

Femoza Engineers &
FEDC Design Consultants

CREATING SOLUTIONS, SHAPING FUTURES

Let's know About us

We are a multidisciplinary engineering design company based in Mangalore, delivering high-quality plant, piping and BIM engineering solutions.

Our team executed more than 20 projects, delivering complete 2D and 3D designs, Bill of Materials (BOM), and engineering deliverables such as 2D layouts, piping isometrics, 3D modelling, and As-Built documentations for major clients in India and abroad; this also includes advanced laser scan Point Cloud Projects.

We are equipped with essential engineering software, including AutoCAD, Revit, E3D, Plant3D, SP3D, Micro-Station, MS Office, and CAD/CAM/Plant Engineering tools. Our infrastructure also includes a secure FTP server with firewall protection and dedicated internet facilities for seamless communication





WHY FEDC?

- 01** We are committed to delivering engineering solutions that adapt to evolving industry trends and client demands, ensuring optimized outcomes.
- 02** Our engineers are highly adaptive to the latest software and tools.
- 03** Our conceptual approach combines the traditional skills with modern software, enabling practical results and smooth project execution at sites
- 04** Cost & time-saving methodologies with stakeholders to execute projects, bridging location barriers between the client and design engineers.
- 05** Value engineering by optimizing actual parameters, assessing market availability, and facilitating multi-disciplinary interfacing and technical deliberations by our experts with client engineers and vendors.

ONE STOP ENGINEERING SOLUTION

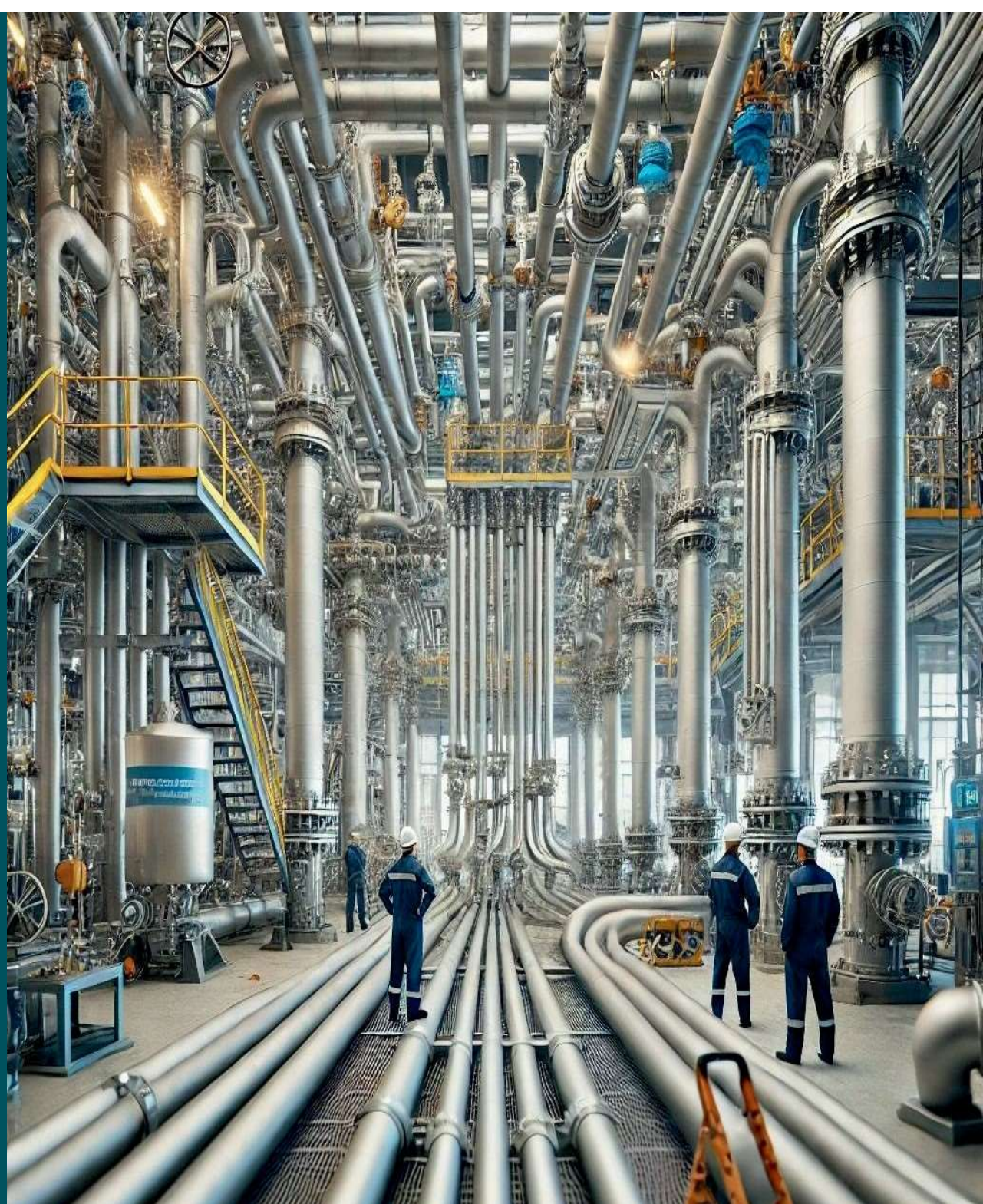
We provide end-to-end, multi-spectrum services in engineering, project management, execution, and technical documentation for process industries, oil & gas, energy companies, contractors, ship owners, engineering consultancies, suppliers, and operators.

SUSTAINABLE PLANT ENGINEERING

Our insightful understanding of industrial processes and regulations helps us design your plant to ensure process safety, sustainability, and efficiency. Our services cover all disciplines and every phase of a process plant project, everywhere in the world. Our customers benefit from synergies derived from our broad industrial experience. Our teams have experience from working with clients in various industries.

ARENA OF WORKING

We are a multidisciplinary, full-service engineering company providing design and engineering solutions to core industrial sectors such as, but not limited to, petrochemical, oil & gas, and process plant industries, including food, pharma, biotech, dairy, pulp production, etc.





OUR VISION & MISSION

Vision

To be a trusted global engineering partner delivering future-ready solutions

Mission

- 01 Provide reliable & optimized engineering services.
- 02 Ensure client satisfaction through quality & efficiency.
- 03 Empower industries with modern technology & innovation.

INDUSTRIES WE SERVICES

SERVING INDUSTRIES THAT SHAPE THE FUTURE.

Our capabilities span multiple industries—oil & gas, petrochemical, refinery, power, infrastructure, and industrial manufacturing—delivering tailored solutions that meet the highest standards of safety, reliability, and efficiency. Each engagement is executed in accordance with global codes and practices including ASME, API, and ISO.



Well Head Platforms

Wellhead platforms are offshore structures that house the equipment needed to extract oil and gas from beneath the seabed. Design and engineering cover structural integrity, piping layout, safety systems, instrumentation, and corrosion protection to ensure safe offshore operations under harsh marine conditions.

Power Generation Plants

Power plants generate energy from fossil fuels, renewables, or waste heat recovery systems. Engineering focuses on mechanical systems, turbines, boilers, piping networks, electrical distribution, and control systems to ensure reliability, efficiency, and environmental compliance.



Infrastructure & Industrial Facilities

Infrastructure projects support industrial and energy operations through the development of utilities, buildings, and support structures. Engineering involves civil, structural, architectural, and MEP systems design – ensuring durability, functionality, and compliance with international standards.

Oil Terminals

Oil terminals serve as vital hubs for the storage, transfer, and distribution of crude oil and refined products. Engineering services include tank farm design, loading/unloading systems, pipeline routing, fire protection, instrumentation, and automation systems to ensure safe and efficient handling of hydrocarbons.



Oil & Gas Refineries

Refineries convert crude oil into valuable petroleum products such as gasoline, diesel, kerosene, and lubricants. Engineering in this sector involves process design, piping systems, heat integration, safety systems, and utilities to ensure continuous, efficient, and environmentally compliant operations.



Utility System & Offsite Facilities

Utility and offsite systems provide the essential supporting infrastructure required for process plants and industrial complexes. These include systems for steam generation, compressed air, cooling water, nitrogen, instrument air, fuel gas, and wastewater treatment.



Processing Plants

Processing facilities convert raw materials into finished products using integrated engineered systems designed to maximize performance, enhance process efficiency, and maintain safe, reliable handling of materials at every stage of production.



Petrochemical Plants

Petrochemical facilities process hydrocarbons into chemical products like ethylene, propylene, methanol, and polymers. These complex plants require integrated design solutions covering process engineering, piping, instrumentation, and control systems to ensure product quality, operational safety, and reliability.

ENGINEERING & DESIGN SERVICES

DESIGN SOLUTIONS THAT ENGINEER THE FUTURE.

Engineering & Design Services cover the conceptual, front-end, and detailed engineering design of onshore and offshore facilities, refineries, petrochemical complexes, and pipeline systems. These services ensure safe, reliable, and efficient operation of process and utility systems in compliance with international codes and best practices such as ASME, API, and ISO precision.



Front-End Engineering Design

FEED establishes the project's technical and cost baseline by developing preliminary process design, equipment sizing, material selection, and layout concepts. It ensures accurate cost estimation, risk identification, and a seamless transition to detailed engineering and execution.



Feasibility Studies & Conceptual Design

We perform technical and economic feasibility assessments to evaluate project viability, investment needs, and process options. Our conceptual design defines project scope, configuration, and cost drivers – forming the foundation for informed decision-making and project planning.

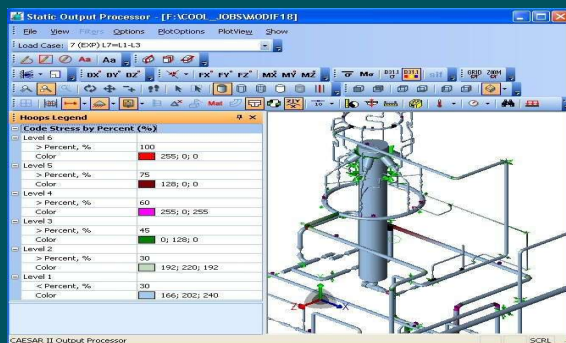


Detailed Engineering Design

Our Detailed Engineering Design services deliver complete multidisciplinary engineering packages including drawings, material specifications, equipment data sheets, and construction deliverables – enabling precise fabrication, procurement, and installation.

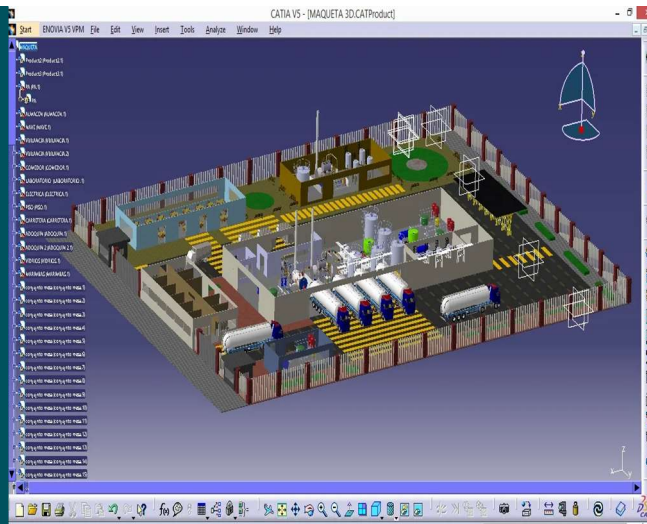
HAZOP, SIL & Safety Risk Analysis

Our safety engineering team conducts HAZOP, SIL, QRA, and risk assessments to identify potential process hazards. We implement mitigation strategies ensuring compliance with OSHA, ISO 45001, and industry best practices.



Hydraulic, Stress & Surge Analysis

Our engineering team performs detailed hydraulic, stress, and surge analysis to evaluate system performance under all operating conditions. We ensure pipeline integrity, prevent surge-related failures, and optimize design in accordance with ASME, API, and industry standards.



As-Built

Engineering Support

We provide as-built documentation using site verification, 3D scanning, and model updates. Continuous engineering support ensures project accuracy, smooth handover, and lifecycle asset management.



Plant Layout & Optimization Studies

Our plant layout services focus on operational efficiency, safety zoning, accessibility, and space utilization. Using advanced 3D modeling tools, we optimize plant footprint while maintaining compliance with HSE and ergonomic standards.



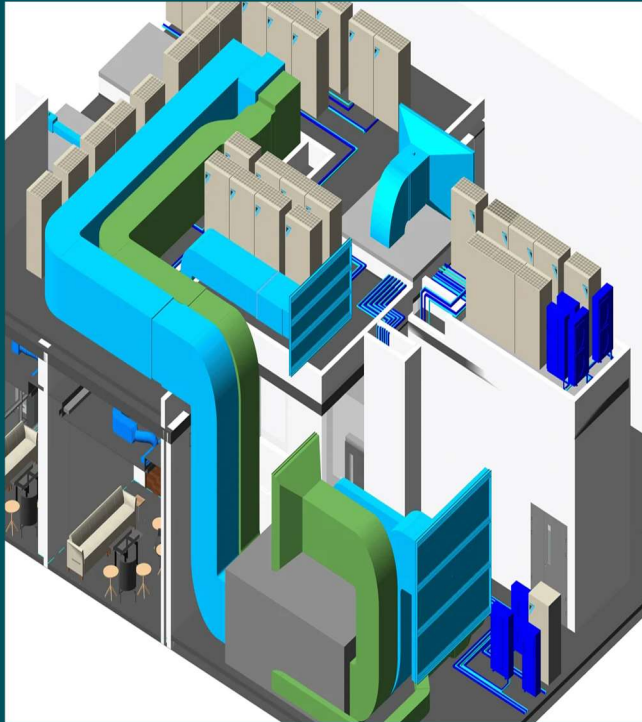
Storage Terminal & Tank Farm Design

We offer end-to-end design of storage facilities for crude, refined products, and chemicals – including tank sizing, containment systems, firefighting design, and terminal piping layouts per API 650/620 and NFPA guidelines.

BIM & DIGITAL ENGINEERING SERVICES

TRANSFORM IDEAS INTO INTELLIGENT MODELS.

Our BIM conversion services don't just digitize drawings—they unlock project intelligence. We convert 2D drawings, sketches, PDFs, and point cloud data into detailed, data-rich 3D models. The result seamless coordination, zero rework, and full control from concept to completion. Future-proof your project with precision.

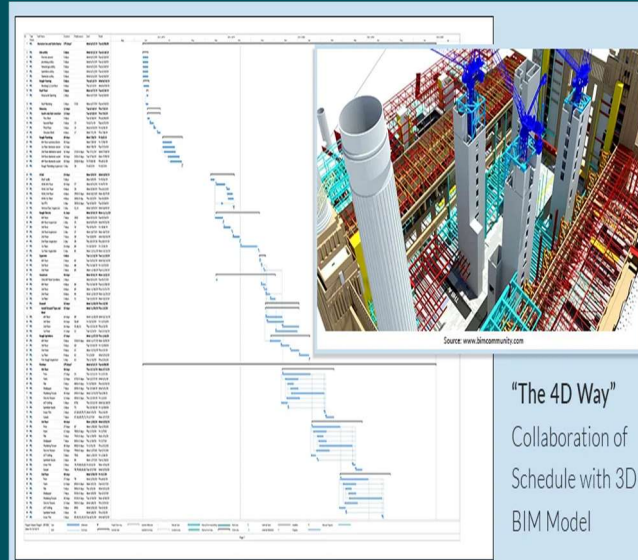


3D Modeling

We create detailed and data-rich 3D models covering plant layouts, structural frameworks, architectural elements, and MEP systems. Our models enable seamless visualization, design coordination, and precise quantity extraction for all project disciplines.

4D Construction Sequencing & Visualization

We integrate construction schedules with 3D models to create 4D simulations that visualize the construction sequence, identify potential conflicts, and improve planning efficiency. This enhances project control, resource optimization, and progress tracking.

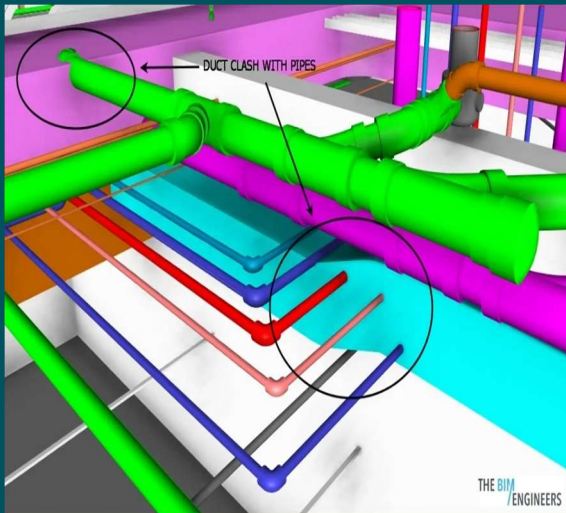


5D Cost Estimation & Quantity Take-Offs

By linking cost and material data with BIM models, we enable accurate and real-time quantity take-offs and cost estimation. This ensures transparency, better budgeting, and minimizes cost overruns during project execution.

BIM Coordination & Clash Detection

Our BIM coordination process identifies and resolves design clashes across disciplines using advanced tools like Navisworks and Revit. This minimizes rework, improves constructability, and ensures smooth on-site execution.



COBie BIM Services

We provide COBie (Construction Operations Building Information Exchange) data integration for seamless information handover from design to operations, ensuring all asset and maintenance data are properly structured and accessible.



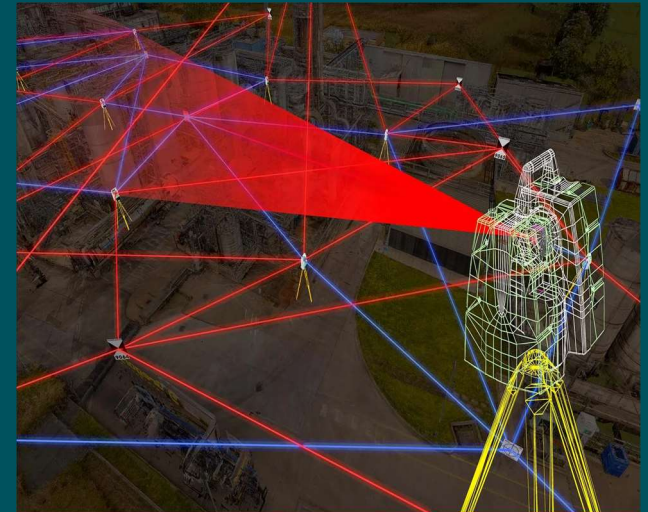
Scan to BIM (Laser Scan Integration)

We provide as-built documentation using site verification, 3D scanning, and model updates. Continuous engineering support ensures project accuracy, smooth handover, and lifecycle asset management.



Asset Information Modeling

Our AIM services extend BIM into operations by linking asset data (equipment details, maintenance history, performance metrics) with 3D models – creating a digital twin for efficient lifecycle management.



Structural BIM Services

Our structural BIM models encompass foundations, framing, steel detailing, and rebar modeling. The models facilitate clash-free coordination, accurate fabrication drawings, and integration with analysis software.

MEP DESIGN SERVICES

OPTIMIZE BUILDINGS WITH INTELLIGENT MEP SOLUTIONS.

Our MEP Design Services integrate mechanical, electrical, and plumbing systems into a single optimized framework, ensuring safety, energy efficiency, and seamless building performance. From concept to execution, we deliver coordinated designs that reduce clashes, minimize rework, and enhance lifecycle reliability.



Electrical Power, Lighting & Earthing

We deliver comprehensive Electrical Power, Lighting, and Earthing system design, ensuring safe, efficient, and reliable energy distribution that meets industrial standards and enhances overall facility performance.



HVAC System Design & Load Analysis

We provide complete HVAC system design including load calculations, ducting, ventilation layouts, and equipment selection to ensure optimal indoor air quality and thermal comfort. Designs are based on ASHRAE, ISHRAE, and international energy standards for efficient and reliable operation.



Piping & Plumbing Network Design

We design water supply, drainage, and sanitary piping systems that ensure hygienic, efficient, and reliable operation. Our layouts and material selections comply with IPC, IS codes, and project-specific requirements for industrial and commercial facilities.

Firefighting & Fire Alarm Systems

We engineer complete fire protection solutions including hydrant networks, sprinkler systems, foam systems, and detection/alarm setups. Our designs comply with NFPA and NBC codes to ensure maximum safety and regulatory compliance.



Utility Piping for Steam, Air, etc.

Our utility piping designs cover steam, compressed air, cooling water, and process service networks. Each system is engineered for performance, energy efficiency, and ease of maintenance, following ASME B31 and related piping standards.

Building Management System (BMS)



Energy Efficiency & Sustainability Design

We integrate sustainable design principles into every MEP project – focusing on energy-efficient equipment selection, heat recovery, and renewable integration. Our approach supports LEED and IGBC certifications, reducing operational costs and environmental footprint.



BMS / BAS System Integration

We provide advanced BMS/BAS system integration solutions that unify building utilities, HVAC, lighting, and safety systems, enabling intelligent automation, energy efficiency, and seamless facility-wide control.



Sustainable Architecture (IGBC/LEED)

We deliver sustainable architectural design aligned with IGBC and LEED standards, creating energy-efficient, environmentally responsible buildings that optimize performance and reduce lifecycle impact.

PROJECT & CONSTRUCTION SUPPORT SERVICES

CERTAINTY DELIVERED THROUGH SMART SUPPORT.

Our Project & Construction Support Services unify engineering insights, field supervision, and quality control to achieve seamless execution. By aligning design intent with onsite activities, we minimize clashes, control risks, and ensure safe, efficient, and predictable project delivery.



Project Scheduling & Coordination

Our project scheduling services ensure efficient planning, scheduling, and control of engineering deliverables. We coordinate between multidisciplinary teams, clients, and contractors to achieve project objectives on time, within budget, and in accordance with quality and safety standards.

Procurement Engineering & Vendor Document Review

We support procurement by preparing technical specifications, bid evaluations, and vendor document reviews. Our engineers ensure that purchased equipment and materials meet design intent, applicable codes, and client requirements, ensuring seamless integration into project systems.



Fabrication & Construction Support

Our team provides construction-level engineering support including design clarifications, field modifications, and coordination between design and site teams. We assist in resolving technical issues during erection, fabrication, and installation to ensure smooth project execution.

Pre-Commissioning & Commissioning Assistance

We assist in system pre-commissioning and commissioning activities by providing procedures, checklists, and technical guidance. Our engineers work closely with commissioning teams to verify design performance, safety compliance, and system reliability before handover.



Work-Pack Preparation

We provides comprehensive Work-Pack Preparation services, delivering clearly structured construction work packs that define scope, materials, drawings, and execution steps to ensure safe, efficient, and well-coordinated project execution.



Operation & Maintenance Documentation

We prepare comprehensive O&M manuals, maintenance procedures, and training documents to support safe and efficient plant operation. Documentation includes equipment data sheets, as-built drawings, and process manuals aligned with client and regulatory standards.



Shutdown / Turnaround Support

We provides complete Shutdown and Turnaround Support services, ensuring safe planning, efficient execution, and timely restoration of operations through detailed scheduling, resource coordination, and technical supervision.



QA/QC & Inspection Coordination

We provides comprehensive QA/QC and Inspection Coordination services, ensuring adherence to project specifications, industry standards, and regulatory requirements through systematic quality checks, and documentation control.

ARCHITECTURAL ENGINEERING SERVICES

SMART ENGINEERING FOR FUTURE-READY BUILDINGS.

Our Architectural & Building Engineering Services integrate design vision with engineering rigor to produce buildings that are safe, efficient, and future-ready. Through coordinated planning and detailed analysis, we minimize rework, improve constructability, and elevate overall project quality.

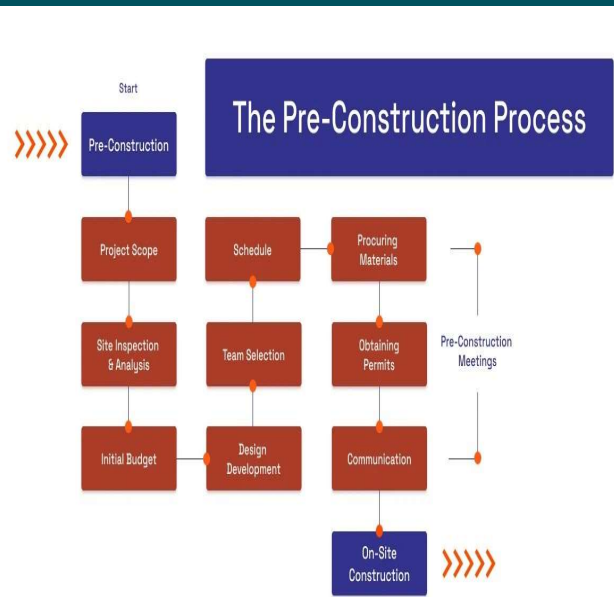


Concept Architecture & Space Planning

We deliver comprehensive concept architecture and advanced space planning solutions that transform project visions into practical, functional, and aesthetically driven layouts, focusing on user experience, spatial efficiency, human-centric design principles, and seamless integration of architectural intent with operational requirements.

Pre-Construction Advisory

We offer in-depth pre-construction advisory services that address feasibility analysis, risk assessment, procurement strategies, design coordination, budgeting, and constructability review, ensuring a smooth transition from planning to execution with minimized uncertainties.



Elevation & Façade Design

We craft expressive, climate-responsive elevation and façade designs that enhance visual identity, improve energy efficiency, integrate modern materials and technologies, and deliver long-lasting architectural character while responding to environmental, cultural, and functional factors.

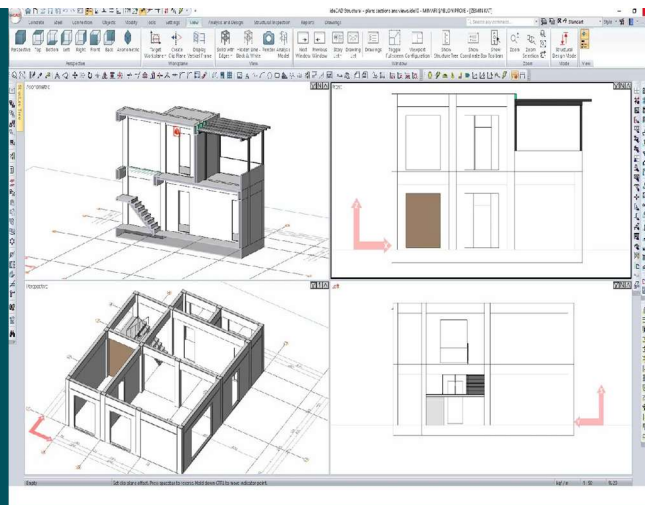
Landscape & Site Development

We design sustainable and visually enriching landscape and site development plans that blend natural elements with built structures, focusing on environmental stewardship, user comfort, drainage management, and aesthetic impact to create vibrant and functional outdoor environments.



Building Structural Optimization

We provide advanced structural optimization services that refine building frameworks using engineering analyses, material efficiency strategies, load assessments, and value-driven calculations to ensure structural safety, cost-effectiveness, and long-term durability.



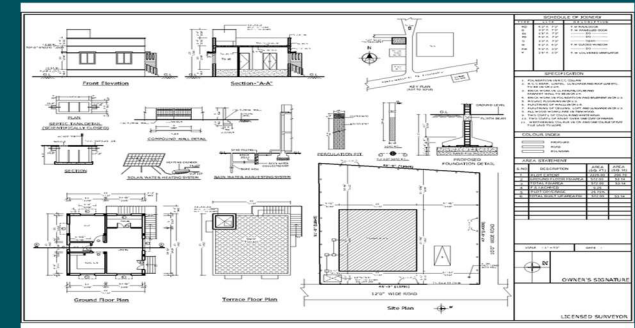
Code Compliance & Approval Drawings

We prepare meticulous code-compliant drawings and approval documents aligned with local bylaws, national standards, and regulatory requirements, ensuring faster approvals, reduced modifications, and seamless progression from design to execution.



Massing Studies & 3D Concepts

We develop detailed architectural massing studies and high-quality 3D concept visualizations that enable clients to explore volume, proportion, spatial hierarchy, and design identity early in the project, ensuring clarity and informed decision-making.



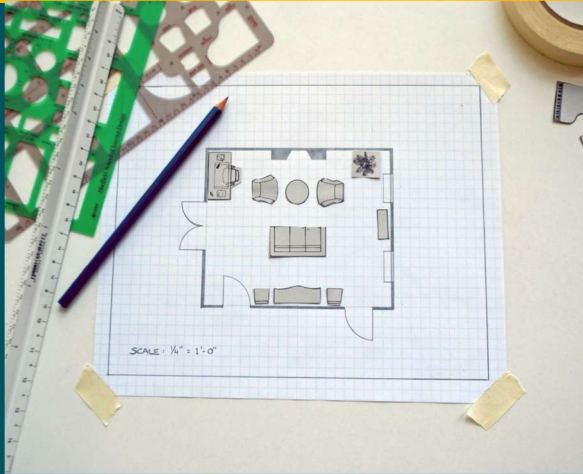
Architectural & Structural Value Engineering

We deliver comprehensive value engineering that balances design excellence with cost efficiency, identifying opportunities to enhance structural performance, reduce material usage, improve sustainability, and maintain architectural integrity throughout the project lifecycle.

INTERIOR DESIGN SERVICES

ELEVATE INTERIORS VIA IMMERSIVE DESIGN & VISUALISATION.

Our Interior Design & Visualization Services integrate spatial planning with photorealistic rendering to create environments that are practical, visually compelling, and fully aligned with client intent. Through coordinated detailing and precise visualization, we minimize revisions, improve constructability, and ensure an exceptional final result.



Concept Development & Space Planning

Our Concept Development & Space Planning approach integrates design creativity with analytical precision to create spaces that are efficient, intuitive, and architecturally aligned. Through careful zoning, workflow analysis, and aesthetic refinement, we ensure each space performs optimally while supporting the project's vision.

3D Visualization & Photorealistic Renderings

Our 3D Visualization & Photorealistic Rendering solutions combine advanced modeling, lighting simulation, and material detailing to produce visuals that accurately reflect the design's form and function. This allows teams to identify improvements early, minimize revisions, and achieve a clear, shared understanding of the project vision.



Material, Finish & Mood Board Presentation

Our mood board presentations integrate materials, finishes, and color schemes into a cohesive visual framework, enabling clients to fully understand the sensory and aesthetic qualities of the proposed interior. This process reduces ambiguity, supports accurate decision-making, and ensures design consistency across the project.

SOFTWARE EXPERTIES

EMPOWER PROJECTS WITH ADVANCED SOFTWARE PRECISION.

Our Software Expertise leverages advanced modeling, analysis, and visualization technologies to improve project control, accuracy, and performance. With integrated digital workflows and robust coordination tools, we reduce design conflicts, enhance productivity, and deliver dependable, data-driven results.

3D Modeling & Design Software

- Aveva E3D
- Aveva PDMS
- Hexagon Smart 3D (S3D)
- Intergraph / SP3D (SmartPlant 3D)
- AutoCAD Plant 3D
- Autodesk Revit
- Tekla Structures
- Civil 3D / InfraWorks
- CADWorx
- AutoCAD
- SpoolGen



Coordination, Collaboration & Project Controls

- Autodesk Navisworks
- BIM 360 / Autodesk Construction Cloud
- SmartPlant Review
- MS Project

Engineering Analysis & Discipline Tools

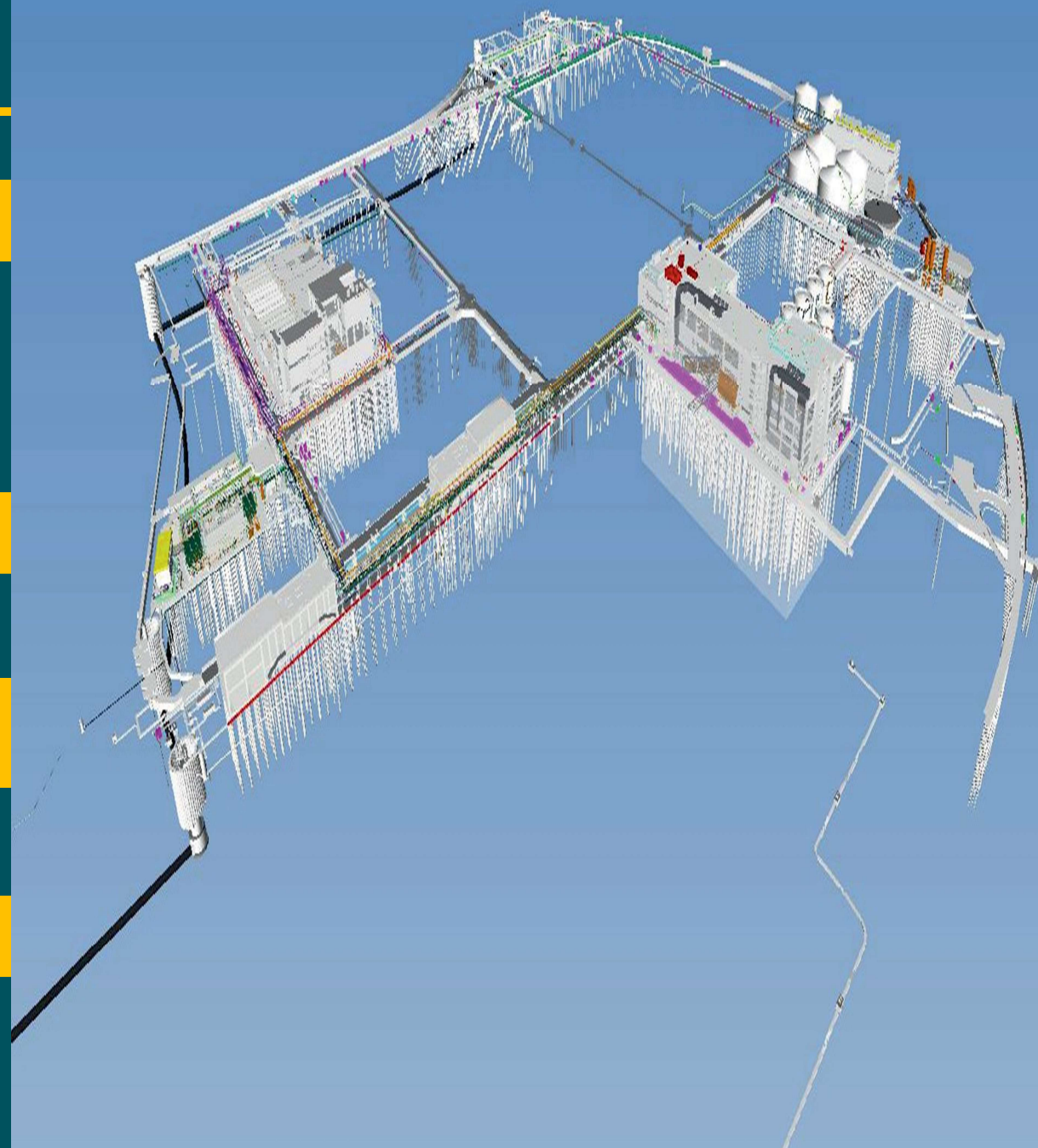
- CAESAR II
- STAAD Pro / SAP2000
- PIPENET
- HTRI
- PV Elite
- ETAP
- DIALux / CALCULUX
- SmartPlant Electrical
- Aveva Electrical
- SmartPlant Instrumentation
- Aveva Instrumentation
- HYSIS
- FLARENET
- INSTRUCALC

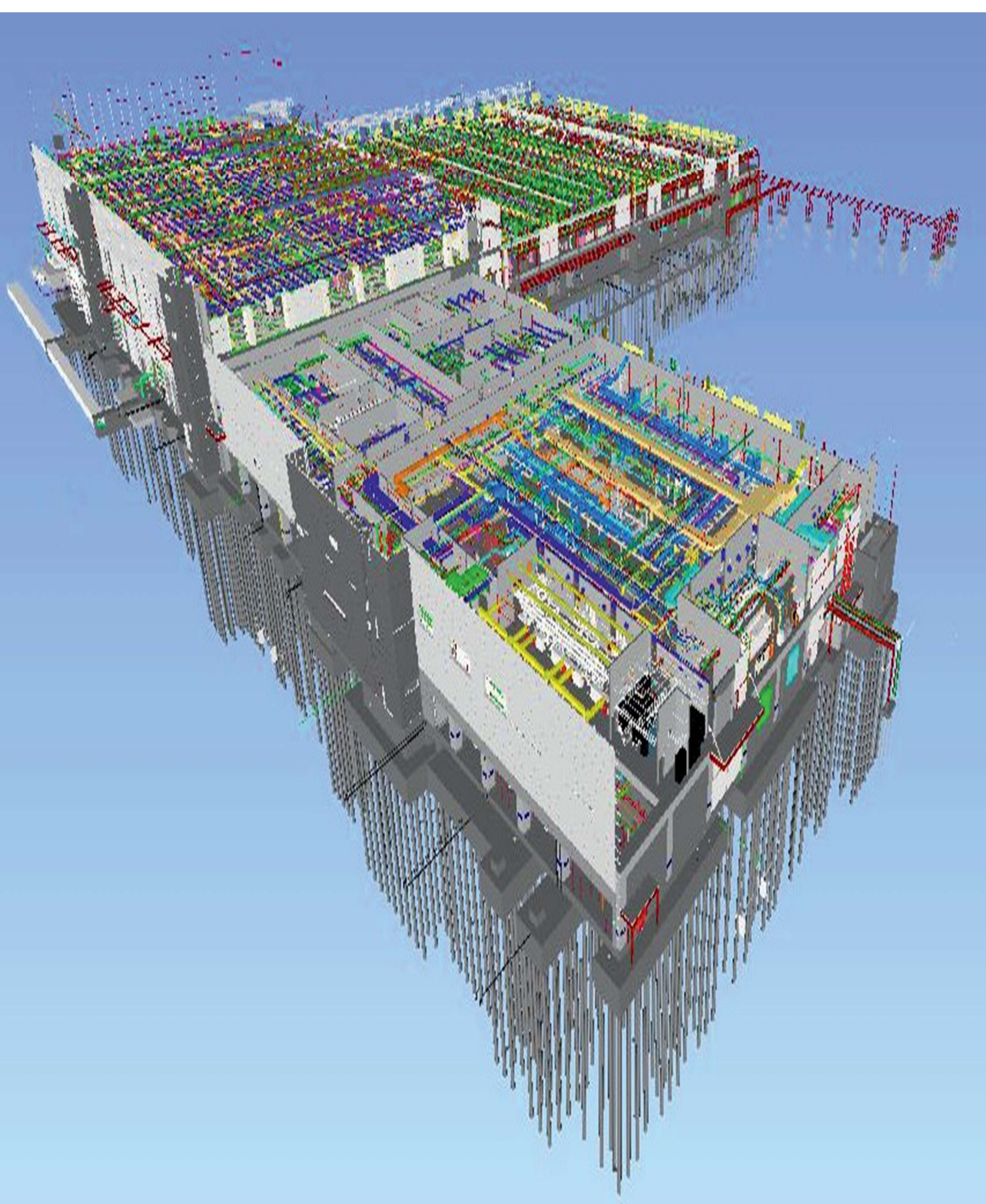


TWRP SINGAPORE

COMMERCIAL

Location	Singapore
Scope	Providing Piping, Structural And Electrical BIM Modelling As Per Client's Standards And Specification Along With Clash - Free Report.
Duration	12 Month
BIM Standard	
Level of Detail	LOD400
Software Used	Open Plant Connect Edition Navishworkd Mange, AutoCAD.
Status	COMPLETED





INTEL PELICAN - PENANG

TYPE	COMMERCIAL
Location	Malaysia
Scope	Providing Piping, Structural And Electrical BIM Modelling As Per Client's Standards And Specification Along With Clash - Free Report.
Duration	18 Month
BIM Standard	
Level of Detail	LOD400
Software Used	Revit 2021, Navisworks Manage, AutoCAD.
Status	COMPLETED

NFPS - QATAR

TYPE COMMERCIAL

Location Qatar

Scope Providing Structural and Electrical modelling as per client's standards along with Clash Free report.

Duration 4 Month

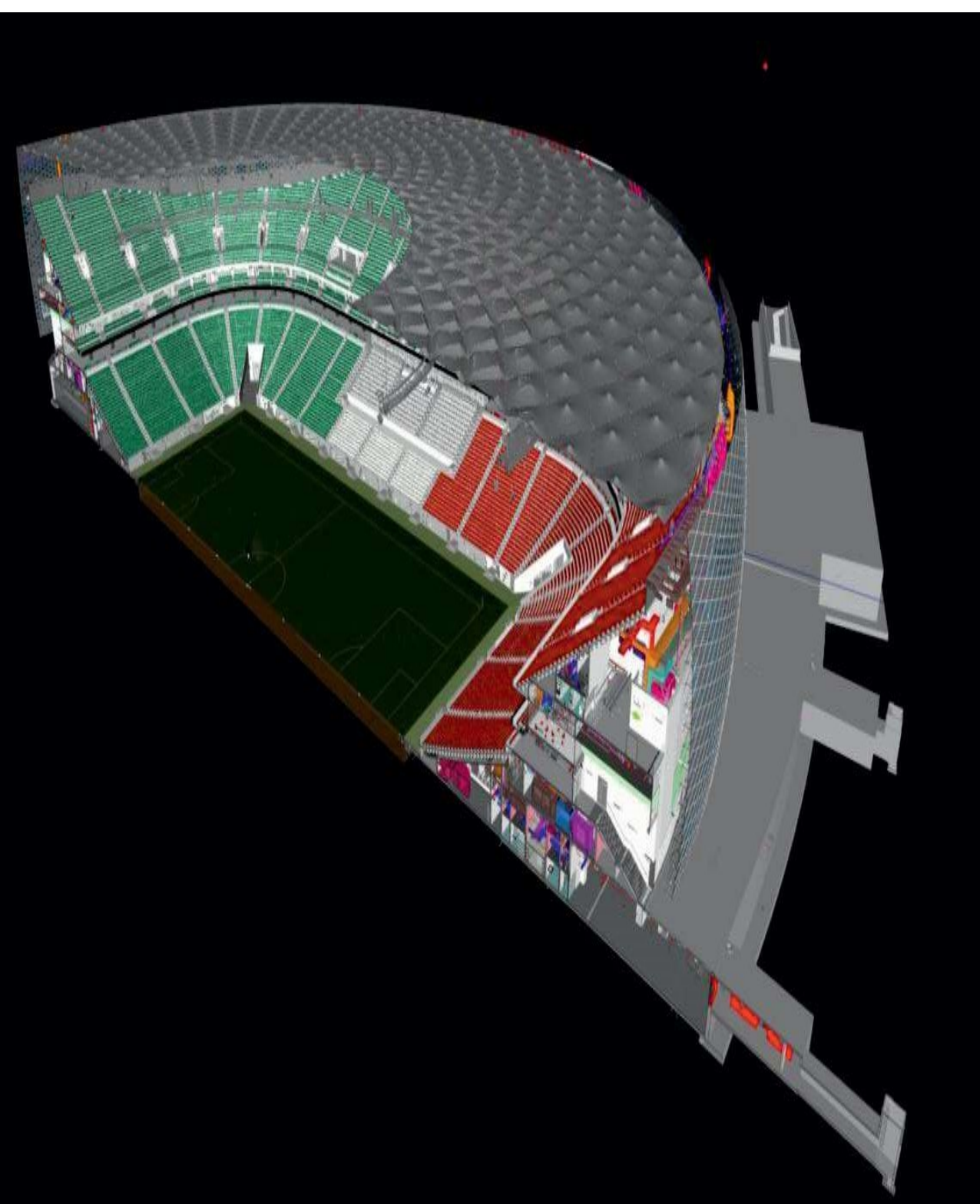
BIM Standard

Level of Detail LOD400

Software Used Revit 2019, Navisworks Manage, AutoCAD.

Status COMPLETED





AL-THUMAMA QATAR STADIUM

TYPE	COMMERCIAL
Location	Qatar
Scope	Providing Structural and Electrical BIM modelling as per client's standards and specification with Clash Free report.
Duration	6 Month
BIM Standard	
Level of Detail	LOD400
Software Used	Revit 2021, Navisworks Manage, AutoCAD.
Status	COMPLETED

ADNOC IFC STATION ABU DHABI

TYPE COMMERCIAL

Location UAE

Scope Providing integrated flooring system support and Electrical modelling as per client's standards and specification with Clash Free report.

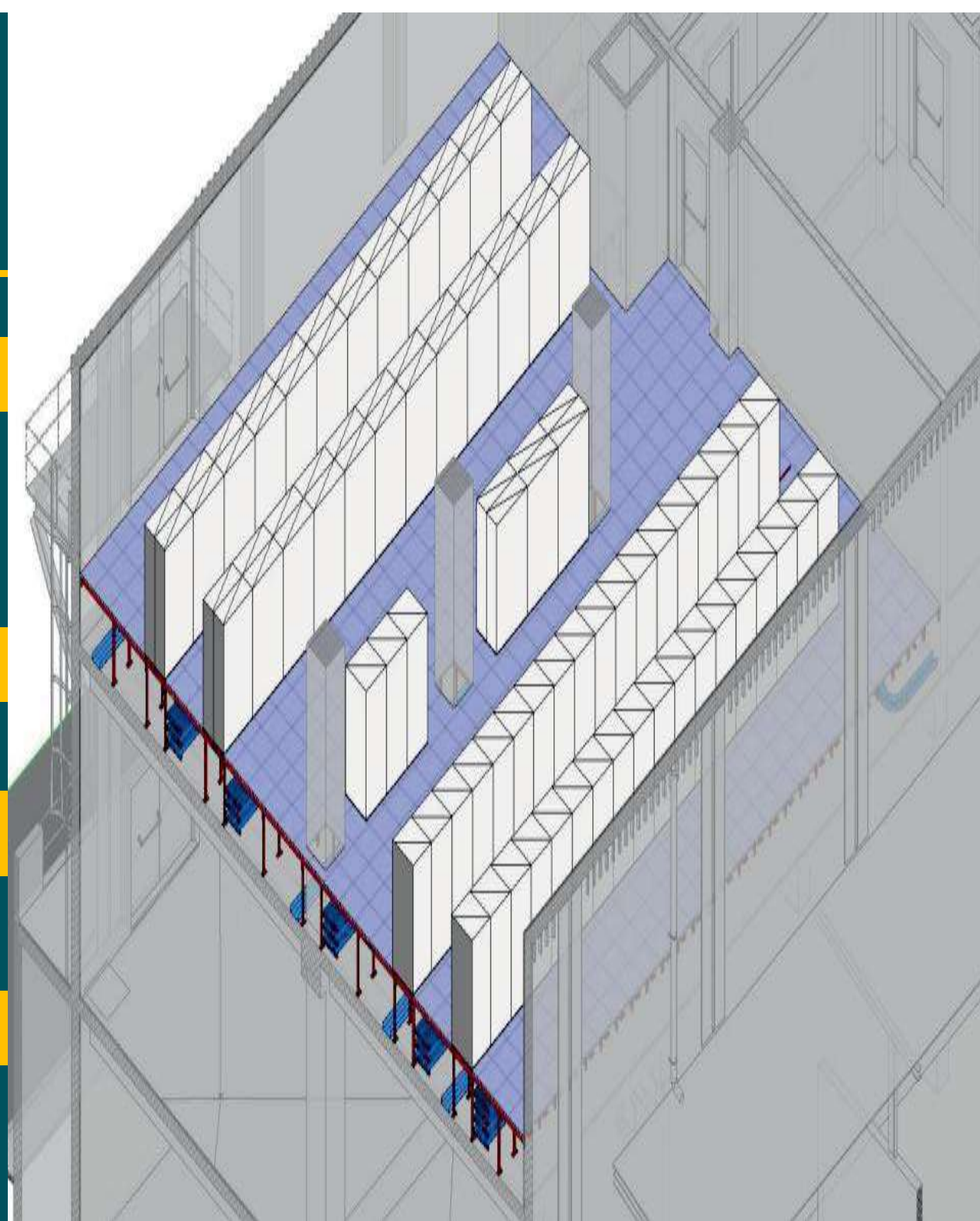
Duration 2 Month

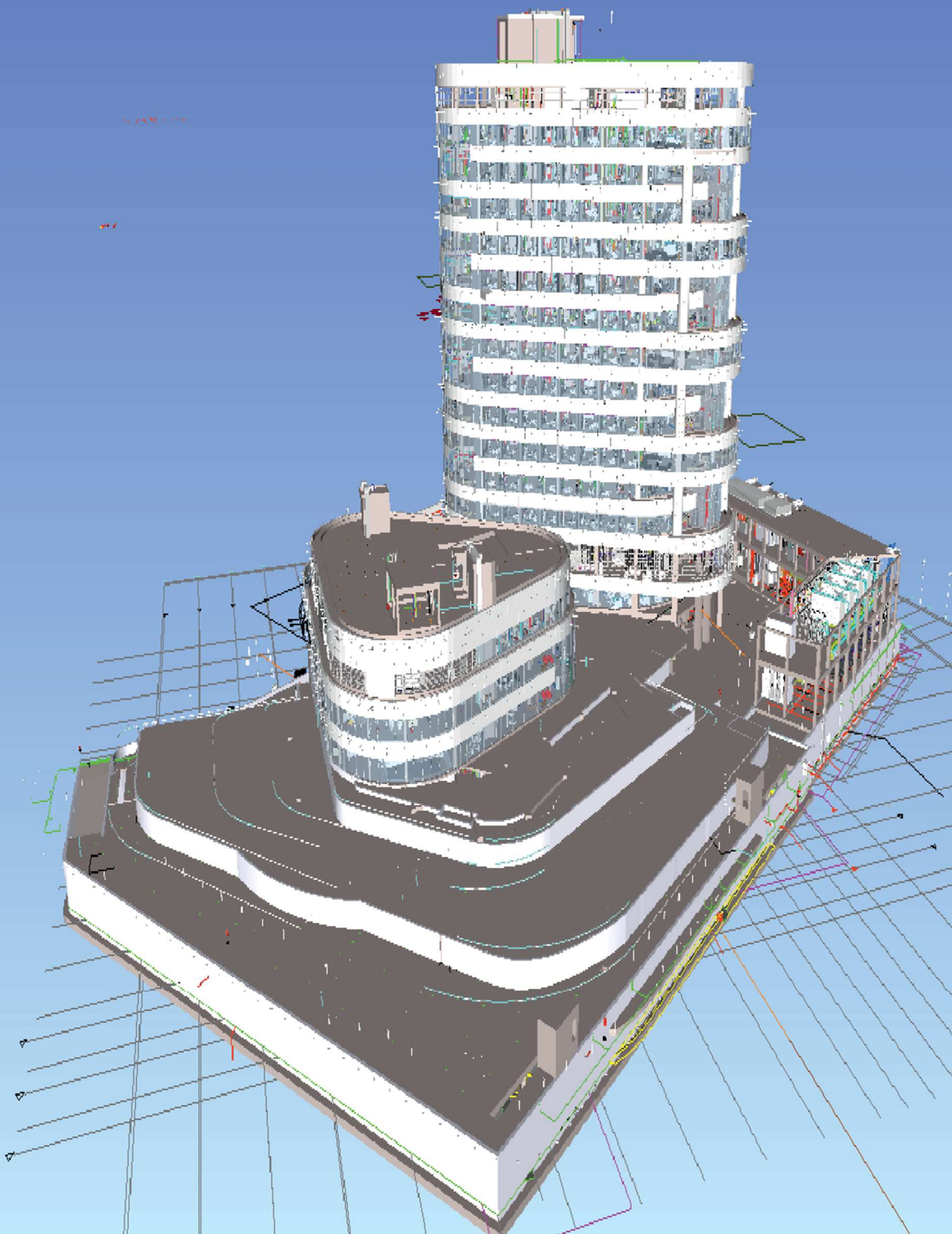
BIM Standard

Level of Detail LOD400

Software Used Revit 2019, Navisworks Manage, AutoCAD.

Status COMPLETED



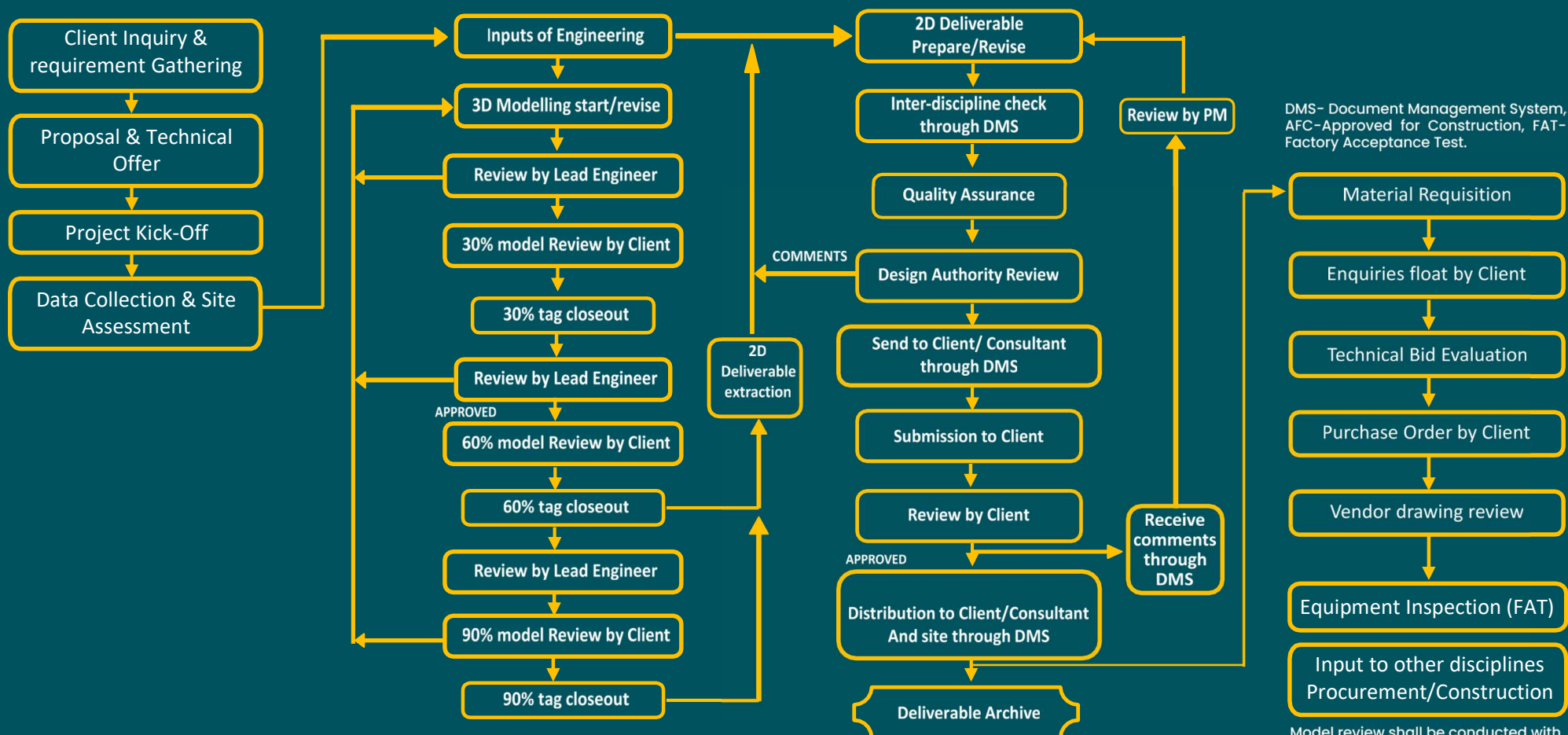


AL-MOOSA HOSPITAL KSA

TYPE	COMMERCIAL
Location	KSA
Scope	Providing Piping, Structural And MEP BIM Modelling As Per Client's Standards And Specification Along With Clash - Free Report.
Duration	6 Month
BIM Standard	
Level of Detail	LOD400
Software Used	Revit 2021, Navisworks Manage, AutoCAD.
Status	COMPLETED

DRIVE PROJECT SUCCESS WITH A STREAMLINED WORK PROCESS.

Our Project Work Process is designed to optimize productivity through defined phases, integrated reviews, and coordinated execution. By aligning teams, managing timelines, and enforcing rigorous quality standards, we ensure predictable progress and reliable project delivery.



Model review shall be conducted with all stakeholders, and observations and resolutions shall be documented. All the observations shall be incorporated as tag closeout and submitted for records



KHAN ABDUL ZAHIR
MANAGING DIRECTOR



ABDUL RAZZAQ
DIRECTOR / OPERATION HEAD

Our Team



MOHAMMED RAFIQUE
BUSINESS DEVELOPMENT MANAGER

Corporate



SIHAB ALI
MECHANICAL ENGINEER
CORE TEAM LEADER-BIM, PIPING
MEP - 9 YEARS EXPERIENCE



ABDUL YASIR
MECHANICAL ENGINEER
CORE TEAM LEADER-BIM, PIPING
MEP - 7 YEARS EXPERIENCE



ROHAN D'ZOUZA
DEPUTY ENGINEER
CORE TEAM LEADER-SP3D, PIPING
MEP-9 YEARS EXPERIENCE



AARON DSILVA
MECHANICAL ENGINEER
CORE TEAM LEADER-E3D, PIPING
MEP-7 YEARS EXPERIENCE



**ASHWIN
GAYAKWAD**
MECHANICAL ENGINEER



RAKSHITHA SHETTY
CIVIL ENGINEER
BIM ENGINEER REVIT BIM, STAAD
PRO 4 YEARS EXPERIENCE



SAMEER SHAIKH
CIVIL ENGINEER
BIM ENGINEER REVIT BIM, STAAD
PRO 2 YEARS EXPERIENCE



RAHILA
CIVIL ENGINEER
BIM ENGINEER REVIT BIM, STAAD
PRO 4 YEARS EXPERIENCE



PAUL DESOUZA
MECHANICAL ENGINEER
PIPING DESIGNER REVIT BIM
4 YEARS EXPERIENCE



FEDC Femoza Engineers & Design Consultants
CREATING SOLUTIONS, SHAPING FUTURES

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