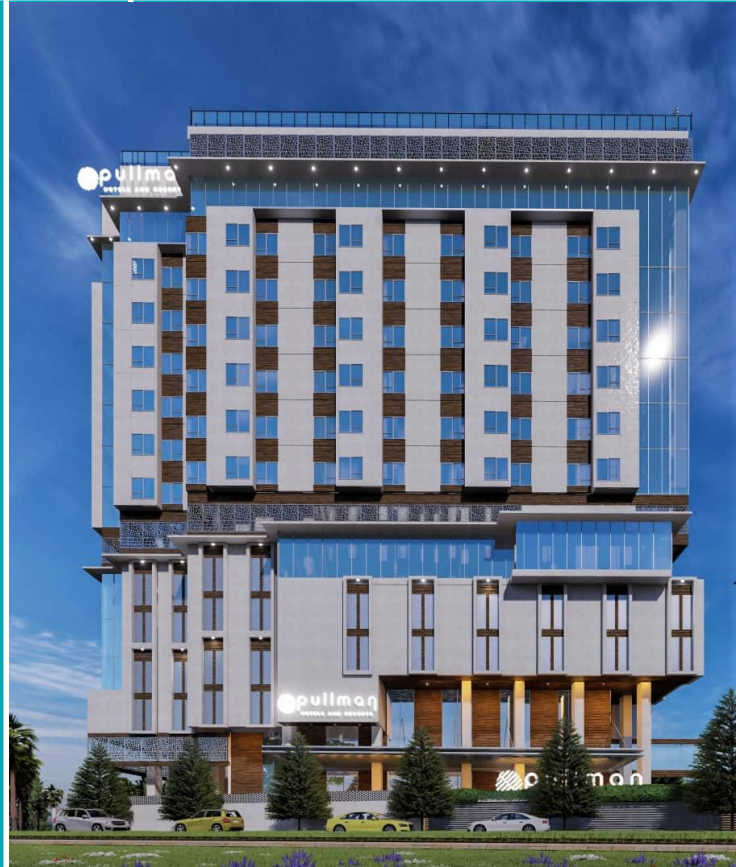
Consisting of a 150-bed Hospital
development with a car park building,
over a built-up area of 14,000 sqms

SOW: MEP Design Review & Supervision

Pullman Short Stay Apartments - *Nigeria*

Consisting of a 120+ short stay
apartments development, retail
center, business corner, etc. over a
built-up area of 24,000 sqms

SOW: MEP Design



Medland Hospital - *Zambia*

Consisting of a 72-bed Hospital development,
over a built-up area of 7,000 sqms

SOW: MEP Design

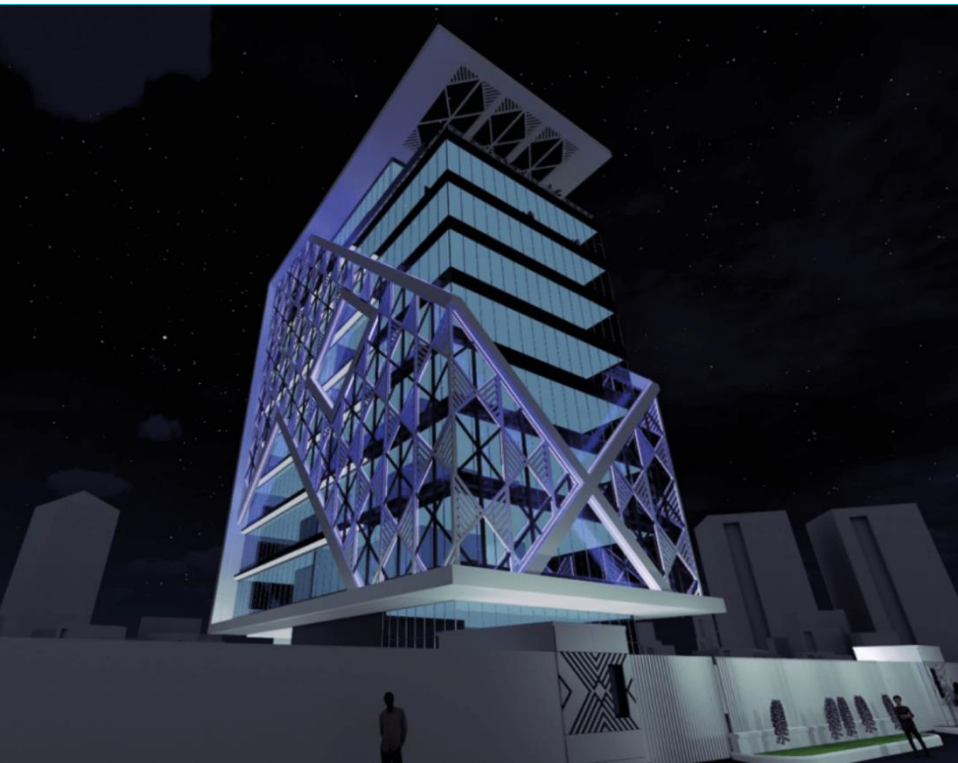


LEED Office Building - *Nigeria*

Consisting of a LEED office
building development with
over 22,000 sqms of built-up
area

SOW: MEP Design





AeroBell Office Building - *Nigeria*

Consisting of an office building development with over 7,000 sqms of built-up area

SOW: MEP Design

Private Residence - *Nigeria*

Smart Private Villa, with total built-up area of 5,000 sqms.

SOW: MEP Design





Boat Club & Pavilion- *Nigeria*

Consisting of Boat Club & Pavilion development with over 1,200 sqms of built-up area

SOW: MEP Design



Private Residence - *Nigeria*

Smart Private Villa, with total built-up area of 4,000 sqms.

SOW: Mechanical & Plumbing Design



Louisville Project- *Eko Atlantic, Nigeria*

Consisting of 2 residential towers with a total of 300 smart luxury units, 2 basements, a podium, retails center and sports center; with a total built-up area of 120,000sqms.

SOW: MEP Design Review and Supervision



African Medical Center of Excellence (Phase 1) - *Nigeria*

Consisting of 170-bed hospital with clinical & support areas, a cyclotron building, and ancillary buildings over a built-up area of 29,000sqms.

SOW: MEP Quality Control & Assurance



Emmanuel Methodist Chapel - *Eko Atlantic, Nigeria*

Consisting of a Chapel and a Multipurpose Building with 2 parking floors, Lecture Rooms, Apartments and Banquet Hall spread over 10,000 sqms of total built-up area.

SOW: MEP Design & Supervision

CyberSpace Office - *Nigeria*

Consisting of an Office Building, including a Tier-3 Data Center, with over 4,800 sqms of built-up area.

SOW: MEP Design & Supervision



Metropolitan Tower - Nigeria

Consisting of smart & luxury residential tower with a total of 58 smart luxury units, a basement, cinema, and sports center; with a total built-up area of 42,000sqms.

SOW: MEP Design Review and Supervision



MOWAA Pavilion - Nigeria

An archaeology pavilion, part of a larger district, consisting of laboratories, conservation & storage areas, office spaces & exhibition spaces; with over 4,700sqms of built-up area.

SOW: MEP Design & Supervision



10 Queen's Drive - *Nigeria*

Consisting of a 6-stories smart residential building development with a built-up area of 7,000 sqms.

SOW: MEP Design & Supervision

LEE Tower- *Nigeria*

Consisting of a 56-apartment smart residential tower development, it includes a basement & elevated parking's, meeting rooms & recreational facilities. It is spread over a built-up area of 38,000 sqms

SOW: MEP Design & Supervision





Data Center Projects

KREYONS Data Center – *Ghana*

Completed MEP Design of a Tier III Certified 4 MW data center.

MTN VGC – *Nigeria*

Completed MEP Design of a Tier III Certified 3 MW data center.

GUARDIA Data Center – *Lebanon*

Completed MEP Design of a Tier II Certified 2 MW data center.

PEGASOS Data Center – *Zambia*

Completed MEP Design of a Tier III Certified 4 MW data center.

ZAIN Data Center – *Kuwait*

Completed MEP Design of a Tier III Certified 1.2 MW data center.

BOHICON Data Center – *Benin*

Completed MEP Design of a Tier III Certified 1 MW data center.

OSARA Data Center – *Nigeria*

Completed MEP Design of a Tier III Certified 2 MW data center.

AMBD Data Center – *Nigeria*

Completed MEP Design of a Tier III Certified 4 MW data center.

AHR Data Center – *Nigeria*

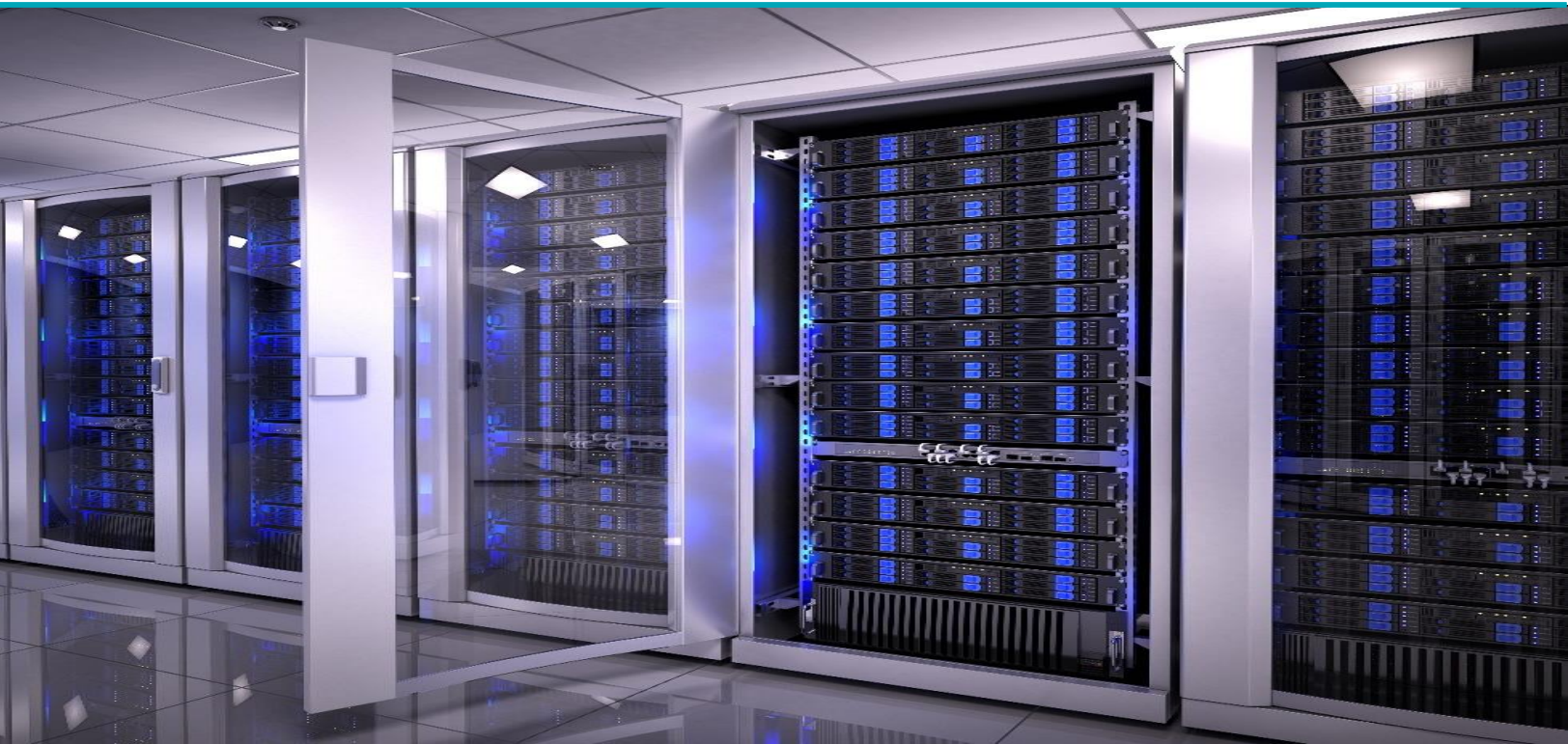
Completed MEP Design of a Tier III Certified 1 MW data center.

Zenith Bank Data Center (V/I) – *Nigeria*

MEP Design of a Tier III 1 MW data center.

Zenith Bank Data Center (Ikeja) – *Nigeria*

MEP Design of a Tier III 1 MW data center.



Power Generation Projects



SMC Phase 1 & 2 - *Nigeria*

Consisting of a Steel Factory with a DC Arc Furnace and a 150MW Power Plant on a total built-up area of 400,000 sqms

SOW: MEP Design

Power Station - *Nigeria*

Consisting of a power station generating a total power of 20 MW.

SOW: MEP Design





GEL Utility Power Station – *Nigeria*

Consisting of 3 GE Gas Turbines generating a total of 75MW

SOW: MEP Design



Karachaganak Power Plant - *Kazakhstan*

Consisting of a 50MW Power Station with an urban industrial development

SOW: MEP Design

Others

Proposed Office Building

Nigeria, Lagos – MEP Design of an office building consisting of 2 building and 15 stories each

Total Down-Stream Offices

Nigeria, Lagos – Redesign of all Security Systems

Noir Restaurant & Bar

Nigeria, Lagos – MEP Design of a 30-table restaurant & bar

VIP Clinic Development

Nigeria, Lagos – MEP Design 14-bed VIP Clinic

Total Houses

Nigeria, Abuja - MEP Design of a residential development

Louis Pasteur French School

Nigeria, Lagos - Electrical Networks redesign

Residential Development

Nigeria, Lagos - MEP design of 3 Buildings with a total of 16 flats

Takoradi Supermarket

Ghana, Takoradi – MEP design of a Supermarket

Sonatrach Residential Compound

Algeria – MEP Design

Pavilion & Boat Club

Nigeria, Lagos - MEP design of a 500 seats Pavilion and Boat Club

Restaurant & Cigar Lounge

Nigeria, Lagos - MEP design of a 100-seats Restaurant & Cigar Lounge

